Public Health Advisory: High Bacteria in Crystal Lake
July 3, 2020

Crystal Lake is unsafe due to high bacteria levels. No one – people or pets -- should have contact with the water. Current bacteria levels can cause serious illness.

A water sample taken Wednesday, July 1, exceeded acceptable levels at a freshwater beach. We tested for E. coli and fecal coliform, both of which exceeded acceptable levels. The accepted level of E. coli for a single sample is 235 cfu/100 ml or below. The accepted level of fecal coliform is 200 cfu/100 ml or below. (CFU stands for colony-forming units, the unit of measure used for samples like this.)

<table>
<thead>
<tr>
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<th>Limit</th>
<th>Crystal Lake July 1</th>
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<tbody>
<tr>
<td>E. coli</td>
<td>235 cfu/100 ml</td>
<td>Above 1600 cfu/100 ml</td>
</tr>
<tr>
<td>Fecal Coliform</td>
<td>200 cfu/100 ml</td>
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Recreational activity in water with bacteria that exceed these limits can cause gastrointestinal symptoms such as nausea, vomiting, diarrhea, and abdominal pain, respiratory symptoms like sore throat, cough, runny nose, and sneezing, eye and ear symptoms including irritation, earache, and itchiness, dermatological symptoms like skin rash and itching, and flu-like symptoms such as fever and chills. Most of these symptoms are minor most of the time but can occasionally be more serious, especially in sensitive populations (e.g. immunocompromised children and elderly).

What are the sources of bacteria in the water?

Bacteria may be present in the water due to a variety of sources. Rain is often a contributing factor to beach water pollution. As rainwater washes over land, it can carry bacteria to the beach. Sewage entering the water can also contribute to high bacteria levels.

What about animal wastes on the beach?

Animal waste, such as from dogs or birds, can get into the water and negatively affect water quality at beaches. The bacteria in dog and bird waste can elevate bacterial levels which can lead to beach postings. Properly cleaning up after your pet can lessen the likelihood of your pet's waste contaminating the beach water. Similarly, refraining from feeding birds at beaches should help reduce potential bacterial contamination.

What is E. coli and fecal coliform?
These are indicator bacteria – bacteria that indicate the presence of fecal contamination. E. coli stands for Escherichia coli, a species of fecal coliform bacteria that is specific to fecal material from humans and other warm-blooded animals. E. coli is a single species in the fecal coliform group. Indicator bacteria testing is recommended for freshwater recreational swimming areas.

Is this the same thing as the cyanobacteria problem from last summer?

No, cyanobacteria are microorganisms similar to algae, not fecal matter. [https://www.mass.gov/guides/cyanobacterial-harmful-algal-blooms-cyanohabs-water](https://www.mass.gov/guides/cyanobacterial-harmful-algal-blooms-cyanohabs-water)

What are the next steps?

Another water sample was taken on Friday (7/3/20) to retest for E. coli and fecal coliform, results will be posted to [www.newtonma.gov/health](http://www.newtonma.gov/health) when they become available. Given the significant amount of recent rainfall, it is anticipated results will exceed safe levels for some time. As previously determined, the bathing beach has been closed for the summer this year and will remain closed.

Where can I get more information?

The above information was adapted from these resources you may find helpful if you would like more information.

[https://matracking.ehs.state.ma.us/Environmental-Data/recreational-water/recreational-water-faq.html#MyPopup](https://matracking.ehs.state.ma.us/Environmental-Data/recreational-water/recreational-water-faq.html#MyPopup)