

2011

Upper Restigouche – Canadian Heritage
Monitoring Report 1998-2010



Prepared for the
Canadian Heritage Rivers Board
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New  Nouveau
Brunswick



The Upper Restigouche

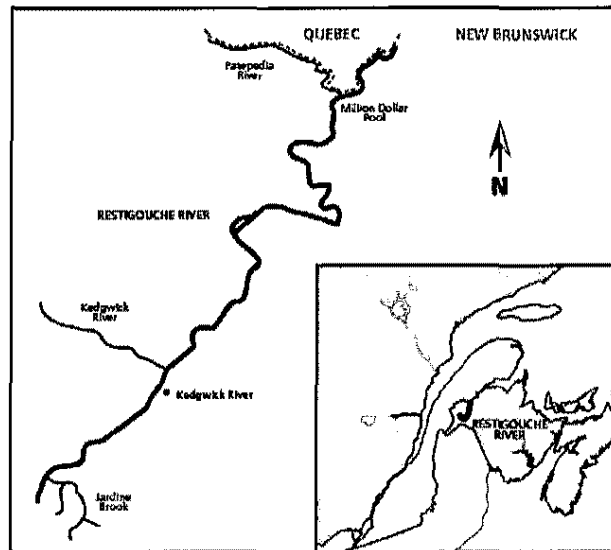
Executive summary

The Upper Restigouche River in New-Brunswick was designated a Canadian Heritage River (CHR) in 1998. This report reviews efforts made from the time of designation to 2010 according to the Canadian Heritage River system's integrity guideline and aims to describe the degree of advancement of the river management plan and achievements. In all, this determines whether heritage and recreational values are still intact and if the Upper Restigouche continues to merit the CHR designation.

Since its designation, stakeholder organizations have remained active in promoting dialogue; harmonizing different activities to pursue habitat and fisheries survey programs, education and habitat improvement.

The Restigouche River Watershed Management Council (RRWMC), established in 2002, was once the original Restigouche river management committee, a stakeholder organization that carried out river enhancement objectives.

In general, the heritage values of the Upper Restigouche River remain intact and the continuous work done by different stakeholders to preserve its integrity warrant the renewal of the designation of this section in the Canadian Heritage River System.





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1. Introduction

The Restigouche River is located in northern New-Brunswick and flows north-east towards the Bay of Chaleurs and the Gulf of St. Lawrence. The New-Brunswick portion of the Restigouche watershed covers approximately 735 900 hectares. The principal tributaries are the Kedgwick, Patapedia and Upsalquitch rivers.

The designated section of the Restigouche River commences at its junction with Jardine Brook and flows in a north-easterly direction, a distance of 55 kilometers, to its junction with the Patapedia River where the Restigouche becomes the interprovincial boundary with the province of Quebec.

The Canadian Heritage River System (CHRS) is Canada's program to promote freshwater heritage conservation and recognize Canada's outstanding rivers based on heritage and recreation values. The program is a cooperative effort by 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:

- Describe any major changes that occurred in relation to the river since its designation;
- Review the natural, cultural and recreational values for which the river was nominated and determine if the river still possesses these values;
- Review the integrity values of the river and describe whether the river continues to possess these values;
- Review the recommendations in the «Managing the Upper Restigouche River as a Canadian Heritage River» document and determine the extent of the accomplishments.



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2. Background and Nomination Process

To be designated a Canadian Heritage River, a river or section of river must be of outstanding significance in one of the following values: natural heritage, human heritage and recreation. In addition, it must follow the integrity guidelines.

The River Systems Planning Study (1990) for New Brunswick identified the Restigouche River as one of the top 10 rivers of the Province for its natural and human heritage values. The recreation resources of the Restigouche River supports a wide variety of activities attracting an average of 10 000 recreationists annually.

The Upper Restigouche River was nominated to the CHRS in January 1995 after showing it met the guidelines for each of the values outlined by the integrity guidelines. The river was officially designated as a CHR in 1998 when the River Management Committee submitted the management plan.

This management plan was prepared based on extensive consultation with individuals interested in the Restigouche River, including local historians, non-governmental organizations, naturalists, wood harvesting companies, fishing camp owners and managers, recreationists, relevant government departments and First Nations.

The planning process resulted in the establishment of a «River Management Committee» comprised of the various stakeholders within the Restigouche River System. A key objective of this group was to assist in the development and implementation of the management plan. Unfortunately, due to a lack of funding, the River Management Committee ceased to exist in 1999.

However, in 2002, another organization, the Restigouche River Watershed Management Council inc. (RRWMC) was created with the mission to protect the Restigouche's salmon population and habitat. The Listuguj and Eel River Bar First Nations, the Restigouche Salmon Club, the «Corporation de gestion des rivières Matapédia et Patapédia» and the Fraser Lodge (now Kedgwick Salmon Club) are the five founding members and are ex-officio members of the fourteen directors of the council. The other nine directors represent the public (2), the eco-tourism sector, industry, municipalities, outfitters, guides and non-profit organizations (2). The RRWMC has been managing the Restigouche Recreation program since 2008 and continues to ensure there are consultations between the different stakeholders of the Restigouche River.



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3. Methodology

The Restigouche River Watershed Managements Council was given the task of preparing this report in order to ensure the involvement of different user and to access up-to-date information on the situation.

The main tools used to gain information on the state of the river and the progress made are:

- Reviews of CHRS reports and field reports provided by the department of Natural Resources
- Secondary source research
- Interviews with key individuals

All the Restigouche River Watershed Management Council (RRWMC) newsletters and recent annual reports were also reviewed to present the measures related to the Upper Restigouche River.

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

4. Chronology of events

The following table presents the chronology of events since the nomination of the river in 1995.

Table 1: Chronology of Events since the nomination and designation

Year	Significant Events, Actions, Research or Studies since 1995
1995	<ul style="list-style-type: none">• Upper Restigouche River nomination is accepted
1995-1998	<ul style="list-style-type: none">• River Management plan preparation with the Restigouche River Management committee
1998	<ul style="list-style-type: none">• Finalization of the River Management plan and acceptance of the Upper Restigouche river as a designated Canadian heritage river• One week of festivities from Belledune to St-Quentin to promote the designation• Launch of a folk music CD of original songs pertaining to the Restigouche with 12 local artists



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1999	<ul style="list-style-type: none">• Routine activities for the Restigouche River Recreation Program (campsite maintenance, cleaning crew and education)• Bank stabilization along Kedgwick River• Management Committee involved in the preparation of the management plan used to obtain CHRS designation ceased to exist (funding issues)
2000	<ul style="list-style-type: none">• Routine activities for the Restigouche River Recreation Program (campsite maintenance, cleaning crew and education)
2001	<ul style="list-style-type: none">• Routine activities for the Restigouche River Recreation Program (campsite maintenance, cleaning crew and education)
2002	<ul style="list-style-type: none">• Creation of the Restigouche River Watershed Management Council
2003	<ul style="list-style-type: none">• First observation of the <i>Saprolegnia</i> Fungus on salmon in the Restigouche System• Four Mile and Jardine brook landing enhancement with cement pads by the MSRT
2004	<ul style="list-style-type: none">• Waterways issues forum to consult the public on canoeing issues• Restigouche Salmon Fishing plan
2005	<ul style="list-style-type: none">• Development and distribution of the canoeists Code of Ethics• Signing of the Memorandum of understanding between the RRWMC with 5 governments (N.-B., Québec, Canada, Listuguj First Nation and Eel River Bar FN.) on salmon resource management
2006	<ul style="list-style-type: none">• Construction and installation of 15 picnic tables and 6 toilets on camping sites
2007	<ul style="list-style-type: none">• Initiation of the Zero-Garbage program which consist of the distribution of reusable garbage bags to canoeists associated with a prize draw to encourage them to carry-in carry-out• «Others users» advisory committee created at the RRWMC



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2008	<ul style="list-style-type: none">• First year the Restigouche River Recreation Program is managed by the Restigouche River Watershed Management Council.• Development of the «Plan de gestion du programme récréatif de la rivière Restigouche» (Restigouche River Recreation Program Management Plan) by the Restigouche River Watershed Management Council• Confirmation of the presence of the invasive algae didymo (<i>Didymosphenia geminata</i>) on the designated portion• Beginning of high-school conferences in 5 schools of the county to educate youth on the importance of respecting other users and on how to prepare a canoeing expedition• Beginning of aerial surveys to locate sediment runoff causing increased turbidity after major rain events
2009	<ul style="list-style-type: none">• Major improvement of the campsites by adding 30 picnic tables and signs referring to outboard regulations, mapping of the river and garbage regulation• Addition of a service office at Rafting Ground hosted by a student to increase education and facilitate contact with canoeists;• Students hired at the starting point (Kedgwick River) to distribute code of ethic information and to register the canoeists.• Siltation trap built in the Five Fingers sub-watershed to reduce sediment runoff from potatoes fields;• Addition of a holding septic tank at Rafting Ground;• Implementation of the Zero-Garbage program by developing a poster, by increasing quality of reusable garbage bags and by having a communication officer to promote the program;• Improvement of 200 m of road leading to Down's Gulch landing



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2010	<ul style="list-style-type: none">• Improvement of the landing, access and parking lot at Down's Gulch landing• Improvement of the road leading to the 4 Mile landing on the Little Main river• Implementation of the Zero-Garbage program by adding a number and a plastic tag on reusable garbage bags to follow-up on the program's success rate• Study on the economic impact of Restigouche Fishing Camps by the University of New Brunswick
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5. Condition of the Values since Designation

5.1 Natural Heritage Values

5.1.1 Background and integrity guidelines

The designated section of the Restigouche provides an outstanding example of a river environment resulting from the earth's development during the Silurian and Ordovician Periods of the Palaeozoic Era and from the ice flow of the Pleistocene Epoch of the Cenozoic Era. It is a gently meandering river with areas of continuous natural erosion. Notable features include islands, flood plains, terraces, dykes, pools, rocky outcrops, gravel bars and depositional features. The topography ranges from low floodplains, to rolling hills, to sheer rock faces. Together with the spruce-fir forest and its diverse lesser vegetation and the opportunities for wildlife viewing, areas of exceptional natural beauty are presented along the river corridor.

Habitat for the Canadian lynx and eagles, both provincially endangered species, are located adjacent to the river system and within this designated section. In addition, a wide variety of rare or uncommon vascular plants, mosses and lichens are found in this area. The major natural value of the river is certainly the Atlantic salmon. The Restigouche River, including the designated section is considered as one of the best salmon rivers in North America.

5.1.2 Condition

The following table presents a review of the natural heritage elements based on the CHRS's 2001 natural framework with the significant actions, research or studies done per themes and an evaluation of the changes or threats to nomination values.



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Table 2: Natural Heritage Values since Designation

CHRS Natural Framework (2001) Themes & Sub-Themes	Natural Heritage Element Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
1. HYDROLOGY			
1.1 Drainage Basins	River channel within the area is not negatively impacted by any man-made structures.	Equivalent Cut area calculation for all watershed of 1000 to 2000 ha initiated in 2010	None
1.2 Seasonal Variation	Spring runs often raise the river levels several meters over the mean high-water mark. July and August are generally noted for their low water levels resulting in hard going for canoeists.		None
1.3 Water Content	Water quality is rated as good to excellent and is characterized by negligible alteration from natural water quality.	Sampling and water content analysis done annually (normally 4 times/year) by the Department of Environment at Kedgwick River	None
2. PHYSIOGRAPHY			
2.1 Physiographic Regions	Restigouche Upsalquitch Ecodistrict of the Uplands Ecoregion		None
2.2 Geological Processes	Representations of the following stages of surface geology development are found within the area: alluvial, glaciofluvial, morainal and pre-quatarnary sediments.		None



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CHRS Natural Framework (2001) Themes & Sub-Themes	Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
2.3 Hydrogeology	River features include floodplains, terraces, islands, dykes, rocky outcrops, depositional feature and deep pools.	Bank stabilization in Kedgwick river to reduce bank erosion	None
2.4 Topography	Characterized by a rolling topography with elevations ranging approximately from 50 m to 400 m. Mean river gradient of 1,3 m/km		None
3. RIVER MORPHOLOGY			
3.1 Valley Types	Streams entering the river are characterized by sharp V shaped valleys		None
3.2 Channel Types	Not negatively impacted by any man-made structures		None
3.3 Channel Profile	Series of rapids, runs, pools and riffles		None
3.4 Fluvial Landforms	Experiencing reduced elevation through a series of rapids and runs		None
4. BIOTIC ENVIRONMENTS			
4.1 Aquatic Ecosystems	Prime freshwater ecosystem suitable for salmonids and macro invertebrates		None



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CHRS Natural Framework (2001) Themes & Sub-Themes	Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
4.2 Terrestrial Ecosystems	Vegetation pattern of the area is believed to be the result of a complex interaction of the landform structure and a history of fires and logging. River corridor is well protected and characterized by a mix of plants and trees of the Acadian forest.		None
5. VEGETATION			
5.1 Significant Plant Communities	Mixed forest including eastern white cedar, balsam fir, and white spruce with scattered white pine. Hardwood species including white and yellow birch, trembling aspen and balsam poplar	150 m buffer along the designated section is protected within the actual forestry management plan on Crown land and will be in the 2012-2017 management plan	None
5.2 Rare Plant Species	Crawe's sedge, variegated scouring-rush, green spleenwort and nodding fescue.		None
6. FAUNA			
6.1 Significant Animal Populations	Combination of forest cover and associated ground vegetation supports an abundance of wildlife. Section long been recognized as being one of the best Atlantic Salmon rivers in North America.	Annual surveys done within the section (Electrofishing surveys, snorkel count of spawning salmon)	None



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CHRS Natural Framework (2001) Themes & Sub-Themes	Natural Heritage Elements Description	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
6.2 Rare Animal Species	Restigouche River provides habitat for Canada Lynx and eagles which are provincially endangered species		None

5.2 Human Heritage Values

5.2.1 Background and integrity guidelines

The Restigouche River System is synonymous with the regional history and is significant from a national and provincial perspective. The river was initially used as a transportation route by Micmacs who reaped the benefits of the abundant fish and wildlife resources while using it as a transportation link to other watersheds and coastal routes in Canada and the United States. The river was used by American Loyalists fleeing the war of independence in search of farmland in the Bay of Chaleurs and in the Restigouche area.

The early salmon anglers, adventurers in search of Atlantic salmon, contributed to the local history by establishing salmon angling camps which today reflect an historic architectural style. These camps welcomed notable people. Personalities associated with the designated section include: Dean Sage, W.F. Ganong, Stanford White, King Edward and G.F. Clarke.

The Battle of the Restigouche took place within the Bay of Chaleurs in front of the actual town of Campbellton. The battle is noteworthy both from a Canadian and regional perspective due to the impact it had on the people and their cultures and the subsequent settlement in the region. It marked the arrival of English speaking immigrants to the region, some of whom settled within the nominated section.

The Restigouche River has long been used by the forest industry to transport logs to mills located in the estuary. This industry has played a major role in the history of the region and local community development.

5.2.2 Condition

The following table presents a review of the cultural heritage elements based on the CHRS's 2000 cultural framework with the significant actions, research or studies done per themes and an evaluation of the changes or threats to nomination values.



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Table 3: Cultural Heritage Values since Designation

CHRS Cultural Framework (2000)	Cultural Heritage Value(s)	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
1. RESOURCE HARVESTING			
1.1 Fishing	Salmon fishing camps since mid 1800s in the section. Four camps namely: Down's Gulch, Larry's Gulch, Kedgwick Lodge and Carter Hall Lodge. Crown waters on the upper section permit public access to salmon angling. Micmac fishing prior to sport fishing.	Enhancement of the landings (Down's Gulch, 4 miles). Annual stocking program (25 000 salmon fry) in the Little Main River and Kedgwick by the MSRT. Annual fish stock monitoring (surveys, inventory of spawning salmon, catch data)	None
1.2 Shoreline Resource Harvesting	Lands cleared for agriculture on the banks became ideal spots for the establishment of the fishing camps. Log slides on steep slopes that were used for the log drive still visible.		None
1.3 Extraction of Water	Not discussed at time of designation		
2. WATER TRANSPORT			
2.1 Commercial Transportation	River system was used extensively to transport logs to the mills which were built adjacent to the river estuary.		None
2.2 Transportation Services	Not discussed at time of designation		



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CHRS Cultural Framework (2000)	Cultural Heritage Value(s)	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
2.3 Exploration & Surveying	Originally, Micmac and Maliseet nations used the river system as a transportation corridor, later utilized by Europeans settlers, loggers and sport fishermen.		None
3. RIPARIAN SETTLEMENT			
3.1 Sitting of Dwellings	River were used by Europeans fleeing the war of independence in the United-States to reach the Bay of Chaleurs		None
3.2 River-based Communities	Forestry and Salmon angling (using rivers for log drive) were the two major economic activities that permitted development in the area.	Interpretation poster on the subject posted in the river offices	None
3.3 River-influenced Transportation	Canoeing is part of the heritage (fishing, transportation route for Micmac and Europeans, logging). Major Micmac transportation route which provided connections to other important watersheds in Canada and in the United States (St.John River)		None



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CHRS Cultural Framework (2000)	Cultural Heritage Value(s)	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
4. CULTURE & RECREATION			
4.1 Spiritual Associations	Salmon and forest from the Restigouche is the base of Micmac culture and spirituality		None
4.2 Cultural Expression	Multi-Ethnic culture (Micmacs, Acadians, Scottish, Irish, French Canadians and English)	Music : Restigouche local Folk CD launched by 12 artists	None
4.3 Early Recreation	Major cultural influence of the area is the long history of salmon sport fishing		None
5. JURISDICTIONAL USES			
5.1 Conflict & Military Associations	Not discussed at time of designation		
5.2 Boundaries	Not discussed at time of designation		
5.3 Environmental Regulation	Crown Land administered under the province's Crown Lands and Forest Act, by the Department of Natural Resources and Energy	Changes in regulation do not allow RV's to camp along a watercourse	None

5.3 Recreation Values

5.3.1 Background and integrity guidelines

The Upper Restigouche River provides ample opportunity for recreation. The unique setting of the river system provides a feeling of remoteness while still being close to civilization. The river offers excellent opportunities for high quality sport fishing, recreational canoeing, kayaking, sightseeing, nature interpretation, cultural and historical interpretation, camping and trail development.



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This section of the river has been used as a recreational waterway for the past 200 years for sport fishing, and more recently in the past 30 years, for recreational canoeing. The increased canoe traffic on the Restigouche River system has resulted in the Department of Natural Resources' decision to initiate and maintain a recreation program on the river. This program, now managed by the Restigouche River Watershed Management Council, is designed to address issues related to the increased recreational use of the river. Designated campsites, four in the Upper Restigouche river section, have been maintained to direct the users away from sensitive areas and fishing pools, and to provide toilets, fire pits and tables to canoeists.

5.3.2 Condition

The following table reviews the recreation values based on the CHRS's recreational capability themes and sub-themes with the significant actions, research or studies done per theme and an evaluation of the changes or threats to nomination values.

Table 4: Recreation Values since Designation

Recreational Capability Themes and Sub-themes	Description of Current Situation	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
1. BOATING			
1.1 Whitewater Canoe, Kayak & Raft	Not discussed at time of designation		
1.2 Extended Canoe Tripping (motor & non-motor)	3 day canoe trips from the Kedgwick River to Rafting Ground is still the most popular canoe activity	Education program and Code of Ethics, Zero-garbage program, registration of canoeists. Canoeing issues forum in 2004. Management plan prepared in 2008.	None
1.3 Day Paddling & Rowing	Day paddling occurs in the section		None
1.4 High Speed Boating	Not discussed at time of designation		
1.5 Motorized Pleasure Cruising/Houseboats	Not discussed at time of designation	Code of Ethics for outboard users distributed starting in 2008	The proportion of jet boats (turbine with 15hp motor or more) on the river increased from 0% to 15% in the time period covered by this report. The situation should be monitored in the future.
1.6 Commercial Tour Boats	Not discussed at time of designation		



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Recreational Capability Themes and Sub-themes	Description of Current Situation	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
2. ANGLING			
2.1 Day Angling	Open water is available in the section for salmon fly fishing	Annual catch and effort are monitored by DNR	None
2.2 Weekend Angling	Same as 2.1	Same as 2.1	None
2.3 Extended Angling Vacation	4 salmon fishing camps still in activity in the section	Economic impact study on Restigouche Fishing camp (2010)	None
2.4 Fly Fishing	Private access, outfitters, public open water and crown reserved 3-day fishing trips are drawn in the section (salmon)	Restigouche river fishing plan prepared by the RRWMC since 2004 involving different stakeholders	None
2.5 Ice Fishing	Not discussed at time of designation		
2.6 Specific Fish Species	Salmon is the most important fish resource on the river	Stocking program, annual surveys and habitat monitoring done annually	None
3. WATER CONTACT/CONTENT			
3.1 Swimming	Not discussed at time of designation		
3.2 Water Skiing	Not discussed at time of designation		
3.3 Snorkel/Scuba	Not discussed at time of designation		
4. WATER-ASSOCIATED ACTIVITIES			
4.1 Trail Use (hiking, walking, cycling)	Not discussed at time of designation		
4.2 Camping	4 campsites along the river are accessible for free, one privately owned campground in Kedgwick River	Maintenance of the 4 campsites located on this section.	None
4.3 Hunting	Not discussed at time of designation		
5. WINTER ACTIVITIES			
5.1 Snowmobiling/Dog Sledding	Not discussed at time of designation		



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Recreational Capability Themes and Sub-themes	Description of Current Situation	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
5.2 Cross-country Skiing	Not discussed at time of designation		
5.3 Skating	Not discussed at time of designation		
6. NATURAL HERITAGE APPRECIATION			
6.1 Wildlife	Offers outstanding opportunities to view wildlife such as moose, bear, osprey, waterfowl, birds and of course the majestic Atlantic Salmon.		None
6.2 Vegetation	150 m buffer zone is protected on both sides of the river on Crown lands (80 % of the section). Private lands also provide a natural environment along the river.	Equivalent cut area study for all 1000-2000 ha watershed started in 2010	None
6.3 Vistas/Scenic Quality	The river's outstanding natural heritage features are neither environmentally nor ethically impacted by developments.	150 m buffer will be included again in the next forestry management plan 2012-2017	None
6.4 Geological Features/Water Features	Floodplains, steep rock outcrops and the clear and cold water of the river		None
7. HUMAN HERITAGE APPRECIATION			
7.1 Historic Sites	Pool and camp names and camp architectures awaken imagination to the life of the early river travelers.		None



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Recreational Capability Themes and Sub-themes	Description of Current Situation	Significant Actions, Research or Studies	Changes or Threats to Nomination Value(s)
7.2 Cultural Landscapes	Impact of the Kedgwick River community and fishing camp are minimal. Represent the waterway as it was in the past.		None
7.3 Sporting Events/Activities	Fly fishing and canoeing remain the main sporting activities in the designated section	Annual Restigouche salmon convention since 2010	None
7.4 Cultural Events/Activities	Not discussed at time of designation	Sunday breakfast at the Kedgwick Lumberjack museum	

6. Integrity based on CHRS Principles, Procedures and Operational Guidelines

Natural, cultural and recreational integrity guidelines were all considered when the Upper Restigouche River was nominated. Table 5 summarizes the condition of the Upper Restigouche River since designation. The integrity guidelines in this table are based on the Canadian Heritage River System Principles, Procedures and Operational Guidelines from 2000. The table also presents changes or threats to integrity values since nomination.

Table 5: Integrity Guidelines since Designation

CHRS Principles, Procedures and Operational Guidelines (2000)	Integrity Value(s)	Changes or Threats to Integrity Value(s) since Nomination
1. NATURAL INTEGRITY GUIDELINES		
1.1 The nominated area is of sufficient size and contains all or most of the key interrelated and interdependent elements to demonstrate the key aspects of the natural processes, features, or other phenomena which give the river its outstanding natural value.	The designated section offers a wide variety of topography ranging from low floodplains to rolling hills, to sheer rock faces. Together with the spruce fir forest coupled with its diverse lesser vegetation and the opportunities for wildlife viewing, a river corridor of exceptional natural beauty has resulted from this combination of natural processes.	None



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CHRS Principles, Procedures and Operational Guidelines (2000)	Integrity Value(s)	Changes or Threats to Integrity Value(s) since Nomination
1.2 The nominated area contains those ecosystem components required for the continuity of the species, features or objects to be protected.	The designated section contains habitat of the Canada Lynx and Osprey which are provincially endangered species and are also of national significance. In addition a wide variety of vascular plants, mosses and lichens are found adjacent to the river. The Atlantic Salmon; which is found throughout the designated section, has long been recognized as an important sport fish in both New Brunswick and Canada.	Increased number of Bald Eagle and less Osprey.
1.3 There are no human-made impoundments within the nominated area.	Only one bridge structure is located within the designated section.	Two sections of bank were stabilized with riprap on approximately 300 m in the Kedgwick river area. However, it is still natural looking
1.4 All key elements and ecosystem components are unaffected by impoundments located outside the nominated area.	There are no impoundments located within the designated section nor are there any impoundments within any section of the watershed	Flash floods, caused by climate change, are more frequent and they increase the turbidity of the water one or two days after the rain event. (agriculture, forestry)
1.5 Natural values for which the river is nominated have not been created by impoundments.	None of the values identified are the results of impoundments.	
1.6 The water of the nominated area of the river is uncontaminated to the extent that its natural aquatic ecosystem is intact.	Water quality is rated as good to excellent and is characterized by negligible alterations in natural water quality and a natural aquatic invertebrate community.	Blooms of the Didymo algae occurred in a stretch of the river but preliminary studies show that except for some changes in the benthic community, the aquatic component is still the same. Blooms are also very dispersed and sporadic
1.7 The natural aesthetic value of the river is not compromised by human developments.	The impact of the Kedgwick River community and fishing camps are minimal. The river's outstanding natural heritage features are neither environmentally nor ethically impacted by these developments.	None



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CHRS Principles, Procedures and Operational Guidelines (2000)	Integrity Value(s)	Changes or Threats to Integrity Value(s) since Nomination
2. CULTURAL INTEGRITY VALUES		
2.1 The nominated area is of sufficient size and contains all or most of the key interrelated and interdependent elements to demonstrate the key aspects of the features, activities or other phenomena which give the river its outstanding cultural value.	Strong connection to the Micmac culture of this region, the influence it had on the settlement patterns of early immigrants, and by providing a significant transportation link within the region and to other watersheds of Canada and the United states. Stanford White, the most influential American architect of the late 1800s, designed Kedgwick Lodge in the «shingle style» architecture	None
2.2 The visual appearance of the nominated area of river enables uninterrupted appreciation of at least one of the periods of the river's historical importance.	The section is very much the same as it was two hundred years ago. Many of the fishing camps that are a part of the river's history are still there. The section has also remained remote by New Brunswick's standards and the rough terrain associated with the river has limited the amount of development that has taken place.	None
2.3 The key artifacts and sites comprising the cultural values for which the river is nominated are unimpaired by impoundments and human land uses.	Architectural design of the fishing camps within the designated section incorporated the extensive use of wood both in the exterior and interior designs complete with cedar shingles.	None
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.	Without exception the Restigouche River System meets this guideline.	Climate change causing flash flooding sometimes increases turbidity for one or two days after rain events.
3. RECREATIONAL INTEGRITY VALUES		
3.1 The river possesses water of a quality suitable for contact recreational activities, including those recreational opportunities for which it is nominated.	Water testing has indicated no pollution problems. All development must conform to government regulations pertaining to septic tanks, waste disposal and land clearing.	None



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CHRS Principles, Procedures and Operational Guidelines (2000)	Integrity Value(s)	Changes or Threats to Integrity Value(s) since Nomination
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 unique setting of the river system provides a feeling of remoteness while still being close to civilization. The river offers excellent opportunities for recreational canoeing, kayaking, sightseeing, nature interpretation, cultural and historical interpretation, camping and sport fishing	None
3.3 The river is capable of supporting recreational uses without significant loss or impact on its natural, cultural or aesthetic values.	In 1998, recreational canoeing and camping within the Restigouche system is estimated at 10 000 canoeists annually. Four designated campsites with toilets, fire rings, firewood and tables have been developed and maintained to direct the recreation traffic away from sensitive areas.	Annual Restigouche River Recreation program insures an educational program and the maintenance of the campsites located in the river section.

7. Review of Upper Restigouche River Management plan objectives

After the nomination in 1995, a river management plan was needed to confirm the Upper Restigouche River's designation. This plan was presented in 1998 by the Department of Natural Resources assisted by the Restigouche River management committee. Since 1998, many initiatives have been followed-up by the Restigouche River Watershed Management Council. The following table details the recommendations presented in this management plan with the degree of completion of each action since the designation.

Table 6: Management Plan Recommendations and Current Status

Management Plan Recommendation	Degree of Achievement (initiated, on-going, addressed, partial, complete)	Actions/Notes
To identify the roles and responsibilities of the stakeholders	On-going	The board of directors of the RRWMC insures a good communication between stakeholders
To consider the implementation of a «River watch/guardian» program	On-going	All Restigouche river Recreation program staff received the Dep. of Fisheries and Oceans River watch training.



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Management Plan Recommendation	Degree of Achievement (initiated, on-going, addressed, partial, complete)	Actions/Notes
To develop and implement a «Code of Ethics»	Complete	Map to be updated in 2011
To develop and implement a communications strategy pertaining to the Upper Restigouche River as a Heritage River	On-going	
To maintain the Recreation Management program of the Department of Natural Resources and Energy	On-going	Management of the program transferred to the RRWMC in 2008
To monitor the quality of the river through periodic sampling and analysis	On-going	Four samples taken annually by the Department of Environment NB in the river section
To monitor activities which have the potential to impact on the river's water quality and quantity	On-going	Forestry/watershed study on-going related to siltation and flow regime
To encourage and support relevant research into Atlantic Salmon within the Restigouche River System	On-going	Department of Fisheries and Oceans is supported by different stakeholders to conduct annual density surveys and research.
To work co-operatively with stakeholders having objectives related to the management of Atlantic Salmon	Complete	Annual Restigouche Salmon Fishing plan with all stakeholders, including First Nations



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Management Plan Recommendation	Degree of Achievement (initiated, on-going, addressed, partial, complete)	Actions/Notes
To determine the direct and indirect economic benefits associated with angling for Atlantic Salmon within the Restigouche River System	Complete	University of New-Brunswick study done in 2010 demonstrates fishing camps supply 535 jobs and \$11.2 million in the local economy.
To determine the carrying capacity of the river system for canoeing	Complete	The 2008 management plan determined the maximum daily departure capacity to 74 canoes, based on the campsite capacities.
To maintain/enhance current business opportunities based on sustainable management practices	On-going	Effort to reduce conflicts between users still a priority and on-going work at the RRWMC
To consider the feasibility of a user fee system for canoeists through public consultation	On-going	Survey of canoeists demonstrates they would accept a daily fee.
To continue joint enforcement initiatives with the Royal Canadian Mounted Police	On-going	Joint patrols done every year with RCMP and Sûreté du Québec
To monitor issues which are subject to current legislation, policies and agreements	On-going	Signs on littering referring to Crown Land Act posted at campsites.
To maintain and supplement inventories of the natural and cultural values of the Upper Restigouche river	On-going	



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Management Plan Recommendation	Degree of Achievement (initiated, on-going, addressed, partial, complete)	Actions/Notes
To conduct periodic surveys of the flora and fauna with emphasis on rare and endangered species	On-going	
To maintain/enhance the visual quality of the river environment	On-going	Part of the task of Recreation program employees is to remove all garbage/graffiti and repair vandalism
To collect and record the oral history of the Restigouche river System	On going	A local group is working on the Restigouche River Museum project which will include all the cultural aspects of the river's history.
In co-operation with First Nations, identify archaeological sites and document the native history of the river	On going	See above
To develop interpretive material, brochures, displays and signage for the Upper Restigouche River	Completed	Posters located in river offices, signs with map of the river are posted at all access and exits points
To consult with interested stakeholders regarding the feasibility of pursuing this concept (CHRS); this will include the Province of Quebec	On-going	
To consult with interested stakeholders regarding the feasibility of pursuing this designation (linear provincial park under Parks policy.	On-going	Feasibility study on the concept to be conducted in 2011



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8. Summary and Conclusions

This report has verified all of the current conditions of the elements identified in the cultural and natural integrity guidelines and values of the Canadian Heritage River System. The actions proposed in the 1998 River Management Plan were also reviewed. The items were listed and presented in the format submitted by the CHRS and all documents used for the nomination process as well as the key persons involved since the designation have been consulted.

The Upper Restigouche River, with its historic fishing camps, quality salmon fishing, preserved landscape and important recreational activities, has a heritage and cultural significance for Canada. The Restigouche's history will soon to be presented by the Restigouche River museum project. Consultation efforts by the Restigouche River Watershed Management Council ensure public involvement in the river's management in order to enhance and preserve all natural resources and heritage assets.

This report confirms that all of the heritage and recreational values of the Upper Restigouche River remain intact and that this portion of river deserves to maintain its status under the Canadian Heritage Rivers System program. However, the Restigouche River recreational program must be continued to ensure proper supervision of canoeing activities and to avoid user conflicts. Monitoring the increased number of motorized boats using turbines (jet boats) is also necessary to characterize this new activity and to prevent it from disturbing the natural tranquility of this section.

In terms of governance, roles and responsibilities, given the demise of the River Management Committee in 1999 and the Restigouche River Watershed Management Council Inc. (RRWMC) activities since 2002, it would be useful and appropriate to clarify the responsibilities of the RRWMC (the river manager) versus those of the Government of New Brunswick in terms of managing the jurisdiction, and sitting as a member of the Canadian Heritage Rivers Board.



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9. References

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LANTZ, Van, 2010, Economic contributions of salmon fishing camps along the Restigouche River in Eastern Canada. Faculty of Forestry and Environmental Management and Department of Economics, University of New Brunswick. 6 p.

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Restigouche River Watershed Management Council, Le Ristigouche Newsletter, November 2007, 6 p.

Restigouche River Watershed Management Council, Le Ristigouche Newsletter, February 2009, 6 p.

Restigouche River Watershed Management Council, Le Ristigouche Newsletter, February 2010, 6 p.

People interviewed:

Sullivan, Donald, Ex-President of the Restigouche River Management committee

Arpin, André, Ex-Treasurer of the Restigouche River Management committee



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Deschêne , Jean-Yves. Coordinator of the Restigouche River Management committee from 1996 to 1999

Dufour, Alain. Foreman of the river crew from 1996 to 2002.

MacNeish, Allan. Former employee of the Department of Natural Resource in charge of the Recreation program and volunteer with the citizens group working on the Restigouche river museum.

Noddin, Michelle. New Brunswick Woodland Operations, Acadian Timber

Makepeace, Scott. Forest Planner AV Group (AV Nackawic and AV Cell)

Shay, Raphael. New Brunswick Conservation Council.



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10. Appendix

Annual Monitoring Report

Name of River ; RESTIGOUCHE
Year; 2009
Events
<ul style="list-style-type: none">- Water and watershed in forestry management workshop, October 8th 2009 organized by the Restigouche River Watershed Management Council (RRWMC);- Annual general meeting in February;- Zero Garbage Program draw (to encourage canoeists to carry out their litter)- Promoting Restigouche protection by participation to various events such as Promotion Plus in Campbellton and Science Night in Tide Head.
Actions
<ul style="list-style-type: none">- Maintenance of campsites and access sites by the Restigouche River Watershed Management Council (mowing grass, removing litter, repairing or replacing damaged equipment). Under agreement with New Brunswick Department of Natural Resources;- Zero-garbage program (distribution of reusable garbage bags to canoeists coupled with a prize draw);- Conferences in schools and to graduates to present the importance of the Restigouche River;- Distribution of Code of ethics to canoeist and outboard users;- Development of an interpretation program to be presented in river offices;- Siltation trap building within the Five Fingers sub-watershed to reduce sediments runoff from potatoes fields;- Planting of 6 000 trees in riparian zones;- Enhancement of 200 m of the road leading to Down's Gulch;- Participation in the Working Group for integrated Management of Restigouche/Madawaska Public forest to promote protection of Restigouche aquatic resources;- Others projects and actions done by the Restigouche River Watershed Management Council (RRWMC) can be found at www.restigouche.org
Changes and Threats
<ul style="list-style-type: none">- Addition of a service office at Rafting Ground to increase education, facilitate contact with canoeists and serve as a location for a student employee;- Addition of a holding septic tank at Rafting Ground;- Implementation of the Zero-Garbage program by developing a poster, increasing quality of reusable garbage bags and having a communications officer promote the program;- Overuse of campsites continues to be a threat in the lower part of the Restigouche River, causing deterioration of the ground and tree mortality. Planning with local stakeholders addressed this issue and a layout plan of new campsite locations was done.- Siltation continues to be a major threat for water quality. Five Fingers brook has been identified as the major source (potatoes production).



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Research and Studies
<ul style="list-style-type: none"> - Smolt salmon monitoring (smolt wheel survey) Dept. Fisheries and Oceans Canada - Juvenile salmon survey - Dept. Fisheries and Oceans Canada - Spawning salmon snorkel count - Dept. Fisheries and Oceans Canada - Siltation aerial survey – Rest. River Watershed Mgmt Council - Water sampling and analysis (Department of Environment of New Brunswick) - Stocking of 75 000 fall fingerling salmon within the watershed.
Management Plan Implementation Items
<ul style="list-style-type: none"> - Education and registration of canoeists still a continuous task for the RRWMC employees; - New signs related to outboard regulations, mapping of the river and garbage regulations were installed; - A restoration approach to sediment runoff locations will help reduce the impact of agriculture and forestry on aquatic habitat.

Name of River ; RESTIGOUCHE
Year; 2010
Events
<ul style="list-style-type: none"> - Canadian Canoe Foundation youth canoe trip (www.canadiancanoefoundation.ca) - Restigouche Salmon Convention (April 30th-May 1st)
Actions
<ul style="list-style-type: none"> - Maintenance of campsites and access sites by the Restigouche River Watershed Management Council (mowing grass, removing litter, repairing or replacing damaged equipment). Under agreement with New Brunswick Department of Natural Resources; - Zero-garbage program (distribution of reusable garbage bag to canoeists coupled with a prize draw); - Conferences in schools and to graduates to present importance of the Restigouche River; - Distribution of Code of Ethics to canoeist and outboard users; - Restoration of the Down's Gulch landing (October) - Others projects and actions of the Restigouche River Watershed Management Council (RRWMC) can be found at www.restigouche.org
Changes and Threats
<ul style="list-style-type: none"> - To follow-up on the Zero-Garbage program success, the RRWMC added plastic tags with numbers and an explanation of the program to each reusable garbage bags provided to canoeists. - Over usage of campsites continue to be a threat in the lower part of the Restigouche



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River, causing deterioration of the ground and tree mortality.

- A new campsite was built at Two Brook (for second night of the 3 day canoe trip)

Research and Studies

- Smolt monitoring (smolt wheel surveys) Dept. Fisheries and Oceans Canada
- Juvenile salmon survey - Dept. Fisheries and Oceans Canada
- Spawning salmon snorkel count - Dept. Fisheries and Oceans Canada
- Siltation aerial survey – Rest. River Watershed Mgmt Council
- Water sampling and analysis (Department of Environment of New Brunswick)
- Stocking of 180 000 fall fingerlings salmon within the watershed.

Management Plan Implementation Items

- Education and registration of canoeist still a continuous task for the RRWMC employees.
- Interpretation posters at Kedgwick River (entrance) and Rafting Ground (exit) offices were installed.
- A project developed with RBC Blue Project funding and forest industry partners will address the impact of harvest area distribution in the sub-watershed by calculating the Equivalent Cut area for all 1000ha and other watersheds of the Restigouche system. This project will help harmonize forestry management and watershed protection by analyzing its impact on flow regime.
- Restoration approach to sediment runoff location will help reduce the impact of agriculture and forestry on aquatic habitat.