Lake Eugenia residents looking to fund water quality study

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What's going on with the lake?

Two families who call Lake Eugenia home are looking to answer the question by raising around \$20,000 for the first phase of a water quality analysis.

Lake residents Morgan Anderson and Doug Hill appeared as a delegation at Grey Highlands council on April 6 where they presented their argument for why people should care about increasing plant growth, algae blooms, and E. coli outbreaks - which have resulted in several closures of the public beach - their report said.

Blue-green algae is a toxic microscopic organism occurring naturally in bodies of water thought to be caused by the amount of available nutrients such as phosphorus and nitrogen.

Although microscopic, populations can rapidly increase and form into a large mass or scum often referred to as an algae bloom. They thrive in areas where the water is shallow, slow-moving and warm.

Blue-green algae blooms can be caused by agricultural and stormwater runoff as well as leaching from septic systems.

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At Lake Eugenia, a debate as to the cause of the blooms is ongoing and some hope a study will shine a light on the culprit.

Speculative causes listed in the report presented to council include bad septic systems, agricultural run-off, bird (geese) poop, two-cycle boat motors, lawn fertilizer, high-phosphate detergent, and climate change. Or, there is no problem and the algae blooms are simply part of a natural cycle.

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Lake Eugenia unusual in area

WATER FROM A1

"There's nothing wrong with people taking an interest in the environment and their lake. There's nothing wrong with that. They're taking the initiative and it's good to have data," said Grey Highlands Mayor Paul McQueen.

Following the delegation, Coun. Cathy Little presented a motion directing staff to provide a report exploring the potential for a partnership with Grey Sauble Conservation Authority on a Lake Eugenia Action Plan and the potential for undertaking a Lake Carrying Capacity study. Council carried the motion.

In their presentation, Hill and Anderson noted Lake Eugenia is a unique case study.

The lake is a man-made 1.800acre stream-fed reservoir owned and operated by OPG. In the winter, OPG lowers the water level to create hydroelectric energy. In the spring, the dam is closed and the water levels return to normal and are then adjusted based on weather and run-off in the summer season.

There are approximately 400 homes on the lake, according to the Hill and Anderson report, with the majority built in the middle of the last century. They estimate there is nearly \$500 million in property valuation on the lake.

The Lake Eugenia lakebed and a portion of the shoreline in most areas is owned by OPG. The residents own their land and have water-access agreements with OPG. The lake is in the Municipality of Grey Highlands and within the watershed managed by the Grey Sauble Conservation Authority.

"The web of government, citizen and private entities (OPG) involved in the lake is so complex and overlapping that no entity has been found that is willing to spearhead an effort to confront a seemingly obvious threat," Hill and Anderson say in their report. "The authors are committed to undertaking a study of water quality in Lake Eugenia. We believe that there will be little issue in raising funds through a direct funding campaign to support our efforts."

Hill and Anderson want to "at a minimum, provide a baseline evaluation of what has occurred and the current status of Lake Eugenia water quality indicators".

They hope a water analysis study will also include suggestions for solutions to any problems identified. "The authors' goal is to not make Lake Eugenia a pristine lake, as would be found in Northern Ontario. Rather it is to help balance the varied constituencies on the lake in a manner that maintains and improves the long-term health of a multi-use lake existing in a semi-urban area," the Hill and Anderson report said.

McQueen said the municipality recently helped fund a fish study at Lake Eugenia, but a water quality analysis has not been undertaken other than regular testing by the Grey Sauble Conservation Authority and homeowners.

Nancy Matthews has a home on the lake and is the president of the Lake Eugenia Property Owners Association. The association has been active in producing its shoreline education program and trying to reduce stormwater runoff, which helps feed the algae blooms.

"We've had all kind of green algae blooms in the last two or three years, 2018 was the really bad year, they're happening earlier and happening in more places," Matthews said. "The water that's coming in from the Beaver River has a very low phosphate count. So, whatever is happening is happening in the lake but one person says 'it's a goose' another person says 'it's the septic systems', 'fertilizer', 'agricultural run-off."

Hill and Anderson plan to form a new or roll into an existing legal organization to provide proposal review, transparency and accountability.

"It is recognized that any interventional efforts to reverse water quality degradation will require the approval and cooperation of the authorities responsible for the lake. Ongoing communication is essential," the report said.

Matthews, who has spearheaded and organized environmental protection efforts around the lake for years, said gathering data and trying to find solutions early is always a good idea.

"It is way easier to prevent environmental damage than it is to clean it up after it's happened," she said.