



Source Water PROTECTION

SPRING ISSUE

TAKING ACTION FOR CLEAN WATER

Human activity and land use continues to threaten the quantity and quality of our most precious natural resource – our ground and surface water. Since all of Ontario's drinking water originates from the surface and ground water found in soil, oceans, lakes, rivers, streams and ponds, preventing its contamination or depletion is paramount. In recognition of this need, Ontario is introducing the Clean Water Act (CWA). This legislation encompasses a multi-barrier approach, so that source protection is emphasized prior to water treatment to better ensure safe drinking water for all of us.



TAKING RESPONSIBILITY IN OUR COMMUNITY

Because water often crosses jurisdictional boundaries, this new process for protecting source water requires collaboration between local municipalities, provincial ministries, communities and conservation authorities. Source protection areas are established based on watershed boundaries over which conservation authorities have jurisdiction. The Niagara Peninsula Conservation Authority (NPCA) is therefore playing an active role in source protection in the Niagara Watershed and this newsletter provides a timely update on its related activities and projects.



UPDATE ON THE CLEAN WATER ACT

The CWA will govern how the sources of drinking water are to be protected in Ontario. In October 2006, the CWA legislation passed third reading in the provincial legislature, and will become an enforceable law once it is “proclaimed”. This should occur in June 2007.

For more information:

- Find details on the CWA at <http://www.ene.gov.on.ca/envision/water/cwa.htm>
- Find proposed regulations on the Environmental Bill of Rights (EBR) website for public comment.



UPDATE ON NPCA SOURCE PROTECTION PROJECTS

The NPCA is participating in numerous initiatives aimed at identifying threats to our water. All current projects are funded by the provincial government through the Provincial Source Protection Program under the auspices of the Ontario Ministry of Environment (MOE) and Ontario Ministry of Natural Resources (MNR).





WATERSHED CHARACTERIZATION REPORT

Since the watershed is an area of land from which surface runoff drains into a common water body, this project plays an important role in source protection.

Project Summary:

The report provides a general overview of the NPCA watershed, including summaries and maps of its geology, hydrology, topography, land use, land cover, population, water quality and potential contaminant threats such as landfill sites.

Project Methodology:

This report utilized existing information from past reports and studies such as Environment Canada data, the 2005 NPCA Groundwater Study, and the Niagara Water Quality Protection Strategy (NWQPS) that was completed in 2003.

Current Status:

A draft of the Watershed Characterization report was completed in December 2006. It is currently undergoing a peer review by Conservation Ontario (the umbrella organisation of the Conservation Authorities in Ontario).

WATER BUDGET CONCEPTUAL UNDERSTANDING REPORT

This project is yet another important step in understanding the current status of the water resources in our community.

Project Summary:

The report provides a preliminary assessment or overview of the surface water and groundwater flows in the watershed.



Project Methodology:

This was accomplished by collecting and analysing numerous data sets (such as the Permits-To-Take-Water (PTTW) database) as well as building on the information contained in the Watershed Characterization report, then mapping and analysing the information compiled.

Current Status:

The NPCA submitted the report to the Ministry of Natural Resources (MNR) in December 2006 for their review, and a successful follow-up meeting was held between the NPCA and MNR in January 2007. As expected, a number of minor revisions are being incorporated into the 'conceptual' report as requested by MNR. The NPCA will proceed to the Tier 1 water budget phase on completion of the Conceptual Understanding.



TIER 1 WATER BUDGET

With this project, we plan to articulate the quantity of our water resources by examining the watershed under our jurisdiction.

Project Summary:

The purpose of a Tier 1 water budget is to identify the hydrologic stresses of the sub-watersheds within the study area, from a water quantity perspective.

Project Methodology:

The NPCA have discussed this next stage with the MNR and have agreed upon a general work plan for the Tier 1 water budget task.

Current Status:

The NPCA is currently working on preliminary tasks in preparation for the Tier 1 water budget analysis.



INTAKE PROTECTION ZONE (IPZ) STUDIES

In keeping with the collaborative nature of source water protection and given the importance of the Intake Protection Zone (IPZ) studies to the program, NPCA staff are assisting the Regional Municipality of Niagara with what is generally a municipal responsibility.

Project Summary:

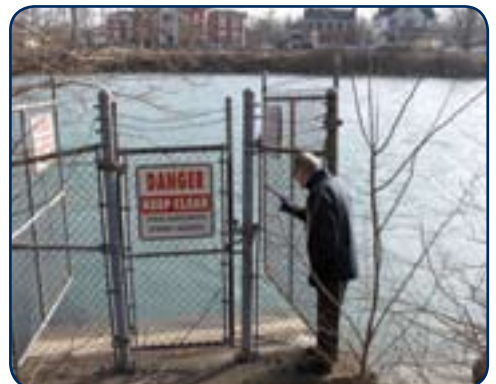
There are six municipal Water Treatment Plants (WTPs) in the NPCA's watershed jurisdiction all of which are owned and operated by the Regional Municipality of Niagara. These IPZ technical studies will characterize the WTP intakes, delineate the IPZs, and assign vulnerability scores for each IPZ as outlined in the MOE technical guidance modules. The six WTPs are located in Grimsby, Thorold, Niagara Falls, Fort Erie, Port Colborne and Welland.

Project Methodology:

The IPZ studies adhere to the MOE Technical Guidance Module No.4 on Surface Water Vulnerability Analysis. The MOE weblink to the technical guidance modules is <http://www.ene.gov.on.ca/envision/water/cwa-guidance.htm>

Current Status:

Locating and retrieving the information required for these studies has been a major task in itself. Data on lake and river flows, bathymetry files, and storm sewersheds is required. Stantec Consulting were retained by Regional Niagara to complete the IPZ Studies, which include surface water flow modelling, by June 2007.



THREATS INVENTORY AND ISSUES EVALUATION

Identifying threats to our water and understanding the extent and scope of these threats is key step to source water protection.

Project Summary:

The NPCA and Regional Municipality of Niagara plan to complete a Threats Inventory and Issues Evaluation for the IPZs.

Current Status:

NPCA SWP staff worked closely with the Regional Municipality of Niagara in preparing a SWP Technical Studies Grant application for this project, which was submitted to MOE in December 2006. An agreement between Regional Niagara and the MOE was signed March 30, 2007. This study will commence once the IPZ studies have been substantially completed.



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