



Lakehead Region  
Conservation Authority

Conserve today...for a better tomorrow

### WHO WE ARE AND WHAT WE DO

The Lakehead Region Conservation Authority is one of 36 Conservation Authorities in Ontario, which are local watershed management agencies delivering services and programs that protect and manage water and other natural resources in partnership with government, landowners and other organizations.

Conservation Authorities undertake a broad range of programs including: flood control, floodplain management, wetland protection, erosion control, reforestation, conservation lands and conservation education.

### LAKEHEAD REGION CONSERVATION AUTHORITY

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### FOR MORE INFORMATION

### ON THE LAKE SUPERIOR WATERSHED VISIT:

[www.superiorforum.org](http://www.superiorforum.org)  
[www.ec.gc.ca/greatlakes](http://www.ec.gc.ca/greatlakes)  
[www.epa.gov/glnpo](http://www.epa.gov/glnpo)

## HOW YOU CAN PROTECT THE WATERSHED

- Leave a natural buffer or riparian zone along shorelines.
- Only plant native species.
- Plant and protect trees along all watercourses to improve fish habitat.
- Replace failed or non-fish friendly culverts (e.g. perched) with ones that allow for fish to travel upstream to spawn.
- Use alternative non-toxic household cleaners.
- Recycle all allowable items and reduce your use of disposable products.
- Dispose of household hazardous waste properly through a household waste depot, battery recycling depot, etc.
- Never burn garbage. Fumes released during burning contribute toxins to local waters.
- Keep your septic system in good repair.
- Take care when refueling near the water as a small fuel spill can pollute a large amount of water.
- Conserve water—use it wisely in your home by installing a rain barrel, only watering your lawn during very dry periods and only running the dishwasher and washing machine with full loads.
- Ensure all necessary permits are in place prior to landscaping or building near the water.
- Become a steward of the watershed. By caring for the land and water and surrounding landscape you can ensure that it will be preserved, enhanced and sustained for future generations.



Whitefish River, Township of Gillies



Wolf River, Township of Dorion



McIntyre River, City of Thunder Bay



Pine River, Municipality of Neebing



Slate River, Municipality of Oliver Paipoonge

**"If there is magic on the planet, it is contained in Water."**

**-Loren Eiseley, The Immense Journey, 1957.**

It's everyone's responsibility to be a good steward and this brochure describes some of the challenges affecting the health of the watershed and more importantly, how you can be part of the efforts to improve, maintain, restore and protect the health of the Lakehead watershed and the Great Lakes.

### WHAT IS A WATERSHED?

A watershed is like a funnel formed by the contours of the land and drained by all rivers and streams that flow through it.

The boundaries of a watershed are formed by the highest points in the landscape – they are like the edges of a bathtub or sink – any water that falls within it will drain towards the same outlet.

On its journey towards an outlet, the water within a watershed can pass through different landscape features such as streams, rivers, lakes, bogs and marshes.

So, even small amounts of pollution, when contributed by many people, can combine to cause significant problems. As a result, the health of the watershed becomes the combined responsibility of everyone who lives, works and plays in the watershed.

The Lakehead watershed flows through the area of jurisdiction of the Lakehead Region Conservation Authority (LRCA) into Lake Superior and is part of the even larger Great Lakes-St. Lawrence River Watershed. The member municipalities of the LRCA include: City of Thunder Bay, townships of O'Connor, Conmee, Dorion, Gillies, and the municipalities of Neebing, Shuniah and Oliver Paipoonge. The watershed also includes unorganized townships north of the LRCA, which fall under the jurisdiction of the Ontario Ministry of Natural Resources.

The first step in protecting the watershed is to better understand your place within the watershed and understand that all actions influence the overall health of the entire ecosystem, as everything is connected.



Water in the Lakehead Watershed flows south to Lake Superior.

# PROTECTING THE LAKEHEAD WATERSHED

Remember that your actions and those of your neighbours affect the water quality in the watershed.

## LAKE SUPERIOR FACTS

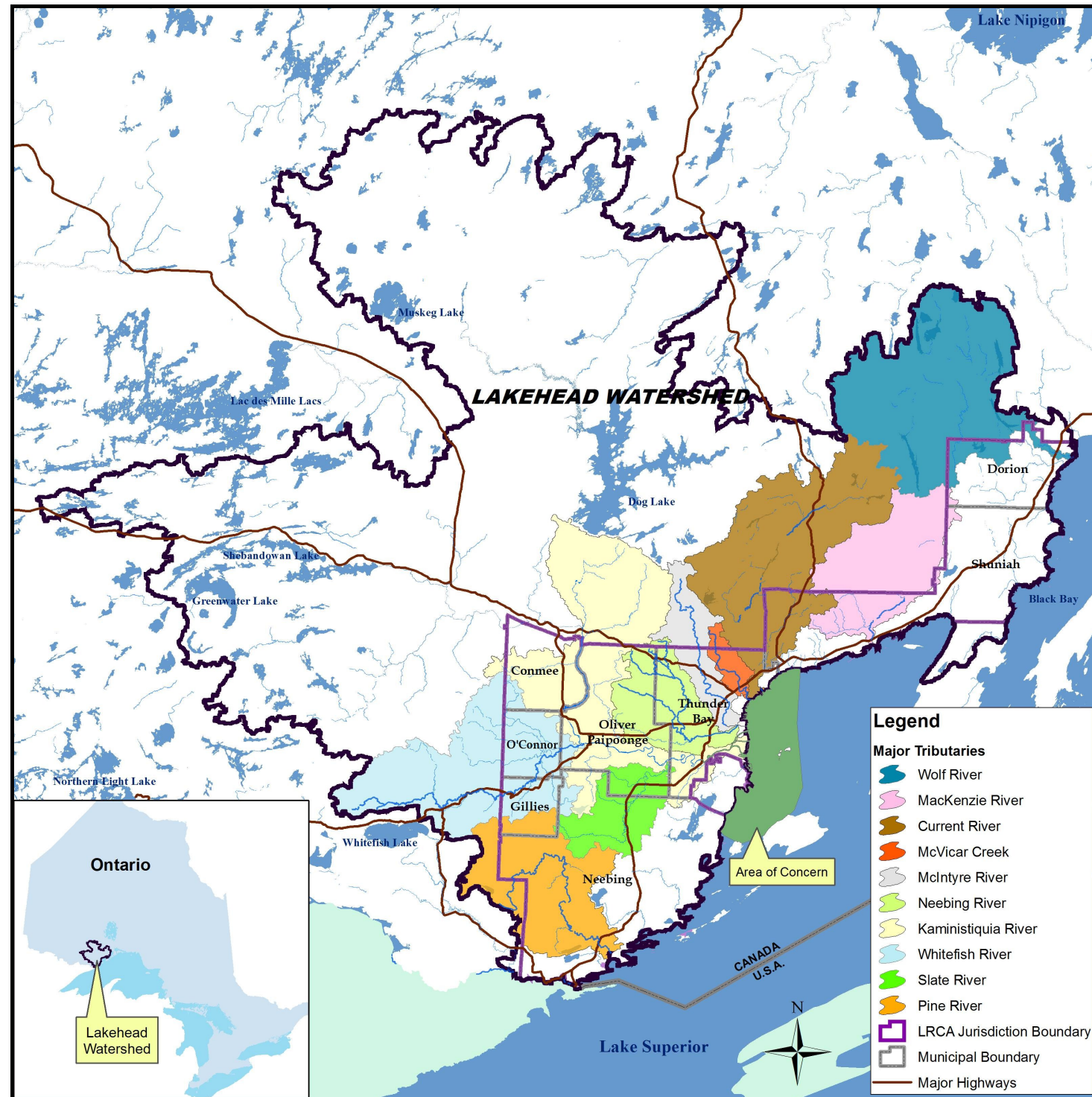
- Is the largest freshwater lake in the world by surface area and third largest lake by volume.
- Is the largest of the Great Lakes with a surface area of 82,100 square kilometres and a volume of 12,230 cubic kilometres.
- Over 1500 streams and rivers run into Lake Superior.
- It has a maximum depth of 406 metres and an average depth of 147 metres.
- It contains more water than all of the other Great Lakes combined.
- It has the longest hydraulic retention time, 191 years, of all the Great Lakes (i.e. the time it would take for all the water to replace itself).
- All time high Lake Superior water levels were experienced in 1950, 1985 and 1986, while all time low levels were recorded in 1925, 1926 and 2007.

## LOW WATER LEVELS IN THE WATERSHED

Many residents in the watershed obtain their water from private wells or lake intakes. In times of low water, residents can experience water shortages in their wells or have exposed water intake pipes due to lower than normal lake levels.

Even though Lake Superior contains 10% of the earth's surface water, low water levels can still have an impact. To minimize impacts from low water levels, the following actions can assist in preserving shoreline habitats while allowing continued enjoyment of all the recreational opportunities the lake provides:

- When low water levels expose rocks and woody debris in the nearshore, leave them in place as they provide shelter and nursery areas for fish.
- If rocks must be moved to access the lake, consider only moving a narrow strip instead of the entire shoreline.
- Use a portable roll-in dock, which can be moved according to lake levels. Permanent structures result in a loss of fish habitat and can be easily damaged by ice, resulting in frequent repairs and in-water work.
- Anchor or moor boats and recreational water craft off shore.
- Do not build structures in the exposed shoreline area. When water levels rise structures will become flooded.



## LAKEHEAD WATERSHED FACTS

- Extends from the US border on the southwest to the Township of Dorion on the northeast, covering 11,526 square kilometres.
- Includes 13 provincially significant wetlands.
- Consists of 22 river systems that flow in a southerly direction towards Lake Superior including the following major tributaries: Wolf River, MacKenzie River, Current River, McVicar Creek, McIntyre River, Neebing River, Kaministiquia River, Whitefish River, Slate River and Pine River.
- There are two municipal drinking water systems in the watershed and the remaining residents draw their water from private wells.
- The Thunder Bay Area of Concern was designated in 1987 under the Canada-United States Great Lakes Water Quality Agreement. The Remedial Action Plan committees are currently coordinating the effort to restore the environmental quality and beneficial uses in the area.

## IMPORTANCE OF RIPARIAN ZONES

When it comes to large bodies of water like Lake Superior, our greatest potential impacts occur where we get our feet wet—in the nearshore areas like wetlands and riparian zones. Riparian zones are the narrow strips of land that border creeks, rivers or other bodies of water.

Although riparian areas may occupy only a small percentage of the area of the watershed, they represent an extremely important component of the overall landscape. In other words, riparian zones, if undisturbed, act as a buffer between land and water.

Riparian vegetation can offer many services to a watershed. Leaves and branches break the force of falling rain and runoff is slowed by the leaf litter, broken twigs and native vegetation. By slowing down the runoff, the riparian zone allows the water to be absorbed into the ground, resulting in less surface flooding and bank erosion.

Tree and plant roots from riparian vegetation provide shelter to fish, giving them a place to hide from predators, lay eggs, find food and shade from direct sunlight. These roots also act as a shoreline stabilizer to control erosion.

The network of roots also acts as a water filter to remove pollutants and other impurities from surface water runoff including fertilizers and pesticides.

**LOW WATER CONDITIONS**  
Lake Superior, 2007



**ACCEPTABLE RIPARIAN ZONE**



**INADEQUATE RIPARIAN ZONE**

