

Detroit River  
Canadian  
Cleanup  
**Annual Report**  
**2018 - 2019**





## A MESSAGE FROM THE DETROIT RIVER CANADIAN PUBLIC ADVISORY COUNCIL

*"One of the best approaches to planning for climate change is to conserve as much healthy, intact and interconnected habitat as possible." Nature Conservancy of Canada, Spring 2016*

The big news for 2019 centres around Ojibway Shores. The City of Windsor is going through an expropriation process to acquire land to be swapped with the Windsor Port Authority for Ojibway Shores. Those magical 33 acres will connect to the Ojibway Complex, creating a necklace of green from the river to the Herb Gray Parkway.

As part of its community benefits program, the Windsor-Detroit Bridge Authority gave the City of Windsor \$1.5 million seed money for an animals only eco bridge spanning the Ojibway Parkway, connecting the Black Oak Heritage Forest with Ojibway Park. The Public Advisory Council (PAC) has requested that the City include money to complete the project in its 2020 budget deliberations.

PAC sent a personal letter to Premier Ford requesting that the Province of Ontario fulfill its monetary obligations under the Canada-Ontario Agreement by funding the Detroit River Canadian Cleanup for the remainder of 2019. The Premier sent a thank you reply but made no commitment.

In June representatives of the State of Michigan and the US Environmental Protection Agency gave a presentation to the DRCC outlining cleanup efforts on the Michigan side. Hundreds of millions are being spent to reclaim twelve contaminated sites from Belle Isle to the mouth of the river across from Amherstburg.

Thanks to the faithful members and friends of PAC for their support. Without their help PAC's effectiveness would be non-existent. Special thanks to Vice Chair Andy Paling, the DRCC staff including Gina Pannunzio, Claire Sanders and our new RAP Coordinator Jackie Serran.

Submitted by Tom Henderson, Chair  
Public Advisory Council, DRCC



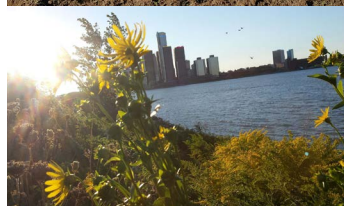
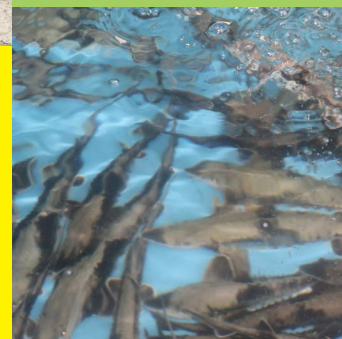
*The Detroit River Canadian PAC is a group of citizen volunteers and representatives from non-government organizations dedicated to improving the health of the Detroit River ecosystem. If you are interested in getting involved in the PAC, please contact the RAP Coordinator at [postmaster@detroitriver.ca](mailto:postmaster@detroitriver.ca).*



  
**DRCC Attended  
25 Outreach  
Events**



  
**1 BUI  
Redesignated**



# Focus: COMMUNITY OUTREACH AND TREE PLANTINGS



The DRCC participated in 25 events, festivals, community plantings, presentations and other engagement opportunities between the spring of 2018 and end of winter 2019. Through these efforts, thousands of individuals celebrated ongoing restoration efforts, learned about cleanup history, and engaged first hand with fish communities, wildlife, Detroit River islands and sub-watersheds, the DRCC program and more!

Restoring lost habitat in the Detroit River watershed increases biodiversity and environmental stewardship with residents. Through events held in the fall of 2018 and spring of 2019, approximately 4,310 native trees, shrubs and wildflowers were planted with the help of 1,276 fantastic volunteers and 10 community partners. Additionally, more than 1,200 people and over 40 Green Teams attended the annual Earth Day celebrations in the Little River watershed and planted more than 2,200 trees!

## Family Fishing Day

In partnership with the Town of LaSalle, University of Windsor, Essex Region Conservation (ERCA) and Just Fishin' Friends, we hosted our second annual Learn to Fish event on July 7th at Front Road Park in LaSalle. Over 150 participants came to fish (some for the first time!) and learn from expert volunteer anglers. The DRCC created a Fish of the Detroit River poster for this event and provided information to participants about restoration and cleanup projects, statistics on fish populations, and information on how to safely consume fish from the river.

Researchers also gave tours of the University of Windsor Freshwater Restoration Ecology Centre and both the Ontario Clean Water Agency and Ontario Federation of Anglers and Hunters were on hand with great educational displays. Many thanks to everyone who joined us and to all our volunteers.

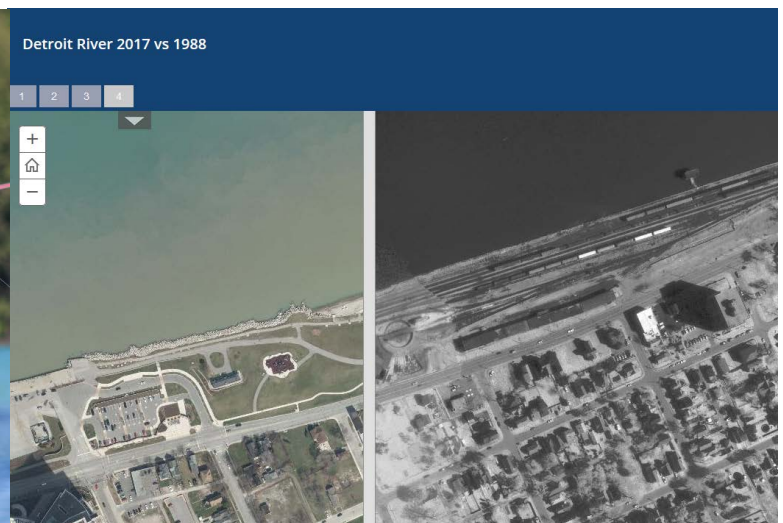
## LOVE Your Detroit River!

We launched a new video highlighting cleanup history of the Detroit River and the progress we have made over the past three decades.

Check it out at [www.detroitriver.ca](http://www.detroitriver.ca).

## Restore the Shore!

Explore the incredible transformation of the Canadian Detroit River shoreline in 1931 versus today! Soft shoreline engineering uses rocks, vegetation and other materials to improve the ecological features in the land-water interface and has been championed under the loss of fish and wildlife beneficial use impairment. Check out our new Shoreline Story Map at: [detroitriver.ca/shoreline](http://detroitriver.ca/shoreline).







## CLEAR WATER: Detroit's River Revival

In partnership with Friends of River Canard, Essex Region Conservation, Windsor Essex Catholic District School Board and St. Thomas of Villanova High School, the DRCC hosted two free screenings of Clear Water: Detroit's River Revival. Based on John Hartig's book, Burning Rivers, Clear Water: Detroit's River Revival is a documentary film that tells an inspirational story of the Detroit River's environmental recovery. From an environmental tragedy to an international refuge, the Detroit River's story is one of determination, resurgence, and most of all, hope.

Over 170 people attended the public screening and over 400 students joined us for the school screening. The evening screening was followed by a panel discussion with Bob Brown, the film producer, Dr. John Hartig, refuge manager of the Detroit River International Wildlife Refuge, Andy Paling, DRCC PAC Co-Chair, and Gina Pannunzio, DRCC RAP Assistant.



### Acronyms

<b>AOC</b>	Area of Concern
<b>BUI</b>	Beneficial Use Impairment
<b>CSO</b>	Combined Sewer Outflow
<b>DRCC</b>	Detroit River Canadian Cleanup
<b>ECCC</b>	Environment and Climate Change Canada
<b>ERCA</b>	Essex Region Conservation Authority
<b>ERNHSS</b>	Essex Region Natural Heritage System Strategy
<b>GLIER</b>	Great Lakes Institute for Environmental Research
<b>MECP</b>	Ministry of Environment, Conservation, & Parks
<b>PAC</b>	Public Advisory Council
<b>PCB</b>	Polychlorinated Biphenyl
<b>PAH</b>	Polycyclic Aromatic Hydrocarbon
<b>RAP</b>	Remedial Action Plan
<b>RTB</b>	Retention Treatment Basin



## Wetland Habitat

A new habitat project in the River Canard has begun! The Collavino wetland is a 150 acre site at the mouth of the Detroit River that has been designated as a Provincially Significant Wetland. With funding support from Environment and Climate Change Canada, ERCA is repairing the existing dyke and installing pumping infrastructure and water level control structures to manipulate water levels on the inside of the dyke to improve habitat quality. Once the restoration plan is implemented, this wetland will provide valuable habitat to local marsh bird populations, amphibians, and reptiles.



## Restoring Forests and Prairies

In 2018/19, ERCA restored a total of 2.7 hectares (6.7 acres) to Carolinian upland forest or tallgrass prairie. All project decisions were guided by the priorities outlined in the Essex Region Natural Heritage System Strategy (ERNHSS) and are consistent with the habitat priorities of the Detroit River Remedial Action Plan (RAP). Since 2000, a total of 441 hectares (1,092 acres) of land has been restored in the Detroit River watershed through this program!



## Peche Island

With funding support from The W. Garfield Weston Foundation, Environment and Climate Change Canada and the City of Windsor, DRCC is collaborating to complete the required permits for an erosion mitigation and fish habitat project at Peche Island. The objectives of this project are to create a series of sheltering islands to protect Peche Island from erosion and create fish habitat. These sheltering islands will reduce wave action, mitigate shoreline erosion and create a calm water embayment that will offer fish refuge and the opportunity for aquatic plants to establish. In time, this embayment is expected to provide valuable aquatic habitat to local fish and wildlife.



# Focus: POLLUTION REDUCTION

ERCA continues to implement projects in the watershed to reduce the potential for pollutants to reach the Detroit River. In 2018/19, ERCA planted 5,590 feet of buffer strips (which trap sediment and filter nutrients) to help prevent surface water from carrying soil from agricultural fields into local streams.

The City of Windsor completed a study to review alternative methods to control combined sewer overflows (CSOs) from the areas west of Caron Avenue to the Lou Romano Water Reclamation Plant. The recommended design is to move forward with developing another Retention Treatment Basin (RTB) in the study area. During wet weather events, there may be insufficient capacity to treat all CSO water, resulting in excess untreated sewage being discharged into the Detroit River.



## Focus: MONITORING AND RESEARCH

Progress on restoring the river is measured by 14 beneficial use impairments, or BUIs. A beneficial use is the ability of all living organisms (including humans) to use the Great Lakes without adverse effects. As of the beginning of 2019, the Detroit River Canadian Area of Concern (AOC) has 7 impaired beneficial uses, 6 unimpaired, and 1 requiring further assessment. A status report on one of the BUIs, Restrictions on Dredging Activities, was completed and it was recommended that the status be changed to not impaired, which was accepted. Two additional status reports were completed for the Degradation of Benthos and Fish Tumours and Other Deformities BUIs and are currently under review.

## Next Steps

- 1) Recommend the status change of the Degradation of Benthos and Fish Tumour and other Deformities BUIs to 'not impaired'
- 2) Conduct fish consumption survey to determine what people are eating from the river, for the Restrictions on Fish and Wildlife Consumption BUI
- 3) Implement habitat restoration and enhancement projects in the Detroit River
- 4) Continue to monitor issues, and implement and promote RAP projects
- 5) Monitor phytoplankton and zooplankton in and coastal wetlands on the river



### Restrictions on Dredging Activities - Designated not impaired in April 2019

Every three to four years, dredging takes place in the Lower Detroit River to maintain water depth for commercial ships. The sediment that is dredged is tested for contaminants to determine proper disposal location. Monitoring of the sediment has shown traces of heavy metals, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), and therefore is taken to a confined disposal facility in accordance with provincial guidelines. In September 2018, the Restrictions on Dredging Assessment was submitted for official re-designation and in Spring 2019, it was officially re-designated! This means restrictions on dredging activities is no longer considered impaired for the Detroit River.

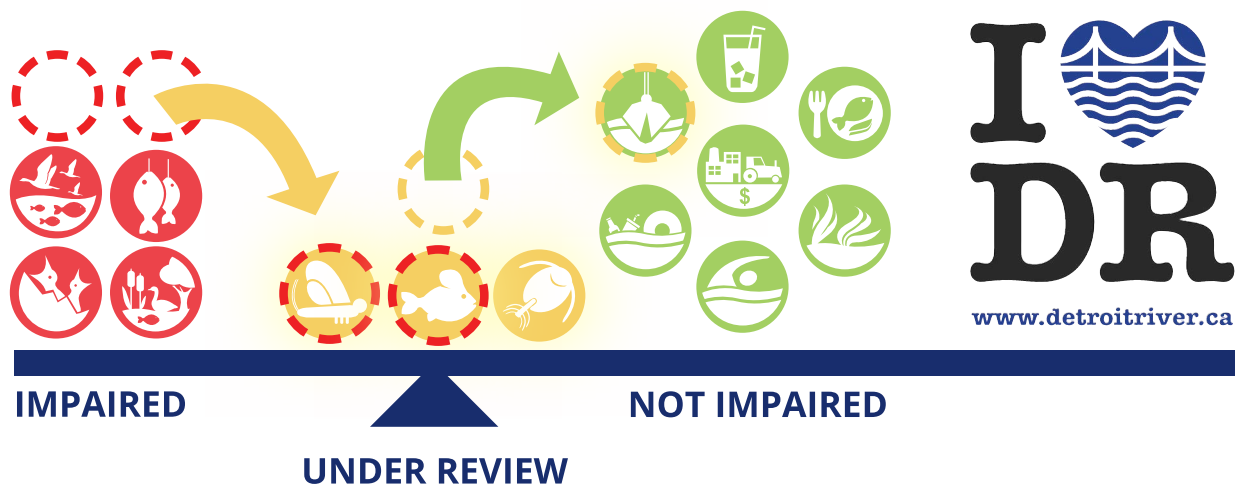


### Fish Tumors and Other Deformities - DRCC recommending not impaired status

Brown bullhead, our indicator species for tumours, were collected in 2002 and 2016 and were assessed for liver tumours and other deformities. Scientists also evaluated changes in sediment contamination in the Detroit River between 2002 and 2016 to determine if these contaminants have changed over time. The research indicated that 1 out of 112 brown bullheads had a liver tumour (<1%), less than the Great Lakes background rate. Further, sediment contamination has decreased over time. Based on this information, DRCC will soon request the re-designation of the degradation of benthos BUI to "not-impaired."







## Degradation of Benthos - DRCC recommending not impaired status

Monitoring insects living in the river bottom sediment helps to determine the environmental quality of the Detroit River. Between 2016 and 2018, researchers reviewed sediment chemistry and benthos data collected from the river. They found that sediment contamination has decreased over time, bioaccumulation potential is minimal, and benthic community composition in most sites is similar to reference sites. This work shows that the river has improved over time and good progress has been made through the numerous cleanup projects and regulation changes completed to date. The status assessment for the Degradation of Benthos BUI was completed and the DRCC will soon request the re-designation of this BUI to “not impaired”.



## Other Research

The Department of Fisheries and Oceans is conducting additional field work to assess the status of phytoplankton and zooplankton in the river. Phytoplankton are tiny plants and zooplankton are small animals in our waterbodies. Changes in their populations can be indicative of changes in nutrient pollution. This study will augment existing data and be used to assess the current status of phyto/zooplankton populations in the river.

Environment and Climate Change Canada conducted a pre-site restoration survey at the Collavino wetland and monitored additional non-coastal wetland sites for marsh bird communities. The information collected will support the evaluation of marsh bird populations (BUI #3) and wetland habitat quality (BUI #14) within the Detroit River Area of Concern.

Environment and Climate Change Canada is also continuing with the studies on birds (tree swallows and cormorants) to assess their reproductive health (BUI #5) by evaluating hatching success and contaminant levels in their tissue. By comparing tissue concentrations to known effect levels, researchers can determine if contaminants are adversely affecting reproduction. Cormorant studies at Mud and Shag Islands are also ongoing to look for deformities or other reproductive problems.

The Detroit River Canadian Cleanup (DRCC) is a community-based initiative launched in 1998 to cleanup, enhance, restore and sustain the Detroit River ecosystem. Partnerships within the DRCC aim to promote and implement the cleanup plan, called a Remedial Action Plan (RAP).

The ultimate goal of the DRCC is to remove the Detroit River from the list of Great Lakes Areas of Concern. The DRCC's members provide leadership in identifying partnerships and funding opportunities to support and complete cleanup goals for the Detroit River.

For more information on any projects listed in this report, or to download the detailed 'Pathway to Delisting' work plan, please **visit [detroitriver.ca](http://detroitriver.ca)**.



Funding provided by ECCC and the MECP.



311-360 Fairview Avenue West  
Essex, Ontario N6M 1Y6  
[postmaster@detroitriver.ca](mailto:postmaster@detroitriver.ca)  
[www.detroitriver.ca](http://www.detroitriver.ca)  
519-776-5209 x356



/DetroitRiverCC



/DetroitRiverCanadianCleanup



/detroitrivercanadiancleanup



/detroitriverrap