

A Natural History of the Beaver Brook Conservation Area



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Beaver Brook Conservation Area



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Summary

Stretching from Route 9 to the Mill River in Leeds, this 25-acre conservation area includes rocky, oak-dominated uplands, three certified vernal pools, patches of swamp forest, a very scenic ½-mile stretch of Beaver Brook, plus several hundred feet along the Mill River. All of the land falls within the



Estimated Habitat for Rare Species, abuts another 15 acres under conservation restriction, and what's really nice, this property currently has very few invasive plant problems.

History

Like most of our region, all of this land was cut and cleared for pasture during the early 1800s. In this case, the clearing was mostly likely done to raise sheep for the nearby woolen mills in Leeds. Sometime during those years, a wood road was created that extended between Route 9 and the Mill River. It probably took advantage of a much earlier Indian trail (MA Historic Commission's Reconnaissance Survey Report, 1982) and traces of the old road can still be found just upstream from the arched-stone bridge on the rail line. The rail line was punched through just after the Civil War, in 1867-68, and was built largely at the urging of Haydenville's leading manufacturer, Joel Hayden.





The remains of an old stone wall, probably dating to the 1820s or 1830s, occurs on the property, not far from the bike trail. Parts of another stonewall can be found near the remains of east-west cross road that connected Route 9 to the Mill River. Strands of barbed wire can also be found on the property, physical evidence of its history as pastureland.

By the late 1800s, this property was part of a large farm owned by the Packard family. The main farm was on the other side of Route 9 and included the land where Linda Manor is located. In 1952 a couple in their mid-forties named Fred and Mabel Whitburn purchased 40 acres of the former Packard Farm. The woods had been logged in the 1930s, but when they bought it, the five (or so) acres along Route 9 were still cleared and opened. The Whitburns lived in the house at the end of Leonard Street (#80) and kept horses in the pasture. The rest of the land was their “backyard” and during their tenure, they left it alone. According to the Whitburns’ former neighbor, Daniel Keith,



This photo from 1965 shows the conservation area as almost entirely forested, the one exception being the Whitburn’s pasture along Route 9. The image also clearly shows the old wood road that ran along Beaver Brook, between Route 9 and the railroad line, and it also shows evidence of the site’s logging history, with a line running down through the center of the property indicating two different land use histories.

the couple loved the land and wildlife and they opened it up to their neighbors, letting them wander the land and enjoy it too.

By the 1990s, the Whitburns were in their eighties, and thus begins the strange and complicated tale of how this conservation area came to be. In 1994, Mabel died at the age of 88 and sometime after, Fred decided to re-write his will. By then he was in his early nineties and apparently at the encouragement of his parish priest, he hired a local attorney to help him. In March, 1998, Fred died, just a month shy of his 97th birthday and when his estate was settled, his home and property had been left to his then-caregiver and his money was split between the Catholic Church and the Western New England Animal Center.

Six months later, his caregiver sold the property to John Hanley, a New York resident, who was the local attorney's

brother-in-law and also a trustee of the newly formed Beaver Brook Nominee Trust. Less than a month later, the Beaver Brook Nominee Trust filed a Request for Determination of Applicability with the conservation commission to verify the property's wetland boundaries and not long after that, a forest cutting plan was filed.

Both of these actions alarmed the neighbors, who recognized that these were often preliminary steps before a development. And they were right. In 1999, just a year later, Hanley submitted the first plan for a 49-lot subdivision on the property. During the next eight years, the neighbors' opposition to the project remained strong and along the way, they certified five vernal pools on and around the property, two of which supported rare species.

Use of land in Leeds undergoing change

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Daily Hampshire Gazette (Northampton, MA) - July 17, 1999 [Browse Issues](#)

Readability: 11-12 grade level (Lexile: 1210)

To the Editor:

Regarding your July 8 article, "Leeds man's gift aids animals," I have only one thought.

If **Fred Whitburn's** love for animals prompted his very generous donation to a local animal shelter, how would he feel knowing what is happening to the land he owned and loved.

This land, home to many animals such as deer, raccoon, wild turkey and bear, was sold and is being divided into lots for housing units.

The construction and blasting necessary to build roads and bring water to the new units will shatter the quiet that the human and non-human residents of Leeds have long cherished. I can't help but think that threatening wetlands and disturbing acres of existing animal habitat would not have been Mr. **Whitburn's** dream of how to use the land.

Julie Daniel

Leeds

Beaver Brook plan apparently being scrapped

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Daily Hampshire Gazette (Northampton, MA) - January 7, 2004 [Browse Issues](#)

Readability: >12 grade level (Lexile: 1310)

NORTHAMPTON - It appears that a developer's plan to build 49 homes on a parcel of land off Route 9 in Leeds that drew much neighborhood ire over a four-year period has been scrapped.

In its place now is a proposal to build three homes on the former site of the proposed **Beaver Brook Estates**, off Haydenville Road (Route 9) and Grove Avenue in Leeds.

That plan, offered by local developer Robert Jeffway Jr., will be aired Thursday at a public hearing held by the Planning Board scheduled for 7:25 p.m. in the Council Chambers of the Puchalski Municipal Building.

Jeffway's proposal is markedly different in scope from the 49-home development New York City developer John J. Hanley had once proposed for the site. Hanley is looking to sell Jeffway three of four lots on the 59-acre site, and retain one lot, which has frontage on Route 9, for himself.

Seven months ago, the Planning Board rejected a scaled-down, 19-home version of the subdivision Hanley had been planning.

Hanley's attorney, Patrick Melnik of Northampton, said today that at this point "nothing is settled," because there has been no sale yet and Jeffway has received no permits.

"It all depends on how things play out," said Melnik.

By 2004, the Beaver Brook Nominee Trust had acquired an abutting 20 acre parcel, which allowed them to reconfigure the subdivision. After multiple iterations and revisions, the project was scaled back significantly and the final plan, approved after many hours of meetings by the planning board and conservation commission, included about half as many homes as the original, larger set-backs from the vernal pools and wetlands, plus a connecting trail to the rail trail and 40 acres of conservation land, including nearly all of the former Whitburn property. Fifteen acres of conservation land would wrap around most of the new development and be held under a private conservation restriction, while the remaining twenty-five acres would be donated to the City's conservation commission and would be open to the public. In 2009 the transfer was completed, and the Beaver Brook Conservation Area became official.

Access

Today this conservation area has no designated parking, but informal parking is available along Grove Street and also along the cul-de-sac on Chestnut Street extension. From either of these locations, the property can be easily accessed. The boundary of the conservation area is marked inconsistently, and its trails are not marked either. One trailhead begins on the gravel path (closer to Chestnut Street Extension) and cuts through the uplands, past the largest vernal pool, and down to Beaver Brook.



The trail that begins near the bike path threads through the mountain laurel and passes a large vernal pool. In the foreground of the photo of the vernal pool is the moss-covered trunk of a swamp white oak, a relatively uncommon tree species in the City.

At that point it splits, with a thin trail heading upstream and another going downstream. The downstream trail joins the rail line next to the beautiful arched stone bridge.

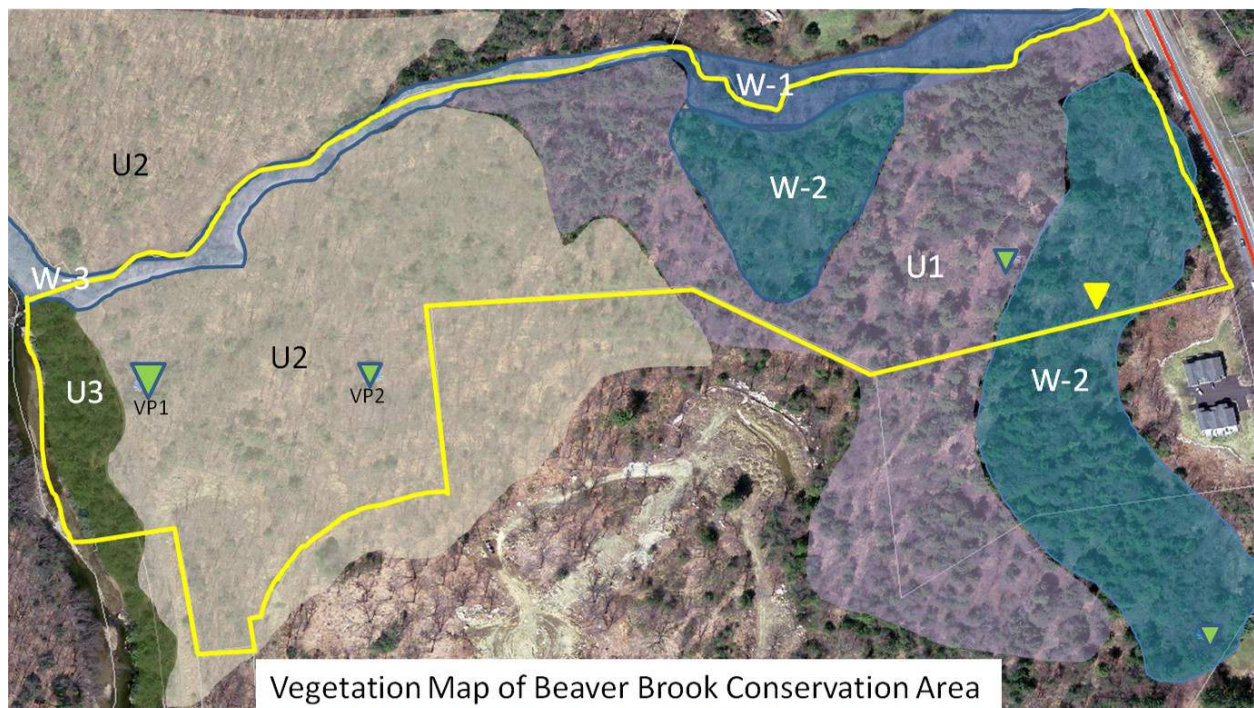
If people want more adventure, bush-whacking is also an option. The old logging roads are getting very grown in, but many are still visible, and if you head upstream from the camping/picnic area, you will find the re-



mains of the old wood road that ran between Route 9 and the Mill River. This road peters out about 800 feet before Route 9 (there is a grove of white pine and part of an old stone wall), but you can easily make your way along the edge of the brook to Route 9.

Topography & Geology

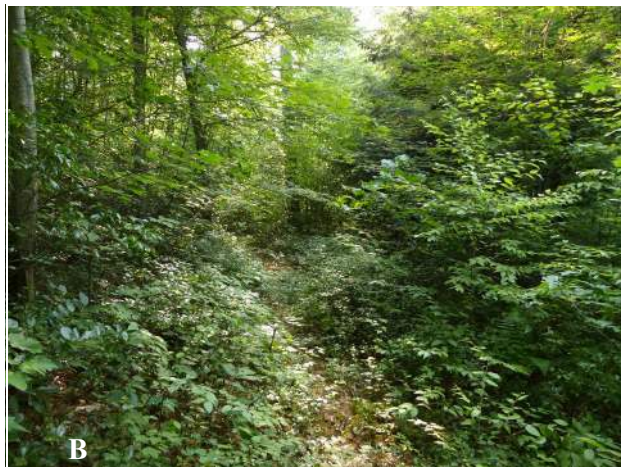
By and large, this 25-acre parcel can be characterized as gently sloping in the eastern half and rugged and rocky in the western portion. Most of the property is covered with rocky till, with just the thinnest band of



sandy, glacial outwash along the border of Beaver Brook (near Route 9 and the cemetery). In general, the eastern half of the property has wetter soils, while the western half is significantly drier.

Vegetation Patterns

Like any landscape, the vegetation patterns that we see on the property today are a function of its land use history, hydrology and underlying geology. Very broadly, the wetter, eastern half is dominated by hemlock and white pine, while the much drier, rockier western half is dominated by



(A) Hemlock, white pine and young hardwoods are common in the eastern half of the conservation area and land under private conservation restriction. (B) A trail along an old wood road is disappearing as new growth overwhelms it. (C) The remains of cut stumps can be seen below a dense stand of young black birch.

oak, with an understory of mountain laurel. Looking more closely, these can be refined and separated into three broad upland categories, two types of forested wetlands, plus vernal pools, Beaver Brook and the Mill River. The following descriptions are matched with the Vegetation Map (next page).

Uplands

U1: Hemlock and white pine, mixed with hardwoods (red maple, shagbark, birch, oak)

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The western half of the property is awash in mountain laurel and boasts a canopy dominated by oaks.

cover nearly a third of the property. Fifteen years after timber harvesting, the network of old logging roads is growing in with young black birch, while the clearings from the harvesting job are now carpeted with hay-scented fern. Other common plants in this area include bracken fern, wild sarsaparilla, clubmosses, Canada mayflower, partridgeberry...and very occasionally, Japanese barberry.

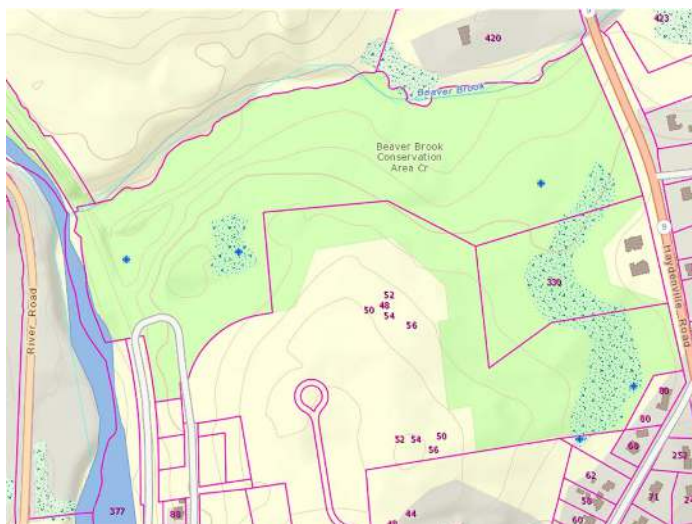
U2: The rocky, rugged part of the property is drier and more acidic, and dominated by oak (red, scarlet, white, black) in the overstory and loaded with mountain laurel and witch hazel in the understory. American chestnut resprouts are also common. The soils here are bony, and bedrock can be seen at the surface.

U3: A nearly solid stand of hemlock grows along the steep slope between the rail trail and the Mill River.

Partridgeberry (*Mitchella repens*) is one of the few members of the coffee family living in the temperate zone. Paired flowers bloom in late June and what's odd is that they fuse into a single fruit, which is the reason why another common name for this plant is two-eyed berry.



Few plants grow in the shady understory of the hemlock grove.

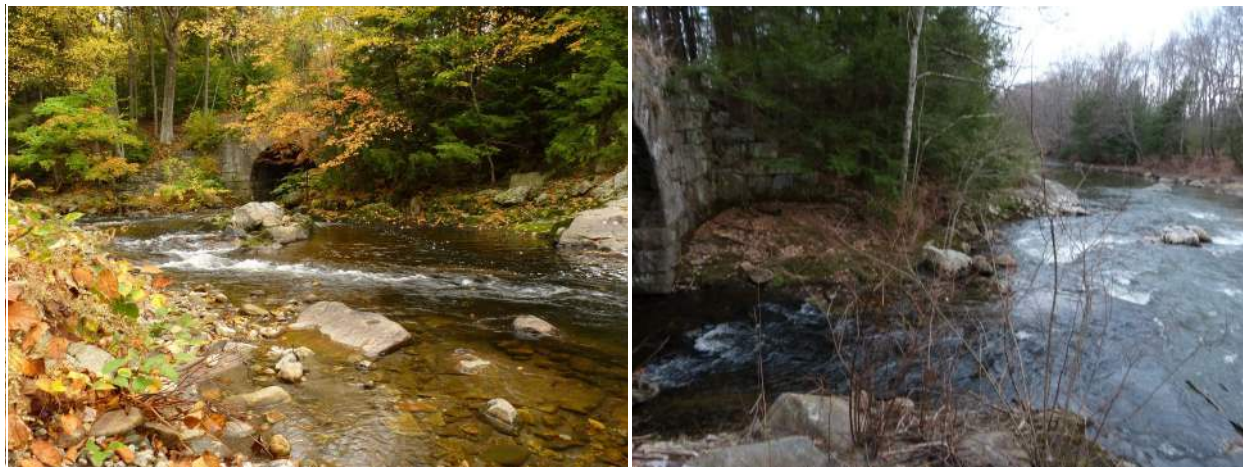


This topographic map nicely shows the outline of the conservation area and the land under conservation restriction, as well as the locations of the wetlands and certified vernal pools on the property.



Mill River, Beaver Brook and Wetlands

Mill River: This property includes a rocky stretch of the Mill River, with bedrock exposures, riffles and pools and of course, the arched stone bridge. This is one of the popular places in the area for swimmers and it is a nice place to snorkel. Japanese knotweed, however, is present along the banks—especially on the other side.



Two views of the Mill River stretch below the railroad arch. This area is a favorite swimming spot in the summer and a nice place to snorkel to see black-nosed dace, brook trout and shiners.

Beaver Brook: This very beautiful stretch of Beaver Brook is rocky and includes bedrock outcrops. It is very different from the sandy bottomed brook on the east side of Route 9 that lies within the Beaver Brook/Broad Brook Conservation Area. Eastern pearl mussels live in this stretch, and it



When Beaver Brook enters the property near Route 9, it is a quietly, meandering stream. This stretch of Beaver Brook has more barberry, multiflora rose and Asiatic bittersweet than downstream.



A rich swamp forest along the Beaver Brook has formed in an old meander along the river. Downstream, the character of the river changes, from a more open and sandy bottom to a faster, rockier-bottomed, shady waterway.



Part of what makes Beaver Brook so interesting and appealing is its variability, from slow-moving and sandy stretch with small rapids and large boulders. This increases the diversity of animals that can live in its waters. (The Japanese knotweed is not far from this boulder; there is also a second patch, downstream and across the river, on land owned by the Catholic Church.



Not far from the railroad arch is a small trail that parallels Beaver Brook and links to the upland trail that connects to the bike trail. This area has richer soils and more ironwood and wildflowers than elsewhere on the property. Turning around and looking downstream, the river widens and its bottom a mix of sands and small cobbles.

looks ideal for wood turtles. Old chewed stumps tell that beavers have been along this part of the brook. Downstream from the campsite is a small patch of Japanese knotweed!



W-1: Beginning at Route 9 and moving downstream, the brook is narrowly bordered by red maple, ironwood, scattered hemlock and white pine. Winterberry and alder are common in the shrub layer, and a broad diversity of plants grow in the understory. These include a mix of ferns (royal, cinnamon, lady, sensitive, and New York fern) as well as spotted touch-me-not, poison ivy, hog peanut, meadowsweet, and Virginia creeper.

Just opposite the private house to the north, the brook bends and there is a sunnier, old meander and an area of open water. Red maple, winterberry, sensitive fern, royal fern, silky dogwood, touch-me-not, and a mix of sedges growing in the seepy borders. Barberry is abundant here, and Asiatic bittersweet is frequent.

At the western edge of this vegetation zone is an old stonewall, the remains of the historic wood road and a very shady grove of hemlock and pine. There is almost no understory vegetation in this area, and the brook is deeply shaded with moss-covered rocks.

Along this stretch of Beaver Brook, there are a few non-native plants (Asiatic bittersweet, multiflora rose, and Japanese barberry), but all in fairly low numbers.



W-2: A perched wetland/swamp forest with seeps and abundant hemlock and red maple. The understory is loaded with cinnamon fern, sensitive fern, poison ivy, and wetland grasses.

The vernal pools in this section are located in shallow topographic depressions that intercept groundwater. These are surrounded with High-bush blueberry, winterberry, tupelo and occasional elm.

Sphagnum moss is common on hummocks of the watery depressions. A few glossy buckthorn were found in these zones, as was scattered barberry and Asiatic bittersweet.

W-3: This stretch along Beaver Brook is higher in elevation than W-1 and the vegetation includes an abundance of ironwood, red maple, red oak (some of which are real whoppers) and a few scattered white pine (also some big ones). Witch hazel is abundant in this stretch, as is New York fern, white woodland aster, Canada mayflower, wild sarsaparilla, Christmas fern, wintergreen, partridgeberry. Low-bush blueberries (*Vaccinium angustifolium*, *V. pallida*) are also both common here. There is an old campsite in this section, and just downstream from the campsite is a small, but worrisome patch of Japanese knotweed.



Certified Vernal Pool 1 (VP1): This isolated pool is an artifact of the construction of the railroad in 1867. In building the rail line, a berm was created that blocked the water's natural drainage and created a depression in the landscape. Today, more than 150 years later, it functions as a vernal pool and is used as a breeding pond by spotted salamanders, wood frogs and many other species. After breeding here, the adults return to the surrounding uplands, where they live underground for the re-



Wood frogs (*inset above*) are one of the amphibians that breed in the pools on the conservation area, including in this wooded pool, which is located in a perched wetland in the eastern portion of the conservation area. The sphagnum here may also provide suitable breeding habitat for the less common four-toed salamander.

mainder of the year. There is little surrounding vegetation in the understory. The slopes nearby include a mix of oak and other hardwoods.

Certified Vernal Pool 2 (VP2):

This large, shallow vernal pool is within a natural depression in the bedrock, which has helped to create a perched water table. This uncommon habitat is one of the few areas in Northampton where swamp white oak occurs. Other vegetation includes sheep laurel and mountain laurel. In the original layout of the subdivision, a road was going to go right through this vernal pool. It is known breeding habitat for wood frogs, spotted salamanders, and an unspecified species of Special Concern.



Recommendations

1. Rid the area along Beaver Brook of the small patch of Japanese knotweed—or else it will grow and grow and obscure the view of this lovely stream.



The small patch of Japanese knotweed in the foreground along Beaver Brook, while the remnants of the old wood road can be seen in the second photo. It could be used as a “new” trail that links to Route 9 and other parts of the conservation area.

2. Maintain the foot trails (they are growing in) throughout the property and repair the trail erosion that has begun at the railroad berm.
3. Control the other invasives along the brook and Mill River (in conjunction with the Mill River Greenway Initiative).
4. In collaboration with the Beaver Brook Condominium HOA, the Leeds Civic Association, and/or others, keep the camping/picnic area free of litter and keep the invasives (e.g. garlic mustard) under control along the gravel and paved connecting trails.
5. Organize field walks to this property to expose more people to the varied habitats (vernal pools, upland oak woods, swamp forest, and brook).
6. Try to acquire the parcel to the north which has its own elaborate network of trails and the remains of an old quarry.
7. Install signs along Route 9 and at the entrance to the trail. Identify parking areas. Create a brochure/kiosk that describes the natural history of the land.



This report was made possible with support from Northampton's Community Preservation Fund.

Photographs © Laurie Sanders.