

Marblehead Open Space and Recreation Plan



2012
June 30, 2012

The Open Space and Recreation Plan Update Committee is pleased to present this Plan to the citizens of Marblehead for their use as a town resource and guide.

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Section 1. Plan Summary

The Marblehead Open Space and Recreation Plan ("the Plan") represents Marblehead's strategy to enhance and expand the existing open and recreational space and programs within the town. The Plan identifies additional land that the town could acquire for open space and recreational purposes. Recognizing that Marblehead's centuries of development have left little open land subject to traditional open space planning, The Plan looks for ways to increase the recreational and conservation value of existing town lands and for other means of protecting the natural resources of the community.

In addition to articulating the town's goals, objectives, and action plan, the Open Space and Recreation Plan Update Committee ("The Committee") hopes that the Plan will be used by residents and visitors to explore the existing open spaces and programs within the Town of Marblehead. The Plan contains maps; descriptions of properties, facilities, flora and fauna and programs; and provides information on parking and restroom facilities.

Section 2. Introduction

2A. Statement of Purpose

The Plan is a comprehensive update of the town's planning priorities. Marblehead's last Open Space and Recreation Plan was written in 1999, preceded by plans from 1988, 1982 and 1978. The Plan was originally written to allow Marblehead to participate in certain state and federal funding programs. Additionally, the Plan now serves as a source of information on the town's properties, facilities, and program, and as a guide to parks and conservation lands.

Several factors contributed to the town's decision to update the Marblehead Open Space and Recreation Plan. Over the past decade and a half the Conservation Commission and Planning Board have spent most of their time as permit-granting authorities. As development pressures continue and jurisdictions expand, the boards and commissions have less time to spend on long-range planning. An additional objective was to review the challenges facing existing open space, and to draw up town-wide goals and priorities for open space and recreational needs.

2B. Planning Process and Public Participation

The Committee was formed in 2011 and is made up of representatives of the Conservation Commission, the Recreation and Parks Commission, the Planning Board, the Marblehead Conservancy, and one at-large member. Several interested citizens became helpful members of the committee.

The Committee met regularly from September 2011 through June 2012. The Committee divided up the task by assigning specific sections to individual members to complete. Recognizing that public input was essential in determining the town's needs, the Committee used several methods to solicit public input.

The Committee identified all of the known organized users of the town's parks, playgrounds, and open spaces. This list included nine neighborhood organizations, 12 town departments, 11 youth and

adult sports leagues, many clubs and organizations, and various others. In total 62 groups were contacted by committee members (see Appendix A). Thirty responded. Information was then collected, compiled and organized.

The Committee also developed a general survey (see Appendix A). This survey was placed on the Marblehead Town website and the Library. The information contained in these surveys was collected and analyzed. The Committee also held public workshops, a more traditional method to collect public comment. One workshop was held at the beginning of the process in January and another was held after the draft plan was publicized. Analysis of the survey information can be found in Section 7 of this document.

Local newspapers, the *Marblehead Reporter* and the *Lynn Item*, covered the public forum. At the time of this updating, the internet has become a major means of communicating. As a result, announcements and results of the survey were provided to the public through www.wickedlocal.com, connected to the *Marblehead Reporter*, and to a web-only site, the *Marblehead Patch*. The survey for individual comments was posted on the home page of the town of Marblehead. Responses received in digital form were included with those received in paper form.

Section 3. Community Setting

3A. Regional Context

The town of Marblehead is a coastal community located on a peninsula 17 miles north/northeast of Boston in Essex County. It is a densely populated town with a population of 19,808 (2010 Census) and a land area of 4.33 square miles. The town is bordered by the town of Swampscott to the south, the city of Salem to the southwest, and the Atlantic Ocean to the west, north, and east.

Marblehead boasts one of the most active harbors in the region with over 2,500 boats moored within the town's waters in the summer months. The town attracts a large tourist population and is especially busy in the summer with its many historically significant sites. The town's commercial districts have many shops, restaurants, and other businesses geared toward the tourist population. It has many historic sites (described later in the document) that attract visitors from the region and beyond, and many recreational properties (also described later in the document). The latter attract boaters, swimmers, sunbathers, walkers, divers, and other visitors from the region. Vinnin Square is a major shopping center located on the town's southern boundary and bordering the communities of Salem and Swampscott. This shopping area attracts a large number of people from the surrounding area.

Marblehead is a member of the North Shore Task Force, a group of communities located north of Boston in the vicinity of Salem Sound. These communities meet regularly to discuss issues of common concern and interest, such as transportation, conservation, zoning, and watershed.

Marblehead is a part of the new Essex National Heritage Area, a federally designated heritage region comprising 34 historically and naturally rich communities, and the Essex County Scenic Byway route that was established in 2011 and runs roughly along the coast on routes 129 and 1A from Lynn to Newburyport. Its purpose is to promote access to the area's scenic beauty and historic heritage.

3B. History of the Community

B1. Business & Industries

From the town's founding in 1629 until the mid-1800s, fishing was Marblehead's dominant commercial enterprise. By 1660 Marblehead was described as "the greatest towne for fishing in New England." From the 1720s until the mid-1700s overseas trade brought prosperity. By 1765 Marblehead was among the ten largest towns in the colonies, with a population of 5,000 and 30 to 40 merchants engaged in foreign Atlantic trade. In 1765, 935 families lived in 519 houses; more than half of those houses, or portions of them, still survive.

The Revolutionary War caused severe economic hardship for every family. Ten companies of Marblehead fishermen and mariners served with Col. John Glover's mariner regiment. Though much of the merchant and fishing fleet was lost due to the reduction in trade, much of the town's merchant fleet and hundreds of seamen became the nucleus of the continental navy. Fishing resumed as the town began to recover from that war and then the embargo of 1807-09 and the War of 1812. Some Marbleheaders joined crews of merchant ships sailing into the Pacific or, later, helped the fast new clippers set records around Cape Horn. Although Salem dominated trade in the Pacific, a number of Marblehead captains attained wealth in the 1820s and 1830s from the Asian trade, and during those same decades the town's fishing industry was substantial.

Cottage shoe production in the early 1800s grew into a major industry through the 1880s. In the colonial period, prior to the Revolution, shoemaking had been one of several alternate and winter occupations for fishermen, mariners, and aging seamen in New England and seaport towns. During and after the Civil War, industrial activity increased in Marblehead, with shoemaking overtaking but not eclipsing rope manufacturing (which had decreased in importance by 1855) and shipbuilding. The railroad came in 1839 but ceased operating in 1959, leaving behind a 4-mile railroad bed. In the 1850s and '60s, small wooden factories of three or more stories were built throughout the community, each with several dozen workers, with larger factory buildings of wood or brick added in the 1870s and 80s, mainly along Pleasant Street.

Neighborhoods expanded beyond the industrial areas. House construction escalated in the 1830s/40s throughout the downtown area, and again after the 1870s, in and among the earlier dwellings and industrial areas surrounding Pleasant Street.

Shoemaking, primarily choice soft-leather products, grew to become the town's leading industry in the last half of the 1800s, especially with the decline and eventual reduction of the fishing industry after 1846. That year, a September gale on the Grand Banks decimated Marblehead's fleet beyond the point of rebuilding. There was an active schooner fishery at the time of the Portland Gale of 1898, but it did not last long into the 20th century. Small boat fishing and lobstering (day boats) continue to this day. Marblehead factories never reached the scale of Lynn, Haverhill, or Reading, but Marblehead's shoe industry was productive until two fires, in 1877 and 1888, destroyed much of the business district.

In the late 1800s Marblehead's appeal as a seaside resort began to attract summer visitors and yachting enthusiasts. Seasonal cottages sprang up on West Shore farmlands, and spacious summer homes were built around the outlying areas of town, such as Peach's Point and Marblehead Neck. Restaurants and

hotel resorts were built around the harbor both in town and on the Neck, to serve the wealthy summer residents and vacationers. In the last half of the 1800s, yachting and racing began to flourish, and Marblehead captured the title “yachting capital of the world.” Its harbor soon earned a reputation as one of the country’s leading centers for sailing and yachting. Sailing continued to thrive through the 20th century and still does today, with 1800 moorings in Marblehead Harbor and 1400 Marblehead moorings in Salem Harbor, off Marblehead’s west shore.

From 1910 or ‘11 to 1918, amphibious aeroplanes were manufactured in two factories that employed more than 300 people in two different coastal locations: at Maverick’s Cove in the Little Harbor and Redstone Cove toward the southeast end of Marblehead Harbor. The larger factory on the Little Harbor burned in 1918. It had been built in a former marshland tidal zone at the end of the peninsula, alongside a small plant that had converted coal to gas for lighting toward the end of the 1800s. A long two-story office building was built on that site in the 1960s.

Streets were paved around 1900, gas lighting was installed after the Civil War, electricity came in the 1890s, and trolley tracks were laid down Pleasant Street and turning west onto Washington and then down Franklin / Selman Streets in the 1880s/90s, then removed when sewers were dug downtown around the 1920s.

The demise of the resort economy after the turn of the century caused economic hardship. Downtown, poverty had persisted throughout the post-civil War period and into the 1900s for much of the community that was not affiliated with the tourist business.

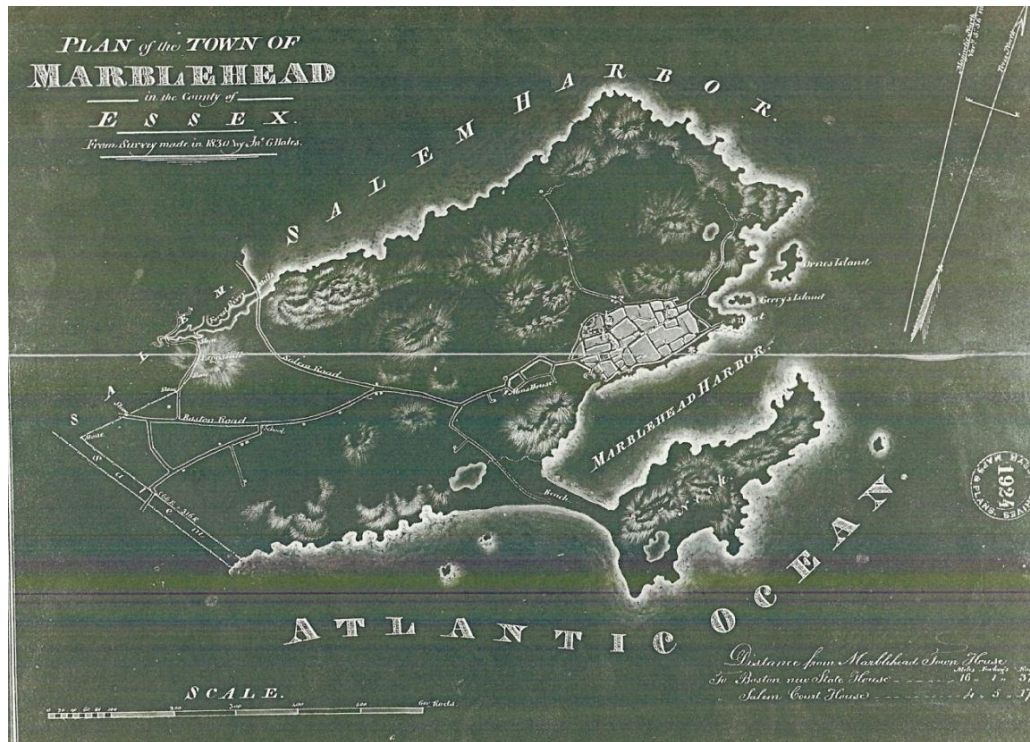
Throughout the 1900s, small independent businesses proliferated in the downtown area and beyond, both maritime and commercial, as they had in the 1700s and 1800s as well. Business was largely local, though more and more people commuted into Boston or Salem for work – mostly by train, until the railroad ceased operations to Marblehead in 1959, and then by car south through Revere or west through Salem to the new route 128. Some smaller companies in small office buildings developed around the 1970s in the center of the peninsula. Most of the older brick school buildings from the 1800s were periodically developed into multiple-dwelling buildings in the last half of the 1900s.

In the third quarter of the 20th century, a variety of small companies developed, occupying small office buildings that were nestled among residential areas in the outlying areas of town. Many independent businesses thrive in former and current single- and multiple-resident buildings.

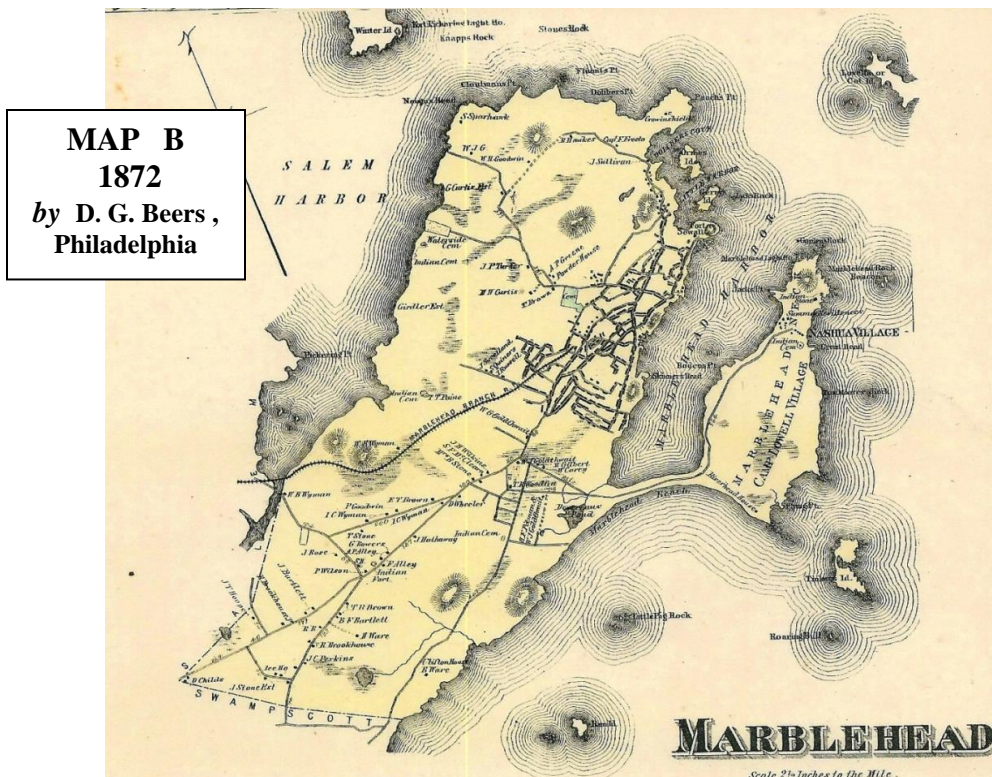
B2. Land, Housing & Commercial Development

The earliest area of Marblehead to be settled was at the northern tip of the mainland peninsula, along the shoreline of the Little Harbor area. To the west and southwest lay large tracts of farmland (the largest being about 300 acres, held by one individual grantee), and other farmlands to the south (in the vicinity of today’s Humphrey Street, named after the landholder, John Humphrey) and southeast (Devereux area, named after the principal holder of those lands in the 1600s – the Devereux / Deverix family). East of the peninsula, the “Great Neck” to the east of the harbor and two offshore islands in Little Harbor remained undeveloped until after the Civil War. The southwest (Gerry’s Island – named after Thomas Gerry, its owner from c.1725 to 1750) had up to three dwellings on it until the 1970s. Both Little Harbor islands are currently undeveloped.

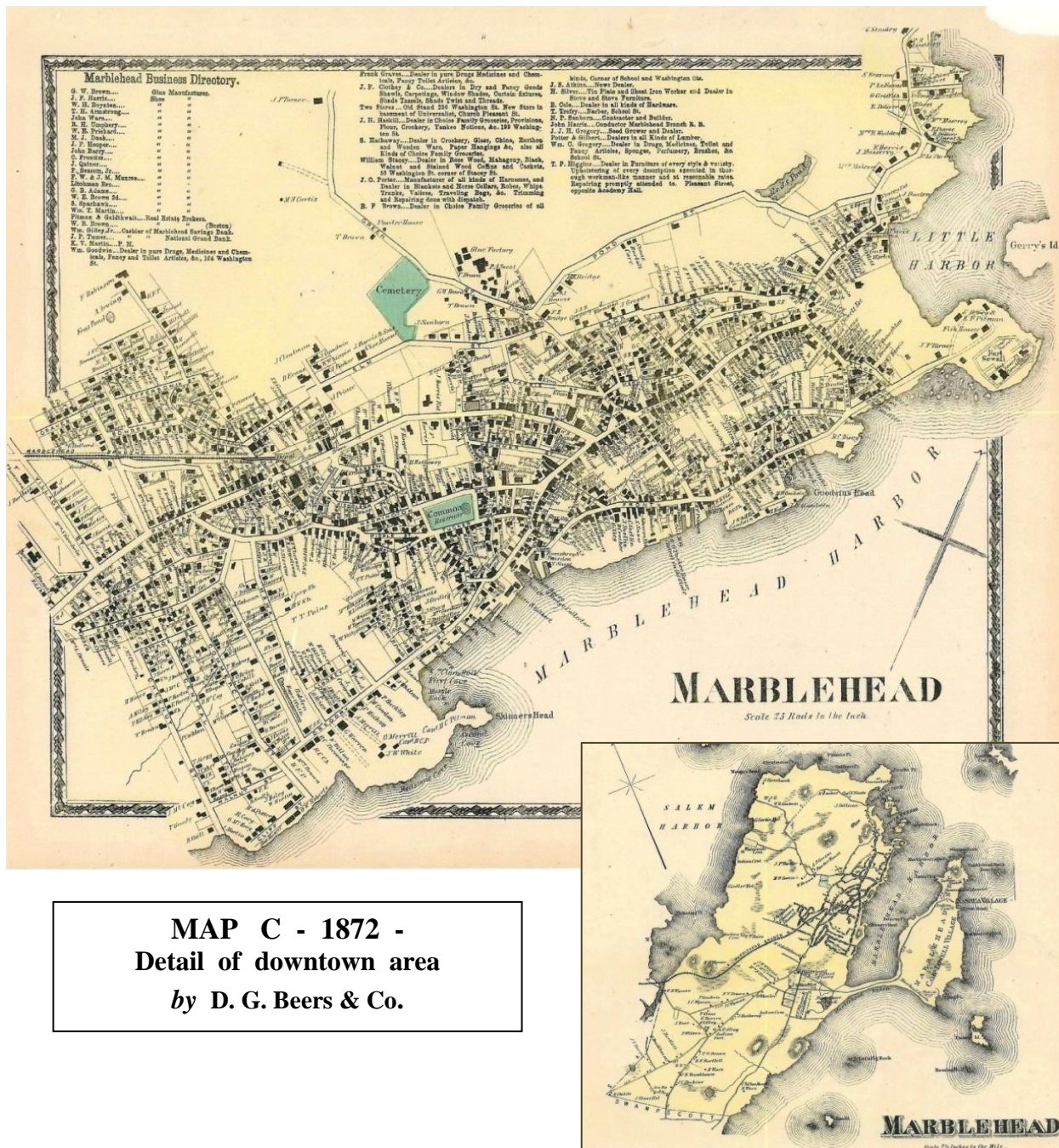
For most of the 1700s and 1800s, the town was concentrated in the northeast area of the mainland peninsula, along Marblehead Harbor to its east. (See Map A – 1830)



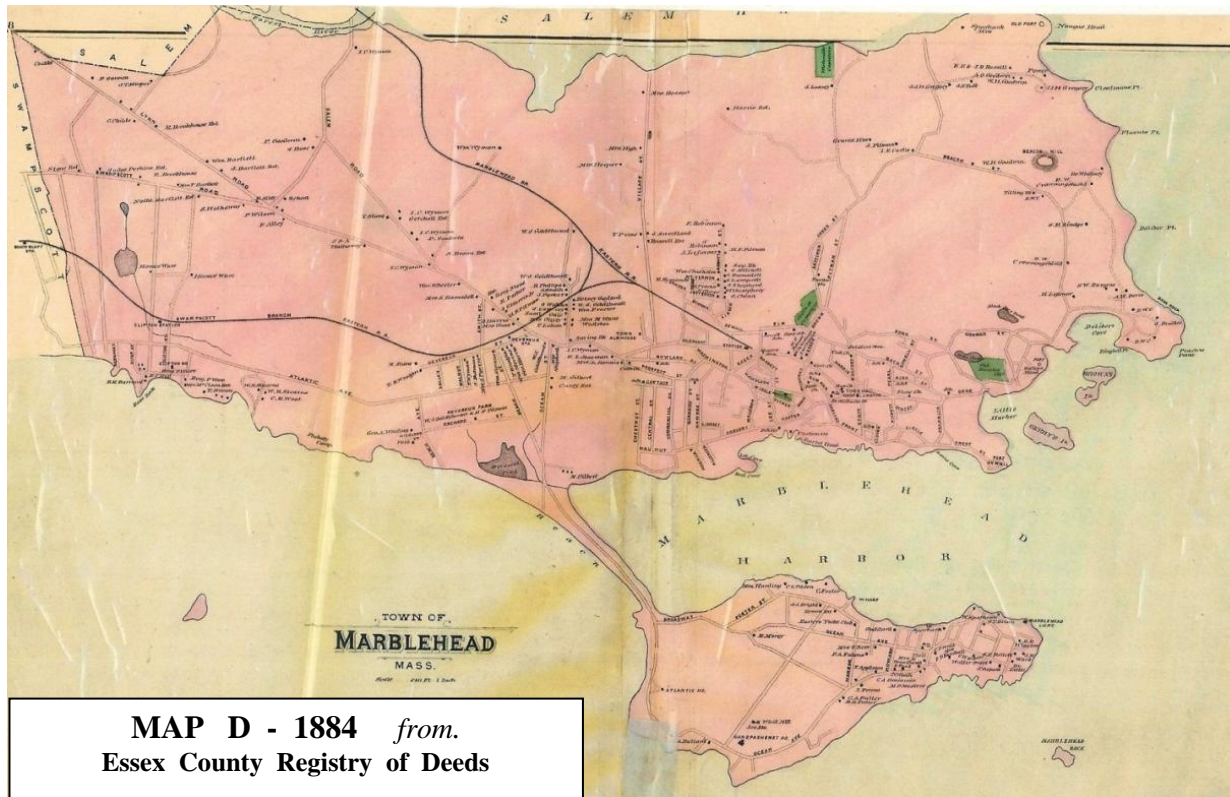
MAP A - 1830 from Essex County Registry of Deeds



House construction escalated throughout the downtown area in the 17-teens, 1760s, and 1830s/40s, and again after the 1870s in and among the earlier dwellings and industrial areas surrounding Pleasant Street. (*See Maps B – 1872 & Map C – 1872 – development detail*) Often, in the 1700s and after, in the downtown area, houses replaced earlier dwellings or were built on land that had been subdivided from larger house lots; the latter still occurs periodically. However, tear-downs occur infrequently, and in the downtown area have been regulated since 1968, when a local historic district was established by Town Meeting vote (*See Historic District map in Appendix*).



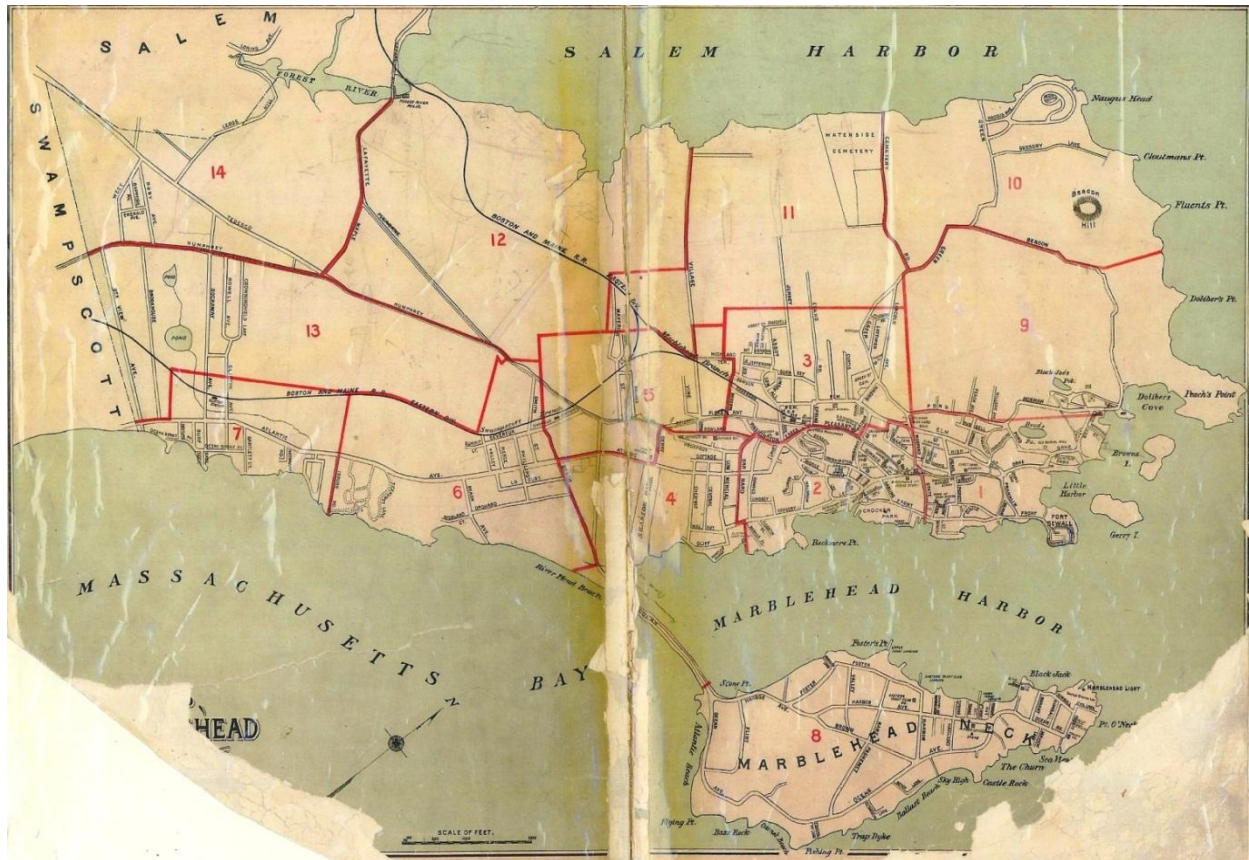
After about 1870, coastal areas were developed for tourism and summer rentals or vacationing, with nearly twenty large wooden hotels built around the perimeter of Marblehead, including on the Neck, in the historic downtown area, and along the southeast coast toward Swampscott. Large summer houses were constructed on Marblehead Neck, and a few on the mainland as well. On the west shore, smaller vacation homes and cottages were built at random locations in the early to mid-20th century.



In 1824, the town's network of roads gained street names that largely survive today. (*See Maps C (town detail) – 1872 & D – 1884*) A principal mid-1800s roadway thoroughfare from the south (from Boston via Swampscott) had been added by 1872 and improved by 1884, designated as Atlantic Avenue by that time. Development expanded along the southwestern road zone before it branched off to Salem, Lynn, and Swampscott. (*See Map D – 1884*)

A railroad line from Boston was added in 1873, with small stations at the Devereux area (*Map E*, section 5, far west), and later (after the 1920s), in the new Clifton neighborhood (*Map E*, section 7, northwest). In the late 1800s, horse-drawn trolleys conveyed vacationers from the railway terminus on Pleasant Street down to and along Washington Street to Franklin Street and down Selman Street, terminating at Front Street, and returning along the same track. (*Railroad shown on maps B, D, & E and trolley route shown on Map E – 1912*)

Marblehead Neck was substantially developed after 1872, with roads (principally around the perimeter and on the northerly, portion of the island, which was much smaller and narrower than the southerly portion), large house-lots for summer homes, and several hotels. (*See Maps C – 1872 & D – 1884*) (*Map B* notes Native American sites on the Neck)



MAP E - 1912 *from Town of Marblehead Assessor's Office*

Most development from 1884 through the 19-teens involved the construction of summer homes on sizeable lots on Marblehead Neck and the coastal zones in the areas noted above (*Map E - 1912*, sections 8, 6, 7, 13) as well as further development of the southern and southeast coastal regions (*Map E*, sections 6 & 7), and the northwest corner of the mainland peninsula (*Map E*, section 10).

By 1912, a large cemetery had been laid out in the undeveloped western lands, from the coast inland to the westerly road at that time (Green St.) (*Map E*, section 11); it is now near capacity.

The 20th century witnessed growth typical of many communities at the same period. The 1920s saw the development of much of the southeast lands into smaller residential-scale neighborhoods on a grid of streets perpendicular to Atlantic Avenue – what is now referred to as the “Clifton” region of town. (see *Map F - 1938*)

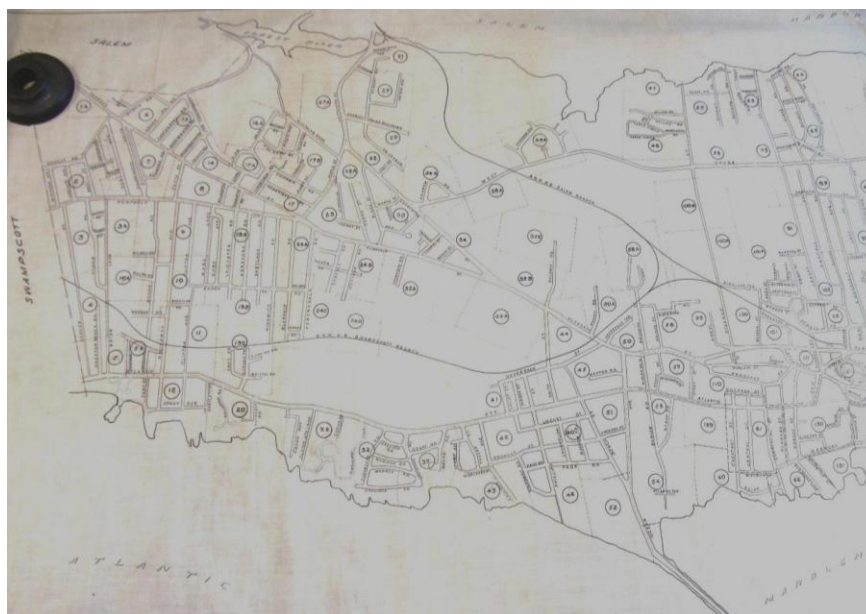
After World War I, on the western side of the main Marblehead peninsula, several enclaves were developed on former open lands as well. A few large inland farms remained. (see *Map F - 1938* and section 4F, page 39) (The huge tracts of the 1600s had been subdivided into smaller though still large parcels at various times in the 1700s and especially the 1800s. Many parcels appear to have been purchased by three or four individuals in the later 1800s – Ephraim Brown, Isaac Chauncey Ware, and William Wyman – along with scores of others with fewer properties.)

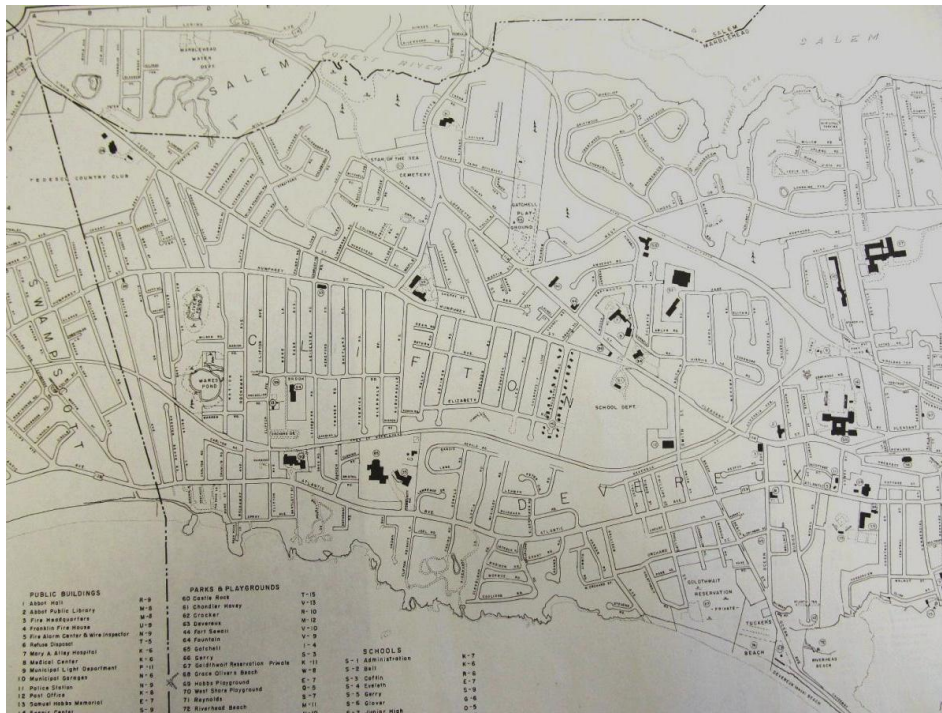


MAP F - 1938 *from Town of Marblehead Assessor's Office*

MAP G - 1940

*from WPA
showing 1930s
development
of Clifton area*





**MAP H -
1976
detail
showing further
development of
the Clifton area
in the 1950s**

After the Second World War, the remaining lands in the Clifton area (southeast Marblehead) were developed (*see Map H – 1976*), and most of the farmlands in the western half of the mainland peninsula were developed into residential neighborhoods with two-story houses, mostly in the 1950s and '60s (*see Map I – 1976*).

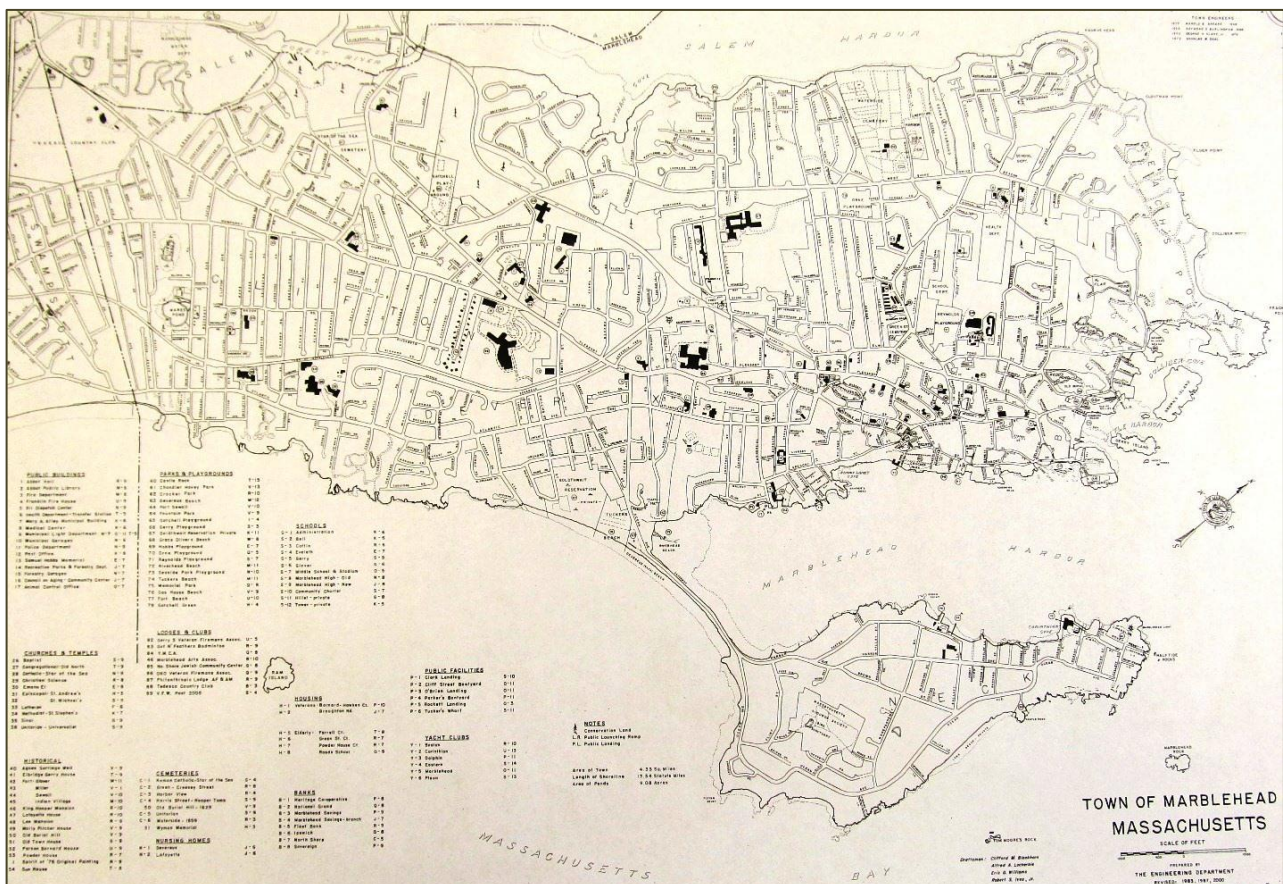


MAP I - 1976 detail from Town of Marblehead Assessor's Office

In the 1970s, homes were added here and there, and in several small areas immediately outside the downtown Historic District (*see map in Appendix*) were developed into small one- or two-story, single-dwelling townhouse complexes. And in the 1980s, a small development of over-scale houses was developed at the end of the peninsula, between the Little Harbor and the main harbor and a former tidal zone (*see Map I – 1976*). After 2000, a few clusters of very large houses and a very large condominium complex with an extensive parking lot were developed on vacant land in the center of the peninsula.

Most of the fairly minimal development of small office buildings and business parks in the third quarter of the 20th century occurred in the center of the peninsula, on lands formerly undeveloped, behind residential areas. Most are hidden from view as one navigates the town's principal byways.

In the 1970s, several small one- and two-story strip-mall shopping areas took over former commercial/residential zones along Pleasant Street, and a larger two-story office/retail building is currently under construction in the same vicinity. In 2007-9, a large and extensive YMCA complex was developed on former open space atop Legg's Hill, along the Forest River tidal area, with road access through wetlands zones.



In 2010, a coastal Scenic Byway was established from Lynn to Newburyport, which enters downtown Marblehead through a spur off the principal driving routes (129 > 114 > 1A > 127 > 133 > 1A). http://www.essexheritage.org/scenicbyways/Essex_Coastal_Byway_Brochure.pdf

3C. Population Characteristics

Marblehead's total population has remained steady since the 1970 U.S. Census, fluctuating closely around 20,000. The population in the 2010 census was 19,808 and it is anticipated that it will remain essentially stable into the foreseeable future. This is due to the current density and lack of buildable land. The build-out of the town is now greater than 95%. The highest density of Marblehead is in the downtown area, which is centered in close proximity to its harbor. In this area the high density is due to zoning, where lot sizes are 3,000 sq. ft. or less, and to the town's history as an early fishing and seaport village, which evolved from its original land grants, property divisions, and minimal roadway development in the 1600s.

Population density

According to the 2010 census 19,808 people live within Marblehead's 4.33 square miles. This means the population density in 2010 was 4,574 people per square mile. The population density in 2000 was 4,499 people per square mile.

Age Distribution

There have been only minor changes in the age distribution over the last thirty years. The greatest increase in percentage between the census of 2000 and that of 2010 occurred in the 5-14 age group, with a decrease in the 15-44 age group, the birthing years. Both groups represent trends over the past thirty years.

Age	1980	1990	2000	2010	
under 5	825	1198	1185	1025	
5-14	2701	2142	2583	3018	
15-44	9037	8835	7361	5597	
45-65	4791	4806	6410	6805	
65 & over	2777	2990	4033	3363	<i>Source: U.S. Census</i>

Racial Composition

According to the 2010 U.S. Census, the racial composition of the population is overwhelmingly white; however the numbers of Asian/Pacific and Hispanic residents have grown in recent decades.

Race & Ethnicity				
White	96.4%	Black	0.8%	
Native American	0.1%	Asian/Pacific	2.1%	
Other Race	0.6%	Other	0.1%	<i>Source: U.S. Census</i>

Households

According to the 2010 U.S. Census there were 8144 households. The number of households has steadily increased in proportion to population since 1970, thus implying a decline in the average size of households, which in 2000 was 2.4 persons. The percentage of non-family households has remained roughly level since 1980.

Income Distribution

There are 5236 families. 370 (7%) have income less than \$25,000; 1407 (26%) have income between \$25,000 and \$75,000. The mean family income is \$127,065. The per capita income is \$59,055. There are 2702 non-family households. The median non-family income is \$48,955.

Unemployment

The unemployment rate in December of 2011 was 4.5%, well below the state average for December 2011. The national average unemployment in December 2011 was 8.5%.

Labor Force

According to the 2010 U.S. Census, the industries employing the largest numbers of Marblehead residents are educational services, and healthcare and social assistance (26.2%), professional services (17.3%), and finance, insurance and real estate (12.6%). Manufacturing (8.1%), retail trade (7.4%). Of the 9,553 residents over 16 that work, 6,943 drive to work alone, 518 carpool or use public transportation, and 402 walked to work; 964 work at home, and 230 use other means. The mean travel time to work is 33.4 minutes.

Industries

The leading industries in Marblehead are: educational, health and social services, 21%; professional, scientific, management, administrative, and waste management services, 18%; and finance, insurance, real estate, and rental and leasing, 12%.

Education

Of all persons over 25 years of age, 38% have a bachelor's degree or higher and 30% have a graduate degree or higher.

3D. Growth & Development Patterns**Patterns and Trends**

Today Marblehead is primarily residential with two small business districts and a small industrial park. Seventy percent of the town's land use is residential. The town is almost completely developed. Very little privately owned large parcels of land remain undeveloped.

Pre-revolutionary development in Marblehead centered in the "downtown" area. A remarkable number of these buildings are still standing. The downtown area development is characterized by structures on small lots and narrow roads that in some cases were former cow paths. The majority of the town was developed in a more suburban character with single-family homes on larger (quarter acre) lots on wider uniform streets. Marblehead's West Shore consists of small "camps" situated fairly close together, which have been rehabilitated and expanded over the years. Marblehead Neck, an area known as Peach's Point, and the Clifton shorefront were developed as summer communities with large homes on large lots for wealthy summer residents.

Infrastructure

Since Marblehead is almost completely built-out, its future development is not expected to be affected by the need for extended utilities. Maintenance of aging facilities will continue.

Water Supply

Marblehead is a member of the Massachusetts Water Resources Authority (MWRA), and buys its water from the MWRA. The town is at the "end of the MWRA line." The water system includes 75 miles of water mains, 7,608 service connections and 785 hydrants. The entire town has access to a year-round water supply.

Sewer

The town is part of the South Essex Sewage District (SESD) for sewage treatment. SESD is made up of five neighboring communities; Salem, Beverly, Danvers, Peabody and Marblehead. The primary treatment plant is located in Salem, and an adjoining secondary treatment plant is presently being constructed. The secondary plant is expected to be on line and operating by 2008. Marblehead accounts for 6% of wastewater processed by SESD. The entire town is sewerage and contains 96 miles of sanitary sewers, 37 miles of storm drains and 7,570 service connections.

Electric

The town has its own electric company, Marblehead Municipal Light, which oversees 4.3 square miles of service area, 88 miles of overhead lines, 20.6 miles of underground conduit, 3,800 poles, 2,019 streetlights, and 9,957 watt-hour meters.

Transportation

MBTA bus lines 441, 442, 448, and 449 into Boston via Lynn service Marblehead. Commuter rail service to North Station, Boston, is available on the Rockport line from Salem Station (340 parking spaces in 1998, soon to be increased to 553) and Swampscott Station (131 parking spaces). Average travel time from Salem to North station via train is 25-34 minutes and Swampscott Station is 25-27 minutes. A seasonal ferry is available from Salem to Boston and Logan airport. Ample parking is available at the ferry dock. The MBTA Blue Line's closest stop is 10 miles away in Revere.

Long-Term Development Patterns

Marblehead has fifteen zoning districts, although the majority of the town is zoned as a single residence district. There are small business districts zoned as such, as well as a small industrial park zoned as "unrestricted." The town has five shoreline zoning districts. These districts have increased sideline requirements, a waterfront setback requirement, and a lower maximum height restriction. These regulations were designed to protect the views from and towards the shoreline. The town also has a harborfront district, designed to maintain, promote, and secure current and future water-dependent development, particularly marine services.

The town's Planning Board administers the site plan approval process. The site plan approval process, adopted in 1988, is designed to ensure that larger developments and development along the shoreline are designed in harmony with the prevailing character of the town and that the character of the site being developed is preserved. The process also examines the vehicular and pedestrian movement within the site for convenience and safety and satisfies that emissions from the site such as erosion, surface water runoff, sewage, etc. are minimized. The process ensures that adverse effects on abutting lots, the immediate neighborhood, and the town are minimized in terms of conflicts between residential, commercial, and industrial uses, obstruction of views, increases in use of town services, and impact on town infrastructure.

The Planning Board reviews and issues permits at a very low threshold through the site plan approval process. All nonresidential developments over 700 square feet, residential subdivisions of three or

more lots, all new construction and additions over 500 sq.ft. within any of the shoreline or harborfront districts are required to obtain a site plan approval special permit. In 1996 the town adopted subdivision control. Most communities in Massachusetts operate under this law, Marblehead being one of the last to adopt it. The subdivision control law replaced the board of survey, which operated with the Selectmen acting as that board and approving roads. In adopting the subdivision control law, the town felt that the laying out of roadways and lots was more a planning function and therefore more appropriately governed by the Planning Board. In accordance with the law, the board adopted rules and regulations that are designed to afford more flexibility in the laying out of roadways. This was done in order to adequately meet the unique character of the development of specific parcels of land rather than applying broad standards that are often inappropriate for the smaller developments Marblehead often considers.

Marblehead sees very few nonresidential developments. In fact, since 1990 to 1994 only four permits were taken for new commercial construction. However, one major commercial development is currently occurring on the west side of Pleasant Street south of School Street, on the site of the former Warwick Theater.

During the 1990s there was an average of 23 building permits for new residential construction per year. The largest subdivision that the town has seen in decades was Westledge, a 22-lot subdivision of single family homes in 1996. The Tedesco Country Club owns the largest tract of privately owned land in the town. This land is zoned residential and is presently used as a golf course. The town is unaware of any plans to discontinue its present use.

Building permits for residential development:

<u>Year</u>	<u>Single Family House Permits</u>	<u>Teardowns</u>
2001	17	8
2002	14	6
2003	12	6
2004	22	14
2005	23	10
2006	15	7
2007	10	6
2008	5	4
2009	9	8
2010	15	6
2011	15	

Subdivisions past 10 years		
<u>Year</u>	<u>Name</u>	<u>#Lots</u>
2000	Ocean Meadow	6
2001		0
2002		0
2003		0
2004	Maples Estates	10
	Legg's Hill	6
2005		0
2006		0
2007		0
2008		0
2009		0
2010	Mound Rd./ Naugus Ave	7
2011	Camille Terrace	<u>7</u>
TOTAL		46

In 2003 the town received its first 40B Comprehensive permit application, and there have been three projects permitted since then, creating 153 housing units with 39 affordable housing units.

In 2009 the town established two smart growth development zoning overly districts.

Marblehead's long-term development pattern is largely established. The future is likely to continue the pattern of in-fill construction of single-family homes, reuse or replacement of existing structures, and small nonresidential developments because of its proximity to Boston, its strong economy, and its desirable location for young families.

Section 4. Environmental Inventory and Analysis

4A. Geology, Topography, and Soils

Geology

We thank Dr. Lindley S. Hansen, Professor of Geological Sciences at Salem State University for the information in this section.

Several interesting topographic and geological features add to the uniqueness of Marblehead. First is its location in eastern Massachusetts: the town occupies an entire peninsula totaling 4.33 square miles, shaped by Massachusetts Bay, Marblehead Harbor, and Salem Sound and includes 14.2 miles of tidal shoreline. Besides the coastline, the other borders are the town of Swampscott on the south and the city of Salem on the west.

Marblehead Harbor is one of the most spectacular sites along the eastern seaboard making it not only a popular tourist destination but also the backdrop for many cultural, educational, recreational, and community activities described in other parts of this report. At its greatest depth during low tide, the harbor is 27 feet deep and approximately ½ mile wide and 1¾ miles long. The straight harbor, situated in a northeasterly direction, is located at the coordinates of 7051' W longitude and 4230' N latitude. At the southerly end of the harbor beginning at Riverhead and Devereux Beaches, a tombolo, or causeway, forms a natural enclosure and connects Marblehead Neck to the mainland. Within the

town's boundary there are two small islands: Brown's Island, which is under the jurisdiction of the Trustees of Reservations, and Gerry Island, which is privately owned.

The rocky landscape of Marblehead Neck is underlain by ancient Precambrian granite and fine-grained volcanic rocks, known as the Lynn Volcanic Complex. They reflect a once violent volcanic past, dominated by catastrophic ash flows and stiff slow-moving lava flows. The variegated, craggy exposures on Castle Rock are remnants of these pyroclastic flows, or welded tuffs. Volcanic fragments or "pyroclasts" are clearly visible in the rocks. Ancient banded lava flows form the rocky clefs beneath Marblehead Light. The Lynn Volcanics weather chalky white, which early settlers may have, at a glance, mistaken for marble. Hence, the name Marblehead. This ancient igneous rock complex comprises a small portion of the geologic terrain that geologists call Avalonia, a micro-continent and volcanic arc originating from North Africa. Avalonia peeled off of North Africa around 480 million years ago and migrated through an ancient ocean basin, no longer in existence. The eventual collision of Avalonia with North America (~380 ma) uplifted the Northern Appalachians, the roots of which are seen in the complexly metamorphosed rocks west of route 128, and running along the interior spine of New England. The dark rocks west of Marblehead Harbor are Salem-Gabbro Diorite, also part of Avalonia but a couple hundred million years younger than the Lynn Volcanics. The Salem Gabbro-Diorite is easily seen in front of the High School on Pleasant Street, at the Glover School on Maple Street, and throughout the Sevinor property off Humphrey Street.

A major fault, long since inactive, separates the two rocky terrains and is responsible for the submerged trough that forms Marblehead Harbor. Earth movements include sudden horizontal or vertical shifting of portions of the crust such as quakes and faulting, which Marblehead experienced in the 16th and 17th centuries according to Indian folklore. Evidence is seen in the form of slickenside, which are polished rock surfaces with striations that indicate faulted surfaces, not to be confused with glacially polished surfaces such as those seen on the east of the causeway. There is an example of this effect on the hilly portion of the Sevinor property behind the Marblehead Community Center. Another example of faulting is not visible and lies at the bottom of Salem Harbor that was detected in 1970 by a research vessel with seismic sounding devices. A large, down thrown fault block of crust resulted from downward slippage during a violent shaking or as a consequence of lateral spreading. This fault line is located nearly mid-harbor and is approximately 170' wide and of undetermined length. These large faults are not recent, but most likely formed when the great supercontinent, Pangea, rifted apart and the Atlantic Ocean started to open.

Following the opening of the Atlantic Ocean and millions of years of erosion and sea level fluctuations, Marblehead was no doubt overlain by sediment and a thick mantle of weathered rock. The area resembled the beach-lined coasts south of New York. This all changed when around 2.5 million years ago the climate grew colder and ice sheets developed. Locally there is only evidence that glaciers reached this far south twice during the ice age. Retreating glacial action transported rocks known as "soled stones" and left erratic boulders that are different in composition from the bedrock. Before real estate development in the 1920s, the Clifton area was dotted with these boulders, but they can also be seen today at Waterside Cemetery, in Wyman Woods, and at Forest River. Ponds such as Ware and Oliver resulted from glacial action and are known as kettle ponds. Ice blocks melted, causing the surrounding soil to cave in and create a depression that filled in with water from the water table forming the pond.

The rocky headlands and intervening pocket beaches reflect glacial scouring by the last great ice sheet, which pushed sediment onto the continental shelf and then retreated around 15,000 years ago. Waves

crashing along headlands tear off pieces of rock and grind them down to provide the area's cobbled beaches. Within each clast is a history of volcanism and a little piece of what was once North Africa.

Evidence of volcanic activity approximately 400 million years ago in the vicinity of what is now Lynn appears in the outcroppings at Chandler Hovey Park and Castle Rock, where flow banding and a "welded tuff," rocks made up of volcanic fragments, are seen. There are many examples of faults, dikes, sills, and other geologic activity in almost every exposed ledge in town, so much so that schools come to town to examine them with their geology classes, especially at Preston Beach.

Marblehead's rocky coastline, beaches, and inland terrain continue to evolve through seasonal weather changes, human and animal excavation on the land, and through the effects of erosion and weathering that is inherent with this coastal environment. Waterfront open spaces and parks areas such as Beach Bluff Park, Seaside Park, Crocker Park, Chandler Hovey Park, and Fort Sewall receive the brunt of ocean storms and tidal action. Wind and wave action in particular provides enormous energy that weathers, erodes, and changes unprotected areas such as the four major intertidal zones: Rocky Outcrops, Sandy Beaches, Sheltered Coves, and Salt Marshes. More environmental descriptions of these zones follow in Section C: Water Resources.

Topography

The town's highest elevations are in Wyman Woods, a conservation area along Salem Harbor, where the hilly terrain rises to 33 meters or 108 feet above sea level not too far from the Hamond Nature Center, and off Beacon Street, Beacon Hill, near Steer Swamp. In general, the undulating topography on the west side of town is at a higher elevation than on the east side along Marblehead Harbor. This is evidenced by the next highest areas such as at Naugus Head and the intersection of Pinecliff Drive and Crestwood Road off West Shore Drive. Both of these areas are 30 meters or 105' above sea level. Along the east side of town, the highest elevations, approximately 21 meters or 70 feet, include Gilbert Heights, Roundy's Hill, the training field at Abbot Hall, and the cliffs rising between Goldthwait Reservation and Greystone Beach.

Soils (*See Appendix D2 Map*)

The most recent soil survey available through the Town Engineer's Office is dated May 1984 and reveals two general soil types in Marblehead, both formed in glacial till: Chatfield-Hollis-Rock Outcrop association and Urban land-Udorthents association. These general soil types match those found in the neighboring communities of Lynn, Swampscott, and Salem.

The Chatfield-Hollis-Rock outcrop association (coded CrC, CrD, HuC on the soil survey map) consists of loam and is moderately deep or shallow, gently sloping to steep grade and can be well drained or somewhat excessively drained. This soil forms low irregular hills, ridges, and plains and often contains common bedrock exposures and depressions of very poorly drained organic soils. In Marblehead, this soil type exists in woodlands but also in residential areas as well as swamps and marshes.

Marblehead's soil types are more suitable for woodlands since the main limitations for residential development are due to rocky outcroppings, exposed bedrock and slope which pose problems for new construction, with or without basements. There are limitations as well for recreational development for campgrounds, picnic areas, and playgrounds due to the small loose stones or large rocks and boulders, exposed bedrock, and slopes. These limitations are less relevant for paths and trails. The

Clifton and West Shore areas were once extensively and successfully farmed, but real estate development has eliminated this, hence the old name for the Glover School – the Farms School.

As far as wildlife habitat is concerned, this soil type ranks fair to poor to very poor in supporting habitat elements such as grain or seed crops or legumes and grasses or wetlands. The soil type ranks fair to good in supporting wild herbaceous plants. This soil type ranks fair to very poor as a potential habitat for open land wildlife, woodland wildlife or wetland wildlife.

The other predominant type of soil is called Urban land-Udorthents association (coded Ur or UD on the soil survey map) and describes areas where soils have been altered or obscured by urban works or structures; or where soil material has been excavated or deposited. Urban land consists of nearly level to moderately steep areas where buildings, industrial areas, paved areas, and railroad yards cover 90% of the surface area. These areas are used primarily for commercial, industrial, or residential purposes. Udorthents consists of areas from which soil has been removed and areas on which soil has been deposited. These areas can support vegetation and are used primarily as athletic fields, playgrounds, cemeteries, or lawns as well as road building. Udorthents soils are water permeable with ranges from slow to very rapid and consist of gravel, cobblestones, stones, and boulders.

The *Marblehead Schools Open Lands Report* provides soil analyses of four school properties. At the high school, both soil types are found: the lower lying playing fields consist of Urban land-Udorthents characterized by level, filled, excavated and altered land. Chatfield-Hollis-Rock outcrop typifies the surrounding hilly areas characterized by irregular hills and ridges between 15% and 35% slope, and plains containing common bedrock exposures and depressions of very poorly drained organic soils.

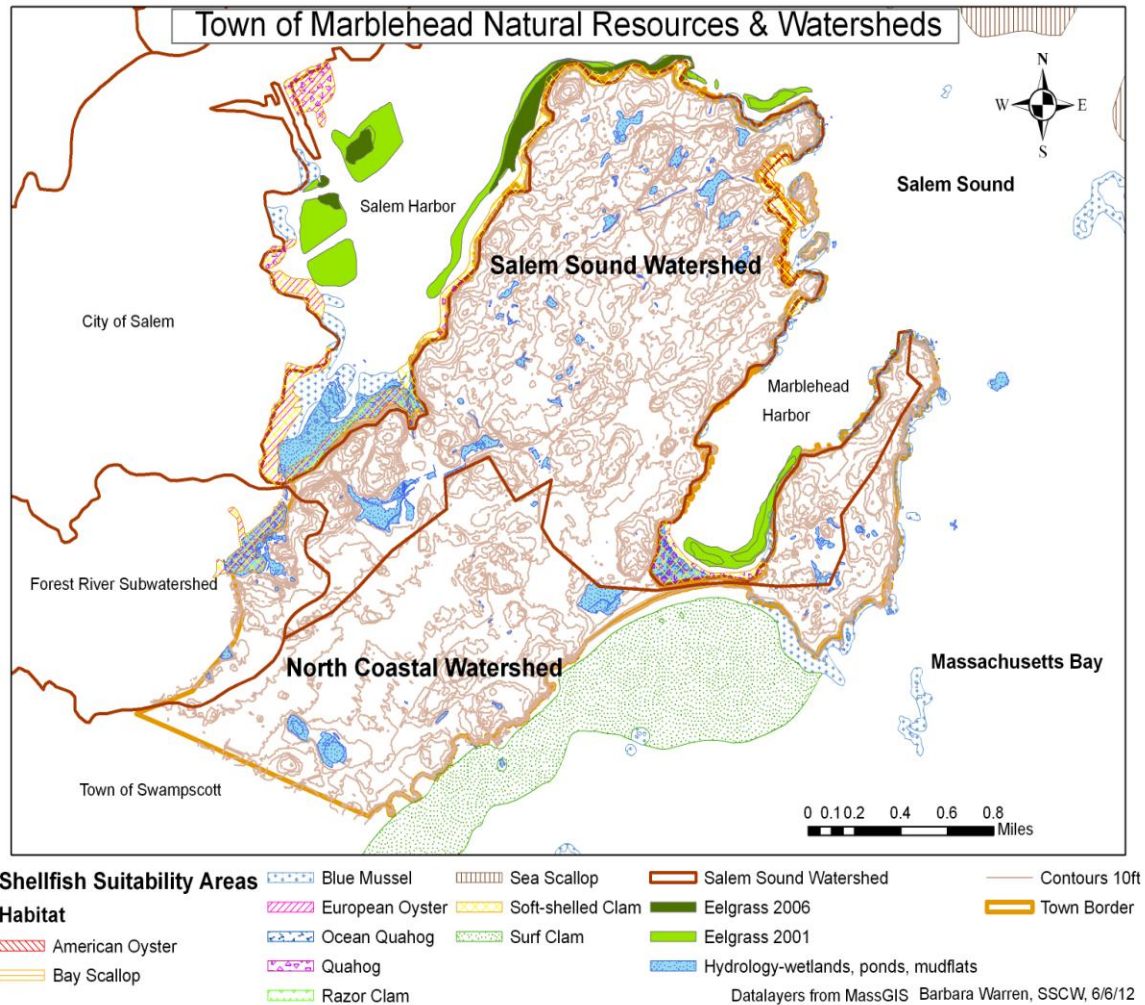
At Marblehead Veterans Memorial Middle School, much of the soil has been altered where the school, pavement, and playing fields are located. In addition to this soil type classified as Urban land-Udorthents, there consists Freetown Muck (coded Fm on the soil survey) described as wet soil poorly suited for building, farming, or recreation but well suited for wetland habitat that is studied as part of the school curriculum. Lastly, this site consists of Hollis-Urban-land Rock and (coded HuC on the soil survey) east of the hockey and playing fields. Sandy loam and exposed rock characterize this area. Its uses are limited due to the bedrock depth of 18" and by droughtiness.

The Beacon Street and Lincoln Ave. sites have combinations of wet as well as rocky and shallow to bedrock soils. These soils are classified as Freetown Muck, Hollis-Urban Land-rock outcrop, and Urban Land and therefore have similar opportunities and limitations as at the Veterans Middle School.

One other open space site, the Lead Mills property, which is currently privately owned, was contaminated until its cleanup in 2011. This site abuts the Forest River Conservation Area, the Marblehead Right-of-Way (the Path), Wyman Woods, and Salem Harbor. Elevated lead levels in the soil were found in this site, but it is not likely that adverse health effects resulted from current use of the bike paths at the site.

Watershed (submitted by Barbara Warren, Executive Director of Salem Sound Coastwatch)

Waters in the easterly half of Marblehead Neck and the southern section of Marblehead flow directly to Massachusetts Bay, while the rest of Marblehead is in the Salem Sound watershed, with sections draining to Forest River, Salem Harbor, Salem Sound, or Marblehead Harbor.



Monitoring by C. Costello, Division of Watershed Management, Massachusetts Department of Environmental Protection, observed a decline in eelgrass beds between 2001 and 2006.

Twelve-year mapping and change analysis of eelgrass (*Zostera marina*) a real abundance in Massachusetts (U.S.A) identifies statewide declines

Charles T. Costello & William Judson Kenworthy

Accepted: 27 December 2010

In addition to showing the watershed areas of Marblehead, this map also displays the results of a study of the decline in marine eel grass. While not listed as an endangered plant by the state, this noticeable reduction over time is something that Salem Sound Coastwatch works to fight as the grass beds are important to stabilizing the shoreline and are nursery areas for various marine wildlife. The Marblehead Conservation Commission supports efforts to protect against further erosion.

4B. Landscape Character

Marblehead has a variety of landscapes, including rocky shores, sandy and cobble beaches, salt marshes, ponds, wetlands, upland forests, and meadows.

Rocky shores, so typical of New England, predominate where the land meets the sea. Much of this landform is in private hands, but public access is available throughout the town. The best places available to the public include Castle Rock and Chandler Hovey Park on Marblehead Neck. On the mainland, Fort Sewall, Red Steps, Seaside Park, Crocker Park and Crowninshield Island are popular access points.

Sandy and cobble beaches form in the bays between the rock headlands throughout town. The two longest beaches are Devereux and Preston Beach, which stretches into Swampscott. Numerous pocket beaches are scattered through the town. Those with public access include Fort Beach, Gerry Playground, and Danger Beach. The best example of a cobble beach is at the end of Devereux Beach in front of Goldthwait Reservation. Here, the characteristic terraces of cobble beaches are clearly evident.

Tombolos are formed where offshore islands divide the current so it meets again on the landward side and drops sand and gravel. Examples are the connection between the Neck and the mainland and the one between Gerry Island and Gas House Beach.

Salt marshes are found in two areas of town. The largest is in the Forest River Conservation area. A smaller one is located at the Goldthwait Reservation. Both are ditched and in danger from development. In the case of Goldthwait, storm drains entering into the upland side of the marsh provide enough fresh water to foster the growth of large stands of phragmites.

Ponds are sprinkled across the glacial landscape. Those with public access include Redd's Pond, Black Joe's Pond, Ware Pond, Wye Pond, Hawthorn Pond, and two unnamed ponds in the Audubon Sanctuary on the Neck. There are also three unnamed ponds in the Forest River Conservation Area. Two of these small ponds were dug during the excavation of gravel in the late 1940s or early 1950s. Another small pond, a glacial kettle, has been certified as Marblehead's only vernal pool after fairy shrimp were discovered there in 1997.

Wetlands predominate in Steer Swamp and Wyman Woods. They also lie on the borders of both Hawthorn Pond and Ware Pond. As Wye Pond fills in, it is becoming more of a wetland than a pond.

Upland forests are located in Wyman Woods and Steer Swamp. Both areas are successional forests as old pastureland returns to a more natural state.

Meadows are diminishing rapidly as a result of development. The last remaining large meadow was lost when the new high school was built in 2005/7.

4C. Water Resources

As a seaside community, Marblehead's heritage is tied to its water resources. The town is bordered on three sides by the sea, with 14.2 miles of tidal shoreline, and has title to two near shore islands. Numerous pocket beaches and fringing marshes are scattered along the coast. Important inland water resources also grace the town. These include about seven ponds and four major wetland areas comprising 69 acres.

Recreational opportunities in and around these water bodies are numerous due to public access in many places. Networks of trails and benches around many of the inland water resources allow for walking, bird watching, ice skating, and model sailboat racing, while parking facilities and public ways encourage residents to enjoy the town's beaches.

Harbor access is provided by public piers in both Marblehead and Salem Harbors, and mooring fees are reasonable.

Many of the town's freshwater resources are currently endangered by increased nutrient loads associated with urbanization. The problem of eutrophication is discussed in more detail in section 4-G (*Environmental Problems*). Several ongoing efforts to combat cultural eutrophication of surface water bodies are also mentioned in this section.

C1. Surface Water

Ponds

A glacial landscape of kettle holes, scour lakes, drumlins, and sand and gravel deposits forms the setting for the town's fresh surface waters. In the following section, each of the existing pond systems in town (several ponds have closed in during the last century) is briefly described, and recreational uses and avenues of public access are outlined.

Black Joe's Pond. Located 1/8th mile due north of Redd's Pond, Black Joe's Pond is also a perched, spring-fed glacial scour lake, with a dioritic granite basin. It has an outlet that empties into the ocean and has a maximum depth of seven feet and a surface area of approximately two acres. Black Joe's is accessible only by foot, contributing to its preservation. It abuts conservation land and is partially owned by the town. It is used extensively for skating in the winter and some fishing in the summer. The pond is home to mallards, gulls, pheasant, turtles, muskrat, fish hawks, raccoons, field mice, sparrows, an occasional fox, and bullfrogs. Abutting the northern bank of the pond is Black Joe's Tavern, a private residence and an historic building dating to 1691. Joe Brown, for whom Black Joe's Pond was named, resided in this house from 1798 until his death in 1834. He served as a revolutionary soldier, and his Aunt Crese later used the house as a stop on the Underground Railway.

Coy Ponds. The Coy Ponds system is a series of kettle hole ponds, located on the Salem-Marblehead boundary just above Forest River. There is a large pond by Legg's Hill that is in Salem. This became much larger when Marblehead stopped draining water from the area. In the Forest River conservation area, there are three small ponds. One is the last remaining kettle in the area. The other two were created when the area was a gravel pit before World War II. There were several kettles before the gravel was removed to fill land for Logan Airport, and the area was known as the Dungeons. As discussed in Section 4-C4 (*Aquifer Recharge Areas*) this area provided drinking water in the past, and has been reassessed more recently for its feasibility as a future water supply. Due to the inflow of road salt and oil from the Vinnin Square shopping area, the water quality has been degraded.

Hawthorn Pond is essentially comprised of two separate wetlands. To the north is a shallow cattail marsh. Sedges and multiflora rose grow nearby, and speckled alder and red maple rim the border. To the south is a deep marsh, with some open water and more sparse vegetation. Duckweed and pond lilies are found in the marsh, with cattail and willows around the edges.

Nanepashemet Pond (Great Pond) and the Audubon Sanctuary Pond. Nanepashemet or Great Pond, located on Marblehead Neck, has greatly diminished in size in the latter part of this century. A 1943 U.S.G.S. map shows a huge marsh area, where a much smaller marsh exists today. The name "Great Pond" probably referred to the entire system, which now includes several other small ponds, one of which is the unnamed Audubon Sanctuary pond. Located on the 17 acre Audubon Sanctuary, this pond is about one half of an acre in size and only three to four feet deep, with a silt bed. The pond is spring-fed, and was developed in 1979. This area has been highly manipulated, with the streams that connect the system having been rerouted at various times. Nevertheless, the pond's fresh water, close to the sea, provides an excellent habitat for migratory birds, and a lot of rarities are seen at this site. An occasional green-backed or gray-blue heron, ducks, bitterns, kingfishers, flycatchers, red-winged blackbirds, and tree swallows have all been seen here, as well as morning warblers during spring migration in early June, and white-eyed vireos as early as late April. Even the elusive Connecticut warbler has been seen in the fall. Fishing is not permitted at the Audubon pond, which has been stocked at some stage with goldfish. A southern turtle, the red-eared slider, has been imported to the pond and has survived three New England winters. Snapping turtles are the native species present at the pond. Mallards nest in the marshy areas, and red-spotted newts breed here.

Oliver Pond is located just to the northwest and upstream of Ware Pond. The two are hydrologically linked by a storm water pipe. Oliver Pond is plagued by algal blooms, a signal of its eutrophic condition, likely resulting from direct discharge of storm water into this water body. The private owners of the pond have undertaken a management program, including herbicide application, to reduce algal growth. There is a real need to eliminate nutrient sources to the pond, rather than treat the symptoms of eutrophication. There is no public access to Oliver Pond at this time, but an access from May St. has been offered by a resident.

Redd's Pond is considered the Walden Pond of Marblehead. It is a glacial scour lake, of approximately 80,000 cu. ft. or 0.6 million gallons. The pond's surface is 58 feet above sea level, and its basin is composed of hornblende diorite. It is spring fed, with no obvious inlet. While it remains unfrozen, Redd's Pond is home to approximately 100 ducks. The females lay their eggs and raise their fledglings in the adjacent marsh known locally as "Little Nurse Pond." When the pond freezes, the flock winters in a protected cove of Little Harbor. Gulls and migratory birds and waterfowl also frequent the pond. Bass and carp, which are said to have been stocked at some stage, also live in the pond. The pond is ringed almost entirely by bedrock or pavement, providing a walkway around the perimeter. Redd's is well used for model boat racing, fishing, and relaxing. Families are often seen feeding the ducks on the pond. There is much contemporary concern about what appears to be declining water quality in Redd's Pond. Filamentous algae often cover the bottom of the pond and surface algal blooms occur during parts of the summer. Best Management Practices (BMPs) are being reviewed with the help of a state matching grant of \$14,500 that the town was awarded in fiscal year 1998. A study is underway to assess the nutrient levels of the water column and of the sediment.

Ware Pond. Oliver and Ware Ponds are located in the Clifton section of Marblehead. The Ware Pond site spans 8.5 acres, including the 3.8 acres of pond. The land here is nearly level to gently sloping, with poorly drained soils vegetated by red maples, arrowheads, and alders. The pond is bordered by an artificial "causeway" which separates it from a one-acre shallow marsh. This marsh is mainly vegetated with jewelweed, cattails, and purple loosestrife. About half of the perimeter of the pond is easily accessed for walking, bird watching, and ice skating in the winter. There is a handicap-accessible raised walkway for access to the back of the pond and a leveled and smoothed path to the

front of the pond from Warren Road. This approach leads to a raised viewing area, giving a fine view of the pond.

Several other ponds graced the town in earlier parts of its history, but these have filled in over time, due to increasing development pressures. These include Manataug Trail Pond, which is now a woodland marsh, Scotch Pond, now a cattail bog, one of the Coy Ponds, and Devereux Pond. Oliver, Ware, and Nanepashemet Ponds are greatly diminished in size relative to their historical stature.

Marblehead Harbor

Marblehead Harbor is home to approximately 2,500 sailboats, motorboats, and fishing boats. It averages 27 feet in depth, with shallow areas at the head of the harbor. Public access to the harbor is provided by a public boat ramp at Riverhead Beach and several public piers downtown, including the State Street and Commercial Street wharves.

The waters of Marblehead Harbor are classified as SA (DWPC 1988). Class SA waters are designated for protection and propagation of fish, other aquatic life, and wildlife; for primary and secondary contact recreation; and for shellfish harvesting without depuration in approved areas. No identified major point sources discharge into Marblehead Harbor, although smaller discharges and non-point source pollution inputs are numerous. These include street runoff via storm drains, boat toilets (now banned), bilge pump discharges (a major problem), fuel-dispensing spills, and miscellaneous other inputs from the large number of boaters and other individuals who utilize the harbor.

Working under a grant from the Federal Clean Waters Act, Marblehead purchased a pump-out boat and offers its services to boaters who use the harbor. However, the process of cleaning up the harbor waters is proceeding slowly due in part to a lack of funds for personnel to perform the pumping. Thus far, Marblehead does not charge for the pump-out services, and there are approximately 2,500 boats in the two harbors surrounding Marblehead for which the unit is responsible. The town of Marblehead storm water system has tested positive for illicit contaminants and is currently in violation of its EPA-issued MS4 storm water discharge permit. In an effort to remediate the system and by order of the EPA, an Illicit Discharge Detection and Elimination (IDDE) plan was enacted.

Coastal Environment and Beaches

The coast of Marblehead offers a wide array of habitats ranging from exposed, rocky outcrops to protected marshes and mud flats. These habitats provide niches for a wide variety of marine plants and animals. Rocky outcrops dominate much of the coastal landscape. In these areas, characteristic zonations of plants and animals traverse the intertidal zone. Encrusting animals (e.g. barnacles, mussels, and limpets) are common, and in the summer, tidal pools are filled with numerous crustaceans, small fish, and green algae. Rocks are covered with encrusting brown and red algae. In the deeper parts of the intertidal zone, large brown kelp and red algae are found, with more delicate red and brown algae in the upper portions of the intertidal zone.

Cobble and sand beaches are a prominent feature of the Marblehead coastline. Those exposed to the open ocean receive the highest energy waves and contain the largest sand grain sizes. These areas, including Devereux Beach, are ideal habitat for large surf clams. With the closure of the Tinker's Island Sewage outfall at the Roaring Bulls, Devereux Beach surf clams may once again be suitable for human consumption.

The two largest beaches in town, Preston Beach and Devereux Beach, are both barrier beaches. Preston Beach, a sandy beach armored by seawalls, spans the border between Marblehead and Swampscott. Devereux Beach, a cobble beach, is also armored at one end by the wall supporting the Causeway, the paved road leading to Marblehead Neck. Both beaches have easy public access with both paid and resident parking areas. Preston Beach is bordered by Beach Bluff Park, a small park recently developed by the Clifton Improvement Association for use by the public. Devereux Beach has a food concession, rest rooms, and a playground. Beachgoers use these public beaches for swimming, walking, sunbathing, and surfcasting. Smaller but equally popular public beaches include Riverhead Beach, directly opposite Devereux Beach, Gas House Beach, and Grace Oliver Beach. Each of these mixed sand and cobble beaches can be publicly accessed and provide additional recreational opportunities. Gas House Beach was the historical site of a manufactured gas plant (MGP) operated by Marblehead Gas Light Company (MGLC). Contamination from this operation was discovered but has been cleaned up. As a result, at Gas House beach there is now a small public park. Due to elevated bacterial counts, signs warning bathers of potential environmental and human health hazards have been placed at Grace Oliver and Riverhead beaches when testing dictates the need. Testing is regularly carried out throughout the summer months.

Shallow coves with fine sediments are prevalent in the protected areas within Salem, Marblehead, and Little Harbors. These regions, although highly contaminated, support dense beds of mussels and soft-shelled clams. They are important nursery grounds for finfish and crustaceans. Brown and red algae commonly grow on cobbles within these protected habitats, and eel grass is often anchored in the mud just below the low-water line. It seems to be coming back after a long period of die-offs. Salem Sound Coastwatch and the town of Marblehead are undertaking a project to restore the watershed surrounding Wyman Cove, so that the once productive shellfish beds there may be rejuvenated and eventually opened for shell fishing again. At the upper ends of the mud flats, saltwater marshes predominate. These regions of saltwater tolerant plants are most common along the Marblehead shoreline at the head of Salem Harbor. Luxuriant meadows of marine cord grass (*Spartina* spp.) serve to anchor fine sediments in place. Upon the death of these plants, significant quantities of nutrients are released into the water, maintaining the fertility of the coastal waters.

C2. Flood Hazard Areas *(See Appendix D4b – Flood Zoning Map)*

A flood insurance study was undertaken in 1983 by FEMA for the town of Marblehead. This study suggests that the low-lying coastal areas of Marblehead are subject to the periodic flooding and wave attack that accompanies coastal storms, including northeasters and hurricanes. Storm damage tends to be limited to low coastal highways, boats, beaches, and seawalls. However, occasional major storms accompanied by strong onshore winds have resulted in storm surge and wave activity that has caused extensive property damage. Some of the more significant storms to impact Marblehead include those of December 1909 and 1959 (approximately 160- and 15- year recurrence intervals, respectively); hurricanes Carol 1954 and Donna 1960; and February 1972 and 1978 (approximately 25- and 80-year recurrence intervals, respectively). These storms damaged harbors, marinas, commercial developments, and residential developments in the flood-prone coastal areas.

In 2012 the town adopted a new floodplain bylaw, and the new FEMA Flood Insurance Rate Maps must be adopted by this date in order to remain a participating community within the National Flood Insurance Program. The purpose of the floodplain district is to protect public safety and to minimize damage caused by floods.

C3. Freshwater Wetlands Areas *(See Appendix D4c – Wetlands Map):*

Marblehead has approximately 69 acres of wetlands, 2.4% of the town's total area. Wetlands consist of 38 acres of open freshwater wetlands, 20 acres of wood swamps, and 11 acres of saltwater wetlands.

Steer Swamp and Flag Pond

This site, located at the south side of Beacon Street between the Board of Health land and Norman Street, consists of 43.5 acres of roughly varied land. The Steer Swamp Conservation Area is owned by the town, acquired by purchase, eminent domain, and gift, over a period of 20 years. The wetlands ecosystem and drainage area extends beyond the borders of the conservation area, totaling 157 acres. A narrow, moderate yield aquifer underlies the watershed. Flag Pond lies at the center of Steer Swamp, and a stream (Babbling Brook) flows through the swamp. Flag Pond was created in the center of the swamp in the mid-1600s when the small stream was dammed in order to power a mill. The dam was later dismantled, allowing the area to revert to its former state as a marsh. This area is filling in at an accelerated rate, evolving from a shallow marsh to a wet meadow. It supports a dense growth of herbaceous aquatic vegetation, as well as cattails, phragmites, arrowheads and purple loosestrife. Two streams with a contributing area of approximately 205 acres feed the pond. The terrain on the upland portions of Steer Swamp is generally steep with many ledgy ridges and shallow to bedrock soils. The clustered vegetation is second-growth scrub and brush over most of the upland portion, representing an early successional stage from its previous use as pasture. The predominant tree species on the upland section include choke cherry, aspen, gray birch, and sumac. Lowland portions of the site are swamp and marshland, abounding in speckled alder, arrowwood viburnum, and willow, low and high blueberry, sassafras, blackberries, bayberries, strawberries, and myriad wildflowers.

The diversity in terrain and ecosystem types (grassy areas, shrubby growth, forest, and wetlands) and the high productivity of these areas make for excellent wildlife habitat, particularly for songbirds and waterfowl. It is the most extensive habitat for wild birds and animals in Marblehead, and on any particular day mallards, geese, grouse, cardinals, and many other songbirds can be observed. Traffic throughout the area is limited to paths used by walkers, mountain bicyclists, and horseback riders. Erosion of trails due to heavy use was especially severe in steep areas. In response to the 1999 Open Space and Recreation Plan, the Marblehead Conservancy, a nonprofit, has repaired the trails and continues to maintain the area well. This area is heavily used by neighbors.

The water quality in Steer Swamp is questionable. The stream that runs through the swamp begins above West Shore Drive as an open stream and flows through a 60-inch culvert under the Marblehead Transfer Station. An incinerator on the site of the Transfer Station was shut down in October, 1975. In the past, ash from the incinerator was landfilled on site. The landfill limits extend beyond the original 10-acre area, with the majority of the extended fill limit found on abutting Steer Swamp conservation land. The town has approved the capping of the landfill and the design of the new waste-handling transfer station and extensive recycling area. Storm water runoff will have to be treated before entering the stream to prevent poor water quality in both Steer Swamp and downstream at Grace Oliver Beach.

Hawthorn Pond Area

This town-owned conservation area consists of 10.7 acres of wetlands and marsh. It is located adjacent to the Path (the old railroad bed), and can be easily accessed by foot through a small trail system. It was acquired by purchases and gifts from a variety of landowners. The area is used for nature study

by local schools, and by the many who use the Path for hiking, bicycling, jogging, horseback riding, and cross-country skiing. The site is moderately sloped, with shallow-to-bedrock soil near the Hawthorn Road entrance, and a low-lying deep marsh in the center of the parcel. The vegetation on the upland portion of the site consists of a mixture of hardwoods and shrubs, including black cherry, pin cherry, staghorn sumac, aspen, and red and black raspberry.

Two separate wetlands are located on the site. To the north is a shallow cattail marsh. Sedges and multiflora rose grow nearby, and speckled alder and red maple rim the border. To the south is a deep marsh, with some open water and more sparse vegetation. Duckweed and pond lilies are found in the marsh, with cattail and willows around the edges. These wetlands border a poorly drained wooded area to the south and immediately adjacent to the Path. The soils on this site range from shallow-to-bedrock fine sandy loams on the upland portions to hardpan-till soil on the eastern side. The wetland soils are composed of deep muck and silt loam.

Gatchell-Wyman Woods

This 33.5 acre site, bordered by Gatchell Playground, Salem Harbor, and the Path, was the first parcel in Town to come under control of the Conservation Commission as a result of the March 1962 Town Meeting. The terrain in Wyman Woods is diverse, ranging from level, poorly drained wooded swamp between the playground and the Path, to steep, rocky, shallow-to-bedrock uplands near the harbor. There are two distinct hills on the upland portion of the parcel where the soil is especially thin and outcrops abundant.

The soils here are deep muck in the low-lying area and shallow-to-bedrock, very fine sandy loams on the uplands. Vegetation consists of primarily willow, red maple, highbush blueberry, and buttonbush in the low lying areas, and a mixture of hardwoods, including red and white oaks, red maples, hickory, black cherry, red cedar, and white ash on the uplands. The northwestern portion of the parcel abuts Salem Harbor where woodlands transition into an open, grassy area bordering a rocky beach. This area has good potential for passive recreational uses including picnicking, fishing, and swimming. Easy access is provided by the Path. The Hamond Nature Center, formerly Camp Shore Lea, a Girl Scout cabin, is located on the portion of the site closest to the playground. Plans are underway to use the cabin for a program to provide both children and adults with opportunities to learn about the natural history and ecology of Marblehead's open spaces.

C4. Estuaries

Forest River

The 30-acre Forest River site is located at Marblehead's northwestern boundary with Salem. It includes one of the two significant estuarine areas in Marblehead. The terrain of this area is diverse, with steep exposed bedrock at the former sand and gravel excavation site on the property, poorly drained soils near the southern border, and salt marsh bordering the river. The site is accessed by a trail system.

Vegetation is diverse in density and composition, ranging from sparse grasses, weeds, and shrubs in the heavily scoured areas to thick sumac stands and a pole hardwood stand at the Old Salem Road end of the parcel. Staghorn sumac, gray birch, brambles and pin cherry are the dominant shrub species. Red maple, bigtooth aspen and black cherry pervade the wooded areas. *Spartina patens* dominates the salt marsh.

Much of the soil in the area was disturbed when the site was excavated for gravel, with pits dug down to bedrock or the water table. Two small excavation pits have filled with fresh water. There is also a seasonal pond at the bottom of the remaining kettle. They are currently littered, but could be improved for recreation and wildlife purposes. The remaining ridges are generally composed of shallow-to-bedrock soils and occasional gravel pockets. The presence of tidal gates, no longer used by the city of Salem, have continue to impair the ecological integrity of this system. In 1998 the Salem Conservation Commission obtained an agreement to leave the tidal gates open for a 1-year trial period. Heavy erosion of the marsh banks and high fecal coliform counts represent some of the problems associated with inhibited tidal flushing of this estuary. The gates are now back in operation, closing intermittently during summer months and remaining open during the winter.

Goldthwait Reservation

Historically, this area was the site of Devereux Pond, a large pond in the middle of a saltwater marsh. The pond no longer exists, but was shown on maps up to about 1900. Whether it really was a pond or just a marsh is hard to tell. There also was a smaller pond located by Orchard Street, which was formed by a dam. After this time neither is shown. The dam was obviously removed and the larger “pond” probably filled in from eutrophication. Today the area comprises 12 acres of salt marsh/salt meadow nestled behind Devereux Beach, a cobble barrier beach. The marsh is connected to Riverhead Beach by a series of 48-inch culverts. A small tidal creek meanders through the marsh, dividing several times. The creek is bordered by a small quantity of salt marsh cordgrass (*Spartina alterniflora*), while the majority of the marsh is vegetated by a dense stand of salt meadow grass (*Spartina patens*). The Reservation is bordered by a band of common reed (*Phragmites communis*), a common inhabitant of marsh edges and fresh- and saltwater transition zones.

Along the northern and western borders, where runoff from the adjacent residential neighborhood enters through several stormwater pipes, the area is vegetated by invasive freshwater wetlands species. These include cattails (*Typha*), purple loosestrife (*Lythrum salicaria*), sensitive fern (*Onoclea sensibilis*), willows (*Salix* sp.), and red maple (*Acer rubrum*). The Trustees of Goldthwait Reservation have undertaken a restoration effort at the marsh, aimed at eradicating these invaders through mechanical removal and burning of vegetation, as well as channel dredging to enhance circulation of salt water within the marsh. Because the real culprit is likely fresh stormwater runoff, a rerouting of the town's stormwater drains will be necessary to restore the marsh. Efforts are being made now to rid the area of phragmites.

The perimeter of the marsh is easily accessed near the public parking lots at Devereux Beach. Historical records show that several other marshes previously existed in town, including the Great Swamp (or Brickyard Reservoir). These marshes, like some of the former ponds, have filled in due to residential development.

C5. Aquifer recharge areas

Marblehead's potential groundwater supply is limited due to lack of aquifers and potential saltwater intrusion. Since 1952, Marblehead's water supply has been provided by the Metropolitan District Commission. Prior to joining the MDC system, Marblehead water came from town-owned wells and a pumping station off Loring Avenue in Salem, and from Thompson's Meadow, also in Salem.

Thompson's Meadow was purchased by the town on May 28, 1912, from Orin Thompson (54.5 acres) and R.D. Potter (12.8 acres) to supplement the town water supply. In 1923-24 this area was tied in to

Marblehead's Legg's Hill filter beds to supplement that supply. These wells were shallow driven wells that collected mainly surface water, providing approximately 630,000 gallons per day. When the quality of the water from these wells deteriorated, they were taken out of service and the town became part of the Department of Conservation and Recreation's water supply network.

In 1985, Town Meeting authorized a study to determine the current quality of water in the wells. The data received to date indicates that there is a good possibility that this water could be utilized with some treatment to reduce excess iron. As part of this effort, the Zone II (zone of contribution to the well) for this potential water supply was mapped by SEA Consultants. This study concluded that the safe yield of the aquifer is about 0.3 mgd, and that in order to be used as drinking water, water drawn from this site would require filtration to reduce turbidity and metal concentrations, and disinfected since the supply would be partially induced from a nearby pond.

The Sewer and Water Board has always been on the forefront of efforts to conserve water. During this decade, the board initiated an aggressive leak-detection program. The results of this program show that unaccounted water use in the town is one of the lowest in the state. The Board has also pursued a state grant for the identification of infiltration within the sewer system. The Sewer Board received a 90% grant to study the inflow and infiltration of the system. The grant itself was for \$272,000, but the long-term benefits to the rate payers will be in the millions of dollars as the cost of sewage treatment continues to escalate. Both of these programs contribute significantly to the very best possible use of our resources.

The town's two elevated water tanks hold a one-day supply: 1.5 million gallons at the Village Street tank and 1 million gallons at Burke's Hill. Average water use is 100 gallons per person per day (total: 2.2 million gallons per day).

4D. Vegetation

Marblehead's Recreation and Parks Department has been very active in maintaining the trees along the roads and in public areas. However, a lot of stress is still being placed on the remaining vegetation. Any remaining "pocket" woods and wetlands (those small, privately owned parcels not coming under the jurisdiction of the Conservation Commission or the Recreation and Parks Department) are being consumed. Abutters to conservation lands often expand their yards to include a little bit here and there of the conservation lands. Or they use them as dumps for their yard waste.

Marblehead has approximately 9000 shade trees on 72 miles of public ways as well as additional trees and shrubs in parks and on other public grounds. The tree warden, who is appointed by the Board of Selectmen, is in charge of the planting, care, and maintenance of public trees. The planting of trees is done throughout the growing season. Presently, there is a greater need for new and replacement trees than the budget provides.

A fund to accept donations for planting trees has been established. The town presently has approximately 15 species of trees that are planted, including Gingko biloba, Japanese Zelkova, flowering crabapple, flowering pear, Kwanzan cherry. Winter moth has been the biggest threat to tree health; also sugar maple decline has had an impact on the town. Sidewalk upheaval continues to be a problem as root systems of trees mature. Public shade trees may not be cut, trimmed, or removed by any person other than the tree warden, even if he/she is the owner of the fee in the land on which a

public tree is situated, except upon a permit in writing from said tree warden. They may not be cut down or removed without an advertised public hearing, which shall identify the size, type, and location of the shade tree or trees to be cut down or removed.

It is still recognized that Marblehead has a very valuable series of conservation lands. These lands encompass heavily wooded areas; wetlands such as salt marshes, inland marshes, and tidal flats; open fields; and rocky outcroppings. Altogether these areas afford the public some very enjoyable vistas, pleasant hiking, and the opportunity to commune with nature. In addition, the vegetation on these lands and the many trees along the streets provide the public with a very real awareness of the vital role such vegetation plays in the physical and mental health of the community. While such open spaces provide many important values, perhaps one which is of significant value to the town is the stormwater storage capability. Since there is a very large amount of impervious surface in the very dense town, the ability of these open spaces to take up water during heavy rainfalls has become extremely important to prevent local flooding of some neighborhoods. These lands also provide much-needed habitat for terrestrial and aquatic wildlife. A vernal pool has been identified and registered on one of these lands.

The plants described below provide a wide variety of food for wildlife, especially birds, since Marblehead is on the Atlantic flyway, a major bird migration route. Trees are major contributors to soil chemistry, which is vitally important to both wildflowers and amphibians. Oaks and pines, for example, enhance the acid environment required for high- and lowbush blueberries, Indian pipestem, Jack-in-the-pulpit, columbine, lady's slippers, wild oats, and many other plants. In particular, Indian pipestem and lady's slippers are so sensitive to soil chemistry and the presence (or absence) of certain microorganisms that they rarely survive transplantation. Marblehead is very fortunate to have the foregoing as one of the "plant communities."

Another plant community present in Marblehead includes swamp maple, alders, pussy willows, clethra, Joe Pye weed, thalictrum, false lily-of-the-valley, horsetail, native geraniums, a host of ferns and mosses, and other aquatic plants, including cat o' nine tails. The areas that transition between the oak-dominant and maple-dominant areas include locust trees, paper birch, black cherry, red cedar, blackberries, (red and black) raspberries, strawberries, grasses, rugosa roses, vetches, and cinquefoils. The locust trees also border the more open sunny areas and salt marshes, along with willows, where chickory, beach peas, toadflax, daisies, rabbit and several other clovers flourish.

Endangered Plants

The Massachusetts List of Endangered, Threatened, and Special Concern Species (http://www.mass.gov/dfwele/dfw/nhesp/species_info/mesa_list/mesa_list.htm) identifies one plant, *Eleocharis ovata* (Ovate Spike-sedge), as endangered and last observed in Marblehead in 1971.

While remaining alert to the endangerment of plant species, it is important to recognize that a source of endangerment lies in the substantial amount of alien invasive plants that exist in Marblehead.

Protection

The management of the conservation lands is a critical issue. Citizens have identified the type of problems related to the urbanization of the area mentioned above. In addition, invasive plants such as oriental bittersweet, Japanese knotweed, purple loosestrife, and phragmites threaten to convert some of these lands into less valuable monocultures. The Trails Committee of the Marblehead Conservancy, a volunteer group, has contributed a great deal to controlling the spread of these invasives, including

eradicating a large stand of kudzu, a vine that is capable of reaching lengths of more than 100 feet, growing at a rate of one foot per day. One of two stands was discovered at the end of the Path in Wyman Woods.

Other invasive plants have been identified in town with some effort to control their spreading. Porcelain berry, pepperweed, garlic mustard, Norway maple are all examples. Watershield has covered some 75% of Black Joe's Pond. Careless discarding of unwanted plants has also led to the spread of English ivy and other ground covers. Unfortunately, so much of Marblehead land has been disturbed over the past several decades that the entire area has been fertile ground for invasives.

Local schools, scout troops, church groups and others have also been instrumental in helping maintain some of the trails and in policing the area for trash. But it is recognized that the best way to maintain the lands is by having them used by the public, which in turn will want to preserve them for their enjoyment. Within reason, the more people who use these lands, the more support they will receive. Education of the public is a key element in achieving this goal.

4E. Fisheries and Wildlife

The wildlife is typically suburban: rabbits, raccoons, skunks, foxes, some coyotes, wild turkeys, pheasants, and songbirds. Because the town is located along the Atlantic coast flyway for migratory birds, both local and transient waterfowl are plentiful. Shellfish, mussels, clams, lobster, and finfish abound in the salt water. The waters around Gerry Island offer a safe and unique environment for lobster nurseries, and the rocky substrate provides the juvenile lobsters with cracks to hide in until they are large enough to survive. The numbers around Gerry Island are greater than any other monitored site in Massachusetts and New Hampshire, and half of the sites in Maine. Bluegills, carp, and horned pout can be found in a few freshwater ponds.

A vernal pool was identified in the Forest River conservation area and registered with the Massachusetts Division of Fisheries and Wildlife in April, 1998, as pool #1442. To qualify as a vernal pool, the water in the pool must contain certain obligate amphibian and/or invertebrate species. The obligate species found in this particular pool was fairy shrimp (anostraca). Registered vernal pools are protected by the Massachusetts Wetlands Protection Act. Any discharge of fill material into, or dredging from, a registered vernal pool is strictly prohibited.

Endangered wildlife

The Massachusetts list of wildlife species considered threatened or of special concern in Marblehead are:

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Bird	<i>Sterna hirundo</i>	Common Tern	SC	2001
Butterfly Moth	<i>Pieris oleracea</i>	Mustard White	T	1914
Reptile	<i>Malaclemys terrapin</i>	Diamond-backed Terrapin	T	1979

Note: The listings are taken to be those that use an area for breeding rather than for migration.

One other species, the American eel (*Anguilla rostrata*), is not yet on the list, but is being considered. The American eel spawns in the Atlantic Ocean and migrates to fresh water to mature. This eel is known to inhabit the upper reaches of Forest River.

On September 28, 2011, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service released notice that the American eel was being reconsidered for listing as a threatened or endangered species. The Service has begun a status review on new information that became available after 2007. The notice stated – “The American eel, found in freshwater, estuarine and marine habitats from Greenland to South America, has been extirpated from portions of its historical freshwater habitat during the last 100 years, mostly resulting from dams built through the 1960s. Habitat loss and degradation, harvest, and turbine mortality have also contributed to some local population declines.” This may be significant to the Forest River as it currently flows through floodgates that are periodically closed, but which will hopefully be able to remain open or removed altogether.

Wildlife Corridors and Flyways

The former railroad bed that once connected with Salem and, separately, with Swampscott is today a utility corridor for both electric power and sewerage lines. Its very openness invites not only human traffic but also a variety of wildlife. The past few years have seen an increase in appearances of coyote, red fox, whitetail deer, turkeys, and fisher cats. All have been seen in areas alongside the old railway bed. Other sightings are mostly related to conservation areas.

Forest River is a corridor for many species of wildlife: fish, reptiles, birds, and animals. As noted above, the river is the pathway for the American eel to find its way from the Atlantic Ocean to its maturing home. Horseshoe crabs breed along the shores in May of each year. Egrets and herons nest in the area. Occasionally an eagle is spotted not far from the riverbanks.

Marblehead Neck, an island connected to the mainland by a causeway, was designated an Important Bird Area by the Audubon Society primarily for its importance to migrating land birds in the spring (April to early June) and fall (August through early November), as well as to some overwintering species. Indeed, the town of Marblehead, being a peninsula on the Atlantic coast flyway of migrating birds, has its own importance due to its physical features. It makes all open space a premium in town since everywhere is valuable. Birds arrive in the spring on Marblehead Neck, moving into the Audubon sanctuary and adjacent neighborhood. They have been tracked moving around the neighborhood and around the sanctuary then seem to flying inland, frequently ending up at the near shore of Salem Harbor where they stop due to the water barrier. Then it seems that they migrate inland or north the following evening. So the flight corridor has to be across the town, loosely through the residential areas. Of course in urbanized areas, the threats from cats, other predators, leaf blowers (which impair their ability to hear), and other human activities are all likely sources of stress for the migrating birds.

In the fall, some species of birds fly directly from Massachusetts, quite likely from Marblehead, straight to the Caribbean and South America. One species that does this is the Blackpoll Warbler, a state listed species. Much of the world’s population of this warbler flies south in the fall to Massachusetts, down the Atlantic coast and then across the ocean to South America. All the warbler species that migrate to the tropics are declining in numbers likely due to many factors—breeding habitat fragmentation, disturbance/development on the wintering grounds in the tropics, and disappearance of key migration stopping points.

4F. Scenic Resources and Unique Environments *(See Appendix D3 – Features Map)*

Situated on a peninsula and protruding like a thumb out into the Atlantic, Marblehead offers an unusual amount of scenery for such a small town. Vistas from Marblehead Neck look south toward the Boston skyline and east toward the ocean. Other vistas from the Neck and the mainland look west toward Salem and north toward Cape Ann. Strung along these waterside open spaces are beaches, rocky outcroppings, and tidal pools. Both the Neck and mainland are sprinkled with open spaces, including the uplands and wetlands of Wyman Woods, Steer Swamp, the ponds in the Audubon sanctuary, Hawthorn Pond, and Ware Pond conservation areas.

Another interesting feature of our conservation lands is that four of them (there are seven total) are interconnected by an old railroad bed, noted earlier. Today a utility corridor, it has become a popular path for walkers and bike riders. As such, it is known by many as the Path. The bed is under the jurisdiction of the electric and water and sewer departments, but these departments maintain it for public use as well as for their purposes of providing utilities to the community. This “emerald necklace” is about 4.5 miles long and meanders in, through, and out of the conservation lands. A one-hour walk on this greenway starting at the Swampscott line will take you past Ware Pond, the high school (formerly Sorosis Farm), Wye Pond, Hawthorn Pond, Wyman Woods, Lead Mills, Salem Harbor, and finally to the Forest River Conservation Area. Even though the Path is abutted by many residences, because of dense vegetation it is possible to get the feeling one is walking down a country lane.

Glacial scarring, in the form of striations on the polished rocks, are found in both the Forest River Conservation Area and on Flirtation Rock at Preston Beach. Flirtation Rock is periodically visited by high school and college geology classes because of its unique geology. Clearly exposed on the rock are dikes, sills, faults, volcanic bombs, mineral crystallization, and other signs of the Earth's dynamic geology. Castle Rock has similar features. Chandler Hovey Park shows clear signs of volcanic flow banding. Tombolos connect Marblehead Neck to the mainland and Gerry Island to Gas House Beach. Protruding into the ocean as it does, and falling on the Atlantic flyway, Marblehead is a great place to observe the spring and fall bird migrations. Marblehead periodically falls in the path of the Monarch butterfly migration, and plants such as Japanese knotweed can be seen decorated with countless Monarchs during these years.

Historic sites abound throughout the town, from Native American summering sites and cemeteries to perhaps the largest concentrations of houses and buildings pre-dating the start of the American Revolution in 1775, as well as places that set maritime and aviation milestones, and industrial buildings of wood or brick that tell the story of Essex County and New England's industrial and factory era (primarily shoes here in Marblehead).

Colonial-period sites include a variety of rare 18th century and early 19th century structures.

The principal ones are:

Old Burial Hill, site of the town's first meeting house and cemetery (c.1635), and a notable New England burying ground with many culturally important gravestones, including some from the later 1600s. It also includes the raised brick tomb of General John Glover.

Town Common, 1600s & 1700s (the principal one of several), on the 17th & 18th century Windmill Hill (later the site of Abbot Hall).

Windmill Hill (two or perhaps more), sites of wooden windmills in the 1700s. One was later the site of Abbot Hall, and the other was later the site of the town's high school, now middle school, near the former Work House, Poor House, Alms House toward the outskirts of town on Pleasant Street opposite Gerry Street.

Fort Sewall, established in 1644 and enlarged/developed in various wars through the Civil War; last used in 1898, then decommissioned. Some structural rooms survive. The western half of the fort's early embankment was developed into residential parcels in the late 1800s.

Fort Washington (formerly Fort Bailey), Fort Darby, and Fort Glover (sometimes called the Cow Fort), three former colonial-period forts built atop granite headlands with a lookout over the Atlantic and Little Harbor (from the west, above Gas House Beach, a likely landing site for an army), Salem Harbor (on the northwest shore of the peninsula), and the Atlantic (from atop the southeast base of the peninsula, with a panorama view of the Atlantic). Fort Washington on Bailey's Head is now Fountain Park, named after a colonial tavern originally there, the Fountain Inn, near a well made famous by a local romantic rags-to-riches story. **There is nothing left of those three forts.**

Old Town House, built in 1727 of wood with raised corner blocks and ogee cornice blocks, it is one of the earliest in the country still standing, and pre-dates the first incarnation of Boston's Faneuil Hall (1742).

Powder House, built of brick in 1755 as a munitions store, one of the few surviving early powder houses, and one of even fewer built in a cylindrical format; it has a conical wooden roof.

Gun House, built c.1810 of brick with arched wood doors (for cannon); built on orders of the U.S. government after America's Embargo Act of 1808-9 failed to deter impressment of American seamen onto British ships.

A national historic district (1984) and a **local historic district** (1968) include more than 200 houses built before 1775 (several dozen more outside the official historic district) and more than 800 built before 1840. Ten sites are individually listed on the National Register of Historic Places.

Those include (*from earliest to latest*):

Fort Sewall (earthwork) (1644 with later modifications 1705, 1744 & afterward --
French & Indian War, Revolutionary War, War of 1812, Civil War, Spanish-American War)
St. Michael's Church (1714) (wood)
Harris Farm House (1720) (wood)
Old Town House (1727) (wood)
King Hooper Mansion (1st house built 1728; front façade addition c.1750s/60s/after 1745)
Elbridge Gerry House (1744) (childhood home of E.G.; enlarged c.1820s/30s, after Gerry)
General John Glover House (1761/2) (wood)
Colonel Jeremiah Lee Mansion (1766-8) (wood)
Abbot Hall (1876) (brick & stone)
Story Grammar School (1880) (brick)
Marblehead Light (1896) (metal)

Mid-to-later 19th century and 20th century sites include:

Marblehead's Light House, 1896, one of only a few built of metal in a "machine age" style. It replaced an earlier lighthouse, 1834, attached by a covered wooden walkway to a somewhat later house, mid-1800s or c.1870s.

A variety of buildings of wood or brick that formerly were shoe factories. One of the last ones burned in the late 1990s. Earlier structures had burned in larger fires in 1866, 1877 and 1888.

A stone church (called "Old North"), 1824, built of local stone, with a new stone facing on the façade added in 1886.

Abbot Hall, the 1876 town hall and central seat of town government, built of brick and a variety of stone in a High Victorian Gothic style. It is home to some important cultural artifacts, including the famous large-format "*Spirit of '76*" painting and other paintings and historic items relating to the town's history.

Mary Alley Municipal Building, a former hospital built of stone in the mid-1950s, in an Art Deco style, named after a Marblehead school teacher who in 1904 left to the town a house she had owned on Franklin Street for use as a hospital. The stone building replaced the earlier building as a hospital after 1956, and was converted to municipal offices for the town around 1979.

Several brick school buildings from the later 1800s to early 1900s. They include:

- Marblehead High School (1789) (became an American Legion building after 1913 & two condos c.2005)
- Story Grammar School (1880)
- Gerry Elementary School (1906)
- Veterans Memorial Middle School (1913, with later modifications & additions) (former high school)
- Glover Elementary School (1916) (soon to be renovated)

Grandstand at Seaside Park, built in 1916 and designated a National Historic Landmark in 2011.

The large number of surviving houses from before 1775 is due to the fact that the American Revolution had a devastating economic and social impact on Marblehead. More than 600 men served from a town of 935 families (1765 census), in both the Continental Army (including 180 months as essentially a full regiment from this one town, under the command of a local officer, Colonel then General John Glover) and on privateer vessels out of Marblehead or Salem. In the War of 1812, over 1,000 men served from a population of 6,000 or 7,000. The Civil War took a toll as well, though shoemaking brought prosperity to those who managed the factories, and others, as evidenced many later 19th century houses and buildings in town.

The first and second World Wars had a significant social impact, as everywhere. (A book was written about the former, and historical collections represent and document the latter, particularly in the collections of the town's historical commission.) Many individuals served in both, including several women, and many in town participated in the home-front war effort, which included an active coast watch and nightly blackouts from most of 1941 to 1945, especially along the shore, due to concern about submarines.

Quite a few large farms survived into the 19th and 20th century. None of those farm lands remain. The largest was the Sorosis Farm which covered an area from the junction of Humphrey and Lafayette Streets to Maple Street, including land on Atlantic Avenue and across to Wyman Cove (all formerly land belonging to Isaac Wyman). It was essentially the last farm to remain into the 21st century. James J.H. Gregory had gardens (a farm) on Naugus Head and the Hathaway Farm covered a number of acres in the area that is now Brookhouse Drive. The Goodwin family had a farm (dairy) on Naugus Head and the Tutt family also had a farm there. A huge operation on Marblehead Neck was owned by Ephraim Brown; the dock near the Eastern Yacht Club was where he loaded vessels to transport his produce to Boston and New York. The Looney Farm was near Waterside Cemetery (laid out by 1912) and there were a number of smaller farms on the west shore as well as several along Tedesco Street near the end of town toward Vinnin Square, where Marblehead's Gen. John Glover once had a farm (apparently his residence when he died in 1797). (*Our thanks to Town Historian Bette Hunt for the information about the 19th and 20th c. farms.*)

After both wars, farmlands and large farm operations in the large acreage around the downtown area were developed and subdivided. One of the last large farms, the Sorosis Farm, provided the land for the town's most recent school construction (Marblehead High School, built in 2007).

Throughout the 1900s, there were a continuation and growth of fraternal- and service-oriented community groups (nearly 60 were listed in the city directories of the early 1900s), and a variety of other types of volunteer groups and associations were formed as the century progressed. Many continue, and the missions of several are concerned with land or coastal issues: the Audubon Sanctuary, Goldthwaite Reservation Association, Clifton Improvement Association, the Hamond Nature Center, Marblehead volunteers for the Lobster Conservancy, and other smaller local ad hoc conservation-minded groups. The Marblehead Conservancy began in 2001, in part to address action items identified on the town's Open Space Plan of 1999. A recycling committee, farmers' market, an eco farm-direct co-op, and other groups followed.

A volunteer-based historical society was established in 1898, and an arts association was formed in 1922. Both purchased important late-colonial houses in Marblehead (in 1909 and 1938), thus safeguarding them from loss of their interiors and preserving them from modern development, and both continue to thrive with very small professional staffs augmented by many volunteers.

A historical commission with a town-appointed board was established for the town in 1964, following state guidelines set by the newly enacted Massachusetts Historical Commission. Soon after, an Old & Historic Districts Commission was approved for Marblehead on March 3, 1965 and the enabling/establishing act for it was accepted at the Town Meeting of March 14, 1967, with bylaws and amendments approved and adopted at Town Meeting on March 11, 1968, all based on state guidelines set by the Massachusetts Historical Commission.

4G. Environmental Challenges

Water Quality

Marblehead is geographically small and very developed, with continued new home construction. As a result, there is tremendous pressure on the town's remaining natural resources, open spaces, and even its conservation lands. Deteriorating freshwater quality associated with increased development is a significant concern.

Many of Marblehead's freshwater resources are currently endangered by increased nutrient loads associated with urbanization. Storm water drainage systems currently utilize many of the existing brooks and water-bodies, channelizing untreated storm water runoff into these fragile systems. Visual signs of eutrophication, including severe algal blooms and invasion of exotic terrestrial plants and macrophytes are obvious in most fresh water-bodies. High fecal coliform counts are measured in many of these waters and at storm water outfall pipes on the public beaches. Since 1998, the Board of Health has placed signs at several of these outfall locations to warn the public when poor water quality develops. Low dissolved oxygen concentrations have also been measured in some ponds.

Several efforts to combat cultural eutrophication have been, and are currently being undertaken, including those at Redd's Pond, Ware Pond, Black Joe's Pond, Goldthwait Reservation. Despite these efforts, more must be done in these areas, including implementing appropriate best management practices. Suggested best management practices include redirecting and/or infiltrating storm water flow, better maintenance of existing storm drains, more frequent street cleaning, or dredging of nutrient-rich sediment.

Other water-bodies throughout town also need attention. For each of these water resources, the water quality and habitat viability should be assessed by measuring water column and sediment nutrient concentrations, water column chemistry (including dissolved oxygen, pH, specific conductivity, redox potential, etc.), and biological parameters including chlorophyll a. These data should be used in determining the trophic status of each water-body. Only then can appropriate remediation and management plans be developed to enhance the water quality at these areas.

Hazardous Waste

Historical and recent industrial activity has left the town with several hazardous waste sites, and has likely resulted in soil concentrations of heavy metals and other contaminants above background in some locations. The downtown region of Marblehead has a history of industrial activity dating back several centuries which includes fishing, shoemaking, some silversmithing, lead milling, and (later) illuminating gas production. Wastes from these processes, including heavy metals, are likely to be found in the soils. Painting of houses with lead-based paints in the past also resulted in deposits into the soil around the base of homes in some areas, particularly the older historic district.

There have been several state-listed hazardous waste spills in Marblehead, including an oil release at the Star of the Sea parking lot at 80 Atlantic Avenue, and a gasoline release and leaking underground storage tank at Cloutman's Boatyard on Cliff Street, both of which are classified as Tier I Disposal Sites, Phase I. Tucker's Wharf, on Marblehead Harbor, was the site of another leaking underground storage tank, and of metal contamination. Remediation has been completed at all of these sites.

Gas House Beach and the area surrounding it was formerly operated as a manufactured gas plant (MGP) from 1854 to approximately 1911 by the Marblehead Gas Light Company (MGLC). The site contained high levels of polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), petroleum identification (PET ID), and total cyanide. This site was cleaned up by court order in the late 1990s and partially remediated, but it cannot be built on unless fully remediated. A deed restriction still needs to be filed by the property owner (formerly MassElectric, which became Keyspan, then National Grid, as the company ownership changed). Full remediation is deemed not possible due to tidal flow during the process. A formal

agreement with the town specifies that the area abutting Gas House Beach will remain a parkland, though privately owned.

The Lead Mills site, located on the Forest River at the base of Salem Harbor, was also a state-listed site, where high quality white lead was manufactured from 1830 through the 1960s. Lead shot was also manufactured here at one time. A 1994 investigation yielded a mean soil lead concentration 622 mg/kg dry weight for 30 soil samples. Hot spots existed with concentrations as high as 13,800 mg/kg lead. The remaining RCRA 8 metal concentrations were below the MCP Reportable Concentrations (RCs). Testing for semi-volatile compounds detected 7 compounds significantly above the Reportable Concentrations: benzo (a) anthracene, benzo (b) fluoranthene, benzo (a) pyrene, chrysene, dibenzo (a,h) anthracene, indeno (1,2,3-cd) pyrene, and dibenzofuran. Ten additional compounds were detected at concentrations below the RCs. This whole area, including the intertidal zone, was cleaned up in 2011 by the previous owner, NL Industries, and has been given a clean bill of health. There is currently some interest in the town's acquiring the site for open space.

Landfill

The town's only landfill is no longer active but remains a transfer station, from which the town's solid waste is shipped to a waste-to-energy facility. It is a repository for landscapers' and citizens' yard waste, and there are also specific curbside pickup days. The yard waste is then turned into compost for landscapers and the citizens of the town to use. The town is in the process of capping the landfill and designing a new transfer, recycling center, hazardous waste collection area, and swap shed to be completed in 2014. The landfill has had an insignificant impact on surface water quality in the unnamed stream. Water quality results indicate that there is no health or environmental risk associated with stream surface water quality. High bacterial counts at Grace Oliver's Beach have not been connected to the transfer station. Prior to the current landfill being opened, the town "dump" was located at Gatchell Green at the corner of Lafayette and Maple Street. This was closed and capped many years ago and is now a playground.

Erosion

Marblehead's rocky geology prevents erosion from being a significant problem, but there are some coastal banks composed of glacial outwash that have experienced serious erosion. Many of these areas have been hard-stabilized over the last century through the construction of seawalls. Erosion in non-coastal regions of town is minimal.

Chronic Flooding

Flooding has become increasingly problematic in recent years, a result of continued urbanization. Flooding now occurs in areas of town not previously impacted by floods. The increased impermeable surface area from new roads, driveways, and houses is straining existing stormwater infrastructure so that the system is no longer as effective in carrying away stormflows as it once was. Maintenance of storm water drains is also a problem.

Environmental Equity

All of the residents of Marblehead have access to, and many opportunities to enjoy, the extensive protected open space in town. However, as noted in the survey results, a majority of residents do not feel that there is enough conservation land but are generally satisfied with the amount of recreation land. The town would like to increase connectivity of conservation and recreation lands so that users can access these areas without driving, since parking is limited in some areas.. All conservation areas are free of charge and many are located along public transportation routes. Devereux Beach charges a

nominal fee for use during the summer. All other beaches charge no fees. This ensures that the activities are affordable for all residents. The town presently has no environmental justice areas.

As seen in Map __ the town-owned land is fairly evenly spread throughout the town. The population is densest in the downtown areas of town where the minimum lot area is as low as 4000 square feet. Other than these areas, Marblehead's population is distributed proportionally across town.

Section 5. Inventory of lands of conservation and recreation interest

This section details information about open space and recreational lands in Marblehead. The inventory includes land that is owned by the town and land owned or managed by organizations such as the Trustees of Reservations or Massachusetts Audubon. The inventory is categorized by ownership. Determinations of each site's condition, recreational potential, and public access were made based on observation by members of the Open Space and Recreation Committee and by consulting the appropriate town department, board or organization.

Preservation of open space is extremely important to the residents of Marblehead and the region. In addition to parks, open space and recreation facilities, Marblehead places a great deal of value on its waterfront and historic resources. In addition to the acquisition of open lands the town residents also place a high priority on the management and maintenance of these lands.

The Town will continue its efforts to determine where conservation and park acquisitions or restrictions may be appropriate to further protect open space. The town will also continue to look at ways to regionalize and work with abutting communities including the Town of Swampscott and the City of Salem in order to increase recreational opportunities.

This inventory lists the town's extensive passive and active recreational opportunities.

Key

Owner - Indicates the owner of the property and the agency or department responsible for managing and maintaining the parcel.

Manager - Agency or entity charged with managing the site.

Current Use - Details the main uses for the site.

Public Access - Indicates if the public can access the site on a good, fair, or poor rating scale.

Protection status - Indicates if the site has received state or federal funding, or protection from sale and building development.

Condition Identifies - the site condition (excellent, good, fair or poor).

Public/Grant - Identifies the source of funding for that particular if any

Recreational potential - For land not used for recreational purposes, potential for recreational activities is identified or constraints are listed. Conservation land is generally deemed to have limited recreation potential except for passive recreation such as hiking and walking.

Zoning - Identifies the zoning district in which the parcel is located.

ADA access - Indicates whether the site is universally accessible

Inventory\of\lands\of\Conservation\and\Recreation\Interest

)Private\Land

Owner	Manager)	Current\Use	Public\Access	Protection) Status	Condition	Public\Grant	Recreation\Potential	Zoning	ADA\Access
Private	Private	Boating	Pvt.-Membership	None	Excellent	None	N/A	H	Full
Private	Private	Boating	Pvt.-Membership	None	Excellent	None	N/A	SESR	Yes
Private	Private	Boating	Pvt.-Membership	None	Excellent	None	N/A	SGR	No-
Private	Private	Boating	Pvt.-Membership	None	Excellent	None	N/A	SESR	Yes
Private	Private	None	Pvt.-Property-	None-	Good	None-	Passive-Uses-	H	No-
Private	Gold.-Res.-Assoc.	Passive-Recreation	Public-Way	Perpetuity	Good	None	Passive-Uses-	SSR	No-
Private	Private	Swimming/Sunbathing	Public-Way	None	Good	None	Passive-Uses-	SSR	No-
Private	Private	Art-Education-&Exhibits	Public/paid	None	Excellent	None	Art-Ed.-&Exhibits	U	No-
Private	Private	Path	Public-Way	Perpetuity	Good	None	Passive-Uses-	CR	No-
Private	Private	passive-Recreation	Public-Way	None	Excellent	PARC-pending	Passive-Uses-	SSR	No-
Private	MHD-Hist.-Soc.	Exhibits/Research/Lectures	Public-Way	None	Excellent	None	exhibits/Education	U	No-
Private	Private	View	None	Perpetuity	Good	None	Yes	SESR	No-
Private	Private	Stormwater-Run-Off	Public-Way	None	Good	None	Passive-Uses-	SR	No-
Catholic-Church	St.-Mary's-Church	Burial-Site	Public-Way	None	Good	None	Passive-Uses-	SR	No-
Private	Private	Golfing	Public-Way	None	Excellent	None	Passive-Uses-	SR	No
C/o-Salem	MHD:-Water/Sewer	None	None	None	Good	None	Passive-Uses-	SALEM	No-
Private	Private	Private-School	Public-Way	None	Excellent	None	Open-Space/educator	SR	Full

Zoning-Legend	
Code	Description
CR	Central-Residence
H	Harborfront
SALEM	City-of-Salem-
SESR	Shoreline-Expand-Single-Res.
SGR	Shoreline-General-Res.
SR	Single-Residence
SSR	Shoreline-Single-Res.
U	Unrestricted-District

Inventory of Lands of Conservation and Recreation Interest

Non-Profit Land

Property	Owner	Manager	Current Use	Public Access	Protection Status	Condition	Public Grant	Recreation Potential	Zoning	ADA Access
Audubon Sanctuary	Non-Profit	MA Audubon Soc.	Recreation	Free	Perpetuity	Good	None	Yes	ESR	No
Children's Island (aka: Cat Island)	Non-Profit	YMCA	Recreation	Unofficial	None	Good	None	Yes	SALEM	No
Crowninshield Island (aka: Brown's Island)	Nonprofit	Trustees of Reservations	Recreation	Free	Perpetuity	Good	None	Yes	SALEM	No

Zoning Legend	
Code	Description
ESR	Expanded Single Residence
SALEM	City of Salem

Inventory of Lands of Conservation and Recreation Interest

Public Land

Property	Owner	Manager	Current Use	Public Access	Protection	Status	Condition	Public Grant	Recreation Potential	Zoning	ADA Access
Abbot Hall	T/o Marblehead	T/o Marblehead	Town Administration	Free	None	Good	None	None	Yes	CR	Yes
Alley Steps	T/o Marblehead	T/o Marblehead	Pathway	Public Way	None	Good	None	None	No	CR	No
Alley Way	T/o Marblehead	T/o Marblehead	Pathway	Public Way	None	Excellent	None	None	CR	No	No
Beacon St. School	T/o Marblehead	School Dept.	Recreation	Free	None	Good	None	Yes	SR	No	No
Bell School	T/o Marblehead	School Dept.	Education	Free	None	Good	None	None	Yes	SR	Partial
Castle Rock	T/o Marblehead	Rec. Dept.	Passive Recreation	Public Way	None	Good	None	Passive Uses	SESR	No	No
Chandler Hovey Park	T/o Marblehead	Rec. Dept.	Passive Recreation	Public Way	Perpetuity	Good	None	Passive Uses	SESR	Partial	No
Clark Landing (aka State St. Landing)	T/o Marblehead	Harbors	Passive Recreation	Free	None	Good	None	Passive Uses	H	Partial	No
Cliff St. Boatyard	T/o Marblehead	Harbors	Boating	Public Way	None	Good	None	None	Yes	SR	No
Coffin School	T/o Marblehead	School Dept.	Education	Free	None	Fair	None	None	Yes	SR	Partial
Commercial St. Landing	T/o Marblehead	Harbors	Recreation	Free	None	Good	None	SGR	Partial	No	No
Commercial St. Park	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	SGR	Partial	No
Cove Lane	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	None	No	SESR	No
Cressey St. Cemetery	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Good	None	None	No	SR	No
Crocker Park	T/o Marblehead	Selectmen	Recreation	Free	Perpetuity	Good	None	Yes	H	Partial	No
Danger Beach	T/o Marblehead	T/o Marblehead	Beach	Public Way	None	Good	None	None	No	SSR	No
Des Moulins Lane	T/o Marblehead	T/o Marblehead	Pathway	Public Way	None	Good	None	None	No	SESR	No
Devereux Beach	T/o Marblehead	Rec. Dept.	Beach	Free	Perpetuity	Good	None	Yes	SSR	Yes	No
Doliber Landing	T/o Marblehead	T/o Marblehead	Recreation	Free	None	Good	None	None	SSR	No	No
Evelth School	T/o Marblehead	School Dept.	Education	Free	None	Good	None	Yes	SR	Partial	No
Forest River	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Good	None	Yes	SR	No	No
Fort Beach	T/o Marblehead	Rec. Dept.	Recreation	Free	None	Good	None	Yes	SCR	No	No
Fort Beach Shanty Area	T/o Marblehead	Selectmen	Recreation	Free	None	Fair	None	Yes	SCR	No	No
Fort Sewall	T/o Marblehead	Selectmen	Recreation	Free	Perpetuity	Good	None	Yes	SSR	Partial	No
Fountain Park	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	H	No	No
Fuller Lane	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Free	None	Good	None	Yes	SESR	No	No
Gallison Avenue	T/o Marblehead	Highway Dept.	Recreation	Public Way	None	Good	None	SSR	No	No	No
Gas House Beach	T/o Marblehead	Selectmen	Recreation	Public Way	None	Fair	None	Yes	H	No	No
Gatchell Green	T/o Marblehead	Highway Dept.	Recreation	Free	None	Good	None	None	SR	No	No
Gatchell Playground	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	SR	Partial	No
Gerry Playground (aka Stramski)	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	SR/SSR	Partial	No
Gerry School	T/o Marblehead	School Dept.	Education	Free	None	Good	None	None	Yes	SR	Partial
Gingerbread Lane	T/o Marblehead	T/o Marblehead	Pathway	Public Way	None	Good	None	None	SR	No	No
Glover School	T/o Marblehead	School Dept.	Education	Free	None	Good	None	SR	No/N/A	No	No
Grace Oliver Landing	T/o Marblehead	Harbors	Recreation	Free	None	Good	None	None	No	SSR	No
Graves Beach (aka Little Harbor)	T/o Marblehead	Harbors	Recreation	Free	None	Good	None	None	No	SSR	No
Barnegat Landing	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Good	None	None	No	SR	No
Green Street Cemetery	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Good	None	None	No	SR	No
Gun House	T/o Marblehead	Selectmen	Recreation	Free	Unknown	Good	None	None	No	CR	No
Harris Street Cemetery	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Good	None	None	No	CR	No
Harvard Street	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	None	Yes	SESR	No	No
Hawthorn Pond	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Good	None	Yes	SR	No	No
Hobbs Playground	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	SR	No	No
Lincoln Avenue	T/o Marblehead	School Dept.	Recreation	Free	None	Fair	None	Yes	ECR	No	No
Lookout Court	T/o Marblehead	T/o Marblehead	Pathway	Free	None	Good	None	None	CR	No	No
Lovell Cove	T/o Marblehead	Rec. Dept.	Recreation	Free	None	Good	None	Yes	SCR	No	No
Maintenance Garage Area	T/o Marblehead	Rec. Dept.	Maintenance	None	None	Fair	None	None	No	SR	Partial
Storage Area	T/o Marblehead	Harbors	Boating	Free	Perpetuity	Good	None	Yes	N/A	N/A	No
Marblehead Harbor	T/o Marblehead	US Govt.	Costal Navigation	None	US Govt.	Good	None	None	No	SESR	No
Marblehead Light	T/o Marblehead	US Govt.	Navigation	None	US Govt.	Good	None	None	No	SESR	No
Marblehead Yacht Club	T/o Marblehead	M'hd Yacht Club	Recreation	Paid	None	Good	None	Private	SGR	Yes	Yes
Memorial Park	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	B1	Yes	Yes
Middle School	T/o Marblehead	School Dept.	Education	Free	None	Good	None	Yes	SR	Yes	Yes
Nahant Street	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	Yes	SESR	Yes	Yes
OKO Building	T/o Marblehead	T/o Marblehead	Recreation	Free	None	Good	None	None	No	CR	No
Old Burial Hill Cemetery	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Good	None	None	No	CR	No
Old Town House	T/o Marblehead	T/o Marblehead	Recreation	Free	None	Good	None	None	No	U	In Process
Orne Playground	T/o Marblehead	Rec. Dept.	Recreation	Free	None	Good	None	None	SR	No	No
Parker Lane	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	Yes	SESR	No	No
Parker's Boatyard	T/o Marblehead	Harbors	Recreation	Free	None	Good	None	Yes	SGR	No	No
Peabody Avenue	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	Yes	SESR	No	No
Point of Rocks Lane	T/o Marblehead	T/o Marblehead	Harbor Beach Access	Public Way	None	Good	None	Yes	SESR	No	No
Powder House	T/o Marblehead	T/o Marblehead	Recreation	Free	None	Good	None	None	ECR	No	No
Preston Beach	Clifton Imp. Assoc.	Clifton Imp. Assoc.	Recreation	Unofficial	None	Good	None	None	No	SWAMP	Partial
Railroad St. Way	T/o Marblehead	Municipal Light & Sewer Dept	Recreation & Maintenance	Free	None	Good	None	None	Yes	VAR	Partial
Ram Island	C/o Salem	Private	C/o Salem	None	None	Fair	None	None	Yes	SALEM	No
Red Steps Beach	T/o Marblehead	Rec. Dept.	Recreation	Free	None	Good	None	None	No	SGR	No
Redd's Pond	T/o Marblehead	Cemetery Dept.	Recreation	Free	None	Fair	None	Yes	CR	No	No
Reynold's Playground	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Good	None	Yes	ECR/U	Yes	Yes
Riverhead Beach	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Fair	None	Yes	SSR	Yes	Yes
Robinson Farm	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Excellent	None	Yes	ESR	No	No
Seaman's Wharf Harbor View Lane	T/o Marblehead	Private	View	None	Perpetuity	Good	None	Private	CSSR	No	No
Seaside Park	T/o Marblehead	Rec. Dept.	Recreation	Free	Perpetuity	Excellent	None	Yes	SR/SSR	No	No
Senior High School	T/o Marblehead	School Dept.	Education	Free	None	Excellent	None	Yes	SR	Yes	Yes
Steers Swamp	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Good	None	Yes	ESR	No	No
Thompson's Meadow	T/o Marblehead	Water & Sewer	Reservoir	Free	None	Good	None	Yes	N/A	No	No
Transfer Station	T/o Marblehead	Board of Health	Transfer Station	Free	None	Fair	None	None	SR	No	No
Tucker's Wharf	T/o Marblehead	Harbors	Recreation	Free	None	Fair	None	None	Yes	H	Yes
Village Street Pier	T/o Marblehead	Harbors	Recreation	Free	None	Good	None	Yes	SSR	Yes	Yes
Ware Pond	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Good	None	Yes	SR	Yes	Yes
Waterside Cemetery	T/o Marblehead	Cemetery Dept.	Cemetery	Free	None	Excellent	None	No	SR/SSR	partial	No
Wye Pond	T/o Marblehead	T/o Marblehead	Recreation	Free	None	Poor	None	Yes	SR	No	No
Wyman Woods	T/o Marblehead	Con. Com.	Recreation	Free	Perpetuity	Good	None	Yes	SR	No	No

Zoning Legend	
Code	Description
CR	Central Residence
ECR	Expanded Central Residence
ESR	Expanded Single Residence
H	Harborfront
SALEM	City of Salem
SCR	Shoreline Central Residence
SESR	Shoreline Expand Single Res.
SGR	Shoreline General Res.
SR	Single Residence
SSR	Shoreline Single Res.
SWAMP	Town of Swampscott
U	Unrestricted District
VAR	Zoning varies along Railroad R/o Way

Lands may have a conservation interest whether they are public, private, or nonprofit-owned. For that reason the above inventory of lands in Marblehead has been drawn up and is presented here in three separate categories of current ownership. A zoning legend is associated with each table presented.

5A. Protected Parcels

Below is a compilation of all lands in Marblehead which are protected as conservation lands or as parks or via conservation restrictions or trusts. Further details specific to conservation land is provided in Appendix C.

	Acres	
Audubon Sanctuary	18.76	sanctuary
Brown's Island	7.2	trust
Chandler Hovey Park	4.45	park
Commercial St. Park		park
Crocker Park	1.75	park
Devereux Beach	19.06	park
Forest River	30.14	conservation land
Fort Sewall	22.43	park
Fountain Park		park
Gatchell Playground	21.9	park
Gerry Playground	7.25	park
Goldthwait Reserve	15.58	trust
Hawthorn Pond	10.70	conservation land
Hobbs Playground		park
Knight's Hill Road		
Marblehead Harbor		ocean harbor

Memorial Park		park
Ocean Ave. Beach		park
Reynold's Playground		park
Robinson Farm	3.15	conservation land
Seaman's off Harbor View Lane		conservation restriction
Seaside Park	17.21	park
Steer Swamp	45.45	conservation land
Turner Woods	1.15	conservation land
Ware Pond		conservation land
Wyman Woods	29.73	conservation land

Article 97 of the Articles of Amendment to the State Constitution, or simply "Article 97," protects certain lands acquired for natural resources purposes, meaning "conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources." Furthermore, a 1973 opinion of the Attorney General stipulates that land acquired for these purposes cannot be converted to any other use without the following actions: 1.) the local conservation commission must vote that the land is surplus to its needs, 2.) the park commission must vote the same if it is parkland in question, 3.) the matter must be taken up at Town Meeting or City Council and pass by a 2/3 vote, 4.) the town must file an Environmental Notification Form with EOE's MEPA Unit, and 5.) the matter must pass by a 2/3 vote of the Massachusetts Legislature. Finally, if the property was either acquired or developed with grant assistance from EOE's Division of Conservation Services (i.e. Self-Help, Urban Self-Help or Land and Water Conservation Fund), the converted land must be replaced with land of equal monetary value and recreational or conservation utility

Within Marblehead, protected parcels are lands owned by the Conservation Commission or Water Department, by the town as a park, by a nonprofit land trust, or those having a conservation or deed restriction in perpetuity. Several are accessible or partially accessible by wheelchairs or by individuals with disabilities, though improvements at each site would be advantageous, when possible, pending funding.

Audubon Sanctuary

Marblehead Neck is about one mile long and one-half mile wide. It is composed mainly of metamorphic rock, which is volcanic in origin. The interior wooded area has long been used for birding due to its unique position along the Atlantic Flyway. In 1954 the Neck Improvement Association, with the help of Walter McKim, raised the necessary funds and donated the land to the Mass. Audubon Society along with a substantial endowment that is used for upkeep. Birders come from all over, especially in spring and fall. It is used throughout the year for nature study, jogging, walking, and cross-country skiing in the winter. A trail guide has been prepared by the Marblehead Neck Garden Club. The guide is available at the library or from the Club.

Brown's Island

This island straddles Little Harbor and Doliber's Cove. Mrs. Francis B. Crowninshield, a summer resident of Peach's Point and one of the nation's leading advocates of historic preservation, gave the island to the Trustees of Reservations in 1955, and the Trustees renamed the island Crowninshield. In 2009 the selectmen formally rejected changing the name to Crowninsheld, and it remains Brown's Island on nautical charts. The 5-acre island is composed of an unusual variety of land forms: granite shore and tidal pools, sand beach, salt marsh, and wooded hilltop, which rises to approximately 50 feet above sea level. From the hilltop there is a sweeping view of Salem Bay, the Beverly shoreline, and

Baker's and Misery Islands. The island is heavily used in the summer months by groups and families for swimming and picnicking. Most users arrive in boats, which are anchored in deeper water. At low tide it is possible to walk across the mud flats from several points of public access, one being Harding Lane off Beacon Street.

Chandler Hovey Park

Located on the eastern arm of the entrance to Marblehead harbor at the far end of Marblehead Neck off Follett Street, the area consists of grass and shrubs over a rocky area with a magnificent view of Marblehead Harbor and adjacent coastline and waters. There are newly remodeled handicap-accessible restrooms, 2 pavilions, 12 benches, 6 picnic tables, and a parking area for about 35 cars. The parking area is open daily from 8:00 am until 10:00 pm from Memorial Day through Labor Day. Several of the small rocky beaches are used for swimming.

Crocker Park

A delightful waterfront park in old Marblehead on one of the highest points of the harbor, the area has uneven ledge and grass areas with some trees, shrubs, and flower beds. There are also 15 benches, a small pavilion, handicap-accessible public restrooms, and a drinking fountain. A newly remodeled swimming float is moored adjacent to the park and is reached by descending a set of stairs. There is no parking nearby, except on adjacent streets, so it is best to walk or bicycle to this area. In the summer the park is sometimes used for various festivities such as band concerts and viewing the fireworks on the Fourth of July.

Forest River

The approximately 30-acre Forest River site is located between the end of Old Salem Road and the Forest River, which runs adjacent to the Marblehead/Salem town line. It includes one of two significant estuarine areas in Marblehead, the first being the Forest River area. The second area is on Swampscott Road and flows through Thompson's meadow. The terrain in the Forest River area is diverse, ranging from steep exposed bedrock and cutbanks of the former sand and gravel excavation site to the level, poorly drained area on the southern border and the salt marsh bordering the Forest River.

Two small excavation pits have filled with fresh water and provide a habitat for wild fowl. A vernal pool, registered with the Massachusetts Natural Heritage and Endangered Species Program and mentioned in Section 4E, is present in the spring and is located in the vicinity of the entrance on Old Salem Road. Vegetation cover is diverse in density and composition, ranging from sparse volunteer growth of grasses, weeds, and shrubs in the heavily scoured areas to thick sumac stands and the pole stage hardwood stand at the Old Salem Road end of the parcel. Staghorn sumac, gray birch, brambles, and pin cherry are the dominant shrub-type species. Red maple, bigtooth aspen, and black cherry dominate the wooded areas. *Spartina patens* dominate the salt marsh.

Much of the soil in the area has been disturbed, since the site was previously used as a source for sand. The soil was excavated for gravel down to the bedrock or the water table. The ridges are generally composed of shallow to bedrock soils and occasional gravel pockets. Access to the area is best obtained off Old Salem Road near the back of the Star of the Sea Cemetery. Parking is available here. Another access is marked by a sign on the west side of Lafayette Street a few hundred feet up the hill from the Marblehead/Salem town line. Access to Forest River Conservation land is also possible on Legg's Hill Road, marked by a sign, but parking is not recommended along this street.

Fort Sewall

Fort Sewall is a Revolutionary War fort that was used to protect the harbor. The fort was given to the town by the federal government in 1922 to be permanently used as a public park. There are magnificent views of open ocean, coastline, and Marblehead and Little Harbors. This location provides grass areas, historic structures, benches, and restrooms (not handicap accessible) open mid-June through the end of October. Fort Sewall is used primarily for passive recreation activities, picnicking, sightseeing, and just plain relaxation. There is a small parking lot near the entrance to the fort.

Fountain Park

Fountain Park is situated high above Little Harbor off Orne Street and directly across from Old Burial Hill cemetery. This park has an excellent view of open ocean, coastline, and Little Harbor. There is a pavilion with benches where one can rest and marvel at unbelievable views. Limited parking is available along Orne Street.

Goldthwait Reservation

Goldthwait Reservation is located on the Atlantic Ocean, adjacent to Devereux and Tucker's Beaches. Dr. Joel Goldthwait donated his private estate in 1947 to be used by the residents of the town. The approximately 14 acres include a brackish marsh, a cobble embankment, and beach frontage. There is a small parking lot and three fireplaces. Limited use of the picnic and beach area is allowed by small groups with a special permit obtained from the reservation's board of directors. This is the only salt marsh in Marblehead providing invaluable habitat for marine and wildlife.

Great Harbor or Marblehead Harbor

Yachting and fishing and related industries - boat building, sailmaking, boat rental and repair - are important to the town. There are 2,338 mooring permits for pleasure boats and 100 for commercial craft. Marblehead Harbor is filled to capacity with 1800 moorings, and the mooring area on the Salem Harbor side of Marblehead utilizes approximately 500 moorings out of a potential 1,200 available. Five yacht clubs are located around the perimeter of the harbor. There are five public landings in Marblehead Harbor: Commercial Street, Clark Landing, Parker's Boat Yard, Tucker's Wharf, and Cliff Street Boat Yard. There are several public ways that provide access to the harbor. Riverhead Beach is at the southwesterly end of the harbor where there is a public launch.

Hawthorn Pond

This parcel is located between the end of Hawthorn Road and the old railroad right-of-way. It is managed by the Conservation Commission, having been acquired by purchases and gifts from a variety of owners. Access to this parcel is available from the end of Hawthorn Road or from the old railroad bed. The terrain on this parcel ranges from moderately sloping shallow to bedrock soil near the Hawthorn Road entrance to the low-lying deep marsh in the center of the parcel. A trail system crosses the parcels and intercepts the old railroad bed. A few smaller paths allow visitors to explore the remainder of the site. The vegetation on the upland portion of the site consists of a mixture of hardwoods and shrubs, including black cherry, pin cherry, staghorn sumac, aspen, and red and black raspberry.

There are two separate wetlands that dominate the center of the parcel. The wetland to the north is classified as a shallow marsh. It is dominated by cattails and also includes sedges and multiflora rose. Speckled alder and red maple border the marsh. The wetland to the south is classified as deep marsh or pond. The vegetation here is much more sparse, as open water is clearly visible. Duckweed and

pond lilies are found in the marsh, with cattails and willows around the edges. These wetlands border a small poorly drained wooded area on the south that is immediately adjacent to the old railroad bed. The soils on this site consist of shallow to bedrock fine sandy loams to the upland site of the main trail and a hardpan-till soil on the eastern side. The wetland soils are composed of deep muck and silt loam on the soils with lower water tables. This area is presently used by the several schools in the vicinity (the Bell, Glover, Tower, Veterans Middle, and High Schools) for nature study and by the many who use the railroad bed for hiking, bicycling, jogging, horseback riding, and cross-country skiing.

Marblehead Light

This is a light tower at the entrance to Marblehead Harbor, owned by the federal government and maintained by the Coast Guard. It sits at the end of Marblehead Neck within Chandler Hovey Park and is accessible to the public with special notice.

Memorial Park

This small town park is located at the junction of Pleasant Street and Essex Street. The park is dedicated to the memory of veterans who died in past wars. Flower and shrub beds are maintained along with three benches for people to rest and reflect. The park sits under the canopy of six large trees and is contiguous to the YMCA land, recently acquired by the National Grand Bank as a parking lot. The bank has planted flowering trees and shrubs in an effort to blend the two properties.

Robinson Farm

This 3.2-acre remainder of the Robinson Dairy Farm, purchased by Marblehead as conservation land, is accessible from the end of Ramsdell Road and by way of walking trails from an adjacent 8.4-acre property administered by the School Committee (see Jermyn Farm). The original farmhouse is gone, but the foundation of the first barn remains. Both dated to about 1840. This property also serves as the site for a tree farm of the Marblehead Conservancy, providing a spot for the maturing of root systems of native tree seedlings and shrubs before they are planted permanently in the town's various conservation and other open space areas. An upper trail leads walkers past the tree farm and a nearby butterfly garden before joining the adjacent school property. Continuing on, the trail loops through a small meadow, lowland, then loops back across two streams before returning to the old farm.

Salem Harbor

This description refers to that portion of Salem Harbor which is shared by the city of Salem and the town of Marblehead. It is relatively shallow but does serve as an anchorage for many small boats on the Marblehead side. A large portion of its perimeter contains clam beds, which unfortunately are not harvestable at this time due to pollution. There are a number of beaches along its shore offering quiet areas of beautiful vistas. The inner harbor is popular with water skiers due to its shallowness and large expanse of water.

Seaman's - Off Harbor View

In 1997 the owner of this property granted the town a conservation view restriction to ensure that the public would forever have another view of the Marblehead Harbor from this particular vantage point. Harbor View intersects with Chestnut Street at the south end of the harbor. There is no public access.

Seaside Park

This is the largest park in our town and offers many passive and active recreational opportunities. There are six all-weather lighted tennis courts and a practice area. There is a regulation-size, all-weather lighted basketball court and full-size major league baseball diamond, which is maintained for

school, youth baseball, varsity, and other baseball leagues. Off season, the varsity field hockey team uses the outfield. There is a large grandstand building, with restrooms (not handicap accessible), a field house and locker rooms, and storage area, which serves as the backstop for the baseball field. A good-sized asphalt area at the rear of the grandstand is used for street hockey in the summer. There is also an excellent hill for winter sliding. The rear of the park borders on Marblehead harbor and offers some wonderful views of the harbor as well as of Massachusetts Bay. This section is quite hilly and has walking paths and benches and contains a variety of trees and shrubs. There is a 0.9-mile 18-station exercise trail which runs along the perimeter of this section. Many years ago this was the site of Fort Glover.

Steer Swamp

This site, located between Beacon Street and Norman Street, is roughly 45 acres of conservation land. The area contains clearings, shrub areas, forest, wetlands, uplands, and a major brook commonly referred to as Babbling Brook. A second, smaller brook flows from Cheever Avenue. These two streams, with a contributing drainage area of approximately 205 acres, feed the wetlands in Steer Swamp. There are many paths and a bridge spanning Babbling Brook.

Access to Steer Swamp is from Norman Street, Beacon Street, Stonybrook Road, Cheever Avenue, Barry Road, and Blueberry Road. Black Joe's Pond, approximately a two-acre spring-fed pond, borders the conservation land. This pond is used extensively for skating in the winter and some fishing in the summer. The terrain on the upland portions of Steer Swamp is generally steep with many ledge ridges and shallow to bedrock soils. The vegetation in this area is relatively clustered with second-growth scrub and brush, reflecting the fact that it is in an early successional stage from its previous use as pasture. The predominant tree species on the upland section are 10 to 20 feet in height and include choke cherry, aspen, gray birch, and sumac.

Lowland portions of the site are swamp and marshland with mostly muck soils. The lowland abounds in speckled alder, arrowwood, and willow, and low- and highbush blueberry, sassafras, bayberry, strawberries, and myriad native wildflowers. Flag Pond, which also borders this conservation land, is presently evolving from a shallow marsh to a wet meadow. This area supports a dense growth of herbaceous aquatic vegetation as well as cattails, phragmites, arrowheads, and purple loosestrife.

The diversity in terrain and ecosystems (grassy areas, shrubby growth, forest, wetlands) and the high productivity of these areas make for excellent wildlife habitat, particularly for songbirds and waterfowl. On any particular day, mallards, geese, grouse, cardinals, and many other songbirds can be observed.

Turner Woods

Originally part of a larger property gifted to Marblehead, this 1.1-acre plot is imbedded in a residential area and across Turner Road from the Coffin School. Though small, it is frequented by a variety of birds and is being replanted with native tree and shrub seedlings. A looping path offers visitors a shaded, open, and quiet spot to enjoy nature.

Ware Pond

The 8.5-acre Ware Pond site includes a 3.8-acre pond as well as much of the land around the pond. The terrain surrounding the pond is nearly level with a gentle slope toward the pond. The southern and western edges of the pond are bordered by relatively poorly drained woodland that is vegetated by red maples, arrowhead, and alders. One side of the pond is bordered by an artificial "causeway"

that separates it from a one-acre shallow marsh. This marsh is vegetated mainly by jewelweed, cattails, and purple loosestrife. At the northeastern edge of the site are two benches which provide a fine view of the pond and community gardens, called the Sevinor Community Garden. This garden contains 10 plots, each measuring 10 by 20 feet for use by residents of the town. Access and parking are available from Marion Road and Marion Road Extension. This area is popular for ice skating in the winter. Just to the northwest of Ware Pond is Oliver's Pond. Water from Oliver's Pond flows into Ware Pond through a storm water pipe. A neighbor on May Street has offered to provide public access.

U.S.D.A. suggestions for this area include the addition of food plants to improve the pond for waterfowl and removal of the pond lily roots to keep the pond open and slow the aging process. Three lots extend through wetlands to the pond's edge, and conservation easements should be sought.

Wyman Woods

Consisting of approximately 30 acres, this conservation area is located at the end of Everett Paine Boulevard and is bordered by Gatchell Playground, Salem Harbor, West Shore Drive, and the old railroad right-of-way, the Path. The land was the first parcel to come under Conservation Commission control through Town Meeting action in March 1962. About half of the area was gifted to the town by the Wyman family and the family of Azor Orne Goodwin, who died in World War II.

The terrain in Wyman Woods is diverse, ranging from level, poorly drained, wooded swamp (between the playground and the old railroad right-of-way) to steep, rocky upland in the area extending to Salem Harbor. There are two distinct hills on the upland portion of the parcel where the soil is especially thin and outcrops are abundant. One part of the site was formerly used by the Hawthorne Council of the Girl Scouts during the summer, where they maintained a day camp called Camp Shore Lea. The camp has now been transformed into the Hamond Nature Center under the jurisdiction of the Recreation and Parks Commission. This parcel has a trail system that is well maintained and extensively used.

The soils in Wyman Woods consist of deep muck in the low-lying areas and shallow to bedrock and very fine loams on the uplands. The vegetation consists mainly of willow, red maple, highbush blueberry, and buttonbush in the low-lying areas, and a mixture of hardwoods on the uplands, including red and white oaks, red maple, hickory, black cherry, red cedar, and white ash.

The old railroad right-of-way, the Path, which runs along the end of Salem Harbor near Lafayette Street, separates a small section of Wyman Woods from the main area. This small section of woodlands, situated along the shore, is an open grassy area with beach for swimming and picnicking. The access to this area is very good since it can be reached by the Path from Lafayette Street or West Shore Drive, as well as through the Wyman Woods trails, which are most easily reached by parking at the end of Everett Paine Boulevard.

5B. Unprotected Parcels

Abbot Hall

This is the town hall for Marblehead, a large red brick Victorian structure on the National Register of Historic Places, readily visible from many parts of the town. It is bordered on two sides by large grass

areas which are used for various festivities and which are enjoyed by many individuals in passive recreation.

Alley Steps

A set of granite steps leading from Washington Street up to High Street or vice versa depending on which way you are going.

Alley Way

A public way with stairs connects Mechanic Street with Market Square, where the Old Town House is located.

Barnegat Landing (See Graves Beach)

Beacon Street

Approximately 5.7 acres of undeveloped property under the jurisdiction of the School Department at the corner of Beacon and Green Streets, it is completely vegetated, contains small wetlands on the eastern half of the site, small hills in the southwest, and steep slopes to the north

Bell School

The school has 6.6 acres of sloping terrain, much of which is used as off-street parking or service areas.

Black Rock Lane

This was a public way but a generous resident of the town donated a parcel of land abutting Steer Swamp in exchange for this way. It was agreed to maintain a view of the ocean on the east from this land, which is now private. There is no public access onto this land.

Boston Yacht Club

This club as well as all other four yacht clubs are situated on Marblehead Harbor. These are private organizations and require membership for access to their facilities.

Brookhouse Drive

This road runs between Humphrey Street and Tedesco Street in the Clifton area and is divided by a series of grassed median strips. These are mowed and maintained by the town for aesthetics and recreation.

Captain John Glover Hooper Burial Site

Captain Hooper, his grandfather "The Patriot", and other direct descendents of the Hooper family are buried here. A quiet little plot of land off Harris Street where a visitor can absorb some of the local history and travel back in time. Directly across from the Harris Street cemetery.

Castle Rock

A small waterfront park off Ocean Avenue on Marblehead Neck, with benches. It offers a magnificent view of the Atlantic Ocean and offshore sailing and fishing.

Children's Island (formerly Cat Island)

Children's Island is the home of the Marblehead/Swampscott YMCA summer day camp for children. The island is 1¼ miles by boat from the public landing at State Street and is under the jurisdiction of the City of Salem. The 29-acre island is long, narrow, and generally level. It is about 20-30 feet above

sea level and covered with grass. There is a small grove of pines at the southern end of the island. The original forest cover is said to have been destroyed by the British in 1776 in order to get a clearer view of Marblehead harbor. Attempts at planting trees and shrubs have not met with much success, and erosion of this exposed island is a serious problem. The island's first recorded owner was Robert Catta (1635), who purchased the island for grazing land. Catta evolved into the name Cat. Many varied uses followed: in the 1700s the island was the site of a smallpox inoculation hospital; in the 1800s a hotel and resort; from 1870-1946 a sanatorium for crippled children; finally in 1956 the island was purchased by the YMCA for \$12,000 for use as a day camp. There are three buildings, two saltwater pools, a pier, and moorings used for the sailing program. There is no fresh water or electricity. The saltwater tank on the south side of the island is also used as a navigational aid. About 85% of the 480 children who participate each summer are from Marblehead. The rest are mostly from Swampscott and Salem. On the southern end of Children's Island is a rocky, guano-covered headland separated from the main island except at low tide. It is locally known as Gull Island. In the summer it is a nesting area for numerous gulls and cormorants.

Clark Landing (aka State Street Landing)

The main public landing for the town offers wonderful sea level views of Marblehead Harbor. There are many park benches, some of which are under a pavilion. Flower gardens are maintained. Accessible public restrooms are available, and the general area is preserved as part of the historic district. Parking is available. This landing is used by many lobstermen/fishermen for supplying and unloading their boats. It is likewise available to the general public for short-term mooring.

Cliff Street Boatyard (formerly Cloutman's Boatyard)

This serves the public as a boat storage area and a launch facility. It is located off Cliff Street adjacent to the Marblehead Yacht Club.

Cloutman's Boatyard (See Cliff Street Boatyard)

Coffin School

One small grassy area, approximately 1.5 acres, currently used as athletic fields for elementary gym classes.

Commercial Street Landing

This landing is used by many lobstermen/fishermen for supplying and unloading their boats. It is likewise available to the general public for short-term mooring. There is limited on-street parking.

Commercial Street Park

This little park is at the end of Commercial Street next to the landing. It has a park bench and a small grassed area. From this park, one can quietly view the harbor and its activities.

Corinthian Yacht Club

This club as well as the other four yacht clubs are situated on Marblehead Harbor. These are private organizations and require membership for access to their facilities.

Cove Lane

A public way off Kimball Street on Marblehead Neck, it offers a superb view looking across Marblehead harbor to Fort Sewall and beyond. The way has been grassed over, but it remains a public

way. There is a small sandy beach at the end with access, albeit difficult. There is a set of wooden stairs for public access to the beach at the end of the Lane.

Cressey Street Cemetery

This historic cemetery abuts the Green Street cemetery. Together, these cemeteries offer a very pleasant grassy area to rest and relax on benches under shade trees. Located on Cressey Street between Elm and Green Streets.

Danger Beach

Located at the end of Green Street overlooking Salem Harbor. A set of stairs leads down to a small pebble beach set among large rock outcroppings. A secluded spot for swimming or picnicking. Parking is available along Green Street.

Desmoulin Lane

This lane is located off Ocean Avenue on Marblehead Neck. It offers a panoramic view of the open ocean to the east. The way is 30 feet in width in a straight line to low water. At the end of the paved lane is a path leading down to the rocky shore. Parking is available on Ocean Avenue.

Devereux Beach

Located on Ocean Avenue just before the causeway leading to Marblehead Neck, it is the major beach area for the town. There are lifeguards on duty from 8 am to 4 pm from mid-June through Labor Day, and there are public restrooms (the ones in the restaurant are accessible). Parking from 8 am to 4 pm is free for Marblehead residents with town stickers and is available on a charge basis for others without stickers. Tucker's Beach, formerly the Usher Property, is the resident part of this area. There are picnic tables, benches, and pavilions for protected viewing. A seasonal restaurant that can be reserved provides light meals and beverages. This beach is the most popular recreation area in Marblehead. At the other end of the causeway at the beginning of the Neck is another part of Devereux Beach. This beach is tucked away almost out of sight. It has a small sandy beach and a couple of park benches. A great bike stop. There is limited parking on Ocean Avenue.

Doliber Landing

This public landing is off Beacon Street just after Graves Beach and faces Brown's Island. It is suitable for small boats only and has limited parking.

Dolphin Yacht Club

This club as well as the other four yacht clubs are situated on Marblehead Harbor. These are private organizations and require membership for access to their facilities.

Eastern Yacht Club

This club as well as the other four yacht clubs are situated on Marblehead Harbor. These are private organizations and require membership for access to their facilities.

Eveleth School

Approximately 3.5 acres of land, mostly developed with grass and shrubs. There is a small ball field in the rear and parking to the left of the school. Mostly used for school activities. This property is adjacent to the Hobbs Playground. On-street parking and lot parking during non-school hours.

Fort Beach

Fort Beach is a small sandy and pebble beach off Front Street just before Fort Sewall. There are a lot of rock outcroppings with small tidal pools at low tide. Many people have pull moorings and store boats against the walls at this area. There is a small parking lot across Front Street.

Fort Beach Shanty Area

This area is in back of the parking lot referred to in the description of Fort Beach. It is public land where many fishing shanties are stored and where, if lucky, one can get a glimpse of the comings and goings of a lobsterman/fisherwoman.

Gallison Avenue

Located off Atlantic Avenue this street brings one to the beach just south of Goldthwait Reservation. There is limited on-street parking.

Gas House Beach

Gas House Beach is a small neighborhood beach at the end of Gas House Lane off Orne Street. Good protection with pebble sand. Limited on-street parking is available along Orne Street near Fountain Park.

Gatchell Green

Gatchell Green, at the junction of Lafayette Street and Maple Street, is a large grass area with trees and shrubs and is used as a playground/practice field. On-street parking.

Gatchell Playground

Gatchell Playground is an 8-acre multi-use area at the intersection of West Shore Drive and Lafayette Street. The area has synthetic surfaces and a regulation all-weather basketball court, which is lighted for summer basketball leagues. There are four regulation Little League fields which are used daily by school and youth baseball groups. The playground is also used for football in the fall. In addition, there are benches, bleachers, a field house, restrooms, and children's playground equipment. There is a dedicated parking area plus on-street parking on residential streets.

Gerry Island

This is a private island lying in Little Harbor just off Gas House Beach. It has flat terrain populated by poison ivy, wild shrubs, and small trees, and its entire coast is ledge.

Gerry Playground

Gerry Playground is approximately seven acres and is located off West Shore Drive between Dodge and Pitman Roads. Access is via Stramski Way. There are picnic tables and cookout grills for group and family picnics on Salem Harbor, and a new multi-aged play structure. There are 66 pram racks available by reservation for town residents and a public pier, allowing for greater access to the water. There is a beach area which is suitable for swimming at high tide. The children's sailing program is based here utilizing 6 Precision Class sailboats and a whaler. Approximately 100 children participate for 10 weeks each summer. There are two parking areas for about 25 cars. The scenic beauty, lawns, trees, and shrubs, including a number of cultivated blueberry bushes, make this one of the more popular areas for passive family-oriented recreation

Gerry School

Approximately 1.5 acres, steeply sloped with ledge and hot-topped playground in front of the school. Parking in rear.

Gingerbread Lane

This lane runs between Orne Street and Norman Street. It is a quiet little passageway with the aura of a little country lane.

Glover School

About to be rebuilt, approximately 4.3 acres, mostly trees and ledge. Limited use as a recreational area. There is a hot-topped playground facility.

Grace Oliver Beach

Off Beacon Street at Crowninshield Road and facing Doliber Cove. Limited street parking on Beacon Street.

Graves Beach

A public boat launch facility with a small neighborhood beach, it is located at the end of Orne Street where Orne becomes Beacon Street. The view is across to Gerry Island and the open ocean. There is boat storage adjacent to this area, and beyond the boat storage there is another lovely beach, accessible from Beacon Street via Harding Lane.

Green Street Cemetery

This historic cemetery abuts Creesey cemetery, and together they offer a very pleasant grass area to rest and relax on benches under shade trees. Located on Creesey Street between Elm and Green Streets.

Gun House

Located on Elm Street across from the Gerry school. This is a two-stall garage dating from 1808 and is used to house cannon from the Spanish American war. The cannon are used for various celebrations in town.

Harris Street Cemetery

This cemetery is directly opposite the Captain John Glover Hooper Burial Site on Harris Street and directly behind the Unitarian Universalist Church. It shelters the gravesites of many Marbleheaders, dating from the earliest times of the town.

Harvard Street

This is a public way off Harbor Avenue on Marblehead Neck. It offers a superb view looking across Marblehead Harbor to Fort Sewall and beyond. There is a set of stairs leading to a small cobble stone beach. Parking is on Harvard Street.

High School Land

This mostly developed property is under the jurisdiction of the School Department. The site contains just over 33 acres and includes the high school, athletic fields, and a few acres of open space. It is bounded by Humphrey and Pleasant Streets to the north and the railroad right-of-way to the south. The Marblehead Community Center, which houses the Council on Aging and the Recreation and Parks Commission is located on about two acres of this property.

Hobbs Playground

1.14 acres of land at the intersection of Clifton Avenue and Brook Road. The area has a regulation size Little League field and several pieces of playground equipment for younger children. It is mostly used as a neighborhood playground and is adjacent to Eveleth School. On-street parking plus parking in the Eveleth School lot during non-school hours.

King Hooper Mansion

This is an historically significant structure housing various artifacts and memorabilia dating from the last one to two centuries. It is privately owned and maintained by the Marblehead Arts Association but is open to the public six days of the week and for specific occasions.

Jermyn Farm

8.46 acres of the former Jermyn Farm, now under the management of the School Committee. This parcel had been used as a dump site for used construction material but has since been partially cleaned by the Trails Committee of the Marblehead Conservancy under the guidance of both the School Committee and the Conservation Commission. With the permission of both departments, trails have been constructed and joined with those of the Robinson Farm conservation land.

Knight's Hill Road

This road runs between Elm Street and Pond Street near Redd's Pond. A small section is paved, but most of the road is a narrow, hilly gravel path.

Lead Mills

Nearly 5 acres, this land formerly housed a lead mill which produced a form of lead for making paint. It is situated where the Path crosses Lafayette Street near the Marblehead/Salem town line. Privately owned, the land on the Marblehead side was cleaned up in 2011. Acquisition of this land has become a priority, and citizens at the May 2012 Town Meeting voted unanimously to purchase it. If funded at an override of Proposition 2½ in June, it will become an extension to the Wyman Woods conservation area.

Legg's Hill

This is a fairly large parcel of land off Legg's Hill Road, 19.5 acres of which was bought by the YMCA in 2003 to construct a state-of-the-art building that opened in 2009. Situated between the Forest River and Tedesco Pond, it affords the highest view in the area. From its apex one can see far out into the Atlantic Ocean and across much of Marblehead and Salem, including the inner part of Salem Harbor. This is private land that has been totally disturbed, there being little natural vegetation or beauty left on the property.

Lee Mansion

This is an historically significant structure housing various artifacts and memorabilia dating from the 18th century. It is privately owned and maintained by the Marblehead Museum and Historical Society and is open to the public during the summer on certain days of the week and for specific occasions. The historically authentic gardens are open at all times.

Lighthouse Lane

This way is off Follett Street and is part of the Chandler Hovey Park. It is 25 feet wide and runs down 366 feet to low water. Views are over to Children's Island and beyond.

Little Harbor (see Graves Beach, Gas House Beach, and Grace Oliver Beach)

Lincoln Avenue

This undeveloped property is under the jurisdiction of the School Department. A long, narrow wooded site of 6.5 acres, it is bordered to the west and southwest by a dense residential neighborhood. It abuts Reynolds Playground and contains wetlands with an intermittent stream, as well as ledge in the higher elevations.

Lookout Court

This is a narrow way with stairs leading between Tucker Street and Gregory Street. The section of it which exits at Gregory Street is referred to as Prospect Alley. The upper portion, Lookout Court, offers a wonderful view of Marblehead Harbor in front of the Boston Yacht Club. This area is within the historic district.

Lovis Cove

Located on Front Street at the end of Selman Street, Lovis Cove is sandwiched between a small restaurant and a private residence. It is a cobble beach used by hardy swimmers and scuba divers. A set of stairs leads down to the beach. Some small boats and dinghies are moored offshore. On-street parking is available along Front Street if you can find it.

Maintenance Garage and Storage Area (at Devereux Beach)

The garage and storage area is at the rear of the town parking area at the beach. Boats, lobster traps, and off-season equipment are stored outside.

Marblehead Charter School

This is one of the charter schools authorized by the state and is located off Lime Street. It abuts Reynolds Playground and has a limited amount of open space associated with it.

Marblehead Veterans Memorial School

There is limited open space here – two ball fields, which are also used for other sports. On Saturdays in the summer and fall a Farmers' Market uses part of the space.

Marblehead Yacht Club

This club as well as the other four yacht clubs are situated on Marblehead Harbor. These are private organizations and require membership for access to their facilities.

Mechanic Way (see Alley Way)**Nahant Street**

This is a public way on Marblehead Neck offering a lovely view of Marblehead Harbor, Fort Sewall, and beyond. It is located off the eastern end of Ocean Avenue directly adjacent to the Corinthian Yacht Club. There is a small cobble stone beach.

Ocean Avenue Beach

This is a stretch of undeveloped, privately owned beach directly on Ocean Avenue on Marblehead Neck located just after crossing the causeway. It offers a panoramic view of the open ocean down to Boston. It is a good bike rest stop and there is short-term parking on Ocean Avenue and surrounding streets.

Oko's Building

This is an historically significant structure housing various artifacts and memorabilia dating from the last one to two centuries. It is privately owned and maintained but is open to the public on certain days of the week and for specific occasions.

Old Burial Hill Cemetery

This cemetery sits atop a high hill with sweeping views of much of the waterfront of Marblehead. Many of the earlier residents of Marblehead (including some Revolutionary War heroes) dating from the 1600s are buried here. A small pavilion on the apex of the hill offers visitors respite from the sun and a little protection from any wandering ghosts. Old Burial Hill is adjacent to Redd's Pond, being bordered by Pond and Orne streets.

Old Town House

This is an historically significant structure housing various artifacts and memorabilia dating from the last two to three centuries. It is privately owned and maintained but is open to the public on certain days of the week and for specific occasions.

Oliver's Pond

This is a private pond, which feeds into Ware Pond. It sits between May Street and Marion Road. There is no public access, but a May Street resident has offered access.

Orne Playground

This playground is located at Evans Road and West Shore Drive and has only been partially developed. There is a softball field and playground equipment on the Shepard Street side of the playground. A community garden exists on the Evans Road side.

Parker Lane

This public way is off Foster Street on Marblehead Neck. It looks across the inner portion of Marblehead Harbor with views of downtown and Abbot Hall. Stairs lead to a beach and a park bench. There is parking for two cars.

Parker's Boatyard

This is a public boat launch ramp with a small crane and storage facility on Marblehead Harbor, located off Redstone Lane.

Peabody Avenue

This is a public way located off Harbor Avenue on Marblehead Neck. There is a lovely view looking across Marblehead Harbor to Fort Sewall and downtown. There is a small grass area at the end of this way for picnicking and relaxing. This is a good bike stop. There is no car parking.

Point O'Rocks Lane

This is a public way off Follett Street at the end of Marblehead Neck. There is a marvelous view of Salem Sound, Children's, Misery and Baker's islands, and the coast up to Gloucester.

Powder House

A small round red brick structure with an unusual pointed roof located on Green Street, not far from Cressey Street, it was used to store gunpowder and munitions for Fort Sewall during the 1700s. It is a safe distance from the fort to protect the munitions from enemy shelling.

Preston Beach

This is a quasi-public beach on the ocean in front of Beach Bluff Park on the Marblehead/Swampscott town line. It is owned and managed by the Clifton Improvement Association. There is paid parking across the street during the summer.

Railroad Right-of-Way or the Path

The former Boston and Maine is owned by the town under the jurisdiction of the Water & Sewer Department and Municipal Electric Light Department. This greenway, with rails and ties long since removed, has an average width of 40 feet throughout its length of almost 4.5 miles. The central part of the roadbed has a well-compacted path. Brush is trimmed and the Path is maintained using gravel and stone dust. This path connects three conservation areas: Ware Pond, Hawthorn Pond and Wyman Woods. It ends at the Marblehead/Salem town line, a few hundred feet from a fourth conservation area, Forest River. There is considerable frontage along the High School land in back of the post office and along the private open land belonging to Tower School.

The right-of-way is a heavily used valuable resource for the entire town. Uses of the right-of-way include walking, jogging, bicycling, horseback riding, cross-country skiing, and nature study. The Recreation and Parks Department and the Marblehead Environmental Coalition are working with the Metropolitan Area Planning Council on an area-wide rails to trails program through the National Rails to Trails Conservancy. This right-of-way now connects with a paved bicycle path in Salem from Lafayette Street to Loring Avenue near Salem State College. It is anticipated that the connection to Swampscott will eventually be re-established.

Ram Island

This is approximately a 5-acre island about a half mile off Marblehead near the Marblehead/Swampscott town line. It is legally within the corporate limits of Salem. A 10-year conservation restriction was granted by the owners in 1976, and it is "self extending" every 10 years unless the owners give notice to the contrary. A craggy chunk of grasses and perennial herbs, it is the home of thousands of gulls and is left in its natural state. Access by small boat is possible but difficult.

Redd's Pond

This pond is adjacent to Pond Street and just below Old Burial Hill. A very picturesque pond in the Barnegat section of town with depths of from three to 11 feet, it is used for skating in the winter months and model sailboat races in the summer months. Wild waterfowl frequent the pond. There are benches for resting, relaxing and observing the waterfowl.

Red Steps Beach

This is a small piece of land at the end of Chestnut Street. It has three park benches for viewing the south end of Marblehead Harbor, the causeway, and the open ocean beyond. A set of stairs, painted red, leads down to rocks jutting up from the harbor. A few dinghies are moored off these rocks. At low tide one can swim from a small beach. On-site parking is available.

Reynold's Playground

This playground is 5.45 acres for active and passive recreation located off Green Street and Pond Street. There is one regulation softball field, which is used for men's and women's softball leagues. The field is lighted for evening play. In the fall, a regulation soccer field and football field are laid out across the outfield of the softball field. In the spring a lacrosse field is laid out across the same outfield.

There is a field house with public restrooms (not handicap accessible) and equipment storage and benches. A new street/ice hockey rink, with boards, was created in the spring of 2009. The rink was developed by a group of volunteers and donated to the town. There is a dog park with separate areas for large and small dogs on a hill overlooking the fields. There is parking for about 25 cars off Green Street.

Riverhead Beach

This beach is located on Ocean Avenue across from Devereux Beach. It has a beach area on the harbor, but because of extensive tidal flats, it is used as a beach by a few swimmers at high tide, and is a favorite spot for wind surfing. The land area provides additional parking for people using Devereux Beach. There is an excellent free public boat ramp for use at high tide. This area has also been used for carnivals and circuses and in the winter serves as a storage area for floats.

Salem Harbor

This refers to the Marblehead side of Salem Harbor, which looks across to Salem. Marblehead residents maintain a number of moorings in this harbor, and there is public access and parking off the Village Street pier.

Star of the Sea Cemetery

This cemetery serves the church, Our Lady, Star of the Sea, but is actually owned by the diocese of Massachusetts and administered by St. Mary's Church in Salem. It is located on Lafayette Street almost across from St. Andrew's Church. It abuts, in part, the Forest River conservation land.

State Street Landing (See Clark Landing)

Stramski Playground (See Gerry Playground)

Tedesco Country Club

The new clubhouse and part of the fairways of this private club lie partly in Marblehead, with the remainder being in Salem and Swampscott. In the winter the club allows a portion of its land to be used for cross-country skiing and downhill sliding.

Thompson's Meadow

This meadow comprises 113 acres of undeveloped land, both upland and wetland. It is located in Salem but belongs to Marblehead. This parcel starts on Swampscott Road (it forms an estuarine area), sits astride Loring Avenue, and runs into the Forest River area. It was formerly used by Marblehead as a source of town water, but is currently not potable.

Tinker's Island

This private island lies within the corporate limits of Salem. It has seasonal cottages and there is no public access.

Tower School Land

Tower school is located on West Shore Drive, about 1/2 mile from the intersection with Lafayette Street. Behind the school are playing fields and wetlands belonging to the school. These wetlands form a hydraulic connection to Hawthorn Pond and the stream which flows out to Wyman Cove in Salem Harbor. The Path leads past these lands, contributing to the natural setting of the way.

Transfer Station

Health Department Land - 16 acres of land once used as a landfill, an incinerator site, and more recently a recycling area with a transfer station for household and commercial refuse and a dump for brush and leaves. A \$15+ million project capping the landfill, rebuilding the transfer station, and providing a new recycling area and swap shed began in late 2011.

Tucker's Wharf

This public wharf is adjacent to Clark Landing and offers both a launch (for small boats) and mooring facilities.

Village School Land

Much of this land is occupied by buildings, parking, and playing fields, but there is still a sizable portion of open land. In back of the school is a wetland surrounded by a small upland. This is used as a field laboratory to teach the children about wetlands and nature. It is accessible from the road which runs off the West Shore Drive end of Jersey Street by the football/track field. Beyond the playing fields and at the end of Byors Road, off Village Street, is another open area with some trails and another small wetland (see Jermyn Farm). This was once known as Jermyn farm. It has now become part of the Robinson Farm trail area. Access is from the school, the Robinson Farm, or Byors Road.

Village Street Pier and Recreation Area

A public landing on Salem Harbor is available at the end of Village Street. Situated across from the landing is 0.9 acres adjacent to Richard Rockett Landing and Pier. This area is used for parking by people using the boating facilities on Salem Harbor. There is also a fee-for-service launch and a building, which is used to store equipment and supplies.

Waterside Cemetery

This cemetery is located on West Shore Drive and serves the town of Marblehead. The land runs down to Salem harbor and offers some beautiful views for reflection and meditation.

Wye Pond

The pond is eutrophying and is now an isolated wetland containing surface water only at wet times of the year. Frogs can be heard here in the spring, and it may serve as a breeding ground for certain amphibians. Wye pond is located on the Path between Maverick Street and Village Street.

Ways - Elm/High Streets

There are two public ways running between Elm and High Streets. They are located between #20 and #24 High Street and between #32 and #34 High Street. As is the case in much of the downtown in Marblehead, they are sandwiched between houses but are open for public use.

5C. Public and Nonprofit Parcels

Nonprofit open space parcels of land in Marblehead are protected and listed in the section **Protected Parcels** and the related table, above.

Section 6. Community Vision

6A. Description of Process

The Marblehead Open Space and Recreation Plan Update Committee members developed the goals listed in Section 8 by analyzing information gathered through the town-wide survey, the survey/interviews of identified groups and organizations, the public hearing, and committee meetings.

The process began in September of 2011 with the formation of the Open Space and Recreation Plan Update Committee. The committee held regularly scheduled meetings through June of 2012. At these meetings the committee divided the work by assigning specific sections to individual members or teams of members. The committee also devised several ways to determine and implement methods to gain public input into the plan. After the information was collected, organized, and analyzed, the information was compiled into a draft plan that was widely distributed throughout the town for comment. A final public hearing was held and changes made as a result of the hearing, and public comments were incorporated into the final plan.

The Marblehead Open Space and Recreation Plan relates to the Metropolitan Area Planning Council's MetroGreen, in that the Plan catalogs all of the town's open spaces and other lands that supply the community with clean water, flood protection, recreation, natural beauty, and a sense of local character. The Plan meets all of the MetroGreen open space goals and objectives.

6B. Statement of Open Space and Recreation Goals *(See Appendix D5 – Open Space Inventory Map)*

The citizens of Marblehead appear to have a common vision for the town's open spaces. The same views often reappeared in all the survey results, interviews, meetings, and forums. The citizens expressed overwhelmingly a desire for a cleaner, better maintained park system, expansion of open land, and the protection and enhancement of existing open space and recreation lands. The overall vision for the town also includes bike trails, increased access to the waterfront, dog parks, expansion of recreational opportunities, increase universal access to playgrounds and restrooms, and promotion of recreational use of the waterfront. The citizens and organizations alike recognize the need to educate the citizens on the importance of conservation and wetland issues.

6C. Relationship to Massachusetts Outdoors 2006 Statewide Comprehensive Outdoor Recreation Plan (SCORP 2006)

Massachusetts Outdoors 2006! Statewide Comprehensive Outdoor Recreation Plan (SCORP), developed by the Massachusetts Executive Office of Energy and Environmental Affairs, Division of Conservation Services, assessed the recreation needs of the state by region and turned that assessment into a guidance document. The intent of the document is to provide policy recommendations for the state as a whole and to suggest key issues at regional levels that should be incorporated into regional plans.

Within *SCORP 2006*, Marblehead is considered part of the northeastern region. According to the report, the most popular recreational activities within the region include swimming, walking, sightseeing and tours, hiking and fishing. All of these activities are enjoyed in Marblehead. Distinction from other communities of the northeast region arises in the list of other activities that the

SCORP survey found to be more popular in the northeast than the rest of the state. The report found that baseball, sunbathing, horseback riding, off-road vehicle driving, snowmobiling, boating (motorized), and surfing were more popular in the northeast region than in other areas of the Commonwealth. Soccer, tot lots, and pond hockey were also found to be popular activities. Marblehead, however, is small in land area and long in coastline, giving the community a distinction among other northeast region communities. The town also has a long history with the sea. As a result, sailing is a major activity, with more than 2000 boats moored around the peninsula during the summer. Off-road vehicle driving, horseback riding, and snowmobiling are nonexistent. Art, in various forms, draws tourism as do the many historically important sites and buildings.

Although there are differences between Marblehead and the rest of the northeast region with respect to favored recreational activities, Marblehead citizens are as concerned with access to open space and maintenance of activity areas as any other northeast region community. The town being small, one or more open space and recreational activity areas are within walking distance of every household. That said, there is a continuing concern for those with physical disabilities. According to the survey conducted for *SCORP 2006*, the northeast region residents support improving access to recreational facilities for persons with disabilities.

The *SCORP 2006* survey also showed support in prioritizing funding for maintenance of existing facilities and new open space acquisition. A survey of Marblehead residents in 2012 agreed with this prioritizing of funding and further showed a strong need for bike trails, again consistent with the survey of northeast region residents done for *SCORP 2006*. However, in Marblehead, coastal access for boats and dog parks were the next most popular needs, compared with playgrounds and swimming in *SCORP 2006*. In summary, *SCORP 2006* serves as a good guide to regional interests, a welcome starting point when assessing local interests and a useful tool for relating to neighboring communities.

Section 7. Analysis of Needs

The character of Marblehead owes much to its natural, scenic, environmental, and cultural surroundings, which have been described in preceding sections. In the regional context, Marblehead remains a uniquely situated and historic town. Protecting its assets is a priority for town residents who responded in various ways to the Committee. In 2012, data was collected (see Appendix A for letters of invitation) over a two-month period from approximately 120 citizen surveys, 30 town department and special interest group surveys, and from a forum and public hearing on open space and recreation held on January 23, 2012. The collected data was compiled, graphed (see Appendix B), and discussed by the Committee before giving the lead for developing most objectives and plans to the Committee representatives of the Conservation Commission and the Recreation and Parks Commission. Two items of interest do not fit well with either of the chosen lead commissions: use of the former rail bed (the Path), and its upkeep as a place of recreation and bicycle trails. For these, the planning group proposes that current appropriate managers assigned by the town to the relevant areas be brought together for planning.

Many of the goals listed in the 1999 Plan remain open, not as a result of having done nothing, but rather because the efforts are continuing. In some cases, the means of achieving the desired ends changed. As an example, the involvement of nonprofits and neighborhood groups in carrying out activities or in raising funds to help support an activity or purchase is more prevalent. Other efforts

ended, such as the Standing Committee on Open Space. The needs spelled out below, many from the 1999 plan, need to be reconsidered, and new approaches to solutions need to be found.

7A. Summary of Resource Protection Needs

Resource protection needs exist at both the regional and local levels. At the regional level, areas for protection include water resources, land usage, cultural heritage, and “green” infrastructure. Locally, similar resources need protection in order to maintain Marblehead’s quality of life, uniqueness within the regional context, and to protect and enhance the town’s character and identity. The local resources needing protection include water, land, vegetation, and wildlife. Regional resource protection needs:

A1. Water: A multi-community approach to conserve water resources and to protect its quality is needed to forestall wasteful use and pollution that have detrimental effects on the environment, ecology, and recreation in the region. Many North Shore municipalities share the common resources of tidal shoreline, wetlands, inland ponds, streams, rivers, and groundwater. Marblehead alone has 14.2 miles of coastal waters, and two of its water resources, Forest River Conservation area and Thompson’s Meadow, originate in Salem. Salem Sound Coastwatch is a group dedicated to raising awareness of water quality and provides a vehicle for action. Their work in Salem Harbor on the effects of the Salem power plant and their interest in Babbling Brook in Marblehead’s Steer Swamp are examples of much needed regional resource protection. In its report entitled *Riverhead Beach Preliminary Feasibility Study* (mentioned in Section 6-C *Surface Water* in this Plan), the Gulf of Maine Research Center, Inc. documented numerous discharges and non-point source pollution inputs, which occur from a variety of sources such as street runoff, pesticides, animal waste, and boat discharges. In addition, coastal North Shore towns have many recreational properties, which attract boaters, swimmers, sunbathers, divers, and other water related activities. Other cultural and educational activities attract many more boaters from the region to these properties, such as the YMCA Camp on Children’s Island or Marblehead Harbor during the Fourth of July fireworks and musical performances at Crocker Park.

A2. Land: Wise land use practices must be kept at the forefront as economic, commercial, and residential endeavors challenge current zoning and planning regulations within this built-up region. For instance, residents of the West Shore have a direct view of the smokestacks of Salem Power Plant across the harbor. Other scenic vistas, afforded by Marblehead’s peninsular location, could be lost due to unwise or inappropriate land use. Also, as development occurs, water access may be lost. Using the Massachusetts Coastal Zone Management policy is one step to minimize this. Not unlike other towns in the region, Marblehead is almost completely developed, with very few privately owned large parcels of land remaining undeveloped. According to Section 1: *Plan Summary*, the Plan looks for ways to increase the recreational and conservation value of existing town land, and for other means of protecting the natural resources of the town.

A3. Cultural Heritage: Maintaining the rich cultural heritage through preservation and conservation practices is needed to preclude overdevelopment and loss of the North Shore’s regional character. For instance, across the harbor is Salem, where its diverse history is celebrated throughout the town. The Peabody Essex Museum houses maritime artifacts from the China Trade, the House of Seven Gables portrays the literary history of Nathaniel Hawthorne, and the Witch Trials Memorial commemorates the events in 1692. The presence of the National Park Service not only draws many tourists to their Visitor Center but also provides the city with technical, educational, and financial assistance for

conservation and preservation projects. Other agencies, such as Massachusetts Historical Commission and Historic Massachusetts, are available for technical guidance about cultural landscapes.

A4. Green Infrastructure: The region has a small but impressive “green” infrastructure in the form of abandoned railroad beds, which have the potential for greenway development. There is great and developing potential for connecting neighboring towns of Swampscott, Danvers, and Salem to Marblehead’s railroad right-of-way (described in Section 5A: *Protected Parcels* - AKA the Path). Not only would this regional greenway benefit residents of many towns in the form of recreation, but developing these links as green space would also help mitigate some of the effects of disappearing open landscape through conservation, environmental, and ecological measures. Greenway systems throughout these towns would also provide a much-needed link to historic, cultural, and educational opportunities such as those mentioned in Salem. Finally, a greenway network provides an alternative means for transportation.

7B. Local Resource Protection Needs:

B1. Water

Since Marblehead is not only surrounded by seawater but also has several inland freshwater features, solutions are needed for protection of water quality as well as prevention of flooding and erosion. These measures include:

- Rerouting of stormwater drains away from saltwater marshes,
- Improving town-wide stormwater systems to prevent flooding and to minimize fecal coliform counts in stormwater drains and at outfall locations,
- Assessing water quality using Best Management Practices,
- Assessing the town harbors’ water quality,
- Preventing erosion of coastal banks, and
- Decreasing nutrient load in freshwater bodies that are associated with urbanization.

B2. Land

Very few large parcels of privately owned land remain undeveloped. Maintaining, preserving, and acquiring land is a priority to keep Marblehead’s character. These remaining open spaces (publicly or privately owned) include school properties, water access, such as Gerry Island, Graves Beach, Commercial St. landing, and other right-of-ways, Tedesco Country Club, the Lead Mills, Transfer Station, and Star of the Sea School and Cemetery, to name a few (refer to Section 5: *Unprotected Parcels*). Some of these sites have coastal erosion issues to contend with. Opportunities to forestall more development include:

- Expanding open space and waterfront access,
- Improving waterfront access,
- Identifying, protecting, and preserving remaining undeveloped open space,
- Protecting and enhancing existing open space, and
- Assessing certain parcels to determine if environmental problems exist.

B3. Vegetation

In accordance with the Massachusetts Endangered Species Act, the Massachusetts Division of Fisheries and Wildlife produces a list of endangered, threatened, and special concern species for each town in the commonwealth. Within Marblehead, only one endangered plant, Ovate spike-sedge (*Eleocharis ovate*) is listed and last reported seen in 1971. So much of the land in Marblehead has been

developed, the short listing of endangered or threatened plant species is not surprising. These lands were cleared long ago. However, there remains a concern.

Occurrences in the landscape have sent signals that the ecosystems are in danger. With the exception of the Street Tree Planting Program, town-wide landscape planning on publicly owned properties has been minimal. Hence, native vegetation has been losing ground to invasive exotic species. For instance, Norway maples have invaded Seaside Park. Exotics such as *Lythrum salicaria*, or purple loosestrife, and *Polygonum cuspidatum*, or Japanese knotweed, have invaded Ware Pond; *Phragmites communis* thrives on the edge of Goldthwait Reservation. Intervention is needed to return certain fragile areas to their former natural state. Some solutions may be:

- Controlling noxious weeds through environmentally safe and appropriate methods,
- Reducing pesticide usage,
- Preserving the saltwater marsh ecosystems, and
- Providing food and cover for wildlife.

B4. Wildlife

For Marblehead, the table given in Section 4E of this plan identifies those wildlife species of concern known to have used the area as a breeding site. As noted above for vegetation, the list is rather short. That section of this plan, however, also notes that Marblehead is located along the Atlantic Flyway for migrating birds, bringing waterfowl, waders, and songbirds in summer and in winter. In some cases, these birds are passing through, such as in the spring and fall migration of the warbler. Some species return from their southern range to winter, such as eiders, scoters, and glossy ibis; or return from their northern range to summer, such as the great blue, green, and black cap night herons. To ensure successful annual migration, open space is required. To sustain wildlife and animal populations, Marblehead should assess:

- The impact of passive and active recreation on certain open spaces that support wildlife,
- The effect of water quality (pollution, invasive plant material, proper tidal flow) on wildlife,
- The accessibility of animal and wildlife corridors for habitat, migration, species interchange, and foraging,

7C. Summary of Community Needs

The community needs of Marblehead residents reflect their appreciation of, and deep concern about, the condition and protection of the open spaces and recreational facilities. An analysis of community input from the sources listed below reveals that the townspeople may be prepared to take a more active stance than in the past to implement protection and conservation measures to ensure their preservation. This trend can be seen in the results of analysis of the objective data, but it becomes most apparent when reviewing the subjective comments collected from the surveys and public forums.

As outlined above, the community's needs have been analyzed from the following sources:

Two Open Space Public Workshops - The Committee invited the community to attend two public workshops held on Monday, January 23, 2012, and Monday, April 9, 2012, at the Marblehead Community Center. Minutes from these workshops and results of public input can be found in Appendix A.

A Town Departments and Town Organizations Survey - The Committee distributed a survey to town departments, town organizations, and other groups that have an interest in open space and recreation areas. Members of the Committee conducted interviews with representatives of these groups. Analysis and results of this survey and interviews are included in Appendix A.

An Individual Citizens Survey - The Committee distributed the survey to the general public through distributed placement of paper copy and through Marblehead's town web site. Surveys were available at Abbot Hall, the Marblehead Community Center, and Abbot Public Library. Announcements of the survey appeared in local newspapers and through an electronic newsletter distributed by the Marblehead Conservancy. A copy of this survey and analysis of the results are included in Appendix A and B.

Open Space and Recreation Plan Study Group discussion - Several meetings of the Committee were devoted to brainstorming on the issues of open space status and town needs as revealed in sections 2 through 6 of the Plan.

The most important community needs as interpreted from the above sources are listed below. No attempt has been made to prioritize these needs. However, each category was strongly supported by all sectors of the population queried.

Special Groups

Many of Marblehead parks are universally accessible including Devereux beach. However while Marblehead's conservation areas are all accessible by foot, the town needs to look at ways to increase accessibility. Ware pond has been made accessible through a series of boardwalks. There is a handicap-accessible raised walkway for access to the back of the pond and a leveled and smoothed path to the front of the pond. This approach leads to a raised viewing area, giving a fine view of the pond. Marblehead's Elderly population is growing. Recreational programs and access to parks and open spaces need to be expanded to address the needs of this growing population. Goals include working with the Disabilities Commission and the Council on Aging.

Maintenance

Since public lands are within a compact, densely populated town, maintenance is constantly needed on the town's open spaces and recreational sites, particularly the more heavily used facilities. The community reflected a strong need to improve the overall maintenance and cleanliness of these areas. The top four public lands most used by the respondents to the town survey are Devereux Beach, Fort Sewall, Crocker Park, and the railroad right-of-way, or the Path.

Analysis of survey results showed 67% of those responding were satisfied with places for children to play, 63% were satisfied with the places for adults to recreate, and 39% of the respondents said that the Conservation lands in Marblehead met their needs. Comments from both individuals and organizations, however, indicated that maintenance and cleanup were an issue. Specifically, a range of maintenance procedures (more/better/different) were identified:

- Massive cleanup everywhere

- Covered trash receptacles needed everywhere, including dog receptacles, since pet waste is a problem

- Conservation Land "Maintenance" program to minimize exotic intrusion and to protect from inappropriate recreational use

Vandalism deterrents

Maintain railroad right-of-way (the Path), and make improvements for better use as a bicycle path or wildlife corridor

Change management authority of the Path (the right-of-way)

Restoration of the Hamond Nature Center and its associated trail network

Restore burned building at Gatchell's

"Adopt an area" program for private groups for added maintenance and oversight

Acquisition, Preservation and Protection

Acquisition of additional open space and water access and preservation and protection of existing open spaces and conservation land were among the strongest community needs. This need was expressed in a variety of ways when questions on the surveys asked respondents to rank the 5 public recreation facilities that were needed in town. Results showed the following five highest ranked public recreation facilities that were needed in town:

1. coastal access
2. conservation areas
3. neighborhood parks
4. bike paths
5. children's play areas

Asked if Marblehead has enough conservation land:

61% of respondents said Marblehead did not have enough conservation land

Asked how important is it for the town to acquire and preserve conservation land:

84% indicated it was important for the town to acquire and preserve conservation land

Asked to select whether it was best for the town to use its resources to acquire additional open space, maintain existing conservation land, or address acquisition and maintenance both equally:

94% said that the town should divide its resources equally between acquisition and maintenance

Asked what would they be willing to do to preserve open space:

34% said they would donate money to buy land; 51% said they would vote to override proposition 2½ to set money aside for acquisition; and 12% said they would contribute or sell land to the town.

Suggestions have been offered as to particular parcels of interest for acquisition:

Acquire parcels that abut, are adjacent to, adjoining, or contiguous to existing open space or conservation lands

Acquire access to water

Acquire parcels that add "wooded" areas to the town's landscape

Identify acquirable parcels for future purchase

(parcels mentioned in the town survey were: Gerry Island, Lead Mills)

Make better use of unused school lands

Some town organizations offered solutions to financial constraints and funding issues needed to maintain or acquire lands, such as: Intermodal Transportation Grant, and Community Preservation Act (C.P.A. # S1715) funds generated from the deeds excise tax to address core community preservation concerns.

Suggestions regarding preservation and protection of open spaces included:

- Preserve/Protect open space for natural habitat and wildlife
- Preserve/Protect wetlands by firm regulation to preserve
- Preserve/Protect some lands “dedicated” to nature and wildlife
- Preserve/Protect public lands through public schools establishing stewardship projects similar to one created at Coffin School by Linda Fuller
- Protect open spaces and recreation areas from pollution and unrestrained and unsupervised pesticide and herbicidal use
- Protect public spaces by addressing and solving the pet waste problem

Public information and education

Results from the town surveys indicated that there is a continuing need for more public awareness of open spaces and individual responsibilities for their upkeep. Although trails in the town’s conservation areas are now maintained by a nonprofit, the Marblehead Conservancy, and a reduction in trash in these areas has been seen as public use has increased, there remains much to be done. Dog ownership, for example, includes picking up and disposing of any waste the dogs create. This is often ignored in conservation areas and parks, apparently with the idea that the waste is biodegradable eventually.

Development and Improvement

Developing and improving the existing open spaces and recreational areas and opportunities is an often expressed community need. In addition, many of these areas need improved access for persons with disabilities. According to the individual survey, general recreation and enjoyment (defined as relaxing, enjoying the view, peace and quiet, passive recreation) is the main reason town residents use open space and recreational areas. Walking, jogging, and running tied as the second reason, followed by playing with their children. (Individual athletic groups that responded to the organizational survey indicated that practice of their sport was the most important use of the facility.) The groups perceived as needing the most recreational opportunities were the middle school aged children followed by elementary then high school aged children. Preschoolers and senior citizens required the least amount of open space and outdoors recreational areas, according to the responses.

Opportunities identified for fulfilling this community need were:

- More bikeways
- More public access to water for boats
- Linkage of pathways with adjacent towns
- Increase sites for dog recreation in conjunction with increased attention to compliance with leash and scooper laws
- Development of Hamond Nature Center (formerly Shore Lea)
- Improvements to the Path (railroad right-of-way) to enhance its use as a recreational site (possible change of management authority)

7D. Management of Needs, Potential Change of Use

Many challenges exist in order to better manage the needs and potential changes of use of Marblehead’s open spaces and recreational resources. These challenges cross over the jurisdiction of several town entities. In general, there is a need for better partnerships among the various

departments, legal counsel and finance committee in order to better serve the town residents, who have expressed, through surveys and open town forums, the need to preserve, protect, and expand the town's open space and recreational needs. To that end, restoration of a Standing Committee on Open Space is advised to provide the town administrators with continuing input and support for open space and recreational issues and initiatives. Also, the town should have an open space management plan on a site by site basis to address ongoing maintenance needs.

D1. Cooperation among various departments

(Parks, Recreation, and Forestry; Conservation Commission; Water and Sewer Department; Municipal Light Department; and School Department)

Improved cooperation and coordination among town departments may expedite some of the issues mentioned in the surveys and at the town forums:

- Inconsistent maintenance and clean-up of public spaces, particularly playground areas
- Better communication between town commissions
- Overall improvement of railroad right-of-way; consider supporting its expansion into Swampscott
- Revise memorial plan for benches and trees
- Support an increase in the use of some open spaces such as the Path (railroad right-of-way)
- Support preparation and use of currently unused school properties as open spaces for passive or active re-creation.

D2. Legal/Financial (Town Counsel & Finance Committee)

Survey results indicate also that more people would donate money to a fund set aside to acquire open space or would approve an override of proposition 2 1/2 than they would donate or sell at a reduced rate any property to the town. Residents would also consider conservation easements as another means to secure open space. Other issues that need legal or financial consultation include:

- Annual perambulation of rights-of-way; identification and verification
- Identification of conservation easements
- Stronger enforcement of by-laws: legal issues, management authority, and stronger protection options for Conservation Commission
- Landscaping and swimming pool bylaws need to be written
- Fines for dumping on public land should be increased
- Zoning: should some lands be re-zoned for protection?
- Plan and provide for acquisition of open spaces (need to identify and pursue possibilities including oceanfront; also land bank)
- Build a capital improvement program for improvement of open space

D3. Overall space management

Effective management begins with an analysis of each site, or a master plan, not unlike those on hand for the school properties conducted by the Conway School of Landscape Architecture in 1997. Using this approach, a better understanding of the needs of various sites could be assessed and planned for over several years according to those priorities. For instance, if these sites were analyzed, they could be managed based on some of the following considerations:

- Active versus passive recreation requires different maintenance programs;
- Climatic issues (erosion, wind damage) may bear harder on seaside open space sites versus inland wooded areas (downed limbs, flooding);
- Seasonal flooding may close down athletic fields or the right-of-way;

Soil composition may preclude or enhance certain types of recreation.

D4. Policy

Land resources are the responsibility of several boards, departments, and commissions. To advocate for land use issues, a group of interested people representing the town departments, citizen groups, and town residents, is needed that would symbolize Marblehead's continued commitment to wise and practical land use planning. The town of Arlington has such a group, called the "Standing Committee on Open Space," whose committee members are appointed by the Town Manager, the chief administrative officer. A similar Marblehead group could create a master plan for The Path (railroad right-of-way) particularly in light of other regional and national greenway initiatives created from railroad beds. To that end, it's worth noting that the President's (Reagan) Commission as far back as 1986 described a vision for a living network of greenways in its study, *Americans Outdoors: The Legacy, the Challenge, With Case Studies*, by stating: "Imagine walking out your front door, getting on a bicycle, a horse, or a trail bike, or simply donning a backpack and within minutes of your home, setting off along a long continuous network of recreation corridors which could lead across the country."

Section 8. Goals and Objectives

The goals and objectives listed below are a result of review and analysis of the town's open space survey results; interviews with special interest individuals and groups; discussions and meetings with Recreation and Park and Conservation Commissions. The 11 goals listed below with their objectives appear in no particular order.

Goal 1: Strengthen Environmental Protection

Objective: Protect and enhance local coastal and inland water resources

Goal 2: Better Land Management

Objective: Effectively Protect and Preserve Public Open Spaces within the Town

Goal 3: Acquire Strategic Land Parcels

Objective: Expand protected open space and waterfront access with the Town

Goal 4: Develop Public Partnerships

Objective: To educate the citizens of Marblehead on the importance of conservation and wetlands issues and to encourage their participation in protecting the town's natural resources

Goal 5: Expand Recreational Facilities and Programs

Objective: To expand the year-round recreational opportunities for both children and adults.

Goal 6: Improve Park and Playground Maintenance

Objective: To make our parks cleaner, safer, and more attractive.

Goal 7: Create a Capital Improvement Program

Objective: To improve long-range planning for costly projects.

Goal 8: Publicize and Promote Usage of Parks, Facilities, and Programs

Objective: Make people more aware of what Marblehead has to offer.

Goal 9: Improve Universal Access to Parks, Playgrounds, and Restrooms

Objective: Improve universal access to our open spaces and facilities and improve opportunities for people with disabilities.

Goal 10: Promote Use of the Waterfront

Objective: Expand and promote usage of the waterfront for all forms of recreational use.

Goal 11: Complete Stramski pier project.

Objective: To work with the Harbors and Waters Commission to finish the pier project and increase access to the water from West Shore Drive.

Section 9. Seven-year Action Plan

Following are the open space and recreation goals, objectives, and actions between 2012 and 2019. Under each goal is listed the objective and a series of actions. The years in which each action will be taken are given in parentheses.

Goal 1: Strengthen Environmental Protection

Objective: To protect and enhance local coastal and inland water resources

Action 1a: Prevent new direct discharges of stormwater into resource areas and reduce contamination from existing sources of runoff including transfer station

Priority: 2012-2019. Funding Source: Town Budget

Responsibility: Conservation Commission

Work with Marblehead's Water & Sewer Department, employ state regulations regarding the upgrading and improvement of current and planned stormwater discharges.

Action 1b: Working with a local private group, complete a study of Black Joe's Pond and make recommendations for better pond management practices.

Priority: 2012 Funding Source: No cost in-kind town employees and officials

Responsibility: Conservation Commission

Action 1c: Identify ponds most threatened by nutrient sources;

Priority: 2012 – 2013 **Funding Source:** Town Budget

Responsibility: Conservation Commission

Action 1d: Restore Forest River as a wildlife corridor

Priority: 2013 – 2014 **Funding Source:** Town and Marblehead Conservancy Nonprofit labor

Responsibility: Conservation Commission

Coordinate with Salem Conservation and Agent on keeping the Forest River tidal gates open and removed, if possible. **Funding Source:** No cost in-kind town employees and officials

Goal 2: Better Land Management

Objective: To effectively protect and preserve public open spaces within the town

Action 2a: Work with the Marblehead Conservancy, a local nonprofit, to maintain and improve Marblehead's conservation areas.

Priority: 2012 – 2015 **Funding Source:** Town and Marblehead Conservancy Nonprofit labor

Responsibility: Conservation Commission

Action 2b: Landfill remediation - Work with the Health Department to complete a state-mandated hazardous waste cleanup that affects the conservation area known as Steer Swamp.

Priority: 2008 – 2014 **Funding Source:** Town

Responsibility: Conservation Commission

Action 2c: Control non-native species within town Ponds

Priority: 2011-2015 **Funding Source:** Town and Marblehead Conservancy Nonprofit labor

Responsibility: Conservation Commission

Action 2d: Publish rules and regulations of conservation lands

Priority: 2013 **Funding Source:** Town

Responsibility: Conservation Commission

Action 2e: Work with the Marblehead Conservancy to authorize and carry out a trail management program including maximum feasible access for people with disabilities

Priority: 2012-2015 **Funding Source:** Town and Marblehead Conservancy Nonprofit labor

Responsibility: Conservation Commission

Action 2f: Work with Marblehead's Disability Commission and the Marblehead Conservancy to define feasible trail access for people with disabilities.

Priority: 2012-2013 **Funding Source:** Town and

Action 2g: Promote and maintain the railroad bed right-of-way (ROW) for use by pedestrian and bicycle traffic. First step is to initiate a meeting with the Board of Selectmen, the Light Department, and Water & Sewer Dept. to discuss the best way to achieve the RRROW dual purposes.

Priority: 2013-2014 **Funding Source:** no cost

Responsibility: Conservation Commission/Recreation and Parks Commission

Goal 3: Acquire Strategic Land Parcels

Objective: To expand protected open space and waterfront access within the town

Action 3a: Build conservation land fund

Priority: 2012-2019 **Funding Source:** Town Budget

Responsibility: Conservation Commission

Action 3b: Acquisition of Lead Mills Site – A cooperative effort with the city of Salem and the nonprofits Marblehead Conservancy and Essex County Greenbelt.

Priority: 2012 – 2013 **Funding Source:** proposition 2 ½ override, PARC grant funds

Responsibility: Conservation Commission

Action 3c: Develop policies and procedures for identifying, reviewing, and accepting donated land

Priority: 2013-2019 **Funding Source:** Town in-kind town employees and officials

Responsibility: Conservation Commission

Action 3d: Use the Conservation Commission web pages to encourage donations of conservation restrictions through tax-relief

Priority: 2012-2019 **Funding Source:** Town in-kind town employees and officials

Responsibility: Conservation Commission

Action 3d: Identify properties with the potential for acquisition as open space

Priority: 2013-2019 **Funding Source:** Town in-kind town employees and officials

Responsibility: Conservation Commission

Goal 4: Develop Public Partnerships

Objective: To educate the citizens of Marblehead on the importance of conservation and wetland issues and to encourage their participation in protecting the town's natural resources

Action 4a: Develop partnerships with local environmental groups to work on projects that enhance the town's environment.

Priority: 2012 – 2019 **Funding Source:** Town in-kind town employees and officials

Responsibility: Conservation Commission

Action 4b: Use media articles to educate public on importance of conservation issues

Priority: 2012-2019 **Funding Source:** Town in-kind town employees and officials

Responsibility: Conservation Commission

Action 4c: With the Health Department, educate the public on the use of agricultural chemicals and organic waste disposal. **Funding Source:** Town in-kind town employees and officials and town funds
Priority: 2012-2015

Responsibility: Conservation Commission

Action 4d: Enhance the use of the Conservation Commission web pages to communicate with citizens
Priority: 2013

Responsibility: Conservation Commission **Funding Source:** Town in-kind town employees and officials

Goal 5: Expand Recreational Facilities and Programs

Objective: To expand the year-round recreational opportunities for both children and adults.

Action 5a: Rebuild restrooms at Gatchell's.

Priority: 2014 **Funding Source:** Town budget

Responsibility: Rec & Park Commission

Action 5b: Upgrade playground equipment at Devereux Beach.

Priority: 2014 **Funding Source:** Town budget and Nonprofit donations

Responsibility: Rec & Park Commission

Action 5c: Initiate meeting with Water and Sewer Department on developing walking trails through the emergency secondary water source land owned by the Commission and located in the City of Salem adjacent to the YMCA facility.

Priority: 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Board of Selectmen/Water and Sewer

Action 5d: Initiate a meeting with the Board of Selectmen to establish an ad hoc bike committee to explore and report back to the selectmen ways to make the town more bicycle friendly.

Priority: 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Board of Selectmen

Goal 6: Improve Park and Playground Maintenance

Objective: To make our parks cleaner, safer, and more attractive.

Action 6a: Review existing trash collection program.

Priority: 2013-2014 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 6b: Develop a program to increase recycling in our parks.

Priority: 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 6c: Explore creating a memorial steps program at Fountain Park as a way of funding the replacement of the deteriorating stairs.

Priority: 2013 **Funding Source:** Self funded through memorial donation/town funds for soft costs

Responsibility: Rec & Park Commission

Action 6d: Continue fundraising effort to complement phases two and three of the old burial hill master plan including facility improvements and the repair and restoration of the priority two and three markers.

Priority: 2013-2014 **Funding Source:** Private donations and Mass Historic grants

Responsibility: Old Burial Hill Oversight Committee/Cemetery Commission

Goal 7: Create a Capital Improvement Program

Objective: To improve long-range planning for costly projects.

Action 7a: Conduct an inventory of all recreation properties, their uses and buildings.

Priority: 2012 – 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 7b: Develop a capital improvements program to maximize use of Shattuck funds, grant opportunities etc.

Priority: 2013-2014 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 7c: Develop 5 year and 10 year capital plans to upgrade athletic fields.

Priority: 2012-2013 **Funding Source:** Town in-kind town employees and officials and nonprofit sports leagues

Responsibility: Rec & Park Commission

Goal 8: Publicize and Promote Usage of Parks, Facilities and Programs

Objective: Make people more aware of what Marblehead has to offer.

Action 8a: Develop an interpretive signage program including site locations & develop uniform sign

Priority: 2014 **Funding Source:** Town

Responsibility: Rec & Park Commission

Action 8b: Seek funding sources for architectural and engineering plans for the restoration of the Fort Sewall Structure; utilize the Coffin fund to fund the project and open the facility to the public.

Priority: 2012 – 2013 **Funding Source:** Mass Historic Grant and Trust funds

Responsibility: Board of Selectmen/Fort Sewall Oversight Committee

Goal 9: Improve Universal Access to Parks, Playgrounds, and Restrooms

Objective: Improve universal access to our open spaces and facilities and improve opportunities for people with disabilities.

Action 9a: Continue to meet with the Disabilities Access Commission to discuss access.

Priority: 2012 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 9b: Work with the Disabilities Access Commission to research available funding programs for access planning & construction.

Priority: 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Goal 10: Promote Use of the Waterfront

Objective: Expand and promote usage of the waterfront for all forms of recreational use.

Action 10a: Expand sailing program.

Priority: 2013 **Funding Source:** Town in-kind town employees and officials

Responsibility: Rec & Park Commission

Action 10b: Begin paddleboard program.

Priority: 2012 – 2013 **Funding Source:** public/ private lease agreement

Responsibility: Rec & Park Commission

Goal 10: Complete Stramski Pier Project.

Objective: To work with the Harbors and Waters Commission to finish the pier project and increase access to the water from West Shore Drive.

Action 11a: Install fencing on the playground side of Stramski Way from the top parking lot down to the lower fire lane.

Priority: 2012 **Funding Source:** Town Harbor and Waters Funds

Responsibility: Rec & Park Commission

Action 11b: Develop the Stramski house into a viable water front facility with program space, public restrooms, and lockers.

Priority: 2000 **Funding Source:** Town in-kind town employees, officials and donated design services

Responsibility: Rec & Park Commission

Action 11c: Develop part of the Stramski House into a dry goods store to sell fishing gear, ice and other boating needs.

The foregoing Marblehead goals correspond in many instances to certain goals as delineated in the State Comprehensive Open Space and Recreation Plan (SCORP).

The following table identifies those Marblehead Goals that correspond to some of the goals in SCORP.

<u>Marblehead Goals</u>	<u>SCORP Goals Policy / Item</u>
Goal 1	
1.	1/1 5/2
Goal 2	
1.	1/7 4/4 5/13 6/1
Goal 3	
1.	1/6 1/10 1/23 1/24 1/25 1/26 1/27 5/1 5/12 7/2
Goal 4	
1.	1/11 5/7
Goal 5	
1.	6/1 6/2
Goal 6	
1.	6/1 6/2
Goal 7	
1.	6/2
Goal 8	
1.	2/4 5/4
Goal 9	
1.	4/5 5/2 5/3
Goal 10	
1.	5/13
Goal 11	
1.	5/2

Note: The Policy/Item codes shown in this table represent those given in *SCORP 2006* in the order they are presented in the report.

Section 10. Public Comments

The Open Space and Recreation Plan Study Committee (OS&RPSC) held two public workshops on the plan. The first hearing was held in Abbot Public Library on January 23, 2012. The second hearing was held in the Community Center on April 9, 2012. At that time, the results of the survey of individuals was released. These results were subsequently reported in a local newspaper, the *Marblehead Reporter*, and on a local news website, *Marblehead Patch*.

Notes from each public forum follow with details in Appendix B:

January 23, 2012

The purpose of the Open Space & Recreation Plan, the need for an update, and the process for doing the update were presented and discussed. The public meeting was described as a way to gather additional information from the community as it relates to the town's priorities for open space and recreational needs.

Robert French of the Marblehead Conservancy presented a slide show of the town's conservation, park, and active recreation areas. Becky Curran, Town Planner, ran the meeting and took notes on the many offerings from those in attendance. The list of topics of interest from the meeting are given in Appendix B-1.

Our thanks to Patricia Rogers, Executive Director of the Abbot Public Library for arranging use of the Library's Meeting Room.

April 9, 2012

Robert French of the Marblehead Conservancy and a member of the Plan Update Committee presented a slide show on the results of the individual survey. These results, in graph format, are given in Appendix B-2.

We are grateful to the many interested citizens who completed surveys, attended the workshops, or provided written comments to the committee.

We are also grateful to the following boards and organizations that provided comments and suggestions to the Plan Update Committee:

Boston Yacht Club	Shipyard Association
Marblehead Conservancy	Marblehead Police Department
Marblehead Youth Soccer Assn.	Lynch/Van Otterloo YMCA
Salem Sound Coastwatch	Marblehead Fire Department
Swampscott Rail Trail Implementation	OMIA
Glover School	Veterans Middle School
Marblehead High School	Old Burial Hill Oversight Committee
Marblehead Youth Baseball	Soccer Over 30
Girls Youth Lacrosse	Adult Soccer
Marblehead Museum	The Lobster Conservancy
Farm Direct Co-op	Tedesco Country Club
Salem Bike Path Committee	Marblehead Farmers Market
HealthLink	Jan Smith for the Audubon Society

Richard Thibedeau, for FEMA

Duncan B. Cox

Their input appears in Appendix B-3.

Section 11. References

Marblehead Open Space and Recreation Plan 1999

**Massachusetts Outdoors 2006 – Statewide Comprehensive Outdoor Recreation Plan
(Massachusetts Office of Environmental Affairs)**

Appendices

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Appendix A: Requests for Information

Appendix B: Survey Input

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Appendix G: ADA Self Evaluation

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