E.coli high in Montclair’s Third River

How much E. coli is too much?

A recent study is suggesting that the Third River - which has been the source of repeated pollution scares in recent years - may be contaminated with elevated levels of E. coli that are anywhere from nine to 12 times the state Department of Environmental Protection’s recommended limits for primary contact.

But whether these levels are cause for concern is still up in the air.

The concerns of E. coli contamination stem from a September study sponsored by Friends of the Bonsal Preserve and conducted in partnership with the Passaic River Institute of Montclair State University. The study analyzed chemical tests of Third River water samples from three separate locations in the Alonzo F. Bonsal Wildlife Preserve, located in northeastern Montclair and in Clifton.

Each sample revealed E. coli levels that are well beyond state-recommended standards, which prompted Jonathan Grupper of Friends of the Bonsal Preserve to warn visitors to "avoid any contact with the water" and to "keep their pets away."

Grupper said he sent the results of the study to the Montclair Department of Health and Human Services as well as to Township Manager Marc Dashield.

The September tests were a follow-up to a similar study done in July, which alleged much higher levels of E. coli in the river. While September’s tests claim that there may be as many as 1,480 counts per 100 milliliters of water, July’s tests showed up to 7,533 counts/100mL, an eyebrow-raising 60 times the recommended primary contact threshold.

Meiyin Wu, the director of the Passaic River Institute and an associate professor at Montclair State University, said that the marked difference in E. coli counts is most likely due to seasonal temperature changes in the water.

Montclair Health Inspector Keith Costello told The Times that the municipal Health Department has received the study results and has contacted the DEP about possible next steps. Costello said that his DEP contact intends to speak to her supervisor about possibly sending an inspector to the area for a follow-up investigation.
Exposure Risks

What kind of health and environmental risks do the elevated E. coli counts mean for Montclair residents and Bonsal visitors?

According to Wu, the U.S. Environmental Protection Agency and the DEP recommend using E. coli as a general indicator for recreational water use, because it's almost impossible to test for every possible pathogen.

Contamination is measured according to two benchmarks. The first, "primary contact," includes any activity that includes ingestion or full-body immersion in the water, such as drinking or swimming. The other, "secondary contact," includes any activity that may place a person or animal in indirect contact with contaminated water, such as fishing.

As of September, with a state-recommended primary contact threshold of 126 counts per 100/mL and a secondary contact threshold of 770 counts per 100/mL, the alleged counts of E. coli in the Third River exceed both safety benchmarks.

"There are many different E. coli and many different coliforms," said Wu, who emphasized that further study is needed before any conclusions about risk can be drawn. "Unless you identify the species that are in the water, we don't really know whether the E. coli will cause people to get sick."

According to Costello, his DEP contact also said that it would be useful to find out whether the E. coli contamination is animal- or human-based. Costello wrote in an email that his contact stated, "coliform counts fluctuate on a daily basis ... for instance, during geese migration, surface water coliform counts are a lot higher than [September’s test results]. After rain storms, heavy loads of dog waste or fertilizer could be flushed right into the river as well."

Costello said that because the river is unregulated, he recommends that people avoid contact with the water, regardless of the E. coli levels.

"At any point passing through, at any day, all types of things could be in there. All those storm drains are just dumping right into the river. You have dog waste, you have fertilizer, chemicals, oils from the street. We definitely recommend that people don't swim, or have their pets swim, in these rivers."

Grupper said that, based on the limited readings to date, the likely source of the contamination is upriver of the Bonsal Preserve, but that further study is needed to pinpoint the source. He mentioned that Friends of the Bonsal Preserve intends to apply for a grant to continue its monitoring efforts.

"We're optimistic we'll get this grant, and a strong community showing will ensure its success."

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