The Lower Neponset River is a Superfund site now. What does that mean?

By Dharna Noor Globe Staff, Updated March 15, 2022, 6:00 a.m.

A 3.7-mile stretch of the Lower Neponset River that was declared a Superfund site. JESSICA RINALDI/GLOBE STAFF

A nearly four-mile stretch of the Neponset, the beloved Massachusetts river that's been polluted by nearby industry for decades, was designated a federal Superfund site on Monday. The decision came after years of lobbying by state and local officials.

No one wants to hang out near toxic waste, so if you've ever swum, fished, or played in the Neponset River, that news might be troubling. Here's what the new designation

means — and what to know about how to stay safe.

What is a Superfund site?

A Superfund site is a polluted location that the Environmental Protection Agency has determined requires an investigation and a long-term cleanup plan. The designation, which was established by a 1980 law, has been applied to over 1,300 locations, including nearly three dozen in Boston.

The label means the EPA is agreeing to prioritize the site's cleanup and allocate funding to researching and remediating the site.

"EPA has much more authority to try to advance the cleanup than, for example, the state does," Ian Cooke, executive director of the Neponset River Watershed Association, said. "They've got great ability to implement a clean up [and] to require responsible parties to help implement it."

How contaminated is this site, anyway?

Preliminary EPA research have found that the 3.7-mile stretch of the Neponset is polluted with elevated levels of polychlorinated biphenyls, or PCBs — a group of chemicals once used for industrial purposes like paper production and fireproofing.

These toxic compounds were banned by the EPA in 1979, but since they don't easily break down, they've lingered in the environment. And they pose serious health risks: The federal government says they are probably carcinogens, and they've also been linked to reproductive, neurological, and hormonal issues.

Since PCBs cling to organic material, like decomposing leaves and animals found in mud, they're mostly found at the bottom of the river.

Cooke said the highest concentrations of the toxins have been found behind the Neponset's two existing dams, the Baker Dam in Lower Mills and the Tileston & Hollingsworth Dam between Boston and Milton. Stretches where the riverbed is mostly gravel or cobble, like the stretch that runs through Mattapan Square, have barely any PCB pollution.

In the fall, the EPA will conduct a more extensive sampling process to learn more about the pollution.

Is fishing in the Superfund site safe?

Fishing from the lower Neponset might be okay. But you should absolutely not eat anything you catch.

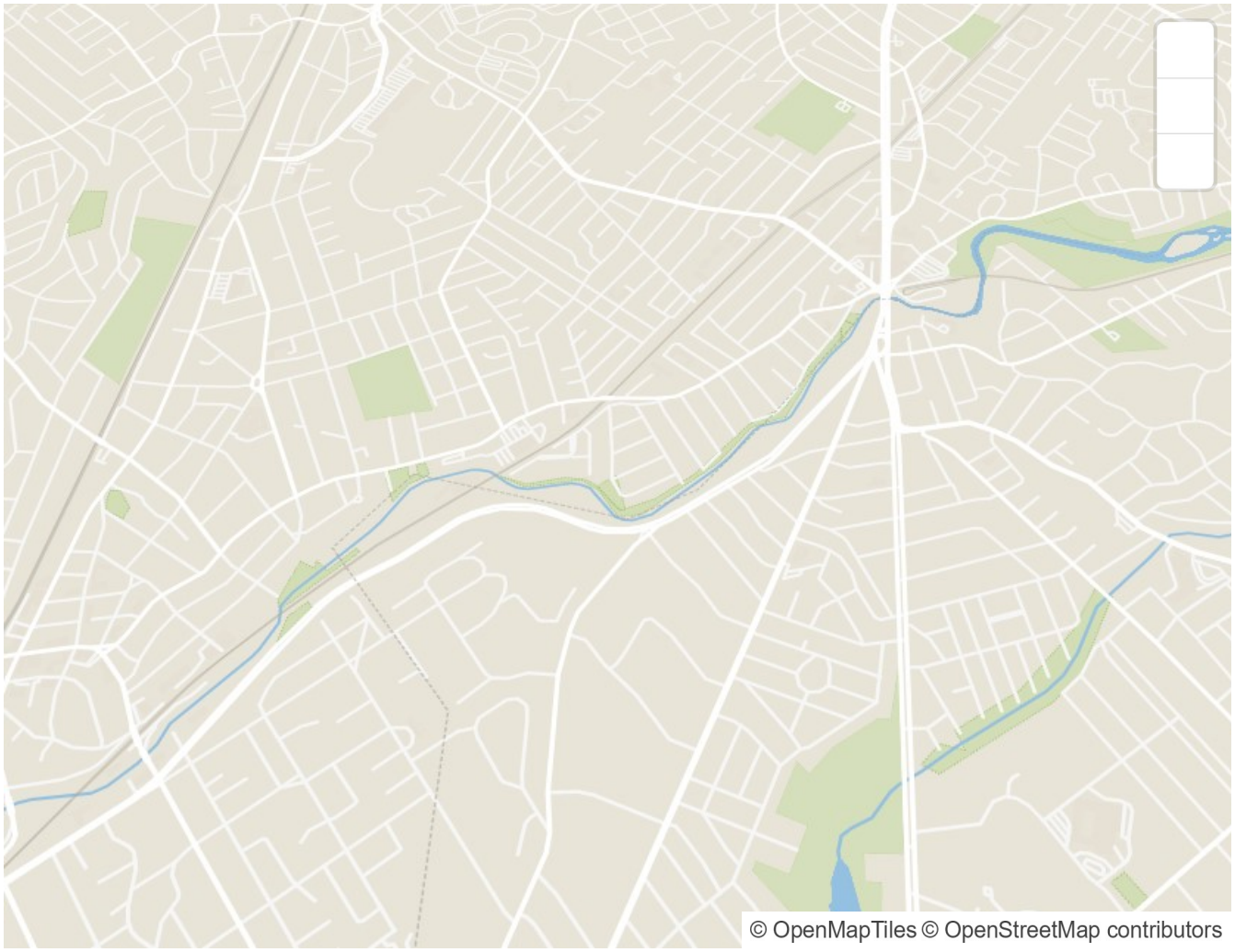
"Throw fish back in," said Cooke.

The freshwater portion of the waterway, which runs from the Baker Dam in the Dorchester-Milton Lower Mills area up to the dam located Walpole at the Hollingsworth, is home to a wide variety of marine life, including blueback herring, American shad, and smelt. All those creatures may be full of PCBs.

Though the Superfund designation only applies to the lower portion of the river, even fish caught from farther upstream may be contaminated, since they may have swam through those highly polluted regions.

Massachusetts officials have warned against eating any fish from the river before.

Lower Neponset River Restoration



What about swimming?

Based on preliminary data, Cooke said there doesn't seem to be much PCB pollution in the water itself. But he still wouldn't advise swimming in it, because it might also be fouled with, well, sewage.

Massachusetts' aging wastewater system allows sewage to flow directly into the Neponset in a couple of places. When it rains, runoff from the streets can also run into storm drains and flow into the river without being treated.

"Even if there wasn't a PCB problem, we wouldn't be recommending that folks swim in

this part of the river," said Cooke.

Since the EPA's Superfund process doesn't regulate sewage runoff — those regulations happen through the Clean Water Act — the Superfund cleanup process may not eliminate these sources of pollution from the river. State officials are working on addressing them, but it could take years. So unfortunately, swimming won't be advisable for the foreseeable future.

Are boats okay?

Some groups row boats along the Neponset. Since they keep to the upper regions of the river, that shouldn't be an issue.

Even rowing, canoeing, and kayaking along the lower regions of the waterway should be fine, "provided you aren't coming in frequent [or] extensive contact with the dark organic mud found in some sections of the river," said Cooke. But his organization recommends washing hands and shoes afterward.

Can I at least walk or bike along the river?

Since PCBs mostly stay in the muck at the bottom of the river, walking and biking along its banks shouldn't be an issue. Preliminary sampling has so far found no worrisome levels of PCB contamination on the land beside the Neponset.

Still, any nearby mud could be contaminated, so make sure you — and your kids and pets — avoid touching it.

"Avoid the muck," said Cooke.

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