A GUIDE TO CENTRAL ALGOMA

Watersheds

INSPIRATION IN RIBBONS OF BLUE

A Publication of the Central Algoma Freshwater Coalition

Lands & Waters of Home

In the summer of 1912, before his style defined Canadian landscape art and his mysterious death created his legend, painter Tom Thomson and fellow artist William Broadhead set off on a two-month canoe expedition down the Mississagi River to Lake Huron, bisecting a corner of Central Algoma. The Canadian Pacific Railway sponsored the journey to promote tourism. I like to imagine Thomson paddling the region's largest waterway, making sketches and capturing photographs of billowing cascades, cobalt lakes, big pines and austere rock — scenes we still encounter over a century later.

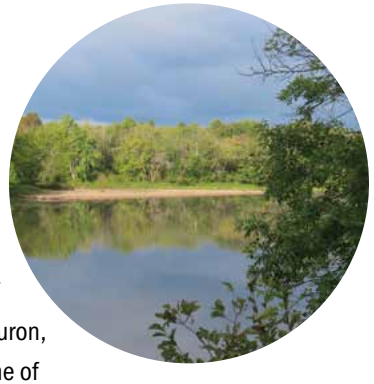
Thomson later described the journey as his favourite canoe trip — even though it ended with a close call. He capsized in whitewater rapids northeast of Dunns Valley and summoned a farmer for a ride to the North Channel. The only legacy of Thomson's 1912 journey is a painting of the Bruce Mines waterfront. The rest were likely lost to the river — another lesser known Thomson mystery. Contemporary artist Andie Trepanier's creative rendering of Thomson's adventure (pages 4-5) deepens my intrigue for this wonderful place.

Watershed boundaries are organically defined by nature. In Central Algoma these include the Great Lakes, inland lakes, rivers, wetlands, forests and agricultural lands. These "ribbons of blue" are the foundation of our economies, communities, recreation and aesthetics. Our challenge in ensuring they continue to provide inspiration for residents and visitors alike is to recognize that development must be balanced by conservation. This entails the stewardship of natural areas, restoring shorelines and reducing pollutants, with an underlying recognition that watersheds are our homes.

Chuck

Chuck Miller
CAFC Chairperson

What is a Watershed?

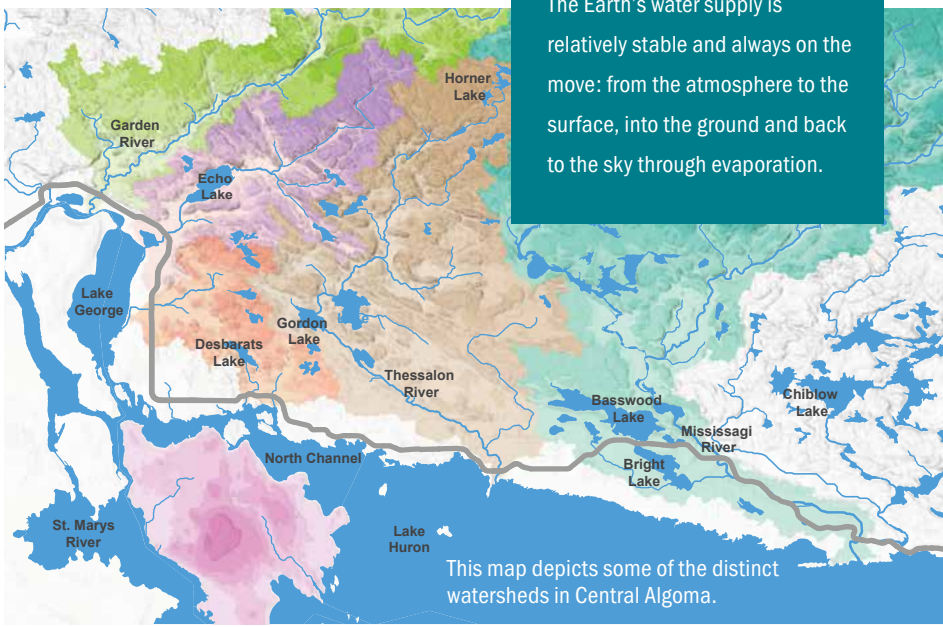


Water defines Central Algoma.

A watershed is an area of land that channels precipitation and runoff into a common body of water. Whether it's a freshwater sea like Lake Huron, a lengthy river corridor like the Mississagi, or one of thousands of tiny ephemeral streams, every body of water is linked to a watershed, which can be defined at various scales, like a family tree.

Surface water in Central Algoma is ultimately destined for the Atlantic Ocean, via the Great Lakes. Lake Huron is fed by inland waterways like the Garden, Echo and Thessalon rivers. Because each of these large rivers is fed by numerous tributaries, each also represents its own distinct watershed at a finer scale. With natural boundaries dictated by the lay of the land, watersheds provide unique glimpses into a region's ecosystems, economies and more.

The Earth's water supply is relatively stable and always on the move: from the atmosphere to the surface, into the ground and back to the sky through evaporation.



This map depicts some of the distinct watersheds in Central Algoma.

Gone With the Flow

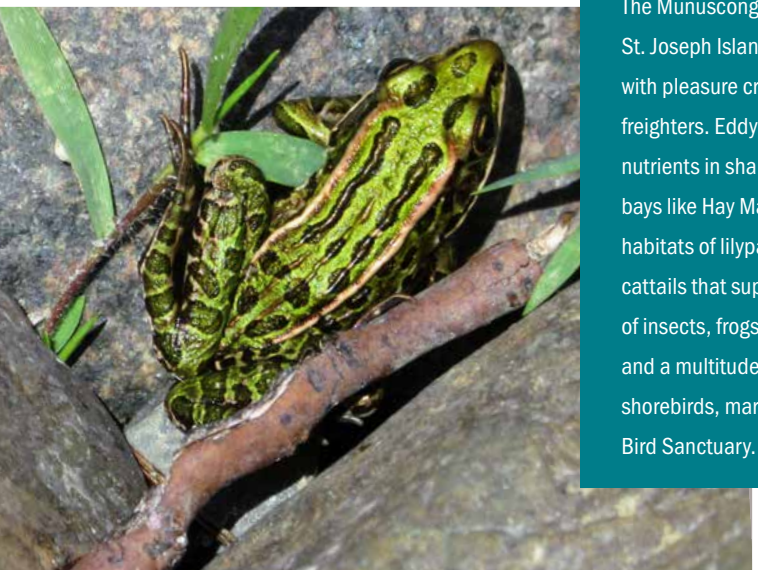
Watersheds shape the landscapes of Central Algoma

Heritage River

The St. Marys has rich cultural and natural histories.

The St. Marys River is an aquatic highway. It remains central to Indigenous cultures, was vital to European exploration and the fur trade, factored pivotally in the War of 1812 and attracted early settlement. It now spans the international border and underpins the modern economy as a link in the St. Lawrence Seaway. The St. Marys River has been radically altered by hydroelectric development, urbanization and industry; yet resilient ecosystems and restoration efforts have upheld and recovered its prolific biodiversity.

The St. Marys River is best known for the lengthy cascade that marks the outflow of Lake Superior. Diverted into power canals and carved into locks, the rapids are a fraction of what they once were. But cold, oxygenated water, blending with warmer, still water, drives ecosystems downstream. The river splits between many islands, widens into the shallow expanse of Lake George, and passes through hourglass channels once again before merging with Lake Huron at St. Joseph Island.



The Munuscong Channel south of St. Joseph Island buzzes and hums with pleasure craft and massive freighters. Eddying currents gather nutrients in shallow, sandy back bays like Hay Marsh, creating habitats of lilypads, reeds and cattails that support nurseries of insects, frogs and toads, fish and a multitude of ducks and shorebirds, marking a Migratory Bird Sanctuary.

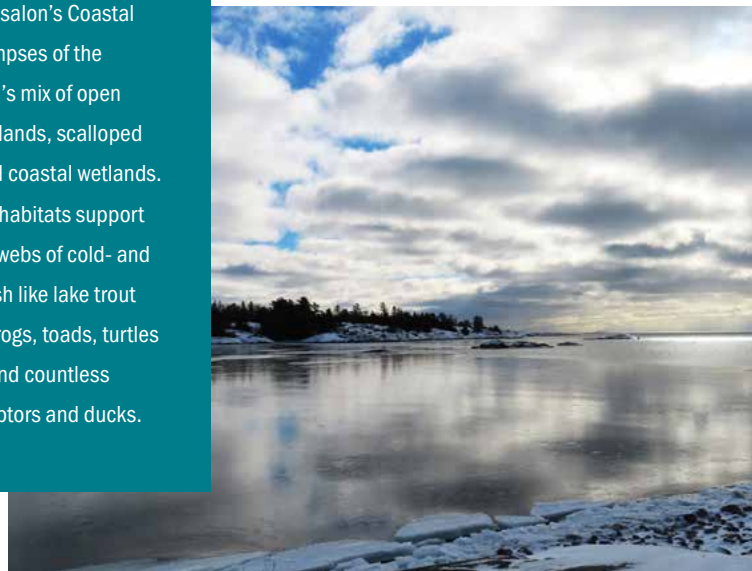
A Lake Within

The North Channel spans a diverse, glacier-shaped geography.

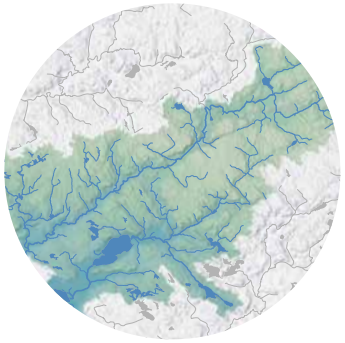
Central Algoma abuts the western half of the North Channel, a 300-km-long lobe of Lake Huron that measures 30 km at its widest point. The waters we recognize today have only existed for 4,000 years, taking shape as the land rebounded from the weight of retreating glaciers. The North Channel is best defined as a lake within a lake, with a multitude of islands, back bays and coastal wetlands in nearshore areas contrasting starkly with Lake Huron's open waters.

The North Channel receives water from Lake Superior via the St. Marys River. Central Algoma waterways contribute lesser volumes, yet the characteristics of each inflowing river shape the North Channel's ecosystems in profound biological, chemical and physical ways. Sediments transported by the Mississagi River create shifting nearshore islands west of Blind River; and the Echo River feeds nutrients into the marshes of Lake George, enhancing biodiversity. Each smaller, contributing watershed leaves its mark.

A hike on Thessalon's Coastal Trail offers glimpses of the North Channel's mix of open water, rocky islands, scalloped shorelines and coastal wetlands. These diverse habitats support intricate food webs of cold- and warm-water fish like lake trout and walleye; frogs, toads, turtles and snakes; and countless shorebirds, raptors and ducks.



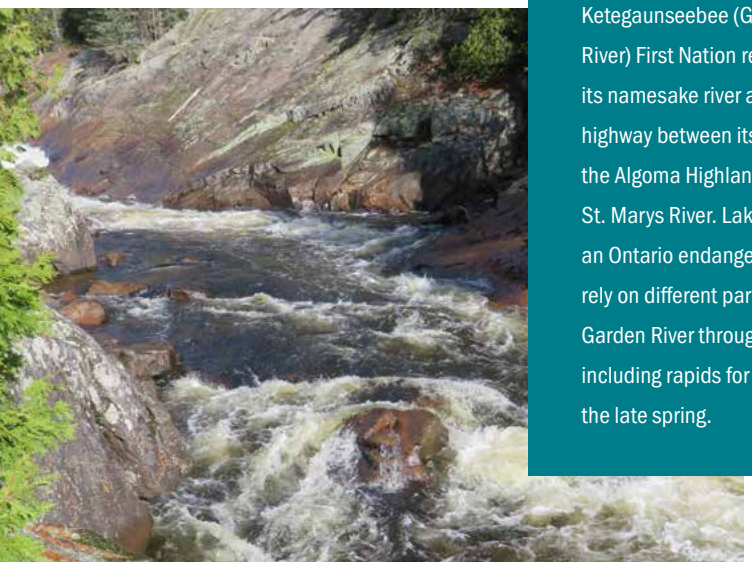
Fast-flowing Rivers



The Garden and Echo are turbulent tributaries of the St. Marys.

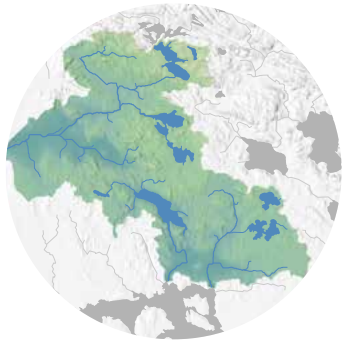
Like many Central Algoma waterways, the Garden and Echo rivers originate in rocky Canadian Shield highlands. The upper sections of these rivers are narrow and steep, with alternating cascades and pools. The turbulent flow adds oxygen to the water, creating ideal conditions for brook trout.

Forested shorelines along the Garden River provide important travel corridors for wildlife including moose and wolf, allowing these wide-ranging species to move between pieces of larger, intact habitat. Large wetlands bookend the course of the Echo River, which flows from the remote, sphagnum-dominated fens of the Stuart Lake Wetland Conservation Reserve to the marshes, shrub swamps and wet meadows at Echo Bay, on the St. Marys River. These diverse habitats contribute to a renowned birding hotspot.



Ketegaunseebee (Garden River) First Nation recognizes its namesake river as a watery highway between its origins in the Algoma Highlands and the St. Marys River. Lake sturgeon, an Ontario endangered species, rely on different parts of the Garden River throughout the year, including rapids for spawning in the late spring.

Streams in Glacial Lakebeds



A trio of waterways flows through agricultural areas.

Just north of Highway 17, Bar River, Stobie Creek and Desbarats River flow lazily across flat terrain once submerged by glacial lakes. The area's rich soils support family farms and cattle pastures. To this day, some fields are still worked with horses, while others have been converted to larger scale, monoculture seed crops like soy beans. The area has a pastoral aesthetic that's enhanced by farmers' markets and small communities like Bar River and Desbarats. Open fields and abundant forage also make it an important staging area for migratory birds.

Flat topography allows these rivers to flood in the spring, and soil substrate means they're prone to carrying eroded sediments. Wetlands at the river mouthes serve as sponges to absorb nutrients, creating rich aquatic ecosystems with conditions far different from the more exposed waters of the North Channel.

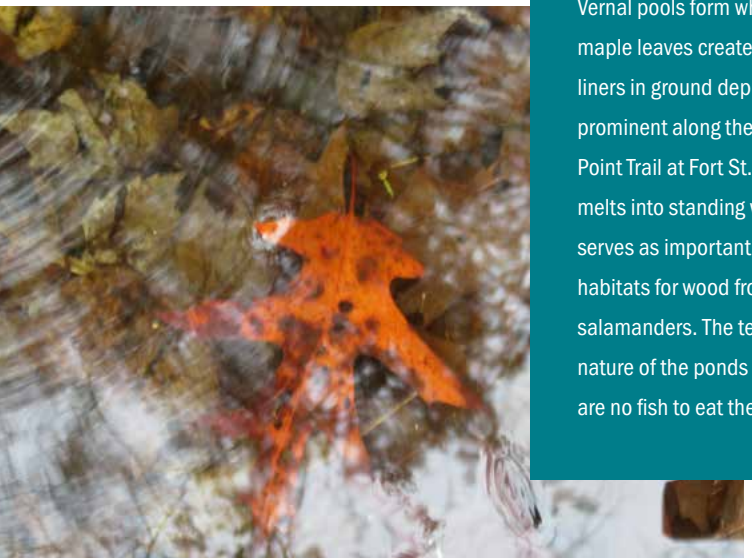
Launching a canoe or kayak at Desbarats provides access to coastal wetlands around the mouths of Desbarats River and Stobie Creek. These areas teem with birds, including American Bitterns, Great Blue Herons and Belted Kingfishers— species that thrive around shallow waters. Paddling through bullrushes and reeds reveals the insects, amphibians and minnows that are critical to the food web.

Island Watersheds

Topography, till and limestone direct groundwater on St. Joseph Island.

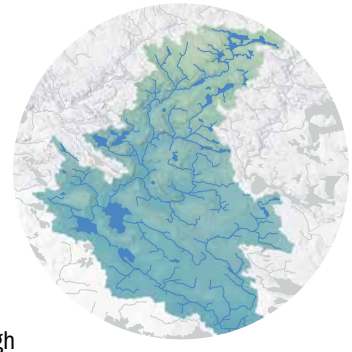
St. Joseph Island has limestone bedrock, compared to much older Canadian Shield geology of the mainland. The high point of land known locally as "the Mountain" is a deposit of sand and gravel pushed into its current location by glaciers. The island's topography and soil characteristics, combined with its relatively small geography, set the stage for lakes and streams primarily fed by groundwater. Four small yet distinct waterways flow from higher elevation areas like spokes on a wheel, fed by subsurface seeps and springs.

Mature forests that support maple syrup production indicate places with well-drained soils and a deeper water table. Meanwhile, cedar-dominated wetlands occur where groundwater meets the surface. These areas, including the headwaters of the Koshkawong River, provide winter habitat for white-tailed deer. Hay Marsh at the southwest corner of St. Joseph Island has its own watershed of creeks feeding into a sprawling coastal wetland.



Vernal pools form where oak and maple leaves create waterproof liners in ground depressions, prominent along the LaPointe Point Trail at Fort St. Joseph. Snow melts into standing water, which serves as important breeding habitats for wood frogs and salamanders. The temporary nature of the ponds means there are no fish to eat the eggs.

River in the Outwash

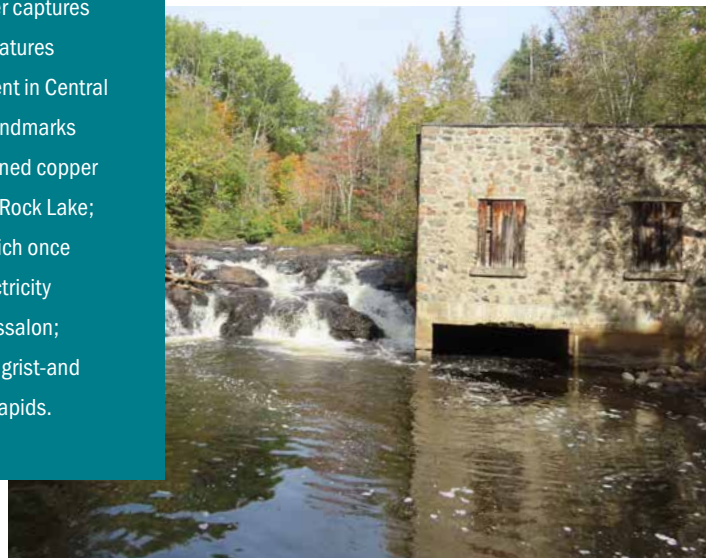


After rocky beginnings, the Thessalon River flows through sandy plains.

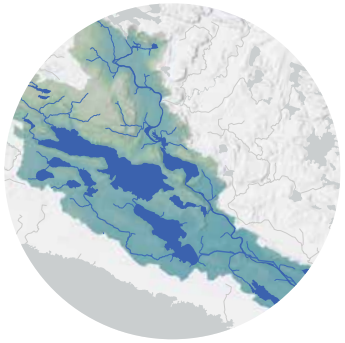
The Thessalon River starts north of Carpenter Lake, flowing off the rugged Penokean Hills through Rock, Gordon and Ottertail lakes. At Rock Lake the spectacular cliffs and topography of the river's headwaters give way to glacial outwash with far less relief. From Rydal Bank the river follows a straight course along a geological fault, bisecting the well-drained, sandy soil of the Kirkwood Forest, where there are few other waterways.

Cool groundwater seeping from the sands supports resilient brook trout on the Thessalon River. These cold water specialists need clear, well-oxygenated water to survive. Sandy sediments carried by the lower Thessalon River add to the long beaches stretching east from its mouth on the North Channel.

The Thessalon River captures the ways natural features shaped development in Central Algoma. Historic landmarks include an abandoned copper processing mill on Rock Lake; the Shaw Dam, which once provided hydroelectricity for the town of Thessalon; and waterpowered grist-and sawmills at Little Rapids.



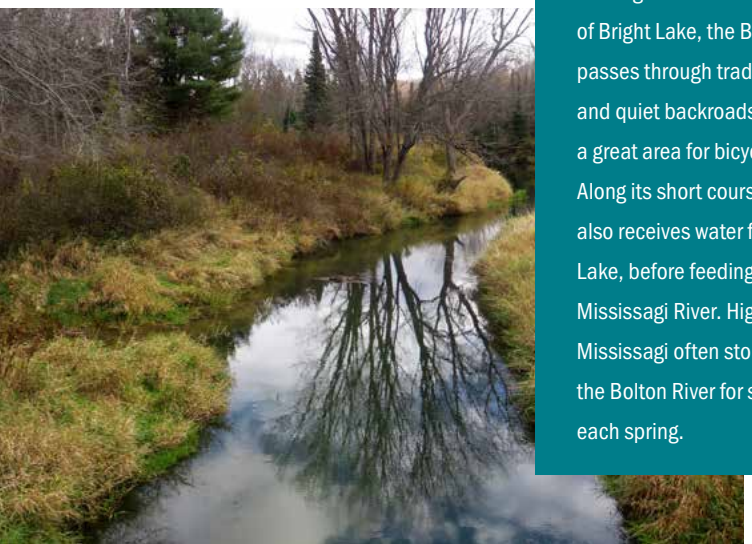
A Tale of Two Lakes



Though connected by water, Basswood and Bright are very different lakes.

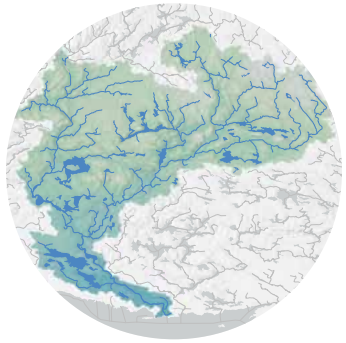
Highway 17 follows a glacial beach ridge between Basswood and Bright lakes. The highway forms a dividing line between Basswood's deep, clear, oxygen-rich waters and the shallower and siltier expanse of Bright Lake. The north shore of Basswood Lake, and its headwaters in the Byrnes Lake-White Birch Conservation Area, are rocky and undeveloped, habitat for wolves, white-tailed deer, lynx and bobcat. Basswood is a headwater lake with few inflowing streams, bedrock geology, an average depth of 38 m and minimal nutrients.

Harris Creek tumbles from Basswood Lake beneath the highway to Bright Lake. Bright is a large, shallow lake, fed by numerous tributaries, including the Pickerel River, meandering through agricultural lands. An average depth of only 5 m allows Bright to warm quickly. Sunlight penetrates the water, supporting emergent vegetation and fish habitat. These characteristics make large, shallow lakes more prone to environmental changes, such as algae blooms.



Flowing out the southeast corner of Bright Lake, the Bolton River passes through traditional farms and quiet backroads, making this a great area for bicycle touring. Along its short course the Bolton also receives water from Dean Lake, before feeding into the Mississagi River. High water on the Mississagi often stops the flow of the Bolton River for several days each spring.

Big River Delta

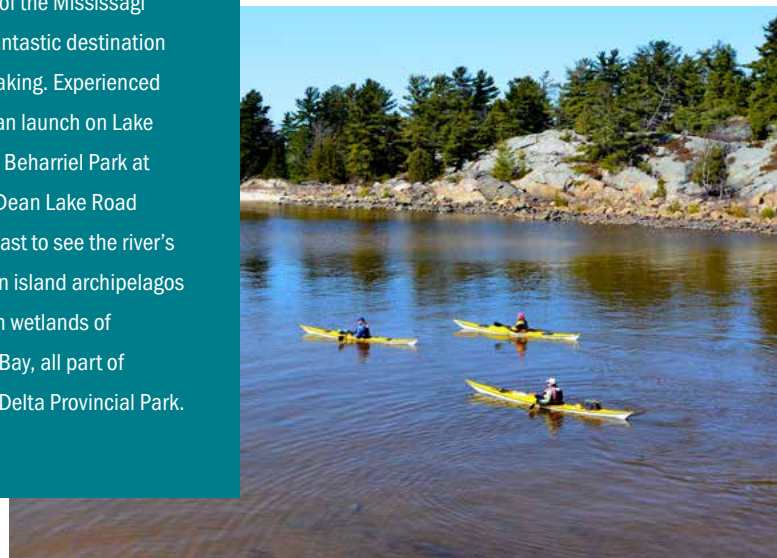


Mississagi sediments form shifting islands at the North Channel.

Only a short segment of the Mississagi River, one of Ontario's largest waterways, touches Central Algoma. The broad, smooth-flowing river east of Iron Bridge is the culmination of a 340-km river starting far to the north. Like the St. Marys River, the Mississagi is an important travelway: for Indigenous people, fur traders, early 20th century icons like Grey Owl (Archibald Belaney), an early conservationist and nature writer, and artist Tom Thomson — as well as modern-day canoe trippers.

Grey Owl called the Mississagi a "king among rivers" for its length, powerful cataracts and majestic valley. Today, four dams and reservoirs harness the Mississagi River's currents, contributing to fluctuating water levels visible to motorists on Highway 17. Near the mouth, permeable riverbanks become saturated and slump into the river. These sediments settle into a delta of shifting and permanent islands at Lake Huron, with separate channels resembling a bird's foot.

The mouth of the Mississagi River is a fantastic destination for sea kayaking. Experienced paddlers can launch on Lake Huron from Beharriel Park at the end of Dean Lake Road and head east to see the river's influence on island archipelagos and the rich wetlands of Mississagi Bay, all part of Mississagi Delta Provincial Park.



Protecting Water's Endless Journey

Simple actions make big differences in preserving our home.

Watersheds deliver essential services for humans and nature alike, including clean water, habitats to support biodiversity and natural resources for economic development. Protecting ecological integrity, reducing pollution and other human impacts to the environment, and sustainable resource management are duties we should all rally around. Rural or urban, farmer or cottager, we all live in a watershed — and we are all responsible for keeping Central Algoma healthy.

Protect Biodiversity

Preserving shorelines, wetlands and woodlots maintains productive habitats for animal movement, foraging and breeding. Planting native vegetation rather than exotic ornamental varieties, even in urban settings, attracts pollinators like bees and butterflies. This results in a cascade of positive effects, including more resilient, drought-tolerant plant communities and a greater variety of songbirds.

Address Climate Change

Dedicating more time to local travel and supporting local farmers are good ways to reduce emissions to mitigate climate change. We can adapt with updated floodplain mapping in watersheds. Rediscovering "old ways" like clotheslines, food preservation and backyard agriculture is both rewarding and good for the climate.

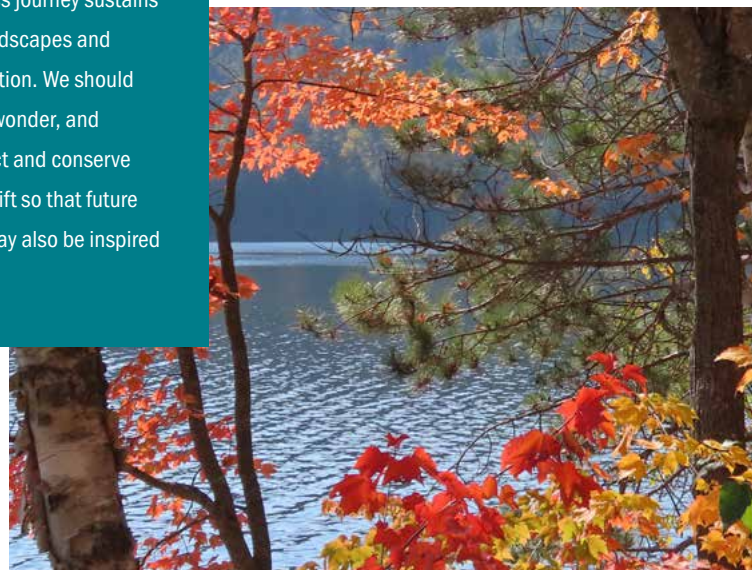
Report Invasive Species

Invasive species like Eurasian milfoil, emerald ash borer and European common reed outcompete native species, greatly reducing biodiversity. Clean your boat thoroughly, don't move firewood, become familiar with identifying invasive species and report any sightings to organizations like the Invasive Species Centre (invasivespeciescentre.ca) or EDDMapS (eddmaps.org).

Reduce Pollution

Investing in modern septic systems, installing livestock fences and protecting and rehabilitating natural buffers keep nutrients out of surface water. This prevents toxic algae blooms and protects waterways. Dispose of chemicals properly and choose less toxic products to keep chemical contaminants out of the environment.

Water's endless journey sustains life, carves landscapes and shapes civilization. We should all cherish its wonder, and strive to protect and conserve this precious gift so that future generations may also be inspired and thrive.



About Us

The Central Algoma Freshwater Coalition is a not-for-profit organization dedicated to keeping Central Algoma a place to live, swim, drink, fish and play for generations to come. Watersheds are central to the regional sense of place, and conserving them is a key part of our mission.

We are committed to working with residents, cottagers, businesses, organizations and municipalities to become good stewards of our natural communities. Let's work together to protect freshwater! We need your involvement to effectively engage the wide-ranging and sometimes competing interests of a vibrant Central Algoma. A diverse community of members sustains us — and ultimately helps to achieve shared goals.

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