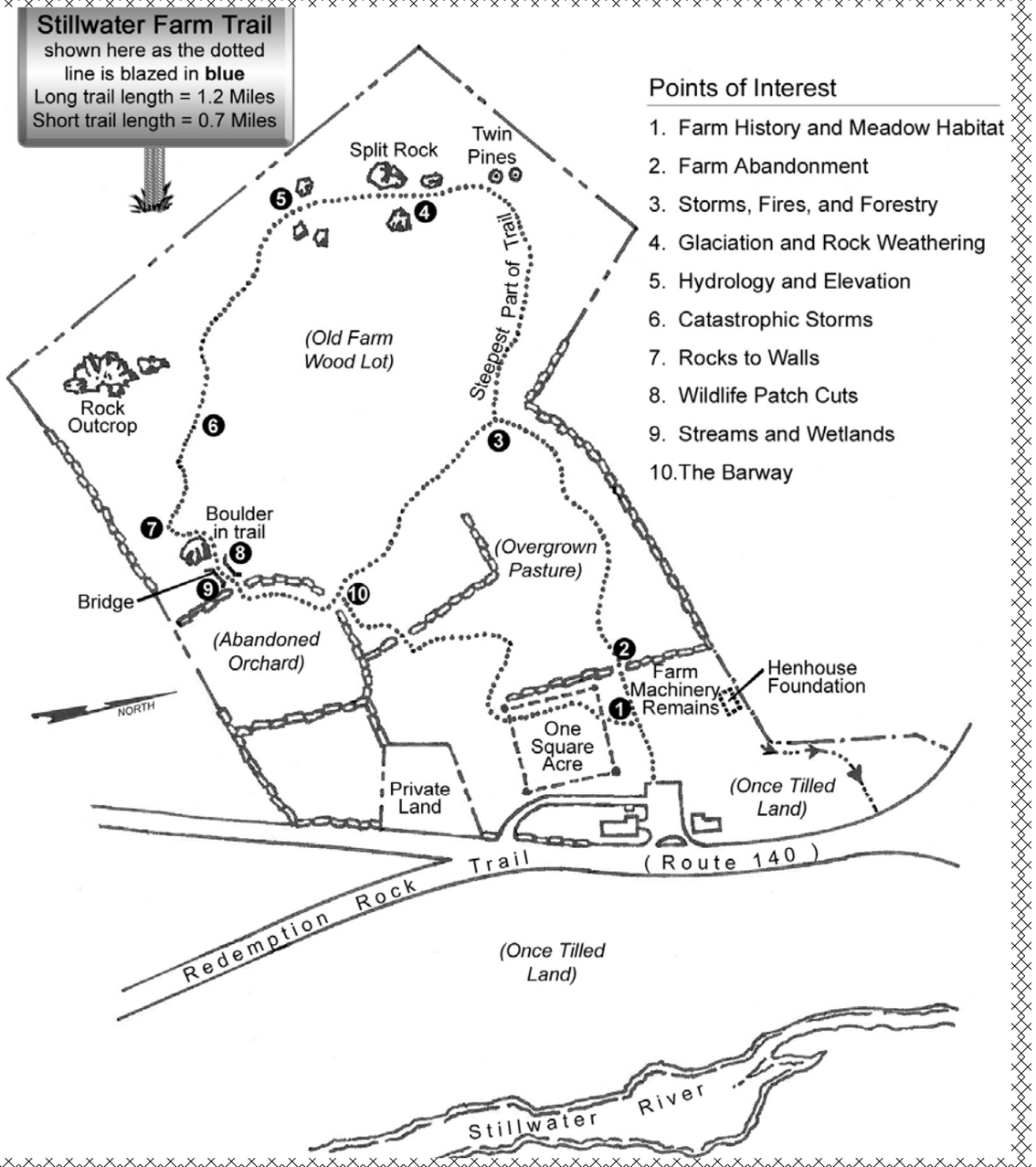

The following activities are **prohibited**

- All acts that pollute the water supply
- Bicycling / Mountain biking
- Horseback riding
- Disposal of trash or litter
- Camping
- Alcoholic beverages
- Motorized vehicles
- Swimming or bathing
- Smoking or building fires
- Animals and pets

This area is open only during daylight hours.

Contact Numbers

Emergency

911

Wachusett Watershed Rangers

978-365-3800

Massachusetts State Police

508-829-8410

DCR Wachusett Reservoir Office

508-792-7423

Department of Conservation and Recreation

Division of Water Supply Protection
180 Beaman St., W. Boylston, MA 01583
(508) 792-7423
www.mass.gov/dcr

Revised 2/2011 Map and Illustrations by James E. Taylor

Stillwater Farm Interpretive Trail

dcr
Massachusetts

- INTRODUCTION -

This trail has ten stations situated at points of interest on a three-quarter mile route. The loop will take about an hour. The terrain is varied with some steep sections, but is generally not difficult. The steepest slopes can be avoided by taking the cross trail between stations 3 and 10.

The trail takes you through 30 acres of New England landscape – from the farmhouse on the deep soils of the valley floor to the thin soils of the stony ridge.

Natural and human history of this tract and its contribution to forest and water resources are the focus of this interpretive trail.

Follow the **blue blazes**. The numbered posts you will find correspond to the numbers in this brochure

After your tour, please return this guide to the kiosk for others to use

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1. FARM HISTORY & MEADOW HABITAT

About 13,000 years ago this land was crushed under millions of tons of ice thousands of feet thick. The Stillwater River is across Route 140 beyond the abandoned fields. These fields, river, highway and farm complex are all situated on gravelly soil deposited here by glacial melt water that flowed down the valley. The bedrock of this valley descends beneath these outwash soils and rises to the surface on the ridge tops both east and west of this spot.

As you walk into the woods you will notice the land becoming increasingly stony. The fields around the farm complex are all that remain of a much more extensive, open countryside of field and pastures that existed just a century ago. During the mid-1800s all of southern New England was just 20% forested. Today, this same area is about 70% forested. The rocky hillsides were pastured, while these bottomlands were tilled for crops.

Certain species of birds such as Bobolinks, Savannah Sparrows and Eastern Meadowlarks depend on these open grassy areas. A variety of other wildlife including butterflies, owls, hawks, turtles, small mammals and White-tailed Deer also depend on carefully managed meadows throughout the year.

The farm was established around 1790 by Zebedee Redding, a Revolutionary War veteran, on the Native American travel route still known as Redemption Rock Trail. He was the first to clear and work these fields along the Stillwater River, which is across Route 140 beyond the abandoned fields. The remaining barn was built in 1868. The farm was later occupied by the Howes, Chandlers, Aroians and, lastly, the Wronski family.

2 FARM ABANDONMENT

Both sides of this stonewall were once open pasture. The left, or western side, was abandoned to tree growth around the turn of the century, while the side towards the farm was pastured until about 1975.

9 STREAMS & WETLANDS

This is an intermittent, or seasonal stream, which transports runoff during the wetter months when snow is melting and the water table is high. Both overland and subsurface flow from the hillside you have just hiked is collected by this small drainage and carried to the Stillwater River. The river delivers this water to the Wachusett Reservoir to become part of the drinking water supply for 2.4 million people.

The importance of the Stillwater River Watershed can be understood when one realizes that one of every eight gallons of water used by more than 40% of the population of Massachusetts comes from this river basin.

Part of the area around this stream is forested wetland. The abundance of water eliminates some of competition between plants, giving greater lushness and diversity to the forest here as compared to the forest on the hilltop.

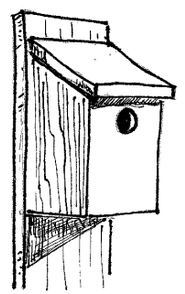
Another benefit of forested wetland is flood control. Although this wetland is small, it contributes, along with others in the uplands of this valley, to the regulation of peak flows from heavy rain. This reduces the threat of flooding and severe erosion. The soils on this hill, with no forest and wetland to protect them, would quickly wash away in the rain.

10 THE BARWAY

The break in this wall is called a barway, where livestock and carts crossed from one field to another. This area was an apple orchard. Orchards were generally perched on gentle slopes with well drained soils to avoid damaging frosts which left the hillsides sooner, but lingered in the lower land along the river.

Below you the forest cover changes from an oak/hardwood mix to a white pine/ hardwood mix. White Pine once occupied much more of this woodlot due to its propensity to seed into abandoned fields. The pines on the lower slope escaped damage by the 1938 Hurricane and have gained significant size. The area closer to the barn was pastured longer than the upper more distant acreage. Grazing livestock also helped the White Pines establish by eating competing the hardwoods while avoiding the distasteful evergreens.

You will soon leave the forest and cross the field behind the barn. It is still a field because it was tilled for crops until just a few years ago. The stony land up here gives way to the smoother, gravel-based glacial outwash which characterizes the valley floor. The land is tillable and mowable so it has been kept open while more difficult land has been allowed to return to forest. The bluebird nesting boxes and apple trees are all maintained for wildlife with volunteer help.



- A SHORT HISTORY OF THE STILLWATER FARM HOUSE -

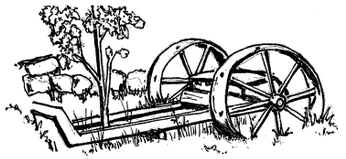
Revolutionary War veteran Zebedee Redding first settled this site at a regional Native American trail intersection, circa 1790. The nearby ford crossing the Stillwater River, and its flanking level land, afforded an opportunity to clear and till for crops and pasture. Originally a single story dwelling, the farmhouse and outbuildings would be enlarged and transformed over the next two centuries to accommodate a burgeoning agricultural enterprise. In 1990, the abandoned and derelict farm was purchased by the Commonwealth and now serves as a watershed interpretive site.

Today the farm house is maintained by the DCR/DWSP as the focal point for interpretation. During operating hours pictures, maps and displays tell the story of the farm, history of the area and the importance of water quality in the Wachusett Watershed. Public handicap accessible restrooms are also available.

Rural abandonment began after the Civil War for many reasons, including the settling of the Ohio River Valley and the Industrial Revolution. Families chose to move to richer, more fertile farmlands or to seek employment in factories rather than try to work this stony land.

The farm was last operated as a dairy and ceased production in 1972. The Metropolitan District Commission purchased the land in 1990 for watershed protection purposes.

You can see various pieces of farm equipment discarded decades ago in the rear of the pasture.



3 STORMS, FIRES & FORESTRY

In 1938, the most powerful and destructive hurricane since 1815 pounded New England. It caused considerable damage to the young, 40 to 50 year old forest. The resulting jumble of downed trees, dead and dried, contributed tremendous amounts of fuel to a forest fire which burned these woods in 1939. This forest has grown since then with a large component of paper birch and poplar along with red oak and red maple.

The trail splits here with the shorter cross trail to your left. Station 4 is to your right and up the hill. You have been walking along a logging road used in 1995 to remove forest products sold to a private timber harvester.

The light thinning in this oak-hardwood stand was supervised by forestry staff who measured and marked each tree to be cut. A volume of 156 cords of fuelwood were removed from 18 acres. This thinned stand provides better light and moisture conditions for the healthier remaining trees to grow.

The overall goal of the DCR Watershed Management forest program is the creation and maintenance of a healthy forest cover, diverse in tree species and ages. We are particularly interested in these conditions as it is known that the purest water flows from a healthy forest landscape.

4 GLACIATION , ROCK WEATHERING

You are approaching the upper ridge of the Stillwater Valley with its thin soils covering bedrock. The glacier scraped ridges and deposited material down slope, leaving deeper soils called till on the lower portions of the valley.

Note the split rock and the exposed ledge in this area. The power of expanding winter ice and growing roots can break stone.

Look closely at the rocks. Numerous lichens grow on rock surfaces. How many kinds do can you see? The rock surface is covered with this partnership between a fungus and a green plant algae. Rock weathering also takes place from lichens extracting minerals.

5 HYDROLOGY & ELEVATION

This is the highest point on the trail at 640 feet above sea level. The barnyard at the start of the trail is at 443 feet. The Stillwater River across Route 140 drops another 38 feet over the 4 miles it travels to the Wachusett Reservoir. Consider that half of all the precipitation which falls on this spot will end up in the reservoir water supply.

How does it get there? Some precipitation falls on leaves and branches and some falls on the ground. A portion of the moisture on the plants evaporates directly back into the atmosphere, while some drips and flows off the trees into the ground and other water falls directly onto the forest floor. Forest soils can take in tremendous amounts of water and store it like a sponge. Deeper soils hold more water than the shallower soils found here.

Half of all the soil moisture is either evaporated or transpired into the atmosphere by trees and other forest plants. The half that is not given off to the atmosphere is called runoff which flows to streams, wetlands and rivers.

The Stillwater River receives runoff from this woodlot and takes it to the reservoir. The natural filtering capacity of forest soils is unsurpassed and results in water far superior in quality to water from fields, streets and residential neighborhoods. Maintaining a healthy forested landscape is the surest way to guarantee a pure source of water.

6 CATASTROPHIC STORMS

The New England forest has been shaped by human and natural forces. Tree clearing, pasturing and burning by humans has transformed this forested landscape over the past two centuries.

Our region lies in the path of periodic storm events, most notably hurricanes and tornadoes, which cause major changes in the forest. Look closely on the forest floor before you. The decayed, moss-covered remains of white pines blown down in the Hurricane of 1938 can be seen. Trees generally fell to the northwest, the wind direction of the most catastrophic storm since 1815.

Notice the characteristic “pit-and-mound” feature associated with wind thrown trees. When the trees blow down, soil and rock are pulled up with the root system, causing a pit where the tree stood and a mound where the roots rotted and deposited soil.

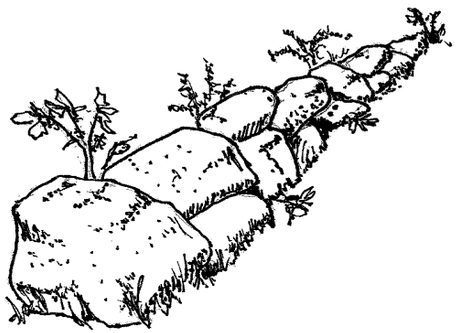
When the next major hurricane comes, timber blowdown in the region’s more extensive and mature, even-aged forest may far exceed the losses of 1938. This will be especially true on east and southeast facing slopes like this one.

7 ROCKS TO WALLS

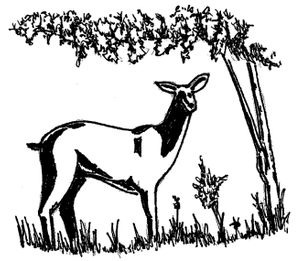
Steep slopes offer special challenges to foresters, watershed managers and developers. This stony hillside is well suited to growing trees, though forest harvesting must be done very carefully to avoid soil erosion. A greater concern is private land similar to this being developed for roads and housing. The ability of a natural forest cover to intercept and slow runoff is far superior to an urbanized environment where polluted overland flow at higher velocities can cause water quality problems.

This stonewall marks the boundary between Stillwater Farm and adjacent private conservation land. The stonewalls of New England are a signature left by farming way of life now all but gone. The walls served to clear the land of stone, to confine animals and to delineate neighbor’s boundaries.

Most stonewalls in this region were built between 1790 and 1840. This wall represents one of the original boundaries of the settlement farms in this valley. Farm lots were laid out to extend from the Stillwater River, as a source of water and tillable bottomland, to the ridge top where plants for grazing and woodland could be maintained for farm use.



8 WILDLIFE PATCH CUTS



This large boulder, called a glacial erratic, was placed here by a glacier some 13,000 years ago. Carried here by the ice sheet, but too large to be moved by the subsequent meltwater, it was gently dropped into place as the face of the glacier melted away.

The openings in the forest were created in 1995 as part of the plan for this woodlot. They occur on level land to minimize soil disturbance, and are comprised of sprouts from the previous overstory of Quaking Aspen, Bigtooth Aspen, Red Maple and White Birch. Wildlife openings, or patch cuts, consist of a large number of saplings which provide forage and cover for a variety of wildlife species including White-tailed Deer, Ruffed Grouse, Woodcock, Chestnut-sided Warbler and Eastern Cottontail.

Early successional forest habitat is not common in southern New England. Forests like this are increasingly lost to development or fragmented into parcels too small to manage for wildlife.

Proper forest management, including complete overstory removals to create small openings like this, can support conditions that will maintain the continued presence of our diverse array of wildlife species.