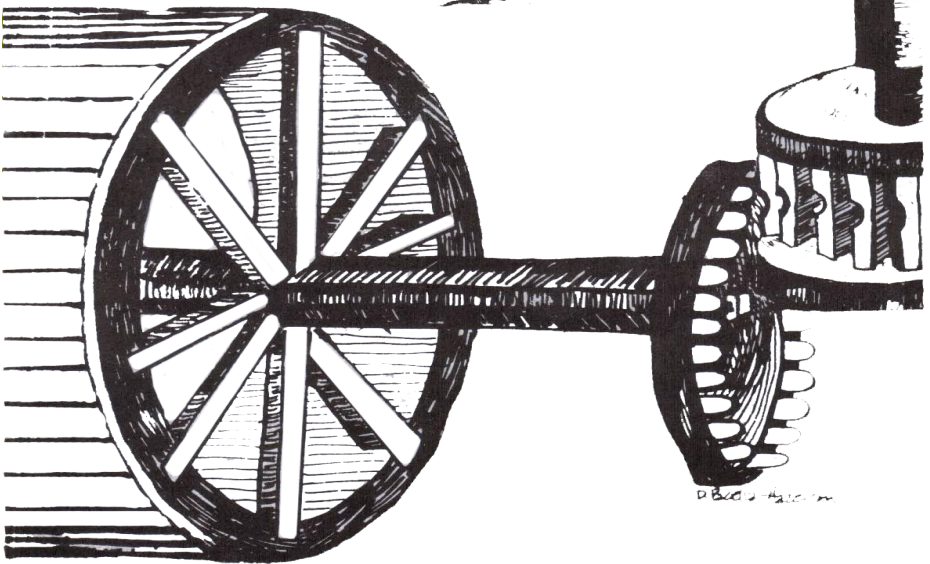
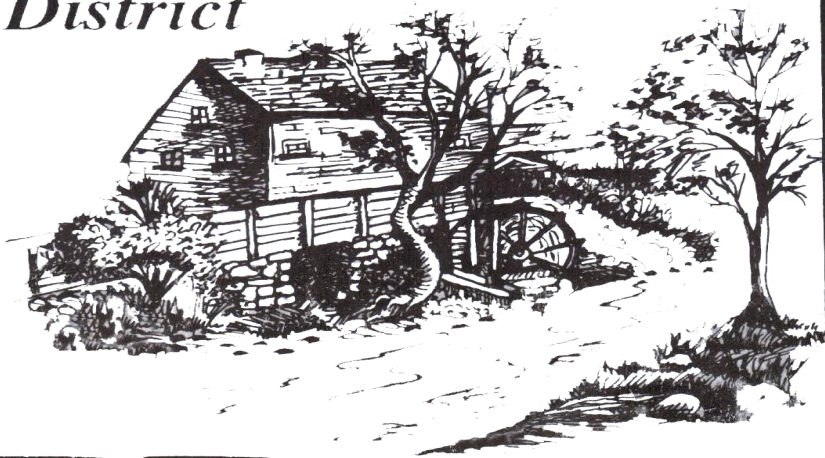
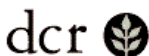


## SELF GUIDED TOUR

### *Spot Pond Brook Archaeological District*



Middlesex Fells Reservation  
Department of Conservation and Recreation  
Commonwealth of Massachusetts-October 1992  
Reprinted with additional photographs and maps  
by the Friends of the Middlesex Fells Reservation-March 2006



### NEW FRIENDS OF THE MIDDLESEX FELS MEMBERS RECEIVE FREE TRAIL MAP

<input type="checkbox"/> Life Member	\$1000	<input type="checkbox"/> Senior (62)	\$15
<input type="checkbox"/> Benefactor	\$500	<input type="checkbox"/> Student	\$15
<input type="checkbox"/> Patron	\$200	<input type="checkbox"/> Trail Map Only	\$6
<input type="checkbox"/> Sponsor	\$100		
<input type="checkbox"/> Supporter	\$50		
<input type="checkbox"/> Family/Household	\$25		
<input type="checkbox"/> Individual	\$25		

All but \$50 of Life Memberships and \$5 of Annual Memberships are tax deductible. You can also join or donate online at [www.fells.org](http://www.fells.org).

☐ I may wish to volunteer. Send volunteer questionnaire

Please make checks payable to and mail to:

Friends of the Middlesex Fells

235 West Foster Street, Melrose, MA 02176

781-662-2340 [www.fells.org](http://www.fells.org) [friends@fells.org](mailto:friends@fells.org)

### Friends of the Middlesex Fells Members receive quarterly newsletter and calendar

Name: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Street: \_\_\_\_\_ Apt.: \_\_\_\_\_

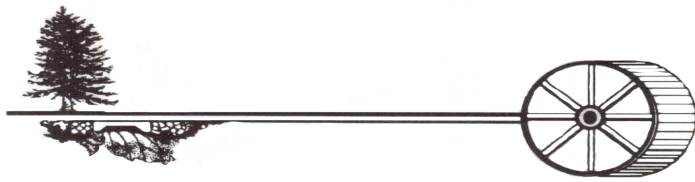
Email (optional): \_\_\_\_\_

Home Phone (optional): \_\_\_\_\_

Work Phone (optional): \_\_\_\_\_

*No personal information is released for any purpose.*

- ☐ Middlesex Fells Wildlife Tracking Survey by David W. Brown \$6
- ☐ Creation of the Middlesex Fells by Michael Ryan \$3
- ☐ The Middlesex Fells: An 1898 article by William de las Casas \$4
- ☐ Friends of the Fells Red Fox T-shirts - Call for colors & sizes \$19



## Forward

In 1893, renowned Landscape Architect, Charles Eliot proposed to...

*“Preserve beautiful and historical sites with bits of scenery which posses uncommon beauty and more than unusual refreshing power.”*

Such was the philosophy that resulted in creating the **Metropolitan Park Commission** and the setting aside of Beaver Brook, Blue Hills and the Middlesex Fells reservations. These words are as poignant today as they were 100 years ago, and they serve as a mandate for the Department of Conservation and Recreation’s continued maintenance and preservation of the region’s open space.

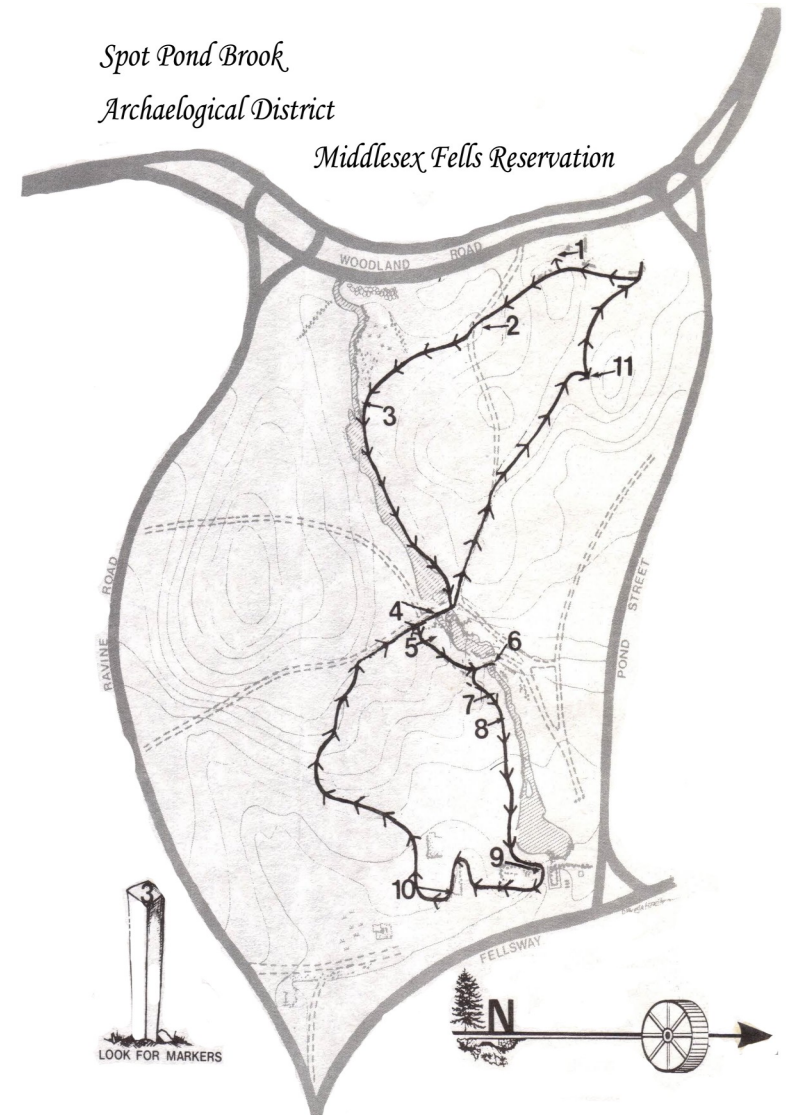
## Credits:

Dianne Pacella-Hazelton:	Design, Layout
Thomas Mahlstedt, Joshua Cline:	Text, Narrative
1992 North Region Staff:	Trail Clearing

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## SELF GUIDED TOUR MAP

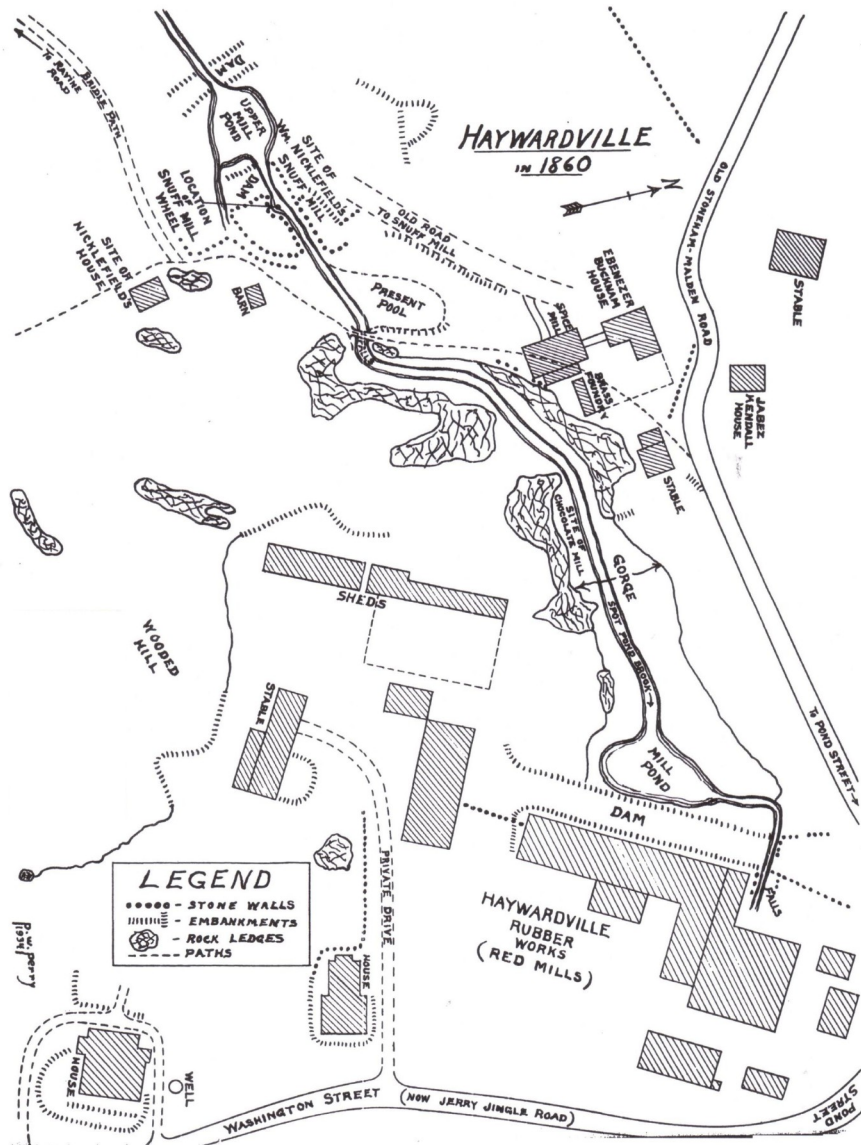


SELF GUIDED TOUR MAP



# Haywardville 1860 Map

from *Round About the Fells: Historical Guide-Book*  
Published by the Medford Historical Society, 1935



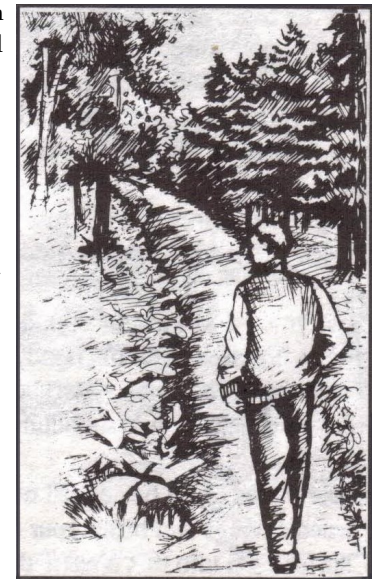
## WELCOME TO SPOT POND BROOK ARCHAEOLOGICAL DISTRICT SELF GUIDED TOUR.

You are invited to embark on a journey through **time** and **space**. Your trip begins in the late 1600s at the top of Spot Pond Brook, and continues to the bottom of the brook in the late 1800s, similar to the way industry and technology evolved at this site. Your trip is a story of the early historic development of Stoneham, Melrose and Malden. This is where it began!

How to use this booklet: A trail has been built through the woods that links various points of historic and natural interest. The text is keyed to specific locations that are identified by 11 numbered wooden markers. After finishing the story at each stop look around for the yellow trail blazes on the trees, or for arrow signs, and walk to the next stop. The map here will keep you on the intended course. (Tour distance: 1 Mile, Difficulty: easy to moderate.)

Your tour take you through the Spot Pond Brook Archaeological District, which is listed on the National Register of Historic Places. Digging or the removal of any historic or natural resources is strictly prohibited.

While this brochure will act as your guide, you must allow your imagination to assist you too. Listen! Smell! Look! Most of all have fun, and come back again.



The Friends of the Middlesex Fells Reservation



## 1 Exploration & Discovery



The time is the late 1600s. The place is **Charlestown End**, a wooded, rugged and largely uninhabited part of Charlestown. You have recently arrived here from Ireland, (or Scotland or England). You may be a **yeoman**, a weaver, shoemaker, mason, carpenter, blacksmith, or miller.

You have ventured into this area today in search of a good place to build a mill. From here you look out onto the large lake which Governor Winthrop only a few years before (1632) had called **Spot Pond**, because of its many islands.

Across the waters you glimpse the wisps of smoke from one of the few remaining Native American encampments in the area.

Now your ears catch the sound of running water. Is this a stream draining from the pond? Will it have enough drop on elevation -- **fall**-- necessary to turn the waterwheels that must power your mill's machinery?

Careful study will be needed before you invest your hard earned savings and bring your family from the comforts of Charlestown into this unsettles region.

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## GRANITE BLOCKS AT HAYWARDVILLE RUBBER WORKS SITE





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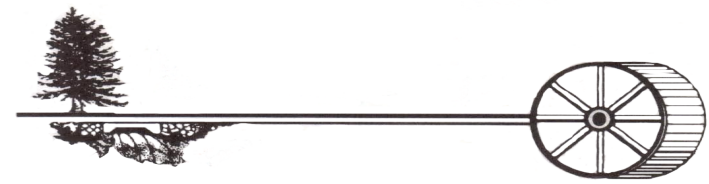
## THE OLD RED MILL



THE OLD RED MILL.



## HAYWARDVILLE RUBBER WORKS SITE

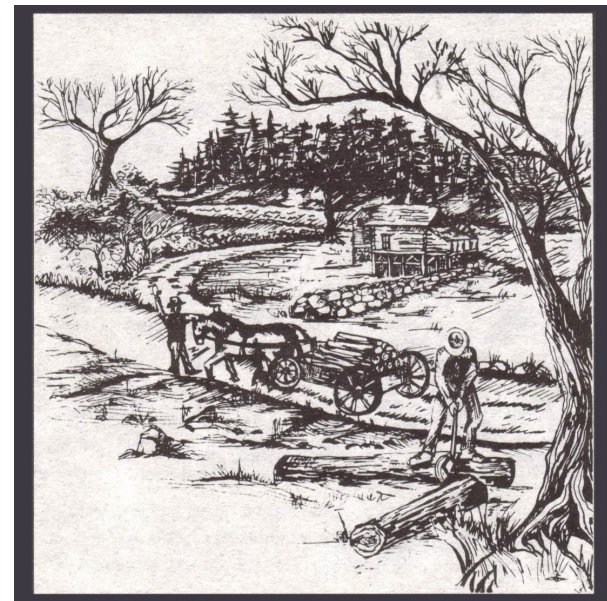


## 2 The Early Years

It is now the mid 1700s, and the stream that you found was perfect. Two mills a few farmsteads are now located here.

You are about to walk down the mill road that leads to the first two mills in the region. Carts and pack animals travel this road daily, carrying grain to be ground, or logs to be cut into lumber so you could build a house. If you don't have any money perhaps the miller will take cut fire wood, or garden vegetables for his services.

As you approach the mill, look to your right. Can you see the old stone wall? This is a 17<sup>th</sup> century *rangeline* which marks the boundary of a family woodlot.



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### 3 A visit to the Grist Mill

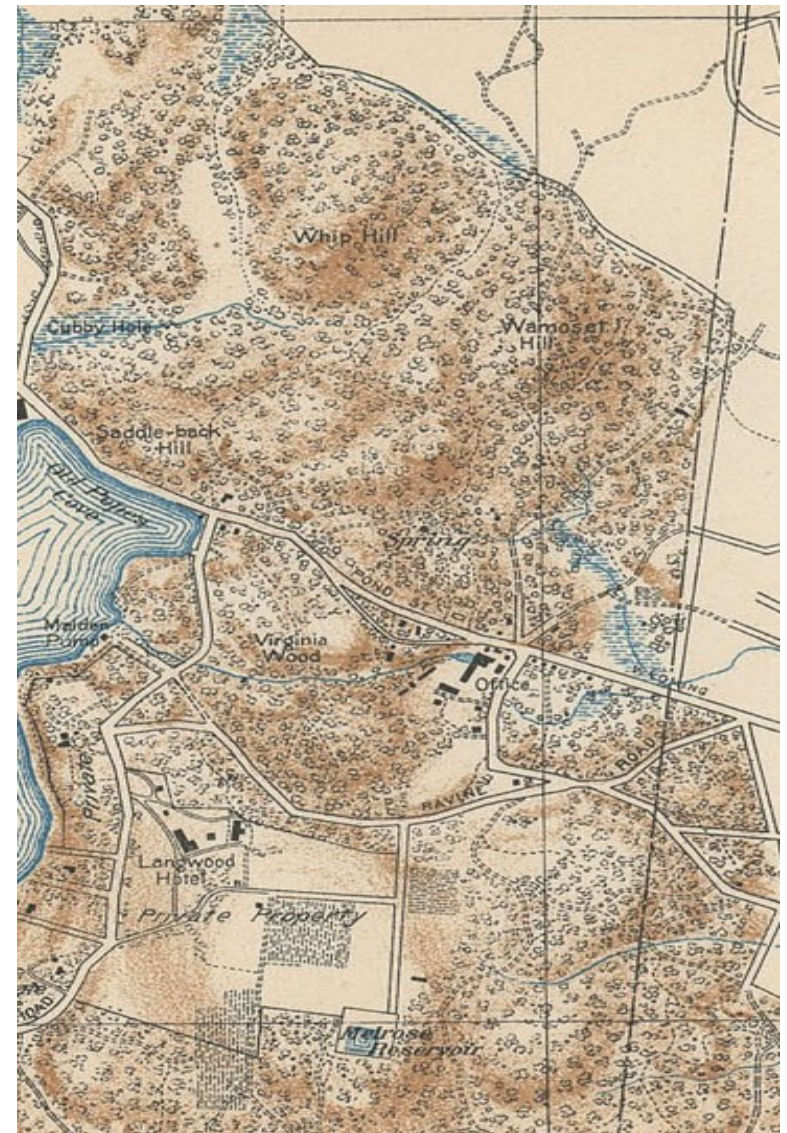
You've arrived at Mr. Vinton and Richardson's gristmill, which may actually have been built in the late 1600s by Captain John Lynde. You have brought grain (rye, wheat, corn or oats) from your small farm a few miles away for the miller to grind into flour.

Your neighbor, Timothy Hadley, a tailor, who you haven't seen for several months, is also here. Your journey now becomes a social visit too, as it's a good time to catch up on local news.

Look over to the stream. The millers lined it with stone, creating a **headrace**, to better channel the flow of water to their waterwheel. The wheel then transferred the energy of the water, through a complex system of gears, shafts and belts, to provide for the grinding stone.



Two hundred years from now the only evidence of the little wooden mill will be a pile of stone from its foundation and water-wheel base. Look carefully, do you see any evidence of this mill here?



Virginia Wood and Spot Pond Brook-1894





Raceway	a channel for conducting water into, or away from a waterwheel.
Rangeline	stone walls used to mark off family lots for harvesting wood.
Spillway	a passageway through, or over, a dam that allows water to be released from the adjacent millpond that is formed by the dam.
Undershot	a waterwheel with buckets, or paddles that are propelled by water passing under, or from below the axle.
Vulcanization	a process pf treating crude rubber with sulfer compounds in varying proportions at varying temperatures, thereby creating a softer, yet stronger and more elastic product.
Wheel Box	the housing that supports a waterwheel's axle and where the lower portion of the wheel turns.
Yeoman	a farmer who owns and cultivates his <u>own</u> farm.



## 4 Ebenezer Bucknam

The time is now 1790, and the place has become Stoneham, which was incorporated as a separate town 65 years earlier.

Much has changed since your last visit to the grist mill. There are many more settlers here now. Ebenezer Bucknam has purchased most of the land along the stream. He has built a stone dam to create a mill pond. The pond's water helped power his sawmill.

Ebenezer has quite the zest for life ...*In 1762 he married Mary Hay who bore him 5 children. Mary died in 1882 and he them married Rachel Lovejoy. He was 42, she 17. Rachel went on to have 9 more children, the last of which he fathered at the age of 63.*

You are currently standing on Bucknam's dam, which also carries the historic **16 ½ foot road**, and creates the mill pond. The upper portion of the dam, and its spillway, were reconstructed in the 1930s by the Civilian Conservation Corps (CCC), and the Works Progress Administration (WPA). They used rounded fieldstone, whereas Bucknam employed angular rock.

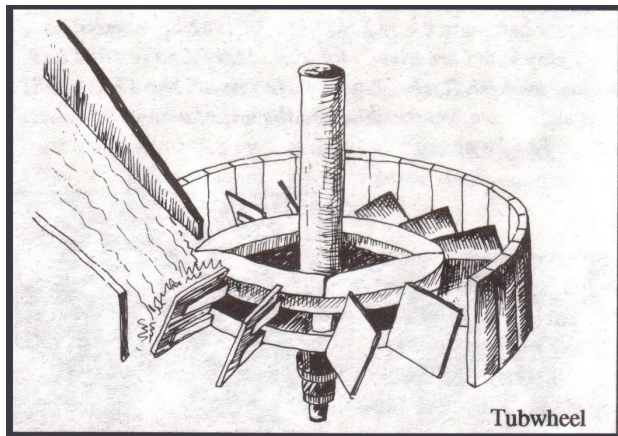
Can you detect the difference?





## 5 Industry Expands

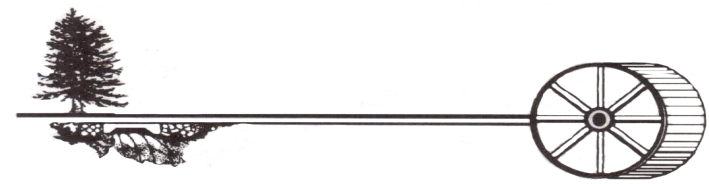
Directly in front of you stands Ebenezer Bucknam's sawmill. Look down at the water's edge immediately in front of you. The stone lined semi-circular feature housed a **tub wheel** that generated Bucknam's power. This wheel lay on its side, horizontal to the water, and the surging water from the dam's spillway turned it. The mill extended from the opposite bank, out over the tub, and was supported here on the island by posts or piers.



The mill's saw is filling the surrounding woods with its whining and screaming sound. Someone must need the lumber to build a house, barn, or new extension for a mill.

Perhaps the saw is cutting the lumber for William Micklefield, who bought a small lot from Bucknam in 1798, and is building a new tobacco snuff mill. Behind you there is a portion of his snuff mill's foundation, with the narrow channel, or **raceway**, next to it. The race will probably convey water to an **undershot wheel**. When completed, this wheel will stand upright, and churns like a ferris wheel.

The Friends of the Middlesex Fells Reservation



## Glossary

Drumlin	an oval, drop – like shaped, glacial deposit or sand and gravel, with its long axis running in the direction in which the ice moved i.e., northerly.
Esker	a ridge of gravel deposited by a stream flowing under a glacier or between two ice packs.
Fall	the difference in vertical elevation between upper and lower reaches of a stream. The greater the difference, the faster the water, and the better the power.
Flume	a conduit or narrow chute through which water passes.
Foundry	an establishment in which metal (iron, brass, bronze, etc.) is heated to a molten state, poured into a mold (cast), thereby creating the desired product.
Headrace	a channel which directs water to a waterwheel.
Hemlock	<i>Tsuga Canadensis</i> – a medium sized cone bearing evergreen tree which grows 60-70 feet high and 2-3 feet in diameter.
Overshot wheel	a waterwheel with buckets, or paddles, that are filled and turned by water poured from the top by a race or flume.

The Friends of the Middlesex Fells Reservation





## 11 A Park System Is Born

Welcome to *Virginia Wood*! The year is now 1891. Fannie Foster Tudor, together with Landscape Architect, Charles Eliot, and friends, have just attended a simple ceremony, with the placement of the bronze plaque, on the ledge above you. The Tudor family, wealthy Bostonians, who owned this property, have donated it to the **Trustees of Public Reservations**, in memory of their daughter Virginia, who recently died at a young age.

This donation was the first such gift of land for public conservation purposes in the country. It became a model for similar donations throughout the country and the world. This country's park system thus finds its origins in this quiet wood.

Today, through the generosity of the Tudors, and the vision of Charles Eliot, the Metropolitan District Commission continues the stewardship of that legacy.

The **Spot Pond Archaeological District**, through which you have just traveled is only a small part of the 2060 acre **Middlesex Fells Reservation**, and of the 13,000 acre **metropolitan parks system**, which is managed and maintained for your enjoyment by the **Department of Conservation and Recreation**. You are invited to continue your explorations and enjoy a wide range of natural and cultural resources that these parklands offer.

Please follow the yellow markers back to your starting point.



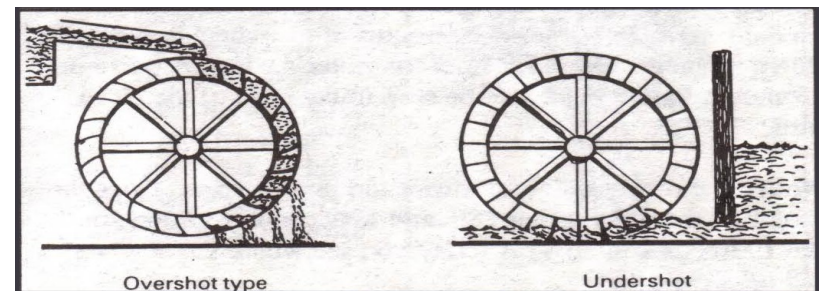
## 6 A Village Grows

The year is around 1812 and you've arrived at **Middle Mill Pond**. About 20 years ago John Rand created the pond when he built a dam in the natural rocky ledge.

Today you've come to help the Hurd brothers repair the paddles on their water wheel, which sits down in the chasm. Their mill has a curious shape as it appears suspended over gorge. Power is derived from an **overshot wheel**, which receives its water from a wooden chute, or **flume**. The flume carries water from the pond, over the edge of the cliff, and pours it onto the wheel.

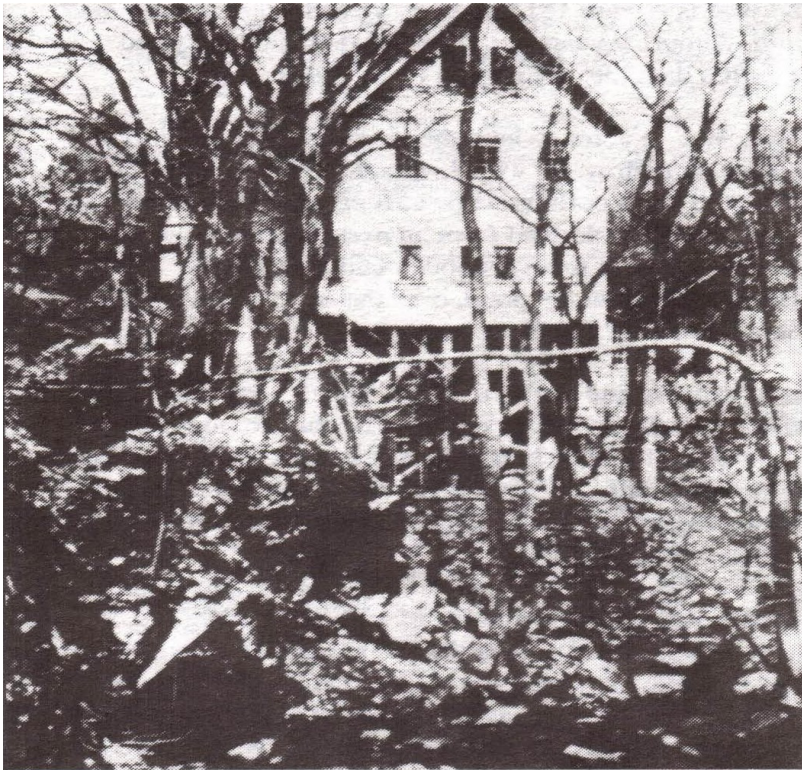
Loud banging and clanking noises are coming from the mall bronze foundry, which is operated by the Grundy brothers. It is sitting next to the Hurd mill, almost attached to it, on the brink of the cliff. This is a busy, noisy and festive place. Located within the space of 75 yards are four mills and several houses.

You are standing in the center of a little mill village. Wagons are coming and going over the dirt roads, horses are neighing, dogs barking, machines and water wheels clanking, water is crashing over the dams and through the races, neighbors and millers shouting greetings to one another. With a little imagination, can you hear the chickens, cows and dogs coming from the yard of the Bucknam House, just around the corner?





## 7 The Gorge



As you pass down the gorge, this vantage provides an excellent view of the upper foundation walls of Hurd's mill perched on the rim of the gorge. The remains of the wheel box sit down in the gorge not far from the water's edge. A portion of Grundy's foundry can also be seen to the right of the Hurd mill.

Notice the rustic bridge, spillway and pond's edge. Does this look like the work of our 18<sup>th</sup> and 19<sup>th</sup> century millers, or of the 1930s CCC and WPA? Can you see where the new and old begin and end?

The Friends of the Middlesex Fells Reservation



*At our peak, I employed 38 workers, and I even provided some of them with a tenement and boarding house; that's how this area got the name Haywardville. In 1863 I sold my company, and moved to Connecticut where I also had a rubber mill.*

Nathaniel Hayward died in 1865. After numerous ownership changes the property became parkland in 1894.

For the final chapter on the history here please follow the trail, one quarter of a mile, to our final stop.



The Friends of the Middlesex Fells Reservation

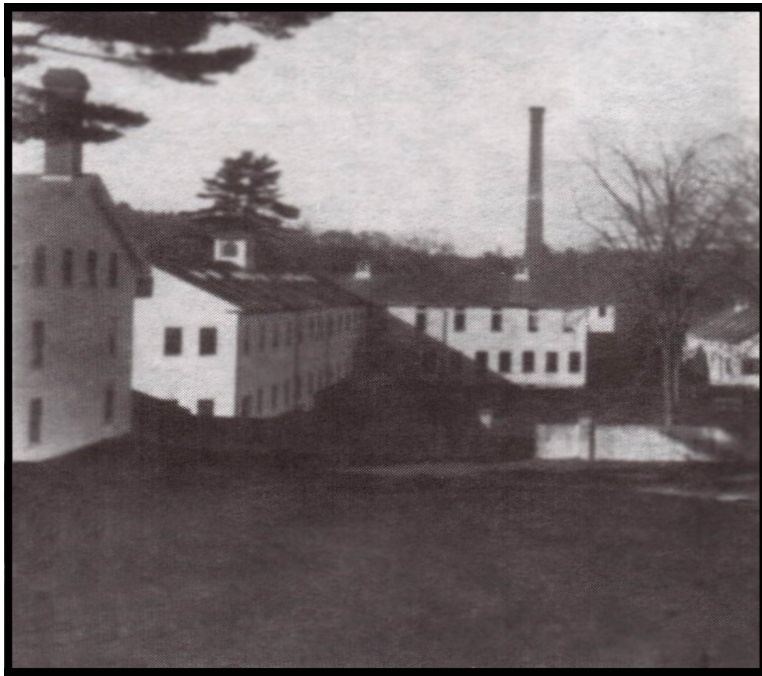




## 10 Haywardville

*You are standing in the exact location where I took this picture of my rubber mill. The milliard is directly in front of you. The long narrow building on the left backs into the downstream side of the dam. The tall smoke stack stands over the stone chamber. The fence marks off the mill yard from the carriage road that ran back to my stables. William Barrett's house appears to the right, and Washington Street (now Fellsways East), passes directly in front of the house.*

*My factory produced a variety of products including rubber boots and shoes, rubber pails and buckets, and rubber chamber pots and spittoons.*



The Friends of the Middlesex Fells Reservation



## 8 Natural Beauty

Lets pause now and leave the mill village behind for a moment to ponder the natural beauty and tranquility of this setting.

Much as it did thousands of years ago, Spot Pond Brooks flows over the ledge and passes through the steep sided ravine below. The narrow ravine tends to trap or retain moisture, making it a cool and damp place, even in the summer. The brook is cutting through a softer bedrock, and from its headwaters upstream, it has meandered around glacially derived land forms known as *eskers* and *drumlins*. The long sinuous snake-like hills seen along the tour are eskers; the round or elliptical ones are drumlins. Can you distinguish between the two?

Now look straight into the air; do you notice anything unusual about the trees? The trees at this spot are majestic *hemlocks*. These huge trees thrive in cool shady locations. This particular stand is on of the largest and healthiest in the greater Boston area.

Its easy to see why Charles Eliot, the founder of the metropolitan park system in 1893 was impressed with this area, and fought to have it set aside, free from future development. It's truly hard to believe that you're only seven miles from downtown Boston.



The Friends of the Middlesex Fells Reservation



## 9 A New Industry Begins

You are in your time machine, and you have moved to the bottom of the brook. The year is 1862; the country is in the grips of the Civil War. By now twenty acres of stream side property have been consolidated under a single ownership- Nathaniel Hayward.

Let Mr. Hayward tell you his own story, and guide you through his mill:

*It was back in 1836 when I discovered how to improve the quality of rubber by adding sulfur when it was being made. My partner, whose name you may recognize, Charles Goodyear, had discovered that heat also improved the rubber. When we combined our two discoveries into a single step, we created the process of vulcanization. The result was a strong product that was free of odor and stickiness and flexible enough to withstand the cold. I am not too humble to suggest that the modern rubber industry owes its origins to our process.*

*The large earthen dam you are standing on, and the mill ponds it creates, were first built by William Barrett, and then improved upon by later owners. Barrett was a silk dyer and manufacturer of medicines. The mill buildings had become so colored by Barrett's dyes that they were once called the Red Mills. The Converse brothers, Elisha and James, briefly owned the mill complex here. (Where have you heard the name Converse before? Are you wearing any?)*

*Now, look down over the dam and peer into the stone chamber. This is a sub-terranean tunnel, or race, which runs underneath the power plant of my rubber works. I have fitted my factory with eight steam engines instead of using the old waterwheels that my predecessors upstream employed. This technology has recently been perfected in the nearby cities of Waltham, Lowell and Lawrence.*

The Friends of the Middlesex Fells Reservation



*Look to the far end of the chamber. Do you see that beautifully made arch? Why do you think it was built in the shape of a barrel rather than the more usual square or rectangular form? From there Spot Pond Brook is channeled underground, and under the buildings. It reemerges on the opposite side of Washington Street (now Fellsway East).*

*Walk with me, let me show you more of my mill.*



The Friends of the Middlesex Fells Reservation