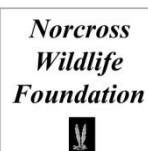
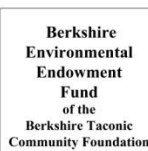


# Churchill Brook Culvert Replacements on both Hancock Road and Churchill Street 2023 Report



*With funding from:*



In 2013, the Housatonic Valley Association (HVA), Berkshire Environmental Action Team (BEAT), and the City of Pittsfield undertook a long-term project to restore the natural aquatic connectivity of Churchill Brook.

Churchill Brook has its headwaters in Pittsfield State Forest. The only human-made obstructions on this brook were two undersized culverts, one at Churchill Street and the other at Hancock Road, both in Pittsfield, MA.

The goals of this project were to:

1. Restore aquatic connectivity in Churchill Brook
2. Ensure the new streamcrossings would last 100 years and could pass the new 100-year (1% chance) flood waters that climate disruption is bringing
3. Restore natural transport of nutrients and sediments downstream
4. Allow for terrestrial wildlife passage under both roads most of the year (except during high water flow events)
5. Reduce the maintenance burden of these crossings on the highway staff in Pittsfield

In 2013 the remains of a recently killed white-tailed deer was found along the side of Churchill street near an old deteriorating culvert that was much in need of replacement. It appeared to staff of BEAT and HVA that the deer was killed in a vehicle collision and that if a better culvert that allowed for terrestrial wildlife passage was constructed, a similar incident could be avoided in the future.

The winter of 2022 – 2023, BEAT performed wildlife tracking after every snow storm from downstream of Hancock Road to upstream of Churchill Street. BEAT also installed wildlife cameras upstream and downstream of Churchill Street to document wildlife movement along Churchill Brook.

**Hancock Road:** From May to June 2018, two under-sized cement culverts under Hancock Road were replaced by a bridge. This bridge has been in place for four full years now. BEAT was able to document small to mid-sized wildlife including mink and coyote crossing under Hancock Road using the new bridge.

Observations: the first year after the Hancock Road bridge was installed the stream would “sink” below the bridge – that is the water would disappear into the substrate under the bridge and the surface would appear dry during low flow times of the year. Before the culvert was replaced, the stream would “sink” just downstream of the culvert, so this was not a huge change, but it did seem that the stream would “sink” even when the flows were not terribly low. In the four years since the culvert was replaced, the “sinking” has returned to only sinking during very low flows.

**Churchill Street:** From November 2020 to April 2021, one deteriorating, under-sized culvert under Churchill Street was replaced by a bridge. This bridge has been in place just over one year. BEAT was able to document mink and raccoon passing under Churchill Street using this bridge.

Observations: During high flows, much of the cobble that had accumulated just upstream of Churchill Street washed downstream to under the bridge creating an island in the middle of the stream and making the water flow around the island to the abutments of the bridge, thus leaving no dry passage along the sides of the stream under the bridge. Only mink and raccoon which don't mind "getting their feet wet" passed under the bridge this winter. However, BEAT did not track any other species crossing over Churchill Street (rather than under) near the bridge other than a porcupine which did not move along the stream at any point in its travels. There were no signs of deer in the vicinity of this part of Churchill Brook this year.

**Summary:** The coyote, bobcat, and fox seem to be moving in a south/north direction. The coyote passes under Hancock Road using the new bridge. The bobcat and fox appear to cross Churchill Brook midway between the two bridges using fallen trees to cross over the brook. This was the case before either culvert was replaced, and seems to be continue to be the case. Raccoon and mink use Churchill Brook and willingly cross under Churchill Street through the new bridge. A great blue heron also landed in Churchill Brook just upstream of the Churchill Street bridge.

BEAT will continue to monitor the section of Churchill Brook from downstream of Hancock Road to upstream of Churchill Street for the next year or two at least.

Links (google folders):

[2022-2023 wildlife tracking notes, photos, and video](#)

[Time lapse videos of the Churchill Street culvert replacement](#)

[Time lapse videos of the Hancock Road culvert replacement](#)

[Photos and notes of Hancock Road culvert replacement](#)

[Photos and notes of Churchill Street culvert replacement](#)

For questions about the wildlife monitoring, please contact Jane Winn, [jane@thebeatnews.org](mailto:jane@thebeatnews.org)

