

A Conservation Authority Perspective  
on the  
Future of the Trent-Severn Waterway

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Chair Downey and members of the Panel ~

The Otonabee Region Conservation Authority (Otonabee Conservation) appreciates the opportunity to provide a written submission regarding the future management of the Trent-Severn Waterway. As a Conservation Authority, we offer a unique perspective on mandated responsibilities within a watershed context, on matters of mutual interest and concern regarding flow management, water quality and development, as well as the future management of the Waterway using an integrated water resource management model.

### **CONSERVATION AUTHORITY MANDATE**

Otonabee Conservation is one of 36 Conservation Authorities in Ontario operating in accordance with the *Conservation Authorities Act* to undertake programs to further the conservation, restoration, management and development of renewable natural resources within our watershed area of jurisdiction (Sections 20 and 21).

Our watershed area of 1,951 square kilometers encompasses all or part of 8 municipalities. Eleven municipal representatives form our governing Board of Directors, supported by a professional staff of 15.

The Otonabee River, which is the main Waterway feature through our area, has a watershed area of 803 square kilometers and encompasses 6 of those same municipalities. Along the Otonabee River system there are 11 TSW dams and water control structures, 11 TSW locks and 8 TSW bridges.

The Indian River is also within our watershed. Under an agreement with the Trent-Severn Waterway, Otonabee Conservation operates and maintains the dam located at Gilchrist Bay on Stony Lake at the Indian River. We set and maintain summer and winter flows through the River; the flow data being accessed by the Trent-Severn Waterway.

Both river systems are significant components of the Trent-Severn Waterway system.

### **MATTERS OF MUTUAL INTEREST AND CONCERN**

#### **MANAGEMENT OF FLOWS**

##### **Flood – Normal - Low Water Conditions**

The effectiveness of our flood forecasting and warning system is tied directly to “lead time”. Lead time can be equated to a river’s response period between the production of excess runoff and the development of flood flows. Flow data is critical to our flood forecasting and warning program.

It is vital information for those living in and along the floodplain since flood preparedness is their only protective measure. Information from the Trent-Severn Waterway is key to protecting lives potentially at risk.

This information is available to us only through the Trent-Severn Waterway.

Within the provincial emergency management program, Otonabee Conservation is obligated to fulfill specific flood forecasting and warning functions.

Otonabee Conservation actively participates in the Ontario Low Water Response Program. This program is designed to mitigate effects of drought through the implementation of short-term, low water management strategies. The local water response team comprised of various agency representatives depends on flow information from the Trent-Severn Waterway.

### Water Control Infrastructure

It is imperative that the Trent-Severn Waterway maintains the water control infrastructure throughout the entire system to ensure the efficient management of flows and thus the accuracy of flow data.

The development and implementation of emergency preparedness plans for dams and water control structures, locks and bridges is another important aspect of infrastructure management. The process needs the involvement of local conservation authorities, other water managers and major water users as well as municipalities. In the event of a dam failure, for example, communities need to react quickly to minimize property damage and social disruption.

### **PLANNING AND DEVELOPMENT REGULATIONS**

There is a clear distinction in the administration of our respective regulations when it comes to development along the waterfront. The distinction is what is commonly referred to as the "high water mark".

Otonabee Conservation administers Ontario Regulation 167/06 (*the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*) from the high water mark elevation and up. The water level of any TSW lake on any given day, coupled with the highest recorded water level for the same location, is information critical in the determination of flood risk. Of all the applications Otonabee Conservation receives for permits under Ontario Regulation 167/06, approximately 60% of them involve development proposals along the Trent-Severn Waterway. Water level information from the Trent-Severn Waterway is key to our decision-making.

The Panel inquired [September 12, 2007 - Lakefield] as to whether the Conservation Authority could take on the permitting role for in-water and shoreline

works and related activities of the Trent-Severn Waterway. In the context of streamlining services, it may be worthwhile to examine a worksharing agreement. Otonabee Conservation has experience respecting worksharing with another federal agency.

The Authority has a Fish Habitat Management Agreement with the federal Ministry of Fisheries and Ocean for a sharing of work obligations that arise in reviewing plans and providing mitigation advice for developments that may harm habitat pursuant to Section 35 of the Fisheries Act. The agreement describes the specific responsibilities of both parties.

Similarly, with the Ontario Ministry of Natural Resources, under the Lakes and Rivers Improvement Act, where Conservation Authority development regulations are in place, the property owner is not required to obtain a separate permit for works, other than those involving dams.

Any discussion on some form of worksharing agreement with the Trent-Severn Waterway would have to address the degree to which approvals could be streamlined and compensation for any additional workload potentially taken on by the Conservation Authority. Our municipal members will not likely support any such changes that place an additional burden on municipal taxpayers.

#### Cumulative Impacts of Development

The natural heritage features and functions that characterize the Waterway, are subject to tremendous pressures. Incremental losses are difficult to regulate and enforce. Likewise, the cumulative impacts are difficult to quantify.

Otonabee Conservation collaborates with staff of the Trent-Severn Waterway on multi-faceted development projects. We take a proactive approach with such matters as a way of addressing mutual concerns, identifying any mitigation requirements and understanding cumulative impacts of development. Inter-agency collaboration and dialogue on issues, such as large developments, are critical in this regard. Lake ecosystems are dynamic systems. The transition to a eutrophic state is a real concern. We know that human activity can accelerate lake eutrophication, particularly actions upon the landscape such as hardening of shorelines, application of fertilizers to the water's edge and faulty septic systems. Water quality diminishes significantly as lake systems undergo eutrophication, exhibiting a decrease in water clarity, lower levels of dissolved oxygen and increased levels of water-borne bacteria.

#### Education

Education and information are critical in the advancement of our respective mandates. For the past number of years, Otonabee Conservation has hosted workshops for municipal building officials, contractors, real estate agents and municipal councilors on the subject of working around water. Staff of the Trent-

Severn Waterway has participated as speakers, offering valuable information to these audiences, raising awareness of its role in land use development and protection of the shoreline ecosystem.

Otonabee Conservation is a supporting member of the Lakeland Alliance, along with Kawartha Conservation, four Stewardship Councils, Peterborough Green-Up, the Federation of Ontario Cottagers Association, Fisheries and Oceans Canada, and the Ontario Ministry of the Environment. This partnership is focused on shoreline stewardship and encourages shoreline property owners to implement practices that will reduce their ecological footprint and hence environmental impact on adjoining water bodies.

The Trent-Severn Waterway was a partner with the Lakeland Alliance in the development of a brand new guide on shoreline stewardship. The publication entitled, A Shoreline Owner's Guide to Lakeland Living was launched at the 7<sup>th</sup> Annual Lakeland Conference in August.

I offer these as examples of any number of initiatives designed to heighten awareness. Education and information are key to shoreline stewardship.

Voluntary action and compliance through education efforts is always preferable over regulatory and enforcement approaches. The latter always need to be in effect for those folks who refuse to comply. However, we can achieve a lot by working with folks who may willingly change their shoreline practices if they are given the right technical information and practical advice on implementation.

The old adage of "an ounce of prevention beats a pound of cure" comes to mind when one considers the time, effort and cost to reverse damage done to the shoreline zone.

### **DRINKING WATER SOURCE PROTECTION**

Water quality is a top of mind issue among our member municipalities. The City of Peterborough, for instance, draws its municipal drinking water source solely from the Otonabee River; it is the second largest municipality in Ontario to draw drinking water from a surface water source. The City of Brantford is the largest municipality in this regard.

Management of the flows along the Otonabee River will directly affect the intake protection of municipal drinking water sources as well as sewage dilution capabilities for the affected municipalities.

The intake protection zones for the City of Peterborough and the former village of Lakefield are located along the Otonabee River. An intake protection zone is defined as the area of land and water immediately surrounding a water intake in a lake, river or stream. Within this area, there is a combined population of

approximately 77,000 people dependent upon safe, clean drinking water coming from the river through the treatment and distribution systems and then directly into their homes.

Local Conservation Authorities are collecting a lot of information through their watershed characterization reports and water budgets that are being developed under the *Clean Water Act*. The watershed characterization report details the existing physical and human characteristics of the source protection planning region as defined through the *Clean Water Act, 2006*. It also provides an analysis of water quality conditions and trends, and identification of potential issues.

The water budget provides information on how water flows through the watershed and estimates the amount of available water. It also assesses the sustainability of water supply sources from a quantity perspective. The ultimate goal of this report is to identify watershed communities where the sustainability of water supplies is questionable and to highlight key factors that may limit the sustainability.

All of this information can be shared with the Trent-Severn Waterway, and similarly the TSW has significant amounts of data from operating practices that needs to be part of this process.

There is also an opportunity to participate in the overall process within the multi-stakeholder Source Protection Committee that is currently being established. It will cover the whole of the Trent River watershed, which encompasses a significant portion of the Trent-Severn Waterway. A seat has been identified for a TSW representative on this Committee.

### Water-based Recreation

The natural extension of safe, clean drinking water is safe water for water-based recreational activities.

Otonabee Conservation owns over 10,000 acres of conservation lands. Several of our properties provide the public with access to the Trent-Severn Waterway. The Squirrel Creek Conservation on the Otonabee River and the Selwyn Beach Conservation Area on Chemong Lake are two popular examples. Our visitor statistics, for Selwyn for example, indicate a growing number of visitors from the GTA with expectations of safe water that they and their children can enjoy for swimming, canoeing and other water-based sports. Given our experiences over previous summers, we expect these visitation numbers to continue to climb as visitors desire natural spaces that are "less crowded", within reasonable proximity of the GTA and provide access to clean lakes and rivers. This is significant in terms of the tourism draw for the area and the resultant economic spin-offs.

## Environmental – Economic - Cultural Values

The Trent-Severn Waterway connects diverse communities as it meanders 386 kilometres through central Ontario. The Waterway is a significant feature and affords communities with tremendous opportunities and potential for sustaining environment health, economic vitality and excellent quality of life.

## **REVITALIZATION OF THE TRENT-SEVERN WATERWAY**

### **GOVERNANCE CONSIDERATIONS**

The Panel has an opportunity to review the governance of the Trent-Severn Waterway. There are several models from which you may draw upon. I would suggest that governance considerations, which are common to many, include:

- Review of existing legislation and regulations – both of the Trent-Severn Waterway and the water managers along the system.
- Improve the financial foundation – The Panel has to ensure that the operations and infrastructure are resourced appropriately. I cannot emphasize this enough in terms of the potential for loss of life and/or significant property damage if this aging system is not properly looked after. All it takes is for one dam to fail and unleash a series of disastrous events and outcomes downstream.
- Stakeholder consultation and collaboration is key – encourages public awareness and greater appreciation for the resources, the science involved in decision making as well as advocacy for a solid management strategy that protects the resource base that so many stakeholders use and enjoy.
- Lastly, and most importantly, I strongly recommend that the Panel examine an integrated water resources management strategy.

### Integrated Water Resources Management (IWRM)

Ontario's Conservation Authorities and governments across Canada use Integrated Water Resources Management to advance their mandated responsibilities.

The World Health Organization defines integrated water resources management as: "The process of promoting the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems."

The key words here are:

- 1) coordinated development and management,
- 2) maximize results,

- 3) an equitable manner, and
- 4) sustaining our vital ecosystems.

Adopting the integrated water resources management process to address the future management operations of the Trent-Severn Waterway would:

- ~ Identify competing interests along the Waterway,
- ~ Reflect the linkages across all of the legislation and regulations,
- ~ Bring all of the agencies to the table,
- ~ Develop consensus on strategic directions for the future,
- ~ Reduce duplication of effort, and
- ~ Identify any gaps in service delivery, and
- ~ Realize efficiencies in human and financial resources.

There are a number of principles, which we believe are integral to integrated water resources management within the Trent-Severn Waterway.

- 1) TSW must support the water resources management priorities of watershed communities within the system.

This means addressing the operational issue of aging operating systems and deteriorating infrastructure. There is no question that the Waterway possesses the operational knowledge and expertise to manage the system. No other organization has the mandate, capacity and expertise to take on this role. What is required is the appropriate level of financial resources committed by the Federal government to Parks Canada for the Trent-Severn Waterway to support the proper functioning as a complete system.

- 2) There must be agreement that knowledge of water quantity and quality is the foundation for effective decision-making and reducing risks to property owners and communities along the Waterway and in downstream locations.

The effects of extreme weather, for example, and resultant flood events are strong reminders of the critical need for accurate data. Think back to the significant rainfall events in Peterborough in 2002 and 2004, which are more devastating than anything the City has experienced before.

- 3) The Trent-Severn Waterway must engage community members in the development of a management strategy that they support and will advocate for in the political arena.

Ultimately, the process should ensure maximum resultant economic and social benefits without compromising the sustainability of natural ecosystems. In a watershed ecosystem, everything is connected to everything else; there is no room for compromise at the expense of the natural environment.

Thank you for providing the Otonabee Region Conservation Authority an opportunity to express its opinions on the future of the Trent-Severn Waterway, and particularly the Authority's response to the relevant key issues facing the Waterway as identified by the Panel.