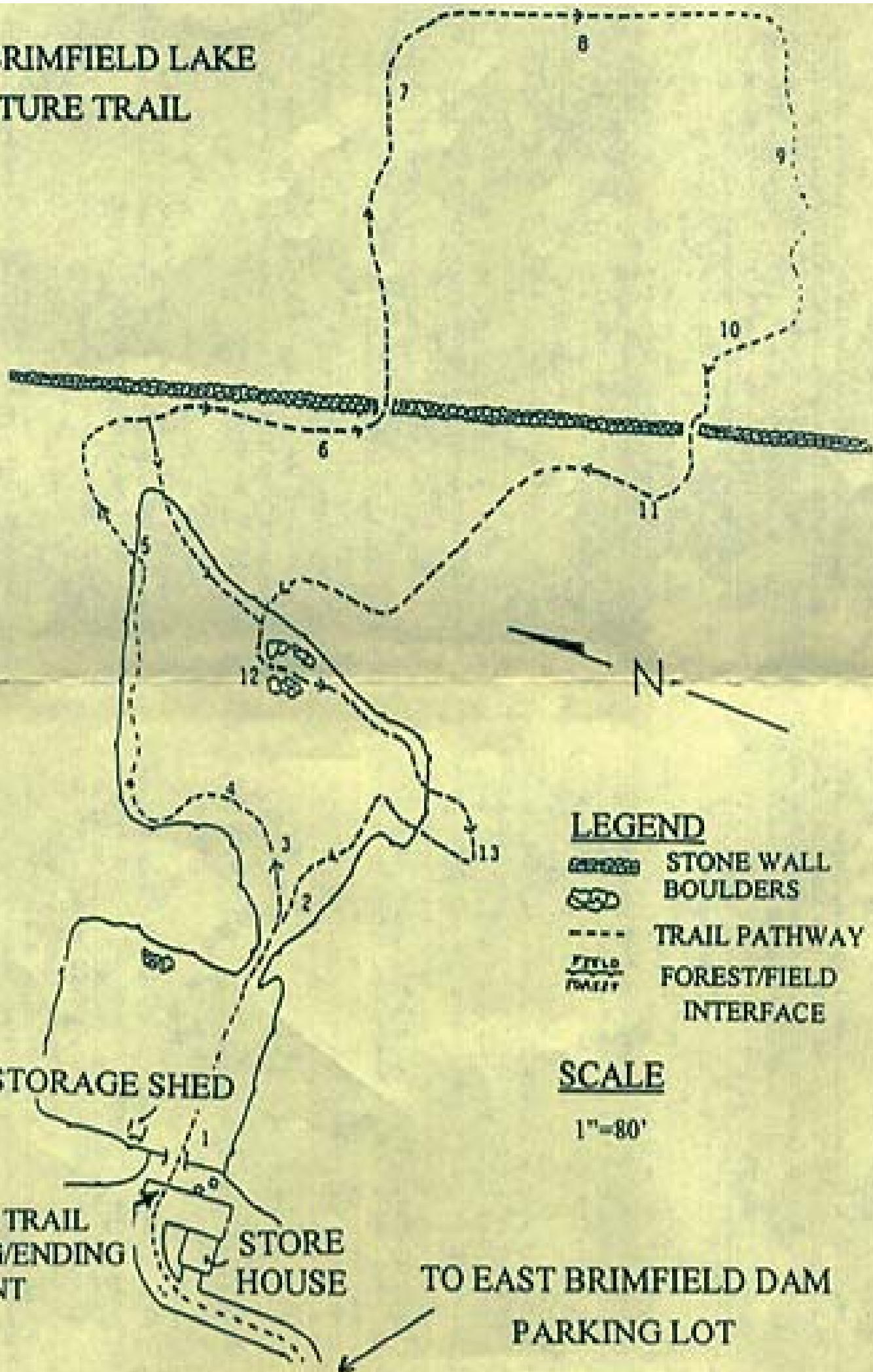






EAST BRIMFIELD LAKE NATURE TRAIL



LEGEND

-  STONE WALL
-  BOULDERS
-  TRAIL PATHWAY
-  FOREST/FIELD INTERFACE

SCALE

1"=80'

STORAGE SHED

NATURE TRAIL
BEGINNING/ENDING
POINT

STORE
HOUSE

TO EAST BRIMFIELD DAM
PARKING LOT

East Brimfield Lake Nature Trail Guide

1. The open field before you is used by project personnel for storage of bulky items and stockpiling of various types of soil. It is these stockpiles of soil that lend themselves very well to the establishment of several species of wildflowers that thrive on bare, disturbed sites.

2. This large open field is the result of the removal and deposition of earthen materials used during the construction of East Brimfield Dam. The area is rapidly filling with eastern red cedar, juniper, pitch pine, and white pine. The wildflowers here present an ever-changing spectacular show of colors. In spring, the oxeye daisies, rough-fruited cinquefoil, and bluets, amongst others begin to emerge. As the summer progresses, brilliant displays of yellow, purple, and white emerge with the arrival of wild indigo, showy tick trefoil, and mountain mint, respectively. In late summer and early fall the various asters begin to exhibit their bright blue, purple, and white flowers.

3. Pioneer species such as eastern red cedar, juniper shrubs, and gray birch are rapidly establishing themselves in this open field. In the future the nearby pines and hardwoods will deprive these two species of sufficient sunlight, thereby “choking” them out of this area in a process called plant succession. Further along the path you will notice a large expanse of juniper shrubs which have encountered this competition for sunlight and have died.

4. Pitch pine (three needles per bundle) forests seed naturally in open fields and pastures depleted of soil nutrients. It is in such fields that pitch pine seedlings receive enough sunlight to establish themselves. Pitch pine acquired its name because the resin (sap) of the tree was, and still is, collected to make tar, turpentine, and pitch; a material used for medicinal and surface sealing purposes. With time, maturing oak, white pine and hemlock trees will “out compete” the shade intolerant pitch pines for sunlight and thus takes over the area.

Also in this area is a grouping of speckled alder. This species is associated with the so-called shrub swamp community; meaning it is common on moist sites such as stream banks and wetland fringes. The speckled alder thrives here in this open field because of the existence of a semi-impermeable layer of soil called a hardpan.

The hardpan, in this case located a few inches below the ground surface, acts to slow down the infiltration rate of precipitation and snow melt into deeper ground, periodically resulting in a layer of highly saturated soil favorable for the existence of speckled alder. However, during dry spells this same shallow hardpan causes the upper soil layers to dry out rather rapidly due to evaporation, resulting in a soil condition well suited for pitch pine, juniper, poplar, cedar, and gray birch.

Just around the corner is a patch of wild strawberries. The common strawberry, which flowers in the spring and early summer, produces a small tart (some say sweet) berry in late June and July.

5. Notice the “edge effect” vegetation. The field with its bushes and open areas changes to a pine-hardwood forest. Herbaceous plants, shrubs, and the low branches on trees act together to form this “edge effect.” This area is an important source of food and shelter for animals.

The trees lining the path upon your entrance into the forest are American elm trees.

6. Mixed pine and hardwood forest. Here you can find large numbers of white oak (rounded leaf lobes), red oak (pointed leaf lobes), and white pine (five-needle bundles). Notice the competition for light, moisture, and nutrients. Some of the smaller trees are dying while the survivors are losing their side branches and growing taller.

You have probably noticed the stone wall running parallel to the trail. This is a remnant of a farmer's field. This farm was likely abandoned, along with many others throughout New England, in the mid-nineteenth to early twentieth centuries due to the labor intensive processes of stone removal combined with the allure of the fertile and relatively rock free lands of the Midwest. The rocks were removed from the fields and placed into walls defining property lines and field/crop boundaries. Since abandonment, the forest has gradually reclaimed the area. At one time, this area probably resembled the open field you traveled through earlier. Further along the path there are other signs of pre-existing agriculture; fence posts, apple trees, and old building foundations - see if you can find them.

7. The large shrub in front of you is highbush blueberry. This plant is very important to wildlife; songbirds, game birds (wild turkey, grouse, and pheasant) relish its berries, and small mammals; deer and rabbits eat the twigs and leaves.

8. The stretch of trail you are now on is a portion of the project's boundaries; red and white markings (along with the trail's designated yellow markings) will be visible on the trees along the path. The narrow open area to the left of the path is a right of way clearing for an oil pipeline.

9. The area in front of and below you is an earth cut created for a trolley line. The trolley, abandoned in the early twentieth century, operated between Springfield and Southbridge. On the other side of the trolley line is another cut created in the 1920's for a railroad line. It was never completed. World War I sapped money away from the English financiers who supported the project.

A word of caution; please do not go near the edge - it is steep and potentially dangerous.

The stand of trees to your left is black/sweet birch. Known by many as a bubblegum tree due to its wintergreen or bubblegum like aroma, this tree supplies about 75% of all birch lumber; used for furniture, flooring, veneer, etc.

From mid-July through the end of August, a small, white, almost translucent plant called "Indian Pipe" grows and blooms beneath the cover of the forest. Since this flower has developed a symbiotic relationship with a fungus from which it derives all of its nutritional needs, it does not require sunlight for its energy source. The resulting lack of "green" chlorophyll is apparent. An interesting note about Indian Pipe is when it is pollinated the flower head moves into a vertical upright position and turns black.

10. You are now located amidst a tall stand of white pine trees. The white pine trees here have grown straight and tall as they compete for sunlight. Notice the smaller dead white pine trees that

did not receive enough sunlight to survive. Notice the lower branches of the taller white pines; they have died so that the branches near the canopy of the tree may continue to spread out and absorb more sunlight.

During the period of sailing vessels, tall straight white pine trees such as these would have been used for the masts of ships.

11. Eastern hemlock stands such as these are very good at blocking out much of the sunlight a sapling (young tree) may need to fully mature. Again the process of competition has come into play. The only method for any plant growth to establish itself in an area such as this is for a tree to fall or be knocked over, thereby allowing direct sunlight to penetrate to the forest floor. Take note of the dimness of the area and the absence of plant life on the forest floor.

12. The large boulders here are glacially deposited remnants of the last ice age. The small white trees located near the boulders are gray birch. This pioneer species is very adept at establishing itself on disturbed sites with poor soil. Gray birch may be distinguished from paper birch by the fact its bark does not peel off (exfoliate) as much as paper birch does and by the black triangular chevrons located below its branches.

13. At this point take a few minutes and, if you will, let your ears do the viewing. What do you hear? Perhaps, a low, dull roar? Straight down this slope is the Quinebaug River as it discharges from the dam. If you look carefully, you may be able to see the shimmering water through the trees. At one time, many years ago, the river was at or near the level at which you stand now. Over several thousand years, the stream has cut its way through glacially deposited till (loose soil) down to its current level.

We hope you have enjoyed your visit to this small sample of the East Brimfield Lake Flood Control Project's fields and woods. Please help us protect them from damage and litter so that others may also enjoy the resplendent scenery they offer.