



# Detroit River Canadian Cleanup

2022-2023 Annual Report



## A MESSAGE FROM THE DETROIT RIVER CANADIAN PUBLIC ADVISORY COUNCIL (PAC)

This year has seen long strides in Detroit River progress and the local environment. Development of the Ojibway National Urban Park (ONUP) is moving along nicely as the Windsor Port Authority ceded ten acres of Ojibway Shores and the Province of Ontario turned over its Tallgrass Prairie Reserve to Parks Canada. The House of Commons passed Brian Masse's Bill C-248 with only one dissenting vote. After Senate approval the ONUP should be a reality.

Kudos to the Friends of Ojibway Prairie for being the number one Non-Governmental Organization (NGO) campaigning for the ONUP. Additionally, at the Parks Canada press conference

April 17 the DRCC was cited as one of the important players in advocating for the preservation of Ojibway Shores.

On the U.S. side plans are underway to remove 5.1 million cubic metres of contaminants from the bottom accumulated over many decades of industrialization. PAC sent letters to Michigan legislators encouraging them to secure funds to help the cleanup. The Government of Canada in its 2023 budget allocated \$420 million over ten years for Great Lakes restoration and improvements. Good news for our Detroit River.

Thanks to Paul Drca for his months of service as Interim RAP Coordinator and to Gina Pannunzio for her work as RAP Assistant.

Tom Henderson, Chair  
Public Advisory Council (PAC),  
Detroit River Canadian Cleanup (DRCC)

*The DRCC 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 (RAP) Coordinator at [postmaster@detroitriver.ca](mailto:postmaster@detroitriver.ca).*

## Overview of Beneficial Uses

Under the Great Lakes Water Quality Agreement, 14 "beneficial uses" were identified and used to establish Areas of Concern (AOC) within the Great Lakes. These beneficial uses generally include recreational, ecological, and economic benefits that come from a healthy environment. When the quality of the environment is degraded and cannot support the intended beneficial use,



4

BUI related  
reports received



DRCC 4 virtual  
and 9 in person  
outreach events  
and engaged over  
1000 people!



2

Habitat restoration  
projects completed



[www.detroitriver.ca](http://www.detroitriver.ca)

they are designated as "impaired" and cleanup actions are identified to restore the impairment. If there is insufficient data to make a determination of "impaired" or "not impaired", further assessment (e.g., scientific study) is recommended. As of March 2023, the Detroit River Canadian Area of Concern has four beneficial use impairments (BUIs) remaining, they are:

- BUI#1 - Restrictions on Fish and Wildlife 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



To date, the DRCC has successfully restored 9 BUIs to a "not impaired" status.



## Focus: | Beneficial Use Status Reports

The following status reports were completed in March 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)



## 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”. To facilitate the assessment of these delisting criteria, specific and measurable metrics have been developed for two criteria, including coastal wetland and riparian habitat. The shoreline restoration goals have been achieved with the completion of several shoreline restoration projects and a long-term strategy.







## Peche Island Erosion Mitigation and Fish Habitat Project

In 2022, the final three offshore islands and revetement were constructed, bringing the Peche Island Project to completion. The project created a soft shoreline revetment on the northeast side of the island and nine sheltering islands on the north side. Construction began in October 2020 when four of the nine sheltering islands were constructed. In fall 2021, two additional islands and a portion of the revetment were constructed. In 2022, the final 3 islands were constructed, and the revetment was completed. This was the largest in-water project to date on the Canadian side of the Detroit River.



This project was made possible through funding and cooperation from our project partners - City of Windsor, Environment and Climate Change Canada, Essex Region Conservation Authority, Swim Drink Fish, and the Province of Ontario (Ministry of Natural Resources and Forestry & Ministry of the Environment, Conservation and Parks).



## Collavino Wetland Protection and Restoration

In October 2022, thanks to a generous donation by the Collavino family, 60.7 ha (150 acres) of ecologically sensitive wetland habitat will be protected in perpetuity by the Essex Region Conservation Authority (ERCA). The property is a mix of wetland and floodplain near the mouth of the Canard River in Amherstburg.

Since 2019, 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, a multi-year phragmites management strategy, and has concluded with a water draw





down to expose the native aquatic plant seedbed. Plants anticipated to emerge include Cattails, Arrowheads, Bulrushes, and wetland forbs such as Swamp Rose Mallow. The re-establishment of these plants will dramatically improve plant biodiversity within the wetland and habitat use by wetland birds and other wildlife. The Collavino wetland is a Provincially Significant Wetland and will require on-going management by ERCA to ensure the wetland offers optimal habitat for local wildlife.



## Potential Detroit River Habitat Projects

The Detroit River Canadian Cleanup's (DRCC) Habitat

Work Group continues to work with landowners and Work Group partners to advance the planning process of two potential habitat projects. One project proposes to repair the dyke that is protecting the wetland complex at the River Canard outlet and the other project proposes to re-create wetland habitat at the south end of Fighting Island. The engineered drawings to



repair the dyke at River Canard have been completed and a site visit to discuss the proposed project with the Department of Fisheries and Oceans (DFO) will be coordinated in the spring of 2023. The wetland re-creation project at the south end of Fighting Island proposes construction of 6 sheltering islands, similar to Pêche Island, to create a calm water embayment. This project is exploring the feasibility of incorporating an innovative product manufactured by the island's landowner, BASF. The next step in the planning process for both projects is to solicit advice from the Department of Fisheries and Oceans on permit requirements.





## Mapping Exercise Quantifies 20 Years of Habitat Restoration: Part 2

Building upon last year's in-depth mapping exercise undertaken by the Essex Region Conservation Authority (ERCA) to map 20 years of habitat restoration efforts within the Detroit River watershed, ERCA completed additional GIS work to assess function of the terrestrial habitats and corridors within the AOC. This work will directly support the assessment of the terrestrial habitat restoration goal for the Area of Concern (AOC) as well as identify habitat restoration opportunities to enhance connectivity between the Detroit River and terrestrial habitats.

**Focus:**



**Monitoring and Research**

The Monitoring and Research Work Group has finalized metrics to facilitate the assessment of fish and wildlife populations, coordinated the status report on bird or animal deformities or reproductive problems and advanced the assessment of restrictions of fish consumption.



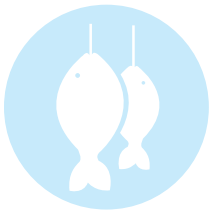
### Degraded Fish and Wildlife Populations

Using the metrics developed to evaluate fish and wildlife populations, the Ontario Ministry of Natural Resources and Forestry (ONMNR) completed an assessment report on fish populations. The draft status report summarizes scientific data indicating the Detroit River supports a diverse, healthy and self-sustaining fish population and recommends a “not impaired” status. Among the findings of this report are that fish communities in wetland coastal areas are comparable to fish communities in unimpaired coastal wetlands and the weight-of-evidence gathered through this assessment provides strong support for the conclusion that fish populations in the Detroit River are unimpaired and that the river is supporting healthy, diverse, and self-sustaining fish communities.

To support the assessment of wildlife populations, Environment and Climate Change Canada (ECCC) partnered with Birds Canada over the past two years to identify factors that are adversely impacting the diversity and abundance of marshbirds. The evaluation will include analysis of local landscape use effects and marshbird habitat needs which will then be applied to the Detroit River Area of Concern (AOC). The outcome of this research project is to understand what the local landscape limitations are for marshbirds and possible remedial actions. This project will be extremely valuable to the Monitoring and Research and Habitat Work Groups in determining next steps to support aquatic wildlife populations.







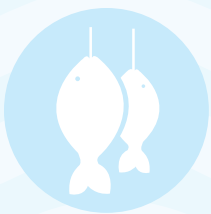
## Restrictions on Fish Consumption

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 was chemical contamination in the waters and sediment of the Detroit River. In 2021 researchers from the Great Lakes Institute for Environmental Research (GLIER) at the University of Windsor used a 4-tiered framework to compile and interpret lines of evidence which were used to assess the not impaired targets set by the Detroit River Canadian Cleanup (DRCC) for this Beneficial Use Impairment (BUI). The tiers for assessment included:

- Do Area of Concern (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 draft report summarizing the findings of the analysis for the fish consumption portion of this BUI using this framework has been completed. Further review and assessment is ongoing and will include incorporating results from the angler survey on fish consumption habits in the Detroit River.



## Fish Consumption Survey

To support the line of evidence for the assessment of fish consumption for the Restrictions on Fish and Wildlife Consumption beneficial use, the Detroit River Canadian Cleanup (DRCC) completed a fish consumption survey (launched in 2019) to collect data on what people catch and eat from the Detroit River. Over 350 surveys have been completed to date. Results from the surveys show that most anglers (65%) eat the fish they catch from the river (4 to 8 oz of fish per meal about 1 to 4 times per month, on average) and the most common fish consumed from the Detroit River are walleye, yellow perch, white perch, and white/silver bass. The DRCC has closed the public survey and continues work on collecting responses from Indigenous communities in 2022. The findings for the fish consumption survey will be used to assist with the final evaluation of the *Restrictions on Fish and Wildlife Consumption* BUI.





## Some recent survey results compared to previous survey results:

### 1996-97 Survey

- 52% of respondents had eaten Detroit River fish in the last 12 months
- 17% ate parts of the fish other than the fillet
- 27% stated they used the Guide to Eating Ontario Fish

### 2019-22 Survey

- 79% of respondents had eaten Detroit River fish in the last 12 months
- 31% ate parts of the fish other than the fillet
- 29% stated they used the Guide to Eating Ontario Fish



Several wildlife studies were conducted between 2008–2019 to evaluate the prevalence of deformities and reproductive problems in birds and aquatic wildlife. Study findings on northern leopard frogs, turtles, tree swallows and colonial waterbirds, each representing a trophic position in the food web, did not reveal high deformity rates or problems with reproduction due to exposure to contaminants in the aquatic environment. The report is comprehensive and provides scientific evidence to support a “not impaired” status recommendation.



## Bird or Animal Deformities or Other Reproductive Problems





# Post Construction Monitoring – Peche Island



The Peche Island Year 1 Post-Construction Biotic Monitoring Report, 2021 (released in 2022) from the

Department of Fisheries and Oceans Canada (DFO) reported that “In the first round of biological monitoring for the Peche Island erosion mitigation project, the fish habitat and community success criteria have all been exceeded.” Findings include:

- Vegetation cover is dense behind the constructed berms. Submerged Aquatic Vegetation (SAV) was found throughout the project site, but the density was highest (>75% SAV cover) along the shore and in the northeast corner, proximate to the newly constructed barriers.
- More fish species were caught than in any previous surveys, including four species at risk.
- Fifteen newly captured adult species were recorded, including some in their juvenile stage.
- Newly captured species included both warm- and cool-water thermal guilds.

A second round of post-construction monitoring by DFO is scheduled for the summer of 2023.











## Next Steps

### The DRCC's Habitat Work Group will:

- Support the coordination of a site visit to the finger dyke with Department of Fisheries and Oceans Canada (DFO).
- Review the findings of the Essex Region Conservation Authority (ERCA)'s analysis on terrestrial function and corridors.
- Review the report by Birds Canada on landscape influences on marsh bird communities.
- Support the completion of the planning phase of the two potential habitat projects.

### The DRCC's Monitoring and Research Work Group will:

- Review the two draft BUI assessment reports (Degraded Fish and Wildlife Populations and Bird or Animal Deformities or Reproductive Problems).
- Advance the assessment of the Restrictions on Fish and Wildlife Consumption.
- Monitor for wildlife and review the report on factors influencing the marsh bird community within the Area of Concern (AOC) and determine next steps.
- Support post construction monitoring and the Habitat Workgroup with completing the planning phase of two habitat projects.

## Focus: | Detroit River AOC Video Series



In 2022, the Detroit River Canadian Cleanup (DRCC) worked behind the scenes with partners to create a series of videos highlighting a variety of topics relating to the Canadian Detroit River Area of Concern. The videos address the Detroit River's history and the Remedial Action Plan's efforts to redesignate the remaining beneficial use impairments.

Check out the videos on our website [www.detroitriver.ca](http://www.detroitriver.ca) and on our YouTube channel! @DetroitRiverCC.





# 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. The majority 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.



The Ojibway Prairie Complex is strikingly diverse in vegetation, animal life and unique habitat types such as forest, wetland, savanna and prairie. These habitats provide for many rare plants, insects, reptiles, birds and mammals. For instance, as part of the Ojibway Shores study, the Essex County Field Naturalists’ Club scheduled a BioBlitz in June. Over a 24-hour period, participants surveyed flora and fauna in the Ojibway Complex through to the Spring Garden Natural Area. Experts found 1120 species of flora and fauna, including 12 species never-before recorded in Canada. Forty-five different orders of organisms were identified; plants and invertebrates made up the largest percentage of species found.

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 Canada and around the world, there is growing awareness of the importance of urban parks as essential places for conservation, recreation, learning, and mental and physical wellbeing.

The Friends of Ojibway Prairie (FOOP) is a volunteer organization dedicated to promoting the creation of a Nation Urban Park in the Ojibway Prairie Complex due to its unique biological and historical significance. The Friends work closely with the City of Windsor and other stakeholders to assist with and advocate for the creation of the Ojibway National Urban Park which will promote the creation and preservation of wildlife habitat in the Area of Concern (AOC).





The Detroit River Canadian Cleanup (DRCC) participated in 4 virtual and 9 in person outreach events between the spring of 2022 and end of winter 2023. Through these efforts, thousands of individuals celebrated ongoing restoration efforts in the Detroit River Area of Concern (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 early April 2022 with numerous partners. Over 200 volunteers across Windsor Essex came together to remove a total of 3,978 lbs or 1,805 kg of litter from two locations within the Detroit River watershed. A total of 1,884 lbs or 855 kg was removed from Little River, and 2,094 lbs or 950 kg was removed from the Sandwich community! This initiative is part of a broader Detroit River binational program celebrating Earth Month (April), hosted through the Detroit River Coalition. More information is available at [www.detroitrivercoalition.com](http://www.detroitrivercoalition.com).

Partners at the Little River location included members of the Detroit River Canadian Cleanup and Public Advisory Council, Essex Region Conservation Authority, Wildlife Preservation Canada, Little River Enhancement Group, Essex County Field Naturalists' Club, Elementary Teachers' Federation of Ontario/Windsor District and the City of Windsor.

Partners at the Sandwich location included University of Windsor students and Alumni, navy sailors from HMCS Hunter, members of Rotary Club of LaSalle Centennial and Interact Club of LaSalle, SuNaAnRu Green Earth, Detroit River Canadian Cleanup, Essex Region Conservation Authority, City of Windsor, the Windsor Port Authority, Bridging North America, the Windsor Detroit Bridge Authority. Funding for this cleanup was provided by Gordie Howe International Bridge Community Benefits Plan.

These two initiatives were part of the larger binational Detroit River Coalition (DRC) member organization litter cleanups in 2022. In total, 47 cleanups with 2,349 volunteers removed 21,591 pounds of litter pollution from within the Detroit River watershed and the shoreline in Canada and the United States!







## Community Tree Planting

Two community Earth Day celebrations took place in April 2022 in two Detroit River municipalities! The large Earth Day community tree planting celebration took place at the greenspace between Wyandotte Street East and Florence Avenue in the City of Windsor, where 800 volunteers and Green Teams planted over 2,230 potted and native seedlings. In addition, the Town of Amherstburg and the Amherstburg Environmental Advisory Council hosted a community tree planting event at the Libro Centre where 50 volunteers helped plant 40 large potted native hardwood trees.

The College Avenue Bikeway, Queen's Dock Park and Brock Park are greener now due to the tremendous efforts of 75 volunteers who planted 108 native large stock trees in the spring and fall of 2022, increasing the urban canopy and shade in Windsor. Funding for these three initiatives was provided by the Gordie Howe International Bridge Community Benefits Plan.



## Sandwich Environmental Walking Tour

The Detroit River Canadian Cleanup, Essex Region Conservation Authority and the Windsor Port Authority held an environmental walking tour in August 2022 to highlight some of the efforts being made along the riverfront. Funding for the Sandwich Environmental Tour was provided by the Gordie Howe International Bridge Community Benefits Plan.

Guests visited McKee Park, Queen's Dock Park, Brock Park, Prosperity Place and Patterson Place while learning about environmental progress from Peter Berry, the Harbourmaster with the Windsor Port Authority, Paul Drca, Remedial Action Plan Coordinator and Tom Henderson, Public Advisory Council Chair from the DRCC and Gina Pannunzio and Ryan Graham from Essex Region Conservation. Thank you to everyone who came!





# Detroit River Evening



Many thanks to everyone who participated in the virtual Detroit River Evening on September 14th on Zoom. Thanks to all the presenters who provided updates on the important work being done in the Detroit River Area of Concern by the Detroit River Canadian Cleanup (DRCC) Public Advisory Council, Friends of the Detroit River, Essex Region Conservation Authority, Great Lakes Institute for Environmental Research and Environment and Climate Change Canada.



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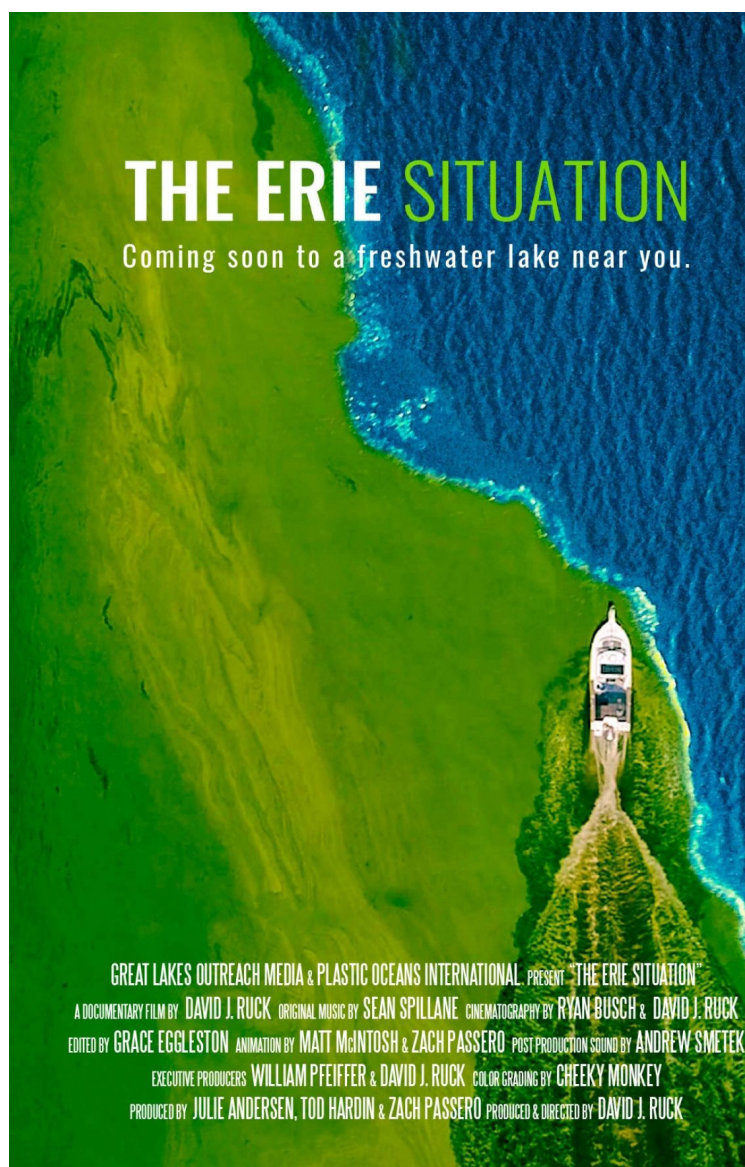


## DRCC Presents: THE ERIE SITUATION

On February 16 2023, the DRCC hosted two screenings of the documentary The Erie Situation at Imagine Lakeshore

Cinemas. The morning screening was provided to 120 students from three Detroit River watershed EcoSchools and those who have participated in environmental Specialist High Skilled Major (SHSM) program and stewardship activities from Riverside High School, Catholic Central High School and W.F. Herman Academy Secondary School. Following the screening, a discussion took place about how to protect the Detroit River at home and at school and getting involved in stewardship activities to improve the health of local watersheds.

In the evening, 100 people came out to watch the free screening, and hear from an expert panel at the end of the show. Thanks to Dr. Katie Stammler (ERCA), David Ruck (THE ERIE SITUATION Director and Producer) and Kyle Davis (Municipality of Lakeshore) for providing great discussion and engaging the audience on such an important local and Great Lakes basin wide issue!



## THE ERIE SITUATION

Coming soon to a freshwater lake near you.

GREAT LAKES OUTREACH MEDIA & PLASTIC OCEANS INTERNATIONAL PRESENT "THE ERIE SITUATION"

A DOCUMENTARY FILM BY DAVID J. RUCK ORIGINAL MUSIC BY SEAN SPILLANE CINEMATOGRAPHY BY RYAN BUSCH & DAVID J. RUCK

EDITED BY GRACE EGGLESTON ANIMATION BY MATT MCINTOSH & ZACH PASSERO POST PRODUCTION SOUND BY ANDREW SMETEK

EXECUTIVE PRODUCERS WILLIAM PFEIFFER & DAVID J. RUCK COLOR GRADING BY CHEEKY MONKEY

PRODUCED BY JULIE ANDERSEN, TOD HARDIN & ZACH PASSERO PRODUCED & DIRECTED BY DAVID J. RUCK





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.

#### Other 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 County Field Naturalists' Club
- Little River Enhancement Group
- Windsor Port Authority
- University of Windsor
- Brighton Beach Power
- Aamjiwnaang First Nation
- Caldwell First Nation
- Walpole Island First Nation

...and many dedicated citizens like you!

#### Acronyms

<b>ANSI</b>	Areas of Natural and Scientific Interest
<b>AOC</b>	Area of Concern
<b>BUI</b>	Beneficial Use Impairment
<b>CWS</b>	Canadian Wildlife Service
<b>DFO</b>	Department of Fisheries and Oceans
<b>DRC</b>	Detroit River Coalition
<b>DRCC</b>	Detroit River Canadian Cleanup
<b>ECCC</b>	Environment and Climate Change Canada
<b>ERCA</b>	Essex Region Conservation Authority
<b>FOOP</b>	Friends of Ojibway Prairie
<b>GLIER</b>	Great Lakes Institute for Environmental Research
<b>IBI</b>	Index of Biotic Integrity
<b>NGO</b>	Non-Governmental Organization
<b>ONUP</b>	Ojibway National Urban Park
<b>PAC</b>	Public Advisory Council
<b>SAV</b>	Submerged Aquatic Vegetation
<b>SHSM</b>	Specialist High Skills Major



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