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Trace E. coli found in two Carlisle wells

Megan Walchuk

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All Carlisle residents are under a boil water advisory, after city workers found trace levels of E. coli bacteria in the community's water.

According to Eric Mathews, Manager, Health Protection for the city, two routine water samples showed the bacteria, which originate from fecal matter. One test showed three cells per 100 ml, while the other showed one cell. Levels must be at zero to be considered acceptable.

However, the cells were only detectable in the treated well water, not the ground water, according to Abdul Khan, Director of Water and Wastewater Treatment.

"From an engineering and a scientific standpoint, that made no sense," he said. Furthermore, additional harmless indicator bacteria, called total Coliform, were not present in the samples, even though it routinely accompanies an E. coli infestation.

That led city staff to believe the results could be due to human error, rather than actual contamination. However, the advisory was put in place as a precaution. "For that one per cent chance there may be something there," said Khan.

According to Ward 15 Councilor Margaret McCarthy, who has been in constant contact with the water treatment lab and city officials since the advisory was in place, only samples from Sunday were affected. Both Saturday's samples, as well as samples collected on Monday came back clean.

Tuesday's results showed one part total coliform - at least five parts typically accompany E.coli contamination. Khan believes that harmless bacteria already existed in the pipe, but were stirred up when city workers flushed Carlisle's system, as a precautionary measure.

The boil water advisory will be lifted when the wells produce two clean test results, at least 24 hours apart. The earliest that could be is Friday evening, said Khan.

There are more than 1,000 varieties of E.coli bacteria, which live harmlessly in the digestive systems of warm-blooded animals, said Mathews. Only a handful can cause illness in humans. "It's very unlikely this is a pathogenic kind of E. coli," he said.

E.coli is screened in water quality tests as indicator bacteria - harmful bacteria can theoretically go where benign forms of E. coli can travel. However, no illness has been reported as of press time, and the level of contamination was extremely low, noted Mathews.

It's not known at this time if the bacteria found are the pathogenic form, or where they could have originated, if human error is not at fault.

The Ministry of the Environment (MOE) has inspected the well's treatment system, which includes ultraviolet and a newly updated chlorination system. The MOE confirmed that both are functional.

Although McCarthy is concerned that the bacteria was found despite the upgraded system "it's important to

know that if we didn't have this system, these daily tests, and it was getting into people's homes unfettered, that would be an even bigger concern," she said.

Although the lab Hamilton hires is capable of determining the exact strain of E.coli, the city won't likely order that test unless reports of health problems arise, said Mathews.

Anyone with health related concerns is asked to call 905-546-3937. Those with concerns about the water system should call 905-546-4426 during business hours, or 905-546-CITY (2489) after hours. McCarthy has ensured that live people will be available to answer health related calls.

Hamilton's Medical Officer of Health is urging Carlisle residents to follow the following guidelines:

- Use an alternate water supply or boil tap water at a full, rolling boil for at least one minute to drink, brush teeth, gargle, make baby food or formula, wash fruits, vegetables and other foods, wash dishes, and prepare food, including ice, juices, coffee, etc.
- While bathing or washing, be careful not to swallow any water. Adults, teens and older children can use unboiled water for bathing. Younger children can be given sponge baths instead of tub baths. Washing hands, flushing the toilet and doing laundry are considered safe.
- When washing dishes by hand, use boiled or bottled water. Alternately, wash dishes with soap and hot tap water, then rinse in a bleach solution of 1 teaspoon bleach to four cups of water. Do not reuse the solution, keep it away from children, and make it fresh daily, to preserve the germ-killing power of the bleach.
- When washing dishes in a dishwasher, use the dishwasher's hot setting, with temperature booster on. For dishwashers without a hot setting or a booster, rinse the dishes in the bleach solution outlined above after the cycle, and allow to air dry.
- To wash countertops, clean with soap and hot water, followed by the bleach solution. Allow to air dry.

See your doctor or go to the hospital if you have diarrhea as well as at least one of the following symptoms; nausea/vomiting, stomach pain/cramps, fever, and headache. See your doctor or go to the hospital if the diarrhea is bloody or lasts more than 48 hours, with or without other symptoms.

The elderly, young, and those with weakened immune systems who become ill should immediately see their doctor or go to the nearest hospital.



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