

February 2008

GANARASKA REGION SOURCE PROTECTION AREA – Overview

The Ganaraska Region Source Protection Area (SPA) is located along the north shore of Lake Ontario, encompassing 935 square kilometres. The SPA extends west of Highway 115/35 to east of County Road 45 and to Rice Lake in the north. The larger watersheds include Wilmot Creek, Ganaraska River and Cobourg Creek. Other watersheds include Graham Creek, Midtown Creek, West Lake Ontario Watersheds, Gage Creek, East of Gage Watershed, East Lake Ontario Watershed and the smaller tributaries that flow to Rice Lake.

The predominant physiographical features of the SPA are the Oak Ridges Moraine, Peterborough Drumlin Fields, South Slope and Lake Iroquois Shoreline, all of which are within the Palaeozoic physiographic region. The coldwater streams and rivers of the SPA offer world-class fishing and recreational opportunities. As well, the Ganaraska Forest, which is located in the headwaters of the Ganaraska River, is the largest continuous forest in Southern Ontario.

The Source Protection Area is a mosaic of agricultural land uses (37.1%), forest (27.2%), wetlands (3.5%) and meadows, savannahs and thickets (10.9%), which are divided by river systems or, transportation and utility corridors (7%). Urban/developed areas (8.3%) are mostly confined to the shore of Lake Ontario with the exception of historic settlement areas that exist along main historic rail, road and river corridors.

The Town of Cobourg is the largest urban centre in the Ganaraska Region SPA with a population of 18,200 or approximately 30% of the area's population. By 2016, the population of the SPA is projected to be approximately 71,000 people. Ward 1 of the Municipality of Port Hope and the Village of Newcastle within the Municipality of Clarington are the other two larger urban areas, and all three of the above noted urban areas receive their drinking water from Lake Ontario. There are three municipal groundwater sources that provide drinking water to Orono, Creighton Heights (Baltimore) and Camborne. Ground and surface water sources are used by watershed residents outside of the serviced areas for drinking water plus other water uses, and septic systems are used as sanitary services outside the three noted urban areas.

Water resources across the SPA do not have the same stresses as major urbanized areas of Ontario, yet surface and groundwater quality has the potential to be impacted by human actions. Nutrients, road salts, closed landfills and historic brownfields, all potentially contribute to water quality degradation. Groundwater quality studies indicate that natural background levels of certain parameters are higher than normal expected concentrations. Surface water quality is generally not a concern within the SPA however chloride concentrations have been



increasing since the 1960's. Nutrients, although exceeding provincial and federal objectives at times, are generally not an issue during baseflow or dry conditions, however do peak during storm events or in certain land use conditions.

Drinking water quantity for those urban areas with sources from Lake Ontario is not of immediate concern. The Oak Ridges Moraine with its unique topography and surficial geology provides recharge to aquifers that feed the river systems (Wilmot Creek, Graham Creek, Ganaraska River, Gage Creek, Cobourg Creek and Rice Lake tributaries). Water quantity problems rarely arise in the SPA, however when they do, they are site specific and localized.



MUNICIPALITIES

The Ganaraska Region Source Protection Area spans across seven lower tier, one single tier and three upper tier municipalities in whole or in part including:

Lower Tier

- Township of Alnwick/Haldimand
- Township of Cavan Monaghan
- Municipality of Clarington
- Town of Cobourg
- Township of Hamilton
- Township of Otonabee-South Monaghan
- Municipality of Port Hope

Single Tier

- City of Kawartha Lakes

Upper Tier

- Regional Municipality of Durham
- Northumberland County
- Peterborough County

MUNICIPAL WATER SUPPLY SUMMARY – Surface Water

Municipality	System Name	Background	Source
Town of Cobourg	Cobourg	The Cobourg Water Treatment Plant distribution system supplies water to approximately 17,000 residents in the Town of Cobourg including approx. 85 residents serviced by a stand alone distribution system located in the Township of Hamilton.	Lake Ontario
Regional Municipality of Durham	Newcastle	The population serviced by the Newcastle Water System in Newcastle and Newtonville is 8,938 people.	Lake Ontario
Municipality of Port Hope	Port Hope	The Port Hope Drinking Water System has been designated a Large Municipal Drinking Water System. The system services a population of 12,500 within Port Hope (Ward 1).	Lake Ontario

Summary of Technical Studies:

Preliminary Intake protection zones have been delineated through the Phase 1 study carried out by the Lake Ontario Collaborative (a group of municipalities spanning the western & central section of Lake Ontario).



MUNICIPAL WATER SUPPLY SUMMARY – Groundwater

Municipality	System Name	Background	# of Wells
Township of Hamilton	Camborne	The Camborne Well Supply is designated as a Large Municipal Residential System. The system supplies 65 homes.	2
	Creighton Heights	The Creighton Heights Water Supply is designated to be a Large Municipal Residential System. This system supplies water to 1,000 people in the Creighton Heights and Baltimore areas.	3
Regional Municipality of Durham	Orono	The Orono Well Supply services 1,779 people.	2

Summary of Technical Studies:

Jagger-Hims Limited is completing Groundwater Vulnerability Analysis, Issues Evaluation and Threats Inventory, and the Tier 1 Water Quality Risk Assessment.

For more information

TRENT CONSERVATION COALITION SOURCE PROTECTION REGION
www.trentsourceprotection.on.ca

Ganaraska Region Source Protection Area

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or

Trent Conservation Coalition Source Protection Region

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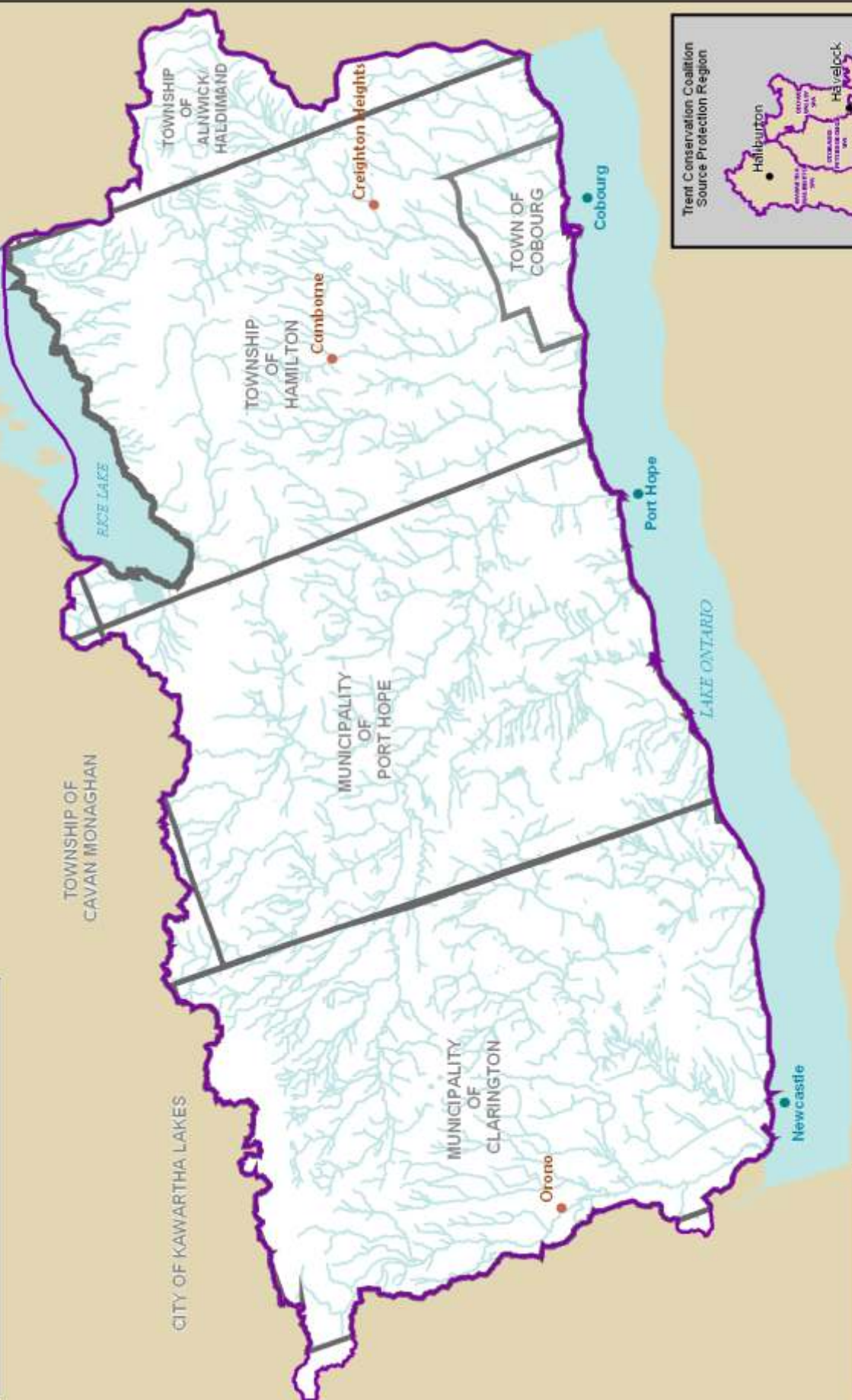




DRINKING WATER SOURCE PROTECTION

 ACT FOR CLEAN WATER

Ganaraska Source Protection Area



Legend

- Municipal Wells
- Municipal Surface Intakes



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