

Peterborough Field Naturalists

Submission to the

The Panel on the Future of the Trent-Severn Waterway

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Introduction

Many special interest groups are concerned with the future development of the Trent-Severn Waterway. Among these are:

- recreation and tourism operators,
- business and urban development groups in communities adjacent to the waterway,
- property owners with residences or non-residential land adjacent to the waterway,
- property developers, and
- hydro-electric generating utilities.

Submissions representing these interests are posted on the Panel's website. Our submission suggests that unless their competing interests and demands are carefully managed we risk substantial environmental degradation and economic loss.

Current uses of the waterway

Substantial use is currently made of the Trent-Severn Waterway for both tourism and recreational purposes.

1. **Recreation and tourist** numbers are substantial.
 - a. A major recreational use of the waterway revolves around boating. Although boating on the waterway appears to be increasing overall, lockages have declined over the last 20 years to approximately 130,000 per year.
 - b. There are an estimated 40,000 boats located at residences and cottages along the more than 4,500 km of shoreline. Additional boats are owned by resorts and campgrounds. Day-use boaters and campers also use the waterway for boating.
 - c. An estimated 400 commercial marinas and resorts derive revenue from water-based activities along the waterway.
 - d. The waterway provides a wide range of angling opportunities. In 2000, an estimated 130,000 anglers fished on Lake Simcoe alone.
 - e. Camping takes place at six provincial parks, at private, municipal, or First Nation-run campgrounds and at seasonal trailer parks. Nearly 7000 sites exist overall.
 - f. Most communities have local waterfront parks. A number of rail trails parallel or intersect the waterway.
 - g. Additional privately-operated recreational resources that abut the waterway include 75 businesses offering cottage rentals, several high-end resorts and a number of golf courses.
 - h. Land-based visits are steady at approximately 1.5M per year.
 - i. Upwards of 60% of boaters and land visitors to lock stations are from Central Ontario.
(Above derived from Discussion Paper #3)
2. **Residential** use of the Trent-Severn Waterway is significant.
 - a. The more than 4,500 km of shoreline delineating the waterway's

lakes and rivers touch more than 132,000 private properties. Many of these are residential properties. An increasing number are no longer small cottages used over the summer months but substantial homes lived in year round or for substantial portions of the year.

- b. Settlements that abut the Trent-Severn Waterway include Trenton, Cambelford, Hastings, Peterborough, Lakefield, Bobcaygeon, Fenelon Falls, Lindsay, and Port Severn. The major centres of Orilla and Barrie are adjacent to the waterway proper on Lake Simcoe as is Port Perry on Lake Scugog. The Trent-Severn Waterway and its associated watersheds were home to over 350,000 people in 2006 (Census of Canada)

Economic impact of the waterway

The Trent-Severn Waterway contributes significantly to the provincial economy.

1. In 1997, direct expenditures of \$49.7 million associated with the operation of the waterway generated an estimated \$96.7 million of economic activity and more than 1,600 jobs.
2. Hydro-electric power generation provides local economic benefit.
3. Little is known of the magnitude of the overall economic benefit of the waterway, although the waterway's natural attributes and its proximity to the growing Greater Toronto Area clearly make it a highly valued amenity supportive of the lifestyle economy that has developed in the Muskokas and elsewhere.

The need to protect natural systems

The uses noted above have significant environmental impacts in the watersheds of the Trent-Severn Waterway system. As the population of Central Ontario grows to over 11 million over the next three decades, so too will the use made of the Trent-Severn Waterway. The current population of Central Ontario, roughly eight million, generates one million visitors to the Trent-Severn Waterway per year. This will likely grow to 1.4 M within two decades, thereby increasing impacts on the natural systems of the Waterway.

The Panel has received submissions from a wide range of interest groups each seeking a greater say in how, or to what end, the Trent-Severn Waterway should be developed and managed.

The contention of this submission is that whatever management structures, development objectives, water management regimes, etc., are recommended by the Panel, it is of paramount importance that the ecological integrity of the Trent-Severn Waterway and its associated lakes and watersheds be the primary objective. This is not now the case with either Parks Canada or the other jurisdictions involved in the waterway's management. Recreational, tourism, residential and urban activities and developments cannot be allowed to further threaten what are already ecosystems under stress. **If the ecological health of the system is not the driver of system management and development**

planning, we risk killing the goose that lays the golden egg. All current and future recreational, tourism and residential activity in the Trent-Severn Waterway area is, and will continue to be, dependent on the maintainance of healthy lakes and rivers. Sound ecological management is, thus, essential for both the ecological health and continued economic well-being of the entire Trent-Severn Waterway corridor.

That the Trent-Severn Waterway system is currently under stress is noted in Discussion Paper #3. The system faces a number of development pressures including;

- an increase in the number, scale and intensity of use of shoreline residential properties,
- increased commercial use of the shoreline for recreational, tourism and lifestyle economy related purposes,
- a continuing loss of wetlands both along lakeshores and in adjacent watersheds, and
- continuing watershed habitat loss and fragmentation.

All these pressures lead to increased nutrient loads and turbidity in rivers and lakes and place existing ecological systems under stress. All result in (a) the loss of **native bio-diversity**, (b) **the establishment of invasive species** in disturbed habitats, and (c) an increased threat of **eutrification** of lakes and rivers.

All these **threats are enhanced by the pressures resultant on climate change.** Climate change over the next twenty to fifty years will result in:

- lower winter snowfalls and hence smaller snowpacks in upland areas in watersheds associated with the waterway,
- lower but more intense summer rainfall, and
- higher average winter and summer temperatures.

These changes will trigger changes in wetlands and lakes that place them under considerable stress:

- As snow packs decline, the amount of water flowing through wetlands will diminish. This will **diminish both the habitat quality of wetlands and their effectiveness** as natural water filtering systems. Such water as passes through them into rivers and lakes will have a higher nutrient load and be more turbid than is currently the case.
- Intense summer precipitation events, particular those in watersheds with fragmented habitats, will result in intense short-term **run-off that increases nutrient loads and turbidity in lakes and streams.**
- Lake levels will continue to decrease as snow melt and summer precipitation decrease and evaporation increases. The maintainence of historical water levels, designed to support navigation throughout the waterway system, will thus need greater than historical draw downs on reservoir lakes. **As lake levels fall and water volumes decrease, nutrient levels will rise, thus compounding the problems caused by**

wetland loss and degradation.

- Changed nutrient loads and increased temperatures will have **complex impacts on existing fauna and flora**. Some will flourish, some will not, and some will become locally extirpated.
- **Invasive species** such as Zebra Mussels and Spiny Water-Flea will become well established. So too will a wide variety of exotic plant and animal species if current ecosystems become increasingly disturbed. As conditions change, invasive species suited to changed conditions will threaten the viability of many current species. Many invasive species enter the Trent-Severn Waterway as a result of inadequate controls on the dumping of bilge water by ships using the Saint Lawrence Seaway. Trent-Severn Waterway management will need to work with counterparts on the Saint Lawrence Seaway to ensure adequate bilge water sanitising regimes are adopted.

Events this past summer indicate local lakes and rivers are under significant stress.

- The environment played a key role in the die-off of thousands of carp in lakes within the Trent-Severn Waterway this summer. Ministry of Natural Resources officials indicate that low oxygen levels, high levels of organic matter, and general pollution made carp susceptible to the bacterium columnaris. Columnaris has been present in the system since the end of the Ice Age. It creates no health problems for healthy fish. The die-off indicates fish are unhealthy because of environmental factors.
- In Quebec, 151 lakes and rivers have suffered from blue-green algae (cyanobacteria) outbreaks this past summer. Of these, 23 lakes had outbreaks throughout the lake. Cyanobacteria produce toxins. These blooms result from the build up of phosphorous, nitrogen and sewage effluent levels. They appear to be triggered by periods of drought following extreme rainfall events. Heavy rains flush high levels of nutrients into lakes and rivers over a short period of time. The following drought concentrates these through evaporation. As water temperatures increase blooms are triggered. As discussed above, the environmental stress factors present in lakes in Quebec are present in the Trent-Severn Waterway system. These toxins put ecosystems under severe stress. Human exposure has negative superficial and gastric impacts. Water with significant levels of such bacteria is no longer potable. Infected lakes are not swimmable. Fish are not edible. Recovery and mitigation efforts will cost millions of dollars if significant outbreaks occur (\$12 million was announced by the Gouvernement de Québec last month). Losses to tourist and recreation business run to further millions. (Santé et Services Sociaux, Gouvernement de Québec)

In summary

Our position in summary is as follows:

1. The current economic viability and future sustainable development of the Trent-Severn Waterway depend absolutely on the health of its constituent ecosystems.
2. Waterway ecosystems are currently under significant stress from wetland loss, shoreline development, habitat loss and fragmentation, and increasing numbers of invasive species. Further development and usage of the waterway will increase levels of environmental stress.
3. Climate change will exacerbate developmental stresses.
4. The maintenance of the ecological health of the waterway system must drive whatever management arrangements and development goals are established by the Panel for the Trent-Severn Waterway.

You have the opportunity to recommend that all levels of government act together and act wisely. We ask that you do so.