



Essex Region  
Conservation  
Authority



# DETROIT RIVER

A CANADIAN HERITAGE RIVER

## Monitoring Report

2001 - 2011

Prepared by the Essex Region Conservation Authority

May 2013





## EXECUTIVE SUMMARY

*“This country is so temperate, so fertile and so beautiful that it may justly be called the earthly paradise of North America.”*

Antoine de la Mothe Cadillac of the Detroit River, 1702

The Detroit River was nominated to the Canadian Heritage Rivers System (CHRS) in 1999 because of its outstanding human heritage and recreational values. Located in the heart of the Great Lakes, it was designated as a Canadian Heritage River in 2001, becoming the first and only river to receive both Canadian and American Heritage River designations. This report describes activities, research and studies which have occurred on the Detroit River since designation, and tabulates the current condition of natural heritage values, cultural heritage values, recreational values and integrity guidelines against CHRS frameworks. Management objectives identified in the designation document are also tabulated and the degree of achievement noted.

The Detroit River is integral to the Windsor-Essex County community and the lives of its residents. This unique international waterway flows through a metropolitan region of over 5 million people, binding the communities which share this precious resource. Thousands of years of First Nations use and 300 years of European settlement have endowed the Detroit River with an exceptional historical character, and the recreational opportunities offered by the river are second to none in North America. As well, over the past decade there have been countless examples that



The International Target Fireworks show draws hundreds of thousands of people to both sides of the Detroit River for a shared celebration of our heritage.

the Detroit River communities are dedicated to restoring the natural heritage of the Detroit River watersheds.

This report has determined that the heritage values upon which the Detroit River was designated remain unchanged, or in fact have improved. The conclusion of this report is that the Detroit River is worthy of continued designation as a river of national significance within the Canadian Heritage River System.



## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	1
INTRODUCTION .....	3
Background .....	4
Methodology .....	5
NATURAL HERITAGE VALUES.....	10
Background .....	10
Condition of Values Since Designation .....	10
CULTURAL HERITAGE VALUES.....	17
Background .....	17
Condition of Values Since Designation .....	18
RECREATIONAL HERITAGE VALUES.....	22
Background .....	22
Condition of Values Since Designation .....	22
CONCLUSIONS.....	35
APPENDIX I.....	36
References .....	36
Background Reports .....	37
Contributing Individuals .....	37
APPENDIX 2:.....	38
Detroit River and Watersheds: Endangered/ Threatened/Species at Risk.....	38



## INTRODUCTION

The Detroit River is unique in Canada, the United States, and indeed, the world. On July 19<sup>th</sup>, 2001, it became the first and only river to receive both Canadian and American Heritage River designations. As the busiest international waterway in North America, the Detroit River, in fact, is more a road than a boundary.

In 1997, the Essex Region Conservation Authority (ERCA) initiated the process to have the Detroit River designated as a Canadian Heritage River. During this time, the American Heritage River Initiative asked for ERCA's assistance in their parallel initiative. A stimulating and educational partnership began that was instrumental in achieving both designations ... a partnership which remains strong and mutually beneficial to this day.

Over the next four years, a committee met regularly and worked diligently, furthering the effort to have the Detroit River receive its designation. After the preparation and submission of a background report, a nomination document, the Detroit River was nominated into the CHRS based on its human heritage and recreational values. A Management Strategy to conserve, interpret, enhance and appreciate values of the Detroit River and its watersheds was completed, and the River made history upon receiving its Canadian Heritage River Designation in 2001.

Since that time, a number of strategic actions have taken place. The Detroit River is integral to the settlement and development of the Windsor-Essex communities. This waterway, between two sovereign countries, has its shores embracing the largest metropolitan area on any international border. Rather than separating the communities along its banks, the river connects them culturally and economically.

As recommended in The Management Strategy for the Detroit River as a Canadian Heritage River (2001), many strategic actions to conserve, interpret, enhance and appreciate the Detroit River and its watersheds have taken place.

Honoured as an American Heritage River in 1998, the Detroit is the first river with dual designations. Designation of the Detroit as a Canadian Heritage River encourages binational cooperation in its wise management and environmental restoration and is a testament to its significance as a national treasure.



Deputy Prime Minister Herb Gray and Minister of Canadian Heritage Sheila Copps designate the Detroit River as a Canadian Heritage River on July 19, 2001.

As envisioned, heritage river designation continues to act as a catalyst to stimulate further restoration of this river that is so rich with history. Significant actions are also being taken on the US side of this international waterway, and progress continues to be made.

The Canadian Heritage River System (CHRS) is a national program promoting river heritage conservation through the recognition of Canada's outstanding rivers. A cooperative effort of federal, provincial and territorial governments, the CHRS requires annual reports and in-depth monitoring every ten years to ensure that a designated river retains the outstanding heritage values for which it was nominated.

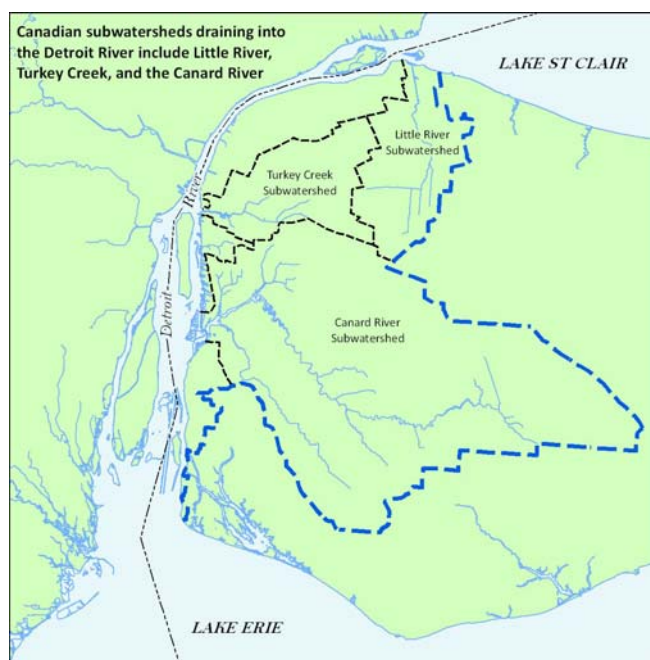
There are four objectives of the 10 Year Monitoring Report for the Detroit River:

1. To describe any major changes that occurred in relation to the river since its designation.
2. To review the natural, cultural and recreational values for which the river was nominated and determine if the river still possesses these values.
3. To review the integrity guidelines of the river and describe whether the river continues to possess these values.
4. To review the recommendations in the designation document *Management Strategy for the Detroit River as a Canadian Heritage River* and determine the levels to which they have been accomplished.

## Background

The Detroit River lies in the heart of the Great Lakes Basin connecting Lake St. Clair with Lake Erie. It flows approximately 51 kilometres from the City of Windsor, through the Town of LaSalle and to the Town of Amherstburg on the Ontario side. In Michigan, the river flows from Detroit to Brownstown Township. Its width varies from six-tenths of a kilometre to five kilometres. The Canada-U.S. boundary divides the river virtually down the middle. The Detroit River watershed drains more than 2,000 square kilometers and its tributaries include Marsh Creek and the Rouge and Ecorse Rivers on the American side. Turkey Creek, Little River and the Canard River are the Detroit River's Canadian sub-watersheds.

The Detroit River was first nominated into the Canadian Heritage Rivers System (CHRS) in 1999 because of its outstanding human heritage and recreational values. Three significant documents were prepared with significant input from the bi-national Detroit River community prior to its designation into the system: *The Detroit River Background Report (1998)*, *The Detroit River Nomination Document (1999)* and *The Management Strategy for the Detroit River as a Canadian Heritage River (2001)*. On July 19, 2001, the Detroit River became the first and only river to receive both Canadian and American Heritage River designations.



The Detroit River watersheds.



## Methodology

A Steering Committee for this review was created consisting of key staff members from the Essex Region Conservation Authority (ERCA), ERCA's General Manager, the Remedial Action Plan (RAP) Coordinator for the Detroit River Canadian Cleanup initiative and others to review the values upon which the Detroit River was designated and to assess their current condition.

Several approaches were used to gain information about the activities and changes to the Detroit River since its designation in 2001:

- A literature review of all Annual Report submissions completed by the Essex Region Conservation Authority.
- A review of ERCA's Registry of Actions.
- Discussions and interviews with key partners involved in upholding the heritage values for which the Detroit River was nominated.

A series of tables was developed based on the CHRS natural heritage, cultural heritage and integrity frameworks and the Detroit River's recreational framework. The recommended management actions from the document *The Management Strategy for the Detroit River as a Canadian Heritage River (2001)* were also evaluated. Information gained from the various sources was summarized and inserted into the tables where appropriate, with a column indicating whether there had been any changes or threats to the values in the monitoring period. While the Detroit River was not nominated for its natural heritage values, significant actions have been taken and measureable progress made in this category. An outline of these successes is included to demonstrate these remarkable achievements. A chronology of significant events since 2001 was also compiled.



The Tower of Freedom Monument was erected in 2001, and with its companion piece in Detroit, Michigan, comprises the world's only International Underground Railroad Monument.



**Table 1: Chronology of Events Since Designation**

Year	Significant Events, Actions, Research or Studies Since 2001
2001	The world's only International <b>Underground Railroad Monument</b> was erected in commemoration of Detroit's Tricentennial, and created by renowned African American artist Ed Dwight. The granite and bronze " <i>Tower of Freedom</i> " Monument stands on Pitt Street in Windsor with the aim of "Keeping the Flame of Freedom Alive", while its companion piece, the "Gateway to Freedom" monument, is located across the Detroit River in Hart Plaza in the City of Detroit. The "Tower of Freedom" Monument is inscribed with the names of key places and people in Canadian Underground Railroad history and holds the National Historic Sites and Monuments Board plaque regarding Canada's role in the Underground Railroad.
	A <b>one-hundred (100) acre reforestation project</b> was completed within the Canard River watershed, a sub-watershed of the Detroit River. 56,000 native species trees and shrubs were planted, uniting a previously fragmented woodlot to create a 300 acre forest.
	The <b>Conservation Vision for the Lower Detroit River Ecosystem</b> was released to the public by dignitaries such as the Right Honourable Herb Gray, Co-Chair of the International Joint Commission, Congressman John Dingell and the Honourable Susan Whelan, Member of Parliament for Essex. This strategy presents a bi-national conservation vision which will strive to protect unique habitats and ecological features of the river. The Detroit River Remedial Action Plan (RAP) has noted that over 95 percent of the historical, coastal wetlands of the Detroit River have been lost to development. As stated in the Conservation Vision, "it is urgent to protect the remaining coastal wetlands and other ecological features before they are lost to further development, and to rehabilitate degraded ones".
	<b>Soft shoreline improvement projects</b> were completed at St. Rose Park in east Windsor, and Hatch Gardens on the Windsor Central Riverfront. These projects provided enhanced fish habitat, recreation access, and aesthetics along 750 metres of waterfront parks, through features such as sheltering islands, cobble beaches, plantings of native vegetation, and waterfront viewing points.
2002	The <b>Windsor Archaeological Master Plan</b> was created to recognize and preserve local archaeological heritage in the City of Windsor.
	A <b>six (6) acre low flow augmentation pond</b> measuring was constructed on the Canard River, one of the Detroit River watersheds, in order to enhance aquatic habitat and water quality during drought conditions.
	<b>24 km of abandoned railway corridor</b> within the Detroit River watershed was donated to the Essex Region Conservation Foundation for Greenway development
	A <b>fish habitat enhancement project</b> was completed at McKee Park, creating a sheltered embayment along 150 metres of shoreline in west Windsor. Features included Lake Sturgeon spawning beds, sheltering islands, and a sand/cobble beach. The project also enhanced public access and provided attractive aesthetic features.



2003	<p>A <b>Detroit River Heritage Parkway</b> was established along the length of the Detroit River. Route markers were erected and a brochure, CD Rom and interpretive signs were developed to ensure the Detroit River Heritage Parkway is a comprehensive scenic driving tour, whereby people can get a sense of the human heritage, natural heritage and recreational values of the river. Interpretive signs were strategically placed along the route to encourage guests to stop and take in some of the outstanding culture and beautiful parks that stretch along the riverside.</p>
	<p>The <b>Clean Water ~ Green Spaces</b> program was established in partnership with all local municipalities to create a local commitment to fund natural heritage acquisition and restoration, and water quality improvement projects. The first priority, in partnership with the City of Windsor, was the acquisition and protection of the 'Spring Garden Prairie' – an Environmentally Significant Area and 'Area of Natural and Scientific Interest' in the Detroit River watershed. This natural area near the Detroit River had previously been planned for residential development.</p>
	<p>Approximately <b>800 metres of Detroit River Shoreline in Amherstburg</b> was acquired by ERCA. A master plan has been drafted to provide public access and viewing opportunities to the public. The property will be named Detroit River Heritage Lookout.</p>
	<p>A <b>soft shoreline improvement project</b> was completed along 280 metres of shoreline at Fort Malden in Amherstburg. The project included fish habitat enhancements such as Lake Sturgeon spawning beds and sheltering islands, while also improving public access to the shoreline.</p>
2004	<p>At Holiday Beach Conservation Area, in Big Creek Marsh at the mouth of the Detroit River, approximately <b>two acres of wetland habitat was restored</b>, native trees were planted and nest boxes were erected to successfully attract a nesting pair of Prothonotary warblers, a critically endangered species in North America.</p>
	<p>The <b>Detroit River Education Program</b> was developed, allowing the human heritage, natural heritage and recreational values of the Detroit River to be taught to students in levels kindergarten through Grade 8. These in-class, thematic lesson plans and activities meet the teaching objectives of the Ontario curriculum.</p>
	<p>The <b>Destination Eagle</b> project was launched by the Detroit River Canadian Cleanup and its partners. Through this program, juvenile bald eagles were examined, banded, tested for toxins and fitted with satellite transmitters that could be tracked online. Educational signage was also developed and installed to promote stewardship and highlight the importance of eagles in the Detroit River region.</p>
2005	<p>The <b>Shores of Erie Wine Festival</b> was created along the shores of the Detroit River in Amherstburg. It has since been named one of Ontario's best festivals.</p>
	<p>The City of Windsor's <b>acquisition and development of Legacy Park</b> near Caron Ave. provided the final piece in the completion of the continuous five (5) kilometres stretch of parkland and trails along Windsor's Central Waterfront. Shoreline improvements were also carried out along this 550 metre site, providing enhanced public access through features such as cobble/sand beaches and viewing platforms, in conjunction with fish habitat enhancements such as a sheltering island.</p>





2006	<p>A <b>native tree seed collection program</b> was initiated to ensure that seedlings planted back into the watershed are of local provenance; this will ensure improved survival and growth of trees planted in the future. Since the program was initiated in 2006, over 15,000 pounds of seed has been collected and propagated into seedlings for planting at sites throughout the watersheds.</p> <p>The <b>Clean Water Act</b> was passed initiating the start of the Drinking Water Source Protection planning process. This process included technical studies towards the development of Assessment Reports, identifying threats to drinking water sources. The Detroit River is a source of drinking water for residents on both sides of the border.</p>
2008	<p>A <b>fish spawning reef</b> was constructed in Canadian waters of the Detroit River between Fighting Island and the Town of LaSalle mainland with bi-national cooperation.</p> <p><b>Petite Côte Conservation Area</b> was developed in the Town of LaSalle. Previously owned as conservation lands with no facilities, this Conservation Area was the site where the <i>Gallerucella</i> beetle, the only known biological control for purple loosestrife, was released to test its effectiveness. Over more than a decade, purple loosestrife, an invasive species, has been substantially reduced. Once developed, this 30 acre Conservation Area featured a wetland boardwalk with a viewing tower overlooking a Provincially Significant Wetland, important marsh habitat, and the Detroit River.</p> <p>The City of Windsor completed a <b>\$110 million dollar expansion of the Lou Romano Water Reclamation Plant</b>. This expansion has taken the largest and one of the last remaining primary wastewater treatment plants in the Great Lakes basin and added secondary treatment capacity at the same time, roughly doubling overall capacity of the facility. These upgrades resulted in water quality improvements more than 10 times better than before the expansion.</p>



Fish spawning habitats have been constructed at various locations along the Detroit River.



2009	<b>Restoration and enhancement</b> to a completed project was organized for the Turkey Creek and Grand Marais Drain. This project continues to reduce flooding risks for many residential, industrial and commercial areas. The improvements to the creek protect it from becoming re-contaminated and ensure it is capable of safely conveying a 1:100 year storm event.
2010	<p>The Detroit River Canadian Cleanup initiative completed its <b>Remedial Action Plan Stage 2 Report</b> which describes progress on the remediation of the Detroit River as well as a future plan for removing the River from the list of Great Lakes Areas of Concern.</p> <p>The University of Windsor's Great Lakes Institute for Environmental Research completed a <b>study to determine the linkage between fish consumption advisories and sediment contamination</b>. This important study provided evidence that the driver of restrictions on fish consumption are contaminated sediments in the lower U.S. side of the Detroit River.</p> <p>The <b>Riverdance site on the Detroit River in the Town of LaSalle was completed</b>. With funding from the Great Lakes Sustainability Fund, the provincial Ministry of Environment and the Detroit River Canadian Cleanup, 550 metres of shoreline were rehabilitated. The site is immediately downstream of the Fighting Island Fish Spawning Habitat Project completed in the fall 2008. The completed works feature an undulating shoreline incorporating a variety of rock types and sizes, and an offshore sheltering island which improve habitat for many of the over 75 fish species that are found in the Detroit River. This new riverfront park provides enhanced access to the Detroit River for residents, visitors and anglers, a canoe launch, and a new LaSalle Environmental Research Centre (a partnership of LaSalle and the University of Windsor).</p> <p>The <b>Ford City Revitalization Project</b> has created 36 outdoor murals along Drouillard Road in the Detroit River watershed highlighting key human heritage aspects of the area's rich history, including the war effort, Ford's footprint, and the Rumrunners.</p>
2011	<p>The museum at <b>Fort Malden National Historic Site</b> was completely renovated to highlight the heritage structure of the building and to display authentic War of 1812 artifacts for the Bicentennial Commemoration. Visitors have new opportunities to learn how Fort Malden has evolved over the past 200 years from a military post to the centre of a modern community. The construction of a palisade better connects the Fort to the historic town of Amherstburg, and provides a strong visual cue of the Fort's military heritage.</p> <p>The Proposed <b>Essex Region Source Protection Area Assessment Report</b> was completed, and identified drinking water threats to sources of drinking water including the Detroit River intakes. Work commenced on the preparation of policies to reduce or eliminate the threats.</p> <p>A <b>combined sewer overflow retention treatment basin (RTB) on the Windsor riverfront</b> was completed and handles greater than 75% of the combined sewer overflows that currently bypass to the Detroit River untreated.</p> <p>Studies completed as part of the Assessment Report through the Source Water Protection program concluded that there has been a <b>substantial improvement in water quality at the Amherstburg water intake</b>, particularly in levels of E.coli, which is attributed to major upgrades of sewage treatment facilities upstream.</p>



## NATURAL HERITAGE VALUES

### Background

The Detroit River was not nominated based on its Natural Heritage values. However, as anticipated, designation has acted as a catalyst in stimulating many additional projects to enhance the river's natural values. It is important to note that the Detroit River is a major link in connecting the upper and lower Great Lakes. It also links the largest wetland complex in the Great Lakes – the St. Clair Flats, and the world's largest freshwater Delta – the St. Clair Delta, to Lake Erie, the most biologically productive of the five Great Lakes. The landscapes, flora and fauna of the Detroit River contain many unique, rare and endangered species of plants and animals not found anywhere else in Canada.



One of the largest populations of the American Lotus, a Provincially rare species, can be found in the Canard River, a tributary of the Detroit River.

As noted in the Nomination Report, numerous actions were underway at that time to improve the natural heritage values of the river. These activities have continued through to present, with a net increase in habitat and the return or population increase of several key species.

### Condition of Values since Designation

As described in Table 2 below, overall Natural Heritage conditions have improved since 2002. Natural areas cover has increased, and several habitat restoration projects targeting key species have been successful at improving reproductive success of those species. In fact, so much progress has been made that adding Natural Heritage values to the Detroit River's designation should be considered.

The Detroit River is utilized by over 75 different fish species for reproduction, feeding, and travel between other lakes. Fish spawning habitat enhancements along the shoreline of Fort Malden National Historic Site, LaSalle's Riverdance Park, Windsor's McKee Park, Windsor Waterfront Parks and many other locations have been constructed. Post-construction monitoring of the Fighting Island spawning reef has confirmed its use by Lake Sturgeon, Lake Whitefish, Walleye and Northern Madtom, which are all important Detroit River fishes.



The Destination Eagle project was launched by the Detroit River Canadian Cleanup and its partners. Through this program, juvenile bald eagles were examined, banded, tested for toxins and fitted with satellite transmitters that could be tracked online. Educational signage was also developed and installed to promote stewardship and highlight the importance of eagles in the Detroit River region.

Water quality has been monitored in the Detroit River and its watersheds since 1996 and over 500 water quality improvement projects have been implemented since designation in 2001. In 2008, 975 cubic metres of PCB contaminated sediments were removed from Turkey Creek (Grand Marais Drain) east of Walker Road. Later that year, the Lou Romano Water Reclamation Plant was expanded, adding secondary



The Destination Eagle project helped to provide habitat and education about Bald Eagles in the Detroit River Area.

treatment and roughly doubling the overall capacity of the largest and one of the last remaining primary wastewater treatment plants in the Great Lakes basin. These upgrades resulted in water quality improvements more than 10 times better than before the expansion. As well, the Windsor Riverfront Retention Treatment Basin (RTB) was constructed in 2011 to reduce the amount of untreated water from combined sewer overflows, ultimately improving water quality. Studies completed as part of the Assessment Report through the Source Water Protection program in 2011 concluded that there has been a substantial improvement in water quality at the Amherstburg water intake in recent years, particularly in levels of E.coli, which is attributed to the major upgrades made to the sewage treatment facilities upstream.

Through the Detroit River Canadian Cleanup initiative, numerous outreach and education events have been implemented. For example, Peche Island Day attracts over 300 people to the Detroit River to visit this beautiful city-owned park and to learn about the island's unique ecology and rich history. The Friends of Watersheds help engage the public in watershed improvements by conducting local cleanup events and native tree/wildflower plantings. A fulsome description of the many actions that have taken place to improve the natural heritage of the Detroit River is presented in Table 2, and although the river was not nominated based on its Natural Heritage values, the Windsor-Essex community has demonstrated a continued commitment to improving the natural environment of the river.





**Table 2: Changes To Natural Heritage Values Since Designation**

Themes & Sub-Themes (2001 CHRS Natural Framework)	Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
<b>1. Hydrology</b>			
1.1 Drainage Basins	Atlantic Ocean Basin. Stream Number 1.	No change since designation	None
1.2 Seasonal Variation	Period of highest flow is March. Period of lowest flow is May-September.	No change since designation	None
1.3 Water Content	Minor sediment load (51-200 mg/l; 5.1 – 10.0 JU). High Total Dissolved solids (> 100 mg/l)	No change since designation	None
1.4 River Size	Flow volume at lowest point of nomination - Major Rivers (>800 m <sup>3</sup> /sec). Total Length of River > 1000km.	No change since designation	None
<b>2. Physiography</b>			
2.1 Physiographic Regions	St. Lawrence Lowlands	No change since designation	None
2.2 Geological Processes	Glacial rebound with typical features such as incised channels, abandoned beaches and deltas	No change since designation	None
2.3 Hydrogeology	Pervious (shales) with low porosity (fine-grained clay / silt)	No change since designation	None
2.4 Topography	Shallow gradient (< 1m/km). Height above sea level 0-400m.	No change since designation	None
<b>3. River Morphology</b>			
3.1 Valley Types	Not described at time of designation.	No change since designation	None
3.2 Channel Types	Lake-contained Channel. Level dependant on large lake.	No change since designation	None
3.3 Channel Profile	Flatwater level. Insignificant gradient.	No change since designation	None



3.4 Fluvial Landforms	Depositional landforms – levees (raised banks enclosing channels within floodplain). Erosional landforms – Gullies.	No change since designation	None
<b>4. Biotic Environments</b>			
4.1 Aquatic Environments	The Detroit River is unique in the CHRS System in that it is a large flowing connecting channel with emergent and submergent wetlands in pockets.	<p>Lake Sturgeon spawning habitat enhancements consisting of submerged offshore rock shoals were constructed along the Detroit River shoreline at Fighting Island, Fort Malden National Historic Site, McKee Park, Windsor Waterfront Parks and many other locations. Post construction monitoring of the Fighting Island reef confirms use by spawning Lake Sturgeon, and Northern Madtom.</p> <p>A low flow augmentation pond measuring six (6) acre was constructed on the Canard River, one of the Detroit River watersheds, in order to enhance aquatic habitat and water quality during drought conditions.</p> <p>Several wetland features have been restored in the watersheds draining to the Detroit River.</p> <p>Over 500 water quality improvement projects have been implemented in the Detroit River watersheds, including buffer strips, soil erosion control structures, septic system upgrades and well capping projects.</p> <p>Since 2002, ERCA has monitored surface and groundwater quality at</p>	Positive Improvement



		<p>numerous stations throughout the region, including the Detroit River watersheds.</p> <p>In 2008, 975 cubic metres of PCB contaminated sediments were removed from Turkey Creek (Grand Marais Drain) east of Walker Road.</p>	
4.2 Terrestrial Ecosystems	Ecozones: Mixed Wood Plains	<p>Since 2002, almost 2 million trees have been planted or distributed by ERCA. Total natural areas cover has increased from 7.5% to 8.5% since 2002, with a net increase of roughly 4,500 acres.</p> <p>A native seed collection program has also been initiated to ensure that seedlings planted back into the watershed are of local provenance; this will ensure improved survival and growth of trees planted in the future. Since the program was initiated in 2006, over 15,000 pounds of seed has been collected and propagated into seedlings for planting at sites throughout the Detroit River watersheds.</p> <p>Approximately 3.0 km of Detroit River shoreline has been rehabilitated used a soft shoreline engineering approach, which enhances fish habitat, provides erosion protection, and in some cases a recreational amenity.</p>	Positive Improvement



5. Vegetation			
5.1 Significant Plant Species	<p>Vascular Plants</p> <p>Dynamic: Oak savannah</p> <p>Diversity: More than 2,200 plant species.</p> <p>Trees: Diversity: Carolinian Canada species</p> <p>Shrubs: Diversity: Oak Savannah</p>	<p>Since 2002, ERCA has completed detailed vegetation inventory projects for three Detroit River watershed municipalities, including Windsor, Tecumseh, and LaSalle. Natural areas were inventoried using the Ecological Land Classification protocol, and included documentation of species at risk, as well as mapping of all vegetation communities.</p>	None
5.2 Rare Plant Species	<p><b>Plants:</b> 22 species listed as Endangered/Threatened/Species of Concern in total. Of those, 10 are listed as Endangered by COSEWIC and SARO; 6 Threatened (COSEWIC)/7 Threatened (SARO), and 6 Species of Concern (COSEWIC)/5 Species of Concern (SARO).</p> <p><b>Trees:</b> 6 species listed as Endangered/Threatened/Species of Concern in total. Of those, 3 are listed as Endangered by COSWIC and SARO; 2 are listed as threatened, and 1 listed as species of concern.</p>	<p>In total, 65 plant and animal species listed as at risk by COSEWIC and SARO. This includes 31 listed as Endangered by the Commission on the Status of Endangered Wildlife in Canada (COSEWIC), 29 listed as Endangered by the Species At Risk in Ontario (SARO); 16 listed as threatened by COSWIC, 20 listed as threatened by SARO; and 16 Species of Concern listed by both COSEWIC and SARO.</p> <p>This may be more endangered/threatened/species of concern than any other heritage river in Canada. Details of these statuses can be found in Appendix 2.</p>	None
6. Fauna			
6.1 Significant Animal Populations	<p>The Detroit River watershed lies fully within the Carolinian Zone, which supports a higher diversity of plant and animal species than any other region in Canada; the highest</p>	<p>No change since designation</p>	None





	concentration of globally rare species and communities in Ontario, including some plants exclusive to this region; one third of Canada's rare plant and animal species; and is globally significant for waterfowl		
6.2 Rare Animal Species	<p>Mammals: 1 listed as Species of Concern by COSEWIC/SARO.</p> <p><b>Birds:</b> 9 species listed as Endangered/Threatened/Species of Concern. Of those, 4 listed as endangered by COSWEIC and SARO; 2 Threatened (SARO); 2 Species of Concern (COSEWIC)/3 Species of Concern (SARO).</p> <p><b>Herptile:</b> 15 species listed as Endangered/Threatened/Species of Concern. Of those, 6 listed as Endangered by COSEWIC, 5 Endangered by SARO; 5 Threatened (COSEWIC)/6 Threatened (SARO); 4 Species of Concern (COSEWIC/SARO)</p> <p><b>Fish:</b> 5 species listed as Endangered/Threatened/Species of Concern. Of those, 1 listed as endangered (COSEWIC/SARO); 2 Threatened (COSEWIC/SARO) and 2 Species of Concern (COSEWIC/SARO)</p> <p><b>Mussel/Mollusk:</b> 7 species listed as Endangered/Threatened/Species of Concern. Of those, 7 Endangered (COSEWIC); 6 Endangered (SARO) and 1 threatened (SARO).</p>	<p>At Holiday Beach Conservation Area at the mouth of the Detroit River, approximately two acres of wetland habitat were restored, native trees were planted and nest boxes were erected to successfully attract a nesting pair of Prothonotary warblers, a critically endangered species in North America.</p> <p>Also, the Destination Eagle project was launched in 2004 by the Detroit River Canadian Cleanup and its partners. Juvenile bald eagles were examined, banded, tested for toxins and fitted with satellite transmitters that could be tracked online. Educational signage was also developed. Several spawning reefs for Lake Sturgeon (COSEWIC status: Threatened) have been constructed, and post-construction monitoring has confirmed use by spawning Lake Sturgeon and Northern Madtom.</p>	Positive Improvement

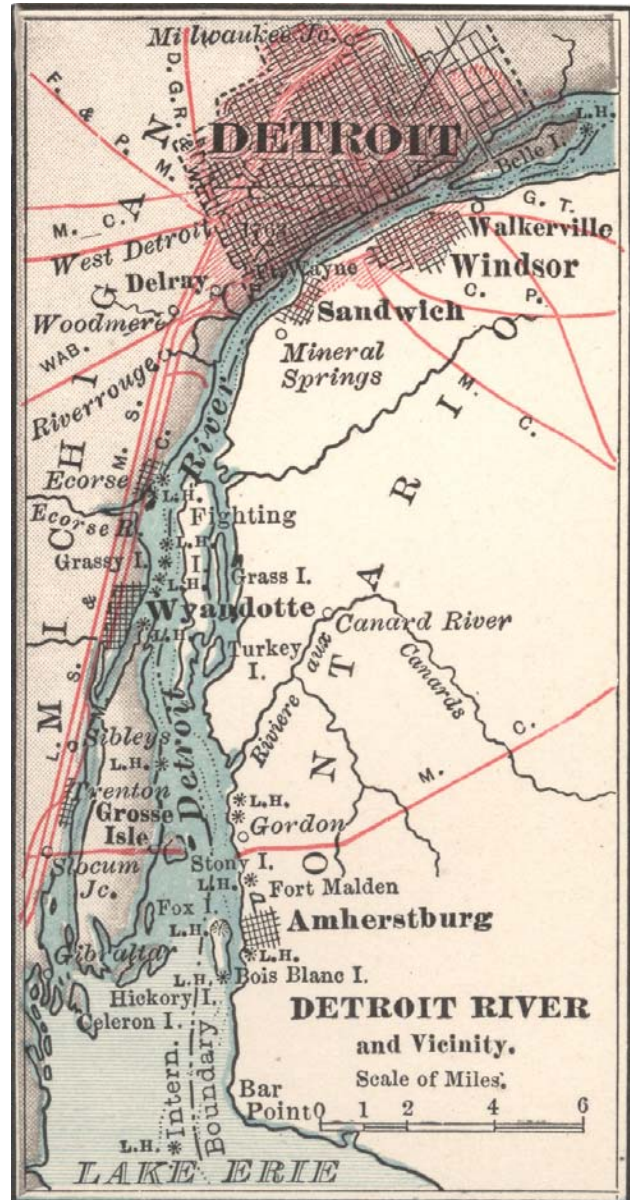


## CULTURAL HERITAGE VALUES

### Background

The Detroit River and its resources have been used by millions of people for thousands of years. For our First Nations, it served as a key settlement site, primary transportation route, and was used for trade purposes and spiritual ceremonies. The river has shaped the history of our bi-national region and in many ways, has influenced North American industries and the global economy. The Detroit River was and is:

- An important link to settlements in the mid-west and Great Lakes during the 1700 – 1800s;
- The terminus for the Underground Railroad and the refugee slaves seeking freedom in Canada;
- Strategically located such that Fort Pontchartrain was established in 1701 and the first permanent European settlement in Ontario was established alongside the River in 1748;
- Important to the military as demonstrated by the construction of Fort Malden and the King's Navy Yard in 1796, and in major battles during the War of 1812 and the Rebellion of 1837-38;
- A showcase of engineering marvels such as the Ambassador Bridge, the Windsor-Detroit Tunnel and the Livingston Channel;
- A location where more than 300 years of European settlement history has been preserved in heritage buildings, waterfront parks, period museums, legends, folk songs, literature, artwork and historical accounts.



An early map of the Detroit River



## Condition of Values Since Designation

As described in Table 3, Cultural Heritage Values continue to be a cherished and important element of the Detroit River. Particularly in the years leading up to the bi-centennial celebrations of the War of 1812, there has been significant emphasis on highlighting the human and cultural heritage associated with the river and more than 40 Canadian groups and organizations work to preserve specific heritage resources in the Detroit River Region. They meet quarterly to share information through the Southwestern Ontario Heritage Council. While it is positive that there are so many organizations working together, because of this, progress can sometimes be uneven and fragmented. Additionally, formalizing a means of Canada –US communications amongst cultural heritage groups would be advantageous.



Fishing is enjoyed along both sides of the Detroit River.

New research indicates that the Drouillard mill built in 1781 near the Detroit River may have been the earliest water powered grist mill in Ontario. Local focus on and appreciation for the historic and cultural resources of our community continues to grow, particularly as the events and activities associated with commemorating the War of 1812 are planned and implemented.

**Table 3: Changes To Cultural Heritage Values Since Designation**

CHRS Cultural Framework (2000)	Cultural Heritage Values	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
<b>I. Resource Harvesting</b>			
I.1 Fishing	Aboriginal fishing, domestic consumption of fish, commercial fishing	None	None
I.2 Shoreline Resource Harvesting	Trapping of beaver, trapping of other edible or fur-bearing aquatic animals, hunting of waterfowl, quarrying stone	None	None
I.3 Extraction of Water	Small scale domestic use, municipal water supplies, agricultural uses, industrial	The Detroit River Canadian Cleanup (DRCC) conducted a survey of users of Detroit River	None



	extraction for factories and mines	<p>water (those with a Permit to Take Water) in order to assess the “Added Costs to Agriculture or Industry Beneficial Use Impairment (BUI)” in June 2010.</p> <p>As part of the Assessment Report completed in 2011 through the Source Water Protection program, ‘Water Budget’ studies were carried out for the regions watersheds including Detroit River tributaries. The studies evaluated the quantity of water supplies in surface waters and ground water aquifers, in comparison to water demand based on ‘Permits to Take Water’ in the subject watersheds.</p>	
<b>2. Water Transport</b>			
2.1 Commercial Transportation	Navigable channel itself, human or wind powered commercial freight and passenger transport, powered commercial freight and passenger transport, navigational improvements, cargoes.	Continuing since designation. Dossin Museum of the Great Lakes provides a River Cam so anyone can follow river traffic.	None
2.2 Transportation Services	Places of construction, repair and storage of craft, facilities for loading, unloading and storing cargo and passengers	Discussion of re-introducing passenger ferries for international River crossing. New storage and docking facilities were constructed along the Detroit River by Sterling Fuels and the Windsor Port Authority incorporating significant environmental benefits.	None
2.3 Exploration & Surveying	Not nominated on this value.	None	None





3. Riparian Settlement			
3.1 Siting of Dwellings	Dwellings, farmsteads originally accessible only by river, dwellings and lots sited in respect of floods, water access; shoreline seasonal settlements, significant riparian residences	None	None
3.2 River-based communities	Archeological evidence of shoreline Aboriginal settlements; patterns of settlement affected by surveys; roads/railways whose structure is dictated by rivers	New research indicates that the Drouillard mill built in 1781 near the Detroit River may have been the earliest water powered grist mill in Ontario.	None
3.3 River-influenced transportation	Steel road bridges; ferries and associated docks, cables; tunnels/fords/causeways		None
4. Culture and Recreation			
4.1 Spiritual Associations	Ritual or ceremonial structures; sites of recurring spiritual or ritual activity; burial grounds		None
4.2 Cultural Expression	Historical river-based literature; paintings of specific rivers or people using rivers; river folklore; architectural responses to river locations; river-based cultural landscapes	Development of Windsor Sculpture Park on the banks of the River. The Park includes 31 large scale contemporary art works. As well, many festivals attracting hundreds of thousands of visitors to the riverfront are held each year.	Positive Improvement
4.3 Early Recreation	Watersport facilities or clubs	Since designation, River Canard Canoe Rentals has opened allowing additional river access.	None
5. Jurisdictional Uses			
5.1 Conflict & Military Associations	Aboriginal conflict sites, European armed conflict afloat, invasion routes and associated battlefields, river-side fortifications	Bi-national preparations made to commemorate the Bicentennial of the War of 1812 with a wide variety of events and publications.	None



5.2 Boundaries	Political boundaries, artifacts associated with trans-boundary movements; special regional roles or identities created by boundaries	No change since designation	None
5.3 Environmental Regulation	Municipal sanitary and storm sewage disposal systems; river reclamation projects affecting degraded rivers; fish hatcheries and regulated spawning grounds.	Although not required by regulation, significant upgrades have been undertaken at the Lou Romano Water Reclamation Plant, the Central Riverfront Retention Treatment Basin and the Amherstburg Wastewater Treatment plant, all benefitting water quality within the Detroit River.	None



The Military heritage of the Detroit River continues to be a fascinating and integral part of its human and cultural heritage value.



## RECREATIONAL HERITAGE VALUES

### Background

For hundreds of years, the Detroit River has been used for boating, fishing and hunting, and nature viewing and appreciation. Over the years, an extensive park and trail system has been developed to promote, enable and enhance the recreational opportunities along the river. Some of the Detroit River's highlights include:

- The largest number of recreational watercraft per capita in North America, and more than 93 public and private marinas on both sides of the river;
- An extensive riverfront park system on both sides of the river offering public access for world-class fishing, boating, views of lush natural features, passing ships and urban skylines, as well as venues for numerous annual festivals and events;
- Outstanding opportunities for residents and visitors to enjoy boat tours, sightseeing and participating in bird watching, angling and hunting.
- Numerous festivals and events held on both the American and Canadian side of the Detroit River annually.

### Condition of Values since Designation

The Detroit River continues to be an outstanding destination for recreation. Since designation, parks have been upgraded and enhanced and new parklands added to provide residents and visitors with outstanding opportunities to appreciate the Detroit River. The Detroit River also remains a high quality, heavily used recreational resource for all types of boating. White Sands and Crystal Bay are managed as Ontario's only water-only accessible conservation areas.



The Shores of Erie Wine Festival annually welcomes over 20,000 visitors to the Detroit Riverfront.

New fishing docks and observation platforms have been constructed, and soft-shore engineering projects have enhanced the aesthetics of the river while also improving fish habitat values and access for fishing. Numerous festivals and events are held along the shores of the Detroit River each year in all municipalities along its banks, bringing hundreds of thousands of residents and tourists to discover and enjoy its beauty and value. New river-based sporting events including the Detroit River Red Bull Air Race (2009 and 2010), renewal of annual tug boat races, and ABP Gold Cup (Hydroplane) races are examples of some recently introduced or renewed exciting international events.



Table 4: Changes To Recreation Values Since Designation

Recreational Capability Themes and Sub-themes	Description of Current Situation	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
<b>1. Boating</b>			
1.1 High Speed Boating	The Detroit River remains a high quality, heavily used recreational resource for all types of boating.	White Sands and Crystal Bay managed as Ontario's only water-only accessible conservation areas.	None
1.2 Day Paddling & Rowing			
1.3 Sailing			
1.4 Commercial Boat Tours	Boat tours continue to be offered on both sides of the river.	New public dock and terminal have been built to give Great Lakes cruise ships, ferries, dinner cruisers, tour boats, tall ships and other vessels of interest the ability to dock in downtown Detroit, and in support of proposed ferry between Windsor and Detroit.	Positive Improvement
<b>2. Angling</b>			
2.1 Day Angling	The Detroit River continues to be heavily used for day/weekend angling opportunities.	Soft-shoreline engineering projects completed on Detroit River and its watersheds include new fishing docks and access facilities. Upstream restoration projects further restore wetland and aquatic habitats. As well, a study undertaken by the Detroit River Canadian Cleanup identifies taste of fish as a non-impaired beneficial use, an improvement since designation.	Positive Improvement
2.2 Weekend Angling			
2.3 Angling Vacation	Not described at time of designation. Most angling is done by local residents.		None
2.4 Ice Fishing	Not described at time of designation		None





2.5 Specific Fish Species	<p>Of the 117 species of fish in the Great Lakes, 75 are found in the Detroit River.</p> <p>The River is known internationally for its Muskellunge, Walleye, White Bass and Yellow Perch in addition to other sport fisheries.</p>	<p>Reintroduction of Lake Sturgeon through sturgeon spawning bed restoration project on Fighting Island (proposed to be expanded to more than 1 acre in 2013/14).</p> <p>Spawning locations have been reported in the river for 32 species.</p> <p>Fishes of Essex County and Surrounding Waters (Lynda D. Corkum) published in 2010 provides comprehensive field guide to fishes in Canadian and adjacent American Waters of Detroit River, Lake St. Clair and Lake Erie.</p> <p>Critical Habitat for 2 Endangered species (Pugnose Shiner and Northern Madtom)</p>	None
<b>3. Water Contact</b>			
3.1 Swimming	Swimming and swimming beaches, continue to be available.		None
3.2 Water Skiing	Not described at time of designation.		None
3.3 Snorkel/Scuba	Diving continues to be popular, and increased in advance of War of 1812 celebrations.		None
<b>4. Water Associated</b>			
4.1 Trail Use	Regional and Municipal Trails have increased and enhanced to provide more opportunities for river-based trail use.	<p>20km Essex to Amherstburg Greenway donated by CN in 2002. Trail development ongoing.</p> <p>Windsor Essex Parkway (in construction) adds additional 20+ km of additional trails.</p>	Positive Improvement



		All river communities have increased trails in municipalities along the river. County Wide Active Transportation initiated (approved 2012) to support on-road and off-road trail development	
4.2 Camping	Camping continues to be provided for in the Detroit River watersheds.		None
4.3 Hunting	Waterfowl, deer, turkey and pheasant hunting and hunting clubs throughout Detroit River watersheds.		None



Municipal and regional trails have increased and provide more opportunities for recreational river-based trail use.



5. Natural Heritage Appreciation			
5.1 Wildlife	Detroit River is internationally recognized for bird, plant, and animal species and nature appreciation.	<p>Detroit River International Wildlife Refuge established in 2002 as the only international wildlife refuge in North America, and includes nearly 6,000 acres of natural heritage protection along 48 miles of Detroit River and Western Lake Erie shorelines.</p> <p>Holiday Beach Conservation Area named globally significant Important Bird Area (IBA) by Bird Studies Canada.</p>	None
5.2 Vegetation		<p>Continued support from Essex Region Conservation Foundation, senior levels of government and other partners (e.g. Nature Conservancy of Canada, Ducks Unlimited Canada) and private donations contribute towards the securement of 410 acres of natural areas and the donation of 100 acres of abandoned railway for greenway/trail purposes.</p> <p>Essex County Conservation Action Plan in partnership with Nature Conservancy of Canada lists areas in Detroit River watershed as high priority.</p>	Positive Improvement
5.3 Vistas/Scenic Quality	Diversity of vistas and landscapes, as well as continued river use, urban skylines, Ambassador Bridge and rural/natural landscapes make the Detroit River visually impressive.	The City of Windsor developed Legacy Park, providing the final piece of a continuous stretch of 5 kilometres of parkland and trails along Windsor's Central Waterfront. Shoreline improvements were also carried out along this 550 metre site, providing enhanced public access	Positive Improvement.



		<p>through features such as cobble/sand beaches and viewing platforms, in conjunction with fish habitat enhancements such as a sheltering island.</p> <p>Petite Cote Conservation Area (formerly known as our Sabadash property) was created in the Town of LaSalle, featuring a wetland boardwalk, and viewing tower overlooking a Provincially Significant Wetland and the Detroit River.</p>	
5.4 Geological Features/Water Features	Not described at time of designation.		None.
<b>6. Human Heritage Appreciation</b>			
6.1 Historic Sites	Events, festivals, landmarks, parks, open spaces, and museums reflect significance of river in the history of Detroit River Communities.	New exhibits at Fort Malden National Historic Site in Amherstburg, and ongoing events and activities to commemorate War of 1812 in all Detroit River communities.	None.
6.2 Cultural Landscapes	History and contemporary use of river and watersheds provide broad diversity of cultural landscapes.		None.
6.3 Sporting Events/Activities	Increase in river-based events and activities, and facilities on both sides of Detroit River.	New river-based sporting events including Detroit River Red Bull Air Race (2009 and 2010), renewal of annual tug boat races, and ABP Gold Cup (Hydroplane) races.	None.
6.4 Cultural Events/Activities	Significant increase in river-based recreational events on both sides of the River.	Re-development of the riverfront Festival Plaza in Windsor which hosts a wide variety of concerts and events.	Positive Improvement.



**Table 5: Integrity Guidelines Since Designation**

CHRS Principles, Procedures and Operational Guidelines	Integrity Values	Changes or Threats to Integrity Value(s) since Nomination
<b>I. Natural Integrity Guidelines</b>		
I.1 The nominated area is of sufficient size and contains all or most of the key interrelated and interdependent elements to demonstrate the key aspects of the natural processes, features or other phenomena which give the river its outstanding natural value.	The river and its watershed are of sufficient size and composition to demonstrate the key aspects of features and processes which give the Detroit River its outstanding values. The river is 51 kilometres in length, and its width varies from six-tenths of a kilometre to five kilometres.	None
I.2 The nominated area contains those ecosystem components required for the continuity of the species, features or objects.	The river contains ecosystem components necessary for the sustainability of its valued features.	None
I.3 There are no human-made impoundments within the nominated area.	The Detroit River does not contain any man-made impoundments. Its regime has remained virtually unchanged since the first settlements.	None
I.4 All key elements and ecosystem components are unaffected by impoundments located outside the nominated area.	The entire Detroit River and its major tributaries were nominated as a CHR, and there are no impoundments that affect the designated area.	None
I.5 Natural values for which the river is nominated have not been compromised.	The Detroit River was not nominated based on its natural heritage values. However, since designation, hundreds of clean up and restoration projects have taken place within the Detroit River and its watersheds, and measurable improvements to its natural heritage have been demonstrated.	None
I.6 The water of the nominated area of the river is uncontaminated to the extent that its natural aquatic ecosystem is intact.	The Detroit River is a working river and the busiest international crossing in North America. The communities along its banks have demonstrated significant commitment to improving its natural ecosystem through hundreds of projects, including major efforts at the Lou Romano Water Reclamation Plan,	None

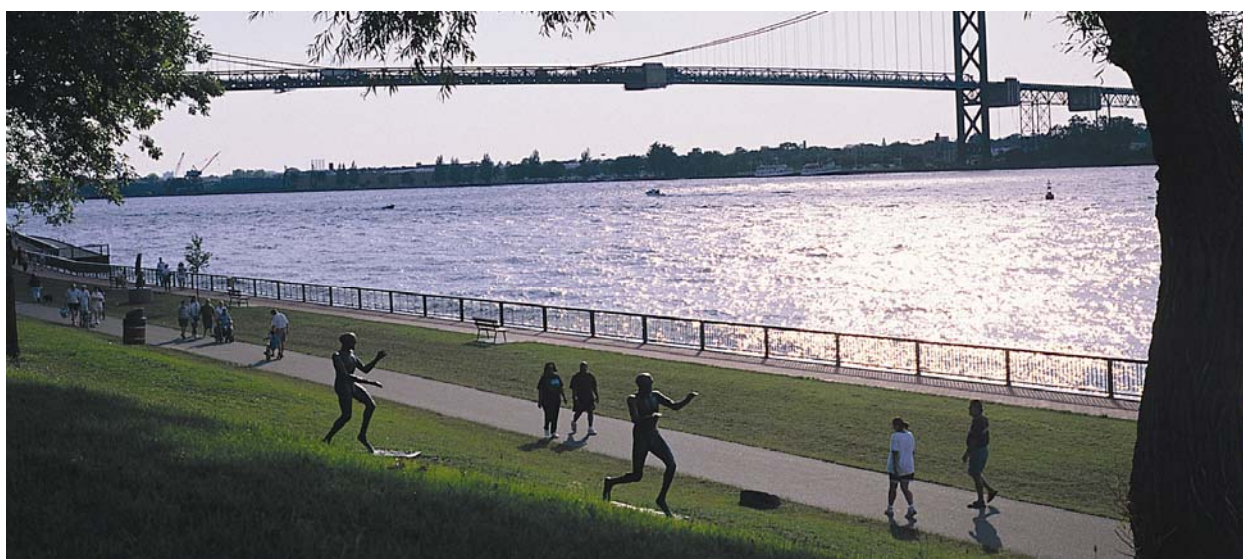




	the Central Riverfront Retention Treatment Basin, and the Amherstburg Wastewater Plant.	
1.7 The natural aesthetic value of the river is not compromised by human developments.	Additional parkland has been developed since the time of designation, improving opportunities for people to connect with and appreciate the significant natural beauty of the Detroit River.	None
<b>2. Cultural Integrity Guidelines</b>		
2.1 The nominated area is of sufficient size and contains all or most of the key interrelated and interdependent elements to demonstrate the key aspects of the features, activities or other phenomena which give the river its outstanding cultural value.	Bi-national communication amongst heritage groups has increased since designation.	None
2.2 The visual appearance of the nominated area of river enables uninterrupted appreciation of at least one of the periods of the river's historical importance.	The Detroit River's regime has remained basically unchanged since the area was discovered by European explores more than 300 years ago. Today, it flows past the same lands and islands, without impoundments, as it has for centuries. Its shorelines have changed in many locations through erosion protection projects and urban development, but pockets of undeveloped land still exist, appearing much as they did in the past.	None
2.3 The key artifacts and sites comprising the cultural values for which the river is nominated are unimpaired by impoundments and human land uses.	There are rich examples of <i>in situ</i> historical artifacts along the Detroit River. Archaeological sites, Fort Malden and several heritage buildings represent pre-settlement, as well as the 18 <sup>th</sup> and 19 <sup>th</sup> centuries.	None
2.4 The water quality of the nominated area does not detract from the visual character of the cultural experience provided by its cultural values.	The "Degradation of Aesthetics" is one of the 14 variables used to measure the Detroit River's ecosystem health. In summer 2011, the DRCC conducted a visual survey of aesthetics at 11 sampling location along the entire length of the Detroit River. The DRCC is currently preparing a report on the condition of the river's aesthetic condition.	None



3. Recreational Integrity Values		
3.1 The river possesses water of a quality suitable for contact recreational activities, including those recreational activities for which it is nominated.	The Detroit River possesses a water quality adequate for many forms of recreation throughout its length, from on-water recreational pursuits such as swimming and boating, to related pursuits such as hunting, fishing and nature appreciation.	None
3.2 The river's visual appearance is capable of providing river travelers with a continuous natural experience, or a combined natural and cultural experience, without significant interruption by modern human intrusions.	The River has been influenced by humans for centuries. Human intrusions are part of the River's story and cannot be erased.	None
3.3 The river is capable of supporting recreational uses without significant loss or impact on its natural, cultural or aesthetic values.	The Detroit River supports wide and varied recreational pursuits without significant loss or impact on its natural, cultural or aesthetic values. In fact, recreational pursuits such as natural and human heritage appreciation, hunting, fishing and birding rely heavily on their natural and cultural landscapes. Planning and management of the lands by local, regional and provincial governments demonstrate a strong commitment to the Detroit River and its resources.	None



Thousands of people flock to the Detroit River each day to enjoy the many kilometres of parkland, trails, sculptures, playscapes and art that line its banks.



**Table 6: Management Plan Recommendations and Current Status**

Management Plan Recommendation	Degree of Achievement (initiated, on-going, addressed, partial, complete)	Actions/Notes
Establish a Detroit River Council.	Ongoing	The Detroit River Canadian Cleanup initiative works together collaboratively to address the natural heritage values of the Detroit River. As well, the Western Lake Erie Watersheds Priority Natural Area, which includes the Detroit River, includes representation from all levels of government and public.
Hold Community Workshops to develop local and international partnerships.	Ongoing	Numerous community workshops on Human Heritage topics in particular, such as War of 1812, Underground Railroad and others. As well, Tourism Windsor-Essex-Pelee Island and the Windsor-Essex Development Corporation have and continue to host forums for local and bi-national partnerships. Finally, the recently collaborative to designate the Western Lake Erie Watersheds as a Priority Natural Area further enhances opportunities for local and international collaboration.
Establish a Detroit River newsletter and maintain a website.	Ongoing	The Detroit River Canadian Cleanup publishes a regular newsletter with updates regarding progress along the Detroit River. A website that catalogues projects and progress along the Detroit River is hosted by the University of Windsor, and the Detroit Heritage River designation is prominently featured on the website at <a href="http://www.erca.org">www.erca.org</a> .
Install signage recognizing Canadian and American Heritage River designations.	Completed	The ten interpretive signs that are strategically placed along the Detroit River Heritage Parkway identify the Detroit River as the only river in North America with both Canadian and American Heritage River designations.
Establish a Detroit River Day.	Ongoing	The Detroit River Canadian Cleanup hosts an annual visit to Peche Island, one of the Detroit River's beautiful natural islands, and utilizes the opportunity to showcase projects, programs and successes along the river. In 2011, they also introduced the first Detroit River Evening.



Develop a Detroit River heritage value-based educational program.	Completed	In 2004, the Detroit River Education Program was developed, allowing the human heritage, natural heritage and recreational values of the Detroit River to be taught to students in levels kindergarten through Grade 8. These in-class, thematic lesson plans and activities meet the teaching objectives of the Ontario curriculum. In addition, thousands of school children come to the River through field trips to the Park House Museum and Fort Malden National Historic Site in Amherstburg; the Sculpture Garden, Dieppe Memorial and Festival Plaza in Windsor.
Identify historical resources as a first step in developing a human heritage conservation strategy.	Ongoing	Windsor, Amherstburg and Tecumseh have municipal heritage committees. LaSalle is in the process of forming a Committee. One of the key functions of a Heritage Committee is to inventory cultural heritage features.
Ensure human heritage values are reflected in municipal policies, Official Plans and zoning bylaws.	Ongoing	<p>The Ontario Heritage Act (2005) integrates within the Official Plan under the Provincial Planning Act and Provincial Policy Statement (PPS). There is a process in provincial legislation and policy that enables the municipal and county level governments to take action in this arena. The Essex County Official Plan is currently being updated and treatment of cultural heritage is being explored.</p> <p>As well, Municipal Heritage Committees in Windsor and Amherstburg generally conduct inventories of heritage buildings and make recommendations to Councils regarding those that are outstanding and should be designated.</p>
Develop local and international tours and other activities such as websites.	Ongoing	The Citizen's Environment Alliance hosts an annual binational Detroit River Boat Tour showcasing challenges, as well as successes, along the river. The Detroit River and its heritage river designation are also prominently featured on the website at <a href="http://www.erca.org">www.erca.org</a>
Plan and develop a Riverfront 'parkway'.	Completed	In 2003, the Detroit River Heritage Parkway was established along the length of the Detroit River. Route markers were erected and a lure brochure, CD Rom and interpretive signs were developed to ensure the Detroit River Heritage Parkway is a comprehensive scenic



		driving tour, whereby people can get a sense of the human heritage, natural heritage and recreational values of the river. The interpretive signs have been strategically placed along the route to encourage guests to stop and take in some of the outstanding culture and beautiful parks that stretch along the riverside.
Develop and implement the Essex Region Ecotourism Strategy with a Detroit River component.	Ongoing	Nature and heritage events designed to draw residents and tourists to experience the natural areas of the Detroit River and its watersheds are planned annually. These include birding festivals, cycling events, and upcoming, an outdoor adventure race. Tourism Windsor-Essex-Pelee Island have recognized eco-tourism and outdoor recreation activities as a trip motivator to our region and as such, have established a closer collaboration and increased emphasis on promoting nature based recreational opportunities within the Detroit River and its watersheds.
Develop joint international recreational activities and events.	Ongoing	International planning to mark Bicentennial of the War of 1812, Freedom Landing Festival and other Black History events.



Ecotourism and outdoor recreation continue to grow in importance in the Detroit River watersheds.





Expand implementation of water quality remediation workplans.	Ongoing	Water quality remediation projects and workplans are developed annually.
Continue habitat restoration projects.	Ongoing	ERCA partners with public and private landowners annually to implement habitat restoration projects.
Coordinate and expand watershed-wide water quality monitoring.	Ongoing	Water quality continues to be monitored at 8 sites within the Detroit River and its watersheds.
Recognize and support environmental clean-up efforts undertaken by industrial interests.	Ongoing	ERCA presents annual Conservation Awards that recognize industries and individuals that make extraordinary efforts. In 2011, Sterling Marine Fuels, the largest petroleum distribution centre in the Great Lakes, was honoured for going far above minimum standards during a construction upgrade project. Sterling created a significant fish habitat restoration project and implementing extraordinary sedimentation control measures that completely eliminated any migration of sediment from the site. The final design of the shoreline works and infrastructure minimized the footprint on the river bottom and proceeded in a fashion to eliminate disturbance during construction, and they were substantially recognized for their contributions.
Protect natural features through municipal planning documents and other policies.	Ongoing	Natural Heritage Features inventories have been completed within the City of Windsor and Town of LaSalle as part of a municipal Official Plan Review process, and have been used to determine appropriate land use designations and policies.
Encourage greater public involvement in environmental cleanup activities.	Ongoing	Through the Friends of Turkey Creek, Friends of Canard River and the Little River Enhancement Group, over 6,600 volunteers have conducted more than 160 clean up and restoration events, resulting in the removal of 450 cubic yards of debris and the restoration of over 78 acres of habitat within the watershed.
Coordinate and expand watershed-wide air quality monitoring and remediation programs.	Initiated	Explorations on air quality and remediation programs have been initiated through the Windsor-Essex Environment Committee, the Citizen's Environment Alliance and the Great Lakes Institute for Environmental Research.



## CONCLUSIONS

To this day, the human heritage and recreational values of the Detroit River remain an important part of the history of our region and indeed, our country. As a bi-national community, those who live on both sides of the river continue to respect and revere its contributions to our cultural and social fabrics.

This report has determined that the majority of the Detroit River heritage values remain intact and in many cases, have been improved in the period since designation in 2001. The many exciting activities and changes move toward further protecting and enhancing the heritage values upon which the river was nominated.

Additionally, through efforts of many different organizations, agencies and individuals, significant improvements have been made toward the river's natural heritage values. This report demonstrates that the River now also satisfies CHRS Natural Heritage values as well as Cultural Heritage values and Recreational Opportunities. **To that end, it is proposed that the Canadian Heritage Rivers Board consider adding Natural Heritage to the Detroit River's designation values as well.**

Based on the findings of this report, the Detroit River is most worthy of continued designation as a river of national significance within the Canadian Heritage Rivers System.



The spectacular Detroit River skyline.

## APPENDIX I

### References

Corkum, Lynda D. 2012. Fishes of Essex County and Surrounding Waters

Detroit River Canadian Cleanup. 2010. Detroit Raw Water User Survey to assess the Added Costs to Agriculture or Industry BUI

Detroit River Canadian Cleanup. 2011. Assessment of the Tainting of Fish and Wildlife Flavour (BUI #2) in the Detroit River Fish Area of Concern

Essex Region Conservation Authority. 2011. Detroit Canadian Heritage River: A Decade of Success

Essex Region Conservation Authority. 2009. Fish Sampling for the K. Walter Ranta Park and LaSalle Riverfront Park - Fish Habitat Restoration Projects

Essex Region Conservation Authority. 2011. Town of Tecumseh Natural Heritage Inventory. Essex, Ontario.

Essex Region Conservation Authority. 2010. Update to the Candidate Natural Heritage Area Inventory – Town of LaSalle Official Plan Review. Essex, Ontario.

Essex Region Conservation Authority. 2008. City of Windsor – Update to the CNHS Inventory. Essex, Ontario.

Essex Region Conservation Authority. 2002. Essex Region Biodiversity Conservation Strategy – Habitat Restoration and Enhancement Guidelines. Dan Lebedyk, Project Co-ordinator. Essex, Ontario.

Essex Region Conservation Authority. 2012. Essex Region Natural Heritage System Strategy - (An Update to the Essex Region Biodiversity Conservation Strategy). Essex, Ontario.

Metropolitan Affairs Coalition. 2001. Conservation Vision for the Lower Detroit River Ecosystem.

## Background Reports

Detroit River Background Report – 1998

Detroit River Nomination Report – 1999

Detroit River Management Strategy – 2001

Canadian Heritage River System (2001) A Framework for the Natural Values of Canadian Heritage Rivers: 2<sup>nd</sup> Edition.

Canadian Heritage River System (2000) A Cultural Framework for Canadian Heritage Rivers. 2<sup>nd</sup> Edition.

## Contributing Individuals

Caroline Biribauer, Community Outreach Coordinator, Essex Region Conservation Authority

Matthew Child, former Director of Watershed Restoration, Essex Region Conservation Authority

Janet Cobban, Curator, John R. Park Homestead Conservation Area

Irene Moore Davis, President, Essex County Black Historical Research Society

Terry Fink, Town of LaSalle

Chitra Gowda, Water Quality Analyst, Essex Region Conservation Authority

Karen Grygory, Shores of Erie International Wine Festival

Natalie Green, Remedial Action Plan Coordinator, Detroit River Canadian Cleanup

Cari-Lyn Hawksworth, Manager, Fort Malden National Historic Site of Canada

Dan Lebedyk, Conservation Biologist, Essex Region Conservation Authority

Stephen Lynn, Ford City Renewal Project

Mike Nelson, Conservation Planner, Essex Region Conservation Authority

Roger Palmini, GIS/Database Technician, Essex Region Conservation Authority

Averil Parent, City of Windsor

Karina Richters, City of Windsor

Anne Rota, Town of Amherstburg

Danielle Stuebing, Director, Community Outreach Services, Essex Region Conservation Authority

Stan Taylor, Source Water Protection Project Manager

Richard Wyma, General Manager/Secretary-Treasurer, Essex Region Conservation Authority



## APPENDIX 2:

### Detroit River and Watersheds: Endangered/ Threatened/Species at Risk

English Name	COSEWIC Status	SARO Status	Canada General Status	Ontario General Status
<b>Mammal</b>				
Eastern Mole	SC	SC	Sensitive	Sensitive
<b>Birds</b>				
Barn Owl	END	END	Sensitive	At Risk
Piping Plover	END	END	At risk	At Risk
King Rail	END	END	At risk	At Risk
Prothonotary Warbler	END	END	At risk	At Risk
Least Bittern	THR	THR	At risk	At Risk
Peregrine Falcon	SC	THR	Sensitive	At Risk
Yellow-breasted Chat	SC	SC	Secure	May be at risk
Bald Eagle	NAR	SC	Secure	At Risk
Black Tern	NAR	SC	Secure	Sensitive
<b>Herptile</b>				
Spotted Turtle	END	END	At risk	Sensitive
Common Five-lined Skink (Carolinian population)	END	END		
Eastern Foxsnake (Carolinian population)	END	END		
Queensnake	END	END	At risk	At Risk
Butler's Gartersnake	END	THR	At risk	At Risk
Northern Cricket Frog	END	END	At risk	At Risk
Blanding's Turtle	THR	THR	May be at risk	At Risk
Eastern Musk Turtle	THR	THR	At risk	At Risk





Spiny Softshell	THR	THR	At risk	At Risk
Eastern Hog-nosed Snake	THR	THR	At risk	At Risk
Massasauga	THR	THR	At risk	At Risk
Snapping Turtle	SC	SC	Secure	Secure
Northern Map Turtle	SC	SC	Sensitive	Sensitive
Milksnake	SC	SC	Sensitive	Sensitive
Eastern Ribbonsnake	SC	SC	Sensitive	Sensitive
Fish				
Northern Madtom	END	END	At risk	At Risk
Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	THR	THR		
Channel Darter	THR	THR	At risk	At Risk
Pugnose Minnow	SC	SC	Sensitive	Sensitive
Spotted Sucker	SC	SC	Sensitive	Sensitive
Mussel/Mollusk				
Northern Riffleshell	END	END		
Snuffbox	END	END		
Wavy-rayed Lampmussel	END	THR		
Eastern Pondmussel	END	END		
Round Pigtoe	END	END		
Mudpuppy Mussel	END	END		
Rayed Bean	END	END		
Plant				
False Hop Sedge	END	END		
White Prairie Gentian	END	END		
Slender Bush-clover	END	END		
Small-flowered Lipocarpa	END	THR		



Heart-leaved Plantain	END	END		
Eastern Prairie Fringed-orchid	END	END		
Pink Milkwort	END	END		
Drooping Trillium	END	END		
Skinner's Agalinis	END	END		
Scarlet Ammannia	END	END		
Colicroot	THR	THR		
Wild Hyacinth	THR	THR		
Goldenseal	THR	THR		
Dense Blazing Star	THR	THR		
Purple Twayblade	THR	END		
Willowleaf Aster	THR	THR		
Dwarf Lake Iris	SC	THR		
Swamp Rose-mallow	SC	SC		
Climbing Prairie Rose	SC	SC		
Riddell's Goldenrod	SC	SC		
Pygmy Pocket Moss	SC	SC		
Green Dragon	SC	SC		
Tree				
American Chestnut	END	END		
Eastern Flowering Dogwood	END	END		
Red Mulberry	END	END		
Kentucky Coffee-tree	THR	THR		
Common Hoptree	THR	THR		
Shumard Oak	SC	SC		



TOTALS	COSEWIC	SARO		
Endangered	31	29		
Threatened	16	20		
Species of Concern	16	16		
No Longer at Risk	2	0		
<b>TOTAL ENDANGERED/THREATENED/ SPECIES OF CONCERN</b>	<b>65</b>	<b>65</b>		

THR = Threatened    END = Endangered    AR = At Risk    NAR = Not At Risk    SC=Species of Concern  
 COSEWIC = Committee on the Status of Endangered Wildlife in Canada  
 SARO = Species At Risk in Ontario