




DETROIT RIVER
C A N A D I A N
C L E A N U P

www.DetroitRiver.ca

**Annual Review
2012-2013**





On September 7, 2012 an important achievement in the continued improvement and protection of the Great Lakes, including the Remedial Action Plan, took place with the signing of the revised Canada-U.S. Great Lakes Water Quality Agreement (GLWQA) Protocol of 2012. This agreement between Canada and the United States, first signed in 1972, commits both countries to protect and restore the Great Lakes ecosystem. The 2012 GLWQA reaffirms the importance of restoring the Great Lakes' Areas of Concern (e.g., Detroit River) while tackling other, more recent priority issues facing the Great Lakes such as aquatic invasive species, habitat loss, chemicals of concern, and climate change.

www.natgeo.tv.com

Continuing Progress

For the 2012-2013 program year, the Detroit River Canadian Cleanup (DRCC) partners completed many important projects which will continue to help us move towards the removal of the Detroit River from the list of Areas of Concern (AOCs). For example, the planning and design for two fish habitat restoration projects in the Detroit River were completed, a shoreline options guide was prepared to encourage riverfront landowners to adopt fish-friendly shoreline erosion control measures, monitoring of frog and bird health as well as coastal wetland quality was conducted to help us measure the health of the Detroit River, and more! Public education and outreach projects were an amazing success this year with our annual film screening, the Peche Island Day event, community tree planting events, and the production of our two professionally-created videos; one following wastewater from your home in Windsor and another about the DRCC! Both videos can be found on our website.

Read on to learn more about these great projects. We had a terrific year thanks to our partners and dedicated citizens, like you! Thank you for your interest in the Detroit River. Together, we will continue to make progress toward achieving a healthier Detroit River ecosystem.

For more information and tips on what you can do to help improve our ecosystem, visit www.detroitriver.ca.



Natalie Green
Remedial Action Plan Coordinator

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Cover Photo: Black Crowned Night Heron by Arthur Morris. www.birdsasart.com

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) to protect, enhance and restore the Detroit River in order to remove it 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.

This document reports on accomplishments on the Canadian side of the Detroit River between April 1 2012 and March 31 2013.

Canada Ontario

THE CITY OF
WINDSOR

BRIGHTON BEACH Power

Honeywell



Essex Region
Conservation
Authority

University
of Windsor
thinking forward

and many dedicated citizens like you!

Education & Public Involvement



Wastewater Education Video: 1, 2, TP!



Have you ever wondered what happens to water and other substances when they are flushed down our drains and toilets? It shouldn't be a mystery, so the City of Windsor and the Detroit River Canadian Cleanup partnered to create a wastewater video to help de-mystify the topic and to educate viewers.

Using stunning graphics and excellent information, the video follows the flow of wastewater from a home in Windsor to one of two places: the wastewater treatment plant or the Detroit River. The video also provides tips on what you should and shouldn't put down the drain and how our wastewater gets treated before being released into the Detroit River. Check it out on our website, YouTube Channel or you can scan the bar code shown here!



Detroit River Evening

Over 50 people attended our 2nd Annual Detroit River Evening at Riverdance Park in LaSalle, Ontario. We were pleased to welcome Dr. Trevor Pitcher, Professor of Biology at the University of Windsor, to speak to the group about fish conservation breeding. The Evening was also an opportunity to learn more about the projects implemented by DRCC Member Organizations to improve the Detroit River.



Detroit River Boat Tour

The DRCC sponsored the Citizens Environment Alliance's State of the Detroit River Boat Tour which was held on July 14th, 2012. The four hour cruise of the Detroit River, attended by over 100 people, featured expert narration about the Detroit River's environmental hot spots and unique fish and wildlife habitats.



Screening of Liquid Assets

Over 250 people attended our 4th Annual Film Screening event to learn about the critical role that our water infrastructure (e.g., pipes that carry drinking water to our homes or the treatment facilities that clean wastewater before it's discharged to a lake or stream) plays in protecting human health and promoting economic prosperity. Participants also had the opportunity to ask local experts questions about Windsor's water infrastructure after the film.

Pêche Island Day 2012

This popular event, hosted by the DRCC partnership since 2006, was our best attended to date! Despite less than ideal weather conditions, 430 people boarded one of the four boats or a large 18-person canoe (similar to that used by the early French settlers) and crossed the Detroit River to discover Pêche Island, a City-owned park that is only accessible by boat. Once on the island, visitors learned about the island's unique history and ecology. A special thanks to the organizations that made the event a success including the City of Windsor, Ontario Ministry of Natural Resources, Windsor Police, BASF Inc., Windsor Essex County Canoe Club, Essex County Field Naturalists' Club and Citizens Environment Alliance.



Black Oak Heritage Park Cleanup

The DRCC supports community cleanups events coordinated by our member organizations. On April 21, 2012, 52 dedicated, enthusiastic volunteers from Windsor's Royal Canadian Navy Reserve Division - HMCS Hunter, local cyclists and hikers of the park, Royal Canadian Army Cadets (Windsor Regiment) and many other local residents participated in cleaning up a section of Black Oak Heritage Park in Windsor.

Together, the group worked tirelessly for three hours and picked up 5.5 tonnes of debris and 189 tires (plus one very large tractor tire) from the otherwise beautiful park. Among the debris collected were two couches, a boat, microwave, tires and various construction refuse.



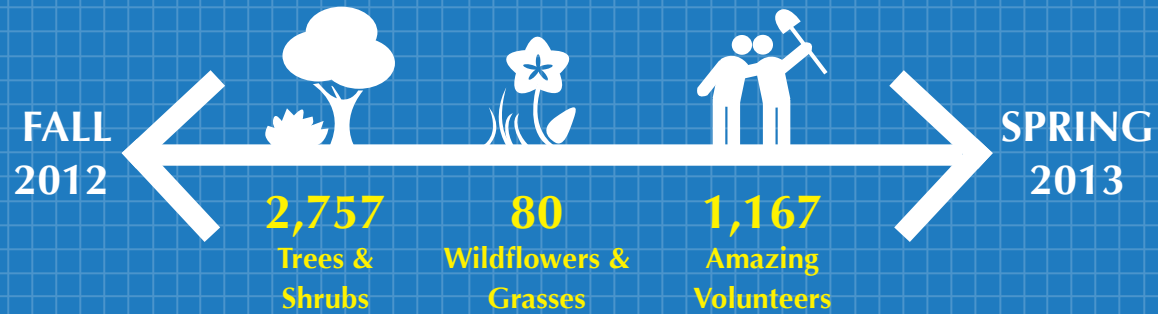
GLIER Native Plant Garden

In October 2012, with help from the local community, staff and students at the Great Lakes Institute for Environmental Research (GLIER) at the University of Windsor planted a native wildflower garden at the front entrance of their building at 2990 Riverside Drive West in Windsor.

Native plants are important because they are drought tolerant, increase food and habitat for pollinators, attract native butterflies, and require little cost to maintain. This Native Plant Garden further demonstrates GLIER's commitment to protecting the local environment by reducing the need to mow and water.



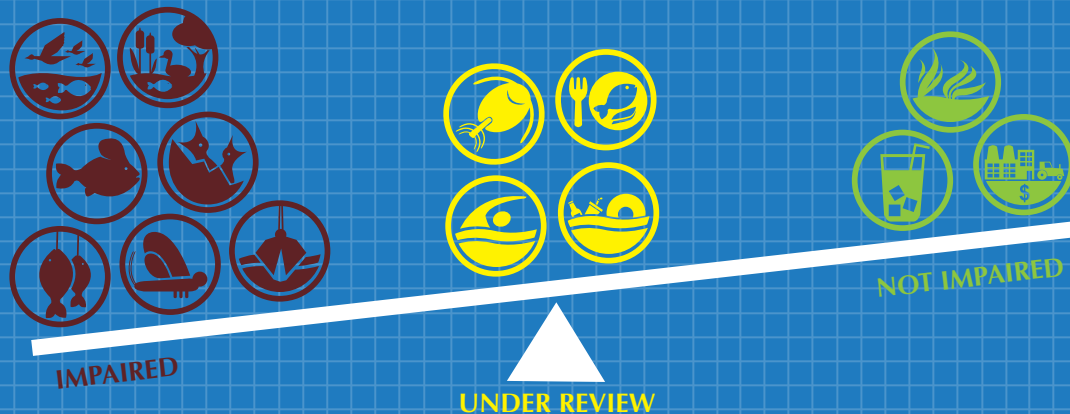
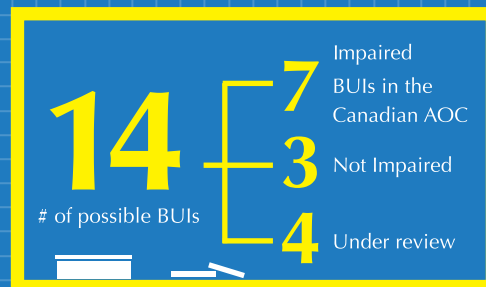
Tree & Wildflower Plantings



Planting native trees and wildflowers restores lost habitat and increases biodiversity in the Detroit River watersheds while fostering environmental stewardship in the community.

BUIs: 101

A beneficial use is defined as the ability of all living organisms (including humans) to use the Great Lakes without negative effects. When the beneficial use is impaired, it is called a beneficial use impairment or BUI. Tracking the status of BUIs tells us if the water is healthy or not.



Monitoring & Research



Scientific Research



Scientists from the University of Windsor's Great Lakes Institute for Environmental Research (GLIER), Environment Canada, Ministry of the Environment and the Ministry of Natural Resources conduct various monitoring and research studies to assess the condition of the Detroit River.

In 2012, researchers assessed the condition of coastal wetlands and completed studies on the reproductive health of Black-Crowned Night Herons and Northern Leopard Frogs. Contaminants in sediments and water in the Detroit River and at the mouth of each of its tributaries (Little River, Turkey Creek, Canard River) were also monitored. The results of these studies will help the DRCC's technical working groups assess the status of the Detroit River's beneficial use impairments, for example, the Loss of Fish and Wildlife Habitat and Reproductive Problems in Birds. Technical reports are expected in 2013-2014.



Habitat



Detroit River Shoreline Options Guide

A previously completed Detroit River Shoreline Assessment confirmed that more than 80% of the shoreline is developed and artificially hardened as a result of urbanization and industrialization which has resulted in unsuitable habitat for many fish species.

To encourage riverfront landowners to consider fish-friendly shoreline erosion protection techniques, a public-friendly, visually appealing guide showing various options for possible shoreline restoration on the Canadian side of the Detroit River was created. A decision matrix was also developed to help various representatives (e.g., contractors, technical staff) choose the best shoreline solution based on specific site characteristics and needs. The manual is expected to be released in 2013.



Expansion of the Fighting Island Fish Spawning Reef

In late 2008, a spawning reef was constructed in the Detroit River, near the northeast corner of Fighting Island. Success was quick! As early as spring 2009, researchers noted important fishes such as Lake Sturgeon, Walleye, and Lake Whitefish, using the site for reproduction. More recently, an assessment of Detroit River flow and bottom conditions revealed that only a few locations throughout the Detroit River are ideal for this type of restoration work, including the Fighting Island site. Several U.S. and Canadian organizations have partnered once again to complete the design and construction of a second fish spawning reef adjacent to the existing one at Fighting Island. The reef will continue to offer suitable habitat for Detroit River fishes. Construction is anticipated to be completed in 2013-14.

Shoreline Fish Habitat Restoration at Lafarge Inc.

Building on many years of shoreline restoration activities, this project will ultimately enhance a 315 m shoreline at a major industrial site along the Detroit River.

In 2012-2013, the Essex Region Conservation Authority in partnership with the Windsor Port Authority received funding from the Great Lakes Sustainability Fund (GLSF) and other sources to begin planning and designing this fish-friendly shoreline restoration effort including completing: (1) fish assessments in and around the site to determine which species are present, (2) shoreline restoration concepts and detailed drawings for the project, and (3) all necessary pre-consultations and approvals for construction. The shoreline restoration is anticipated to be completed in 2013-2014, pending funding approvals.



Biodiversity Conservation Strategy Implementation

The primary focus of the Biodiversity Conservation Strategy (BCS) is to implement large scale habitat restoration projects in priority areas of the Detroit River AOC, as identified in the BCS Report. In 2012-13, a total of 29.5 acres (11.9 hectares) was restored to Carolinian forest at 6 sites. Additionally, a 0.5 acre wetland was constructed through this project. Signs will be installed at select sites where there are good exposure opportunities (i.e., the restoration site is near a well-travelled road) and the landowner consents to the sign. All project decisions were guided by the priorities outlined in the Biodiversity Conservation Strategy and are consistent with the habitat priorities of the Detroit River RAP.

Point / Non-Point Source



Optimization of the Windsor RTB



The Windsor Riverfront Retention Treatment Basin (RTB), which became operational in November 2011, is designed to reduce the amount of untreated wastewater entering the Detroit River as a result of a combined sewer overflow (CSO). During a heavy rainfall event, the RTB collects and holds untreated CSO water until the rainfall event ends and it can be sent to the wastewater treatment plant. If the capacity of the RTB is exceeded during the rainfall event, then the CSO water receives some treatment before being discharged to the Detroit River.

The goal of this project was to evaluate the operation and performance of the Windsor Riverfront RTB and to ensure that it is meeting the Ontario Ministry of the Environment's (MOE) Guidelines (as per Procedure F-5-5 for treatment). During the study, the quality of water entering and exiting the RTB during overflow events was analyzed. In 2012, a total of 25 CSO events occurred whereby over 363 million litres of CSO water was captured by the RTB and sent to the wastewater treatment plant or given primary treatment on site, if needed. Overall, the project indicates that the RTB facility is functioning well and meeting the requirements of the Ontario MOE Guidelines.

The RTB improves water quality by reducing the amount of untreated water released to the Detroit River from sewer overflows.

The RTB is located underground here.



Septic System Care and Maintenance Outreach Program

Improperly functioning or poorly maintained septic systems can result in pollution of the Detroit River's tributaries. In a recently completed Septic Strategy for the Detroit River AOC, one of the identified challenges was that some homeowners may not know that they have an on-site septic system or how it should be maintained. The Essex Region Conservation Authority, with funding support from Environment Canada, launched an awareness project to help landowners learn more about septic systems and their maintenance. Coined "Get Septic Savvy!", the comprehensive program included a mass mailing to rural landowners in the Detroit River watershed with information about septic maintenance and a magnetized reminder to have their septic systems serviced regularly to save them money in the long term. Workshops and meetings were held with local groups whose role is influential in making potential homebuyers aware of septic system conditions, inspections and maintenance. Lastly, homeowners can save 10% on septic maintenance costs with local contractors until September 2013. So, let's get Septic Savvy!



Rural Non-Point Source Pollution Remediation Program

The Rural Non-Point Source (NPS) Pollution Remediation Program has been implemented for the last 16 years by the Essex Region Conservation Authority and partners. The program aims at reducing rural non-point source pollution (e.g., nutrients, suspended solids and bacteria) in the Detroit River's watershed through the implementation of Best Management Practices such as buffer strips, tree plantings, septic system upgrades, and soil erosion control structures.



Public Advisory Council



The PAC is an important part of the Detroit River’s cleanup process; it provides a venue for the public to contribute to the restoration and protection of the Detroit River Area of Concern. We promote community involvement in the protection of the Detroit River, review DRCC reports, lobby local and senior governments on Detroit River issues, and serve as the public’s voice on DRCC committees.

We celebrated important regional achievements such as the signing of the revised Canada-U.S. GLWQA and of a collaboration agreement for the Western Lake Erie Watersheds Priority Natural Area Initiative in September 2012. The PAC continues to push for a Canadian component of the Detroit River International Wildlife Refuge. Along with other local environmental groups, we were at the forefront of bringing together representatives from various organizations in order to connect the Airport Swamps through a community planting effort. The PAC was involved in bringing attention to the massive, unsightly piles of petroleum coke stored on the U.S. side of the Detroit River. Our concern for the health of the Detroit River ecosystem as well as local residents sparked a letter writing campaign to local politicians, conversations with the media, and participation in a rally on the riverfront on March 9, 2012. Our PAC continues to lobby for the preservation of Ojibway Shores in west Windsor in order to protect its important, natural shoreline and to link the Detroit River to other ecologically-important inland areas such as the Ojibway Prairie Complex. We also continue to liaise with our American colleagues through our participation in U.S. PAC meetings in Michigan to support restoration efforts. The PAC has been in the forefront when it comes to participation in community cleanups and tree plantings supported by the DRCC in partnership with the City of Windsor, ERCA, Trees Ontario, and the community.

Special recognition and congratulations are needed for four of our PAC members: Pete Thomas, Phil Roberts, Pearl Bradd, and Ian Naisbitt for their significant environmental efforts in this region. In early 2013, they were each recognized as Conservation Champions by the Essex Region Conservation Authority. Keep up the great work!

Tom Henderson, Chair
Gord Harding, Vice-Chair

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.



An Area of Concern is a location in the Great-Lakes - St. Lawrence River Basin that has been identified as severely polluted or degraded.

Acronyms

| | | | |
|-------|--|------|---------------------------------|
| AOC | Area of Concern | GLSF | Great Lakes Sustainability Fund |
| BCS | Biodiversity Conservation Strategy | MOE | Ministry of the Environment |
| BUI | Beneficial Use Impairment | NPS | Non-Point Source |
| DRCC | Detroit River Canadian Cleanup | PAC | Public Advisory Council |
| EC | Environment Canada | RAP | Remedial Action Plan |
| ERCA | Essex Region Conservation Authority | | |
| GLIER | Great Lakes Institute for Environmental Research | | |

Detroit River Canadian Cleanup

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