was estimated to be over \$50 million per year and property damage costs are currently at \$500 million.

March 21, Mary Muter and Paul Cowley were guests on TV Ontario's *The Agenda with Steve Paikin*. Paikin did an excellent job at drawing out the key issues on this crisis and highlighting the remedies, namely controls in the St. Clair River.

March 22, World Water Day. Roger Gauthier and Mary Muter of ROWI held a media blitz.

Late spring The Sierra Club Canada Foundation renewed the research agreement with McMaster's Dr. Pat Chow-Fraser's freshwater wetlands biology lab. Her team will continue to assess the ecological impact of 14 years of low water levels. They will assess water quality at the outflow of the Nottawasaga River, and implement a botulism watch program, and study treatment techniques for Phragmites. This work will help to answer some of the tough questions that our governments don't want to know about and the Sierra Club will continue to release the results publicly. FoTTSA has supported this project for several years

Late March, Gauthier and Muter spend several days in



Washington meeting with key government representatives. They left with a clear sense that their work was cut out for them, with a long way to go before remedial action in the St. Clair River will begin.

Late March, they have learned that the US Army Corps of engineers (USACE) which is the only organization that can in fact carry out this work, have confirmed that they still have authority to do this work from its original authorization in 1962. However, much work and time will still be needed to determine how to reactivate this authority.

Late March, ROWI has retained lawyers Holland & Knight to lobby in Washington to help expedite this process. This is a very costly undertaking and will require the public to make generous contributions to ROWI to support this effort over the next two years.

Engaging governments to take action on the St. Clair River has been and remains a major commitment by FoTTSA, both financially and time-wise. That is where the final road block remains to restoration of lake levels in Michigan-Huron-Georgian Bay. Please help!

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issues at Ontario Municipal Board hearings on the new Simcoe County OP.

Industrial Wind Turbines (IWTs)

With the assistance of CORT (Coalition of Residents – Tiny) and championed by Deputy Mayor Lawrence, Council has passed a By-law to ensure that the Township will not be burdened with environmental and financial impacts of any future IWT developments. Among other provisions, the By-law ensures that installers are held financially responsible for taking down turbines after their useful lifetime expires by requiring a Standing Letter of Credit in the amount of \$250,000 for each turbine. The By-law also sets a building permit fee of \$50,000 per megawatt to cover the costs to the Township. The text of By-law 13-008 can be viewed online at https://docushare.tiny.ca/docushare/dsweb/View/Collection-39435.

Policing Policy and Costs for 2012 and 2013

Doug Taylor, Treasurer, reports that the Township's OPP policing cost was \$1,765,345, but a rebate of \$125,573 based on actual services was received. This will be put into a Policing Services Reserve account. The OPP's estimated cost for 2013 is \$1,692,734 (Tiny's initial budget estimate was \$1,818,307).

Township-Wide Parking Strategy

Council has enacted changes to parking along the western shoreline of the Township on Concession Roads 1-18, as a result of staff concerns about on-street parking and the Fire Chief's need for sufficient road width for emergency access of vehicles. Here are the changes:

Concession 4 West: No parking both sides of road to

Concession 5 West: No parking extended 200 m Concession 9 West: No parking both sides for 600 m to base of ridge

Concession 11 West: No parking both sides to Brook Ave.

Concession 14 West: No parking

Concession 17 West: No parking to Poplar Dr.

All signage was to be placed starting April 1, 2013. Council also is addressing special resident concerns about parking at Cawaja Beach, the Bluewater Subdivision and the Pennorth Drive and Lackie Crescent areas.

Noteworthy Additional Issues

Parks & Recreation Associations have new powers and limitations since new statutory requirements for non-profit corporations, concerns about liability insurance and appropriate fiscal management have led to a new Memorandum of Understanding between these local Associations and the Township. These voluntary groups now have a uniform and transparent structure under which to work and conduct their programs and maintain their facilities.

Severn Sound Environmental Association has conducted healthy streams projects; tree distribution; tributary monitoring (Wye, Lafontaine, Copeland); stream temperature and benthos monitoring (Wye, Lafontaine, Copeland); Source Water Protection; Ontario Drinking Water Stewardship Program for source protection; Tiny bog evaluation to document the extent of the bog; and runs the Provincial Groundwater Monitoring Network. Tiny has significant drinking water threats and SSEA is to ensure that our water systems are safe and in compliance

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Research to Improve Beaches and Recreational Water Quality

BY ALLAN CROWE, ENVIRONMENT CANADA

During the past several years, many of the beaches of Tiny Township have experienced problems related to poor water quality and deteriorating sand conditions, including elevated levels of E. coli, algae, wet sand and invasive vegetation. Protecting and restoring the beaches requires a scientific understanding of the natural processes that affect the movement of pollutants in the groundwater and their release to the adjacent lake water and beach.

In order to address these problems and devise effective management techniques, a research team comprised of scientists from the University of Western Ontario, Environment Canada, and the University of Waterloo will be conducting a 3-year research project that will focus on gaining understanding of the factors and processes that control the health of beaches and recreational lake water of the beaches of Tiny Township. These researchers were awarded a three-year Strategic Research Grant from the Canadian National Sciences and Engineering Council to conduct this research. The study is to:

- characterize physical, biological and hydrological conditions at a wide range of beach types, including groundwater flow below the beaches;
- identify factors contributing to the persistence of elevated concentrations of E. coli and possible pathogens in groundwater and sand at beaches, and the mechanisms that move them between the lake and groundwater;
- identify nutrient sources and hydrological/chemical processes controlling nutrient levels in groundwater below beaches and their discharge to adjacent lake water;
- determine the relationship among groundwater conditions, the sand conditions, nutrients levels, and invasive vegetation, E. coli, and algae in the sand and lake water.

Starting this spring, the research team will be undertaking field work at several beaches. The selected beaches will cover a range of types, including beaches that are 'degraded' (e.g., wet sand conditions, absence of sand dunes, presence of algae, E. coli, invasive vegetation) and 'healthy' (e.g., dry sand conditions, native vegetation, little E. coli and algae). The field trips will be conducted to capture changes that occur through the year. Work to be performed includes both measuring groundwater flow at the beaches, groundwater discharge rates to the lake, beach morphology and sand water content, and collecting samples of groundwater, sand and lake water for analyses of nutrients, E. coli, oxygen levels, and chemistry. Part of the research will include the temporary installation of groundwater monitoring equipment (e.g., wells, sampling instruments, and groundwater discharge collectors) along a line across the beach. Instrumentation will remain at the sites only during a specific field study (up to 10 days).

A key goal of this study is to communicate the results of the research to interested stakeholders of Tiny Township (e.g., municipalities, NGOs, cottage associations, and residents), and ensure stakeholders have the knowledge and ability to develop and implement local management approaches to protect and restore the beaches and water quality.

For further information, please contact

Professor Clare Robinson University of Western Ontario Tel: 519-661-211 ext 80974 email: crobinson@eng.uwo.ca

WE NEED YOUR SUPPORT!

to fund lobbying of Canadian and American governments to take action to restore Lake Michigan-Huron-Georgian Bay water levels WE CAN'T DO THIS WITHOUT YOUR HELP!

YES...I WANT TO HELP... HERE IS MY DONATION FOR THIS EFFORT!

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Please make cheque(s) payable to:

or to:

Sierra Club Canada Foundation,

Great Lakes Section, One Nicholas Street, Suite 412B Ottawa, ON K1N 7B FoTTSA, 42 Haselmere Rd. Toronto, ON M4N 1X6



http://www.restoreourwater.com On Facebook: RestoreOurWaterLevels and on Twitter: RestoreOurWater