

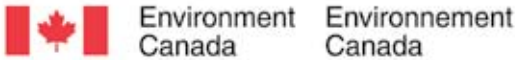


DETROIT RIVER
CANADIAN
CLEANUP

www.DetroitRiver.ca

Annual Review 2011-2012





...and many dedicated citizens!

Restoring our River, together!

The Detroit River Canadian Cleanup (DRCC) is a community-based partnership 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 restore the Detroit River's beneficial uses with the ultimate goal of removing 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.

This document reports on accomplishments on the Canadian side of the Detroit River between April 1 2011 and March 31 2012.

Cover: Woman fishing along the shores of the Detroit River. Photo credit: DRCC

Message from the Coordinator

The Detroit River area is steeped in a very rich history...both positive and negative. From European settlement to industrialization, the River has endured years of intensive human use leading to many environmental problems. However, decades of pollution control and remediation efforts have led to significant improvements for the inhabitants of this area, humans and wildlife alike. We now have evidence that our actions can make a positive impact on the environment.

In 2011-2012, we celebrated numerous accomplishments including the completion of the Detroit River Canadian Remedial Action Plan Stage 2 Report. This important report summarizes and highlights a decade of projects completed by DRCC partners and provides recommendations that will guide future remediation efforts. Its completion is a big step toward removing the Detroit River from the list of AOCs. Over the last year, the DRCC partners also completed many projects that will improve the Detroit River such as fish habitat restoration on the Canard River, upgrades to the Amherstburg Waste Water Treatment Plant, monitoring projects leading to the proposed re-designation of two beneficial use impairments, and several public education events including our 1st annual Detroit River Evening. What an exciting year!

Thank you for your interest in the Detroit River's clean-up. 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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Education & Public Involvement



Screening of Mysteries of the Great Lakes



The DRCC's 3rd Annual Film Screening was a huge success. Over 250 people joined us at Silver City Theatre in Windsor, Ontario to view a free screening of the educational documentary "Mysteries of the Great Lakes" on Wednesday November 30, 2011.

State of the Detroit River Boat Tour

The DRCC sponsored the Citizens Environment Alliance's State of the Detroit River Boat Tour held on July 16th, 2011. The four hour cruise of the Detroit River featured expert narration about the Detroit River's environmental hot spots and unique fish and wildlife habitats.



Photos: Vittorio Sbrocca

Community Cleanups

On Saturday, May 14, 2011 approximately 35 volunteers worked together to target and clean-up 12 tonnes of waste from a section of the Detroit River shoreline adjacent to Brock Street Dock in West Windsor. The event was coordinated in partnership with the Essex Region Conservation Authority, the City of Windsor, and the Windsor Port Authority.



Photos: Peter Berry

Tree Plantings

During the fall 2011 and spring 2012, approximately 2,410 trees and 1,625 wildflowers and grasses were planted in the Detroit River watershed (including Little River, Turkey Creek and Canard River) with help from over 1400 volunteers. Planting native trees and wildflowers restore lost habitat and increase biodiversity in the Detroit River watersheds while fostering environmental stewardship in the community.

Detroit River
Sub-Watershed

Turkey Creek
Sub-Watershed

Little River
Sub-Watershed

Canard River
Sub-Watershed



Calendar Contest

During the summer 2011, the DRCC held a drawing contest for elementary school children to decorate our 2012 calendar. Children were asked to submit a drawing based on one of the following themes:

- Things we can do to protect the Detroit River
- Recreational activities on or near the Detroit River
- Wildlife that lives in or on the Detroit River
- Conserving water at home
- Actions that improve the health of the Detroit River

Winning entries appeared in our 2012 Calendar and children were awarded a gift certificate, a copy of the calendar, and a DRCC water bottle. Visit our website to view the winning drawings.



Inaugural Detroit River Evening

On June 15, 2011 the DRCC hosted the first annual "Detroit River Evening". Approximately 60 people attended this event, at Ojibway Nature Centre in Windsor, Ontario, to hear Dr. John Hartig speak about his book entitled Burning Rivers. The public and DRCC representatives also received updates on ongoing and completed Detroit River projects.



Photos: DRCC

Habitat



Detroit River Shoreline Assessment Project

The Detroit River shoreline extends approximately 52 kilometres and includes approximately 1,000 mainland properties (publicly and privately owned). As part of the Shoreline Assessment Project, each property along the Canadian side of the Detroit River was visited and details related to the sites' biological and structural characteristics (e.g., natural, sheetsteel wall, etc.) were collected. This information was analyzed and mapped to identify and prioritize areas for shoreline restoration or enhancement. Using this information, individual shoreline project concepts will be developed and implemented based on landowner interest and available resources to advance the habitat priorities listed in the Detroit River Remedial Action Plan.

This project was completed by the Essex Region Conservation Authority with funding support from the Great Lakes Sustainability Fund, Ontario Ministry of Natural Resources, City of Windsor and Windsor Port Authority.



Photos: ERCA

Canard River Shoreline Restoration Project



Before



After

Photos: DRCC

A broad partnership of organizations worked together to restore 200m of shoreline at the River Canard Park, co-owned by the Town of LaSalle and the Town of Amherstburg, to improve fish habitat for over 25 fish species and provide erosion protection. The project utilizes a variety of soft shoreline techniques including a diversity of stone types, shapes and sizes to create small spaces for fish eggs and invertebrates, increasing the overall shoreline length (by changing its shape) and creating a deep water pool to further improve fish habitat.

A walking trail, two large viewing platforms and a fishing platform were constructed to enhance visitor experiences. The streamside area of the park was restored using native prairie plant species and trees, including beautiful flowers that will attract birds and butterflies as well as provide colour to the park throughout most of the growing season. An interpretive sign describes the restoration project and highlights the environmental features of the Canard River. The park has a small boat ramp which will allow access by kayakers and canoeists.

Project partners included the Essex Region Conservation Authority, Friends of Canard River, Town of LaSalle, Town of Amherstburg, Great Lakes Sustainability Fund, Ontario Ministry of Natural Resources, Ontario Ministry of Environment, Essex County Stewardship Network, Amherst Quarries Ltd., and West Windsor Power.

Detroit River/Canard River Stewardship Initiative

The Essex County Stewardship Network (ECSN) continued to work with landowners and other organizations to improve water quality/quantity and natural habitats along the main tributaries of the Detroit River (Little River, Turkey Creek and Canard River). The ECSN's goal is increase natural habitat linkages, enhance fish and wildlife habitats and populations by reducing fragmentation, rehabilitating existing areas and creating new habitats.

In 2011-2012, the ECSN created and restored over 21 hectares of habitat including the construction of five wetlands (16.8 ha) and several tallgrass prairie and native tree plantings (4.3 ha) in the Detroit River's watershed. Funding for this project is generously provided by the Great Lakes Sustainability Fund, Canada-Ontario Agreement, and various landowners.



Photos: Brett Groves

Biodiversity Conservation Strategy Implementation

The primary focus of the Biodiversity Conservation Strategy is to implement large scale habitat restoration projects in priority areas of the Detroit River AOC. In 2011-12, the Biodiversity Conservation Strategy Implementation project accomplished the following:



- Over 200 landowners in priority habitat restoration areas of the AOC were contacted and invited to participate in voluntary habitat restoration activities. Other landowners contacted ERCA directly.
- Restoration of 23 hectares of habitat (primarily forest habitat) at several private landowner sites in spring, 2011.
- Technical services and incentive grants were provided to restore 17 hectares of forest and wetland habitat at targeted locations in the AOC in 2012. Grants were provided to individual landowners for projects at a maximum rate of 1/3 of the project cost.
- Ongoing support to the Friends of Canard River, Friends of Turkey Creek, and the Little River Enhancement Group (as requested).



Point / Non-Point Source



Amherstburg Waste Water Treatment Plant Upgrades



Overall facility as viewed from Sandwich Street

An upgrade and expansion of the Amherstburg Wastewater Treatment Plant is nearing completion. The upgrades will accommodate the anticipated population growth of the Town of Amherstburg and improve water quality in the Detroit River. The antiquated facility provided only primary treatment consisting of solids removal by mechanical means followed by chlorine disinfection. Among other important upgrades, the new 9,500 m³/day secondary treatment facility will feature an ultraviolet disinfection system to kill bacteria in the water without the use of toxic chlorine. The upgrades will help improve the Detroit River's water quality by reducing the amount of pollutants in effluent and reducing the bypass of raw sewage.

The project was estimated at \$29 million with the provincial and federal governments contributing approximately \$10.6 million toward the cost of the project through the Canada-Ontario Municipal Rural Infrastructure Fund.



Rural Non-Point Source Pollution Remediation Program

The Rural Non-Point Source (NPS) Pollution Remediation Program has been implemented for the last 15 years by the Essex Region Conservation Authority and partners. The Program aims at reducing rural non-point source pollution in the Detroit River's watershed, such as nutrients, suspended solids and bacteria. The following activities were undertaken in 2011/12:

- Using modeling results that identified high priority remediation areas, approximately 175 landowners were contacted and provided with information on the technical and financial assistance available through the program.
- Five buffer strips, three soil erosion control structures, four fragile land retirement (tree planting) projects, and six septic system upgrade projects were completed.
- Technical (agrological) advice and extension services were provided to rural landowners in the AOC watershed regarding soil conservation and water quality enhancement.
- Participation in the Essex Soil and Crop Improvement Association and Essex Conservation Club provided a forum for information exchange regarding environmental issues in the AOC.



Photos: ERCA

Monitoring & Research

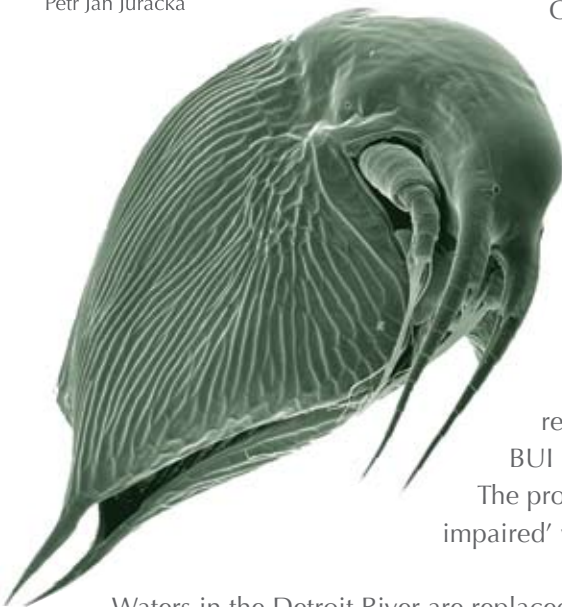


Beneficial Use Impairment Studies

A beneficial use is the ability of all living organisms (including humans) to use the Great Lakes without adverse effects (e.g., healthy aquatic animal populations). When the beneficial use is impaired, it is called a beneficial use impairment or BUI. There are fourteen possible BUIs. As of 2011, the Detroit River Canadian AOC had 9 impaired beneficial uses, 4 not impaired, and 1 requiring further assessment.

During 2011-2012, the DRCC's Monitoring and Research technical working group re-assessed two beneficial use impairments in the Detroit River Area of Concern: Beach Closings (water quality for recreational contact) and Degradation of Phytoplankton and Zooplankton Populations.

Zooplankton: Cladoceran
Petr Jan Juracka



There are no safe, public swimming locations on the Canadian side of the Detroit River monitored by the Windsor-Essex County Health Unit. Therefore, to assess water quality for BUI #10 (Beach Closings), the DRCC's working group conducted a 3-year monitoring study of *E. coli* bacteria at two representative areas. The results were compared to upstream and downstream locations that are monitored by the Windsor-Essex County Health Unit. The results showed that the levels of *E. coli* at the monitored sites did not exceed levels for recreational contact. Thus, the working group recommended that the status of the Beach Closings BUI be re-designated from 'impaired' to '**not impaired**'. The process to formally re-designate the status to 'not impaired' will be completed in 2012-2013.

Waters in the Detroit River are replaced in approximately 21 hours and are representative of the upstream waters of Lake Huron. Recent research showed that phytoplankton and zoo

plankton communities in the Detroit River were representative of the oligotrophic-mesotrophic conditions of Lake Huron. Therefore, the working group recommended that the status of the Degradation of Phytoplankton and Zooplankton Populations BUI be re-designated from 'requires further assessment' to '**not impaired**'. The process to formally re-designate the status to 'not impaired' will be completed in 2012-2013.

Zooplankton: Amphipod
www.nwfsc.noaa.gov



The Monitoring and Research technical working group is presently conducting a study to examine the quality (colour, odour, debris) of the Detroit River at 11 sites along the Canadian shoreline. Results of this study are expected in 2012-2013.

Workshop: Monitoring and Research of Beneficial Use Impairments in the Detroit River and St. Clair River AOCs

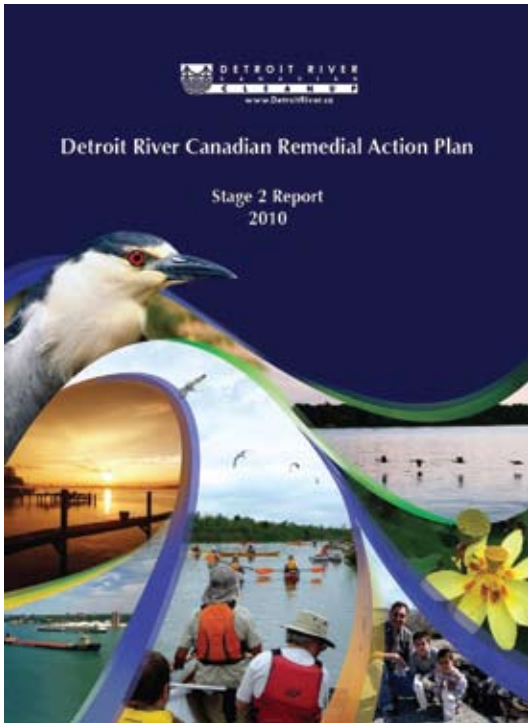
On September 28-29, 2011, the DRCC's Monitoring and Research Work Group hosted a Detroit River and St. Clair River Areas of Concern Beneficial Use Impairment Workshop at the Great Lakes Institute for Environmental Research (GLIER) in Windsor, Ontario.

The focus of the workshop was on monitoring and research activities related to four BUIs in the Detroit River and St. Clair River AOCs:

- Restrictions on Fish and Wildlife Consumption,
- Fish Tumours or Other Deformities,
- Bird or Animal Deformities or Reproductive Problems, and
- Degradation of Fish and Wildlife Populations.

An important outcome of the workshop was the development of recommendations to guide the assessment of these four BUIs. A report describing the presentations, results, discussion and conclusions of the workshop was completed in early 2012. If you would like a copy, please visit our website or contact the RAP Coordinator.

Remedial Action Plan Stage 2 Report Release



We are pleased to announce that our Detroit River Canadian Remedial Action Plan (RAP) Stage 2 Report was officially released to the public on January 25, 2012. The Report is a very important milestone in the Remedial Action Plan process as it provides recommendations and identifies priority actions which will continue to restore the Detroit River ecosystem. The RAP Stage 2 Report was written to comply with the requirements of the Great Lakes Water Quality Agreement. The DRCC held a release event on January 25, 2012 at the Art Gallery of Windsor which provided an opportunity for partners to celebrate this major achievement. Please visit our website or contact the RAP Coordinator for a copy of the Report.



Photos: DRCC

Public Advisory Council



High on the agenda over the past year has been the quest for preservation of Ojibway Shores in west Windsor and establishment of a “necklace of green” stretching from Ojibway Shores to the Spring Garden Natural Area. Public Advisory Council (PAC) members made note of coastal natural heritage sites along the Detroit River shore in Windsor and LaSalle. The PAC continued to push for a Canadian component to the Detroit River International

Wildlife Refuge while maintaining contact with the American side through our presence at functions organized by the Friends of the Detroit River including Shiver on the River and U.S. PAC meetings in Michigan.

The PAC has publicly saluted important milestones in the Detroit River AOC such as the completion of the Detroit River Canadian RAP Stage 2 Report as well as the combined sewer overflow retention treatment basin to improve Detroit River water quality, a project jointly funded by the City of Windsor and the federal and provincial governments. Along with other citizens’ groups, the PAC lobbied the Windsor-Essex Parkway consortium regarding compensation for natural areas which will be paved over during construction of the new road. The public has been assured that over fifteen hectares of natural areas are set aside east of the Ojibway Parkway for mitigation.

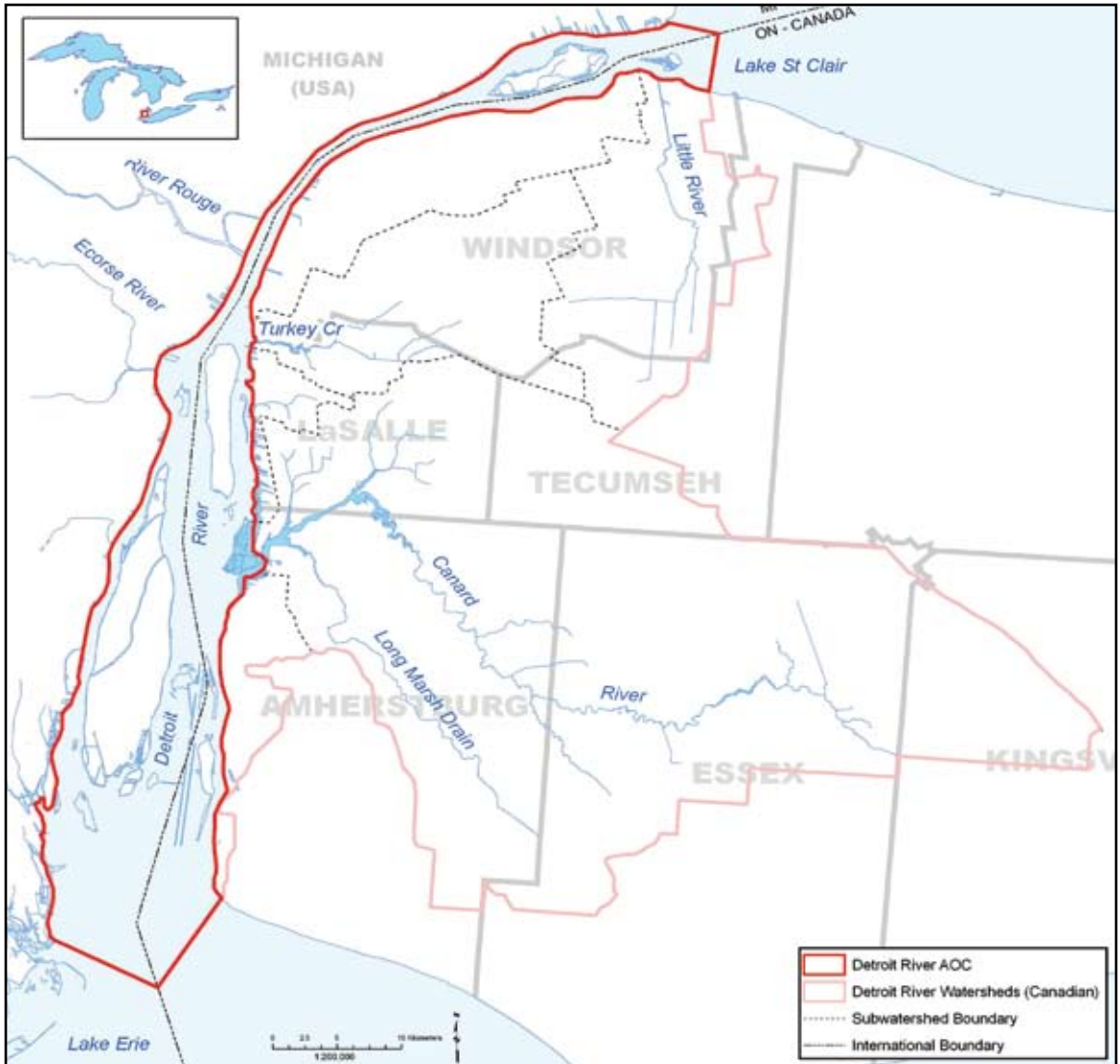
PAC members have been in the forefront when it comes to participation in community clean-ups and tree plantings supported by the City of Windsor, ERCA, Trees Ontario, the Windsor Port Authority and the Friends of Watersheds. Keep up the great work!

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. The PAC is an important part of the Detroit River’s cleanup process by providing a venue for the public to contribute to the restoration and protection of the Detroit River Area of Concern. The PAC’s roles and responsibilities include: promoting community involvement, critically reviewing DRCC reports, lobbying local and senior governments on Detroit River issues, and serving as the public’s voice on DRCC committees. If you are interested in getting involved in the PAC, please contact the RAP Coordinator.

Acronyms

AOC	Area of Concern	MOE	Ministry of the Environment
BUI	Beneficial Use Impairment	MNR	Ministry of Natural Resources
DRCC	Detroit River Canadian Cleanup	NPS	Non-Point Source
EC	Environment Canada	PAC	Public Advisory Council
ECSN	Essex County Stewardship Network	RAP	Remedial Action Plan
ERCA	Essex Region Conservation Authority		
GLIER	Great Lakes Institute for Environmental Research		



Canadian Areas of Concern in the Great Lakes–St. Lawrence River Basin



Photo credit: Environment Canada

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

Detroit River Canadian Cleanup

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