Lake County

Soil & Water Conservation District

E. coli in Agate Bay

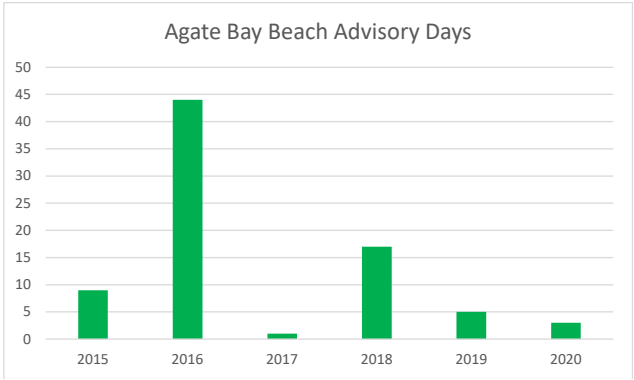
Since 2019, Lake County SWCD has worked together with the Natural Resources Research Institute to investigate the sources of E. coli in Agate Bay using DNA analysis.

Why is E. coli a problem?

E. coli is a bacteria found in the digestive tracts of humans and other warm-blooded animals. E. coli found in surface waters can be a sign of fecal contamination. Most strains of E. coli are harmless, but some can cause illness. The presence of E. coli can also indicate that other possibly harmful pathogens are present.

E. coli and Beach Closures

The Minnesota Department of Health tests E. coli levels at numerous Lake Superior beaches, including Agate Bay, throughout the summer. When E. coli levels exceed state standards, beach advisories are put into effect, discouraging aquatic recreation.



E. coli DNA Analysis

E. coli levels were measured at three Agate Bay sites, and samples were analyzed for human and avian markers to help determine the source of the E. coli. Results of the study showed a high level of human markers. The sites included an outlet from the wastewater treatment plant, a stormwater outlet, and just off the beach. Although the wastewater treatment plant outlet had high levels of human markers, the overall level of live E. coli in those samples was very low, which is consistent with a properly operating wastewater treatment system. Of greatest concern is the stormwater outlet in Agate Bay, which had high levels of human markers as well as a high level of live E. coli. Both E. coli levels and human markers decreased from 2019 to 2020, but the decrease was not significant.

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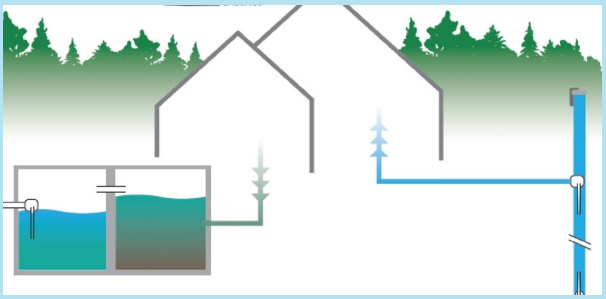
2020 Agate Bay study sites

How can we reduce E. coli levels in our surface waters?

Maintain Septic System

Make sure your septic system is inspected at least every three years and that it is properly maintained. A failing septic system can leak human waste into ground and surface waters.



Pick up pet waste

Pet waste left on the landscape gets washed into waterways when it rains. We've teamed up with the City of Two Harbors to install pet waste stations along frequently used trails throughout the city. A few moments of effort can help keep our waterways clean.

Don't feed wildlife

Waterfowl were identified to be a contributing source of E. coli contamination. Feeding geese and other wildlife encourages them to congregate, which increases the concentration of their waste.

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