

Managing the Tatshenshini River as a Canadian Heritage River

Yukon Portion





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*Prepared by Parks Branch, Department of Environment,
Government of the Yukon
for the Canadian Heritage Rivers Board*

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ISBN 1-55362-196-4

Design and layout: Patricia Halladay Graphic Design

Photography: Parks Branch, Environment Yukon; Department of Tourism and Culture;
Sarah Gaunt; Ron Chambers; and Gordon MacRae

We, the undersigned, support the designation of the Yukon portion of the Tatshenshini River as a Canadian Heritage River.

In doing so, we support:

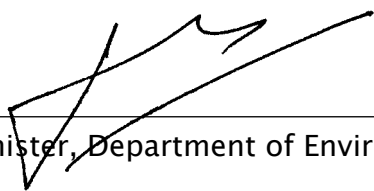
- sharing the responsibilities to achieve the goals of the management strategy as outlined; and
- promoting the importance of the Tatshenshini River's recreational, natural and cultural heritage.



Chief, Champagne and Aishihik First Nations

September 30, 2002

Date



Minister, Department of Environment

February 25, 2004

Date



Regional Director General,
Department of Indian Affairs and Northern Development

February 12, 2003

Date

In memory of Sarah Gaunt

This management plan is dedicated to the memory of Sarah Gaunt (1946–2003), who was instrumental in getting the Tatshenshini River (Yukon) recognized for its spectacular landscape, its recreation opportunities, and its important human history.

Sarah learned to love rugged natural landscapes in her native Scotland. She came to Canada in 1966, and achieved a B.A. in Cultural Geography from McGill University. She was soon drawn to the natural beauty and people of the north, living in Canada's eastern Arctic in the 1970s. Sarah moved to the Yukon in 1980, where she soon was hired as a First Nation's land claims researcher and advisor. From 1988 until her death, Sarah was employed by the Champagne and Aishihik First Nations as a land-use, heritage, and protected areas planner.

Sarah worked tirelessly to build bridges between the First Nations and the conservation communities, and always made the extra effort to have each side see the merits of the other's position. Sarah was committed to co-management and to seeing this principle implemented in management plans and strategies for protected areas within Champagne and Aishihik First Nations' traditional territory, including the management strategy for the Tatshenshini River (Yukon). The Tatshenshini–Alsek basin was a very special place to Sarah; she talked about its power, and had a vision for its future. Sarah shared her love and knowledge of the river and its history, inviting both old friends and newcomers alike on her next adventure, whether it was rafting the river, hiking, skiing or mountain-biking. Before she died, Sarah established the Tatshenshini–Alsek Foundation to promote cultural, ecological education, stewardship and co-management studies, programs and projects related to this very special area.

Acknowledgements

We would like to acknowledge all of the participants and agencies that have been instrumental in pursuing their dream of giving this river the recognition that it so rightly deserves.

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1.0 Introduction

The Tatshenshini River is situated in one of the wildest areas in the world, known for its wilderness, whitewater, wildlife and salmon. It provides nationally and internationally significant recreational opportunities in a pristine and scenic mountain wilderness setting.

The Tatshenshini River also continues to be an important part of the social and economic well-being of the Champagne and Aishihik First Nations (CAFN) people. The cultural and spiritual heritage of this special area — along with the natural resources that the management area provides — is extremely important to the First Nations. These people have had a long-term interest in ensuring that the river and its resources are protected for current and future generations.

The Yukon portion of the Tatshenshini River in the south-western Yukon (as shown on Map A: Regional Setting, Tatshenshini River Canadian Heritage River Management Area; page 32) falls within the Champagne and Aishihik First Nations' traditional territory. The CAFN Final Agreement directed the Yukon Government to nominate this portion of the river under the Canadian Heritage Rivers System (CHRS). In response to this direction, the 45-kilometre Yukon section of the river was successfully nominated as a Canadian Heritage River on June 7, 1998. It was determined through the consultation process that the management area would take into consideration the entire Tatshenshini watershed.

There has been a long-term interest in having the river designated under the CHRS. Originally, resource assessment work in the mid 1980s identified the river as a potential heritage river because of the significant values that were present within the Yukon portion of the Tatshenshini River. More detailed studies followed early in the 90s with the completion of the formal background study. The background study, completed in 1993 identified the natural, cultural, and





recreational values necessary for the preparation of a nomination document and its submission to the Canadian Heritage Rivers Board (CHRB).



Before the river can be formally designated to the CHRS, a management strategy must be completed. This document outlines the natural, cultural and recreational values for which the river was nominated and provides guidance on how these values are to be conserved while recognizing the national importance that the river plays within the CHRS.

The management strategy only applies to the Yukon portion of the Tatshenshini. The river also travels through British Columbia and Alaska, where the applicable management regimes apply.

Extensive consultation and cooperation between governments and the CAFN has occurred throughout the development of the nomination document and the management strategy. The processes outlined in the CAFN Final Agreement under Chapter 13 were followed and this strategy is a reflection of that work.





2.0 Goals of the Canadian Heritage Rivers System (CHRS)

The Canadian Heritage Rivers System was established in 1984 as a cooperative federal–provincial–territorial program. Parks Canada is the lead federal agency.

In the Yukon, the Department of Environment coordinates the management of Canadian Heritage Rivers in conjunction with the relevant Yukon First Nation and other agencies (e.g. Department of Fisheries and Oceans) with legislative authority for the river and surrounding lands.

Yukon’s Bonnet Plume River and the Thirty–Mile section of the Yukon River have already been designated under the program.

The objectives of the CHRS are to give national recognition to Canada’s important rivers and to ensure their future management such that:

- the natural and human heritage that they represent are conserved and interpreted; and
- the opportunities they possess for recreation and heritage appreciation are realized by residents of and visitors to Canada.

Participation in the CHRS is voluntary and participants retain their traditional jurisdictional powers, including land ownership and management.





3.0 Role and authority of the Tatshenshini management strategy

Rivers and surrounding areas that are designated under this program are managed by the relevant jurisdictions under existing legislation and policies. No new regulations result directly from this process. The management strategy does not override any existing policies and regulations, nor does it propose any new legislation.

The purpose of this management strategy is as follows:

- highlight the natural, cultural and recreational values of the river;
- provide a current status of these values;
- provide an overview of issues that may affect the integrity of the values;
- provide recommended indicators and monitoring programs for the issues that were discussed through public consultation; and
- recommend policies for guiding future management and stewardship of the river's heritage and recreational values and, as necessary, address unacceptable changes in the river's values.



4.0 Preparation of the Tatshenshini management strategy

Research for the management strategy occurred in two phases:

- identification and analysis of issues that may affect the integrity of the river's values, and
- discussion of alternatives for addressing these issues.

Three main issues were identified for further discussion following the first phase of work. These included the size of the management area, river recreation issues and potential access issues related to sport fishing.

The public, commercial operators and agencies with legislative authority in the area were invited to comment on possible alternatives for addressing the issues and to provide other suggestions. This public and special interest group consultation phase was extensive and occurred over a two-year period. It became evident through this consultation phase that the current pristine condition of the river was intact and that the management strategy should be to conserve these values rather than attain them. The future impact of winter recreational activities within the Yukon portion of the watershed was also identified as an issue.





5.0 Summary of heritage and recreational values

The Tatshenshini nomination document (1998) highlights the following values:

5.1 Cultural

- The river was and continues to be an important part of the social and economic well-being of the Champagne and Aishihik First Nations.
- The river has outstanding historic features and representation of Canadian historic themes, including native people's history and culture, trading, travel routes, links to coastal exploration and mapping, gold rush trails, transportation, and personalities and events.
- The Tatshenshini is a special place in the cultural and spiritual heritage of the Champagne and Aishihik First Nations and the Coastal Tlingit people.

5.2 Natural

- The river is representative of the Yukon-Stikine Highlands Mountains Ecoregion of the Yukon.
- It has outstanding habitat and populations of Pacific salmon species that play a key role in the human and natural heritage of the region.
- There are notable concentrations of wildlife species such as grizzly bears, Dall sheep and mountain goats.
- The river has representative examples of physiographic features, such as complex coastal and interior geologic formations, the Duke River and Denali faults, and river morphology.
- Key wildlife habitat supports large and robust population densities of grizzly bears, the southernmost range of Dall sheep in Canada and an unusual level of biological diversity.



- Because of the merging of the coastal, interior boreal and alpine biomes, vegetation communities are extremely diverse and support a number of rare plants and animals.

5.3 Recreational

- The river has outstanding scenic qualities, such as dramatic mountain ranges, canyons, rapids, waterfalls and natural beauty.
- It provides opportunities for exceptional quality of recreational and lifestyle activities.
- The Tatshenshini is an international adventure tourism destination for rafting and wilderness travel.

In Appendix 1 (page 24), the Tatshenshini values have been sorted into the CHRS Framework.





6.0 Role of the Tatshenshini River in the CHRS

The values described in Section 5 provided the basis for the role the Tatshenshini River would play in the CHRS. The 1998 nomination document outlined the role as being as follows:

- to provide, within a river environment, representation of the natural and cultural heritage of the Yukon's southwestern coastal mountain region as defined by the Yukon CHRS study;
- to conserve and protect an area rich in cultural significance to the Tlingit and Southern Tutchone people;
- to protect and highlight a river environment that provides outstanding representation of a transitional ecosystem with high values of fish and wildlife habitat;
- to provide recreational opportunities for river travel as well as hiking, fishing, wildlife viewing, horseback riding and cultural history interpretation in a scenic wilderness setting; and
- to protect and enhance an international adventure tourism destination.

The addition of the Tatshenshini River into the Canadian Heritage River Rivers System will provide the national recognition that this river, known for its wilderness splendor, deserves. Designation would be consistent with the CHRS objectives of promoting, protecting and respecting this rich river heritage.



7.0 Existing land and water uses

A major non-recreational land use in the Tatshenshini watershed has been and continues to be placer and hardrock mining exploration and development. The land within the Kluane Game Sanctuary was originally excluded from Kluane National Park and Reserve due to the extensive mineral occurrences in the area. Map C: Third Party Interests (page 34) shows current valid placer and quartz mining claims in the watershed.

Fishing, hunting, trapping and other recreational and subsistence activities continue in the area by First Nation and non-First Nation people.

Highway camps, microwave tower sites, borrow pits and other service and maintenance operations are located along the Haines Highway corridor. A water licence is held on Dollis Creek.

The Haines Highway was built in 1942–43, shortly after the construction of the Alaska Highway. It has been upgraded several times and is a major travel route for tourists heading to Alaska or farther north in the Yukon. The Haines–Fairbanks oil pipeline was built in the 1950s, and abandoned in 1968. The right-of-way is still visible.





8.0 The Tatshenshini River (Yukon Portion) Management Area Strategy

The 1998 CHRS nomination document for the Tatshenshini included the entire (45-km) Yukon portion of the river. The size of the management area was reviewed during the initial preparation of the management strategy and it was determined that it should take in the entire watershed of the river.

The drainage basin for the Yukon portion of the Tatshenshini River is shown on Map B: Canadian Heritage River Management Area, Tatshenshini River (Yukon Portion; page 33). The headwaters of the Tatshenshini and parts of the main upper tributaries, such as the Blanchard River, lie within Tatshenshini-Alsek Park, British Columbia. The river then flows through the Yukon and enters British Columbia again. It joins the Alsek River (flowing out of Kluane National Park and Preserve) before passing through Glacier Bay National Park, Alaska and emptying into the Pacific Ocean.

Consideration of the entire watershed is required to incorporate the natural and cultural values identified in the nomination document (e.g. human activities on the tributary rivers and streams could create downstream impacts on the Tatshenshini).

Given the use patterns by commercial operators and other river travellers, a complementary management regime between the Yukon, B.C. and Alaska is desirable. Presently, the Yukon portion of the Tatshenshini River is the only part of the watershed not included in a protected area. The management strategy and CHRS designation should fill a major gap in this regard.



9.0 Management Strategy for the Tatshenshini River

9.1 Vision

Protecting the river's unique and exceptional cultural, natural and recreational heritage values is essential in maintaining a truly wilderness river environment, which in turn is capable of providing outstanding cultural and recreational opportunities.

9.2 Principles

The following principles are consistent with the vision of the Tatshenshini River as a Canadian Heritage River. They serve as a guide to future management decisions and activities that may influence the integrity of the river or compromise its natural and human heritage values and recreational opportunities. They provide the foundation of the goals, objectives and actions for achieving the vision for the Tatshenshini River's future in the Canadian Heritage River System.

- **Conservation and appreciation**

Conservation and appreciation of the Tatshenshini and its outstanding values should inform all decisions related to the planning and management of the Tatshenshini as a Canadian Heritage River.

- **Coordination, cooperation and partnership**

Jurisdiction for the Yukon portion of the Tatshenshini River falls under the federal, territorial and Champagne and Aishihik First Nations governments. Downstream jurisdiction for the river as it passes through Tatshenshini-Alsek Park is with the British Columbia government. The river then flows through Glacier Bay National Park, which is under the control of the Alaska government. The actions that any one agency takes has a direct impact on the public, private, commercial and First Nation interests. Coordination, cooperation and development of partnerships among government and





non-government organizations (NGOs) will provide opportunities to ensure effective use of available tools for conserving and protecting the river's natural and human heritage values and recreational opportunities.

- **Adaptive approaches**

Development and implementation of plans related to the management of the heritage values of the river must be adaptive and responsive to changing social, environmental and economic conditions.

- **Recognition of existing rights, agreements and obligations**

Management of the Tatshenshini River as a Canadian Heritage River must recognize existing and future rights, agreements and obligations. This recognition extends to First Nation traditional activities and uses, and others with vested interests in the river or its surrounding lands.

- **Accountability**

Government, NGOs, individuals, community groups, business, industry, First Nations are accountable to one another, and to the population as a whole, for decisions and actions that may affect the heritage values of the Tatshenshini River.

9.3 Goals and objectives

9.3.1 *Conservation and protection*

Goal

To protect and conserve the natural and human heritage values of the Tatshenshini River, including its outstanding natural features, historical significance, ecological diversity and cultural importance.

Objectives

- coordinated use of legislation, regulatory tools, guidelines and voluntary mechanisms available for conserving and protecting heritage values and river integrity; and

- a science-based approach to support decision-making that is consistent with conservation and protection of the river's heritage values, recreational opportunities and river integrity.

9.3.2 Recreation

Goal

To provide a diverse range of recreational opportunities for residents and visitors to the region while continuing to conserve the natural and cultural values of the river.

Objectives

- improved awareness of the river's outstanding heritage values and recreational opportunities;
- management of the recreational opportunities that are provided by the river's natural and human heritage values; and
- ensuring that economic opportunities provided by the river's recreation and heritage values are consistent with the vision established for the river.

9.3.3 Communications and cooperation

Goal

To support communication between all agencies, the public, and First Nations in managing the Tatshenshini River in the best interests of its heritage and recreation values.

Objectives

- improved systems for sharing information that supports the river's exceptional heritage values and recreational opportunities;
- communication of the importance of the river's heritage and recreational resources to residents and visitors;
- cooperation between groups to balance economic benefits with the river's heritage and recreational values.





9.3.4 *Appreciation and interpretation*

Goal

To support continued appreciation and interpretation of the natural and human heritage values of the Tatshenshini River and to promote its significance as a Canadian Heritage River.

Objectives

- interpretation of and learning about the river's natural and human heritage values;
- establishment of a common understanding of the river's values, and the uses and activities associated with it.





10.0 Multi-jurisdictional management and existing watershed plans

The Yukon, federal and Champagne and Aishihik First Nations governments all have legislative responsibilities within the management area. Rural land blocks and site-specific selections belonging to the First Nations are subject to their laws and regulations (see Map C: Third Party Interests, Tatshenshini River (Yukon Portion) Canadian Heritage River Management Area; page 34). Part of the management area lies within Kluane National Park and Reserve and is managed by Parks Canada. The remainder of the area is Yukon land.

Following the conclusion of the Devolution Transfer Agreement between the Yukon Government and the federal government, responsibilities for regulating land-use activities now lie within the various departments of the Yukon Government. The Department of Fisheries and Oceans regulates the salmon fishery along the river. All laws of general application continue to apply in the management area (e.g. *Yukon Historic Resources Act*, *Wildlife Act*, etc.).

In British Columbia, just south of the management area, the Tatshenshini-Alsek Park protects the B.C. portion of the river. The provincial park — along with Kluane National Park and Reserve, Glacier Bay and Wrangell St. Elias National Parks and Preserves and the Tetlin National Wildlife Refuge — have jointly been declared a World Heritage Site by UNESCO.

Management plans are in place for both Kluane National Park and Reserve and Glacier Bay National Park and Preserve. Both of these areas have strong protection mandates, focusing on the maintenance of ecosystem values and the provision of high-quality wilderness experiences for visitors. Tatshenshini-Alsek Park has a Management Direction Statement in place. Both Kluane and Tatshenshini parks have cooperative management relationships with the Champagne and Aishihik First Nations.





The Champagne and Aishihik First Nations, in conjunction with the Yukon Government, are in the process of preparing a management plan for the Shāwshe/Dalton Post Special Management Area. The Shāwshe/Dalton Post Special Management plan will focus on the management of heritage resources and visitor use of the site and is compatible with this strategy.



Use of the Tatshenshini and Alsek rivers is cooperatively managed by the national and provincial parks. Use of the rivers is restricted by the allocation of take-out permits in Glacier Bay and put-in permits for the Alsek in Kluane. Recreational non-commercial day use is not regulated on the Alsek or Tatshenshini by any jurisdiction.





11.0 Proposed future actions and management considerations

As per the objectives for the CHRS program, the all-encompassing goal for managing the Yukon portion of the Tatshenshini River is as follows:

To give national recognition to the river and ensure long-term management that will conserve the natural, cultural and recreational values for the benefit and enjoyment of Canadians now and in the future.

Two main issues were identified through the preparation of the management strategy and recommendations for monitoring were proposed for both.

11.1 Commercial and recreational river traffic

Rafting, kayaking and jet-boating are the three primary modes of recreational travel on the river. Rafting contributes the most visitors to the Yukon portion of the Tatshenshini outside of Shāwshe/Dalton Post. Commercial and recreational one-day raft trips start at the Blanchard River highway camp or at Bear Flats on the Haines Highway and take out at Shāwshe/Dalton Post. Whitewater paddlers also travel this route. Jet-boaters operate below the upper canyons starting from Shāwshe/Dalton Post.

Multi-day wilderness raft trips leaving from Shāwshe/Dalton Post and travelling to Dry Bay, Alaska are well regulated by the national and provincial parks with the cooperation of the Yukon government and CAFN.

It was generally agreed through the public consultation process that existing informal management of recreational use of the river (e.g. mutual respect, simple avoidance by departing at different times and maintaining litter-free stopping sites) is sufficient for the current level of use.

It is recognized that any significant increase in a particular use group (rafters, jet-boaters, whitewater paddlers) may require more formal management of recreational and





commercial use. As well, the potential for new user groups (e.g. jet-skiers) could alter the current user satisfaction levels.

In order to determine impacts (ecological and social), recreational use needs to be monitored on the river. Suggestions include self-registration at the put-in and take-out sites, surveys of day-user satisfaction and monitoring of on-shore stopping sites.



Future options may include limiting use through a permit system and/or requiring the same “pack-out” standards that are in place downstream (e.g. the use of river toilets or the placement of toilets at take-out or put-in points, designation of camp sites and or stopping points, review of waste management practices at Shäwshe/Dalton Post).

11.2 Trail and road access to fishing areas outside of Shäwshe/Dalton Post

Any increase in the use of off-road vehicles to reach new fishing areas is a potential issue that could affect the integrity of the river’s values. Currently, there is little sign that off-road vehicle use is increasing or new trails are being created. Off-road vehicle use is directly tied to the robustness of salmon runs and the length of the fishing season. If fish runs increase, recreational use and associated impacts will also increase.



It was recommended that off-road vehicle use be monitored or restricted to designated trails. The main concern at present is off-road vehicle use and four-wheel drive campers creating unauthorized campsites on the road downstream of Shäwshe/Dalton Post towards Village Creek. Given that Shäwshe/Dalton Post is the focal point, this issue would best be addressed through the complementary Shäwshe/Dalton Post management plan.



12.0 Implementation priorities

Effective implementation of this strategy is essential in meeting the commitments necessary for the ongoing protection and management of the river's cultural, natural and historical resources. Specific implementation priorities will be set within existing fiscal resources.

It is recognized that not all high-priority initiatives may be implemented during a given year; however, the ongoing monitoring of recreational and cultural use of the river will be given the highest priority. In addition to this important initiative of monitoring and reporting on recreational use, priority will be given to monitoring land-use activities within the boundary indicated on Map B (Tatshenshini River Management Area; page 33). Other implementation and management items will follow the Management Matrix (page 22-23), which will be reviewed annually to determine its effectiveness. New priorities will be set out during this review.

Management of the river's cultural and recreational values will include implementing a voluntary self-registration system and a visitor use survey. These initiatives will be designed to acquire detailed river use patterns while providing the necessary tools for the river's future management. An inventory and documentation of camping and picnic sites used by travellers along the river will be conducted during the 2004 operating season. This information will be used as a baseline for measuring future recreational impacts on the river and is considered essential in implementing an effective management regime.

Education and interpretation strategy

One of the primary benefits of having the Tatshenshini River designated under the Canadian Heritage Rivers program is the recognition the river will receive. An education and interpretive strategy will be developed in conjunction with the Champagne and Aishihik First Nations, river users and commercial operators to assist in education about and promotion of the river.





Annual and ten-year reports

The Canadian Heritage Rivers Board requires both annual and ten-year reports to be completed outlining the state of the natural, cultural and recreational values for which the river was nominated. The Department of Environment, on behalf of the managing jurisdictions, will complete or coordinate these reports.

Managing agencies and legislative tools

The river passes through Yukon Territory, British Columbia and Alaska, all of which have different legislation and responsibilities for managing its use. Table 1 summarizes the legislation for the respective regions.

Table 1. Legislation related to the Tatshenshini River

<p>Yukon Government</p> <p><i>Wilderness Tourism Licensing Act</i></p> <p><i>Historic Resources Act</i></p> <p><i>Wildlife Act</i></p> <p><i>Waters Act</i></p> <p><i>Quartz Mining Act</i></p> <p><i>Placer Mining Act</i></p> <p><i>Yukon Oil and Gas Act</i></p> <p><i>Yukon Environmental Assessment Act</i></p> <p><i>Lands Act</i></p> <p><i>Territorial Lands (Yukon) Act</i></p> <p><i>Environment Act</i></p> <p><i>Forest Protection Act</i></p>	<p>Government of British Columbia</p> <p>Various pieces of land and water legislation, with the primary management tool being the <i>B.C. Parks Act</i> for the Tatshenshini-Alsek Park</p>
<p>Government of Canada</p> <p>Department of Fisheries and Oceans</p> <p><i>Canada National Parks Act</i> for Kluane National Park and Kluane Wildlife Sanctuary</p>	<p>State of Alaska</p> <p>Various pieces of state and federal legislation along with the <i>Alaska National Park Services Act</i> for Glacier Bay National Park as the main management tool</p>
	<p>Champagne and Aishihik First Nations</p> <p>Responsibility for rural land blocks and site specifics under their self-government agreement; leaders in the co-management regime for the Shäwshe/Dalton Post Special Management Area</p>



13.0 Indicators of success

Success towards achieving the Heritage River vision for the Tatshenshini River will be indicated by the following:

- broad public awareness of the river's outstanding natural and human heritage values and recreational opportunities and an understanding of the factors that may affect them;
- commitment of stakeholders to carry out activities that sustain the heritage values of the river;
- effective communication and information sharing between stakeholders involved in all aspects of stewardship of the river;
- partnership and cooperation among interests to achieve the heritage river vision, goal and objectives; and
- a shared local, territorial and national vision for the future of the Tatshenshini River as a prominent Canadian Heritage River.



Table 2. Management Matrix for Tatshenshini

Issue	Value	Goal	Indicators
Recreational watercraft use of river (rafts, kayaks, jet boats)	Natural, cultural, recreational Boating/Canoeing; Camping; Angling; Natural Heritage Appreciation; Human Heritage Appreciation; Hiking	To provide a diverse range of recreation opportunities for residents and visitors to the region while continuing to conserve the natural and cultural values of the river	Number of users, visitor satisfaction, shoreline impacts
Off-road vehicle use and new trails/camps	Natural, cultural, recreational Geological and hydrogeology	To protect and conserve the natural and human heritage values of the Tatshenshini River, including its outstanding natural features, historical significance, ecological diversity and cultural importance	Linear disturbance, length of roads and trails, new camps and trails
Snow-machine use	Natural, cultural, recreational Geological and hydrogeology	To protect and conserve the natural and human heritage values of the Tatshenshini River, including its outstanding natural features, historical significance, ecological diversity and cultural importance	Snow-machine numbers, frequency of use, visitor satisfaction, impact on moose and vegetation
Shoreline developments	Recreational value Boating/Canoeing; Camping; Angling; Natural Heritage Appreciation; Human Heritage Appreciation; Hiking	To provide a diverse range of recreation opportunities for residents and visitors to the region while continuing to conserve the natural and cultural values of the river	Land-use permit applications, leases or title applications
Industrial development (mining, forestry, etc.)	Natural values Cultural values Integrity values Recreational values	To protect and conserve the natural and human heritage values of the Tatshenshini River, including its outstanding natural features, historical significance, ecological diversity and cultural importance	Review land-use files (Energy, Mines and Resources, Lands Branch)

Current status of indicator	Monitoring required	Corrective measures
Approx. 1000 summer commercial users, three commercial jet boat operators use river during fishing season, satisfaction good amongst all users, few observed shoreline impacts	<ol style="list-style-type: none"> 1. Installation of voluntary self-registration boxes at put-in and take-out points (2004) 2. Conduct visitor satisfaction surveys in coordination with the other managing agencies in summer of 2004 and every five years thereafter 3. Annual monitoring of shoreline impacts 4. Cost @ \$5.0K O&M annually for implementing monitoring program 	<ol style="list-style-type: none"> 1. Institute a permit system to limit use, if required 2. Adopt recreational use policies, e.g. use of port-a-johns, in place downstream 3. Limit shoreline access to established pullouts
Unknown	To be established, if required and addressed in Shäwshe/Dalton Post Management Plan	Limit off-road vehicle use to existing trails by means of public education, if required
Unknown	To be established under existing legislation, if required	To be established, if required
As shown on land use map, water quality, visual impact analysis, land use permits	To be established under existing legislation, if required	To be established, if required
Registered mining claims, timber harvest allotments, land use permits, water quality and visual impact analysis	Environmental assessments of significant projects	To be established if required

Appendix 1: Summary of heritage river values and conditions

Natural values framework

Theme/Sub-theme	Theme representation
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1.0 Hydrology

1.1 Drainage basin/ Stream number	The Tatshenshini is part of the Alsek watershed, a Pacific Coastal River Basin. The Alsek basin is approximately 2% of the land area of Canada.
1.2 Seasonal variation	The Tatshenshini has a single high-flow peak in June and July caused by the summer melt of snowfields and glaciers. Its flow declines from November until March. In the Yukon portion of the watershed, flows are governed more by temperature than precipitation, although heavy rains can temporarily elevate water levels.
1.3 Water content Physical properties Chemical properties	Limited data indicates the water meets Canadian Water Quality Guidelines (1984). The upper reaches of the Tatshenshini are generally clearer than the lower turbid waters. Lower tributary streams are heavily loaded with sediments.
1.4 River size Average flow volume Total river length	The Tatshenshini is classified as a small-volume, second-order stream. Mean monthly flows in the upper Tatshenshini River fluctuate from less than 10 m ³ /s in March to more than 80 m ³ /s in June. < 500 km (215 km from Shāwshe/Dalton Post to Dry Bay)

2.0 *Physiography*

2.1 Physiographic region	West Coast Ranges
2.2 Geological processes Bedrock formation Surficial material formation	<p>The geological and tectonic history of the region is complex and not well understood. It is part of the western margin of North America, formed by the impact and accretion of a series of oceanic crustal plates. Sedimentation, faulting, folding, vulcanism and metamorphosis were all involved.</p> <p>Soils in the area are thin and poorly developed. Active mass wasting and periglacial processes continue throughout the region. Surficial materials are complex, formed by glacial, fluvial and gravitational processes.</p>
2.3 Hydrogeology Bedrock Unconsolidated materials	<p>The upper Tatshenshini River in the Yukon has Devonian to Permian sedimentary and volcanic rocks and more recent plutonic rocks.</p> <p>Variable: The river valley floodplains, alluvial fans and river terraces are characterized by fluvial sediments made up of gravels, sands and silts. Moraine and till, consisting of clay, silt, sand and rock fragments are found on lower valley sloped and in U-shaped creek valleys. Colluvium (talus and scree) is found on steep slopes and at the foot of slopes. Permanent ice and bedrock materials cover a portion of the area.</p>
2.4 Topography Gradient Relief	<p>Steep: > 5m/km</p> <p>> 1000 metres above sea level</p>

3.0 *River morphology*

3.1 Valley types	Straight and convex at different locations
3.2 Channel patterns Stream configuration	Straight Canyon-like river cliff topography
3.3 Channel profile Whitewater	Prolonged rapids and whirlpools
3.4 Fluvial landforms Erosional	Deeps and undercuts

4.0 *Biotic environments*

4.1 Aquatic ecosystems Riverine systems	Headwater zone
4.2 Terrestrial ecosystems Ecozone	Boreal cordillera

5.0 *Vegetation*

5.1 Significant plant communities	A convergence of biomes and geomorphologic processes has resulted in a complex, diverse and unexplained set of plant communities. Floodplains are regionally important for hedysarum meadows and slide alder.
5.2 Rare plant species	A list of 30 rare plant species has been compiled for the B.C. portion of the Tatshenshini–Alsek Park. It is expected that some of these species are rare in the Yukon; however, there have been no comprehensive vegetation surveys in the Yukon portion of this region.

6.0 Fauna

6.1 Significant animal populations	Outstanding concentrations of grizzly bears are nationally significant. The area is the southernmost range of Dall sheep in Canada. Moose populations are regionally significant. Salmon habit is significant regionally and territorially. Unusual diversity exists due to the merging of three biomes.
6.2 Rare animal species	None known to date

Condition of cultural heritage values

Theme/Sub-theme	Theme Representation
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7.0 Resource Harvesting

7.1 Fishing Aboriginal prehistoric fishing	Oral history and archival sources indicate that there may have been ten or more fishing villages in the nineteenth century in the Tatshenshini basin. The area is associated with massive population losses and shifts in settlement patterns post-European contact.
7.2 Shoreline resource harvesting trapping of fur-bearing animals; hunting of birds and land animals	The Tatshenshini River basin is an important region within the Champagne and Aishihik traditional territory. Trapping, hunting and fishing are activities associated with cultural identity and use of the basin.

8.0 Water transport

8.1 Commercial transportation prehistoric trade	Prior to European contact, the Coastal Tlingit traded extensively with the Tutchone in the Yukon interior and the Pacific coast region. Southern Yukon oral history suggests that the area's importance as an inter-regional transportation route extends back many years.
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9.0 Riparian settlement

<p>9.1 River-based communities river industry-based communities</p>	<p>Neskatahin/Shäwshe was both a seasonal fish camp and a home base for some of the region's Tutchone. Elders have related stories about 300–400 Tutchone gathering there to fish for sockeye almon by gaffing and in traps. Shäwshe was also the major south Yukon regional trading centre of the nineteenth century.</p>
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Condition of recreational heritage values

Recreational value	Nature of value
Boating/Canoeing	Estimated to be around 1000 persons per season upstream of Shäwshe/Dalton Post, plus 1000 persons downstream of Shäwshe/Dalton Post.
Camping	Numbers are unknown. Most use of the river is by day-trippers. Camping at Shäwshe/Dalton Post is tied to fishing season and the Yukon government also provides camping at Million Dollar Falls.
Angling	Numbers are unknown. Angling is tied to the salmon fishery, which is regulated, based on abundance of runs.
Natural heritage appreciation	Most natural heritage appreciation is tied to the national and provincial parks and associated programs. Potential exists for other opportunities along the river and within the watershed.
Human heritage appreciation	Most human heritage appreciation is tied to Shäwshe/Dalton Post and CAFN heritage sites. The Shäwshe management plan will deal with specific opportunities and management of heritage values and interpretation.
Hiking	Limited hiking at present

Integrity values

Integrity Guideline	Current situation
Natural integrity	
The nominated section is of sufficient size to include significant representations of all of the natural processes, features, or other phenomena that give the river its outstanding natural value.	By including the entire watershed within the Yukon, it is felt that the area is of sufficient size to represent and contain the main natural features. The features, which are not contained within the heritage river management area, fall within national or provincial park boundaries in the Yukon, B.C. and Alaska.
The nominated section includes those ecosystem components which contribute significantly to the provision of habitat for species in need of protection.	Yes, as above
There are no human-made impoundments within the nominated section.	Yes
All key elements and ecosystem components are unaffected by impoundments located outside the nominated section.	Yes
The water in the nominated section is uncontaminated to the extent that its natural aquatic ecosystem is intact.	Yes
The natural aesthetic character of the nominated section is free of, or not adversely affected by, human developments.	There are some impacts on aesthetic value due to existing placer and quartz mineral exploration and development; however, they are considered to be minimal at this time.
Cultural integrity	
The management 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 that give the river its outstanding cultural value.	Yes. See nomination and background study for details on CAFN heritage and culture in the area.
The visual appearance of the nominated section of the river enables an appreciation of at least one of the periods of the river's historical importance.	Yes: Shāwshe/Dalton Post and Klukshu

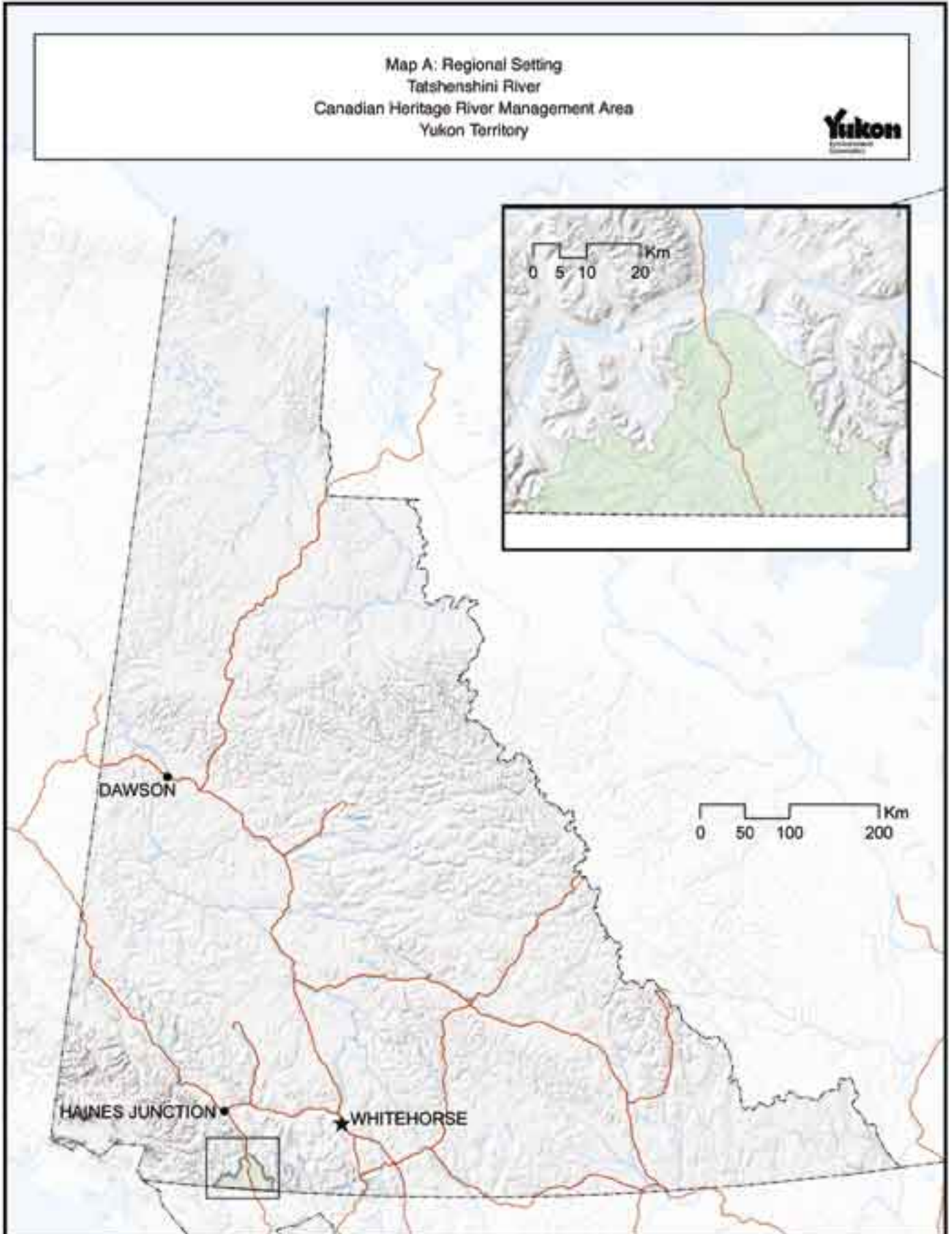
The key artifacts and sites comprising the values for which the river is nominated are unimpaired by impoundments and human land uses.	Yes
The water quality of the nominated section does not detract from the aesthetic appearance or the cultural experience provided by its cultural values.	Yes
Recreational integrity	
The river possesses water of a quality suitable for recreational activities, including those for which it is nominated.	Yes
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.	Yes
The river is capable of supporting increased recreational uses without significant loss of or impact on its natural, cultural or aesthetic values.	Yes; however, it is recommended that monitoring take place to gather baseline data.

Appendix 2: Maps

Map A. Regional Setting

Map B. Management Area

Map C. Third-Party Interests





**Prepared by Parks Branch,
Department of Environment, Government of the Yukon
for The Canadian Heritage Rivers Board
2004**

