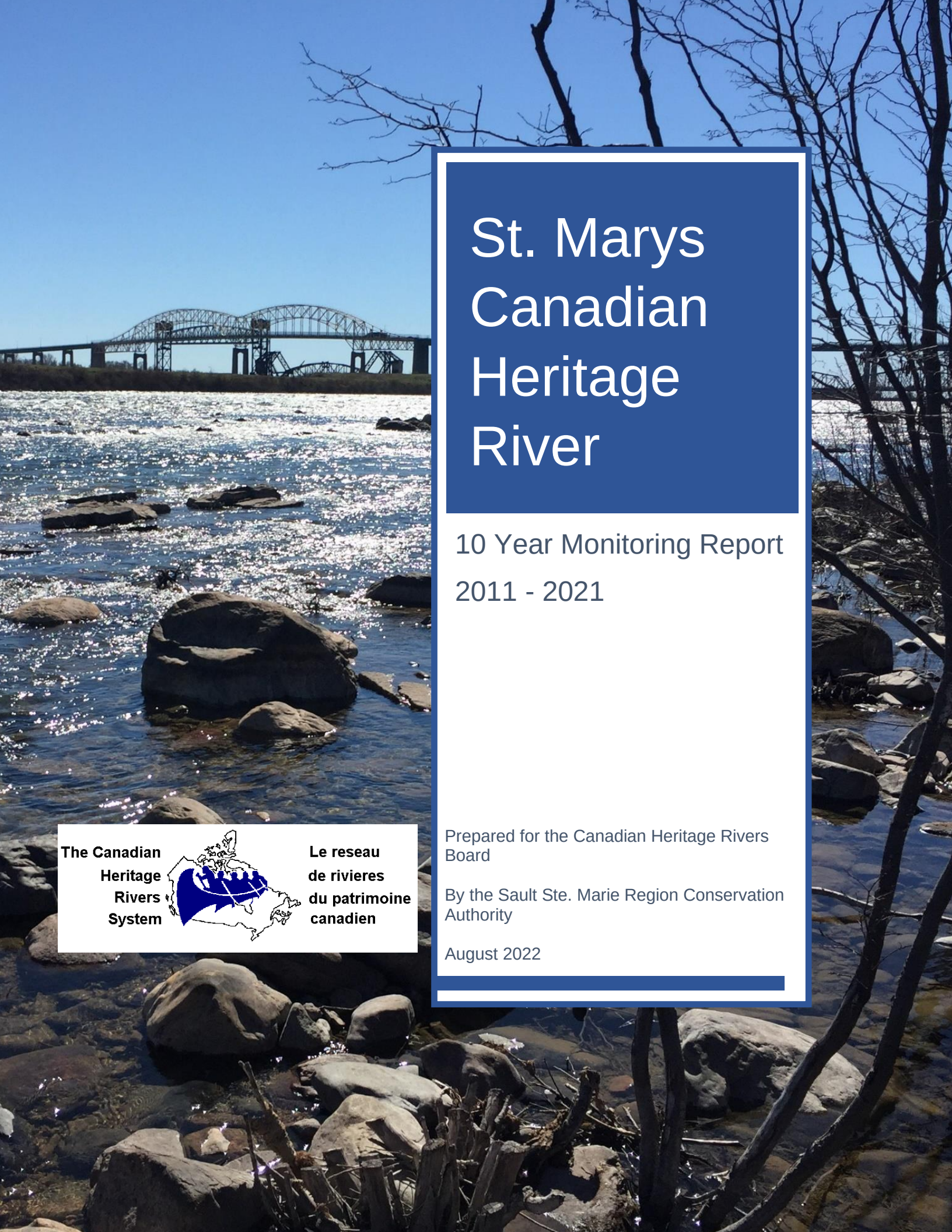


St. Marys Canadian Heritage River

10 Year Monitoring Report

2011 - 2021

The Canadian Heritage Rivers System

Le reseau de rivieres du patrimoine canadien

Prepared for the Canadian Heritage Rivers Board

By the Sault Ste. Marie Region Conservation Authority

August 2022

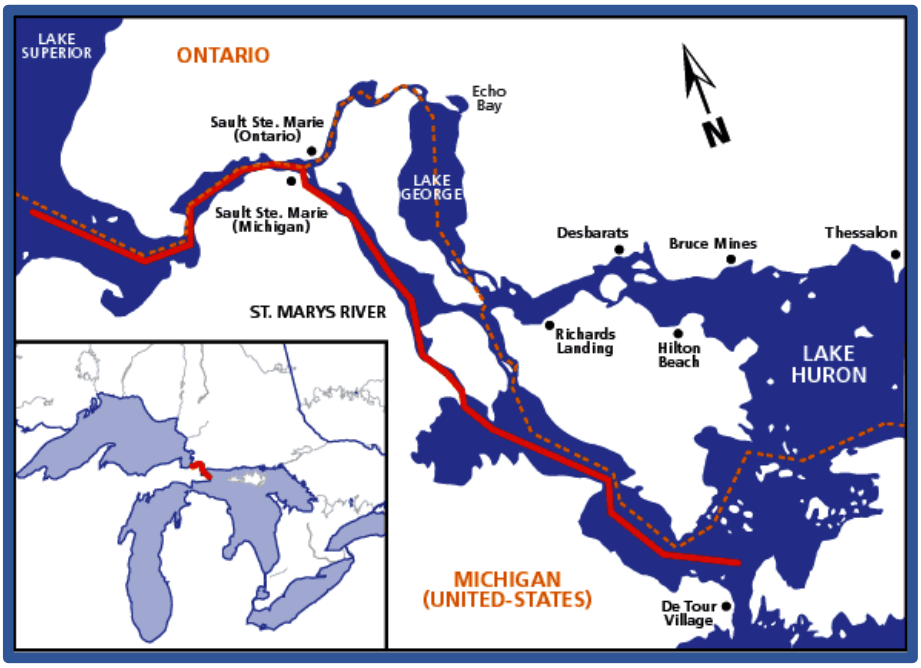
Executive Summary

The St. Marys River (ON) nomination for inclusion in the Canadian Heritage Rivers System (CHRS) was accepted by the CHRS Board in 1998. The nomination document's recommendation was based on the river being an important 125-kilometre link between three Great Lakes, having outstanding cultural values supported by recreation values, being the cultural hearth of the Ojibwe people since 2000 BCE, a key transportation link, having technological innovation in navigational and industrial examples, and being the venue for significant history changing events in Canada.

Following the production and acceptance of a Heritage Strategy the River was designated a Canadian Heritage River in early 2000.

This report strives to collect and analyze the events, studies and any improvements or threats to the river since the last decadal report (2000-2011).

Through the use of the CHRS format, Natural, Cultural and Recreation values as well as Integrity values and current statuses of designation recommendations have been listed with any changes to those resources noted as well as the recent history of any implementation of recommendations.



Some of the noted improvements for natural and recreation values in Tables 2 & 4 include studies assessing water quality through the Remedial Action Plan (RAP) process, dredging administrative controls, Managed Forest Plans, recognition of river values in municipal Official Plans, a new Waterfront Adventure Centre, and guided interpretive canoe tours where knowledge on the local history, culture and environment are emphasized.

Cultural values and resources noted in Table 3 include a study by the St. Marys Fisheries Task Group on sport fishing activities in the River, Fisheries and Oceans Canada (DFO) findings that the river is home to a relatively healthy fish community, and the Great Lakes overall see additional protection through the Great Lakes Protection Act, Lake Superior Regulation Plan 2012, and the Ontario Great Lakes Strategy.

The analysis of the specific integrity values that have experienced changes since designation are noted in Table 5, with little threat still existing today and threats that are noted such as

sediment impairment are in the process of being mitigated. Climate change and the associated fluctuations in water levels will continue to pose a threat to navigation and recreation values but are mostly beyond the scope of the CHRS or agencies connected hereto.

Table 6 in the report details the recommendations presented in the original management plan with the degree of achievement of each objective/action since the rivers' designation. Table 7 highlights the benefits to the river that designation has afforded.

The overall assessment section is a summary of how the objectives set out for the ten-year monitoring reports, as noted in the Introduction, are met.

Continued positive changes on the river and attempts at implementation of the Heritage Strategy lead to the conclusion that the St. Marys River does indeed still meet CHRS Guidelines for its Cultural and Recreational values and should retain its designation as a Canadian Heritage River System.

Rock faces and bluffs highlight the rugged, natural features of Gros Cap at the mouth of the St. Marys.

Contents

1.0 Introduction

The period from 2011-2021 have yielded positive changes to the St. Marys River, a vital link between Lake Superior and lakes Huron and Michigan. Nominated in 1998 and designated in 2000 by the governments of Ontario and Canada under the Canadian Heritage Rivers System (CHRS), the River continues to exemplify the outstanding Cultural and Recreational values for which it was nominated. The plaque of dedication is written in three languages, Ojibwe, French and English which are the languages of the historical peoples using the River.

The CHRS is a national heritage program, a cooperative effort by the Federal, Provincial and Territorial governments. Part of the designation process required a Management Strategy or Plan, and for the St. Marys River 13 objectives were presented with actions to be taken to sustain the River's values.

OBJECTIVES:

1. Protect Significant Landscape Elements, Vistas and Viewpoints
2. Protect Biotic Resources
3. Protect Shorelines of the River and its Tributaries
4. Protect, Restore and Create Aquatic Habitats
5. Control Sea Lamprey
6. Improve Water Quality
7. Celebrate the Diversity of the History and Culture of the Valley
8. Inventory, Document, Preserve and Maintain Heritage Resources of Significant Natural, Architectural and Archeological Interest and Value
9. Ensure All Forms of Development Are Consistent with Heritage Values
10. Promote the National Historic Sites within the River Valley
11. Protect the Integrity of the Fishery
12. Increase the Opportunities for Recreation in the River Valley Without Compromising Heritage Values
13. Recognize the Economic Potential of Tourism Based on Recreational Values

This report is a decadal monitoring requirement to assess the status of the values identified in the Nomination Document and the management actions in the Management Strategy.

The objectives of this report are to:

- Summarize the chronology of significant events, actions, and research that have occurred since the last ten-year report;
- Describe the positive or negative changes or threats to the state or condition of the values for which the River was originally designated;
- Present the status of key actions and management objectives called for in the designation document;
- Provide a summary of cultural, recreational, economic, and collaborative benefits resulting from the River's designation;
- Assess the River's ability to meet the criteria outlined in the designation document for continued designation as a Canadian Heritage River.

2.0 Background

Based on interest from the City of Sault Ste. Marie Planning Dept. and the Sault Ste. Marie Region Conservation Authority (SSMRCA) a background study was carried out in 1996 as a first step toward Nomination to the Canadian Heritage Rivers System (CHRS). Nomination was accomplished due to the St. Marys River's outstanding cultural resources supported by its recreational values. Historically, use of the River's resources dates back to 2500 BCE when Indigenous people, notably the Ojibwe, fished and gathered on the River.

This was followed in the 17th and 18th Centuries by explorers, fur traders and missionaries, and in the 1900s by industrialists and immigrants. Two dates stand out to illustrate the strategic position of the River: first 1812, the start of the war of 1812 which helped determine Canada's future and second 1870, the 'Chicora Incident' which prompted the construction of the Canadian Canal.

Flowing 125 kms from Gros Cap in the west to Bruce Mines-Fort St. Joseph on St. Joseph Island in the east the River drops about 6.7 metres at the 'Sault 'or rapids allowing for electrical power production on both sides of the Canada-United States border.

On the Canadian side, a canal and lock system constructed to get around the rapids is noted for its unique operating system and emergency swing dam considered engineering innovations of historical significance. In 1987 the Sault Canal was designated a national historic site by the Historic Sites and Monuments Board of Canada.

Other alterations in the vicinity of the canal system such as a series of nine railroad bridges, the International bridge for vehicle traffic, industrial complexes for steel, power and paper making and various government and municipal structures have reduced the river's width and natural character.

Elsewhere on the river most of the natural character has been saved and a Management Strategy for preservation of those values along with cultural and recreational values was prepared and submitted to the CHRS Board in early 2000. This resulted in the designation of the St. Marys River into the Canadian Heritage Rivers System by the Ontario and Canadian governments in August 2000.

Many people were involved in getting the designation covering all facets of interests on the entire length of the River. Just based on the work of that group makes it imperative for those responsible for all river interests to carry out the recommendations of the Management Strategy. This second ten-year monitoring report will attempt to determine how well that effort has been achieved.

3.0 Methodology

The following approaches were used to gather information towards assessing the river's status as a Canadian Heritage River:

- Review of the Background Study, Nomination Document and Management Strategy for the St. Marys River.
- Review of annual reports submitted to CHRS.
- Review of annual reports of the Lake Huron Committee of the Great Lakes Fishery Commission on Integrated Management of Sea Lampreys in Lake Huron.
- Communication with key personnel with an interest in the river.
- Review of various literature, media sources and website sources having relevance to the river.
- Gathering and digestion of all the information received.

A new set of tables were provided by CHRS to insure conformity of the 10-year monitoring report with other designated Heritage Rivers.

Commemorative plaque for the St. Marys River as part of the CHRS.

4.0 Chronology of Significant Events from 2011 – 2021

The following table presents the chronology of events since the last ten-year monitoring report (2000-2011).

Table 1: Chronology of Events since 2011

Year	Significant Events, Actions, Research or Studies since 2011
2011	Great Lakes Fishery Commission (GLFC) established a field experiment to increase invasive sea lamprey trap efficiency by manipulating flow at the compensating gates, Cloverland Electric Cooperative, and Brookfield Renewable Power was conducted on the St. Marys River. Changes result in an increase in lampreys caught.
2011	Environment and Climate Change Canada (ECCC) led Sediment Flow and Transport Modelling was completed to determine and show visual representation of whether contaminated sediment at a specific depth could be exposed. Deeper sediments, under 5cm, were found to be stable under a range of tested historical flow conditions (i.e. those measured over the last 100 years).
2011	Lake Superior Watershed Conservancy established the Dr. Frederick van Nus Preserve which lies at the Carp River headwaters in Prince Township's Precambrian Shield country. An enjoyable 2-km section of the Voyageur Trail loops through the Preserve's rolling hardwood forest uplands, across beaver dams, past wetlands and rocky outcroppings.
2012	Canada and the USA sign an amended Great Lakes Water Quality Agreement, updated to enhance water quality programs that ensure the "chemical, physical, and biological integrity" of the Great Lakes.
2012	Prince Township released an updated Official Plan.
2012	St. Marys River Bi-National Public Advisory Council (BPAC) held its 11th Environmental Summit entitled "St. Patrick's Day Celebration with the St. Marys River". The summit included a panel discussion outlining the history, culture, ecology, and recreational opportunities of the river as well as updates on efforts to restore the river's environmental quality. The summit also included interactive activities to encourage stewardship among younger generations.
2012	City of SSM "Celebrate 100!" civic anniversary. Over 64 events took place throughout the year including a myriad of activities that took place along the waterfront, the highlight of which was a visit by the His Excellency the Right Honourable Governor General David Johnston and Mrs. Johnston participating in a commemoration ceremony in Clergue Park overlooking the river.
2011-2013	St. Marys Pulp and Paper Mill (located on the St. Marys River waterfront) is decommissioned, and the site dismantled and sold to real estate developers to convert the site into a mixed-use cultural and tourism hub through reuse of the most historically and architecturally significant buildings. Therefore, there is no longer wastewater discharge to the river.
2013	The Remedial Action Plan (RAP) Implementation Annex is completed, which outlines the priority actions going forward to complete the Area of Concern's (AOC) restoration.
2013	ECCC commissioned a report on the potential hazards to the river associated with spills from shipping vessels. Based on a decade of reported cases [from 2001 to 2011] captured by the Canadian Coast Guard, the number of incidents

	within the St. Marys River is fairly low, particularly when compared to the Great Lakes overall.
2013	ECCC prepared a “Coastal Wetland Habitat Scoping Report” which saw 12 AOC and 4 non-AOC sites visited and assessed for water quality, aquatic vegetation and bird communities in order to provide a snapshot of the condition of coastal wetlands in the St. Marys River.
2013	The Kensington Conservancy signed their Hole in the Wall and Fishnet Island Easement, protecting a total of 77 acres and approx. 700 m of St. Marys River shoreline.
2011-2015	City of Sault Ste. Marie (ON) established new Storm Water Management Master Plan and Guidelines to improve the quality and quantity of stormwater runoff around the community to minimize the input of contaminants to the St. Marys River.
2013-2015	Water quality study completed by Algoma University on physical and chemical parameters show aesthetics and eutrophication/algae BUI’s are not impaired (ON).
2014-2015	ECCC completed its multi-year study of deformities, contaminant levels and reproductive health of birds. The results of the study showed: it is clear there is no evidence to suggest there are differences in developmental effects in herring gulls and common terns that could be associated with influences specific to the St. Marys River AOC. As a result, the Bird or Animal Deformities or Reproductive Problems BUI has officially been changed to “Not Impaired”.
2014-2015	Fisheries and Oceans Canada (DFO) completed a second assessment of the AOC fish community using the index of biotic integrity (IBI) approach encompassing fieldwork and data analysis. Studies concludes that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species.
2015	Passing of the Great Lakes Protection Act.
2015	ECCC collected 100 White Suckers along the Ontario shoreline of the St. Marys River. Subsequent histological evaluations (liver tumour analyses) by the British Columbia Ministry of Agriculture and Experimental Pathology Laboratories Inc. revealed six had tumours, equating to a 6% tumour rate. This is a marked improvement from the higher rates detected in the past, but it remains above the 5% threshold the Great Lakes Commission (2002) established as an indicator of environmental degradation.
2015	There have been numerous assessments and study reports completed over a decade focusing on contaminated sediment in the St. Marys River. In order to outline all of the existing data collected, ECCC procured illustrative maps of the study sites. These maps include a historical overview of over 100 sample sites and results collected by ECCC and the Ministry of Environment, Conservation and Parks (MECP) since 2002.
2015	International Lake Superior Board of Control implemented the Lake Superior Regulation Plan 2012 resulting in a more natural pattern to St. Marys River flows, which will help to sustain riverine ecosystem health.
2015	The Sault Ste. Marie Region Source Protection Plan is released by the Source Protection Committee for the Sault Ste. Marie Region Source Protection Area. The plan includes threat policies for the St. Marys River watershed to address areas where significant threats exist and policies to prevent future threats from becoming significant.

2011-2016	ECCC - Canadian Wildlife Service completed a 5-year monitoring effort to assess baseline wildlife habitat conditions and evaluate the degree of impairment (if any) of coastal wetland water quality, and breeding marsh bird, amphibian, aquatic macroinvertebrate and submerged vegetation communities. The coastal habitat and biotic communities were found to be not impaired.
2015-2016	The City of SSM and the Sault Ste. Marie Region Conservation Authority (SSMRCA) completed the Yellow Fish Road project with the local Girl Guides of Canada. Yellow fish were painted on the road near storm drains and pamphlets delivered to residents to help educate the public about the negative effects of pollution entering the environment by way of catch basins. This project was part of a broader program run by Trout Unlimited Canada.
2016	A Dredging Administrative Controls document was created for the St. Marys River that provides guidance for dredging proponents and permitting agencies on the regulatory oversights in the planning and undertaking of dredging activities.
2016	Inaugural Meeting of the Great Lakes Guardians' Council.
2016	Council of Lake Committees (CLC) adopted its Environmental Principles for Sustainable Fisheries in the Great Lakes Basin to help guide individual lake committees as they identified and prioritized environmental issues that impede achievement of their Fish-Community Objectives.
2016	The Kensington Conservancy established the Boyer Preserve (93 acres). Includes approx. 500 m of St. Marys River shoreline, most of which is classified as Provincially Significant Wetland.
2017	Ontario's Great Lakes Strategy released.
2017	St. Marys River Fisheries Task Group completed a study entitled "Population Dynamics of the St. Marys River Fish Community from 1975-2017". This is the 9th gillnet-based survey since 1975 which produces indices of abundance and population status.
2017	St. Marys River Fisheries Task Group completed a study entitled "A synthesis of sport fishing activity In the St. Marys River". In order to quantify the sport fisheries, the Michigan Department of Natural Resources (MDNR) and the Ontario Ministry of Natural Resources and Forestry (OMNRF) undertook an open water creel survey of sport anglers. The survey covered both Ontario and Michigan waters from the compensating works downstream to Lake Huron at DeTour. This is only the second whole-river creel study of the St. Marys River.
2017	Sault Ste. Marie Canal National Historic Site partnered with the Sault Ste. Marie Region Conservation Authority and the City of SSM to host the lock's first paddling event. The event celebrated Canada 150 and recognized the St. Marys Heritage River designation.
2017	SSMRCA created the Managed Forest Plan for the 2018-2027 Term, which sees 4,757.83 acres of forest within the City of SSM and Prince Township managed carefully under the Managed Forest Tax Incentive Program (MFTIP).
2011-2018	Beach closings BUI assessment show water quality and state of public beaches along the river are comparable to outside the AOC and are not impaired (ON). Officially redesignated the Beach Closings BUI to Not Impaired status.
2018	City of SSM launches Shape the Sault, a city led strategy designed to inform and engage the public to give our community a voice as we re-establish a new long-term vision for the City, which will be articulated through the new Official Plan.

2017-2019	Remedial dredging in Algoma Steel boat slip to remove contaminated sediment. In 2017, 10,900m3 of contaminated sediment was removed, followed by an additional 4,638m3 in 2019. Remediating the boat slip sediment is being conducted as part of the Legacy Environmental Action Plan (LEAP).
2019	Through the RAP program, a Conceptual Site Model (CSM) for the St. Marys River Contaminated Sediments is updated. The CSM represents the site-specific state of understanding of contaminant sources, fate, transport, and potential exposure of receptors. The overall deduction of the CSM is that there is a low potential for adverse effects in benthic invertebrates, fish, wildlife, and humans that are exposed to contaminated sediment in the St. Marys River.
2019	As part of an agreement with the province in 2019, Algoma Steel Inc. is required to implement a plan to identify and address past environmental contamination at the Sault Ste. Marie mill site. The plan, which has been reviewed and approved by the Ministry of Environment, Conservation and Parks (MECP), is called the LEAP.
2019	Lake Superior Watershed Conservancy began offering a St. Marys River themed *Canoes for Conservation* Tour. Includes interpretive guided canoe tours where guides will take individuals on a journey along one of the historic water trails while sharing knowledge about the local history, culture, and environment.
2019	Sault College opened the Waterfront Adventure Centre which allows Saultites access to a host of watersports and recreational options at the former RYTAC site. Includes rentals for canoes, kayaks, and stand-up paddleboards.
2018-2020	The St. Marys River CHRS Story Map is created and implemented. Each Heritage River Story Map displays various visual representations of geospatial data in combination with text, photos, videos and external links.
2020	The RAP office at Algoma University prepared a Status Report and Strategic Plan for the St. Marys River AOC.
2020	City of SSM released its Algoma Trail Network Mountain Bike Master Plan.
2020	Ontario released the Provincial Policy Statement, 2020 under the Planning Act.
2011-2021	Great Lakes Fishery Commission continued with the St. Marys River control strategy for addressing invasive sea lamprey in the river. This includes trapping of spawning-phase sea lampreys, release of sterilized males (discontinued in 2012), and spot treatments with 3.2% granular Bayluscide. Larval lamprey abundance and juvenile production from the river is significantly lower than before the control strategy was initiated.
2019-2021	The Kensington Conservancy established the Coatsworth Island Preserve which protects the entirety of Coatsworth Island (28.8 acres in size). Includes approx. 1.33 km of St. Marys River shoreline. The island has scenic rocky areas with tall pines along the shore. The interior is a mixed forest. Ospreys have been known to nest on the island.
2021	ECCC is working in partnership with Batchewana First Nation in an effort to help address the Loss of Fish and Wildlife Habitat BUI, draft design plans and concept drawings have been developed for naturalizing the channel bed and bank areas of the Whitefish Channel and constructing shoals east of Whitefish Island to benefit native fish populations.
2021	ECCC reran the Flow Rate and Sediment Transport model from 2011 in 2021. This was done to address concerns that the model was too coarse for the analysis of sediment stability and to account for potential impacts of climate change that would likely result in higher than the observed historical flows. It accounted for daily average flow rates over the decades and the maximum flow

	rate that can be physically released downstream of the compensating works was included in the modelling scenarios to examine the worst-case scenario. The reassessment confirmed that deeper sediments are stable under the range of tested conditions.
2021	The Sediment Management Strategy for the Canadian section of the St. Marys River AOC was drafted. It provides a plain language summary of the history, current status, and future actions required as related to the management of contaminated sediment in the river. The strategy is intended to provide the community with a clear understanding of the sediment assessment process and outline management approaches appropriate for the St. Marys River.
2021	The Community Fish Consumption survey was launched by Algoma University. The survey results will help to form a better understanding of consumption patterns within the community.
2021	Canada-Ontario Great Lakes Agreement is a collaborative agreement to protect and restore the Great Lakes.
2021	City of Sault Ste. Marie installed a fully accessible canoe/kayak launch at the Bellevue Marina.
2019-Present	Sault Field Naturalists partnered with the City of SSM and the SSMRCA to create "diversity gardens" to increase the varied ecological opportunities of the grassy areas next to the floodways in order to support a wide variety of species.

Annual activities that also take place along or in proximity to the St. Marys River includes:

- Bon Soo Winter Carnival
- Canada Day Celebrations
- Passport to Unity
- The Great Tugboat Race
- Sustain Algoma Expo
- War of 1812 Rendezvous and Fur Trade
- Hub Trail Festival
- Bushplane Days
- Annual Arts at the Docks
- Rotaryfest
- Tall Ships
- Algoma Fall Festival
- Festival of Trees
- Shadows of the Mind Film Festival

Events and festivals along the River offer something for everyone.

5.0 Condition of Natural Heritage Values

5.1 Background

The St. Marys River was not nominated on its natural heritage values. However, under CHRS Selection Guidelines for Natural Heritage Values, the river *is an outstanding example of river environments as they are affected by the major stages and processes in the earth's evolutionary history as represented in Canada*. Affected by major stages and processes in evolution, a record of Canada's past formations can be seen. E.g., Precambrian Shield, rifting and faulting of the Keweenaw era, scarps and sills of the Michigan Basin, and dunes and beaches of the Wisconsin glaciation. Some of the bed rock examples are ancient granite, water laid sandstone, and limestone. A 122m scarp of an eroded batholith forms the entrance to the river. The geological features are not influenced by manmade impoundments.

Under the next Natural Heritage Selection Guideline: *contains outstanding representations of significant ongoing fluvial, geomorphological and biological processes*, the river is in the evolutionary process of erosion and deposition to some extent due to sandy shores, changing water levels and wave action. Plant and animal communities also change with climate change, water level and temperature changes. This is especially true for Provincially significant wetlands found along the river.

The next Guideline: *contains along its course unique, rare or outstanding examples of biotic and abiotic natural phenomena, formations or features,* is the least represented but outstanding examples of fish and waterfowl are present in the valley. The 'rapids', even as they exist today, is a feature of the river that is unique and where some of the best fishing in North America is found.

The final Guideline is: *contains along its course habitats of rare or endangered species of plants and animals, including outstanding concentrations of plants and animals of Canadian interest and significance*. There are at least four examples of this, at Gros Cap, at Whitefish Island and two old pine sites on fluvial sands of Mark's Bay and Garden River. There are 24 birds, 16 terrestrial and 7 aquatic species at risk listed throughout the Sault Ste. Marie region by the OMNR SSM District as of 2017.

5.2 Condition of values since 2011

Table 2: Natural Heritage Values Since 2011

NATURAL VALUE	DESCRIPTION OF CHANGE IN VALUE (e.g. Magnitude, Positive or Negative Change, Immediate or Long-term)	REASONS FOR CHANGE (e.g. Threat, Stressor, Management Action)	ACTIONS TAKEN IN RESPONSE
1.0 HYDROLOGY			
1.1 Drainage Basins	None	N/A	N/A
1.2 Seasonal Variation	Moderate and long term negative change	Higher variations between low and	The International Lake Superior Board of Control

		high water levels throughout the year due to climate change, ice jams when river freezes/thaws.	(under the authority of the IJC) monitors the water levels on the St. Marys River and adjusts the levels of the compensating gates to ensure more predictable/natural flows and reduce the risk of ice jams in the winter.
1.3 Water Content	Long term positive changes	The water quality of the St. Marys River has been a concern since the implementation of the Area of Concern Remedial Action Plan.	Water quality study by Algoma University on physical and chemical parameters of the St. Marys River show "aesthetics and eutrophication/algae" Beneficial Use Impairment (BUI) is not impaired. Decommissioning of the Pulp and Paper Mill has led to reduced runoff to the river.
1.4 River Size	None	N/A	N/A
2.0 PHYSIOGRAPHY			
2.1 Physiographic Regions	None	N/A	N/A
2.2 Geological Processes	None	N/A	N/A
2.3 Hydrogeology	Moderate and immediate negative change	Significant natural erosion on Mark's Bay Conservation Area shoreline due to increased/higher intensity storm/wave activity along the shoreline due to climate change.	Bank stabilization project took place along the Mark's Bay Conservation Area shoreline (within designated area of river) to reduce erosion and further protect the shoreline.
2.4 Topography	None	N/A	N/A
3.0 RIVER MORPHOLOGY			
3.1 Valley Types	None	N/A	N/A
3.2 Channel Types	None	N/A	N/A
3.3 Channel Profile	Immediate and long term negative change	Dredging takes place in the river to allow for continued shipping, as well as to remove pockets of contaminated sediments.	A Dredging Administrative Controls Document has been prepared through the RAP that provides guidance for dredging proponents and permitting agencies on the regulatory oversights

			in the planning and undertaking of dredging activities.
3.4 Fluvial Landforms	None	N/A	N/A
4.0 BIOTIC ENVIRONMENTS			
4.1 Aquatic Ecosystems	Long term negative change	Continued climate change has and is expected to see warmer waters, more frequent and intense storms, less ice cover and greater fluctuations in water levels throughout the St. Marys and Great Lakes. Additionally, development could affect wetland areas.	Studies on the status of the AOC continue in order to assess legacy issues. New initiatives, such as the International Lake Superior Board of Control's Lake Superior Regulation Plan 2012 will help to sustain riverine ecosystem health. Development within the jurisdiction of the SSMRCA is regulated through O. Reg. 176/06. Significant wetlands and significant coastal wetlands are also protected via the Provincial Policy Statement, 2020, and are being incorporated into the Official Plan for SSM. ECCC is working in partnership with Batchewana First Nation towards naturalizing the channel bed and bank areas of the Whitefish Channel and constructing shoals east of Whitefish Island to benefit native fish populations.
4.2 Terrestrial Ecosystems	Long term positive change	Land protection needed for the Great Lakes St. Lawrence forest types.	SSMRCA is managing over 4,700 acres of forest under their Managed Forest Plan for the 2018-2027 term. Includes forests of old growth Pine. Multiple Preserves established by the Lake Superior Watershed Conservancy and the Kensington Conservancy. Ongoing work by the Sault Field Naturalists to

			naturalize grassy floodways flowing to the St. Marys River.
5.0 VEGETATION			
5.1 Significant Plant Communities	None	N/A	N/A
5.2 Rare Plant Species	Long term positive change	Plant Species at Risk (Threatened, Special Concern, Endangered).	Plant species that are considered at risk in the Sault Ste. Marie Region have been inventoried (MNRF, 2017) and are being incorporated into the Official Plan, SSM.
6.0 FAUNA			
6.1 Significant Animal Populations	Long term positive change	Identification of significant wildlife habitats.	SSM has identified a Peregrine Falcon Nesting Site, as well as Whitetail Deer Wintering Yards within the vicinity of the St. Marys River and these are being incorporated into the SSM Official Plan.
6.2 Rare Animal Species	Long term positive change	Species at Risk (Threatened, Special Concern, Endangered)..	Species that are considered at risk in the Sault Ste. Marie Region have been inventoried (MNRF, 2017) and are being incorporated into the Official Plan, SSM.

Old growth White Pines, one of Ontario's oldest trees can still be found along the River. A.J. Casson's (Group of Seven) painting of a windswept pine has become an identifying trademark of this part of Ontario.

6.0 Condition of Cultural Values

6.1 Background

The St. Marys River has been and is the focus for transportation themes, historical significance and non-contact recreation.

CHRS Selection Guidelines for Cultural Values requires that the river and its immediate environment are *of outstanding importance owing to its influence, over a period of time, on the historical development of Canada through a major impact upon the region in which it is located or beyond*. The St. Marys River's outstanding contributions have been recorded historically in early use of the river by Indigenous people as they frequently lived nearby and used it for transportation, fishing, other provisions, and camping. Artifacts dating back to 2500 BCE have been recorded by archeologists. Many of the Métis people of Canada, Batchewana, and Garden River First Nations still live along the river's shores today. History in the 17th and 18th centuries saw the era of the fur trade and the voyageur canoes which also carried missionaries to the Indigenous peoples.

More recent history saw the building of locks to get around the rapids, bridge crossings, compensating dams and power facilities. Settlement occurred close to the river 'highway' at Sault Ste. Marie and Bruce Mines. Ore and Grain carriers from the west have to pass through the river and lock system making the St. Marys a vital link in Canadian and International trade and one of the world's most important Canals.

The next Guideline requires that the river be *strongly associated with persons, events or beliefs of national significance.* Several examples of the above are historically documented such as discoverer Etienne Brule, Chief Shingwauk, Fur Traders, Henry Schoolcraft, Jesuit Missionaries, Francis H. Clergue, and Charles Ermatinger. Movements of military personnel also had to pass by or on the river (the 1870 Chicora incident).

The third Guideline involves the river *containing historical or archaeological structures, works or sites which are unique, rare or of great antiquity*. The river still easily fulfills this guideline as cited in the previous documents for designation such as through Whitefish Island artifacts of Indigenous origin dating back to 200 BCE and showing evidence of continuous use. Today the island is used by hikers and naturalists with permission from the Batchewana First Nation.

Non-contact recreation[1] presently engaged in includes fishing, various species in a variety of water conditions from warm to cold, hiking on the Voyageur Trail and waterfront walkways, boating of all kinds, nature appreciation and photography, ship viewing, camping, rock and fossil collecting, and boat tours.

6.2 Condition of values since 2011

Table 3: Cultural Values Since 2011

CULTURAL VALUE	DESCRIPTION OF CHANGE IN VALUE (e.g. Magnitude, Positive or Negative Change, Immediate or Long-term)	REASONS FOR CHANGE (e.g. Threat, Stressor, Management Action)	ACTIONS TAKEN IN RESPONSE
1.0 RESOURCE HARVESTING			
1.1 Fishing	Long term positive change	The AOC RAP originally identified "Restrictions on Fish and Wildlife Consumption" as impaired on the St. Marys River.	Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species. St. Marys River Fisheries Task Group completed a study entitled "A synthesis of sport fishing activity In the St. Marys River". Found that the overall magnitude of the fishery remains substantial. The Community Fish Consumption survey has been launched by Algoma University. The survey results will help to form a better understanding of

[1] i.e., Non submersion in water such as swimming or snorkeling

			consumption patterns within the community.
1.2 Shoreline Resource Harvesting	None	N/A	N/A
1.3 Extraction of Water	Moderate long term negative change	Historical and current use by industry, governments, and municipalities. As climate change continues, water availability may be affected.	The extraction of water (whether for consumption or exported from the system) makes up part of the Water Budget included in the Sault Ste. Marie Region Source Protection Plan. Consumptive demand estimations are used to determine the amount of water used by domestic users, municipal supply, and industrial purposes. Based on this information, policies are created to prevent future threats from becoming significant.
2.0 WATER TRANSPORT			
2.1 Commercial Transportation	Short term negative change	The opportunity for lake and ocean freighters to run aground may become more frequent as water levels in the St. Marys River fluctuate with climate change.	Periodic dredging of the shipping channel continues to ensure that freighters are able to pass through the St. Marys River. Implementation of the Dredging Administrative Controls Document. A study prepared for Environment Canada found that vessel related discharges to the St. Marys River AOC is relatively low and that there are fewer suspected causes of discharges in the St. Marys than in the Great Lakes.
2.2 Transportation Services	None	N/A	N/A
2.3 Exploration & Surveying	None	N/A	N/A
3.0 RIPARIAN SETTLEMENT			
3.1 Sitting of Dwellings	None	N/A	N/A
3.2 River-based Communities	None	N/A	N/A
3.3 River-influenced Communities	None	N/A	N/A

4.0 CULTURE & RECREATION			
4.1 Spiritual Associations	None	N/A	N/A
4.2 Cultural Expression	None	N/A	N/A
4.3 Early Recreation	None	N/A	N/A
5.0 JURISDICTIONAL USES			
5.1 Conflict & Military Associations	None	N/A	N/A
5.2 Boundaries	None	N/A	N/A
5.3 Environmental Regulations	Long term positive change	The Canadian portion of the RAP AOC has seen of the 10 BUIs identified as impaired or needing assessment, only 6 currently remain.	The MECP, DFO, OMNRF, ECCC, SSMRCA, and International Board of Control all have jurisdiction over the St. Marys River with associated regulations in an effort to protect and enhance. The Remedial Action Plan has seen the delisting of 4 BUIs since the last CHRS report. Local municipalities are including the river and surrounding environments within their Official Plans. The Great Lakes see additional protection through the Great Lakes Protection Act, Lake Superior Regulation Plan 2012, and the Ontario Great Lakes Strategy.

Lock through the historic canal. Guide your boat into the lock at the Sault Ste. Marie Canal and feel the power of the water as it lifts you from Lake Huron to Lake Superior, bypassing the St. Marys River Rapids.

7.0 Condition of Recreational Values

7.1 Background

Early recreation on the St. Marys probably started with boating, fishing, hunting, bathing and walking. CHRS Selection Guideline for Recreational Values includes *when a river and its immediate environment possess a combination of river-related recreational opportunities and related natural and/or cultural values that together provide capability for an outstanding recreational experience*. The St. Marys River environment possesses many and diverse recreational opportunities such as boating, by sail or power, and fishing opportunities in natural settings are available in the upper and lower river and carry-on traditional recreation pursuits. Although the rapids area is urbanized, heavy fishing pressure is evident with both fly and bait fishing by anglers. Creel surveys show Atlantic and Pacific salmon, walleye and rainbow trout as preferred species in the rapids area. Stocking of both walleye and Atlantic salmon is done to enhance and sustain the fishery.

Relatively low human populations, the size and length of the river, and regulatory controls on the river assure that the river still possesses water quality suitable for those recreational opportunities for which it was nominated and includes both contact and non-contact recreation.

7.2 Condition of values since 2011

Table 4: Recreational Values Since 2011

RECREATIONAL VALUE	DESCRIPTION OF CHANGE IN VALUE (e.g. Magnitude, Positive or Negative Change, Immediate or Long-term)	REASONS FOR CHANGE (e.g. Threat, Stressor, Management Action)	ACTIONS TAKEN IN RESPONSE
1.0 BOATING			
1.1 Whitewater Canoe, Kayak & Raft	Positive change	Little to no access for the public to canoe/kayak rentals along the St. Marys River.	Sault College opens the Waterfront Adventure Centre along the St. Marys River. Allows the public to rent out canoes, kayaks, and paddleboards.
1.2 Extended Canoe Tripping (motor & non-motor)	None	N/A	N/A
1.3 Day Paddling and Rowing	Positive change	Little to no access for the public to canoe/kayak rentals along the St. Marys River.	Lake Superior Watershed Conservancy offers a St. Marys River themed Canoes for Conservation Tour. Includes interpretive guided canoe tours where guides will take you on a journey along one of the historic water trails while sharing knowledge about the local history, culture, and environment.
1.4 High Speed Boating	None	N/A	Annual Power Boating Canada/Poker Runs America CAN/AM President's Cup VIP Poker Run.
1.5 Motorized Pleasure Cruising / Houseboats	None	N/A	N/A
1.6 Commercial Tour Boats	None	N/A	There are discussions about bringing back boat tours on the Canadian side of the River.
1.7 Sailing	None	N/A	N/A

2.0 ANGLING			
2.1 Day Angling	Long term positive change	The AOC RAP originally identified “Restrictions on Fish and Wildlife Consumption” as impaired on the St. Marys River.	Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species. St. Marys River Fisheries Task Group completed a study entitled “A synthesis of sport fishing activity In the St. Marys River”. Found that the overall magnitude of the fishery remains substantial. The Community Fish Consumption survey has been launched by Algoma University. The survey results will help to form a better understanding of consumption patterns within the community.
2.2 Weekend Angling	Long term positive change	The AOC RAP originally identified “Restrictions on Fish and Wildlife Consumption” as impaired on the St. Marys River.	Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species. St. Marys River Fisheries Task Group completed a study entitled “A synthesis of sport fishing activity In the St. Marys River”. Found that the overall magnitude of the fishery remains substantial. The Community Fish Consumption survey has been launched by Algoma University. The survey results will help to form a better understanding of consumption patterns within the community.
2.3 Extended Angling Vacation	N/A	N/A	N/A
2.4 Fly Fishing	Long term positive change	The AOC RAP originally identified “Restrictions on Fish and Wildlife Consumption” as	Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is

		impaired on the St. Marys River.	complex, diverse, and dominated by native species. St. Marys River Fisheries Task Group completed a study entitled “A synthesis of sport fishing activity In the St. Marys River”. Found that the overall magnitude of the fishery remains substantial. The Community Fish Consumption survey has been launched by Algoma University. The survey results will help to form a better understanding of consumption patterns within the community.
2.5 Ice Fishing	Long term positive change	The AOC RAP originally identified “Restrictions on Fish and Wildlife Consumption” as impaired on the St. Marys River.	Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species. St. Marys River Fisheries Task Group completed a study entitled “A synthesis of sport fishing activity In the St. Marys River”. Found that the overall magnitude of the fishery remains substantial. The Community Fish Consumption survey has been launched by Algoma University. The survey results will help to form a better understanding of consumption patterns within the community.
2.6 Specific Fish Species	Long term negative change	The St. Marys River is home to Lake Sturgeon, which is considered a threatened species. Any drop in water levels throughout the rapids could affect spawning/rearing habitat.	International Lake Superior Board of Control implements Lake Superior Regulation Plan 2012 resulting in a more natural pattern to St. Marys River flows, which will help to sustain riverine ecosystem health and spawning territory for Sturgeon.

3.0 WATER CONTACT / CONTENT			
3.1 Swimming	Positive change	Release of various studies showing that RAP “Eutrophication and Undesirable Algae” BUI is not impaired in the St. Marys River AOC.	Sault College opens the Waterfront Adventure Centre which allows Saultites access to a host of watersports and recreational options at the former RYTAC site.
3.2 Water Skiing	None	N/A	N/A
3.3 Snorkel / Scuba	None	N/A	N/A
4.0 WATER-ASSOCIATED ACTIVITIES			
4.1 Trail Use (hiking, walking, cycling)	Long term positive change	Increase in the amount of trails along the St. Marys River (the Sault boasts some of the best mountain biking in Ontario).	City of SSM lead the Algoma Trail Network Mountain Bike Master Plan with a long term goal to add 75 km of new trail to the existing network.
4.2 Camping	None	N/A	N/A
4.3 Hunting	None	N/A	N/A
5.0 WINTER ACTIVITIES			
5.1 Snowmobiling / Dog Sledding	None	N/A	N/A
5.2 Cross-Country Skiing	None	N/A	N/A
5.3 Skating	Positive change	Increase in the amount of skating rinks along the St. Marys River.	Addition of two outdoor skating rinks along the River’s edge by the City of SSM.
6.0 NATURAL HERITAGE APPRECIATION			
6.1 Wildlife	None	N/A	N/A
6.2 Vegetation	None	N/A	N/A
6.3 Vistas / Scenic Quality	None	N/A	N/A
6.4 Geological Features / Water Features	None	N/A	N/A
7.0 HUMAN HERITAGE APPRECIATION			
7.1 Historic Sites	None	N/A	N/A
7.2 Cultural Landscapes	None	N/A	N/A
7.3 Sporting Events / Activities	None	N/A	N/A
7.4 Cultural Events / Activities	None	N/A	N/A

Spend a casual weekend on the River or soak up the sun during one of the great boating events like the CanAm Poker Run or Trans Superior Race in Sault Ste. Marie.

8.0 Integrity Guidelines since designation

The following table presents the specific integrity values that have experienced changes since the designation in more detail.

Table 5: Specific integrity values that have experienced changes since designation

NATURAL, CULTURAL OR RECREATIONAL INTEGRITY VALUE	CHANGE IN INTEGRITY VALUE (Brief Description)	THREAT OR STRESSOR (Current, Immediate, Long term)	ACTION(S) TAKEN TO ADDRESS THREAT	THREAT STILL PRESENT?
1. NATURAL INTEGRITY GUIDELINES				
1.2 The nominated area contains those ecosystem components required for the continuity of the species, features or objects to be protected.	Higher variations between low and high water levels throughout the year.	Climate change is the current and long term stressor.	The International Lake Superior Board of Control (under the authority of the IJC) monitors the water levels on the St. Marys River and adjusts the levels of the compensating gates to ensure more predictable/natural flows.	Yes

1.6 The water of the nominated area of the river is uncontaminated to the extent that its natural aquatic ecosystem is intact.	The AOC RAP still lists the "Degradation of Benthos" and "Restrictions on Dredging Activities" BUIs as "impaired" at this time.	The current and long term stressor of dredging that takes place in the River to allow for removal of pockets of contaminated sediments.	A Dredging Administrative Controls Document has been prepared through the RAP that provides guidance for dredging proponents and permitting agencies on the regulatory oversights in the planning and undertaking of dredging activities. Additionally, a Sediment Management Strategy for the Canadian section of the St. Marys River AOC has been drafted. Recent DFO studies conclude that the St. Marys River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species.	Yes, but improving
1.7 The natural aesthetic value of the river is not compromised by human developments.	The AOC RAP originally identified the "Eutrophication and Undesirable Algae" and "Degradation of Aesthetics" BUIs as "impaired" on the St. Marys River.	This was a long term stressor that was identified in 1992 that involved instances of floating debris that seemed to originate from a wastewater treatment plant.	In 2006 the City of SSM's East End Wastewater Treatment Plant was upgraded to secondary treatment using the first biological nutrient removal system in Ontario. Additionally, from 2011 through 2015 the City of SSM establishes and implements a *Storm Water Management Master Plan and Guidelines* to improve the quality and quantity of stormwater runoff around the community to minimize the input of contaminants to the St. Marys River.	No, these BUIs were designated as "no longer impaired" in 2018.
2. CULTURAL INTEGRITY GUIDELINES				
2.4 The water quality of the nominated area does not detract from the visual character or the cultural experience provided by its cultural values.	The AOC RAP originally designated the "Beach Closures" BUI as "impaired" on the St. Marys River.	This was a long term stressor that was identified in 1992 and involved bacterial densities exceeding Provincial	The development of a storm water management master plan for the City of SSM, East End Wastewater Treatment Plan upgrades, and confirmation that the floating masses being seen were predominantly comprised of algae, detritus and pollen, and not a	No, this BUI was designated as "no longer impaired" in 2018.

		Water Quality Objectives.	significant source of E. coli bacteria. Additionally, a multi-year beach water quality assessment was completed in 2016 that found no major local manmade sources of bacterial contamination to the river and that water quality was comparable to that outside of the AOC.	
3. RECREATIONAL INTEGRITY GUIDELINES				
3.1 The river possess water of a quality suitable for contact recreational activities, including those recreational opportunities for which it is nominated.	The AOC RAP originally designated the "Beach Closures" BUI as "impaired" on the St. Marys River.	This was a long term stressor that was identified in 1992 and involved bacterial densities exceeding Provincial Water Quality Objectives.	The development of a storm water management master plan for the City of SSM, East End Wastewater Treatment Plan upgrades, and confirmation that the floating masses being seen were predominantly comprised of algae, detritus and pollen, and not a significant source of E. coli bacteria. Additionally, a multi-year beach water quality assessment was completed in 2016 that found no major local manmade sources of bacterial contamination to the river and that water quality was comparable to that outside of the AOC.	No, this BUI was designated as "no longer impaired" in 2018.
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 AOC RAP originally identified the "Eutrophication and Undesirable Algae" and "Degradation of Aesthetics" BUIs as "impaired" on the St. Marys River.	This was a long term stressor that was identified in 1992 that involved instances of floating debris that seemed to originate from a wastewater treatment plant.	In 2006 the City of SSM's East End Wastewater Treatment Plant was upgraded to secondary treatment using the first biological nutrient removal system in Ontario. Additionally, from 2011 through 2015 the City of SSM establishes and implements a *Storm Water Management Master Plan and Guidelines* to improve the quality and quantity of stormwater runoff around the community to minimize the input of contaminants to the St. Marys River.	No, these BUIs were designated as "no longer impaired" in 2018.

Sault Ste. Marie known as Bawating, the heartland of the Ojibwe.

9.0 Designation Document Recommendations and Current Status

Table 6: Designation Recommendations and Current Status

OBJECTIVES AND KEY ACTION(S)	DEGREE OF ACHIEVEMENT	COMMENTS
Protect Significant Landscape elements, Vistas, and Viewpoints: - increase awareness - further studies - maintain diversity - conserve significant landscapes - identify areas and sustain them	On-going	Municipal, Provincial, and Federal agencies have continued studies and monitoring on the river. River is still classified as an Area of Concern. Provincially Significant wetlands are protected. Increased awareness is maintained through the SSMRCA and BPAC websites. Kensington Conservancy has established nearly 200 acres of Preserves/Easements, protecting significant landscapes and approximately 2.5 km of St. Marys River shoreline. Lake Superior Watershed Conservancy has also established a Preserve within the St. Marys River watershed.
Protect Biotic Resources: - through planning process - through tax incentives - identify all sites	On-going	Official Plans have been or are being updated, with SSMRCA engaged during the process. New legislation in place to further protect the Great Lakes.

		Over 760 acres protected under the Conservation Land Tax Incentive Program. An additional 4700+ acres protected under the Managed Forest Tax Incentive Program.
Protect Shorelines including tributaries: - assess shoreline - identify natural features - information for landowners - protection policies in regulatory documents - require review of shoreline alterations - no development in hazard lands	On-going	SSMRCA O. Reg. 176/06 in place to regulate development near wetlands, or alterations to shorelines and watercourses within Sault Ste. Marie and portions of Prince Township. Includes associated Shoreline Management Plan. New legislation in place to further protect the Great Lakes. Official Plans have been or are being updated, with SSMRCA engaged during the process.
Protect, restore and create aquatic habitats: - monitor aquatic environments - expand conservation communications - support regulation of dredging - support water quality improvement - facilitate remedial works - support adequate watering of the rapids	On-going	Current project through Algoma University called the “St. Marys River Tributary Enhancement Project”: includes area cleanups, habitat restorations, and invasive species identification/removal. Additionally, ECCC - Canadian Wildlife Service completed a monitoring effort to assess baseline wildlife habitat conditions and evaluate the degree of impairment (if any) of coastal wetland water quality, and breeding marsh bird, amphibian, aquatic macroinvertebrate and submerged vegetation communities. Conservation communications are disseminated via the SSMRCA, BPAC, and CHRS websites and social media. Dredging Administrative Document is in place for the river. Continued water quality improvements are being seen through the RAP AOC program, with water quality related BUIs recently delisted. International Lake Superior Board of Control implements Lake Superior Regulation Plan 2012 resulting in a more natural pattern to St. Marys River flows, which will help to sustain riverine ecosystem health.
Control Sea Lamprey: - continue research into effective controls - continue a binational control effort - support adequate funding for assessment and control	On-going	Great Lakes Fishery Commission continues with the St. Marys River control strategy for addressing invasive sea lamprey in the river.
1.6 Improve water quality: - encourage public awareness of quality concerns - continue to monitor	On-going	City of Sault Ste. Marie (ON) established new Storm Water Management Master Plan and Guidelines to improve the quality and quantity of stormwater runoff around the community to

- encourage strict enforcement of regulations - support implementation of the Remedial Action Plan - support upgrading of any wastewater treatment - support actions to separate storm water from sanitary systems - evaluate point source treatment compliance with regulations - support disposal regulations for all vessels - maintain quality and quantity of ground water to the river		minimize the input of contaminants to the St. Marys River. Through the RAP program, a Conceptual Site Model (CSM) for the St. Marys River Contaminated Sediments is updated. The CSM represents the site-specific state of understanding of contaminant sources, fate, transport, and potential exposure of receptors. The Clean Water Act, 2006, continues to protect drinking water and contributes to maintaining quality and quantity of groundwater to the river through the Source Protection Plans for SSM area.
Celebrate the diversity of the history and culture of the valley: - sharing of information among cultural groups - promote local events - promote the recording of cultural heritage - encourage educational programs - support financial assistance to cultural groups	On-going	City of SSM “Celebrate 100!” civic anniversary. Over 64 events took place throughout the year including a myriad of activities that took place along the waterfront, the highlight of which was a visit by the His Excellency the Right Honourable Governor General David Johnston and Mrs. Johnston participating in a commemoration ceremony in Clergue Park overlooking the river. Sault Ste. Marie Canal National Historic Site partnered with the Sault Ste. Marie Region Conservation Authority to host the lock’s first paddling event. The event celebrated Canada 150 and recognized the St. Marys Heritage River designation. Lake Superior Watershed Conservancy offers a St. Marys River themed *Canoes for Conservation* Tour. Includes interpretive guided canoe tours where guides will take individuals on a journey along one of the historic water trails while sharing knowledge about the local history, culture, and environment.
Inventory, document, preserve and maintain heritage resources of significant natural, architectural and archeological interest and value: - promote the importance of preserving the river’s human heritage - support a Provincial Register of historic sites - maintain the inventory of local significant sites - identify sites in planning documents for protection	On-going	Many natural sites have been documented as Provincial wetlands, sensitive shorelines, rare plant communities, and archeological heritage. Sites and artifacts are protected through legislation, planning documents and conservation areas.

- support acquisition of sites where necessary - facilitate partnerships to support protection and interpretation of heritage resources		
Ensure all forms of development are consistent with heritage values: - require archeological assessment prior to development - use planning policies to conserve significant heritage resources - continue designation of properties under the Ontario Heritage Act	On-going	Sault Ste. Marie Municipal Heritage Committee advises Council on matters relating to the Ontario Heritage Act, including designation. Additional protection of heritage offered through planning policies, Official Plans, national, provincial, and municipal sites.
Promote the National Historic Sites within the river valley: - support protection and development of National Historic Sites Values - use and promote historic sites for education and celebrations	On-going	Sault Ste. Marie Canal National Historic Site and the Fort St. Joseph National Historic Site are both promoted primarily through Parks Canada.
Protect the integrity of the fishery: - support continuing research and improvements to river habitat - review the advisability of a stocking program - continue fish and threats monitoring	On-going	The RAP process and the St. Marys River Fisheries Task Group have paved the way for many improvements to water quality, stocking of appropriate fish species, and protection of existing species through invasive species research and the Sea Lamprey Control Programs. Recent DFO studies have found that the River is home to a relatively healthy fish community that is complex, diverse, and dominated by native species. ECCC assessed tumor rates in White Suckers and found a 6% tumor rate. While this is still above the 5% threshold that the Great Lakes Commission established, it is a marked improvement from higher rates detected in the past. St. Marys River Fisheries Task Group completed a long term study on population dynamics of the river's fish community from 1975-2017. CLC adopted the Environmental Principles for Sustainable Fisheries in the Great Lakes Basin.
Increase the opportunities for recreation in the river valley without compromising heritage values: - encourage recreation respecting river values - encourage more public access to the river where possible	On-going	Sault College opens the Waterfront Adventure Centre which allows Saultites access to a host of watersports and recreational options at the former RYTAC site. Includes rentals for canoes, kayaks and stand-up paddleboards. Lake Superior Watershed Conservancy offers a St. Marys River themed *Canoes for*

- support and encourage cooperation among landowners, cultural groups and developers to allow proper use of the river's resources.		*Conservation* Tour. Includes interpretive guided canoe tours where guides will take individuals on a journey along one of the historic water trails while sharing knowledge about the local history, culture, and environment.
Recognize the economic potential of tourism based on recreational values: - expand public awareness of the contribution made by the river towards tourism and as a destination for recreation - encourage and support further development and enhanced opportunities for recreation and tourist development	On-going	Tourism Sault Ste. Marie, a division of the City of SSM and Algoma Country, the tourism site responsible for highlighting the rest of Algoma, draw attention to the many adventures awaiting visitors to the Sault and Algoma region, including recreational, historical, and cultural activities and places to visit. Cycling, watersports, hiking, parks and beaches, fishing, indigenous tourism, skiing, snowshoeing, and snowmobiling are all highlighted along with historical sites.
Empower a group to monitor the strategy and pursue implementation of objectives	On-going	In the first decadal report, the Friends of the St. Marys River had taken on this objective, but they have since dissolved. Therefore the SSMRCA is solely responsible for this item at this time.
Develop educational programs highlighting river values	On-going	Historic sites promote and educate the public at their respective properties. Lake Superior Watershed Conservancy offers a St. Marys River themed *Canoes for Conservation* Tour. Includes interpretive guided canoe tours where guides will take individuals on a journey along one of the historic water trails while sharing knowledge about the local history, culture, and environment
Expand public awareness of the Strategy	On-going	Communications are disseminated via the SSMRCA, BPAC, and CHRS websites and social media.
Encourage partnerships with an interest in the river	On-going	Long standing relationships/partnerships with the BPAC and RAP program, Fisheries Commission, local government, Lake Superior Watershed Conservancy, Kensington Conservancy, Central Algoma Freshwater Coalition.
Seek funding for implementation of Strategy objectives	On-going	A grant was obtained to create signage along the river, and signs were placed. Some signs have since deteriorated and were removed.
Support American designation under the American Heritage Rivers Initiative	On-going	Designation has not yet taken place.

The Compensating Works regulate flow from Lake Superior to Lake Huron.

10.0 Summary of Benefits and Costs since Designation

The decadal monitoring requirements include identification of benefits resulting from the Canadian Heritage River designation in relation to the program goals.

Table 7: Benefits of the designation

TYPE OF BENEFIT	DESCRIPTION
Cultural	Designation has led to improved appreciation and awareness of the river and it's rich cultural and historical significance.
Recreational	Designation has been tied into the local 25 km John Rowswell Hub Trail in SSM, a 25 km multi-use non-motorized trail system that connects many significant points of interest including the waterfront walkway where the St. Marys commemorative plaque is on display.
Improved Knowledge and Education	The annual and decadal reports required for CHRS designation bring the St. Marys River under the focus of Parks Canada staff more frequently. Knowledge of St. Marys related regulations and its heritage values has improved through the preparation of these reports. Heritage projects such as the river story map and Canada 150 paddling event also allow for the public to gather a firmer understanding of the river, its designation and historical importance.

Monetary	Designation permitted access to special funding for heritage projects such as the river story map and Canada 150 paddling event, and decadal reporting.
Community Engagement and Collaboration	Designation has fostered continued collaboration amongst the government agencies, partners and stakeholders along the River.

11.0 Overall Assessment

Based on this decadal review of the current activities and studies, and past documentation for CHRS, this report verifies the current conditions of the St. Marys River as it pertains to its eligibility as a Canadian Heritage River, and it can be reasonably concluded that the St. Marys River still meets CHRS Guidelines for its outstanding combination of Cultural and Recreational values.

Except for a few negatives (that are mainly the result of climate change and technically fall outside of the scope of the CHRS), changes during the most recent ten years of the St. Marys designation support the conclusion above, and appreciation, use, and stewardship of the river by local inhabitants and visitors alike can be continued.

The St. Marys River should retain its designation as a Canadian Heritage River.

Appendix A

Acknowledgements

We would like to thank the multi-Agency staff who supplied information when requested over the phone or by email for incorporation into this report.

References

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Appendix B

List of Tables

Acronyms Used

AOC – Area of Concern
BCE – Before Common Era
BPAC – Binational Public Advisory Council
BUI – Beneficial Use Impairment
CHRS – Canadian Heritage Rivers System
City of SSM or SSM – City of Sault Ste. Marie or Sault Ste. Marie
CLC – Council of Lake Committees
CSM – Conceptual Site Model
DFO – Fisheries and Oceans Canada
ECCC – Environment and Climate Change Canada
GLFC – Great Lakes Fishery Commission
IBI – Index of Biotic Integrity
IJC – International Joint Commission
LEAP – Legacy Environmental Action Plan
MDNR – Michigan Department of Natural Resources
MECP – Ministry of Environment, Conservation and Parks
MFTIP – Managed Forest Tax Incentive Program
OMNRF – Ontario Ministry of Natural Resources and Forestry
ON – Ontario
RAP – Remedial Action Plan
RYTAC – Rotary/YMCA Tennis and Aquatics Club
SSMRCA – Sault Ste. Marie Region Conservation Authority
USA – United States of America