

Advertisement

LONG ISLAND / ENVIRONMENT
ONLY IN NEWSDAY

Long Island frog tunnel saving spring amphibians hopping between vernal pools

WATCH NOW • 0:35
No E-ZPass needed

A new tiny tunnel under a Middle Island road will help frogs travel from one pool to another in a springtime ritual, avoiding deadly traffic above. Credit: Town of Brookhaven/Luke Ormand

By Tracy Tullis
tracy.tullis@newsday.com
Updated March 22, 2025 4:28 pm

 [SHARE](#)



On a chilly March morning a few days before the vernal equinox, an ensemble of spring peepers sang their steady high-pitched song from a shallow rain-fed pond in Middle Island. Wood frogs added their baritone calls to the chorus. "They really are the harbingers of spring," said John Turner, the land management specialist for Brookhaven Town.

Three years ago, Turner was driving on a two-lane road that runs past the pond. As he came over a rise he saw the asphalt scattered with the corpses of frogs: dozens, possibly hundreds, of crushed wood frogs, spring peepers, gray tree frogs, green frogs and bullfrogs. "There were so many I could smell the iron from their blood in the air," he said.



The Middle Island frog tunnel, installed so the amphibians could safely travel from one vernal pool to another. Credit: Newsday/John Paraskevas

The frogs he saw had been crossing from a vernal pool on one side of the road to another on the opposite side. Their slow speed and small size were no match for the cars hurtling past.

Advertisement

Today amphibians have a safer way to travel. An 18-inch-wide tunnel has been built under the road, and this week new steel fencing was installed to direct the travelers away from the hazardous open road and toward the passageway. It is one small segment of a worldwide effort to restore connections between fragmented habitats and to keep animals from becoming roadkill.

WHAT NEWSDAY FOUND

- **A wildlife underpass has been installed** in Middle Island to allow amphibians and other animals to cross a road separating two vernal pools.
- **Scores of frogs were killed** on the road before the tunnel was built — which could have led to their gradual disappearance from those ponds.
- **41% of amphibians worldwide are threatened** with extinction, and car strikes are a significant contributor to their decline.

Wildlife danger

Long Island is stippled with more than 300 vernal pools — small ephemeral wetlands that fill with snowmelt and rainfall in spring but often dry up in summer. These time-limited pools serve as critical nurseries for frogs and salamanders and feeding grounds for bats, wood ducks and wading birds like herons.

In winter, frogs hunker down to hibernate under leaf litter, half buried in mud, or in the crevices of bark, according to their species. When the weather warms they awaken and follow their ancient instincts to move off in search of mates and an auspicious spot to deposit their gelatinous eggs. Hundreds might travel on a single rainy warm evening in spring. Herpetologists call these mass migrations "Big Nights."

While Arctic terns embark every year on the longest spring migration on Earth, from the Antarctic to the Arctic, the denizens of the Middle Island wetlands may have one of the shortest: a distance of about 50 feet. But as Turner found, it's still a perilous journey.



John Turner on Tuesday on top of the Middle Island tunnel, where he had realized that hundreds of frogs were being hit by cars as they traveled between vernal ponds. Credit: Newsday/John Paraskevas

American highways and country roads bisect woodlands, wetlands and grasslands and impose a deadly dilemma on the animals that live there: restrict their quest for food and mates or risk a fatal collision. As many as 2 million large mammals — deer, elk, moose, pronghorn — are killed by cars every year, according to the federal Department of Transportation. There are no good estimates of how many amphibians meet the same fate — most drivers don't notice and highway departments don't keep count. But biologists estimate the number is in the high tens of millions a year.

Frogs and salamanders are also threatened by water pollution and prolonged droughts exacerbated by global warming as well as habitat loss, as wetlands are drained and built over. All of which make amphibians more at risk than any other class of vertebrates: According to the International Union for Conservation of Nature, 41% of amphibians worldwide are threatened with extinction.

The Middle Island pools don't harbor any endangered species, so far as Turner has observed. But high mortality on a single road can lead to a hyperlocal extinction of common species: no more neighborhood peepers and wood frogs awakening and singing in the spring. A tunnel can make the difference between a thriving mini-ecosystem and an inert one.

Advertisement

Brookhaven Supervisor Dan Panico said he was immediately on board with Turner's suggestion that the town build an amphibian tunnel. "We do a lot of open space purchases," he said, but "we've got to have the ecological connectivity."

Evidence of success

Turner found a company that fabricates wildlife tunnels made of smooth concrete that won't hurt delicate feet; he found another that makes wildlife fencing designed to corral frogs, salamanders and other small creatures toward the entrance. The underpass cost the town about \$18,000 and the fencing another \$20,000. But Luke Ormand, a senior environmental analyst in Brookhaven's land management department, quipped, "you can't put a price on the life of a frog."

How the tunnel works

The underpass allows amphibians and other animals to cross a road separating two vernal pools.



Tunnel

Newsday

The town also bought a 3½-acre parcel of land that overlooks one of the pools to protect the habitat from future development.

The underpass, installed in 2022, is the first functioning wildlife passageway on Long Island. (A culvert built 20 years ago, also in Middle Island, ostensibly to help tiger salamanders, was poorly conceived and is rarely used by the target species, Ormand said.)

So far, there's documented evidence that it's working, at least for some species. A trail camera set up at one end has captured many raccoons, opossums, mice, chipmunks and at least one groundhog traipsing through, but very few frogs. That doesn't mean the amphibians aren't using it, Ormand said. The cameras are triggered by movement and heat, so small, cold-blooded animals often pass through undetected. For those critters, the best measure of success is the lack of dead ones on the road, Ormand said. Last year, in his weekly camera checks, he tallied just three dead frogs.

Advertisement

The ecologists involved in the project hope more connectivity projects will follow. Already, a pair of tunnels is being planned for Mount Sinai Harbor, to help female diamondback terrapins navigate a road that cuts through their nesting habitat. It's all part of a plan, Turner said, to "stitch together" the Island's fragmented landscapes and help wildlife to travel safely, however short their commute.

By Tracy Tullis
tracy.tullis@newsday.com
