

A Case Book

The harms caused by

Low Water Levels in Georgian Bay

2012-2013

Version: May 1, 2013

Preface

The impact of declining water levels on the Great Lakes has been studied by many groups over the past decade. These studies have assembled significant amounts of scientific fact, proposed a number of underlying causes and considered possible solutions. This international process continues and it is hoped will eventually develop a course of action to better manage the water in the Great Lakes.

Notwithstanding, businesses, municipalities and residents around Georgian Bay are today facing clear and significant harm from the steadily decreasing water levels. Even with resolution of the broader issue sometime in the future, the impact upon the businesses and people of Georgian Bay constitutes a slow moving disaster that is profoundly affecting their way of life. Many business and residents will simply not survive to see any long term solution.

The Case Book puts a face on the harm as seen in almost every community around the Bay. While these reports are not a complete picture, they provide evidence of the impact and insight into solutions that will help alleviate the problems facing communities. These reports are intended to shape public debate and assist the mayors of Georgian Bay in successfully obtaining assistance in the near term from both Federal and Provincial levels of government.

The information is organized in two sections. Section One lists quantifiable economic costs facing communities in 2013 as they take local action to deal with the effects of low water. It does not include the potential cost of lost business or indirect effects if no remedial action is taken.

Using data from 24 of the 44 Georgian Bay shoreline municipalities:

- A minimum of **\$7.9 million** will be spent just responding to low water levels in 2013. (Note: Only 17 of the 44 communities provided financial information. Extrapolating to all 44 municipalities, the number is close to **\$20 million.**)
- At a minimum **68 marinas** are affected, some facing closure.
- More than **76 private businesses**, other than marinas are affected. Many expect to lay off staff.
- **31 government facilities** are affected including the Coast Guard stations, harbours, municipal water supplies and the Che Cheemaun ferry.

Section Two characterizes the projected economic impacts if remedial action is not taken and the collective impacts being experienced by individual residents around the Bay.

These include:

- Reduction in shoreline property values with consequential reduction of tax base
- Private property owners having to extend water lines and/or deepen wells
- Legal costs associated with negotiating changing shoreline ownership rights
- Secondary impacts upon the tourism economy
- The impact to First Nation communities around Georgian Bay

Two estimators of the scale of the disaster are:

- Cost to cottagers who need to fix/extend docks or need to repair water systems – **\$500 million**
- Negative impact on the local economy - **\$50 to \$100 million per year**

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SECTION ONE

Quantifiable Harms for 2013

North Zone including Manitoulin

Municipality of Assiginack

1. The **Municipality of Assiginack** is concerned about impact upon their two water treatment plants and the municipal marina. (**Reference – Letter Assiginack 1**)

Impacts Identified

Marinas Affected - 1

Government Facilities Affected - 2

Private Businesses Affected - 0

Monetary Impact – Not Provided

North Zone including Manitoulin

Township of Billings

1. The **Township of Billings** has a general concern about the impact of declining water levels.
(Reference – Letter Billings 1)
2. **Kagawong Marina** requires dredging assistance. There will be losses associated with lost revenues from docking and gas sales.
3. The **Kagawong Village** water system has an intake which is now in perilously low water. If the intake is blocked, all households and businesses in the hamlet will be affected.

Impacts Identified

Marinas Affected - 1

Government Facilities Affected - 1

Private Businesses Affected - 0

Monetary Impact - Not Provided

North Zone including Manitoulin

Municipality of Central Manitoulin

1. The **Municipality of Central Manitoulin** is concerned about low water levels upon the community. (Reference – Letter Central Manitoulin 1)

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 0

Private Businesses Affected - 0

Monetary Impact - Not Provided

East Zone

Township of the Archipelago

1. There are **17 marinas** in the township. A loss of an average of ten docking slips per marina is anticipated due to low water levels: 17 marinas @ 10 slips = 170 slips
2. Revenue impact if remedial work is not pursued will be between \$18,000 to \$40,000 per marina: 17 marinas @ \$18,000 or \$40,000 = \$306,000 or \$680,000
3. Costs to dredge and blast in order to maintain same number of slips as in 2012 range from \$30,000 to 60,000: 17 marinas @ \$30,000 to \$60,000 = \$510,000 to \$1,020,000
4. There are **10 resorts** in the township. Loss of income per resort in 2013 due to low water levels is 10% to 18%: 10 resorts @ \$60,000 to \$80,000 = \$600,000 to \$800,000
5. Loss of seasonal employment as a result of less income is two employees: 10 resorts @ 2 employees = 20 employees
6. **Township Marina** (South) will spend \$50,000 for dredging/blastng;
7. **Township Marina/dock** in Pointe au Baril (North) will spend \$500,000 for dredging/blastng;
8. **Township transfer site** (water based) will cost \$50,000 for new access;
9. **Other Township properties** throughout Georgian Bay requiring relief for navigable water access are projected at \$400,000.00.

Impacts Identified

Marinas Affected - 17

Government Facilities Affected - 3

Private Businesses Affected - 10

Monetary Impact - \$2,500,000

Case Study: Additional financial impact analysis on individual shoreline residents

(As of Feb. 25, 2013, from a survey response of 358 from a population of 2,765 residents)

1) Do you require dredging or blasting to maintain water access?

If yes, please provide an estimate as to how much the dredging or blasting will cost?

\$2,130,000 / 89 = Average of \$23,933 as per 25% of respondents

* 25% of 2,765 properties = \$16,543,686.00

2) Do you require a new dock to maintain water access?

If yes, please provide an estimate as to how much the new dock will cost?

\$1,297,500 / 103 = Average of \$12,597 as per 29% of respondents
* 29% of 2,765 properties = \$10,100,904.00

3) Do you require modifications to your existing dock(s) to maintain water access?

If yes, please provide an estimate as to how much the modifications to the existing dock(s) will cost?

\$1,720,450 / 265 = Average of \$6,492 as per 74% of respondents
* 74% of 2,765 properties = \$13,283,281.00

4) Do you require modifications to your water line or water pump?

If yes, please provide an estimate as to how much the modifications to the water line or water pump will cost?

\$138,215 / 126 = Average of \$1,097 as per 35% of respondents
* 35% of 2,765 properties = \$1,061,622.00

TOTAL COSTS	\$40,989,493.00
Minus 28% - Non Residents	<u>11,477,058.00</u>
Canadian Residents	\$29,512,435.00

The individual shoreline resident amounts are not included in the business and municipal impacts summarized throughout Section One of this document. They are included Section Two.

East Zone

Township of Carling

1. The **Township of Carling** provides four access points to Georgian Bay which consists of boat launches and docking facilities. These four areas provide access to a wide variety of contractors, ratepayers and non-ratepayers. Due to the effects of low water levels which became highly noticeable in 2012 these access point became difficult to use causing delays in contractor services and unsafe conditions for users in general.

The Snug Harbour access point to Georgian Bay consists of an older crib dock and one floating dock for which only one side of this dock can be used. Due to low water levels this dock has become non functional and a safety hazard. Application for permits have been submitted to MNR to remove the existing crib dock, dredge the area to a suitable depth to accommodate small craft and install a series of floating docks.

One beach used for annual swimming lessons has been affected and it is uncertain if the beach will be functional for 2013.

Expenditures for 2012: \$62,200.00

Forecast costs for 2013 due to low water levels: \$252,100.00

2. Two of the area's **5 marinas** have commented that they expect to lose 72 of their combined 230 slips due to low water in 2013. The revenue impact if no remedial work is undertaken is \$100-150,000. There will also be staffing reductions of about 2500 hrs. Dredging will be required at a cost of \$330,000.
3. A **Carling Township Resort** indicated that they will lose all 16 of their boat slips, resulting in a revenue loss of \$60,000 per year. Business is already down and cannot consider dredging because of the expense. (Dredging would have cost \$350,000)
4. Many waterfront properties and marinas are severely impacted by low water (**Reference – Letter Carling 1**).

Impacts Identified

Marinas Affected - 2

Government Facilities Affected - 0

Private Businesses Affected - 1

Monetary Impact - \$640,000

East Zone

Township of Georgian Bay

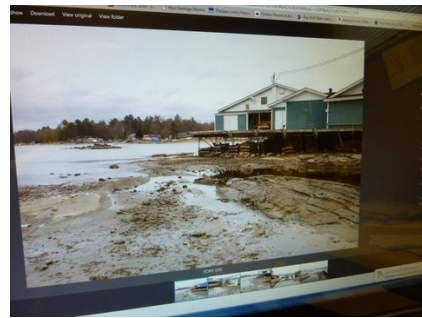
1. Located along the Georgian Bay Coast the Township of Georgian Bay is host to:
 - 13 Marinas
 - 4 Restaurants
 - 2 Schools
 - 1 Church
 - 1 National Park Launch and Visitor Interpretation Station
 - 1 Public Library
 - 5 Realtors
 - 25 Service oriented business – Cottage Watch,
 - 18 Creative Class Workers (painter, sculptures, guides, photographers)
 - 1 Art Gallery
 - Delawana Inn and Spa
 - 4 Inns and 'For Rent' Establishments
 - 2 Water Taxi Companies
 - 2 Marine Mechanics
 - Town Centre Business
 - LCBO
 - Canada Post
 - Hardware
 - Grocery
 - Bakery (Seasonal)
2. In Georgian Bay there are **7 marinas** dredging and all permits have been issued.
 - The cost of dredging ranges from \$30,000 at a minimum to \$650,000.
 - Two companies are overseeing dredging, and will employ 30-40 full time employees during the dredging process.
 - Boat slips directly affected if Marinas to not dredge – 125 confirmed to date.
 - Marina operators are very hesitant to provide confirmation of slips affected.
3. There is a concern about the impact upon area tourism. Using the Provincial Tourism Regional Economic Impact Model TREIM and considering commodity flow an average spending per visit to a cottage is \$250 per person not including overnight accommodations. (**Reference – Letter Georgian Bay 1**)
4. Numerous wetlands are drying up with related ecological problems.
5. Residents are concerned about the deleterious effect of declining water levels and are asking for properties to be reassessed. (**Reference – Letter Georgian Bay 2**)
6. John White, owner of **White Contracting and Barging** of Honey Harbour, commented as follows:
 - Of the 27 commercial industries in Honey Harbour, 17 of them will see an immediate reduction in business due to record low water levels in Georgian Bay. Almost all of them need to do something, be it dredging or dock extensions.

- Many shoreline home and cottage owners and waterside businesses now have dry docks and thousands of boat slips will be unusable this summer.
- White estimates the negative economic impact to Honey Harbour homes, cottages and businesses is between \$200 and \$300 million.
- White, who has surveyed local businesses, reports that the cost to each business to continue to stay in business will be about \$80,000. That's \$2.16 million for the 27 businesses of Honey Harbour alone to stay in business this summer, he said. Businesses are looking to lay off staff to pay for dredging," he added.

Picnic Island - 2011



Picnic Island - 2012



Impacts Identified

Marinas Affected - 7

Government Facilities Affected - 0

Private Businesses Affected - 10

Monetary Impact - \$250,000 (conservative average)

Case Study: Additional financial impact analysis on Township if no remedial action is taken

The Township of Georgian Bay will measure the Economic Impact of Low Water Levels of Georgian Bay initially by assessing the number of affected slips at marinas directly affected and not in use plus the affected revenues from storage/maintenance of boats, fuel, commissary, etc. Further examination should include tourism dollars, overnight accommodations, spending, and reduction in sales at marinas. No analysis of the economic impact of dredging will be done at this phase, but will be completed as an overall analysis.

The following assumptions are used in the financial impact evaluation:

- The cost of renting a slip in Georgian Bay ranges from \$2500 to \$5000 inclusive of parking, and winter storage
- 97-100 % of users of the marina are operating as an entity enabling residents to access their islands and water access cottages.
- Average attendance at marina 400- 600 cars each weekend
- Average persons visiting using slips- 8 persons
- Average number of visits per summer – 12 visits
- The **Delawana Inn** employs 150 part time employees

- Contracting companies in Honey Harbour employ 40-60 part time employees
- Marinas in Georgian Bay generally employ 5 -15 employees each year and some marinas are reporting a reduction in 40% of labour required for 2013 without dredging.
- Annual Pike Tournament will limit boat size to 16 foot aluminum, as any inboard/outboard motor and boat will not fit in channel
- Does not take into consideration boat maintenance, transient boating community, and accommodation or rentals.

Calculation of Impact of No Dredging

Impact on Marinas

125 Confirmed docking slips at risk
 125 Marina * \$3000 (Average) Seasonal Rent = \$375,000

Impact on Workforce

Employees potentially affected
 70 employees *\$20 hour * 40 Hours * 24week \$1,344,000
 (Not including Delawana Inn)

Impact on Economic Spin off related to Marina tourism/traffic

Scaled back to 10 visits at 6 persons per visit

10 visits to the cottage
 125 @ 6 persons per slip *\$250 daily spending * 10 visits \$1,875,000

(Spending: Take into consideration average daily spending of families inclusive of parents, children, for 12 weekends in the cottage at an average of 6 people)

Conservative estimate of economic impact on Township: \$3,200,000

East Zone

Municipality of Killarney

1. **Key Harbour Lodge** is the only marina located from Killarney to the Bing Inlet. Many people enter our area and are low on gas and require fuel from us, but it has become very challenging to try to fuel especially larger boats as they do not have enough fuel to reach their next location, and we were down to 2-3 feet of water or so.
2. **Channel Marina** will see 30% of its boat slips inaccessible this summer. Dredging has to be done regularly to keep up with declining water levels. Annual cost is about \$33,000. (**Reference – Letter Killarney 1**)
3. We run a small marina just off highway 69 at Key River called **Camp Dore**. We provide docking/parking services for 70 cottagers at our business. We have parking space to service 150 cars, service 3 fishing camps and rent 6 cottages. The low water level will negatively impact our business for 2013 and beyond through a significant loss of revenue.

We expect to lose a third or more of our annual revenue through customers and fishing camps transferring their docking and parking needs to Britt. In addition, our fuel sales, transient mooring and other merchandise sales will also be affected.

4. Low water in the Georgian bay has made the outlets of the French river impassable to power boat traffic This has resulted in a loss of approximately 20 full time seasonal customers who would each contribute roughly three to five thousand per year here at **Hartley Bay Marina**.

We have also lost revenue stream from a transient clientele who can no longer reach the Georgian Bay and have taken their monies elsewhere. More importantly is the irreparable environmental damage done to the littoral areas at the mouths of the French river. Areas that were once productive wetland ecosystems are now grasslands and approx five hundred meters from water.

5. The **municipal water intake** is located in the Killarney Channel and with the water level continually dropping the municipal water supply is affected by high turbidity and as a result is more wear and tear on the purification/filtration system. Should the intake ever have to be relocated to the east end of Killarney Channel it would be an expensive venture most likely costing anywhere from between \$6 - \$10 million dollars. With only approximately 275 water users it is a cost that could not be borne by these users alone Provincial/Federal grant monies would be necessary to offset this enormous expense.
6. Declining water levels is having a major impact on tourism which our municipality heavily relies on. We are a tourism based region with the majority of our population (371 permanent residents) relying on jobs from this industry. The low water level will negatively impact business' in Ward 2 through a significant loss of revenue. Most expect to lose a third or more of annual revenues through customers and fishing camps transferring their docking and parking needs to Britt instead.

7. Low water levels have made the outlets of the French River and Key River impassable to power boat traffic and as a result some businesses have seen lost revenue from over 20 full time seasonal customers.

There has been irreparable environmental damage done to the littoral areas at the mouths of the French River. Areas that were once productive wetland ecosystems are now grasslands and approximately five hundred meters from water.

8. The **Provincial government** will bear the cost to recalibrate and reprint all of the marine charts for the affected areas will be in the tens of millions of dollars and will be a very lengthy process. These cost will be downloaded to all boat owners/operators, commercial fishermen and marine related industries.
9. Commercial fishermen are already finding that the change in water depth and temperature are affecting the spawning areas and the migration routes to access the spawning grounds. The financial burden of having to purchase new marine charts will be huge!!
10. We have at least ten marina operators who have facilities to lift larger craft from the water for winter storage are having to turn away customers who have boats with a deeper draft. Fuel sales, transient mooring and other merchandise sales will also be affected should business be shifted elsewhere.

Marinas Affected – 10

Government Facilities Affected – 1

Private Businesses Affected – 20

Monetary Impact - \$33,000

East Zone

Municipality of McDougall

1. The **Municipality of McDougall** has a boat ramp that is used for access to islands within the municipality. This ramp is significantly out of the water at this point. Dredging will need to be done to access for most boats to access the ramp and seasonal residents to access their properties. The municipality has passed a motion expressing its concern to the provincial government.
2. The route from the deeper bay water to the boat launch will also need dredging to maintain an open channel. The total cost of dredging the channel and boat launch is in our current budget at \$40,000.
3. Nobel Beach, where we are currently investing \$200,000, may be less desirable with lower water levels.
4. Private waterfront properties will have to adjust heights of docks and lengths into the Bay. We currently have about 120 shoreline properties and 15 island properties. (**Reference – Letter McDougall 1**)

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 2

Private Businesses Affected - 0

Monetary Impact - \$40,000

East Zone

Town of Parry Sound

1. The **Parry Sound Area Chamber of Commerce** has expressed a serious concern regarding the reduction in water levels. (**Reference – Letter Parry Sound 1**)
2. The **marinas** in Parry Sound have concerns over the water levels and expect it may affect their transient business. Fewer boats travelling the South Channel could mean fewer customers coming into the Harbour for fuel, pump outs, repairs or overnight stays. They also recognise that the issues with the water levels have been ongoing for several years and many have already made changes to adjust (dredging, adjusting dock usage etc.)
3. **Sound Boat Works** expects that 5% of their slips will be unusable should the water stay low.
4. **Big Sound Marina** is a municipally owned transient Marina operated by the Parry Sound Area Chamber of Commerce, they expect:
 - 15% - 18% of the marina slips will be un-rentable in 2013 due to low water levels.
 - This reduction in available slips could cause revenue loss of an estimated \$21,000 per year.
 - Additionally the Chamber of Commerce expects that the reduction in boaters at Big Sound Marina will have an impact of \$15,000 per year on spending in our community (fuel, food, etc.).
5. **Georgian Bay Airways**, a float plane business on our waterfront has already faced issues caused by the low water levels.
 - Repairs were made to their shore wall at a cost of \$100,000
 - Further improvements are needed to their docks for planes and boats.
 - Flight charter business will be reduced as they will not be able to access some of the cottages/drop off locations due to the docks and drop off points becoming inaccessible.
6. **Sail Parry Sound**, our local sailing school will be making improvements to their boat ramp and adding a stair to their wharf in 2013. They need to extend the ramp to position their floating docks further out and the Wharf is currently sitting out of the water. The projected cost is \$10,000
7. If the water levels continue to drop our local tour boat companies will need to look at rerouting their tours to stay clear of the South Channel. The low water levels caused the **Island Queen** to change routes a few days at the end of their 2012 season as the South Channel water levels were too low. At this point they do not have plans to reroute for the 2013 season and if they are required to reroute they are not anticipating any reduction in patrons as they will still run two tours daily.
8. The **Spirit of the Sound Schooner Company** has concerns about their 2013 tours and charters as well as the docking for their boat the MV Chippewa. Should the levels stay low their tours to **Craganmor Point Restaurant** (approx. 10 trips per year) and **Henry's Fish Restaurant** (approx.

12 trips per year) will be at risk of cancellation. Both of these tours travel through the South Channel and could face challenges navigating the two mile narrows. Navigation of the South Channel and access to cottages would also have an impact on their charter business. They have had to defer customers as they are uncertain of what the water levels will be like come Spring/Summer.

The Spirit of the Sound Schooner Company also has concerns regarding their docking facilities. The vessel currently sits above a rock ledge which nears closer to the vessel the further the water levels drop. In 2012 the rock ledge caused damage to their keel cooler at a cost \$850 to repair. Should the water levels continue to drop they will need to seek alternate docking facilities.

9. The **Cambrian**, a vessel contracted as a search and rescue vessel for the Coast Guard Auxiliary has concerns regarding navigation of the South Channel, primarily the Two Mile Narrows. Loss of navigable waterways could result in a reduction of service.
10. The **Downtown Business Association** has expressed concern that the decreasing water levels will have an impact on the Downtown businesses, specifically those retailers that are frequented by boaters.

As the businesses generally do not track the means in which their patrons are arriving they do not have firm numbers however the Downtown Business Association is anticipating a 5-10% drop in summer traffic for provisioning of supplies and general visitor type purchases. They also recognize that this number would rise significantly should cottagers be unable to reach their boat access cottages.

 - Restaurants along the Waterfront, many within walking distance of our transient marinas, may feel the effects of reduced patronage from boaters however it is too early to predict what this may be.
 - The Town of Parry Sound serves as the economic hub for our area, boaters and cottager and tourists travel here for; fuel, food, supplies and services. A reduction in patrons would have a large impact on most of our local businesses.
11. The **Town of Parry Sound** owns and maintains three public boat launches.
 - The Waubuno Beach boat launch requires dredging and dock improvements.
 - The Smelters Wharf boat launch was in need of repair however further improvements have come forth as a result of the low water level exposing the lower section of the ramp.
 - The Champaigne Street boat launch will likely need dredging in the near future to allow for continued use.
12. Storm water pipes and culvert openings are becoming further exposed which can cause public risk. In particular a storm pipe at Waubuno Beach is scheduled to be lowered in 2013. The costs of lowering the pipe along with the repairs to the three boat launches are projected to cost the Town \$400,000.
13. The Town Dock and Big Sound Marina, both municipally owned facilities will need ongoing inspections to ensure the changing water levels are not affecting the supporting structures. These can be costly due to the need for trained divers to perform inspections.

- The Town Dock is becoming less accessible to boaters as the stairs become more elevated from the water.
- Potential impacts on swim programming and swim supervision at the Waubuno Beach.

14. The lower water levels have had an impact on our deep water port.

Cargo ships delivering to the **Smelters Wharf** have had to reduce the size of their loads due to the reduced water depth.

15. The area is designated as a **UNESCO** World Biosphere Reserve. The impact is incalculable.

16. The **Parry Sound Community Business and Development Centre** has had comments from a number of businesses who are concerned about the viability of their water-based business. An entire economic pillar of the community is imperilled. (**Reference – Letter Parry Sound 2**)

Impacts Identified

Marinas Affected - 3

Government Facilities Affected - 3

Private Businesses Affected - 6

Monetary Impact - \$546,000

East Zone

Township of Seguin

1. **Pleasant Point Marina** has to repair its boat launch ramps at a cost of \$50,000. (**Reference – Letter Seguin 1**)
2. **Holiday Cove Marina** will have to blast, dredge and repair its docks at a cost of \$50,000. (**Reference – Letter Seguin 2**)
3. **Rose Point Marina** has 175 slips. Some 22 will be unusable this year because of low water. If no action is taken that will cost the marina \$28,000. We will require \$100,000 in dredging/blasting this year. (**Reference – Letter Seguin 3**)

Impacts Identified

Marinas Affected - 2

Government Facilities Affected - 0

Private Businesses Affected - 0

Monetary Impact - \$200,000

South Zone

Beausoleil First Nation

1. Low water is affecting our ability of get on and off the islands. We need to dredge. We need to rebuild the docks for low water. Some seniors cannot leave the island due to the difficulty in boarding a boat. This affects both Christian and Hope islands.
2. The Beausoleil First Nation (BFN) vehicular ferry (Indian Maiden) is a critical transportation link operating 7 days a week. It must be available 24/7 for emergencies. The low water has resulted in the number of passengers being reduced to 40 from 70. A number of emergency ambulance runs have had to be cancelled. **(Reference – Letter Beausoleil 1)**

A second ferry, (Sandy Graham) ran aground is now being fixed at a cost of \$400,000. The ferry is also being assessed for a “hydraulic device” to assist vehicles and passengers to board the boat. This device is needed due to the low water impact on ferry operations.

3. The BFN have had to rent a replacement barge at a cost of \$300,000. It is difficult to get some companies to provide the needed services because of the awkward financial arrangements with Aboriginal Affairs Canada
4. It is estimated to cost \$600,000 to dredge the harbour and fix the ferry dock on Beausoleil Island
5. Have had to increase the chemical treatment of water because it is becoming more turbid
6. BFN has put plans for a new marina on hold due to declining water levels.
7. The BFN boat launch at Cedar Point is no longer operational due to low water. This has resulted in revenue loss.



Beckwith Island – Forty feet more shore depth since 2012

Impacts Identified

Marinas Affected - 1

Government Facilities Affected - 2

Private Businesses Affected - 0

Monetary Impact - \$1,300,000

The Beausoleil First Nation has also identified a number of more structural issues that are critical to the longer term health of Georgian Bay. Many of these have been moved to “Section Two – First Nations”. Those specific to BFN are listed below.

1. Beckwith and Hope Islands are being negatively affected by many visitors by boat who are not welcome and do not respect the land and the BFN rights
2. The economic health of the Huronia depends in part on the BFN with an annual budget of \$30 million, much of it spent in neighbouring communities.

South Zone

Town of Collingwood

1. The **Georgian Triangle Tourist Association** has identified a series of impacts from low water levels that is undermining the area's tourism industry:
 - a. Harbours in Collingwood, Meaford and Thornbury are low and will need to be dredged this coming season
 - b. Beaches are being degraded throughout area
 - c. Waterfront property values may decline

Comments from the Toronto Boat Show indicate that many boaters are making visitation decisions based upon current water levels. (**Reference – Letter Collingwood 1**)



2. The **Collingwood Yacht Club** is having difficulty moving its boats to/from moorings. For 2013 they are intending to build a wave break and reposition some of the mooring points. This will cost some \$150,000. In future the entire club is likely to be moved.
3. Shops in the downtown are concerned about decreasing business from visitors (**Reference Letter – Collingwood 2**)
4. Issues have been raised about reducing waterfront property tax assessments.
5. A number of shoreline neighbourhoods with local marinas are concerned about continuing water access.
6. A commercial fishing operation, **Whites Fisheries**, is concerned about access to the dock area.
7. **Cranberry Resort Marina** is concerned about the decline in water levels.

8. Rick Baldry, President **Georgian Triangle Anglers Assoc.** states:
- The river mouths of most of the spawning streams such as the Pretty ,Silver , Black Ash Batteau and Indian may pose a problem for spawning rainbows this spring. The fish may make it up to the spawning grounds but if last year's conditions repeat many of the spawning fish will be trapped there.
 - These streams offer many hundreds of hours of enjoyment to fisherman when the ice is not present. (**Reference Letter – Collingwood 3**)

Impacts Identified

Marinas Affected - 3

Government Facilities Affected - 0

Private Businesses Affected - 1

Monetary Impact - \$150,000

South Zone

Town of Midland

1. **Town of Midland, Parks and Recreation**
 - Recreational boating will be adversely affected through the access to Georgian Bay from the Trent Severn system, etc
 - If boaters are afraid of low water levels, the local Marinas (and our own Harbour) will see a loss of business
 - Although I think the depth for larger ships (ie. Our Tall Ships event) at the Harbour remains okay, this may not be the case if levels decrease much more
 - Low water levels will adversely affect the cottagers on the islands in our area which could decrease property values, fewer trips to the cottage, etc.
 - The dredging at the boat launch is expected to be between \$5,000 and \$10,000.
2. **Town of Midland, Public Works**
 - We will likely have to make some changes to the floating docks systems due to the low water levels affecting access from the piers (ie stairs, the system used to anchor the floating docks, etc) , likely around \$5000. Hopefully we don't have to dredge at the harbour
3. **Parkbridge Marinas**
 - General concern about impact to recreational boating in Georgian Bay. A lot of concern in the boating community.
 - The exit channel from the Severn Waterway into Georgian Bay (at Hwy 400 underpass) now has only 5 feet of draft. Boats will not be able to exit, closing the waterway.
 - Parkbridge Marinas will require to dredge this year or next :
 - o Wye Heritage
 - o **Bayport**
 - o Beacon Bay

Typical price \$200,000 per marina (**Reference - Letter Midland 1**)
4. **ADM Milling**
 - The ships entering Midland harbour have had to be "short loaded" for a few years due to low water levels. This reduces the efficiency of the water transport and is costing the company significant money. The supply ship Frontenac had to wait for the wind to change this past year in order to have sufficient water depth to get into the harbour.
5. **Georgian Bay Tours (Miss Midland)**
 - Cannot get the Serendipity Princess out of Georgian Bay into Barrie. Limited access to Severn River system
 - Miss Midland traffic down to 30,000 versus normal run rate of 40,000. Suspect that part of this comes from concern of lack of water.
6. **Midland Bay Sailing Club**
 - Midland Bay Sailing Club is very concerned about the water levels the Bay. The sailing club has dredged the club harbour three times since 2000. The costs include \$160,000 in 2000,

\$185,000 in 2008, and \$200,000 now in 2013. Our concern is that these costs continue to put pressure on the club resources and the current water levels put the future viability of club in question. **(Reference – Letter Midland 3)**

7. Midland BIA

- The Midland BIA is greatly concerned about the devastating effect of water levels dropping and impact upon both general and tourism business. "...do whatever you can to prevent this devastating trend." **(Reference – Letter Midland 2)**

8. Georgian Bay Chamber of Commerce

- The Chamber has expressed concern about the economic impact to most of its members caused by the low water levels. **(Reference – Letter Midland 4)**

Impacts Identified

Marinas Affected - 3

Government Facilities Affected - 1

Private Businesses Affected - 1

Monetary Impact - \$500,000

South Zone

Town of Penetanguishene

1. **Town of Penetanguishene** has three large marinas and two smaller one. They have to dredge annually.
2. **Harbour West Marina** has begun a dredging program that is budgeted to cost \$125,000 between November 2012 and March 31, 2013. Every slip at Harbour West (approx 150) has been adversely affected by the low water levels. These effects include difficulty for vessels to manoeuvre beginning in August 2012, complete inability for many vessels to manoeuvre in October 2012.

They have had a loss of revenue in 2012 includes slip vacancies, as well as lost customers due to declining levels over the season (approx \$10,000).

They used to employ 7 staff in the marina itself, plus 6 more in the mechanical service department, and various sub trades and subcontractors. All of these jobs are definitely at risk, many have already been lost. Of the 7 marina staff, 5 have been laid off due to budgetary requirements of the dredging program. These job losses include, 2 full time (year round) skilled tradesmen, 1 part time (year round) office staff, 2 full time (seasonal) students. The only position they will fill for the 2013 season is 1 part time (seasonal student). If they did not proceed with the dredging program this winter to maintain regular operation on the docks next summer then the mechanical department would be shut down due to inability for vessels to access the launch ramp and docks. This closure would result in the loss of all 6 jobs in the mechanical department. These jobs include 1 full time (year round) service writer, 3 full time (year round) mechanics, 2 full time (seasonal) apprentices.

3. Declining waters will have a major loss of tourism impact. Municipal beaches are less desirable.
4. **Discovery Harbour HHP** is a major tourism draw. The historical ships are now having trouble getting into and out of the harbour. Access to the dockside Kings Wharf theatre has been reduced.
5. Private waterfront properties have not been significantly affected.
6. A possible problem exist with the municipal outflow pipe due to low water.
7. Secondary business impacts:
 - a. **Scotiabank Penetanguishene** - Tourism may impact our transactional business thereby making it difficult for us to justify hiring a summer student teller.
 - b. **The Beer Store** -Noted no significant decline in business activity, and anticipates only a small decline due to water levels in 2013.
 - c. **Wholesale Promotional Products** - As he deals with many marinas, he has noticed a decline in his business activity. He employs 5-7 people during the peak season and may need to cutback if sales continue to decline. In his opinion, if there are no boaters and the marinas are in financial trouble, then he is put in jeopardy as well.

8. **Bay Moorings Marina** incurred \$75,000 dredging costs in 2012, and another \$210,000 spent on breakwall (phase 2) may or not be related to water levels. He noted that because they have fixed docks on pilings, they are extremely impacted by the fluctuation in water levels.

In 2000, the Federal government provided a subsidy for marinas to solve these issues; Bay Moorings was awarded \$100,000 through Ontario Marina Operators Association). Another \$210,000 spent on the breakwall (phase 2) may or not be related.

Bay Moorings has 362 boat slips, and they estimate that about 35-40 are unusable slips (would be far more without remedial work planned for 2013). He also noted that 280 slips have to be lowered in 2013.

In summary the impact of low water levels in Georgian Bay in 2013 will be:

- \$100,000 dredging costs in 2013, with additional \$50,000 to rework pod of docks
- \$75,000 earmarked for physically lowering docks (so boaters don't need ladders)
- Customers calling regularly and are concerned, some have left for other marinas (12 or so)
- Boating season in 2013 will be adversely affected; won't be able to cruise up to Chimney Bay, Big Dog, etc. Overall experience of boating is diminished
- If people are staying around marinas, it may require further washrooms and amenities, contribute to a reduction in gas sales, increase in garbage costs, etc.



Assistant Marina Manager at Bay Moorings, standing where part of their dredging efforts are taking place this winter.

9. **Beacon Bay Marina** spent \$150,000 in 2012 for some maintenance dredging. In 2013, they have already spent \$160,000 in dredging and are going to spend another \$40,000 in dock alternations because the steps are now 27" below where they should be.

In 2012, they had to send 4 of our deeper draft sailboats to Bay Moorings (sister Marina) for deeper water.

Beacon Bay Marina employees 35 people at peak season. If they have boats that leave, they will have to make up shortfalls in budget which means they would probably have to lay some people off.

People may spend more time at their slips which means additional pressure on their infrastructure. More sewage, more hydro etc. which means they will have to increase their costs to compensate which means people may find boating too expensive for sitting at the dock.

Another issue in Penetanguishene are the logs in Penetanguishene Bay that are being hit by boaters that mean costly repairs to which boaters are going to get frustrated and leave Penetanguishene Bay.

10. **Dutchman's Cove Marina** is planning to do some dredging in 2013, and they estimate that approximately 12 boat slips (10%) have been affected by the low water levels.

Their estimated revenue loss in 2012 is \$15,000, although, they don't think any jobs are at risk at this time. They did note that future impacts would include more dredging and higher costs to boaters, but at some point the dredging costs will outweigh the return and these docks will be lost.

Impacts Identified

Marinas Affected - 5

Government Facilities Affected - 2

Private Businesses Affected - 0

Monetary Impact - \$500,000

South Zone

Township of Severn

1. Although Severn has some 120 km of shoreline there are not many impacts. (**Reference – Letter Severn 1**)
2. Matchedash Bay is low which is affecting the value of property and hence the taxes payable on shoreline property.
3. Some individual property owners have done their own dredging.

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 0

Private Businesses Affected - 0

Monetary Impact - Not Provided

South Zone

Township of Tay

1. Marinas in Waubaushene, Victoria Harbour and along the shore are affected. Some marina operators have expressed a concern about the future viability of their businesses.
 - a. **Marshes Marina** - \$100,000 required for dredging (**Reference – Letter Tay 1**)
 - b. **Twin Bridges Marina** - \$50,000 spent on dredging five years ago. Has to be done again
 - c. **Wye Heritage Marine** - \$200,000 anticipated for 2013 dredging
2. Shoreline residents are not able to land their boats on their docks. One resident in Robins Bay has a 100 foot dock and recently put on a 75 foot extension. The water is now 65 feet beyond the dock.
3. **Tay Township's** water supply is affected.
 - a. Because of increased turbidity, use of chemicals to treat the water has recently increased by 25%.
 - b. Have a general concern about the water intake and outfall. If significant changes were required it would have a devastating financial impact on the community.
4. Dropping water levels will affect the value of waterfront cottages.
5. There will be a general impact on area tourism.
6. There will be a general impact on the well being of area businesses.
7. **Queens Cove Marina** will incur costs of \$250,000 for dredging in 2013.

Impacts Identified

Marinas Affected - 4

Government Facilities Affected - 2

Private Businesses Affected - 0

Monetary Impact - \$600,000

Case Study: Financial impact analysis for Queen's Cove Marina

Queens Cove marina had 274 active slips in 2012. If we did nothing about the decreasing water levels:

- 164 of those slips will be inaccessible to our customer's boats.
- That equates to over \$1,200,000 of direct revenues (slips fees, maintenance, repair, and fuel sales).
- The business might survive another year or two if we laid off at least half (7) of our full time staff and all (4) seasonal/summer student staff. However that would be a band aid solution at best. The viability of the business after year two would be very questionable.

If the water level continues to decrease, we will incur additional expense for further dredging and dock system modifications that will be required. The continued viability of Queen's Cove Marina will be at risk. I dare say that many other marinas throughout Georgian Bay will face the same fate.

South Zone

Township of Tiny

1. Tiny has limited shoreline businesses.
2. The conflict over of riparian rights is being exacerbated which has lead to legal action. The **Township off Tiny** has spent about \$100,000 contesting these matters.
3. Tourism is limited but it has had a noticeable effect on the five parks in Tiny. Beaches in particular are affected.
4. The municipality has had the “emerging shoreline” situation assessed for management purposes at a cost of \$120,000.

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 1

Private Businesses Affected - 0

Monetary Impact - \$220,000

South Zone

Wasaga Beach

1. General concern about the impact of low water levels upon Wasaga Beach. (**Reference – Letter Wasaga Beach 1**)
2. Dredging is now regularly required at the mouth of the Nottawasaga River to maintain it as a navigable waterway. It costs \$75,000 every two years to dredge.

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 0

Private Businesses Affected – 0

Monetary Impact - \$37,000



Wasaga Beach Shore – April 2013

West Zone

Town of The Blue Mountains

1. Water intake for the **Town of the Blue Mountains** could be affected if water levels continue to decline. If the water level continues to decline, increased turbidity can increase contamination concerns. With increased concerns, additional purification could be required. To maintain an appropriate depth of water, the water line intake may have to be relocated the intake at a cost of \$6-10 Million.
2. Expect a general impact upon area tourism – no cost estimate, examples of impacts would be on 1) Harbour Usage, 2) Fisheries, 3) Swimming, 4) Ski Hills re: snow making and golf course irrigation (uses which do return water to the Bay)
3. Lower water levels could affect water quality. With water quality regulations and testing of beaches, anytime an adverse sample is found, beaches affected by that sample are to be posted and possibly closed affecting waterfront use and attractiveness.
4. Lower water levels provide prime habitat areas for invasive species such as Phragmites, making those waterfront areas affected less desirable.
5. The immediate impact for 2013 in the Harbour Basin if nothing is done by way of dredging, this will affect 43 of our current users amounting to more than \$76,000 in revenue at our 2012 rates. That is 25% of our mooring revenue.
6. The lower water level limits the ability for cranes to reach boats for launch and haul out. This in turn affects the harbour's land storage availability, more than \$13,500 in revenue. That is 47% of our land storage revenue at our 2012 rate.
7. There are also implied impacts to fuel sales, transient moorings, merchandise sales, etc.
8. The dredging is estimated to cost \$265,000 for us to be able to continue our typical operations.

Impacts Identified

Marinas Affected - 1

Government Facilities Affected – 2

Private Businesses Affected – 3 + (Ski Clubs, Blue Mountains Resorts, Golf Courses)

Monetary Impact - \$265,000

West Zone

Township of Georgian Bluffs

1. Have **three marinas** in the township, all likely affected. **Morrison's Marina** will lose some slips and will likely require dredging. (**Reference – Letter Georgian Bluffs 1**)
2. Have hundreds of private water lines into the Bay. Residents/Cottagers may be cut off from water without extending the lines.
3. Municipal water intake and outflow are fine for now. Concern for the future.
4. Have had difficulty arranging dredging permits because of the divergence between the provincial government and the First Nations.

Impacts Identified

Marinas Affected - 3

Government Facilities Affected - 0

Private Businesses Affected - 0

Monetary Impact - Not Provided

West Zone

Municipality of Meaford

1. Have seen 5 recent applications for shoreline wells. Some are on-hold because of provincial regulations
2. Need emergency dredging to get boats into the harbour. Cost will be \$10-40,000. The declining water levels have negated the earlier dredging done by the **Municipality of Meaford**.
3. **Richardson Boats Limited** employs 12 people in the selling, provisioning and repair of boats. They are concerned about the future of their business. (**Reference - Letter Meaford 1**)
4. **Municipal marinas** are affected.
5. Water intake and outflow are fine for now. Concern for the future
6. **Federal Coast Guard** station is having difficulty getting on/off their dock at certain times
7. **Bay River Restaurant** is concerned that their patrons will not be able to arrive by boat
8. Municipal boat launches are now too steep. Need to be refurbished. (**Reference – Letter Meaford 2**)
9. The Meaford Chamber of Commerce has expressed concern about the low water levels. (**Reference – Letter Meaford 3**)

Impacts Identified

Marinas Affected - 1

Government Facilities Affected - 2

Private Businesses Affected - 2

Monetary Impact - \$25,000 (mid-point)

West Zone

Northern Bruce Peninsula

1. **Municipality of Northern Bruce Peninsula** regularly maintains three boat launches and provides minimal maintenance on several others along Georgian Bay and Lake Huron shore lines. The boat launches at Dyers Bay and Tobermory are now, due to low water levels, not adequate to launch large commercial vessels and pleasure craft. The Municipality is currently budgeting \$100,000 to repair Dyers Bay and replace and deepen Tobermory boat launches. It's important to note that both of these boat launches are federally owned and leased by the municipality. To date we have received no financial assistance for either project.
2. The Municipality leases and operates from the federal government two municipal harbours, Tobermory and Lions Head as well as a break wall/dock at Dyers Bay. All three facilities now have exposed and eroded wooden timber framing that will now see accelerated aging and decay due to exposure to the elements. The Mayor and CAO have made met with our MP and officials from the Department of Fisheries and Oceans, and made them aware of the current deficiencies and the need for additional funding to properly fix these facilities and not simply to continue to place band aids on them. Although all the repairs required at these facilities are not solely related to low water levels, water levels have certainly accelerated the cause and concern. Total cost of repairs is \$ 5,400,000
3. Lakeside residents are stating concern regarding high waterfront assessments during low or no water conditions. If low water trend continues, assessments will fall and the Municipality, County and School boards will see a decrease in revenues from taxation.
4. Northern Bruce Peninsula (Tobermory) is home the **Chi-Cheemaun**. This ferry is iconic in Ontario and provides an essential service to Ontarians. The Chi-Cheemaun is a pivotal tourism, commercial, industrial, transportation and recreational component to rural Ontario's economic stability and future growth. Although still currently operating with adequate depth the Municipality is aware that on windy days there is no keel clearance at the entrance to the South Baymouth dock terminal. Representatives from Manitoulin Island are currently making submissions to the appropriate federal and provincial governments for assistance.

Impacts Identified

Marinas Affected - 2

Government Facilities Affected - 3

Private Businesses Affected – 20

Monetary Impact – Direct impact 2013 approx. \$100,000

West Zone

City of Owen Sound

1. Harbour dredging is urgently needed to protect the harbour (which is owned by **Transport Canada**):
 - a. Existing water intake and outfall (Low lake levels could have an impact on cost of municipal water supply treatment. Low lake levels are being factored in to the new water treatment system project)
 - b. Two public boat launches
 - c. Major tourism event – Salmon Spectacular
2. **Private marina and sailing clubs** will be affected.
3. **Cargill Salt**, a shoreline industry, has to reduce ship loadings.
4. **P&H Elevators**, a shoreline industry, has had to reduce ship loadings
5. **Miller Paving**, a shoreline aggregate operator, is concerned about low water levels
6. **Ontario Northland**, operator of the Chi Cheemaun ferry, is concerned about having enough water to dock the ferry in Owen Sound
7. The Owen Sound BIA expressed concern about the impact of low water levels on its members.
(Reference – Letter Owen Sound 1)

Impacts Identified

Marinas Affected - 2

Government Facilities Affected - 3

Private Businesses Affected - 3

Monetary Impact - Not Provided

West Zone

Town of South Bruce Peninsula

1. **Town of South Bruce Peninsula** boat launch is inoperative due to shallow water.
2. Wiarton was dredged last year and water is now only a foot deep.
3. Hope Bay is too shallow to take vehicles and all others have not been usable for years.
4. Navigation is a concern near shore as charts are all out dated. All but one stream is of no value for the spring spawn.
5. Shore wells that have or are running dry with no options for this winter.
6. Shoreline resorts see very little interest in rentals so far this winter.

Impacts Identified

Marinas Affected - 0

Government Facilities Affected - 0

Private Businesses Affected - 0

Monetary Impact - Not Provided

SECTION TWO

Underlying Impacts

Section One has characterized the 2013 costs of dealing with the impacts of declining water levels - the short term consequences and investments needed to keep the businesses and municipalities around Georgian Bay operating.

Section Two introduces two other aspects:

- The longer term impact upon Georgian Bay from both from an economic and quality of life perspective if no action is taken
- The broader social implications, especially for First Nations, in managing our scarce water resource

The following is a high-level summary. Additional work is needed to fully elaborate these impacts.

1. Shoreline properties and the tax base

As water levels drop the shoreline in front of residences starts to expand. While at first blush this may seem a benefit, for many shoreline and island residents, impacts can range from a minor inconvenience to a complete loss of a way of life. These impacts include:

- Having a pleasing shorefront become an unattractive expanse of rock and brush
- Extending docks tens of meters to provide mooring for boats
- Loss of access to shoreline boathouses and docks
- Inability to transport supplies by boat to island residences

Waterfront property typically commands a premium around Georgian Bay. There is a real likelihood that as properties become less desirable for the reasons given above, that their assessed real estate value will decline. This represents a loss to the homeowner. Homeowners in turn are already approaching MPAC to have their “waterfront properties” reassessed.

Sunnyside Beach Assoc., Meaford

“Property values have measurably diminished. Buyers looking for water property will be quite disenchanted by looking at 75 yards of ankle depth water filled with boulders. Assessment values, supposedly affected positively/upwardly by water access, have not been revisited and revised to accommodate this obvious fall in value. Owners looking to sell may have lost 25% or more of the value of their once prized property. For some this may entail a shortfall of \$200,000 or more dollars.”

Resident, 2164 Shorelane, Wasaga Beach

“Can’t believe how much the water has gone down from 1986. It’s got to be down at least 3 feet. We now have 200 feet of rock and sand in front of our home in Wasaga (Brocks Beach).”

Resident, Georgian Bay Township

“Since we made improvements to our property, the MPAC and Georgian Bay Township made certain that we were reassessed to reflect the improvements and MPAC’s perception of real estate market conditions. However, I question your accurateness and methods when.... Without deep water in front of our property (**where our floating dock currently rests on bottom**), our property is **NOT** saleable at a reasonable price as any potential purchaser would as we did..... want to enjoy the benefits associated with deep water adjacent to his waterfront property.”

As MPAC reacts to the lower market value of less desirable waterfront properties, the municipality's tax base will shift. Taxes will be shifted way from shoreline residents and to other property owners in the community.

The cumulative effect on residents through loss of real estate value can be significant.

The effect on a municipality's tax base can be significant.

2. Residential access, water lines and wells

Many shoreline residents take water from the Bay or from wells situated in close proximity to the Bay, or simply use the Bay to access their property. As the water recedes, homeowners will have to extend their docks, water lines and/or have their wells dug deeper. While individually this may represent a small amount, collectively the impact is substantial.

Cottage Owner - Meaford

"Our household water depends completely on a shore-well. We probably have no more than 18" of water covering the submersible pump. Replacing the well with a deeper version would cost \$20,000 to \$30,000. A holding tank would not be possible as a replacement as the available property area does not allow room.

Water quality has also suffered. Our submission to the Ontario water testing facility has turned up more poor coliform and e-coli readings than ever before despite installation of an upgraded ultraviolet system. Where the original intake trench lay under three to four feet of water, at present it is sometimes open to the air, sometimes covered by three to four inches of water and allows the generation of marine plant life along the whole trench-way. We have had to build a wooden stepped walkway down from the boathouse to achieve any access whatsoever to the baywater. It cost between \$700 and \$800."

Cottage Owner – Tiny

"I recall the low water levels of 1964-5 and despite the impact then, we were always able to get our boat into our dock, swim off the shore and generally enjoy cottage life with minimal inconvenience. The water levels today are well below 1965 levels and no longer can we get our boat to our dock, even my small 16 foot aluminum let alone my 22 foot cruiser! We basically have a mudflat in front of our cottage and have to walk out several hundred yards to swim, and even then it's not up to our waist. I used to dive off our dock! That's the recreational trauma!"

Cottage Owner – Georgian Bluffs

Three summers ago we used our savings and purchased our retirement dream, a small cottage with front door access to boating on Owen Sound Bay. Thousands of dollars and hours of hard labour later, we look out to disappointment and frustration. We have extended our small marine rail from 60 feet to OVER 160 feet. See photo below.

We are high and dry again and unable to extend further as our winch cannot cope with this distance and there is virtually no grade. A small channel is not an option due to the difficult permit bureaucracy and estimated \$15,000.00 cost. There are many more residents in our area with the same situation. As it is right now, we are unable to launch our boat from our cottage so basically we have NO WATER ACCESS which greatly diminishes the value of our property and was the primary reason for our purchase in the first place.



An insight to the scale of this impact comes from the Township of the Archipelago. In February 2013 they surveyed 353 Township residents (approximately 15% of the Township's total of shoreline residents). The following is the information they gathered.

- 1) **Do you require dredging or blasting to maintain water access?** If yes, please provide an estimate as to how much the dredging or blasting will cost?
 - 25% of respondents indicated that dredging/blasting was required
 - \$2,130,000 / 89 = Average of \$23,933 per respondent
 - 25% of 2,765 properties = **\$16,543,686**

- 2) **Do you require a new dock to maintain water access?** If yes, please provide an estimate as to how much the new dock will cost?
 - 29% of respondents required a new dock to maintain access
 - \$1,297,500 / 103 = Average of \$12,597 per respondent
 - 29% of 2,765 properties = **\$10,100,904**

- 3) **Do you require modifications to your existing dock(s) to maintain water access?** If yes, please provide an estimate as to how much the modifications to the existing dock(s) will cost?
 - 74% of respondents indicated they need to modify their existing dock
 - \$1,720,450 / 265 = Average of \$6,492 per respondent
 - 74% of 2,765 properties = **\$13,283,281**

- 4) **Do you require modifications to your water line or water pump?** If yes, please provide an estimate as to how much the modifications to the water line or water pump will cost?
- 35% of respondents need to modify their water lines
 - \$138,215 / 126 = Average of \$1,097 per respondents
 - 35% of 2,765 properties = **\$1,061,622**

TOTAL COSTS	\$40,989,493
Minus 28% - Non Residents	<u>\$11,477,058</u>
Canadian Residents	\$29,512,435

In conclusion, the Township of the Archipelago's 2,700 shoreline owners have identified \$29.5 million in anticipated direct costs. By extension, the 45,000* shoreline residents who front on Georgian Bay are facing costs in the order of \$500 million.

* Source: Canadian Geographic, Michael Bliss, November 1994. (More current data from the Ministry of Tourism, Culture and Sport was not available)

3. Legal rights and changing shorelines

Georgian Bay shoreline property owners have a variety of contracted access rights with respect to water use and boundaries. As the shoreline changes, the rights may be impacted either legally or civilly.

For example, a waterfront property on the inside curve of a bay may lose its water frontage as the property lines from adjacent lots are extended out into the area vacated by the water. How do you resolve the extinguishing of "water frontage" rights?

The following is an example of the harm.

Resident, Tay Township March 2013

We are waterfront property owners in Tay Township having moved to our current address 7 years ago. Over that time we have watched the water level drop each year to a point now where it is no longer accessible from our property. The waterline used to be about 30 ft from our back door but now is about 300 ft and at a 90 degree angle. This has caused disputes with neighbours over water access prompting us to seek expensive legal advice. Our attorney recommended a court action which we rejected due to exorbitant costs beyond our means.

Lower water levels raise concerns of the liability of waterfront property owners for activities on newly-exposed terrain. Many waterfront properties extend to "the water's edge" by virtue of original Crown patents which granted water access at the time of issue. Of course, many interventions have occurred over the years, such as property sales, subdivisions, and rights of way, not to mention failed legislative attempts in the mid-1900's by the provincial government to delineate the "high water mark" as the water-side boundary. Due to these interventions, ownership clarification could require an application under the Boundaries Act, a process which will cost from \$10,000 if no objections are filed to more than \$100,000 if the application involves legal representation and court costs.

The costs of testing and resolving these matters in court are unknown.

4. The broader economic impact

The economic impact to Georgian Bay will have two main aspects;

- Tourism is central element of the economy for many communities around Georgian Bay. A loss of water has already and will continue to negatively affect the entire tourism economy.
- Full time residents choose to live near the water. As that draw diminishes they are less likely to invest in the local economy or come to the area at all. This secondary effect will also negatively impact the economy.

Tourism Economy

The Ontario government establishes the value of the 2010 tourism industry in Ontario at \$22 billion. The Ministry of Tourism, Culture and Sport has estimated that the tourism economy in the southern part of the Bay (County of Bruce, Grey, Simcoe, and Districts of Parry Sound Muskoka) is in the \$1.6 billion range. While the portion dependent upon the waters of Georgian Bay is difficult to assess it is self-evident that tourism will be significantly affected.

The Parry Sound BIA has estimated that the impact of low water is in the order of 5-10% of the local tourism economy.

Marinas

Al Donaldson, Executive Director Boating Ontario, conducted a study 5 years ago of the value of marinas to the Georgian Bay tourism industry. In summary:

- The number of boat slips in the area is 21,000, including the area to Orillia
- Estimated value of spending by the boaters in these slips - \$10,500 (includes slip rentals, repairs, maintenance & storage of boats, fuel, and other "incidentals" and general spending. Does not include employment impacts, boat sales in the area or impacts of cottagers who own boats and also have repair, storage and other expenditures related to boating.)

Marinas directly contribute some \$200 million to the Georgian Bay tourism economy.

Municipal reports (Section One) indicate that the low water level may shut some marinas down while others are largely unaffected. If a conservative 10% of all marina slips are unusable, the loss of revenue to Georgian Bay businesses is in the order of \$20 million per year.

General Economy

The impact upon the general economy is difficult to estimate. There is no relevant statistical data for how the economy may be affected by low water events. The problem will continue to evolve.

One estimator from our study:

1. Georgian Bay Township shows that the additional impact on their general tourism economy is roughly 4 times that experienced by the marinas. Using the figure developed for the marinas

(above), the tourism impact alone represents some \$80 million when projected through the entire Bay.

While the figure must be treated with caution, the annual tourism impact is likely in the order of \$50 to \$100 million.

5. First Nations

The First Nation peoples have a special long-standing relationship with the waters of the Great Lakes, including Georgian Bay. While this section cannot begin to give the appropriate gravity and importance to that relationship, the following comments are noteworthy.

1. Protecting the water is not just about dollars. There are far greater issues.
2. Arrangements with Great Lake waters must involve the First Nations. The Great Lakes are a vital part of the life of First Nation communities. The Anishinabe First Nation must be consulted about any water taking from the Great Lakes.
3. Water must be treated with greater respect and conservation.

The following longer term suggestions should be considered by the Georgian Bay Leaders Initiative.

1. Water taking and waste water inflows around the Bay should be mapped and we should be able to include that in our "casebook"
2. Shoreline communities should seek the "Blue Water" status

With the water currently being so low, a shoreline clean-up should be considered.

6. Summary

If no remedial action is taken there will be a profound long-term economic impact in all areas of Georgian Bay.

- First Nation communities will be substantially disrupted. Far from just an economic impact, the community infrastructure that provides health and safety of these communities will have to be reorganized and rebuilt.
- Municipalities will be affected as the shoreline property values decline and the tax base shifts or simply disappears. Major municipal facilities such as water/wastewater plants and docks will have to be rebuilt, with some individual costs easily into the \$5-10 million per facility.
- Marinas, water related businesses and the economy in general will see significant losses and closures. The impact is likely in the \$50-100 million range annually.
- And finally, individual shoreline residents will be significantly affected. For those who do stay on the shore, those cumulative costs are likely to be in the \$500 million range.

Afterword

The Case Book was created by mayors and leaders from around Georgian Bay. It documents the obvious costs that are occurring in all communities responding to the declining water levels. With this information we intend to work with our Provincial and Federal leaders to develop a program to help shoreline communities to adjust. The adjustment program will be an essential part of responding to the slow moving disaster of declining water levels in Georgian Bay.

The information presented has been gathered directly from the named Georgian Bay communities. If you have any corrections or additional information on your community please forward that information to Gord McKay, Midland, Ontario at gmckay@midland.ca.