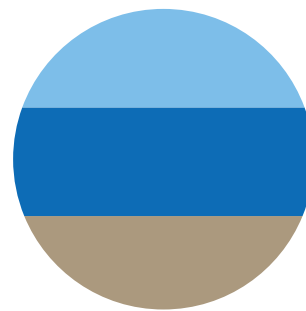


GEORGIAN BAY FOREVER



SUMMER 2014
VOL. 5, ISSUE 2

Protecting your water.

WATER LEVELS, WATER QUALITY, ECOSYSTEMS AND INVASIVE SPECIES

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Georgian Bay Forever is a proud member of the Waterkeeper Alliance.



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SUMMER 2014

Photo credit: Penny Pepperell

Georgian Bay Forever is a community response to the growing need for major research and education projects to sustain the Georgian Bay aquatic ecosystem and the quality of life its communities and visitors enjoy.

We help monitor the Bay's well being, throughout the seasons, year after year.

We fund the research needed to protect the environmental health of Georgian Bay and the surrounding bodies of water. Using our research findings, we inform and educate the general public and governments about any threats to environmental health and propose possible solutions.

Through conferences, workshops and seminars we are educating the Georgian Bay community. By teaming up with reputable institutions we enhance the credibility of our research and we strengthen our ability to protect what's at stake.

Georgian Bay Forever, formerly the GBA Foundation, is a registered Canadian charity (#89531 1066 RR0001). We work with the Great Lakes Basin Conservancy in the United States, as well as other stakeholder groups all around the Great Lakes.

Deeply rooted and broadly drawn, Georgian Bay Forever is steered by lifelong devotees of the Bay. We are committed advocates, educators, environmentalists, realists, idealists, and of course, residents.

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U.S. citizens wishing to make a donation to support our work can do so by giving to:

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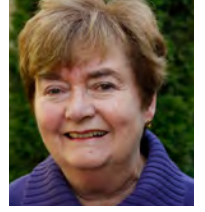
This newsletter is just a snapshot of our work. For the most up-to-date information on our projects, longer versions of newsletter articles and on breaking news about Georgian Bay, please become a regular visitor to our website and Facebook page.

GeorgianBayForever.org

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By Brenda
Drinkwalter

GOVERNMENT SUPPORT COULD MEAN UPDATES TO WATER LEVEL POLICY



As we head into summer, Georgian Bay Forever's focus remains finding a solution to declining water levels. While we will no doubt heave a big sigh of relief at forecasts predicting higher water levels this summer, we must remember that the major cause of low water levels in Lake Michigan—Huron (MH) is climate-driven, evaporative losses. Michigan—Huron has the largest surface area of all of the Great Lakes and no controls to retain water in times of abundance. It is especially vulnerable to long-term climate-change impacts, which are not over. Let's not confuse "weather", which brought much snow and ice cover this winter, with "climate change," which will impact lake levels for years to come.

There is, however, reason for hope on the water-levels policy front. The release of the 2014 UN Report on Climate Change is a potential game changer. Why is this so important? Because the American government, which has to date not made declining water levels a priority, appears to be serious about the new urgency of addressing climate-change impacts. Support from both governments is critical if we are to move quickly to find the best solution to water-level

declines—one that goes beyond simply adapting to lower levels. In his response to the UN report, Secretary of State John Kerry said, "unless we act drastically and quickly, science tells us our climate and our way of life are literally in jeopardy".

Also on the policy front, the Canadian International Joint Commission co-chair, Gordon Walker, spoke at the Georgian Bay Association's March annual meeting, and he talked about the detailed engineering study that is the next step in finding a solution to low lake levels. In his remarks, he said that the study must consider flexible structures, look at the system as a whole (i.e. consider both upstream and downstream impacts) and he used the Thames River Barrier in London as an example of a contemporary structure to consider. He also cautioned that there are no quick fixes. We were pleased to see alignment with much of Georgian Bay Forever's thinking.

This edition features a guest article from Betty Sutton, the impressive new administrator of "The Seaway". The Great Lakes Navigation system is critical to the economy of the Great Lakes—St. Lawrence Region, and we know that low water levels have a quantifiable impact on our ability to ship goods in a cost-effective manner. We are also delighted to announce the following additions to the Georgian Bay Forever Board: Janet Burt (Manitou), who runs a human resources consulting practice, takes on "nominating" on our governance committee; Erwin Stuart (Tiny), a partner with Deloitte and Touche, joins the Board as treasurer; and Derek Bowen (Sans Souci), president of BEX Engineering, assumes the role of science committee chair.

We look forward to seeing many of you on the Bay this summer as David and I attend various cottage association meetings to present the findings of the Mowat Study on the impact of declining water levels. We welcome invitations to present these important results and thank all of you for your generous contributions to this project!

“The release of the 2014 UN Report on Climate Change is a potential game changer.”



By David Sweetnam

HOW LOWER WATER LEVELS ARE HURTING THE ECONOMY—AND OUR PROPERTY VALUES

Georgian Bay Forever is a fantastic organization of dedicated and passionate volunteers, supported by individual donors, corporations, marinas and governments in our shared work to protect our water. As I travel outside the area to represent the organization, I meet people who have never seen “The Bay”—like Dr. Andrew Gronewold, scientist at the National Oceanic and Atmospheric Administration. Drew is a meticulous engineer and scientist looking to improve our understanding of processes that affect the Great Lakes.

ANN ARBOR CONFERENCE

In Ann Arbor, at a gathering of water levels thought leaders, it wasn't long before Drew and I were discussing the changing factors affecting Great Lakes water levels. Did you know that the main drivers of lake levels since the late 1990s have changed from precipitation to water temperature and evaporation? I have also learned that new instrumentation installed on island lighthouses to measure over-lake precipitation and evaporation is now yielding new scientific evidence to explain the complex interaction of water temperature, evaporation and ice coverage. It is not just a simple story of ice cover. During a high ice-coverage year there is an increase in evaporation during the autumn which actually offsets the decreased evaporation due to ice and lower water temperatures the following years.

At the Ann Arbor conference, Drew presented an interesting graph, which demonstrated that new models are very good at predicting water levels three months into the future and reasonably good when looking six months into the future. Adding the new data from the over-lake gauges will improve these predictions further.

Just imagine a system that feeds real-time data from these precipitation gauges and increasingly accurate models into the operating systems of modern structures that attenuate the flow of water into and out of the lakes and best mimic the fluctuations in nature to protect our ecosystems. The design of flexible solutions to

address water levels in the Upper Great Lakes is coming in the near future and a properly scoped study that examines new techniques, materials, and instrumentation, supported by good data, could provide resilience in the face of anticipated climate change and resulting ecological and economic uncertainty. Lana Pollock, chair of the International Joint Commission, refused to sign the IJC Advice to Government last year in part because of its failure to address climate-change impacts.

CONTROL STRUCTURES

At present, only two Great Lakes are controlled, namely Lake Superior at St. Mary's River and Lake Ontario at the Moses Saunders dam in the St. Lawrence River. Since the 1950s, water levels in Lake Ontario have been poorly controlled and wetlands have degraded. New regulations are proposed to allow more variability in the lake levels to better mimic nature and to improve coastal wetland biodiversity. We must embrace the work being generated by scientists like Dr. Gronewold. The recently released *2014 UN Climate Change Report*, which has been widely reported in the last few weeks, is an important development.

But are we headed in the right direction?

US ARMY CORPS STUDY

The US Army Corps of Engineers (USACE) has just allocated \$50K to support a study of the St. Clair River. The need for this study was described in a May 2013 *Design Review Report*.

According to project manager Scott Thieme of the Corps, the money is being used to develop the scope for a project to re-evaluate the previous authorization for work on mitigation for navigational channel dredging impacts from the 1920s, 1930s and 1960s. The findings of the \$17 million Upper Great Lakes Study (IUGLS), showing climate change impacts and erosion in the St. Clair River are not part of the project definition. Nor will ominous climate change predictions in the just released 2014 UN Climate Change study be factored in.

Additional locations for control structures, identified in the IUGLS Report—such as the Niagara River, which might mitigate downstream impacts—are outside the scope of this study. In short, this study ties the hands of the US Army Corps. They will not be considering all the best possible solutions. There is a possibility, but no certainty, that the scope of the study might be adjusted after budgets are defined. The study will require at least three years to complete. The report could potentially be released in 2019, and the solutions could take twenty or more years to implement.

Some believe that it might be possible to start on a journey towards an investigation of the St. Clair River, and then in the future add an additional study to address climate-change impacts. The reality is that given the long time lines required to get funding and to execute a proper study, it is better to do it right in the first place and not place restrictions on the options studied—to do otherwise increases the risk of arriving at an ineffective solution.

Building the region-wide and international support required to gain approval for such a study means adopting an integrated-systems approach to managing Great Lakes water levels, an approach that is already supported by senior organizations like the Council of Great Lakes Governors, the Great Lakes Commission and important economic stakeholders like the shipping industry. It means building a consensus amongst regional stakeholders who hold divergent views.

Georgian Bay Forever believes that when we second guess the experts and place restrictions on phasing, siting or technologies that may be examined, we threaten the very health of the Great Lakes we seek to protect. We must secure funding to study a wide range of structural options in order to address climate change and best protect the entire Great Lakes and St. Lawrence ecosystems and economies.



By Debra Stuart

FISHING FOR SOLUTIONS ON THE WATER

John Carrick Jr., President of McAsphalt Industries, is a longtime cottage owner, sport fisherman and entrepreneur. The nature of the Carrick business has made John and his brother Kelly, McAsphalt's executive vice-president, acutely aware of the economic impact of lower water levels. This awareness recently inspired the Carricks to donate to GBF.

McAsphalt produces and distributes liquid asphalt products from its twenty strategically located terminals across Canada, including seven on the Great Lakes and St. Lawrence Seaway. Its affiliate, Sterling Marine Fuels, situated in the Port of Hamilton and the Detroit River, has been supplying marine fuel to Great Lakes vessels for over thirty years. "Last fall, vessels were forced to short load their cargo by up to 15% and this is of great concern," said John.

The Carrick's gift to GBF was earmarked to help fund the University of Toronto's Mowat Centre study on the impact of declining water levels on the Great Lakes regional economy.

The Carrick family connection to Georgian Bay dates back to the early 1900s, when Belle Bay Verner of Baltimore, Maryland, purchased five islands near the Bayfield area. After travelling by rail to Pointe au Baril, she would hire guides to transport her and her family to the islands by canoe, where they would camp amidst nature in all its glory. She eventually sold the islands with the exception of one—her beloved Lisnacloon, named after her family's homestead in Ireland.

It was there in 1953, that her son, Dr. Bay Verner, built the family's first cottage. Bay married Mercie Carrick of Toronto, the widow of World War II veteran, Alex Carrick, and



Sunset photograph painted by Canadian artist Ken Danby

together they had two children, John and Judy. John married Kathleen, and they had three sons, John Jr., Kelly and Danny. In 1980, John severed the island and built another cottage, leaving Mercie's original cottage intact.

In 2006, John Jr. purchased nearby Head Island, just to the north. It had been a fishing and hunting camp in the 1950s. The ruggedly beautiful, sixty-acre island, with its spectacular panoramic views, serves as the idyllic home-away-from-home, where John Jr., his wife Jane and their four sons, spend quality time—the majority of it in and on the water.



Mercie Carrick Verner's proud catch

“Lower water levels makes island access more challenging and navigating the shoals trickier, plus it is a serious threat to our fragile ecosystem,” the Carrick brothers note.

“This region is renowned for its world-class fishing. Anglers and commercial fisherman have been lured here for generations,” said John Jr. “We’ve experienced cyclical changes due to declining water levels, commercial over fishing and environmental disturbances.

“Lower water levels makes island access more challenging and navigating the shoals trickier, plus it is a serious threat to our fragile ecosystem,” the Carrick brothers note.

The water has played a paramount role in the Carricks' lives from the time they were kids, catching frogs, snakes and turtles, and fishing for bass, pickerel and pike. “Kelly and I have seven sons between us who are continuing the tradition,” said John Jr. The brothers concur, saying, “We have an obligation to support the restoration, protection and preservation of our water levels, for commercial purposes and in order to sustain what generations of our family have enjoyed.”



John and Kelley Carrick, with their seven sons

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“Georgian Bay Forever is one of the most responsible environmental protection organizations on the Bay and our best hope of finding a solution for our water levels.” -ED GARNER

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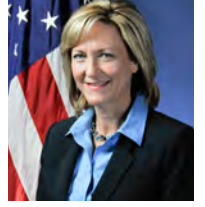
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WOULD YOU PREFER TO STAY IN TOUCH VIA EMAIL? SEND YOUR EMAIL ADDRESS TO
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By Betty Sutton

THE SEAWAY: ENVIRONMENTALLY FRIENDLY, ECONOMICALLY IMPORTANT

As administrator of the U.S. St Lawrence Seaway Development Corporation, I am committed to public service and the search for cooperative and collaborative solutions that support the public interest. To that end, I am committed to doing my part to ensure that we have an efficient, reliable marine system that allows goods to move safely into and out of the Great Lakes region, but I am also keenly aware that in fulfilling our mission to promote waterborne commerce, we must do so in an environmentally responsible way.

There is no question that these jobs are important for the Great Lakes region and the families and communities that depend upon them. This area has environmental and economic challenges and opportunities, but the region is endowed with tremendous resources to confront these challenges and reach for opportunities. It is not an either/or proposition. The question posed to us here in the Great Lakes region is not one of the environment OR jobs; it is how can we concurrently maximize both jobs AND the environment.

When Congress considered the Great Lakes Compact a number of years ago, I led the floor debate on this legislation in the U.S. House of Representatives. Development and adoption of this milestone environmental agreement involving multiple uses of water took tremendous collaboration. That effort is a testament to the ability of diverse interests coming together for a common goal, for the greater good.

It's with that collaborative spirit in mind that I have approached my role as U.S. Seaway administrator. The St Lawrence Seaway Development Corporation takes its mission and its responsibilities concerning the environment very seriously. We strive to work closely with our fellow stakeholders who share in that responsibility. I believe that our interest in promoting commerce and being environmentally responsible are mutual, not contradictory.

The Seaway provides an example of how to balance effectively the goals of environmental stewardship and economic development. We are a public entity, managing a public resource. As such, we have many stakeholders with diverse interests in using that resource. That speaks to commerce; it also speaks to the environment. Co-existence is possible!

“Shipping [by water] is the most energy efficient way to move the goods and materials that are necessary for our daily lives.”

The Seaway is the gatekeeper to the Great Lakes and plays a key role in facilitating waterborne commerce. Great Lakes St. Lawrence Seaway shipping provides jobs and is a key economic driver for the entire Great Lakes region. An economic impact study found that the Great Lakes St. Lawrence Seaway System supports over 225,000 jobs and generates billions of dollars in income and revenues annually in both the U.S. and Canada. The jobs sustained by the maritime industry include not only those located directly on the waterfront, but also many industrial sector jobs, such as construction workers, miners and steelworkers, many of which would disappear if it was not for a vibrant, healthy maritime industry operating along the Great Lakes St. Lawrence Seaway System.



As a steward of the environment, we make it our priority to promote environmentally responsible maritime commerce. Every year, approximately 164 million metric tons of cargo is moved on the System, including iron ore, coal, stone, salt, grain and steel that supply North American steel mills, power stations, factories and food manufacturers. These commodities are going to move; the question is “How are they going to move?”

Moving commodities by water offers an environmentally friendly mode of transport. Shipping is the most energy efficient way to move the goods and materials that are necessary for our daily lives. A maximum Seaway-size laker carrying 30,000 metric tons per voyage is the equivalent of 301 rail cars or 963 semi-trailer trucks.

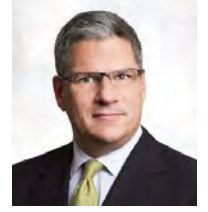
The Great Lakes region is like no other on the planet—uniquely blessed with ecological riches and economic might. We must not lose sight of the importance of simultaneously achieving economic and environmental objectives—increasing the economic output and jobs created in the region as well as improving and preserving the ecological quality of the region. It is not one or the other. When the debate is pushed as an “either/or” proposition with policy-makers, and becomes a question of whether you are for jobs or you are for the environment, the environment often loses because if people don’t have a job to provide for their families, it is often difficult for them to focus on the environment in that moment.

To frame the question as having to choose one or the other is a false choice, which diminishes our ability to focus on the more relevant, difficult and potentially more successful choices that confront us. Our collective challenge is to bring forward conversations, ideas, and outcomes that maximize jobs and the environment. The Seaway, as the maritime gatekeeper to the Great Lakes region, is uniquely situated to play an important role in the development of those ideas and mutually beneficial outcomes.



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GEORGIAN BAY FOREVER IS PROFOUNDLY GRATEFUL FOR
THE GENEROUS SUPPORT OF OUR CORPORATE DONORS.**





By Adam Chamberlain

LAKE LEVELS, CLIMATE CHANGE AND THE WEATHER

In Georgian Bay and other parts of Ontario, the winter of 2013/2014 will be remembered as cold and snowy, and as the first time the Bay and much of the Great Lakes have frozen over in the past twenty years or so. This is surely good news for lake levels on the Bay and across Lakes Huron and Michigan. The presence of an “ice cap” on the water reduced evaporation and, combined with heavy precipitation in the form of rain and snow, will add to the spring melt. I, for one, will not be surprised if the water levels are up a bit this summer.

However, it would be unwise to expect this cold weather and a potential one-year uptick in water levels to be a long-term trend or a sign that we have less to worry about. The weather this year has been cold on the upper lakes and the snowy remains were still everywhere in April. The key to the last statement is the use of word “weather.” We are often aware of daily, weekly, monthly and even yearly trends in weather. I recall clearly the vastly different weather conditions that have prevailed on my eighteen-year-old son’s late March birthday over the years. Even in the coldest lands the weather can vary wildly.

Climate, as opposed to weather, is considered at a minimum to change over decades and probably more accurately over many decades. Here is where we see why this year’s “reprieve” from the warm winters is only that.

Without getting into the numbers (we have all seen them), just think how the last decade has looked. Most of the last century’s warmest years are in our “current” decade and precipitation levels on the upper lakes have been lower than historic norms in that same period. Our local environment, from the point of view of climate as opposed to weather, is not trending well for lake levels on Georgian Bay. Warmer weather and lower rain and snowfall will result in less water in the system and trends towards reduced water levels across the Great Lakes.

The third report of the Intergovernmental Panel on Climate Change released this April repeats and increases the concerns of the scientific

community on the impact and likely progress of global warming as the predominant trend for world climate. The IPCC (which is representative of world scientific thinking, including even some of the most conservative government positions) makes it very clear that emissions from human activity are responsible for the change and that our behaviour in the very near future will determine the eventual extent of the warming and the length of time it will take to recover from it.

The IPCC report is actually many reports prepared and reviewed by hundreds of scientists from around the world. Dealing as it does with a highly complex system, it does not make for easy or quick reading even on the dock this summer. However, many articles are available that provide summaries and analysis of the IPCC’s conclusions and are worth reading as we consider how best to protect our natural heritage.

As we digest the IPCC and other information and think about how best to address water quality and quantity on the Bay we will need to keep all this in mind. The experts we rely upon to analyze this complex problem and consider and propose possible solutions will need to be well funded and have the broadest mandate possible to consider all aspects of the challenges we face and the way forward.

Adam Chamberlain is a member of the Board of Directors of Georgian Bay Forever, and a partner with Borden Ladner Gervais.

Contact georgianbaykeeper@georgianbayforever.org to volunteer for our community based “Coastal Wetland Invasive Species Removal in South-Eastern Georgian Bay” project.

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IN THE FACE OF GROWING
POPULATION AND MORE
INTENSIVE USE OF OUR
WONDERFUL AREA.”**

- Ed & Kathy Garner
Pointe au Baril



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