Detroit River Canadian Cleanup

2023-2024 Annual Report

A Message from the Detroit River Canadian Cleanup Public Advisory Council (PAC)

Tom Henderson, Chair, Public Advisory Council

The PAC has been involved in several Detroit River issues during the past year. In November, a letter was sent to the Michigan Department of Transportation supporting the Windsor City Council's objection to the continued use of the Ambassador Bridge to transport banned corrosive and flammable materials across the river once the Gordie Howe Bridge, designed for this purpose, is operational. The Michigan Department of Transportation responded advising a decision will be made in May 2025.

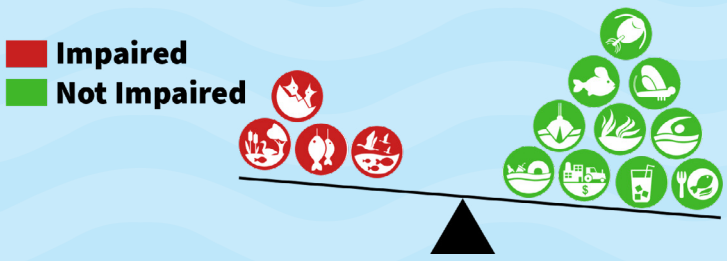
Last spring, a PAC member discovered a huge illegal dumping on the banks of the Little River in Little River Dragonfly Park. City of Windsor officials were contacted, an investigation initiated, and they successfully located the responsible party who was ordered to remove the dumped materials.

On December 29, 2023, a contaminant spill was discovered near the mouth of the Little River. Ian Naisbitt of the Little River Enhancement Group was invited to observe cleanup efforts. The spill was contained.

The PAC also supported the Governor of Michigan and environmental groups in their campaign to shut down the 70-year-old Enbridge Line 5 pipeline. The Line 5 pipeline is transporting crude and natural gas beneath the Straits of Mackinac and a break in the pipeline would put at risk 700 miles of downstream shoreline and affect drinking water throughout the lower lakes, including the Detroit River.

Lastly, the PAC would like to recognize and thank Jackie Serran, the RAP coordinator and her assistant, Laura Neufeld, for their excellent work in supporting the DRCC.

The Detroit River Canadian PAC is a group of citizen volunteers and representatives from non-government organizations dedicated to improving the health of the Detroit River ecosystem. If you are interested in getting involved in the PAC, please contact the Remedial Action Plan Coordinator at postmaster@detroitriver.ca.



3
BUI related reports completed

Hosted or attended 10 in person outreach events and engaged over 1,500 people!

1,760
Trees planted in the Detroit River watershed by our partners

I ♥ DR
www.detroitriver.ca

665 kg of trash removed from the Detroit River watershed

Overview of Beneficial Uses

Under the 1987 Amendment to the Great Lakes Water Quality Agreement, 14 "beneficial uses" were identified and used to establish 43 Areas of Concern (AOCs) within the Great Lakes. These beneficial uses generally include recreational, ecological, and economic benefits that come from a healthy aquatic environment. When the quality of the aquatic environment is degraded and cannot support the intended beneficial use due to local sources of pollution, they are designated as "impaired" and cleanup actions are identified to restore the beneficial use. To date, the DRCC has successfully restored 9 beneficial uses to a "not impaired" status and as of March 2024, there are four beneficial use impairments (BUIs) remaining. They are:

- BUI#1 - Restrictions on Fish Consumption
- BUI#3 - Degraded Fish and Wildlife Populations
- BUI#5 - Bird or Animal Deformities or Reproductive Problems
- BUI#14 - Loss of Fish and Wildlife Habitat

Focus: Beneficial Use Status Reports

The following status reports were completed in 2023. These will be reviewed by the Monitoring and Research Work Group to determine next steps for the following Beneficial Use Impairments (BUIs).

- Degraded fish populations (BUI #3); and
- Bird or animal deformities or reproductive problems (BUI #5)

Restrictions on Fish Consumption (BUI 1)

The restrictions on Fish and Wildlife Consumption beneficial use for the Detroit River is designated as impaired for fish. The main driver for this impairment is chemical contamination in the waters and sediment of the Detroit River. Researchers from the Great Lakes Institute for Environmental Research (GLIER) at the University of Windsor have almost completed assessing this beneficial use. They are currently incorporating 2023 fish consumption data for the Detroit River into the analysis. They are using a 4-tiered framework to compile and interpret lines of evidence to assess the not impaired targets set by the DRCC for this BUI. The tiers for assessment include:

- Do AOC consumption restrictions meet accepted guidelines?
- Are AOC conditions similar to those at comparable reference sites?
- Have there been improvements in priority chemical contamination in the AOC?
- Are there any additional local remedial actions that can be undertaken that would help to remove this impairment?

A final draft of the report summarizing the findings of the analysis for the fish consumption portion of this BUI is expected in late 2024.

Degraded Fish Populations (BUI 3)

In 2022, the Ontario Ministry of Natural Resources and Forestry completed an assessment report on fish populations recommending a “not impaired” status as scientific data demonstrated the fish community is diverse, healthy, and self-sustaining. The “not impaired for fish” status recommendation report was reviewed and accepted by the DRCC Steering and Implementation Committee in June 2023. In late 2023, public information sessions and engagement activities were conducted, including an Open House, and no concerns were identified with the proposed change in status. The status recommendation report is currently undergoing Indigenous engagement, which is expected to be completed later in 2024.

Bird or Animal Deformities or Other Reproductive Problems (BUI 5)

In June 2023, the DRCC Steering and Implementation Committee supported the “not impaired” status recommendation for this BUI based on the results of several wildlife studies conducted between 2008–2019. The studies evaluated the prevalence of deformities and reproduction problems in birds (colonial waterbirds and tree swallows) and aquatic wildlife (turtles and frogs) and study findings did not reveal high deformity rates or problems with reproduction due to exposure to contaminants in the aquatic environment. In late 2023, the status recommendation report underwent public engagement and the DRCC hosted an in-person Open House to solicit the public’s opinion on the proposed change in status for this beneficial use. The report is currently undergoing Indigenous engagement. Once complete, the report will go for review by our American counterparts and then be submitted to the Canadian and Ontario governments for official change in status from ‘impaired’ to ‘not impaired’.

Focus: Fish and Wildlife Habitat

The Loss of Fish and Wildlife Habitat (BUI 14) has four delisting criteria to achieve before the BUI can be considered "not impaired". One of the four criteria, pertaining to shoreline restoration, has been achieved through the completion of several shoreline restoration projects and the development of a long-term restoration strategy. Significant progress has been made advancing the restoration goals of the other three. For example, to achieve the restoration goals pertaining to coastal wetlands and riparian/aquatic habitat, plans for two habitat projects and an evaluation of wetland coverage are underway. Modeling to identify fish habitat suitability and assess habitat gains, is also in progress. To assess progress towards achieving the restoration goals for terrestrial habitat, Essex Region Conservation Authority (ERCA) completed a detailed analysis to identify priority terrestrial habitat and terrestrial corridors within the AOC.

Coastal Wetlands: Collavino Wetland Protection and Restoration

In October 2022, the Collavino family donated 60.7 ha (150 acres) of ecologically sensitive wetland habitat for protection in perpetuity by ERCA. The property is a mix of wetland and floodplain near the mouth of the Canard River in Amherstburg. Since 2022, a restoration plan has been successfully implemented by ERCA to restore the health and function of this wetland. The restoration started with dyke repairs, implementing infrastructure to manage water levels, and a multi-year Phragmites management strategy which included a prescribed burn and a water draw down to expose the native aquatic plant seedbed. This year, a generator was purchased to support the operation of the pump that manages water levels within the wetland.

Further, a biocontrol was released at the wetland to control Phragmites within the wetland. Biological control or "biocontrol" refers to the use of living organisms which suppress an introduced pest. Biocontrol can become self-sustaining as the organisms reproduce and attack Phragmites through space and time. Because of the self-sustaining nature, biocontrol can be very cost effective even at very large spatial and temporal scales.

In May 2023, ERCA released two species of moths at the Collavino wetland *(A. neurica and L. geminipuncta*). As larvae, these moths bore into the stem of Phragmites and eat the tissue, causing damage to the plant. Preliminary research has shown Phragmites that have been hosts for the moths are shorter and rarely produce seed, reducing spread. Once the moths establish, a reduction of Phragmites should follow, allowing native vegetation to re-establish. This return of native vegetation in wetlands will improve habitat quality, a goal for wetland habitat under BUI 14 - Loss of Fish and Wildlife Habitat.

Coastal Wetlands: Detroit River Habitat Project Planning

The Detroit River Canadian Cleanup continues working with property owners on the river to plan two potential habitat projects. The first project proposes to protect the River Canard wetland complex by repairing the finger dyke that has been breached due to high water levels and freighter waves in the area. The finger dyke protects the biggest wetland complex and largest wild celery beds in the Detroit River from the brunt of riverine forces. The wild celery beds provide an important food source for many species of local and migrating waterfowl.

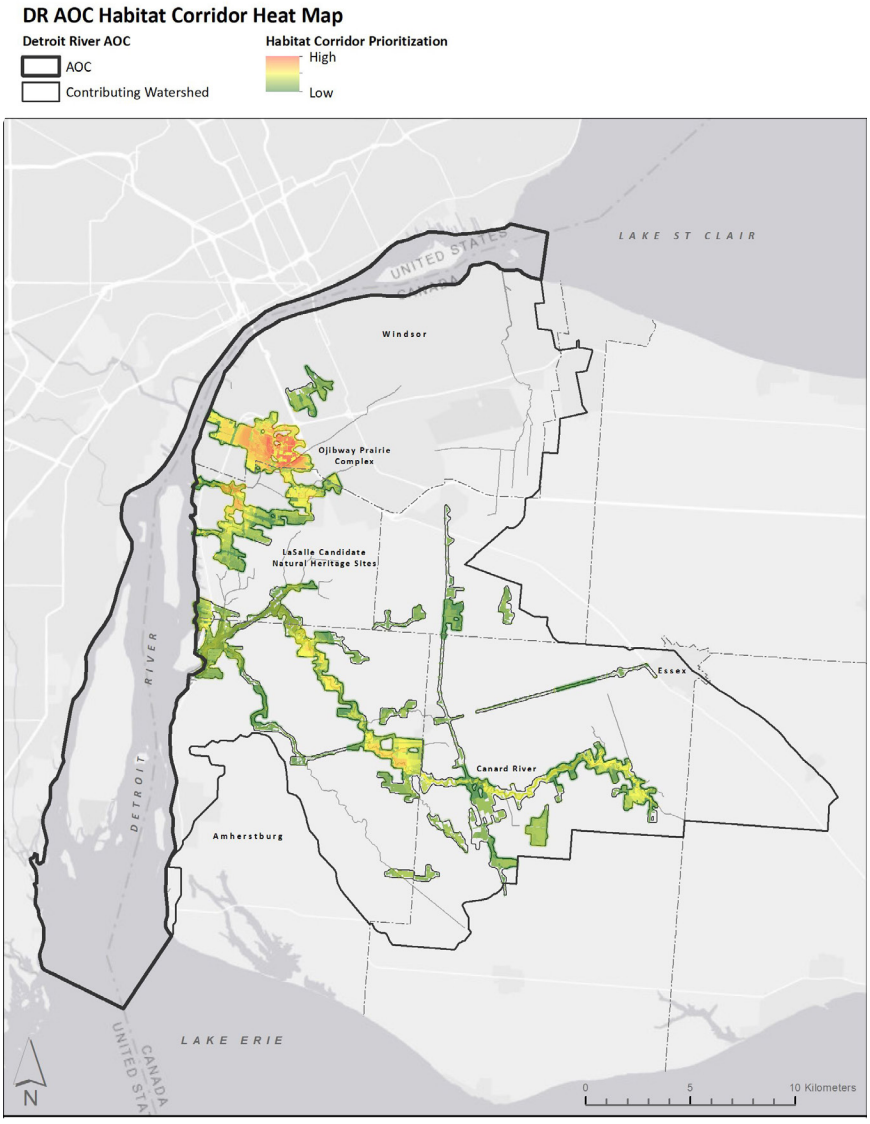
The other project is the Fighting Island wetland re-creation project and proposes the construction of 6 sheltering islands, similar to Peche Island, to create a calm water embayment. Using a model developed by the Department of Fisheries and Oceans that can predict losses and gains in fish habitat as well a fish community response, this project is predicted to provide an overall fish habitat gain as an increase in the diversity of submerged aquatic vegetation is expected.

Historically, an extensive cattail bed existed along the south shore of Fighting Island. While submerged aquatic vegetation is beneficial to fish, emergent vegetation, such as cattails, is beneficial to aquatic wildlife (marsh birds, in particular). Habitat outcomes will be modeled using a computer model from Environment and Climate Change Canada to predict emergent vegetation changes over time to provide a better sense of habitat outcomes. This will allow the project planning team time to consider project enhancements to maximize habitat benefits for fish and wildlife.

To date, engineered drawings for both projects have been completed and the permit application for the Fighting Island project has been prepared. Priorities for 2024-25 include preparing permit applications for the dyke restoration project, updating project costs, and creating project implementation agreements with the landowners.

An application to fund these projects to the federal Great Lakes Freshwater Ecosystem Initiative (formerly Great Lakes Protection Initiative) has been submitted by ERCA and is under review by Environment and Climate Change Canada. Pending funding, construction for the Canard River dyke repair project is scheduled for 2025-26 and the re-creation of the open water wetland at Fighting Island is scheduled for 2026-27.

Terrestrial Habitat: Mapping Exercise Prioritizes Habitat



Building upon 2022's in-depth mapping exercise undertaken by ERCA to map 20 years of habitat restoration efforts within the Detroit River watershed, ERCA completed additional GIS work to identify significant, high priority, terrestrial habitats. The project also identified key terrestrial corridors and evaluated their effectiveness.

As expected, natural features associated with the Ojibway Complex are the most significant (i.e., highest priority) habitats for protection, enhancement, and restoration as they harbour the greatest number of rare species. Other priority habitats include the Candidate Natural Heritage Sites in the Town of LaSalle and the large natural areas associated with the Canard River. Habitat connections to the Detroit River (existing and potential) include the Ojibway Shores property, and riparian areas along Turkey Creek, the Marentette Drain, and the Canard River. This analysis provided the DRCC with excellent information to assess progress towards the terrestrial habitat restoration goal for the AOC. It also identified habitat restoration opportunities to further enhance connectivity between the Detroit River and the adjacent terrestrial habitats.

Focus: Monitoring and Research

The Monitoring and Research Work Group helped coordinate the following activities during 2023/24.

Identifying Landscape Limitations for Marsh Birds

To support the assessment of the wildlife populations, Environment and Climate Change Canada (ECCC) partnered with Birds Canada to identify factors that are adversely impacting the diversity and abundance of marsh birds in the Detroit River. The purpose of this research project was to understand local landscape limitations for marsh birds and identify possible remedial actions. Results of the analyses identified attractive wetland habitat features for marsh birds. They found that marsh birds prefer more cattail and native vegetation, more emergent vegetation and more marsh nearby and in the surrounding landscape. The recommended management actions include controlling Phragmites and encouraging cattail establishment, expanding emergent vegetation and decreasing trees and shrubs in existing wetlands, and increasing marsh extent and decreasing urban land use in the surrounding areas. This project was extremely informative and confirmed the importance of habitat creation and restoration to support aquatic wildlife populations.

Post Construction Monitoring – Peche Island

From 2020-2022, a revetment on the northeast shore and 9 sheltering islands on the north side of Peche Island were constructed to protect the island from further erosion, provide fish habitat behind the islands, and promote the establishment of submerged aquatic vegetation (SAV). The Department of Fisheries and Oceans Canada assessed the establishment and use of fish habitat behind the sheltering islands in 2021 and 2023. Findings show:

- An increase in mean percent SAV cover from 36% pre-construction to 59.5% in 2021 and 52% in 2023.
- In 2021, 34 species (3,347 fish total) were caught, 19 native species that were not captured in the previous surveys. In 2023, 31 species (2,352 fish total) were caught, 16 of which were native and not captured in previous surveys, indicating an increase in species richness.
- Four and one Species at Risk species were caught in 2021 and 2023, respectively.
- Both juvenile and adult fish were using the newly created fish habitat.

Based on this research, the newly constructed sheltering islands have positively affected fish by improving habitat suitability around Peche Island.

Next Steps

The DRCC's Habitat Work Group will:

- Support the completion of permits applications for the two habitat projects;
- Support the coordination of a site visit to Fighting Island with partners of the Work Group; and
- Support Work Group partners to complete modeling and analysis necessary to evaluate progress towards the habitat delisting criteria.

The DRCC's Monitoring and Research Work Group will:

- Conduct marsh bird monitoring at Collavino and baseline marsh bird and vegetation surveys at Fighting Island;
- Review the findings of ERCA's analysis on terrestrial corridors, habitat and function;
- Implement next steps based on report by Birds Canada on landscape influences on marsh bird communities; and
- Support the Habitat Work Group with completing the planning phase of two habitat projects.

Focus: National Urban Park and the Ojibway Prairie Complex

The Ojibway Prairie Complex is a collection of six closely situated natural areas within the City of Windsor and is often referred to as a "necklace of green" moving from the Detroit River shoreline across the landscape. The City of Windsor administers the Ojibway Nature Centre, Ojibway Park, Tallgrass Prairie Heritage Park, Black Oak Heritage Park, Spring Garden Natural Area and Oakwood Natural Area. Many of these sites are designated as Ojibway Prairie remnants and are Areas of Natural and Scientific Interest (ANSI). The Ojibway Prairie Provincial Nature Reserve is comprised of more than 365 hectares of prairie and savanna in Windsor's west end and is strikingly diverse in vegetation, animal life and unique habitat types such as forest, wetland, savanna and prairie.

In August 2021, the Government of Canada announced interest and support to the City of Windsor to explore the possibilities of turning some of the city's most ecologically sensitive areas within the Ojibway Prairie Complex into a National Urban Park. In 2022-23, progress was made towards making this area a National Urban Park. The pre-feasibility phase of the national urban park selection process was completed for the Ojibway National Urban Park in March 2023. During this process, Parks Canada sought out interest and support from local organizations, partners, and governments, co-developed an engagement approach with Indigenous partners, identified study areas for the national urban park, conducted initial stakeholder reach and site-specific studies, and explored ideas for vision, boundary, and governance. Now that this process is complete, the potential national urban park moves into the planning process.

Local member of Parliament, Brian Masse from Windsor-West, put forward a bill (in 2022) that would legislate the Ojibway Complex as a National Urban Park. This bill (C-248) has passed the House of Commons and as of the end of March 2024 is sitting in Senate awaiting its second reading.

In May 2022, the Canadian government announced that Ojibway Shores, the last remaining natural property on the Canadian shoreline of the Detroit River, was transferred from Transport Canada to Parks Canada. This transfer meant that the untouched parcel of land can now be preserved for its environmental significance and be included as part of the proposed National Urban Park. The protection of this property from development is critical to protecting existing natural terrestrial corridors between the river and surrounding lands, a goal of the DRCC. The Detroit River Canadian Cleanup Public Advisory Council has long advocated for the protection of this property and are pleased to see that this has finally been achieved. In addition to the acquisition of Ojibway Shores, the Government of Ontario, Town of LaSalle, and other partners including Hydro One, have committed to transferring lands to Parks Canada should the National Urban Park become reality. We look forward to following the progress of designating this important area as an Urban National Park, given its environmental significance to the Detroit River.

Focus: Community Outreach

The Detroit River Canadian Cleanup (DRCC) participated in 10 outreach events between the spring of 2023 and end of winter 2024. Through these efforts, thousands of individuals celebrated ongoing restoration efforts in the Detroit River AOC, learned about Detroit River history, projects, the DRCC program, and more!

Detroit River Cleanups

The DRCC hosted two large scale litter cleanups on the Canadian side of the Detroit River in April 2023 with numerous partners. The cleanups took place along the Little River and in Sandwich West Windsor located within the Detroit River Watershed. Over 100 volunteers across Windsor Essex came together to remove a total of 1,146 lb or 520 kg of litter in total from the two locations.

Partners included the Windsor Port Authority, City of Windsor, Rotary Club of LaSalle Centennial and their Youth Interact, 35th Tecumseh Cubs (Scouts), HMCS Hunter / NCSM Hunter, University of Windsor Alumni, Caesars Windsor, Little River Enhancement Group, Detroit River Coalition, and many community volunteers!

Essex Region Conservation Authority (ERCA) also hosted a corporate engagement clean up event in September 2023 with volunteers from KPMG Windsor. Together, volunteers and ERCA removed another 320 lb or about 145 kg (320 lbs) of litter from Little River, a watershed of the Detroit River.

Community Tree Planting

The Essex Region Conservation Authority hosted five community tree planting celebrations in Spring and fall 2023 in the Detroit River watershed. The large Earth Day community tree planting celebration took place April 2023 at the greenspace between Wyandotte Street East and Florence Avenue in the City of Windsor, where more than 800 volunteers and Green Teams planted over 1500 potted and native seedlings.

In May 2023, community volunteers and partners planted 40 large trees together at Derwent Park. This planting initiative was supported by the Windsor Essex Community Foundation to commemorate the 40th anniversary of the foundation.
In addition, the Town of Amherstburg and the Amherstburg Environmental Advisory Council hosted an Earth Day community tree planting at the Libro Centre where volunteers helped plant 100 large potted native hardwood trees along Big Creek.

The College Avenue Bikeway is greener now due to the tremendous efforts of 20 volunteers who planted 40 native large stock trees in the fall of 2023, increasing the urban canopy and shade in West Windsor. Funding for this initiative was provided by the Gordie Howe International Bridge Community Benefits Plan.

In addition, community volunteers and students from Herman Secondary Academy planted a total of 80 new large stock trees among three Parks in Windsor's Ford City neighbourhood. Partners from the City of Windsor, teachers, and students from Herman Secondary, and volunteers from Walker Aggregates helped make this large tree planting project a great success in the Detroit River watershed.

Detroit River Evening

Many thanks to everyone who joined us for the Detroit River Evening on June 14, 2023, at the Windsor Yacht Club. The DRCC released their updated workplan and annual report highlighting efforts over the past year. Thanks to our guests, John Hartig (UWindsor), Kevin Money (ERCA), and Mike Fisher (Friends of the Ojibway Prairie), who provided updates on the important work being done in the Detroit River Area of Concern by their various organizations. To celebrate the annual meeting, the DRCC also purchased all tickets on the City of Windsor's boat to Peche Island for the day to provide access to Peche Island for the community.

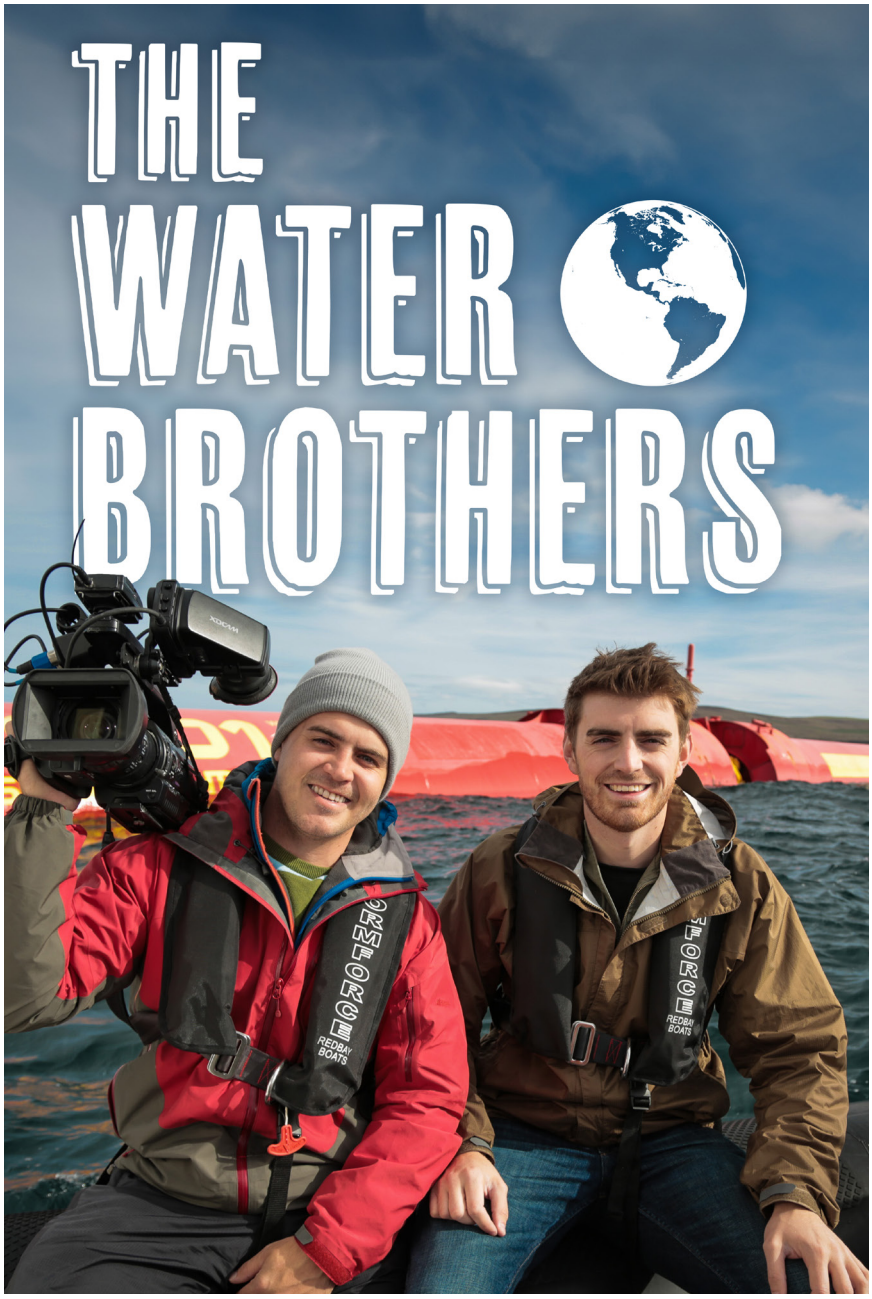
Family Fishing Day

In partnership with Just Fishin' Friends, the DRCC hosted the annual Learn to Fish event on July 7th at Front Road Park in LaSalle. Over 30 participants came to fish (some for the first time!) and learn from expert volunteer anglers. The DRCC provided information to participants about restoration and cleanup projects, statistics on fish populations, and information on how to safely consume fish from the river. Many thanks to everyone who joined us and to all our volunteers from Just Fishin' Friends.

DRCC Presents: The Water Brothers Documentaries

On February 20, 2024, the DRCC hosted a screening of two Water Brothers documentaries, Paving Over Paradise and the Forever Chemicals at Imagine Lakeshore Cinemas. The Water Brothers is an eco-adventure documentary series following brothers as they explore the world, uncovering the most important water stories of our time. Forever Chemicals explores the issue of per- and polyfluoroalkyl substances (PFAS) in our environment which contribute to the water-resistant properties of countless products we use everyday. Paving over Paradise explores wetland loss and restoration in southern Ontario, as about three quarters of the wetlands that once existed in southern Ontario are now gone.

One hundred people came out to watch the free screening and hear from an expert panel at the end of each documentary. Thanks to Dr. Cheryl Murphy (Michigan State University), Abby Hendershott (Michigan Department of Environment, Great Lakes and Energy), and Mark Burrows (International Joint Commission) for sharing their expertise and engaging the audience on PFAS in the Great Lakes. We'd also like to thank Kate Arthur (ERCA), Kathy Jones (Birds Canada) and John Hartig (University of Windsor) for providing great discussion and engaging the audience on wetlands, which are an important local and Great Lakes basin wide issue!



The Detroit River Canadian Cleanup is supported by two main funding agencies – Environment and Climate Change Canada and the Ontario Ministry of Environment, Conservation, and Parks.

Agencies involved in the DRCC include:

- Environment and Climate Change Canada
- Ontario Ministry of Environment, Conservation, & Parks
- Essex Region Conservation Authority
- Ontario Ministry of Natural Resources and Forestry
- Fisheries and Oceans Canada
- Canadian Wildlife Service
- City of Windsor
- Town of LaSalle
- Town of Amherstburg
- UNIFOR Local 200
- Citizens Environmental Alliance
- Essex Field Naturalists' Club
- Windsor Port Authority
- University of Windsor
- Atura Power
- Aamjiwnaang First Nation
- Caldwell First Nation
- Walpole Island First Nation

...and many dedicated citizens like you!

Acronyms

AOC	Area of Concern
ANSI	Areas of Natural and Scientific Interest
BUI	Beneficial Use Impairment
DRCC	Detroit River Canadian Cleanup
ECCC	Environment and Climate Change Canada
ERCA	Essex Region Conservation Authority
GLIER	Great Lakes Institute for Environmental Research
PAC	Public Advisory Council
PFAS	Per- and polyfluoroalkyl Substances
SAV	Submerged Aquatic Vegetation

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