



Lakehead Region Conservation Authority

Conserve today...for a better tomorrow

2008
Annual Report



Chairman's Message



According to the United Nations, by 2050 at least one out of four people will live in a country with chronic or regular shortages of freshwater. On a global scale, there is enough water for everyone, but only if we change

the way we use water today.

Protecting our water resources is essential for all life to continue since only 3-percent of all water on the planet is freshwater and less than one-percent of that is readily accessible for human use.

You can do your part to protect our water by reducing the amount you use and the methods by which you use it.

In Ontario, the "Clean Water Act 2006" is focused on the protection of the sources of water for Municipal residential drinking water systems. Local Source Protection Plans are being developed using a multi-barrier approach with source protection as the first step in the process.

Future steps include ensuring adequate water treatment, a secure water distribution system, proper monitoring and warning systems, and well thought-out responses to adverse conditions.

The responsibility of developing these plans falls to the Lakehead Source Protection Committee.

Additionally, the Lakehead Region Conservation Authority (LRCA) is mandated to ensure the conservation, restoration and responsible management of the region's water, land and natural habitats through programs that balance human, environmental and economic needs within its jurisdiction.

I would like to acknowledge the ongoing work of the LRCA Board, Staff, Source Protection Authority and Committee Members in achieving our goals for 2008.

If we all work together to reduce pollution, control erosion and conserve water today, the future will be better for everyone.

Let's leave the planet in better shape than it was when we entered this world!

Bill Bartley, Chairman

2008 Board of Directors

The Board is responsible for making policy, budget and regulatory decisions affecting the Lakehead Region Conservation Authority.

Chairman	Bill Bartley, Thunder Bay
Vice-Chairman	Grant Arnold, Conmee
Ed Chambers	Dorion
Rick Kieri	Gillies
Beverley Dale	Neebing
LeeAnn Nygard	O'Connor
David Hearn	Oliver Paipoonge
Donna Blunt	Shuniah
Iain Angus	Thunder Bay
Gary Murchison	Thunder Bay
Linda Rydholm	Thunder Bay

Staff

Mervi Henttonen	General Manager/ Secretary-Treasurer
Tammy Cook	Watershed Manager
Ryne Gilliam	Field Operations Supervisor
Michelle Sixsmith	Water Resources Technologist
Roman Augustyn	GIS/Data Specialist
Andrew Finlay	GIS Technician
Richard Boon	Community Relations Officer
Melanie O'Riley	Administrative Clerk
Norma Hunt	Financial Assistant
Melanie Mathieson	Source Protection Project Manager
John Cameron	Source Protection Communications Officer

The Lakehead Region Conservation Authority is a local resource management agency working on a watershed basis. Conservation Authorities protect people and their property from natural hazards of flooding and erosion; protect natural areas and open space, restore and protect aquatic and natural habits; and provide recreational and educational opportunities to local residents.

130 Conservation Road, P.O. Box 10427
Thunder Bay, ON, P7B 6T8
Phone: 807-344-5857 Fax: 807-345-9156
www.lakeheadca.com info@lakeheadca.com



The Lakehead Region Conservation Authority is a member of Conservation Ontario

Ontario Regulation 180/06:

Development, Interference with Wetlands & Alterations to Shorelines & Watercourses

Anytime people live near the water, there is the potential that flooding will threaten lives and property. At the same time, just building and landscaping near the water can threaten the natural eco-system if the developments have not been approved and done in a sustainable manner.

The Lakehead Region Conservation Authority is responsible for protecting people and their property from loss of life and property damage due to flooding and erosion and to conserve and enhance natural resources.

Ontario Regulation 180/06 regulates development in areas where the control of flooding, erosion, pollution or the conservation of land may be affected by development.

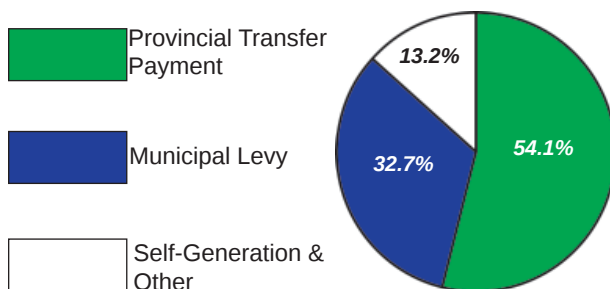
The LRCA has had a Level II Agreement with the Department of Fisheries and Oceans (DFO), Ontario Great Lakes Area (OGLA) since 1998. The Authority is responsible for the initial evaluation of the proposed work as to its potential impact on fish habitat within the LRCA Area of Jurisdiction.

If you are planning to do any work near lakes, rivers, streams or wetlands you may require a permit from the Conservation Authority.

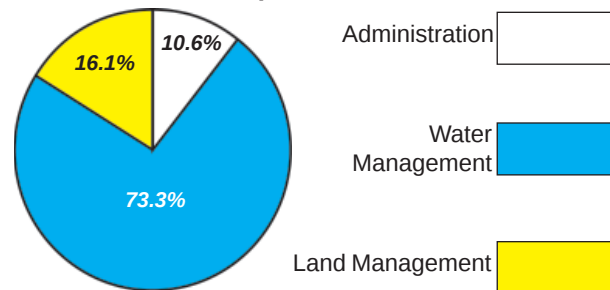
For more information, visit the Authority office in Thunder Bay or visit our website lakeheadca.com. A brochure outlining the Regulations is available at the office or online.

2008 Financial Report

Revenue



Expenditures



Lakehead Conservation's budgeted 2008 revenue and expenditures were approximately \$1.6-million dollars.

This money allowed the Authority to administer its water, land management and corporate services. This included the management of our eight Conservation Areas, Hazelwood Lake Nature Centre, Managed Forests and other lands that include floodplain and erosion control lands. Also included were the operation and maintenance of flood and erosion control structures, flood forecasting/warning, administration of Regulations, plan input and review, tree planting, watershed planning and education/outreach within our watershed jurisdiction.

Revenue is derived from three primary sources: Provincial/Federal Government Grants, Municipal Levies and self-generation which is comprised of user fees, partnerships with other agencies, donations and sponsorships.

The provincial government continues to fund 100% of our activities related to Source Water Protection. This funding is reflected in the Provincial Transfer Payment of the Revenue pie chart.

As property owners we pay taxes on our 2,500 hectares of land. During 2008 our taxes totaled about \$57,000.00.

Much of our work is highlighted throughout this Annual Report.

PLAY IN OUR BACKYARD

The Lakehead Region Conservation Authority (LRCA) invites you to *Play In Our Backyard!*

Thunder Bay's proximity to the great outdoors has always been considered an advantage for residents and anyone who is visiting.

Our eight Conservation Areas and other properties are all within an hour of Thunder Bay and offer a variety of recreational opportunities throughout the year!

If you are a resident of the area, there's no need to spend a fortune on gas to discover a variety of walking or hiking trails, swim in refreshing waters, canoe or kayak, snowshoe, fish on Lake Superior or watch for wildlife along nature trails. It's all right *In Our Backyard!* If you're a visitor to the area, we're glad you came and we know you'll be rewarded for your efforts!

Please help us by paying the \$2/vehicle user fee at our Conservation Areas. All the money is used to maintain and improve our Areas with features such as accessible picnic tables and signage. If you'll be visiting often, consider purchasing a seasonal pass. The 2009 Explorer Card is just \$30 for the year.



Silver Harbour Conservation Area provides access to Lake Superior for boating in summer and ice fishing in winter.

Picnics, fishing and more...

Throughout the year, the Lakehead Region Conservation Authority hosts several special events which highlight the natural attractions of our Conservation Areas.

During Arbour Week, May 18 - 22, 2009, help plant seedlings at Mission Island Marsh Conservation Area or take a seedling home.

Family Fishing Day, to be held on July 5, 2009 at Hazelwood Lake Conservation Area allows Canadian residents to spend the day fishing without having to obtain a fishing license. Use of free fishing rods if you're just learning the sport is provided compliments of the Ontario Federation of Anglers & Hunters Tackle Share program.

Celebrate the benefits of living next to the largest freshwater lake in the world during our Lake Superior Day Picnic scheduled for July 19, 2009 along the Neebing-McIntyre Floodway on Fort William Road.

Our 2009 Fall Festival and Craft Fair, at the Hazelwood Lake Nature Centre is an event for the entire family and will be held on Sunday, September 13, 2009!

View migrating waterfowl and songbirds at Mission Island Marsh Conservation Area during the Fall Waterfowl Viewing Day on October 17, 2009.



An Explorer Card provides you with unlimited access to our Conservation Areas. On sale now at the LRCA office.



Little Trout Bay provides access to Lake Superior for fishing and kayaking. The Conservation Area also features a walking trail and picnic facilities.

Background photo this page: Cedar Falls Conservation Area.

Visit These Other LRCA Properties

In addition to our Conservation Areas, the Lakehead Region Conservation Authority also maintains trails on other properties in the area.

There is a 4 kilometre loop trail at Mills Block Forest, located at John Street Road and Community Hall Road in Thunder Bay.

In partnership with the City of Thunder Bay, paved access paths have been developed along the Neebing-McIntyre Floodway which is owned by the Conservation Authority. These trails start at Chapple's Park and follow the Floodway to the Intercity area. There are also paved trails along the Floodway from behind the Slovak Legion on Atlantic Avenue to the mouth of the Floodway at Lake Superior. Some of these trails connect with the City's network of other trails.

A Floodway Trail Guide is available at the Authority office, 130 Conservation Road in Thunder Bay.



Photos(top to bottom): Cascades Conservation Area, Mission Island Marsh Conservation Area, Hurkett Cove Conservation Area, MacKenzie Point Conservation Area, Recreation trails along the Memorial Grove/Neebing - McIntyre Floodway. Background photo this page: Hazelwood Lake Conservation Area.

Watching your water



The Lakehead Region Conservation Authority participates in two provincial Monitoring Networks.

The Provincial Groundwater Monitoring Network (PGMN) consists of a series of wells which have been drilled around our watershed. Water tested from these wells helps to provide an early warning for changes in water levels caused by climatic changes or human activities as well as changes in water quality from natural or man-made causes.



The data is then used to support informed decision making on water-takings, drought management and land-use planning.

The Authority is a member of the Provincial Water Quality Monitoring Network (PWQMN). Eight times a year, Staff collect water quality samples from selected sites in rivers and streams in the region (below).

The objective is to protect human health and aquatic ecosystems by providing reliable and current information on stream water quality.

The Authority maintains a network of remote rain and streamflow gauges along several area watercourses. These gauges provide data on rainfall and water levels which is used to determine rainfall distribution patterns and flow volumes.

Volunteers in the surrounding area also monitor and report rainfall amounts.



In the winter, snow surveys are conducted and ice conditions are monitored.

In 2008 the Ministry of Natural Resources supplied the Authority with new equipment which will allow Staff to collect precipitation data year round at the Authority office.



Top: The Canadian Coast Guard Vessel Cape Chaillon docks at Silver Harbour Conservation Area to provide tours during the Lake Superior Day Picnic.

Above Right: Students from McKellar Park School learn about habitat during a visit to Mission Island Marsh Conservation Area.



Middle Right: Visitors discuss Source Water Protection during an open house.



Right: Board Member Rick Kieri of Gillies meets members of the public at the annual Trade Show.



Remembering June 6, 2008



Bill Boucher photo

It came almost without warning. While the forecast for June 6, 2008 did call for some rain, it did not call for the deluge that resulted in flash flooding throughout the Lakehead Region. By the time the rain ended, more than 83 millimeters (mm) was recorded at the airport while some areas reported 56 - 105 mm of rain.

Several roads and culverts in the region were washed out (above).



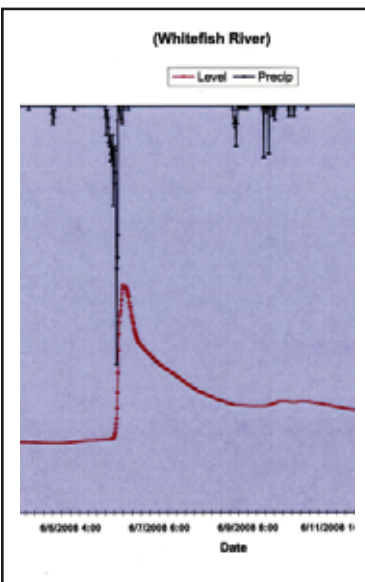
Cathy Woodbeck photo



Homes in the area were left under several feet of water (above: during and after).



The Slate River (left), which was nearly dry due to drought in 2006 and 2007 was filled beyond capacity after the June 6th storm. Flooding occurred along many other area rivers including the Whitefish and Kaministiquia.



Township of Conmee photo

Several townships, including Gillies, O'Connor and Conmee, declared a State of Emergency after roads, including Highway 11-17 (left) were washed out.

Repair work began immediately to recover from the storm (below left).



Data collected from the LRCA's streamflow gauges (far left) show the period leading up to the June 6th storm. The red line is the water level on the Whitefish River while the black line at the top of the graph shows the rainfall. The sharp spike in both lines shows the heavy rainfall and the impact it had over a brief period of time on the river as it overflowed its banks.

The LRCA issued several Flood Warnings as a result of the storm.

The Neebing-McIntyre Floodway turns 25!



The mouth of the Neebing-McIntyre Floodway in the summer of 2008.

2009 marks the 25th anniversary of the Neebing-McIntyre Floodway.

The need for the Floodway came about as a result of concerns over frequent flooding in the Intercity area of the City.

After seeing washed out streets and Intercity Plaza under water on several occasions, it seemed the time had come for some sort of water diversion project.

The engineering firm Proctor and Redfern was first approached by the Lakehead Region Conservation



A large scale model of the proposed Floodway goes on display to the public.

Authority in the early 1970's about creating a Floodway to divert the water from the Neebing River into the McIntyre River in order to protect the Intercity area from regular flooding.

The company proposed constructing a diversion channel around Chapple's Golf Course. This would divert flood water away from the Neebing River and would protect the Intercity area at the same time.

The proposed Diversion Structure would be capable of restricting water flow on the Neebing River east of Ford Street by diverting excess flows into the diversion channel and then to the McIntyre River. The plan called for widening three kilometres of the McIntyre River from William Street, near Confederation College, to Lake Superior.

The Floodway is designed to handle a Regional Storm which is capable of delivering 193 mm/7.6 inches of rain in a 12-hour period.

City Council gives financial support to Floodway initiative



The initial reaction to the proposed \$15 million dollar Neebing-McIntyre Floodway was mixed. Some felt that the cost was too high while others thought the plan would have too much of a negative impact on

the City's green spaces. Public meetings were held and there was also a demonstration using a model of the proposed Floodway. Following considerable debate, on February 20, 1979, City Council approved Thunder Bay's \$3.75-million contribution and the project was finally able to move forward.

During construction of the Floodway, then LRCA Chairman, Bob Hartley, assured Council and the public the cost of the project was "going to be substantially less than their original budgeted contribution."

As it turned out, the Neebing-McIntyre Floodway was completed one year ahead of schedule and under budget. In November 1984, the LRCA returned \$1-million to the City (left) as its share of the budget surplus.



The new Floodway Channel approaches Lake Superior (above). Today, the Channel is lined with thousands of new trees, most of which have been planted as part of the Memorial Grove program. Below left, the Memorial Avenue bridge is under construction. Five new bridges in the City were included in the budget for the Floodway. Below right, cement is poured for the Diversion Structure, near Ford and Parkway Drive.



Floodway Project delivers more than just flood protection

With financial aid in place from the City of Thunder Bay, Province of Ontario and Government of Canada, the project was underway.

The first job, carried out by Thunder Bay Harbour Improvements, was constructing a new bridge on Memorial Avenue near the CLE grounds and Intercity Mall.

All went well and the project was hailed as being ahead of schedule and under budget. Officials and observers across the country praised the Floodway as being ground-breaking and one of the best flood-prevention tactics yet to be seen.

But the project brought more than just flood protection to the City. The budget included funding for five new bridges which would not have been built at the time were it not for the Floodway. The bridges were located on 110th Street (now Island Drive), Fort William Road, Memorial Avenue, William Street

and Balmoral Street.

Upon completion, hundreds of trees were planted along the Floodway and thousands more have been planted since 1984 creating a healthy urban forest.

Floodway Fact:

In 2008, the Neebing-McIntyre Floodway diverted during 4 events for a total of 20 days.

The most significant occurrence followed the June 6, 2008 storm.

Before construction of the Floodway, these events would likely have resulted in flooding in the Intercity area.



Above - The Neebing-McIntyre Floodway as seen in 2008 winds its way through the Intercity area towards Lake Superior



Above - Water passes through the Diversion Structure on the Neebing River. Below - This scene at Intercity Plaza in 1977 was typical of flooding experienced in the area before the Floodway was built.



Always On Guard

The Neebing-McIntyre Floodway became functionally complete in 1983 while the balance of construction work took several more months and was completed in 1984.

Natural Resources Minister Alan Pope, Thunder Bay Mayor Walter Assef, MLA Mickey Hennessy and then-Chairman of the LRCA, Bob Hartley, were among the dignitaries in attendance to cut the ribbon officially opening the Neebing-McIntyre Floodway.

Since 1984, the Floodway has experienced almost yearly demand, usually diverting in the spring as well as following intense storms.

The biggest challenge to date for the Floodway was in July 1997 when a storm dumped 119 mm/4.7 inches of rain over a two day period. Although the heavy rains were not as high as the Floodway had been created to withstand, the Floodway proved its weight in gold when homes and businesses in the Intercity area were spared from severe flooding.

No decisions need to be made to "activate" the Neebing-McIntyre Floodway in the event of a flood. Unlike other floodways, such as in New Orleans and Winnipeg, there are no gates to raise or lower.

A Diversion Structure, located on the Neebing River near Ford Street and Parkway Drive, has an opening which limits the flow on the Neebing River. When water levels exceed the design capacity of the opening, water is re-directed down the Diversion Channel and into the Floodway Channel/McIntyre River.

One indication that the Floodway is diverting is the Neebing River Weir, just west of Edward Street. When the water level on the Neebing River is even with the top of the weir, the Floodway is diverting.

The Neebing-McIntyre Floodway: A Vision and A Legacy

Today the Floodway is on constant guard in the event of flooding.

It has provided a valuable legacy to the City of Thunder Bay which younger generations would not otherwise enjoy.

In the Floodway Channel a new ecosystem for both flora and fauna has been created along with habitat for waterfowl and fish.

The Floodway is also the setting for the Blake Memorial Grove. A partnership between Blake Funeral Chapel, Lakehead Conservation Foundation and Lakehead Region Conservation Authority, the Grove is a place dedicated to remembering loved ones now gone; where trees are planted in their memory.

In partnership with the City of Thunder Bay, the LRCA has constructed six kilometres of access pathways along the Floodway (see map below) which connect to the City's network of Recreation Trails.

By reducing the risk of flooding in the Intercity area, significant development has been able to take place (right). Retail stores, movie theatres and restaurants all thrive in the Intercity area.

New bridges were constructed on roadways over the Floodway including along Balmoral Street, Memorial Avenue and Fort William Road.

Not bad for a project that many residents and politicians resisted, which cost less than original estimates, and which was completed ahead of schedule

That the Neebing-McIntyre Floodway continues



to operate as well today as it did 25 years ago is a testament and tribute to all the engineering and construction firms involved in its creation and to the Board and Staff of the Lakehead Region Conservation Authority who believed in the concept from early on.



PROTECTING LIFE, PROPERTY and our NATURAL ENVIRONMENT

Our History

The LRCA was formed in 1963, by an expansion of the Neebing Valley Conservation Authority. The Neebing Valley Conservation Authority was established under the Conservation Authorities Act in 1954 to deal with flooding problems along the Neebing and McIntyre Rivers. Conservation Authorities were created across Ontario in 1946 by an Act of the Provincial Legislature and are funded through a Provincial and Municipal partnership.

There are eight Member Municipalities within the jurisdiction of the Lakehead Region Conservation Authority that covers over 2,600 square kilometres and extends along 200 kilometres of Lake Superior shoreline from the U.S. Border to the eastern edge of Dorion Township. Member Municipalities include the City of Thunder Bay, the Municipalities of Shuniah, Oliver Paipoonge and Neebing and the Townships of Gillies, O'Connor, Conmee and Dorion.

Preventative Approach

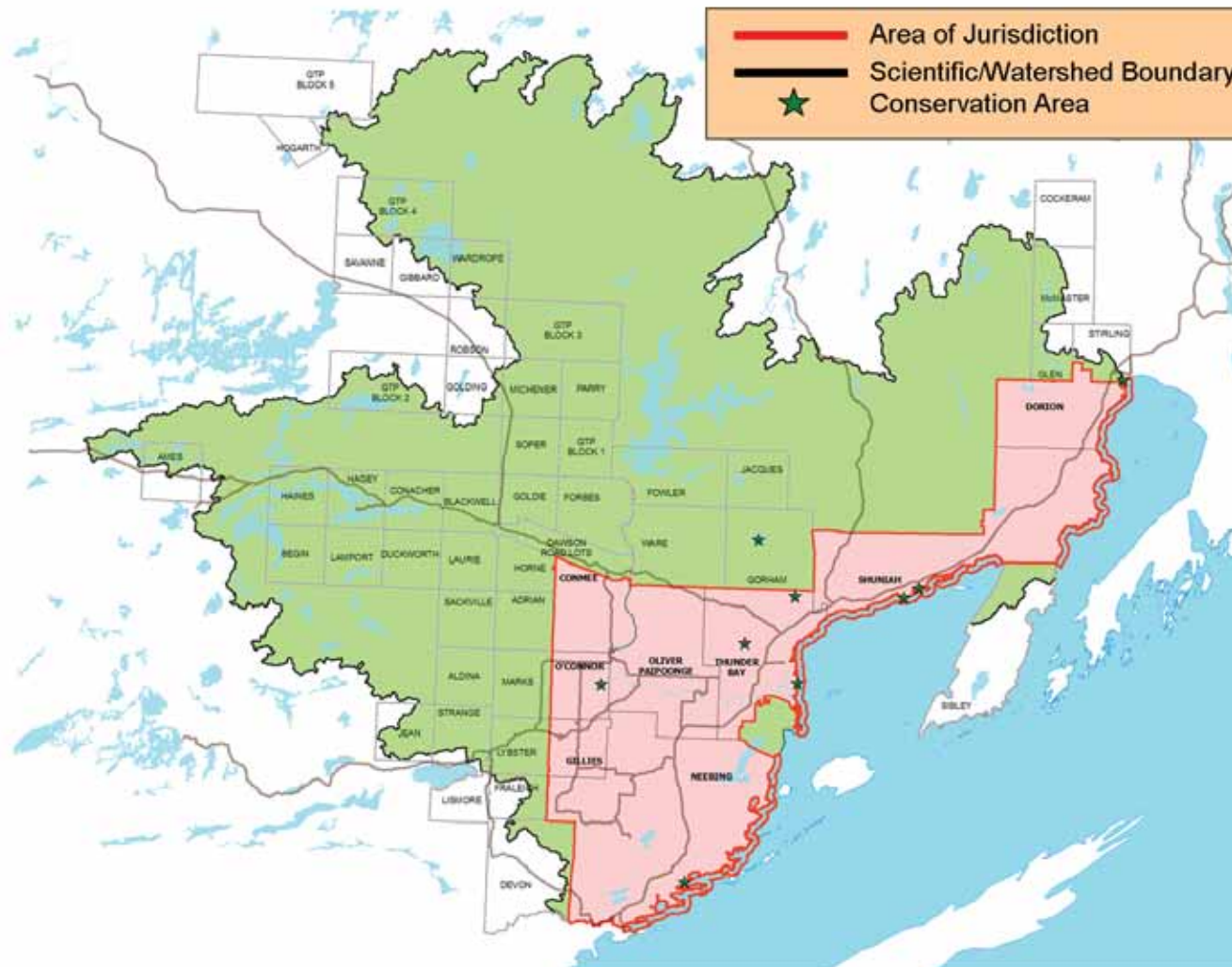
The principle mandate of Conservation Authorities is to prevent the loss of life and property damage due to flooding and erosion; and to conserve and enhance our natural resources.

The Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation is a key tool in fulfilling this mandate because it prevents or restricts development in areas where the control of flooding, erosion, pollution or the conservation of the land may be affected by development. It also protects the mutual needs of the watercourse and landowners adjacent to it.

If you are planning to do any work around water or wetlands, a permit may be required from the Conservation Authority.

The Neebing - McIntyre Floodway controls the potential for flooding along the floodplain of the Neebing and McIntyre Rivers. This protects the Intercity area of Thunder Bay from the effects of heavy rain, spring melt and runoff from other precipitation events (see pages 8 - 11).

The Authority has also taken steps to control



erosion along area rivers and streams. This includes the purchase and removal of homes along sections of the Kaministiquia River and bank stabilization projects along the Kam and McIntyre Rivers.

Flood Standards

The "Regional Storm" or the 100-year flood event is used to determine the flooding hazard limit for the LRCA.

The "Timmins Storm" of 1961, which had 193 millimetres (7.6 inches) of rainfall in 12-hours is the "Regional Storm" for our area.

The 100-year flood event would occur, on average, every 100 years. However there is a one-percent chance of it occurring every year.

We're Prepared. Are you?

The LRCA operates a Flood Warning System where Staff monitor weather forecasts and river conditions. A Flood Bulletin, Advisory or Warning is issued based on the level of danger to the public and property.

When these notices are issued it is recommended that you:

- ★ Listen to any warnings you hear.
- ★ Stay back from high water. All bodies of water should be considered dangerous.
- ★ Let your family or friends know where you are.
- ★ Keep pets indoors or under control.

Could It Happen Here? Yes!

Weather statistics show severe storms do hit the Thunder Bay area as was evident in:

1977
Thunder Bay



1997
Shuniah



2008
Conmee



Photo: Township of Conmee

In The Watershed - 2008 Year In Review

The Lakehead Region Conservation Authority is constantly working to deliver on the terms of its mandate as a local resource management agency working on a watershed basis. In 2008 many studies and projects were undertaken.

Summer Experience Program students and the Authority's Stewardship Intern conducted an assessment of the Slate River (top left) in the Municipalities of Neebing and Oliver Paipoonge. They conducted an inventory of the river's characteristics such as water quality, plant and animal life. The general health of the River was found to be good. The information gathered will be used as a benchmark for future monitoring of the watershed.

A report, released in 2008, indicated visits to Mission Island Marsh Conservation Area were up in 2007. An average of 168 vehicles a day visited the Marsh which was an 18-percent increase from 2003 when a similar study was conducted. Many visitors to the Marsh place bird feeders among the trees which are also enjoyed by other wildlife such as the squirrel seen to the left.

During the summer of 2008 sediment traps along the Neebing-McIntyre Floodway were dredged in order to maintain the overall integrity of the Floodway and its ability to handle a Regional Storm. The sediment traps are an underwater earthen berm constructed at two locations along the Floodway. As water passes over the berm, sediment and particulate matter settles to the bottom. The sediment traps are located upstream of the Balmoral Street bridge and upstream of the CPR bridge (shown left). It was noted that it has been eight years since the sediment traps were last dredged. Accumulated sediment reduces the Floodway's capacity for flood flows when a major storm strikes the City. The work was carried out by MLA Northern Contracting which also dredged the entrance of the Diversion Channel near Ford Street and Parkway Drive.

As part of Earth Day 2008, the Authority turned to the Construction Technology students at Westgate Collegiate and Vocational Institute (bottom photo) to construct several Blue Bird Nest Boxes. Several of the Nest Boxes (lower left photo) were placed at Mission Island Marsh Conservation Area where they have been adopted by Blue Birds and other bird species. The Authority also hosted a workshop, by Jean Lister of the Blue Bird Recovery Program, on building Blue Bird Nest Boxes. Blue Bird populations were critically reduced in the 1960's due to habitat destruction, the use of pesticides and natural predators. In 1988 the Thunder Bay Blue Bird Recovery Program was started and since that time the local population has rebounded.



Lakehead Conservation Foundation



The Memorial Grove Dedication Ceremony, held on June 29, 2008, was attended by hundreds who turned out to honour loved ones. More than 240 trees were planted through the Memorial Grove program in 2008.

The Lakehead Conservation Foundation raises funds to support improvements to Conservation Area facilities and education programs.

In 2008, the Foundation donated \$25,000.00 to the LRCA. A portion of that funding was used for the 3rd annual Lakehead Children's Water Festival which teaches Grade 3 and 4 students about the importance of water through fun, hands-on activities.

The funds are raised through several methods including the Foundation's annual Fundraising Dinner and Auction which is held each February. Guests have the opportunity to purchase valuable merchandise donated by local businesses and individuals as well as dazzling works of art donated by local and internationally renowned artists. Tickets for the 2009 Dinner and Auction, to be held February 12th at the Slovak Legion, are now on sale. Call 345-2377 for your ticket today as seating is limited and the event usually sells out!

The Memorial Grove is a cooperative program between the Lakehead Region Conservation Authority, Lakehead Conservation Foundation and Blake Funeral Chapel. Blake donates funds to plant a tree for each service they provide. The general public can also have a tree planted in memory of a loved one by donating \$55.00 to the Lakehead Conservation Foundation. A certificate is sent to the family and the donor receives a Charitable Receipt. In 2008, more than 240 trees were planted through this program. Since the program began in 1991, more than 4,900 trees have been planted.

The Foundation also raises funds through its annual Garden Party and Plant Sale held the first Saturday in June and through public donations to the Foundation for which Charitable Receipts are issued.



Foundation President, Phil Jarvis (left) presents a donation of \$25,000.00 to LRCA Chairman Bill Bartley (right).

2008 Foundation Board Members

President	Phil Jarvis
Vice-President	Lauri Pajamaki
Secretary	Darlene Guinn
Treasurer	Mary Provenzano
	Glen Dale
	Doug Guinn
	Marlene Jarvis
	Melody Lundstrom
	Richard Lundstrom
	Garry Maxwell
	Gary Murchison
	John Palko
	Paul Straiton

For more information call 345-2377 or write:

130 Conservation Road, P.O. Box 10147
Thunder Bay, ON, P7B 6T6

*The Lakehead Conservation Foundation
is a Registered Charitable Organization.*

PLANNING PROCESS UNDERWAY

It has been a busy year for the Lakehead Source Protection Committee and the Lakehead Source Protection Authority as they started work on the process to develop a local Source Protection Plan for the Lakehead Source Protection Area.



The local Source Protection Committee held regular monthly Meetings throughout 2008 to complete the “Terms of Reference” (work plan) that will guide the process to develop the local Source Protection Plan. The Committee is made up of nine members from three sector groups: Municipal, Industry and Economic and Public and is directed by Regulation of the “Clean Water Act, 2006”.

The Source Protection Authority made up of the same Municipal representatives as the Lakehead Region Conservation Authority Board has continued to provide support for the planning process. Both groups worked together to meet the tight deadlines associated with the legislated process.



Rosslyn Village near Municipal wellhead

The Lakehead Source Protection Committee is working in partnership with local Municipalities and community stakeholders to produce a science-based plan to be completed by August 2012. Technical studies and scientific information will be used to identify potential and significant threats to the sources of water for the two identified Municipal residential drinking water systems in the Lakehead Source Protection Area.



The plan will provide measures to protect the source water that supplies the Municipal systems for the City of Thunder Bay and Rosslyn Village from contamination and over use.

The plan will provide residents in the Lakehead Source Protection Area who are on one of the two identified Municipal drinking systems with the reasonable expectation that the source water that feeds their taps will be clean and safe. However, protecting source water is only the first step in a multi-barrier approach aimed at ensuring safe, clean drinking water for all Ontarians.



Thunder Bay's North Harbour on Lake Superior

Drinking Water Source Protection

KEY ACCOMPLISHMENTS

January 2008

Code of Conduct and Operations Manual for Source Protection Committee completed. *

February 2008

Letters of Commencement sent to provide notification for preparation of the Terms of Reference: Clerks of the Eight Member Municipalities and Fort William First Nation. *

March 2008

Watershed Characterization Report completed.

April 2008

"Meet and Greet" Open House to present the Watershed Characterization Report and Overview of Source Protection Planning.

June 2008

Notice of 35-day public comment period for Draft Proposed Terms of Reference: Internet, Public Viewing Stations and newspaper notices. Deadline - July 25, 2008. *

July 2008

Tour of the Bare Point Intake Protection Zone and Rosslyn Village Wellhead Protection Area.

Two Open Houses for Draft Proposed Terms of Reference: LRCA (July 15) and Rosslyn Village Community Centre (July 17). *

August 2008

Lakehead Source Protection Committee submits the Draft Proposed Terms of Reference to Lakehead Source Protection Authority by August 20, 2008 deadline. *

Notice of 30-day public comment period for Proposed Terms of Reference: Internet, Public Viewing Stations and newspaper notices. Deadline - September 18, 2008. *

September 2008

Water Budget and Water Quantity Stress Assessment completed.

October 2008

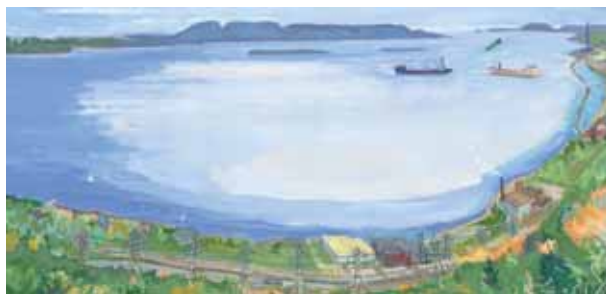
Lakehead Source Protection Authority submitted "Proposed Terms of Reference" to the Minister of Environment for approval. *

(* met legislated deadline)



ENGAGING STAKEHOLDERS

The work of the Lakehead Source Protection Committee and Lakehead Source Protection Authority (SPA) is focused on engaging stakeholders and property owners who obtain drinking water from the two Municipal drinking water systems in the Lakehead Source Protection Area.



Lake Superior - Bare Point Intake Protection Zone

PUBLIC CONSULTATION

Public consultation is a requirement of the regulated process for producing the local Source Protection Plan. Opportunities are provided for stakeholders including the public, businesses, Municipalities, and First Nations living within the Lakehead Source Protection Area to comment and provide feedback.

The Terms of Reference was the first of three documents which required public consultation. Consultation on the Assessment Report and Source Protection Plan will follow a similar process.

The Lakehead Source Protection Committee and the Lakehead Source Protection Authority encourages public input in a number of ways. Notices are posted in local newspapers, at public viewing stations and on the Internet (www.sourceprotection.net) to inform and provide community residents with the opportunity to comment and review documents within a defined comment period. Open Houses are also part of outreach to educate and inform community residents on the planning process.

Did You Know?

Safe, Clean Water: Essential To All Our Lives!

WHAT IS SOURCE WATER?

Source water is untreated water from surface and ground sources with the two connected through the water cycle. Streams, lakes, rivers are examples of surface water, while an underground aquifer or spring is a source of groundwater. The water cycle influences both water sources with the endless circulation of water from the atmosphere to the earth in the form of evaporation and precipitation (rain and snow).

WHAT IS SURFACE WATER?

Surface water refers to water found on the surface of the earth. Surface water is simply where the water table associated with groundwater meets and collects on the surface of the earth. Rain and snow affects surface water.

Surface water flows through a watershed and is often fed by groundwater seeping through the ground into lakes, rivers and streams. In turn, the flow of surface water can penetrate the ground, providing a water source for groundwater aquifers.

WHAT IS GROUNDWATER?

Groundwater is a valuable resource as it makes up 2/3 of the world's fresh water supply. Groundwater collects beneath the Earth's surface between the cracks and spaces in soil, sand and rock. It moves very slowly through the ground where it can collect in large quantities to form aquifers.

The rate at which water moves through the ground depends on the makeup of the soil or rock. The process can take weeks or hundreds of years with the soil and fractures in rock acting as a natural filter to remove some impurities.

Everyone's Responsibility!

WHY IS IT IMPORTANT TO PROTECT SOURCE WATER?

The incident in Walkerton, Ontario (2000) revealed how easily water can become contaminated and how damaging the consequences can be. While it costs money to protect water sources, the investment generates economic vitality and growth. Communities with clean water sources attract human settlement, development and business.

What is Source Protection?

Source Protection is the focus of the "Clean Water Act, 2006" to ensure the sources of water that supply Municipal residential drinking water systems are safe and clean, now and in the future. Source Protection Committees have been established across Ontario to develop local Source Protection Plans that will reduce or eliminate risks and threats to the sources of Municipal residential drinking water.

You Can Make A Difference!

WHAT CAN YOU DO?

We need to protect the sources of water from contamination or over use by managing the influences on them from natural and human activities. The best way to ensure water quality and water quantity is by being environmentally responsible about things we do in our home and in our yard including proper maintenance of wells and septic systems.

THINGS WE CAN DO IN OUR HOME?

- Take shorter showers.
- Turn tap off when you brush your teeth.
- Plug and fill sink for washing.
- Detect and repair leaks.
- Run washing machines/dish washers when full.
- Do not flush paint or chemicals down the drain.
- Return unused prescriptions to a pharmacy.

THINGS WE CAN DO IN OUR YARD?

- Use a rain barrel.
- Wash your vehicle at a car wash.
- Use a broom to clean your driveway.
- Use sand instead of road salt on walkways.
- Reduce the use of pesticides and fertilizers.
- Take care when refueling lawn equipment.
- Clean up pet waste.

ROSSLYN VILLAGE WELLHEAD PROTECTION AREA



The Wellhead Protection Area (defined by red circles on map, above right) shows the area around the wellhead where land use activities have the potential to affect the quality of water that flows into the well. The type of soil surrounding the well and the direction and speed groundwater travels determine the time-of-travel zones ranging from two to 25 years. Technical studies will determine the level of protection in the zones.

BARE POINT INTAKE PROTECTION ZONE



The primary vulnerable area around the surface water intake for the Bare Point Water Treatment Plant, (defined by the yellow circle on map, above right), is called the Intake Protection Zone. Technical studies will be completed as required by the Assessment Report Regulation. These studies will be used in preparation of the Assessment Report to identify significant and potential threats to Municipal residential drinking water.



Information including printed materials relating to Source Protection and the protection of the sources of Municipal residential drinking water are available through the Source Protection Program at the Lakehead Region Conservation Authority. Visit www.sourceprotection.net or phone (807) 344-5857.



Education

Each year the Lakehead Region Conservation Authority delivers education programming to hundreds of area students.

The education is delivered in the form of guided field trips to our Conservation Areas, school visits (below left - Arbour Week at Woodcrest School) and special events such as our annual Children's Water Festival (middle left).

Our Conservation Areas are a living classroom. Raising awareness of conservation issues and developing an appreciation for the wonders of nature are essential to the conservation of our watershed.

The Lakehead Region Conservation Authority provides a number of resources to the general public and to educators in particular. This includes interpretive panels at several Conservation Areas and Study Kits (top left) on a range of subjects which are available for teachers to use in the classroom.

The Authority also offers financial awards and bursaries.

The "Arthur Shewchuk Memorial Bursary" is offered annually to a deserving student entering Lakehead University who permanently resides in one of the Authority's member municipalities and who is enrolled in the field of Biology, Forestry, Geography or Engineering. The 2007/08 Arthur Shewchuk Memorial Bursary was awarded to Ushna Kahn who is enrolled in the Honours Bachelor of Science program majoring in Biology.

The "Lakehead Region Conservation Authority Award" is presented annually to a Confederation College student enrolled in the Recreation and Leisure or Civil Engineering programs. The 2008 recipient of this award was Russell Schrader who was enrolled in the Recreation and Leisure program.

Each year, primary and secondary school students participate in the Northwestern Ontario Regional Science Fair. The goal of the fair is to promote interest and develop skills in science among young people in Northwestern Ontario. The Authority sponsors an award for one student who participates in the Science Fair. In 2008 the award was presented to Elanor Sherlock of Murillo for her project "It's Not Easy Being Green." Her project calculated the average weight of flyers delivered to homes in Oliver Paipoonge in one year and used the information to determine that it would require a 40-foot tall tree with a diameter of 6 to 8 inches to produce enough paper for all the flyers delivered to one home in one year.



PARTNERS: We Can Only Do It With Your Support!

The Lakehead Region Conservation Authority appreciates the support of its many partners in helping to achieve its goals and objectives.

There are eight member Municipalities which belong to the Authority and provide financial support through levies. Representatives of each member Municipality are appointed to sit on the LRCA Board of Directors.

Other financial support is received in the form of donations directed toward specific projects.

In 2008, Ontario Power Generation sponsored the lease of two viewing scopes at Mission Island Marsh Conservation Area, Fall Waterfowl Viewing Day, the production of new interpretive signs for the pavilion at Mission Island Marsh and the planting of trees at the Marsh. OPG was also a sponsor of the 2008 Lakehead Children's Water Festival.

Financial support was received from Union Gas in 2008 (photo: Glenn Burton presents a cheque to LRCA Chairman Bill Bartley). Union Gas provided funds to plant trees at Mission Island Marsh Conservation Area, sponsored a new interpretive panel at the Marsh and sponsored the 2008 Lakehead Children's Water Festival.

Hill's Greenhouses continues to support the Authority's Arbour Week activities by donating thousands of seedlings which are planted at Conservation Areas and which are also given away to the public for planting at home.

The Royal Bank hosted a fun day at Cascades Conservation Area and also sponsored the 2008 Lakehead Children's Water Festival with a grant from the RBC Blue Water Project.

Support from sponsors such as these companies is essential in order to maintain and upgrade Conservation Areas and to provide education programs which benefit the entire community.



uniongas

A Spectra Energy Company

Glenn Burton (right), District Manager of Union Gas, presents LRCA Chairman Bill Bartley with a cheque.



ONTARIO POWER GENERATION

Brett Rushton (left) of OPG's Thunder Bay Generating Station and Plant Manager Derrick Brooks (right), join LRCA Chairman Bill Bartley to plant trees at Mission Island Marsh during Arbour Week.



RBC Blue Water Project™

LRCA Chairman, Bill Bartley (left), and RBC Royal Bank Regional Vice-President NorthWestern Region, Murray Walberg watch as a group of students enjoy a game of Dripial Pursuit at the 2008 Lakehead Children's Water Festival.



Volunteers Are Important Too!

In 2008, volunteers with the Lakehead Conservation Foundation hosted a fundraising dinner auction and plant sale in support of the LRCA.

Students from the Thunder Bay Christian School and Sir Winston Churchill High School assisted at the Lakehead Children's Water Festival. Other volunteers at the Water Festival came from Lakehead University, the Regional Multicultural Youth Centre, Ontario Power Generation, the First Nations Technical Services Corporation and the public at large.

Members of the Thunder Bay Field Naturalists lend their expertise to our Waterfowl Viewing Days.

We thank our many other volunteers who help from time to time throughout the year with our events and projects.

Working Together to Protect the Lakehead's Watersheds

Conservation Authority Watershed Stewardship programs help to protect and improve the health of watersheds across Ontario.

The Lakehead Region Conservation Authority works with its watershed communities and landowners in identifying local concerns and creating solutions to protect and enhance the local environment. In 2008 our Stewardship initiatives involved removing invasive species, public education about living by the water and, as reported on page 14, creating new habitat and studying the health of existing watersheds.



Photos: Top right - In 2008, Galerucella Beetles were released into a patch of Purple Loosestrife along the Thunder Bay Expressway. The beetles eat only the Purple Loosestrife.

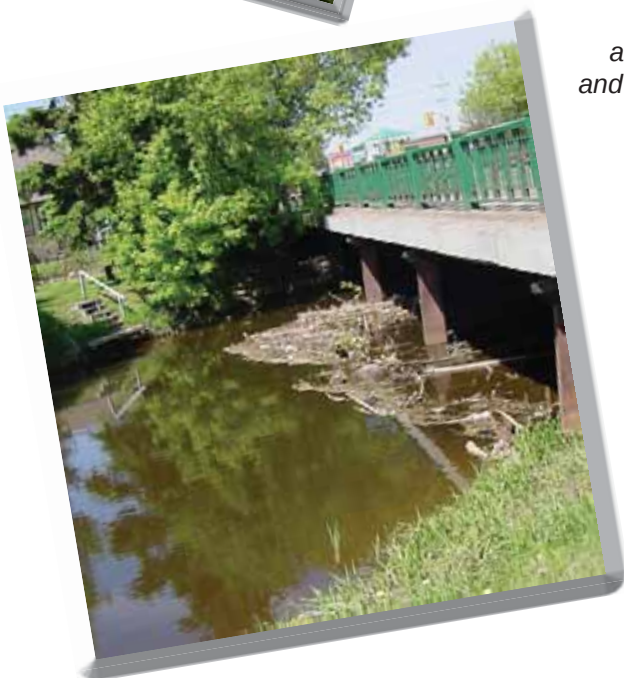
Above - Ontario Rangers from Nipigon, Thunder Bay and Sleeping Giant Provincial Park worked together to dig up Purple Loosestrife along Lakeshore Drive in Shuniah.

Right - garbage and other debris accumulates beneath the Neebing River Bridge on May Street. A series of workshops about Living Along The Neebing River helped to educate area residents about how to care for the river and their property by reducing the use of chemicals, creating buffer zones and helping to keep garbage out of the water.



What is Watershed Stewardship?

Watershed Stewardship is caring for our water, land, air and biodiversity on a watershed basis recognizing that everything is connected in a watershed and is affected by natural and human activities.



Meetings at



Freedom to Focus

Get away from it all and get focused at Hazelwood Lake Nature Centre - the ideal location for your meeting, company picnic, retreat, seminar or workshop.

The Centre is a multi-purpose venue that combines the elegance of a modern facility with the majestic surroundings of a 618 hectare Conservation Area.



"The Centre is in a beautiful natural environment conducive to our workshop."



"For the type of workshop that I do, this is the best facility I have found in Thunder Bay."



Hazelwood Lake Nature Centre

Features:

- Viewing Deck
- One large meeting room (convertible to three)
- Cathedral ceilings
- Fireplace alcove
- Outstanding view of the lake
- Handicapped accessible



Full service catering is available from the White Fox Inn. They will be able to assist with available dates, set-up and menu options.



Lakehead Region Conservation Authority

130 Conservation Road, P.O. Box 10427
Thunder Bay, ON, P7B 6T8
Tel: (807) 344-5857 Fax: (807) 345-9156
info@lakeheadca.com

To book your important event, contact:

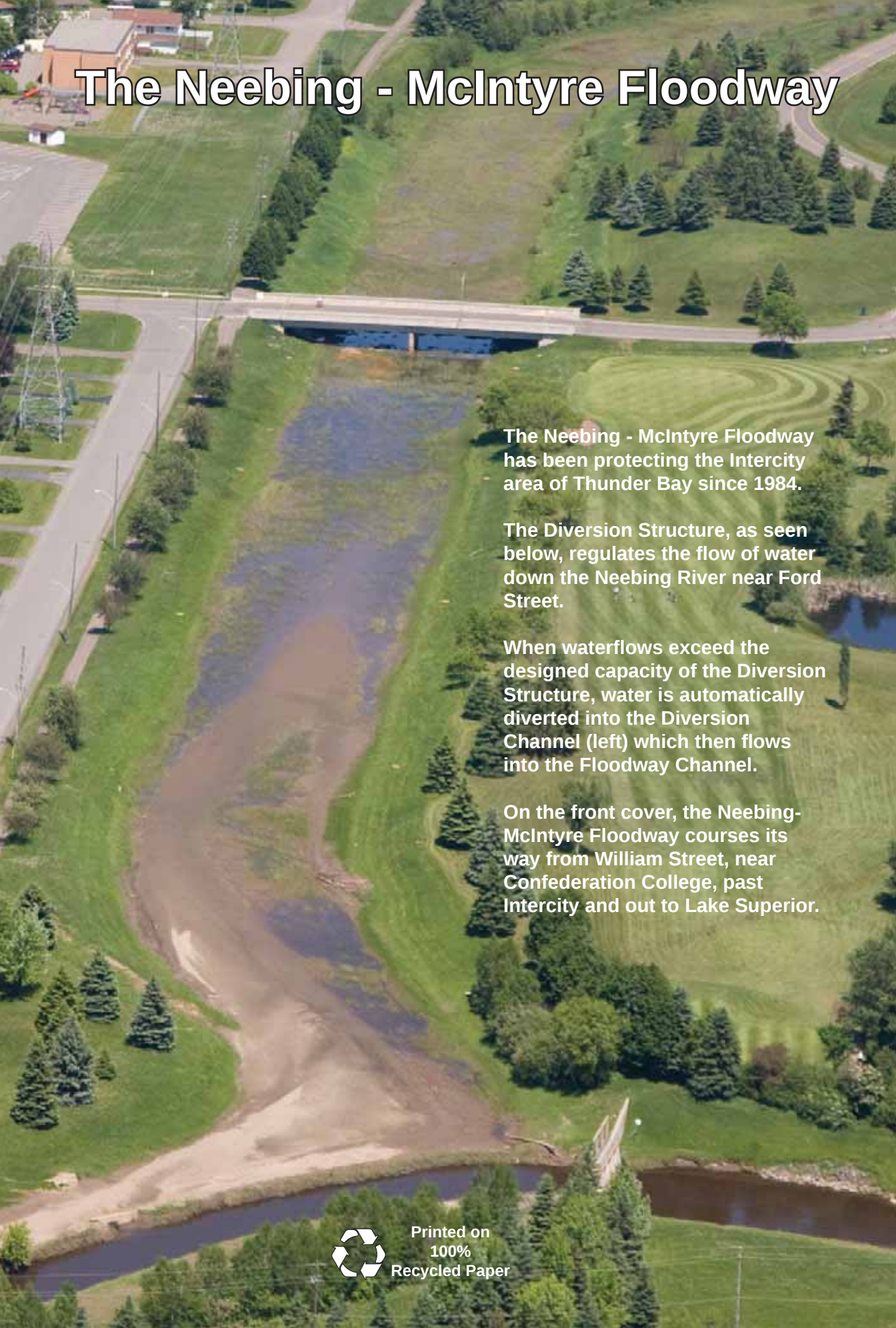


A New World Country Inn
(807) 577-3699
reservations@whitefoxinn.com



"The facility was perfect for our purposes - so aesthetic, comfortable and functional."

The Neebing - McIntyre Floodway

An aerial photograph showing a wide, shallow floodway channel filled with water, flowing through a green landscape. A concrete bridge crosses the channel in the upper middle. To the left, a road and a utility tower are visible. The surrounding area includes grassy fields, trees, and some buildings in the distance.

The Neebing - McIntyre Floodway has been protecting the Intercity area of Thunder Bay since 1984.

The Diversion Structure, as seen below, regulates the flow of water down the Neebing River near Ford Street.

When waterflows exceed the designed capacity of the Diversion Structure, water is automatically diverted into the Diversion Channel (left) which then flows into the Floodway Channel.

On the front cover, the Neebing-McIntyre Floodway courses its way from William Street, near Confederation College, past Intercity and out to Lake Superior.



Printed on
100%
Recycled Paper