

Margaree-Lake Ainslie Canadian Heritage River 10-year Monitoring Report

1998 - 2008

Prepared for the Canadian Heritage Rivers Board

May 2008



Painting by Alice Reed

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1.0 Executive Summary

The Margaree-Lake Ainslie River in Nova Scotia, was designated as a Canadian Heritage River in 1998. This report reviews what has happened over the last decade, and addresses the state of the river, while looking at progress and research. It examines what has happened to the river since designation, determines whether heritage and recreational values are still intact, and reports on the Canadian Heritage River System (CHRS) integrity guidelines. This study also reports on the degree to which river management and goals have been achieved.

Since its designation, collaborative research work has been done by government and community groups. Projects have addressed improving aquatic habitats and salmon and trout stocks. Research took place on animal and fish populations such as moose, American marten (*Martes americana*), gaspereau and bass to develop management initiatives. Water quality monitoring on the river was improved through the installation of a hydrometric sampling station.

Youth Services Canada projects worked to:

- promote awareness of the river's heritage;
- encourage locals to assume a stewardship role;
- monitor water quality on the entire watershed to establish benchmark settings;
- clean-up shorelines;
- stabilize stream banks;
- participate in the local River Watch program;
- partner with the local hatchery to enhance trout and salmon stocks and restore fish habitat; and
- offer information and training on community-

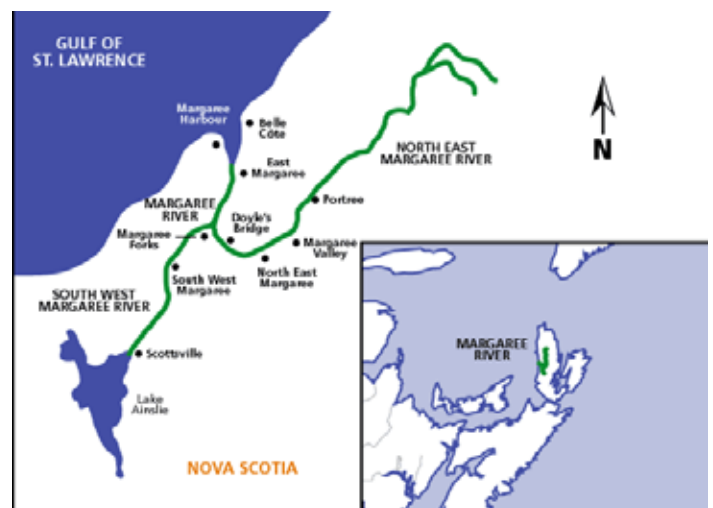


based water quality monitoring.

Forestry practices in the river's watershed were improved when Stora Enso/NewPage received Forestry Stewardship Council certification, which means it must adhere to strict environmental and social standards.

The heritage values of the Margaree-Lake Ainslie River System remain intact. The river is worthy of continued designation as a nationally significant river within the CHRS.

2.0 Introduction



The Margaree-Lake Ainslie river system is the largest river system on Cape Breton; it measures about 120 kilometers in length. The river runs through a variety of scenic landscapes with a dynamic mix of land uses. The river system is characterized by a unique combination of natural and cultural heritage values that reflect a rich history of human settlement on a mosaic of natural landscapes. In 1998, after years of study, the Margaree-Lake Ainslie River system was designated as a Canadian Heritage River.

Its Northeast branch is known for populations of salmon, which attract large numbers of anglers. The Southwest branch has a provincially significant gaspereau run, which is fished commercially.

The Canadian Heritage River System (CHRS) is Canada's program by which to promote freshwater heritage conservation and recognize Canada's

outstanding rivers based on heritage and recreation values. The program is a cooperative effort of federal and provincial/territorial governments, which works to ensure long-term management and conservation of Canada's river heritage. CHRS requires annual reports, monitoring, and ten-year reviews to ensure that CHRS rivers maintain the values for which they were nominated.

The objectives of this report are to:

- determine the degree to which the actions outlined in the management plan have been implemented.;
- establish the current conditions of the outstanding heritage values based on a review of values for which the river was nominated
- determine whether the CHRS integrity guidelines are still being met;
- describe changes that have occurred in relation to the river over the past decade; and
- review the state of the river and to report on progress or setbacks the river has experienced

3.0 Background

From the headwaters of the Northeast Margaree, located to the south of Cape Breton Highlands National Park, the Margaree River flows in a westerly, then southerly direction through a steep-sided valley complex to Big Intervale. From here, the river flows to the south before taking a westerly shift and meanders to Margaree Forks. The Southwest Margaree begins at Lake Ainslie, the largest freshwater lake in Nova Scotia, and flows northerly to Margaree Forks to form the Margaree River. The Margaree River continues north to Margaree Harbour and the Gulf of St. Lawrence.



In 1986, the Province of Nova Scotia reviewed 45 rivers and conducted detailed studies on the seven highest rated rivers. In 1988, a study of the Margaree River system was completed and a year later the Minister announced that the Department of Natural Resources would work toward nomination of the river. In July 1991, the Margaree River system was accepted for nomination as a CHRS river. *The Margaree-Lake Ainslie Canadian Heritage River - A Partnership Strategy* was submitted to CHRS in 1996 and in 1998 the river was designated a Canadian Heritage River.

In 1998, lead responsibility for the CHRS program in Nova Scotia was transferred to the Protected Areas Branch of Nova Scotia Environment (NSE) from the Department of Natural Resources (DNR).

4.0 Methodology

The main approaches used to gain information about the state of the river and progress that has been made are:

- (i) reviews of CHRS annual reports and field reports
- (ii) secondary source research
- (iii) interviews with key individuals

Interviews with key individuals provided information on changes, research, and activities that have taken place on and around the river since its designation. Discussions took place among NSE and DNR staff and key stakeholders.

New CHRS frameworks were developed since the Margaree Lake Ainslie River System was nominated. This report converts identified values to coincide with current national frameworks; the recreational framework used was adapted from the Red River CHRS study.

The condition of heritage values since designation was discussed along with relevant projects or partnership strategy actions. The condition of integrity guidelines was also examined to determine whether the river was still worthy of designation as a river of national significance within the Canadian Heritage River System.

5.0 Chronology of Events

1998 - 2000

- Margaree-Lake Ainslie officially designated to CHRS.
- Responsibility for CHRS transferred to Nova Scotia Environment from the Department of Natural Resources.
- Thirty-one new Wilderness Areas designated, 4 of which are included in the watershed of the Margaree-Lake Ainslie River System.

2000-2001

- Appointment of a regional protected areas program co-ordinator for Cape Breton with responsibility for the Canadian Heritage Rivers in the region.
- The Margaree Area Development Association starts planning for a regional hiking trails program
- Aquatic Development Association of Margaree working with the Margaree Salmon Association (MSA) and the Margaree-Lake Ainslie Canadian Heritage River Society
- Margaree-Lake Ainslie Canadian Heritage River Society and NSEL initiate work with Tourism NS on sponsorship of a regional self-guided heritage tour
- Water quality - central database for historic and future parameter values; purchase of new hydrometric sampling station; plans for the initiation of a community-based water quality monitoring program;
- Concerns over Kenloch landfill addressed by NSE.
- Margaree-Lake Ainslie Canadian Heritage River Society working with NSE to implement the Partnership Strategy. The group meets once a month.

- Opening of a CHRS Resource Center in the Margaree Forks Public Library.

2001-2002

- Identification of potential snowmobile/ATV routes to redirect traffic away from bogs and barrens in Jim Campbells Barren Wilderness Area, which is within the Watershed of the Margaree-Lake Ainslie River System.
- Margaree River featured on the Great Canadian Rivers television series, which chronicled rivers that represent both the natural and cultural heritage of Canada.
- Installation of a hydrometric sampling station on the Northeast Branch of the river that compiles daily recordings into a central database.



- Proposed barite mine at Trout Brook, which flows into Lake Ainslie, met with public concern. The project proposal was eventually withdrawn.
- Youth Service Canada project working to: promote awareness of the river's heritage; encourage locals to assume a stewardship role; monitor water quality on the entire watershed to establish benchmark settings; clean-up shorelines; stabilize stream banks; participate in the local River Watch program; partner with the local hatchery to enhance trout and

salmon stocks and restore fish habitat; and offer information and training on community-based water quality monitoring.



shed to establish benchmark settings; clean-up shorelines; stabilize stream banks; participate in the local River Watch program; partner with the local hatchery to enhance trout and salmon stocks and restore fish habitat; and offer information and training on community-based water quality monitoring

2003-2004

- Voluntary Planning Task Force on Off-highway vehicles makes recommendations on how OHVs might be better regulated
- Aquatic Development Association of Margaree (ADAM) secures a new funding agreement to assist in the production of young trout and salmon for stocking rivers in Nova Scotia. Money also to assist in public education initiatives and collaborative research efforts



2002-2003

- Snowmobile trail relocation to help protect bogs and barrens in Jim Campbells Barren Wilderness Area, which is located within the river's watershed.
- Margaree Salmon Association Stream Habitat Improvement Project worked to improve Lake O'Law Brook, which flows from the NE Margaree River, by stabilizing banks and enhancing pools
- American marten (*Martes americana*) research project sponsored by NS Department of Natural Resources worked to determine population size, distribution and habitat requirements of the provincially endangered American marten (*Martes americana*). The project results will be used to develop a plan to restore populations to a healthy level
- Margaree Tourism Association "Interpretive Signage Project" worked to develop signage to promote heritage values
- Margaree Harbour bridge replacement
- Youth Services Canada Project #2 working to: promote awareness of the river's heritage; encourage locals to assume a stewardship role; monitor water quality on the entire water-

- Moose research project studies the moose population in the Cape Breton Highlands to determine behaviour and movement patterns and develop appropriate management strategies
- Cancellation of the barite mine proposal near Trout Brook
- Youth Service Canada 2003 - Youth at Risk project works to monitor water quality, rehabilitate streams, improve habitat, increase public education, clean shorelines, stabilize stream banks and enhance trout and salmon stocks

2004-2005

- Aquatic habitat improvements: stream bank remediation; habitat restoration; erosion control; bank stabilization; fish habitat improvement; and inventory of streambed, stream-side vegetation and flow characteristics of the Northeast branch
- Computerized inventory of local heritage sites
- Recreation infrastructure improvements: benches and picnic tables placed at key sites along the river; identification signs produced to be erected at key fishing sites; and maintenance carried out on local walking trails
- Litter/garbage pick-up to remove debris from the NE and SW branches of the river
- Infestation of black-headed budworm in the Cape Breton Highlands, which is part of the Margaree-Lake Ainslie Rivers System watershed, with trace defoliation along portions of First and Second Fork Brooks on the Northeast Margaree River



2005-2006

- The Canadian Forestry Service trial aerial spray of *Bacillus thuringiensis kurstaki* (BTK) to test its effectiveness on the black-headed budworm takes place. Subsequent studies showed a collapse of the insect population and recommended cessation of spray operations.

- Relocation of Snowmobile Association of Nova Scotia Trail reduces potential damage to sensitive bogs and barrens in the Jim Campbells Barren Wilderness Area, and associated impacts within the Margaree watershed.
- Scientific research and monitoring indicate that striped bass numbers are on the rise and that smallmouth bass have not been able to breed successfully

2006-2007

- The Nova Scotia Department of Fisheries and Aquaculture (NSFA) takes over the ownership and management of the Margaree hatchery from the Aquatic Development Association of Margaree. This secures long term funding for the operation of the hatchery.
- The Margaree-Lake Ainslie Canadian Heritage River Society completes the section of wilderness hiking trail from Portree to the first look-off on top of Sugarloaf Mountain
- Margaree Area Development Association makes improvements to the walking/hiking trail (Lifestyles Trail) in Lake O'Law

2007-2008

- Stora Enso, which harvests forestry products within the watershed, divests its North American paper operations to NewPage
- Stora Enso/NewPage receives Forest Stewardship Council (FSC) certification.

6.0 Natural Heritage Values

6.1 Background

The designation of the Margaree-Lake Ainslie River System was based on the following key natural heritage features:

- a unique alkaline bog on Black River, which is recognized under the International Biological Program and is under consideration for official designation under the Special Places Act. It contains at least five provincially rare plants



- Remnant maple, elm floodplain forests contain at least five provincially rare plants
- Four provincially rare mammals occur in the steep-sided valley complex of Northeast Margaree







A new national framework for natural heritage values has been developed since the Margaree River system was designated in 1998: *A Framework for the Natural Values of Canadian Heritage Rivers*, 2nd Edition. 2001.

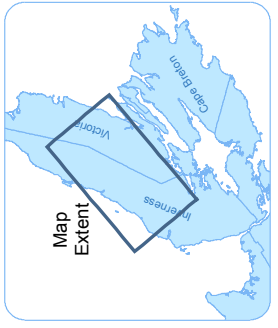
The values for which the Margaree River system was nominated are summarized below, according to this new natural heritage values framework.

- Outstanding earth history - the variety, history and visibility of geological strata and features associated with the river system provide excellent opportunities for interpretation of the complex geology of this region.
- The entire river is an outstanding representation of continuous fluvial and geomorphological processes.
- Outstanding examples of faulting and escarpments depict significant events in Nova Scotia's geological history
- One of the most noted salmon producing rivers in Nova Scotia, which is renowned for spring and fall runs of salmon
- A provincially significant gaspereau run
- Provincially significant wetlands on the Southwest Margaree and Lake Ainslie have outstanding wildlife values
- Second Fork Brook IBP site is a remnant of an old growth sugar maple stand



Margaree Canadian Heritage River

-  Margaree Canadian Heritage River
-  Margaree River Secondary Watershed Boundary
-  Wilderness Areas
-  Cape Breton Highlands National Park
-  Crown Lands
-  Other Lands



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Table 1 Margaree-Lake Ainslie River Natural Heritage Values

CHRS Natural Framework (2001) Themes & Sub-themes	Margaree-Lake Ainslie River Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
1 Hydrology			
1.1 Drainage Basins	Atlantic Ocean Basin; stream number 1		None
1.2 Seasonal Variation	Period of highest flow is May; period of lowest flow is May-September		None
1.3 Water Content	Insignificant sediment load 0-50 mg/l (>5.0 JU); rated high in Total Dissolved Solids (>100 mg/l)	Margaree Harbour Bridge Replacement (at mouth of Harbour)	None - some riverbed disturbance and transportation of sediment occurred during bridge construction only (one time event at mouth of harbour)
		Water quality monitoring has taken place since 2000 when a new hydrometric sampling station was installed	Water quality monitoring on the river has improved, but the coordination of information requires further work
1.4 River Size	Small river or <85m ³ /sec. Length is <500km.	NSE encouraging completion of a central database for historic and future parameter values	
			None
2 Physiography			
2.1 Physiographic Regions	Appalachian Acadian Uplands		None
2.2 Geological Processes			None
2.3 Hydrogeology	Porous bedrock with surficial unconsolidated materials of low porosity: fine-grained clay and silt; impervious bedrock with surficial unconsolidated materials of medium porosity: loams, sand and gravel		None
2.4 Topography	Significant gradient (2-5m/km). Height above sea level is 0-400m.		None

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3 River Morphology			
3.1 Valley Types	Concave-walled valleys: rounded interfluves with significant floodplain; straight-walled valleys: flat/rounded interfluves with significant floodplain		None
3.2 Channel Types	Stream configuration: meandering; lake systems: Feeder lake	Margaree Salmon Association conducts inventory of flow characteristics	Improve/maintain ecological integrity
3.3 Channel Profile	Pool and riffle		None
3.4 Fluvial Landforms	Depositional landforms: oxbows; erosional landforms: undercuts and gorges	Stream bank stabilization and erosion control through Youth Service Canada, Margaree Salmon Association and Department of Fisheries and Oceans projects	Protection from erosional processes
4 Biotic Environments			
4.1 Aquatic Ecosystems	Riverine systems: lowland zone	Amendments to the Special Places Protection Act streamline the process used in the identification and designation of significant ecological sites on private and crown lands	Provides an effective tool for considering additional designations in the Margaree-Lake Ainslie area, which could contribute to protecting important ecological values
		Planning for a comprehensive system of protected areas	Protection of important natural lands as wilderness areas or nature reserves
4.1 Aquatic Ecosystems	Riverine systems: lowland zone	Scientific research on striped and smallmouth bass	Increase in striped bass is encouraging to the closed recreational fishery
			Apparent inability of smallmouth bass to breed means negative effects on brook trout, gaspereau and landlocked salmon are minimized
		Amendments to the Off-highway Vehicles Act	Helps protect biodiversity

Table 1 Margaree-Lake Ainslie River Natural Heritage Values

CHRS Natural Framework (2001) Themes & Sub-themes	Margaree-Lake Ainslie River Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
		Aquatic habitat improvements by Youth Service Canada	Helps maintain/improve ecological integrity
		Litter and garbage pick-up	Improved ecological integrity
		Aquatic Development Association of Margaree (ADAM) secures funding for trout and salmon stocking programs	Helps maintain fish populations while offering opportunities for public education and scientific research
		NS Agriculture & Fisheries invests in ADAM and funds Adopt-a-Stream programs, while creating opportunities in the Atlantic Salmon fishery. Province assumes ownership and management of hatchery.	
		Margaree Salmon Association Stream habitat Improvement Project - bank stabilization and pool enhancement	Improved quality of aquatic habitats are beneficial to the entire ecosystem
4.2 Terrestrial Ecosystems	Ecozone: Atlantic Maritime	Amendments to the Off-highway Vehicles Act	Helps protect biodiversity
		Planning for a comprehensive system of protected areas	Protection of important natural lands as wilderness areas or nature reserves
		Relocation of Snowmobile Association of Nova Scotia trail	Helps preserve ecological integrity
		Infestation of the defoliating black-headed budworm in the Cape Breton Highlands	There was trace defoliation at First and Second Fork Brooks, which are within the river's watershed
		Moose research in Cape Breton Highlands	Maintain healthy wildlife populations to ensure ecological integrity
		Cancellation of barite mine near Trout Brook	

Table 1 Margaree-Lake Ainslie River Natural Heritage Values

CHRS Natural Framework (2001) Themes & Sub-themes	Margaree-Lake Ainslie River Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
		American marten (<i>Martes americana</i>) research has led to efforts by DNR to augment populations by releasing animals into areas where American marten (<i>Martes americana</i>) have been sighted	Enhancement of wildlife populations support the maintenance of “natural” ecosystems such as old growth forests and the protection of natural heritage values
5 Vegetation			
5.1 Significant Plant Communities	Aquatic/Riparian plants: Black River IBP site species; carex and salix species at Black River Trees: dynamic old growth sugar maples	Margaree Salmon association inventory of stream-side vegetation	Helps maintain/improve ecological integrity
5.2 Rare Plant Species	Provincially rare: <i>Sclerophora peronella</i> , <i>Rhynchospora capillacea</i> , <i>Carex gynocrates</i> , <i>Salix candida</i> , and <i>Caltha palustris</i>	<i>Sclerophora peronella</i> listed as Special Concern by COSEWIC	Designation of Wilderness Areas within the river’s watershed helps protect 2 of the 3 <i>Sclerophora peronella</i> sites in Canada
5.2 Rare Plant Species			
6 Fauna			
6.1 Significant Animal Populations	Fish: Atlantic salmon and gaspereau		

Table 1 Margaree-Lake Ainslie River Natural Heritage Values

CHRS Natural Framework (2001) Themes & Sub-themes	Margaree-Lake Ainslie River Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
6.2 Rare Animal Species	Mammals : Special concern: Gaspe shrew; regionally rare: American marten (<i>Martes americana</i>) lynx and rock vole. Birds: regionally rare species: bald eagle	<p>Moose research</p> <p>Under COSEWIC, the Gaspe shrew is listed as no longer at risk</p> <p>American marten (<i>Martes americana</i>) research. DNR released approximately 30 American marten in 2007, including some around Trout Brook and within the river's watershed.</p> <p>Marten were listed as provincially endangered in 2001.</p> <p>Lynx were listed as endangered in 2002. Ongoing research is being conducted by DNR</p>	<p>Maintain healthy wildlife populations to ensure ecological integrity</p> <p>Maintain healthy wildlife populations to ensure ecological integrity.</p> <p>The American marten is one of Nova Scotia's rarest mammals; DNR is trying to improve marten numbers by releasing animals into the wild.</p> <p>Lynx are only found in the Cape Breton Highlands and a few other high elevation areas of the province.</p>

6.2 Condition of Natural Values Since Designation

Water quality monitoring began on the Margaree River system in 2000 when a new hydrometric sampling station was installed. The river is now part of Nova Scotia's Automated Water Quality Monitoring Program.

There have been changes to the Off-highway Vehicle Act and the Special Places Protection Act, which have meant stabilized or improved biodiversity and ecological integrity. Protected Areas planning offers protection to important natural lands - there are currently four wilderness areas along the Margaree River system: Trout Brook; Margaree River; Jim Campbells Barrens; and Sugarloaf Mountain.



Research initiatives in the area have increased knowledge of moose, American marten (*Martes americana*) and Canada lynx (*Lynx canadensis*) species and are useful in the development of appropriate management strategies. There have been a number of improvements to aquatic habitat through the work of the Margaree Salmon Association and the Margaree-Lake Ainslie Heritage River Society. Increased funding to the Aquatic Development Association of Margaree has led to improvements in stocks of trout and Atlantic salmon.

StoraEnso became NewPage and received Forest Stewardship Council certification, which certifies and labels paper and wood products from responsibly managed forests and verified recycled sources, while adhering to strict environmental and social guidelines.

Starting in 2007, Nova Scotia Environment became involved in watershed management planning, for this area.. This includes investigating how to implement current policy in collaboration with communities.

7.0 Cultural Heritage Values

7.1 Background

A new national framework for cultural heritage values has been developed since the Margaree River system was designated in 1998: *A Cultural Framework for Canadian Heritage Rivers*, 2nd Edition. 2000.

While the Margaree - Lake Ainslie was not nominated based on its cultural (human) heritage values, both the nomination document and the designation document (Partnership Strategy) recognize the rich cultural heritage of the region, and the strong cultural ties to the river. These include:

- Pre-contact Native history;
- Mi'kmaq use;
- European settlement;
- Natural resource use; and
- Cultural attachments to sporting and recreation.

A variety of cultural values are summarized in the following table according to the new cultural values framework. The table also outlines significant actions over the past ten years, and any changes to cultural heritage values.

Table 2 Margaree-Lake Ainslie River Cultural Heritage Values

CHRS Cultural Framework (2000)	Margaree-Lake Ainslie River System Cultural Heritage Values	Significant Actions, Research or Studies	Changes or Threats to Value(s)
1 Resource Harvesting			
1.1 Fishing	Artifacts approximately 3000-5000 years old have been found at Margaree Harbour, Margaree, Margaree Forks and Scotsville	Computerized inventory of local heritage sites	Improved storage of and access to information on local heritage
1.2 Shoreline Resource Harvesting	Probably used prior to European contact for hunting and fishing		None
1.3 Extraction of Water	Maps from 1864 and 1898 indicate the presence of sawmills along the river system		None
2 Water Transport			
2.1 Commercial Transportation	Not reported at time of designation		None
2.2 Transportation Services	Not reported at time of designation		None
2.3 Exploration & Surveying	The area was surveyed in 1825 by Joseph Bouchette, the Surveyor General of British North America		None
3 Riparian Settlement			
3.1 Siting of Dwellings	Artifacts approximately 3000-5000 years old have been found at Margaree Harbour, Margaree, Margaree Forks and Scotsville	Computerized inventory of local heritage sites	Improved storage of and access to information on local heritage
3.2 River-based Communities		Computerized inventory of local heritage sites	Improved storage of and access to information on local heritage
3.3 River influenced Transportation	Not described at time of designation		None
4 Culture & Recreation			
4.1 Spiritual Associations	Not described at time of designation	Computerized inventory of local heritage sites	Improved storage of and access to information on local heritage

Table 2 Margaree-Lake Ainslie River Cultural Heritage Values

CHRS Cultural Framework (2000)	Margaree-Lake Ainslie River System Cultural Heritage Values	Significant Actions, Research or Studies	Changes or Threats to Value(s)
4.2 Cultural Expression		Computerized inventory of local heritage sites	Improved storage of and access to information on local heritage
		Interpretive signs produced	Increased public awareness of heritage values
4.3 Early Recreation	Angling for salmon	Aquatic development Association of Margaree received funding for a new fish stocking program. The province has assumed ownership and management of the hatchery.	Improved aquatic life and possibility for improved angling capabilities
5 Jurisdictional Uses			
5.1 Conflict & Military Associations	Not described at time of designation		None
5.2 Boundaries	Not described at time of designation	Designation of four Wilderness Areas	Protection of ecological integrity and biodiversity
5.3 Environmental Regulation	Not described at time of designation	Installation of hydrometric sampling station	Improved water quality monitoring

7.2 Condition of Cultural Values Since Designation

Only improvements have been made to the cultural heritage values of the Margaree River system since its designation in 1998.



A computerized inventory of local heritage sites such as churches, cemeteries and historic buildings has improved the long-term storage of, and access to, critical information on local heritage sites. New interpretive signs act as a valuable tool in public education and promotion of heritage values.

8.0 Recreation Values

8.1 Background & Status

The original nomination document and subsequent Partnership Strategy for the Margaree Lake Ainslie highlighted a range of recreational values that contributed to the river's nomination. These included:

- Wilderness - solitude
- Angling
- River travel
- Scenic appreciation
- Hiking
- Camping

Because there is no national framework for recreational values, the activities listed in the Red River Background Study were used: *Canadian Heritage River System: Red River Background Study, 1998*

The recreation values for which the Margaree Lake

Ainslie was nominated are summarized below, according to the Red River recreational values framework.

Table 3 Margaree-Lake Ainslie River Recreational Values

Recreational Capability Themes & Sub-themes (adapted from <i>Red River CHRS Background Study</i>)	Original Margaree-Lake Ainslie River Recreational Capability Rating	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
1 Boating			
1.1 Whitewater canoe, kayak & raft	Canoeing occurs along 80km of the river corridor and ranges from novice to class 3 intermediate	None	None
1.2 Extended canoe tripping (motor & non-motor)	Not discussed at time of designation	None	None
1.3 Day paddling & rowing (from urban center)	Day paddling occurs on Lake Ainslie, SW Margaree, Margaree, and NE Margaree	None	None
1.4 High speed boating	Not discussed at time of designation	None	None
1.5 Motorized pleasure cruising/houseboats	Not discussed at time of designation	None	None
1.6 Commercial tour boats	Not discussed at time of designation	None	None
2 Angling			
2.1 Day angling (from urban center)	There are 54 named salmon angling pools on the river - a fraction of the actual number	Margaree Salmon Association conducts inventory of flow characteristics	Improve/maintain ecological integrity
2.2 Weekend angling (from urban center)	The area is known for its native wildstock salmon	Research on striped and smallmouth bass	Increase in striped bass in encouraging to the closed recreational fishery. The inability for smallmouth bass to breed minimizes the negative effects on brook trout, gaspereau and landlocked salmon
2.3 Extended angling vacation	In 1983, non-residents rated it the best river in Nova Scotia. It is internationally renowned for its salmon angling opportunities	Aquatic habitat improvements Aquatic Development Association of Margaree secures funding for trout and salmon stocking programs	Helps protect biodiversity and maintain/improve ecological integrity Helps maintain fish populations while offering opportunities for public education and scientific research

Table 3 Margaree-Lake Ainslie River Recreational Values

Recreational Capability Themes & Sub-themes (adapted from <i>Red River CHRS Background Study</i>)	Original Margaree-Lake Ainslie River Recreational Capability Rating	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
2.4 Fly fishing	The Margaree and NE Margaree are fly-fishing only during salmon season, which runs from June 1 to October 15	See above	See above
2.5 Ice fishing	Not discussed at time of designation	See above	See above
2.6 Specific fish species	People fish for speckled trout (sea trout), brown trout, white perch and rainbow smelt	See above	See above
3 Water Content			
3.1 Swimming	Not discussed at time of designation	None	None
3.2 Water skiing	Not discussed at time of designation	None	None
3.3 Snorkel/scuba	Not discussed at time of designation	None	None
4 Water Associated Activities			
4.1 Trail use (hiking, walking, cycling)	There are provincially significant opportunities for hiking, scenic appreciation and wilderness travel, especially along the steep-sided valley complex of NE Margaree	Margaree Area Development Association engaged in planning a regional trail system - trails developed at Lake O'Law and Sugarloaf Mountain (there are 6 trails listed on the Margaree Tourism Association website)	Accessible, well-maintained trails would improve understanding of CHRS values and increase recreational value
4.2 Camping	Opportunity for camping within the watershed.	Designation of wilderness areas.	Improved regional opportunities for low impact camping in protected wilderness areas.
4.3 Hunting	Not discussed at time of designation	None	None

Table 3 Margaree-Lake Ainslie River Recreational Values

Recreational Capability Themes & Sub-themes (adapted from <i>Red River CHRS Background Study</i>)	Original Margaree-Lake Ainslie River Recreational Capability Rating	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
5 Winter Activities			
5.1 Snowmobiling/dog sledding	Not discussed at time of designation. A snowmobile trail was re-routed to protect Jim Campbells Barrens Wilderness Area	Relocation of Snowmobile Association of Nova Scotia trail	Helps preserve ecological integrity
5.2 Cross-country skiing (day use urban center)	Not discussed at time of designation	Relocation of Snowmobile Association of Nova Scotia trail	People may be able to use this trail for skiing and snowmobiling
5.3 Skating (urban center)	Not discussed at time of designation	None	None
6 Natural Heritage Appreciation			
6.1 Wildlife	Mammals : Special concern: Gaspé shrew; regionally rare: American marten (<i>Martes americana</i>) lynx and rock vole. Birds: regionally rare species: bald eagle	Moose research in Cape Breton Highlands American marten (<i>Martes americana</i>) research. The marten has been listed as provincially endangered along with lynx Gaspé shrew is no longer at risk.	Maintain healthy wildlife populations to ensure ecological integrity Enhancement of wildlife populations support the maintenance of “natural” ecosystems such as old growth forests and the protection of natural heritage values
6.2 Vegetation	Fish: salmon and gaspereau Aquatic/Riparian plants: Black River IBP site species; carex and salix species at Black River Trees: dynamic old growth sugar maples	Margaree Salmon Association inventory of stream-side vegetation	Helps maintain/improve ecological integrity

8.2 Condition of recreation values Since Designation

Improvements have been made to the recreational values of the Margaree River system since its designation in 1998.

The Margaree Salmon Association conducted an inventory of flow characteristics and stream-side vegetation; both will help maintain or improve ecological integrity. The group also had a Stream Habitat Improvement Project that worked to stabilize banks and enhance pools.

Research was conducted on smallmouth and striped bass, American marten (*Martes americana*), lynx and moose, which will help in planning and shows encouraging news for the recreational fishery. There were aquatic habitat improvements and trout and salmon stocking programs, which all help protect biodiversity.

The Margaree Area Development Association initiated regional trail system planning, which could lead to additional recreational value and increased awareness of CHRS values. A Snowmobile Association of Nova Scotia trail was relocated to help preserve ecological integrity in the area and had the potential benefit of being used as a cross-country ski trail.

A computerized inventory of local heritage sites such as churches, cemeteries and historic buildings has improved the long-term storage of, and access to, critical information on local heritage sites. New interpretive signs act as a valuable tool in public education and promotion of heritage values. There were discussions concerning the possibility of a self-guided tour of the Margaree-Lake Ainslie area, which would enhance people's understanding of the area.

9.0 Integrity Guidelines

Natural, Cultural and Recreational integrity guidelines were all considered when the Margaree River System was nominated. However, only natural and recreational guidelines apply as the river was not nominated for its human heritage value.

Table 4 summarizes the condition of the Margaree River System's integrity since designation. The integrity guidelines in this table are based on the Canadian Heritage Rivers System Principles, Procedures and Operational Guidelines from 2001. The table also discusses improvements, threats and changes to integrity guidelines.



Table 4 Margaree-Lake Ainslie River System Integrity

CHRS Principles, Procedures & Operational Guidelines (2001)	Margaree-Lake Ainslie River System Integrity Guideline(s)	Changes or Threats to River Integrity
3.3.1 Natural Integrity Values		
The nominated section is of sufficient size to include significant representations of all of the natural processes, features, or other phenomena which give the river its outstanding natural value	The Margaree-Lake Ainslie River System is 120km in length and free-flowing with a drainage basin of 116,537.5 hectares. It is the largest river system on Cape Breton and one of Nova Scotia's largest.	None
The nominated section includes those ecosystem components which contribute significantly to the provision of habitat for species in need of protection	The river's ecosystem is unimpaired and produces abundant fish, wildlife and flora. The river system meets water quality guidelines endorsed by CCREM for aquatic life and recreation.	Water quality monitoring is critical to ongoing assessments of the river's health, and has been improved through local efforts and installation of the permanent sampling station.
There are no human-made impoundments within the nominated section	In 1998 four Wilderness Areas were designated in the area: Sugarloaf Mountain, Trout Brook, Jim Campbells Barrens and Margaree River	Improved monitoring of areas
All key elements and ecosystem components are unaffected by impoundments located outside the nominated section	The entire river is free-flowing with no impoundments	None
The water in the nominated section is uncontaminated to the extent that its natural aquatic ecosystem is intact	No impoundments exist outside of the nominated section	None
The natural aesthetic character of the nominated section is free of, or not adversely affected by, human developments	Water quality data shows the Margaree-Lake Ainslie River System meets Canadian water quality guidelines for freshwater aquatic life. Past and present land uses have never overwhelmed the Margaree. Approximately 30% of the river system is in wilderness condition.	Continued water quality monitoring indicates that the water remains uncontaminated None
3.3.2 Cultural Integrity Values		
The nominated section is of sufficient size to include significant representations of all of the features, activities or other phenomena which give the river its outstanding cultural value	Not discussed at time of nomination	

Table 4 Margaree-Lake Ainslie River System Integrity

CHRS Principles, Procedures & Operational Guidelines (2001)	Margaree-Lake Ainslie River System Integrity Guideline(s)	Changes or Threats to River Integrity
The visual character of the nominated section enables uninterrupted appreciation of at least one of the periods of the river's historical importance	Not discussed at time of nomination	
The key artifacts and sites comprising the cultural values for which the river is nominated are unimpaired by impoundments and human land uses	Not discussed at time of nomination	
The water quality of the nominated section does not detract from the visual character or the cultural experience provided by its cultural values	Not discussed at time of nomination	Water quality monitoring is now taking place
3.3.3 Recreational Integrity Values		
The river possesses water of a quality suitable for contact recreational activities, including those recreational opportunities for which it is nominated	The Margaree-Lake Ainslie River System currently meets all five water quality characteristics of importance to the recreational use of water for non-contact recreation as endorsed by CCREM. It is also suitable for contact recreation.	None
The river's visual appearance is capable of providing river travellers with a continuous natural experience, or a combined natural and cultural experience, without significant interruption by modern human intrusions	The system provides internationally renowned salmon angling opportunities along with provincially significant wilderness travel and trail opportunities. The entire system is of outstanding scenic value. Canoeing is underutilized on the system, of which the SW portion offers 23-26 kilometers of uninterrupted canoeing.	Efforts are underway by DNR, ADAM, MSA, NSFA and DFO to improve fish stocks
The river is capable of supporting recreational uses without significant loss of, or impact on, its natural and cultural values or its visual character	The river system has supported a salmon sport fishery since the 1800s and other recreational uses without significant loss of or impact on its natural, historical or aesthetic values. There is also a significant commercial gaspereau fishery.	Railings on the Margaree Harbour bridge are low to offer unobstructed views. The bridge also features a walking/biking lane to enhance its recreational value

10.0 Review of Management Plan Objectives

Management goals and objectives for the Margaree-Lake Ainslie River were outlined in 1996, as a part of the CHRS nomination process, in The Margaree-Lake Ainslie Canadian Heritage River Partnership Strategy. The creation of the partnership strategy allowed the Margaree-Lake Ainslie River to be designated in 1998.

Table 5 lists the management plan recommendations and reports on the degree of achievement by government and other groups.

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
Natural Heritage Values		
Geology		
i. Conduct a background study of the earth history of the Margaree-Lake Ainslie watershed to provide an inventory of significant geological features of the watershed area	On-going	The Geological Survey of Canada produced three bedrock geology maps from 1996 to 1997, which cover the Margaree-Lake Ainslie System (GSC Open files: 3254, 3253, 3059)
ii. Protect and manage outstanding geological features and points of interest on Crown Land as necessary to maintain their natural character and integrity, and to enable their interpretation	Partial	Protected Areas Program gives umbrella protection; there are many geological features and points of interest protected in the Wilderness Areas within the river's watershed
iii. Inform private landowners of outstanding geological features situated on their property, and encourage the maintenance of their character and integrity through voluntary participation in stewardship programs, and other incentives which might become available	Initiated	Nature conservation on private land in Nova Scotia: Protecting Private Land brochure produced by the Protected Areas Branch of NSEL
Vegetation		
i. Conduct a botanical survey to identify uncommon, rare, unique or otherwise significant vegetation	On-going	Transects were used for vegetative surveys during Wilderness Area planning; surveys included field visits by staff ecologist Frosted-glass whiskers lichen (<i>Sclerophora peronella</i>) exists within the Margaree River and Sugarloaf Mountain Wilderness Areas, which represent 2 of its 3 known locations in Canada. The lichen is listed as Special Concern by the Committee on the Status of Endangered Wildlife in Canada.

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
<p>ii. Protect and manage sites with ecologically significant vegetation on Crown Land as necessary to maintain their natural character and integrity, and to enable their interpretation</p>	<p>Partial / On-going</p>	<p>Wilderness Areas protect ecologically significant vegetation on Crown land.</p> <p>The protected areas systems planning process leading to the protection of 12% of the province by 2015 includes several steps. The first step involves government assisting leading forestry companies and environmental organizations, through the Colin Stewart Forest Forum, to identify high value conservation lands and mitigative measures needed to offset the impacts of land protection on the forestry industry. Subsequent steps will include wider government, stakeholder, and public reviews, revisions, and socio-economic analysis, ultimately leading to a final protected areas plan.</p>
<p>iii. Inform private landowners of significant vegetative features on their property and encourage the maintenance of their character and integrity through voluntary participation in stewardship programs, and other incentives which might become available</p>	<p>Initiated</p>	<p>Nature conservation on private land in Nova Scotia: Protecting Private Land brochure produced by the Protected Areas Branch of NSEL</p>
<p>iv. The proposed community-based group responsible for implementation participate in the management planning process for the Candidate Protected Areas</p>	<p>none</p>	<p>No management plans have been written for the associated wilderness areas.</p>
<p>Fish</p>		
<p>i. Conduct a comprehensive habitat survey for important commercial and angling fish species in the watershed. The survey would identify the important components of the river ecosystem with respect to fish life and identify critical areas that require protection and restoration to maintain fish populations.</p>	<p>Partial</p>	<p>Margaree Salmon Association, DFO, Margaree-Lake Ainslie Canadian Heritage River Society have all worked on stream rehabilitation efforts.</p>

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
ii. Continue and where possible, enhance the full range of management programs (enhancement, enforcement, assessment, habitat restoration and conservation) to maintain fish species and populations	On-going	DFO & DNR fisheries officers work toward these ends
iii. Continue and where possible enhance management policies which allow for a sustainable commercial gaspereau fishery and adequate spawning escapement to Lake Ainslie	On-going	From 1996 to 2000, there was complete closure of the fishery for three days per week and half-day fishing periods for two of the four remaining days. Since then, there have been periodic closures.
iv. Continue biological sampling for population assessment to determine adequate spawning escapement and studies on the early life history of gaspereau in Lake Ainslie relative to physical, chemical and biological components of the ecosystem	Partial	Assessment of the Margaree River Gaspereau Fishery, 1997 - 2000 report published by Fisheries and Oceans
v. Encourage an Adopt-A-Stream Program, or similar initiative to increase public awareness of habitat requirements for trout and other species and to increase community participation in efforts to improve habitats	On-going	NS River Watch Program is in effect. The program highlights the importance of habitat while teaching about proper observation, recording and reporting of violations affecting fisheries resources.
Mammals & Birds	Complete	Youth Services Canada and the Margaree Salmon Association have worked to increase public awareness of habitat requirements, while encouraging people to improve upon these areas
i. Survey rare mammal populations and their distributions in the watershed and identify associated habitat requirements	Partial	NSDNR sponsored a research program which sought to determine population size, distribution and habitat requirements of American marten (<i>Martes americana</i>), a provincially endangered species. A recovery plan is now in place and marten populations are being augmented. The enhancement of wildlife populations encourage the maintenance of "natural" ecosystems, which help protect the integrity of the natural heritage values associated with the river

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
ii. Protect and manage rare mammal habitat identified on Crown Land through appropriate resource planning and management processes	Partial	Four wilderness areas have been designated around the Margaree Lake Ainslie River System: Jim Campbells Barrens, Sugarloaf Mountain, Trout Brook and Margaree River Wilderness Areas
	On-going	American marten recovery plan has led to changes in forestry activities
iii. Inform private landowners of rare mammal habitat situated on their property and encourage the maintenance of this through voluntary participation in stewardship programs, and other incentives which might become available	Initiated	American marten recovery plan has led to changes in forestry activities by New page (formerly Stora-Enso).
iv. Continue and where possible enhance the monitoring of eagle and other significant bird populations and the protection of nesting sites	On-going	Ongoing monitoring of bald eagles by DNR, bird watchers and the Maritime Breeding Bird Atlas (5 year program)
Recreational Values		
Wilderness & Hiking		
i. Inventory and protect outstanding trail opportunities on Crown Land	On-going	NS Environment and local stewardship groups have developed a hiking trail at Sugarloaf Mountain Wilderness Area, and identified other trail opportunities.

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
<p>ii. Encourage and support local community groups to take the lead role in trail development in order to take advantage of provincially significant hiking potential in the area. Where private properties offer quality trail opportunities, efforts should be made to obtain permission for trail development from the landowners involved. Any landowner participation would be voluntary.</p>	<p>On-going</p>	<p>Margaree Area Development Association and the Margaree-Lake Ainslie Canadian Heritage River society have worked on developing hiking trails. NSE has a right-of-way agreement with M-LACHRS to allow for a hiking trail from Portree to Sugarloaf Wilderness Area</p>
<p>Angling</p>		
<p>i. Continue efforts to maintain and enhance the high standard of traditional opportunities associated with angling</p>	<p>On-going</p>	<p>Scientific research and monitoring of fish stocks; aquatic habitat improvements; water quality monitoring; maintaining fish hatchery site and new funding agreement for Aquatic Development Association of Margaree. An interpretive center has been developed at the hatchery, signage has been placed at salmon pools and the Margaree Salmon Association has produced a fishing pools map.</p>
<p>Scenic Appreciation</p>		
<p>i. Conduct a study to identify scenic look-off sites and document areas of particularly high scenic value</p>	<p>Partial</p>	<p>Viewpoints along the Cabot Trail, which runs through the Margaree Valley, have been opened up for the enjoyment of the traveling public.</p>
<p>ii. Develop information and voluntary guidelines to minimize the potential impacts of activities that could reduce the scenic value of the area</p>	<p>Partial</p>	<p>The Keep It Wild brochure encourages people to leave no trace in wilderness areas.</p>
<p>Canoeing & Boating</p>		
<p>i. Conduct a study to identify appropriate opportunities for safe and convenient access to and egress from the river and lake</p>	<p>None</p>	

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
ii. Develop the canoeing and boating infrastructure to provide for access/egress points, and associated signage and brochures for information and educational purposes. Facilities would be established on Crown Lands and public rights-of-way where possible, and at priority locations on existing private land through voluntary agreement with the pertinent landowner(s). iii. Develop clear and accurate information and signage to encourage informed and responsible user activity	Initiated	Interpretive signage project by the Margaree Tourism Association will improve public appreciation of the river's heritage values Keep It Wild brochure Margaree Salmon Association's Angler's Etiquette brochure
Winter Outdoor Recreation		
i. Continue efforts to develop winter recreational opportunities and associated user information	Partial	The Snowmobilers Association of Nova Scotia developed a map of snowmobile trails in Nova Scotia; it applies to the Northeast corner of Jim Campbells Barren, which is in the river's watershed
Camping		
i. Conduct a detailed planning exercise to identify potential high-quality nature-based camping opportunities in the Margaree-Lake Ainslie area	None	
ii. Encourage private initiatives to provide quality nature-based camping	None	
iii. Develop information on codes of etiquette for campers	Complete for wilderness areas.	Keep It Wild brochure
Cultural Heritage Values		

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
i. Conduct a cultural heritage study of the Margaree-Lake Ainslie Area. This study would look at people, historical events, sites and buildings, and develop themes which could be used to interpret the cultural heritage of the area both in schools and in public information programs.	Partial	Computerized inventory of local heritage sites
Interpretation		
i. Conduct a detailed interpretive planning study for the Margaree-Lake Ainslie System	Initiated	The Margaree Tourism Association received \$37200 to develop and implement an interpretive plan for the system
ii. Conduct a feasibility study regarding the development of a heritage center	Complete. / partial	The Margaree Hatchery Visitor Center is now established
iii. Identify and develop educational opportunities associated with the river system	Partial	Youth Services Canada Projects included presentations to local school groups
iii. Identify and develop educational opportunities associated with the river system		Margaree River was featured on the Great Canadian Rivers television series, which chronicled rivers that represent both the natural and cultural heritage of Canada
Opportunities & Impacts of Tourism Development & Marketing		
i. Prepare a strategic tourism plan and marketing strategy for the Margaree-Lake Ainslie area, with a particular focus on the establishment of opportunities, facilities and services that would enhance and support nature-based tourism or eco-tourism, recognizing that facilities must be in place before marketing	Initiated	MLACHRS and NSE initiated discussion with Tourism NS about sponsorship of a self-guided heritage tour
ii. Community-based implementation group review nationally, provincially and locally produced information on the Margaree-Lake Ainslie Canadian Heritage River	On-going	Information is reviewed by MLACHRS as needed
General Integrity		
Water Quality & Quantity		

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
i. Establish a co-ordinated water quality and quantity monitoring program for the Margaree-Lake Ainslie watershed.	On-going	New hydrometric sampling station installed on the river. Youth Services Canada projects worked to educate the public on water quality monitoring to ensure the public's involvement Kenloch landfill site is now a transfer station
ii. Act on recent decisions to close Kenloch landfill site as soon as possible, in order to set aside this source of concern. This action would include monitoring the site once closed and developing alternative methods for solid waste management.	Complete	New hydrometric sampling station installed on the river. Testing kits were purchased for local water quality testing. On-going guidance is available through provincial staff.
iii. Encourage community-based water quality monitoring, involving amongst others, local schools, with responsible government agencies facilitating efforts through provision of expertise, equipment and support funding as required.	On-going	No changes
iv. Maintain the main stems of the Northeast, Southwest and Margaree Rivers as a free-flowing unobstructed system, free from dams and diversions	No changes	
Land Use Activities		
Buildings & Development		
i. Inform private landowners of the importance of vegetative buffers along the river with regards to bank stabilization and erosion prevention, and encourage the establishment of buffers on their own initiative, through <u>voluntary</u> participation in stewardship agreements, or with the benefit of other incentives which might become available	On-going	This has been done informally through the permitting process for construction and through efforts by the Margaree Salmon Association, Aquatic Development Association of Margaree and Youth Services Canada projects

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
<p>ii. Manage Crown Land parcels directly fronting the river and lake to support the objectives of the Margaree-Lake Ainslie Heritage River. The future of all Crown Land in the watershed would be addressed through the designation of protected areas, where warranted, and through the integrated resource management plan</p>	<p>Complete / Ongoing</p>	<p>Four wilderness areas have been designated around the Margaree Lake Ainslie River System: Jim Campbells Barrens, Sugarloaf Mountain, Trout Brook and Margaree River Wilderness Areas</p> <p>Integrated Resource Planning is ongoing through DNR.</p>
<p>iii. Request the Municipality, as a first step towards preparing a Municipal Planning Strategy, to provide more information to the community regarding the process, implications and potential of a Municipal Planning Strategy and Land Use By-law in supporting river conservation objectives. The Municipal Planning Strategy is a process which is separate and apart from the Canadian Heritage River designation and provides for extensive public consultation.</p>	<p>Initiated</p>	<p>NSE is working with community stakeholders on the creation of a “Margaree Watershed Panel” consisting of government representatives, stakeholder groups and business to act as a forum for discussion and cooperation on issues affecting the river, the watershed and its residents.</p>
<p>Agriculture</p>		
<p>i. Continue efforts to foster environmentally-sound agricultural practices, and encourage compliance with associated guidelines</p>	<p>On-going</p>	<p>The NS Department of Agriculture has produced the following resources: Environmental Regulations Handbook for Nova Scotia Agriculture (2004); Codes of Practice for the Application of Non-Agricultural Organic Wastes (NAOW) on Agricultural Land; Siting and Management of Hog Farms in Nova Scotia; and Manure Management Guidelines (April 2006)</p>

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
<p>ii. Develop a comprehensive erosion control plan for the river. This plan would set priorities for highly-valued agricultural land, as well as for salmon pools, buildings, structures and roads, while also conserving the natural functions of the river. An important objective of the plan would be to establish criteria and set priorities aimed at ensuring that available erosion control funding can be utilized to maximum advantage</p>	<p>Partial / On-going</p>	<p>Bank stabilization has taken place There is no comprehensive plan at the moment. However, the Margaree Watershed Panel has potential to deal with this</p>
<p>iii. Continue to address pressing erosion control problems</p>	<p>On-going</p>	<p>Bank stabilization has taken place</p>
<p>Forestry</p>		
<p>i. Prepare an integrated resource management plan to guide land and resource use activities on Crown Land within the watershed. This plan would be comprehensive in recognizing all resource values such as forestry, minerals and wildlife, and place a high priority on the maintenance of biological diversity and the ecological integrity of the watershed.</p>	<p>Complete / On-going</p>	<p>DNR developed an Integrated Resource Management Plan in 1999; it looked at long-range management frameworks. NewPage Forestry Stewardship Council certification.</p>
<p>ii. Consider methods in the integrated resource management plan of harvesting aimed at minimizing potential downstream impacts on water quality and quantity in the river system, and consider scheduling of harvesting to ensure that large portions of forest cover are not removed over short periods of time, as one important aspect in this regard. It is necessary to use harvesting methods that ensure the integrity of the ecosystem.</p>	<p>On-going</p>	<p>NewPage has a long-range management plan for licensed Crown land. DNR policy offers regulation and protection to wildlife habitats and watercourses NewPage Forestry Stewardship Council certification.</p>

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
iii. Review the Forest/Wildlife Guidelines and Standards in the integrated resource management plan and establish guidelines as necessary for maintaining the ecological integrity of steep slopes on Crown Lands	Partial	DNR policy offers regulation and protection to wildlife habitats and watercourses
iv. Encourage private landowners and land users to follow existing Forest/Wildlife Guidelines and Standards. Provide them with information on the impact of harvesting on steep slopes as well as general information on the relationship between forest management activity and the integrity of the watershed. Develop new guidelines for management on steep slopes with private landowner consultation. These new guidelines would be recommended for private lands which receive government funding for forest management and encouraged on other private lands	Partial / Ongoing	NewPage has a long-range management plan for licensed Crown land. DNR policy offers regulation and protection to wildlife habitats and watercourses. DNR has codes of forest practice and sustainable forestry regulations
Mining		
i. Evaluate mineral, petroleum and aggregate extraction and subsequent reclamation proposals to ensure the ecological and recreational integrity of the Margaree-Lake Ainslie Canadian Heritage River and surrounding watershed	On-going	NSE and the public give input into mining proposals via the environmental assessment process
ii. Recognize the values for which the river system was nominated as a Canadian Heritage River in Environmental Impact Assessments undertaken in the watershed.	On-going	NSE and the public give input into mining proposals via the environmental assessment process
Commercial Fishing		
i. Continue efforts to develop voluntary housekeeping guidelines for gaspneau fishing, and associated site maintenance and upkeep.	On-going	Regulations, which are governed by the Federal Department of Fisheries and Oceans, change annually based on population analyses

Table 5 Margaree-Lake Ainslie River Management Plan Recommendations and Current Status

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy (1996)	Degree of Achievement (Initiated, On-going, Addressed, Partial, Complete)	Actions
ii. Continue the orderly development of aquaculture in the watershed under the provisions and procedures contained in the <u>Aquaculture Act</u> and the licensing review process	On-going	The province has acquired the hatchery on the Northeast Margaree River
Land User & Landowner Information		
i. All government agencies, land users and landowners work in cooperation to develop and disseminate information to increase the knowledge and understanding of functions and interconnections within the river ecosystem. Increased awareness of impacts and land uses and activities on the river system will enable land users and landowners to make informed decisions regarding day to day activities	On-going	Youth Services Canada and Margaree Salmon Association projects have helped raise river awareness. The Interpretation at the fish hatchery has also created better understanding.
ii. Produce clear and concise information for landowners in regards to options for <u>voluntary</u> stewardship agreements relating to river conservation. These voluntary options would range from simple handshake agreements to formal management agreements. Landowners would be encouraged to participate in stewardship agreements, and to practice conservation on their own initiative	Initiated	The Margaree Watershed panel has potential to act on this objective.

Annual Assessment of CHRS Values

11.0 Summary and Conclusions

The Margaree-Lake Ainslie River remains a scenic area that is highly valued by local residents and visitors to Nova Scotia. Much of the activity that has taken place along the river has been focussed on aquatic habitat improvements, research, and public education initiatives. The river is well-known by anglers because of its Atlantic salmon and gaspereau fisheries. The river continues to tie together many residents and landowners, with growing engagement by public, government, and businesses partners in enhancing the river's many positive attributes.

This report has determined that the heritage and recreational values of the Margaree Lake Ainslie River System remain intact, or have been improved upon, since the river's designation. Based on this report, the Margaree Lake Ainslie River System is deemed worthy of continued designation as a river of national significance within the Canadian Heritage Rivers System.

12.0 References

Canadian Heritage Rivers System

A Cultural Framework for Canadian Heritage Rivers, 2nd Edition. 2000

A Framework for the Natural Values of Canadian Heritage Rivers, 2nd Edition. 2001

Principles, Procedures and Operational Guidelines. 2001

Forest Stewardship Council Canada website

www.fsccanada.org

Hilderman Thomas Frank Cram

Canadian Heritage River System Red River Background Study. 1998

Margaree-Lake Ainslie River System Advisory Committee

Margaree-Lake Ainslie Canadian Heritage River: A Partnership Strategy. 1996

Nova Scotia Department of Lands and Forests

Canadian Heritage Rivers System Nomination Document - Margaree-Lake Ainslie River System. 1991

Rutherford, L.A. and Associates

Nova Scotia CHRS Background Study - Margaree River System - Study River Reports/Maps. 1988