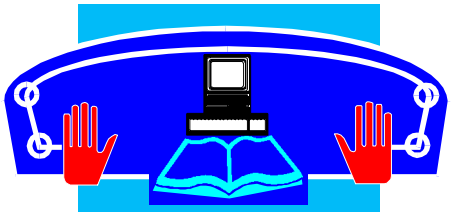


Canadian Heritage River Systems, Nomination Document For Soper River, Northwest Territories

Type of Study: Reference Material

Date of Report: 1991

Author: G.n.w.t. - Economic Development & Tourism

Catalogue Number: 11-32-22

11-32-22

CANADIAN HERITAGE RIVERS SYSTEM

11-32-22

NOMINATION DOCUMENT

This document sets out the submission requirements of the Canadian Heritage Rivers Board for the nomination of a river or section of a river to the Canadian Heritage Rivers System (CHRS). It is the vehicle by which the nominating agency identifies the heriiage significance of the river and justifies the inclusion of the river in CHRS. The purpose of this nomination format is therefore to act as a guide to nominating agencies and to provide consistency in the nomination process.

The Canadian Heritage Rivers System has been established by the federal, provincial and territorial governments for the purpose of recognizing outstanding rivers of Canada and ensuring future management which will protect these rivers and enhance their significant heritage values for the long term benefit and enjoyment of Canadians. to qualify for inclusion in the Canadian Heritage Rivers System, a river or section of river must be of outstanding significance in one or more areas: Natural heritage, human heritage, or recreational values. The nominated section should be large enough to encompass these values and provide the user with an appreciation of the river's resources, as well as an enjoyable recreational experience. The responsibility for the collection and analysis of information to determine heritage values and for subsequent nomination of the river rests with the particular government within whose jurisdiction the nominated river lies.

The Canadian Heritage Rivers Board, composed of federal, provincial and territorial government representatives, will examine each nomination document and will accordingly advise the Minister responsible for the Canadian Parks Service and the Minister(s) of the nominating agency (ies) on the suitability of the nominated river for inclusion within the CHRS. When considering the river, the Board will determine the degree to which the "Guidelines for the Selection of Canadian Heritage Rivers" are satisfied by the nominated river. The Board will consider both the river and its immediate environment which together capture the heritage values.

Within three years of acceptance of a nomination by the Ministers, a management plan shall be lodged with the Board, at which time the river or section of the river shall be formally included in the Canadian Heritage Rivers System. The Board will undertake periodic reviews of Canadian Heritage Rivers to ensure that the designated rivers continue to merit inclusion in the CHRS.

The authority of the Board to carry out these functions is derived from the Ministers of the Crown of the participating governments.

1. River Nomination

Purpose of Section: To formally nominate the river or section of the river for inclusion in the CHRS.

WHEREAS the Soper River and its major tributaries, located on the south coast of **Baffin Island** in the Northwest Territories are of outstanding natural heritage, human heritage and recreational value in the Canadian context; and

WHEREAS the Soper River system displays a complex geological evolutionary history dating back 1,740 million years including expanses of Precambrian bedrock plateau, extensive mineralization through metamorphism resulting in varied mineral deposits, classic examples of folding and faulting, and vivid evidence of glacial scouring; and

WHEREAS the Soper River system contains exceptional examples of the on-going processes of landscape evolution including classic river terraces all along the lower river valley and the erosional process forming numerous waterfalls and rapids on the upland plateau and as tributaries to the river into the Soper valley; and

WHEREAS the Soper River valley is outstanding due to the micro-climate and resulting profusion of vegetation compared to other areas of this arctic region, leading to a similarly unusual concentration of wildlife in the valley; and

WHEREAS the Soper River system contains several features of special significance including one of the few Lapis lazuli deposits in the world, extensive willow growth reaching over 3.6 m (a true anomaly so far above the tree line), and Soper Lake, an example of meromictic lake created by some of the largest tides in the world and displaying reversing falls at its outlet to the sea: and

WHEREAS the Soper River valley was, and still is, an important part of the Inuit lifestyle as a place to hunt, fish, trap, travel and use for personal pleasure; and

WHEREAS the Soper River valley was a critical part of the yearly cycle of life and an overland transportation corridor for otherwise predominantly marine peoples extending from Pre-Dorset times to the present; and

WHEREAS the Soper River system provides opportunities for an exceptional quality and array of wilderness recreational activities including rafting, kayaking, canoeing, boating, hiking, camping, nature study, photography, rock hounding and cultural history appreciation; and

WHEREAS the Soper River is navigable through a major portion of its length and is one of the most accessible and enjoyable rivers in the eastern arctic; and

WHEREAS the Soper River would bring to the system its first representation of the Arctic islands; and

WHEREAS the Soper River system is recognized and supported by the local people of Lake Harbour as a special place worthy of protection and interpretation to visitors through future designation both in Territorial Park status and as part of the Canadian Heritage Rivers System for the protection and appropriate recreational use of its many special features, enhancing the long-term integrity of the area; and

THEREFORE it is recommended that the entire length of the Soper River, including Soper Lake (108 km) and its major tributaries, the Livingstone River (86 km) andthe Joy River (54 km), be included in the Canadian Heritage Rivers System for the purpose of recognizing and protecting its outstanding natural heritage, human heritage and recreational values.

July 4/91
Date

Mayor
Lake Harbour, NWT

July 24/91
Date

Minister
Dept. of Economic Development & Tourism
Government of the Northwest Territories

AUG 12 1991
Date

Minister
Dept. of Indian Affairs& Northern Development
Government of Canada

2. Summary

2.1 Summary of Values

Purpose of Section: to summarize those outstanding heritage and recreational values which provide the rationale for nomination of the

The Soper River shines as an outstanding example of an Arctic river system that has all the qualities necessary for designation within the CHRS. The presence of a diversity of resources, both natural and cultural, along with the exceptional recreational qualities of the area, combine to fully meet the guidelines for nomination to the CHRS as described in detail later in this report. Highlights of that analysis, outlined below, recognize the primary characteristics of the area that give the Soper River Canadian significance as a heritage river.

2.1.1 Natural Resource Values

The primary characteristics recognized as the basis of the nomination are related to the natural resources of the river system. Each of the four CHRS selection guidelines are met by the Soper River and its Valley.

Representation of the Earth's History

Several outstanding features of the area reflect an evolutionary history which dates back some 1,740 million years. Furthermore they are clearly evident in the field and, more than most locations in Canada, provide the opportunity for first hand appreciation of large scale glacial features by persons lacking specific experience in geology. Such features include:

- extensive exposure of Pre-Cambrian bedrock with massive metamorphic intrusions evident throughout the river system;
- **classic** examples of complex folding and faulting visible in much of the valley such as in the Soper Riverbed, just below the confluence with the Livingstone River, and in the upland area on the northeast shore of Soper Lake;
- a remarkable example of a glaciated rock plateau in the headwaters area of the river; and
- extensive mineralization leaving deposits of a wide variety of minerals such as mica, graphite, garnet, marble, soapstone, feldspar, etc. – rock typical of this structural formation but generally not as plentiful in other locations in Canada.

Representation of On-going Processes

Like the evolutionary history evident in the river system, the on-going processes of landscape development such as glacial, fluvial and biological processes are also plainly evident in the tundra landscape. Many of these features in the Soper Valley are considered spectacular examples not only in relationship to the rest of the southern Baffin region but also in a national context (Mercer, 1956), for example:

- the size **and scale of the valley development cutting over 305 m below the level of the plateau;**
- the proliferation and size of waterfalls draining the upland areas of the system both on the plateau itself and into the Soper Valley;
- the massive river terraces, some over 30 m above the current river level; and
- the classic ecological relationships among species such as falcons, ptarmigan, willow, lemmings and foxes.

Natural phenomena, formations or areas of exceptional natural beauty

Outstanding and even rare examples of a number of different landscape features are found in the Soper River system, such as:

- Soper Lake-an outstanding, if not rare, example of a meromictic lake;
- the reversing falls atthe southern outlet of Soper Lake and the massive tides, some of the largest in the world, which create them;
- an internationally significant deposit of Lapis lazuli, one of the few deposits of its kind in the world;
- river terraces of the Soper Valley, particularly two well developed examples near the confluence of the Livingstone and Soper rivers with elevations of 24 and 34 **m; and**
- the outstanding scenery within the region –the lushness and colour of the vegetation and the colour and variety of the rock contribute to this appeal, along with the extentand character of the relief. Cliffs along the valley walls, innumerable waterfalls, and rapids in both the main river channels and the small tributary creeks make the Soper basin an especially scenic place, particularly within the south Baffin region, but within a Canadian context as well (PRP inc., 1990).

(Photo: B. Downie)

The Soper River in front of Mt. Joy

Rare, endangered or outstanding concentrations of plants and animals

Rather than being noteworthy for its biological uniqueness, the Soper Valley is remarkable for its biological abundance, in a region where biological resources are commonly spread sparingiy over harsh, and often relatively barren terrain, for exampie:

- arctic willow over 3.6 m high grow in the valley, well beyond thetreeiine, exceeding anything else found in the arctic (Soper, 1981; and
- concentrations of plants (such as willow, arctic heather and bearberry) and animals (such as ptarmigan, arctic hare and caribou) that are unusual in the region or in the arctic generally (Polunin, 1948) – the valley is known locally for its smell created from the profusion of vegetation.

Natural Resource Integrity

No land uses other than subsistence and recreational use are currentiy ongoing in the area and the impact of these uses is negligible. Conservation status will sustain the pristine integrity of the area.

Protection of the more vulnerable isolated sites, such as areas of major willow growth and nesting sites for falcons and geese, will be dependent upon effective public education concerning the appropriate use of these areas. Management actions such as monitoring and regulating will also help to ensure respect and protection of the resource values.

Of **secondary importance** in the nomination of the Soper River as a Candidate for the CHRS, the human heritage values of the area are nevertheless important yet less well-known or documented. A strong sense of the importance of the land to the Inuit people, present and past, is captured in this area although it is recognized that the Inuit are predominantly a maritime people. White history in the area is also evident relating to early activities of trade, trapping, mining and scientific research. As a result, two of the four CHRS selection guidelines appear to be met while the other two, although partially met require much more extensive historical research to be undertaken.

Canadian Historical Development

Perhaps the most important aspect of the Soper River in terms of human heritage is the influence of this corridor on the native people of the region and on the historical development of their settlement, activity and transportation patterns. Use of the valley was a critical part of the yearly cycle of life for the Inuit people. The Soper provided caribou, ptarmigan and hare for food and clothing, as well as yielding berries and many other plant materials. Furthermore, it is one of the few overland travel corridors known to have significance to these maritime people. A similar kind of significance is suspected but not well documented with respect to the earlier Pre-Dorset and Dorset peoples.

People and Events

In the historic period the Soper River valley is most strongly associated with the activities of Dewey Soper after whom the river was officially named. Commissioned to conduct biological surveys of the area, he was a prominent Canadian naturalist with a long interest and involvement with the north.

The Hudson's Bay Co.'s second post in the eastern arctic was at Lake Harbour. As such, it figured prominently in the events associated with the development of the Company. The initial impact on Inuit lifestyles with the demand for furs had important implications for use of the Soper River valley as did the later mining initiatives that followed the decline of the fur industry.

Historical Structures or Sites

Although archaeological resources of the Soper River valley are potentially important, comprehensive research has not been carried out and little is currently known about them. One important site has been identified but no archaeological assessment of it has been undertaken. It is fully expected, however, that other similar sites are located in the valley.

Some buildings remain in Lake Harbour itself that have direct connections to some of the historic themes that influenced activity in the Soper River valley, such as the old Hudson Bay building, the Anglican Mission building and Soper House. Even though they are not located in the valley, they area part of the visitor experience in the region and are important historic resources.

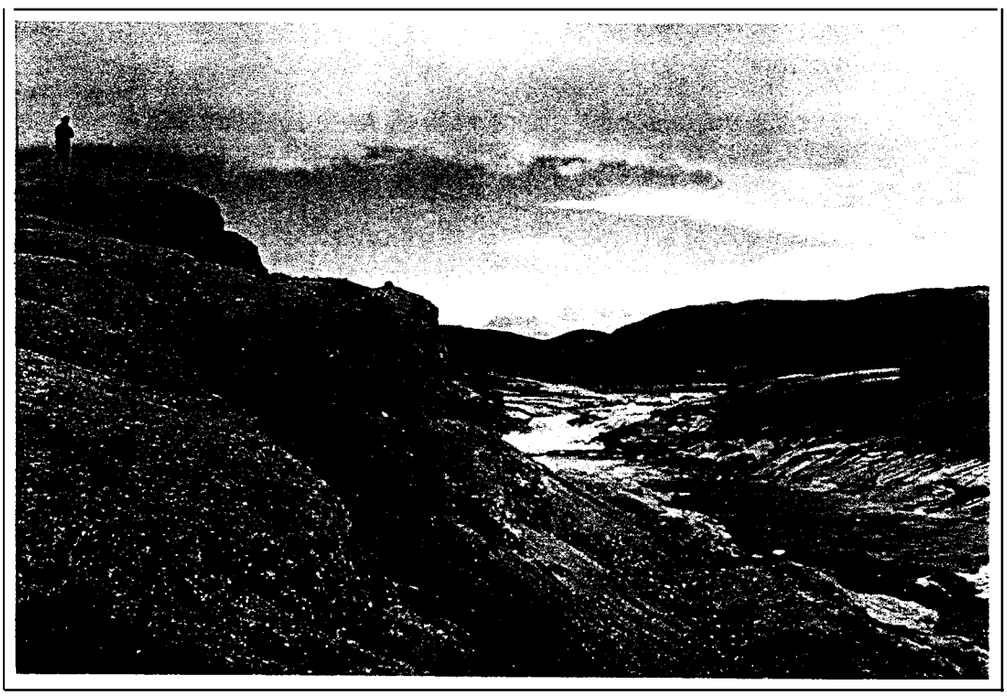
Themes in Canadian History

A number of connections with themes in Canadian history are present in the cultural heritage of the Soper Valley and Lake Harbour, particularity in the areas of arctic science, exploration, development and government administrators. An associated area, that of conservation history, may have even greater connection with the work and life of Dewey Soper. However, these historic themes are not strongly represented in the nomination of the Soper River.

With respect to the mining activity of the area, physical remains are more in evidence, but the extent and importance of the Lake Harbour area to this theme in the Canadian context, is not considered highly significant.

2.1.3 Recreational Values

The recreational values of the Soper River system are exceptional. A wide variety of activities are possible within this arctic wilderness environment. A major segment of the Soper River is navigable – an important consideration in the river's nomination and one which is unusual for rivers in the region. Although virtually unknown and unused presently, the river system is recognized as having highly significant recreation potential (B. Downie, pers. comm.; B. Bodie, pers. comm.). Territorial Park status is proposed for most of the lower reaches of the river system.



(Photo: B. Downie)

Soper River Falls

Recreational Opportunities

The area is unique in its ability to provide an inland, river boating experience of such diverse character. Rafting, kayaking, canoeing and boating are all feasible on a major portion of the Soper River. Camping opportunities along the river are endless and access to the highlands above the river valley is readily available throughout the river's length. The concentration of wildlife and the lushness of vegetation also make the valley an enjoyable and manageable recreational experience for a wide range of visitors. Hiking is relatively easy, particularly along the main valley and even along many tributary routes to the highland plateau.

Many exceptional features are of particular interest and are readily accessible to the visitor such as the reversing falls, spectacular waterfalls and rapids, the exceptional willow growth and the variety of mineral deposits in the area. Scenically the Soper River valley is unmatched in the southern Baffin for its diversity, colour and inviting character.

Of special value is the cultural heritage of the area. The continued use of the valley by local Inuit and their participation in the visitor experience will enrich the memories of the visitor to the Soper River.

Recreational integrity

Levels of recreational use within the Soper River valley are expected to be consistent with the wilderness character of the corridor. The vast majority of the river corridor is easily capable of supporting a high quality recreational experience while at the same time retaining the natural and cultural resources of the area.

Specific management actions such as route selection and registration combined with effective public education will address protection needs of specific vulnerable sites within the corridor.

Water quality within the Soper River system is presently pristine and control of the entire watershed for resource protection and recreation will ensure continuation of that quality.

2.2 Role in the System

Purpose of Section: to describe the role which the river mght play in the CHRS from a national perspective, referring to the characteristics which make it distinct.

The role of the Soper River in the CHRS will be:

- to provide, within a river environment, excellent representation of the natural and cultural heritage of Canada's Arctic islandsand the first representation of those islands in the system;

- to protect and highlight a river environment that provides outstanding representation of major geological periods and examples of a complex geological structure that are more readily observed here than in southern Canada;

- to highlight an outstanding river environment which exemplifies the natural ecosystem and geological history of the southern Baffin region;

* to represent an area important for historic themes in the development of the Canadian Arctic and for cultural activity potentially dating back to Pre-Dorset times;

- to encourage protection, future scientific research, and public understanding of the full range of natural and cultural heritage values of this northern region with a focus on the Soper River; and

* to provide outstanding recreational opportunities for river travel (by raft, kayak, canoe, and motorboat) and associated upland hiking, camping, viewing and nature study in a remote, eastern arctic wilderness setting.

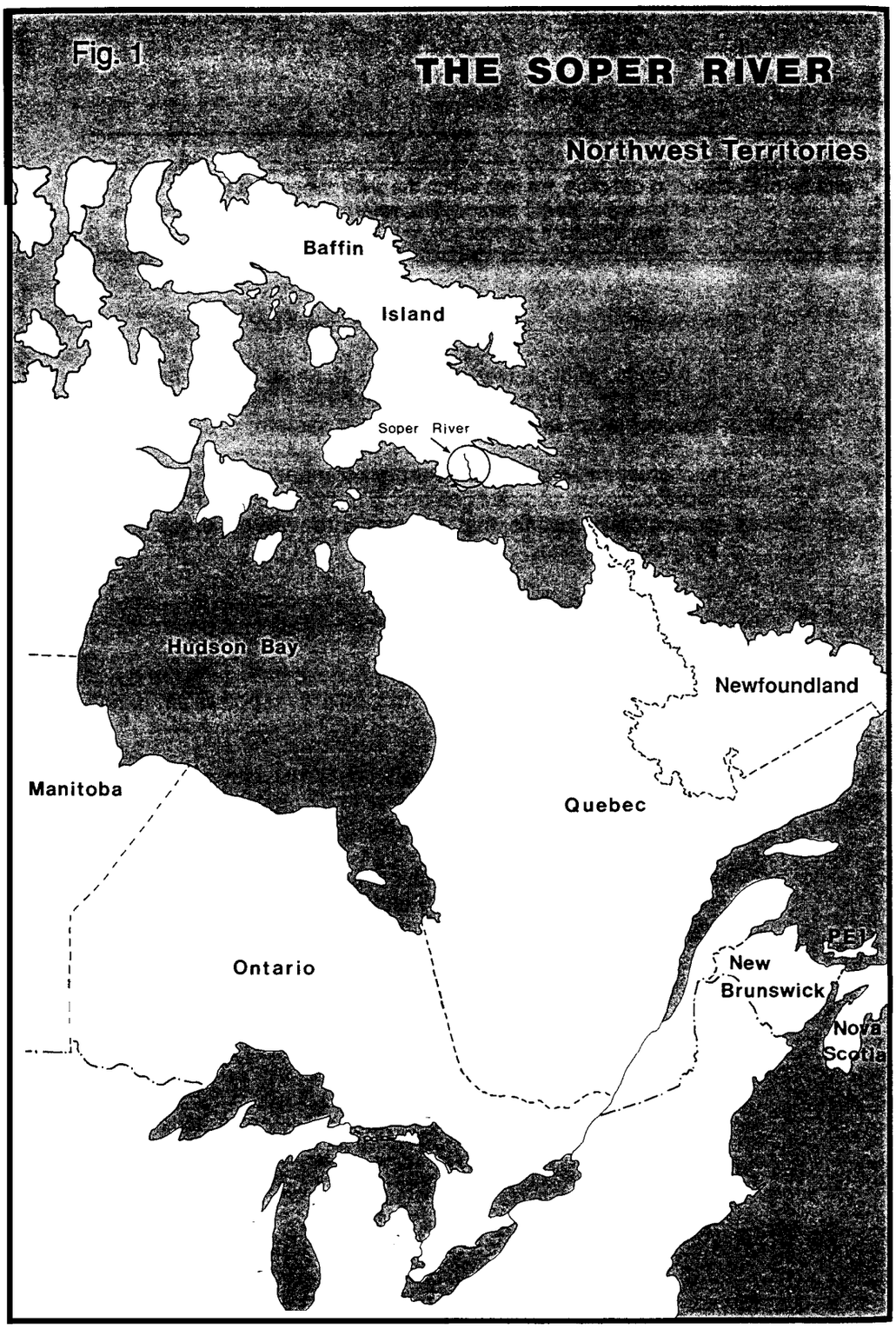


Fig. 1
THE SOPER RIVER
Northwest Territories
Baffin
Island
Soper River
Hudson Bay
Newfoundland
Manitoba
Quebec
Ontario
PEI
New
Brunswick
Nova
Scotia

3. Location

Purpose of Section: to briefly describe the location of the river, through a map, a description of its regional setting, and information on access to the river.

The Soper River drains into Hudson Strait from the south coast of Baffin Island (see Fig. #1). The headwaters of the river begin in the upland plateau of the Meta Incognita Peninsula which is the southeastern tip of Baffin Island. The peninsula divides Hudson Strait from Frobisher Bay and the headwaters of the Soper River draw from over half the width of the peninsula. The Soper River itself follows a southerly course running generally at an acute angle to the coast (see Fig. #2).

The entire length of the Soper River (approx. 108 km) is being nominated along with two of its major tributaries. The tributaries are the Livingstone River (approx. 86 km)andthe Joy River (approx. 54km). In addition, Soper Lake into which the Soper River drains and which itself drains into Pleasant Inlet (Hudson Strait), is included in the nomination, completing the drainage from headwaters to ocean. In the lower reaches of the Soper River, the boundary of the nominated area conforms to the proposed boundary of the proposed Kuujuaq Territorial Park. To the north of the park area, the boundary is the drainage basin of the Soper River and its two major tributaries. The total area is approximately 2,500 sq. km.

In Canadian Arctic terms, the Soper River is easily accessible. The regional centre of Iqaluit (1989 pop. est. 3,126; 1991 NWT Data Book) has daily air service by two major airlines which brings visitors directly from the southern centres of Ottawa and Montreal. From Iqaluit, a charter flight of less than half an hour puts visitors into the central portion of the Soper River valley. Alternatively with a trip across Frobisher Bay by boat visitors can walk a distance of about 40 km overland to the valley. By comparison to most other destinations in the eastern arctic, such access is remarkably easy and inexpensive. The area is virtually unknown to southern Canadians at present but since interest has been shown in the area for park and recreation purposes, more and more people are making enquiries about its opportunities. Tour operators are similarly interested in the prospects for trips in the area because of the variety of recreational opportunities and the relative ease of access and travel.

Two Baffin Island communities are affected by the initiatives for conservation of the Soper River, primarily the south coast community of Lake Harbour and secondarily, the regional centre of Iqaluit. Lake Harbour (1989 pop. est. 350; 1991 NWT Data Book) is situated adjacent to Soper Lake on the south coast. Although not directly on the lake, the community is situated on Glasgow

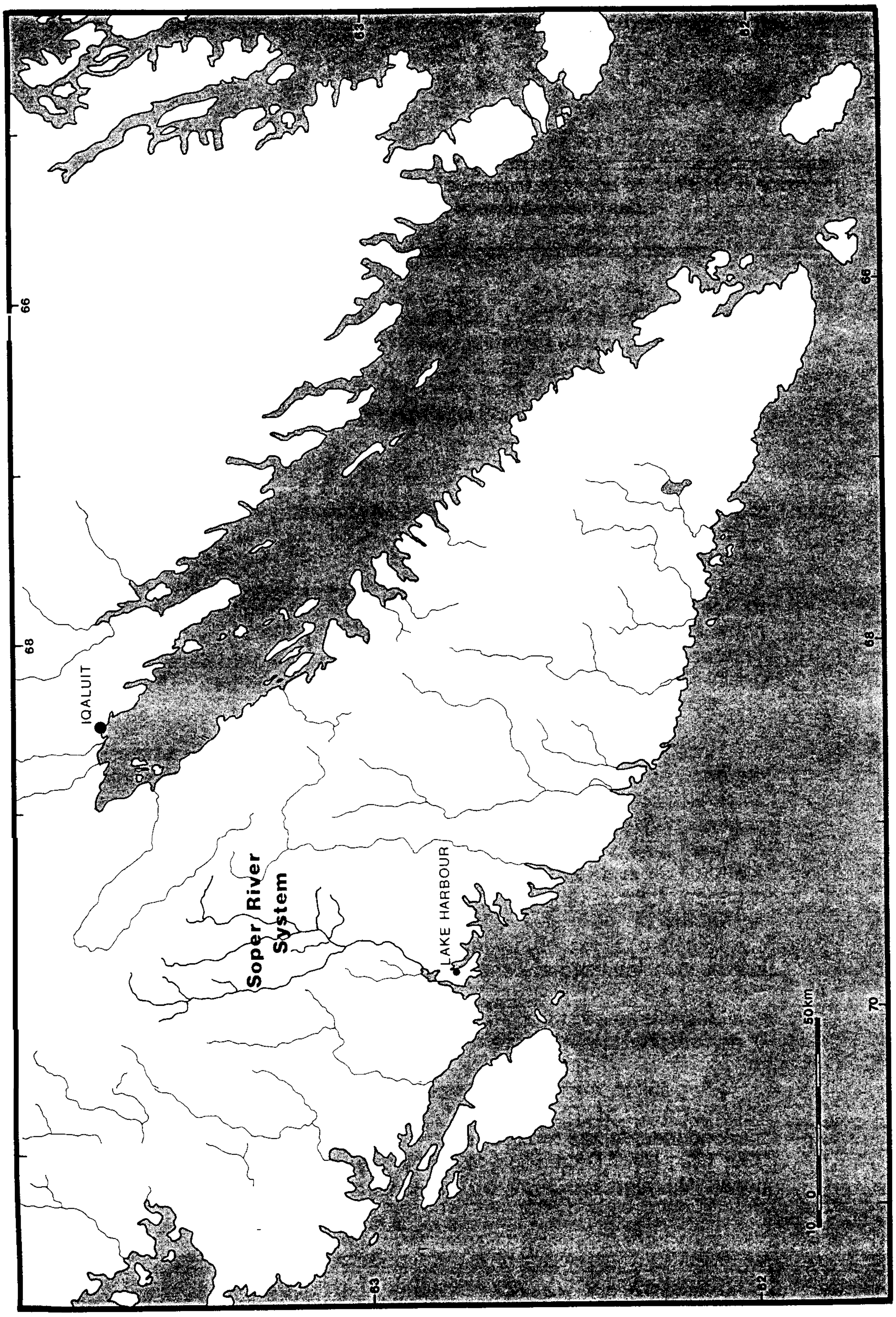
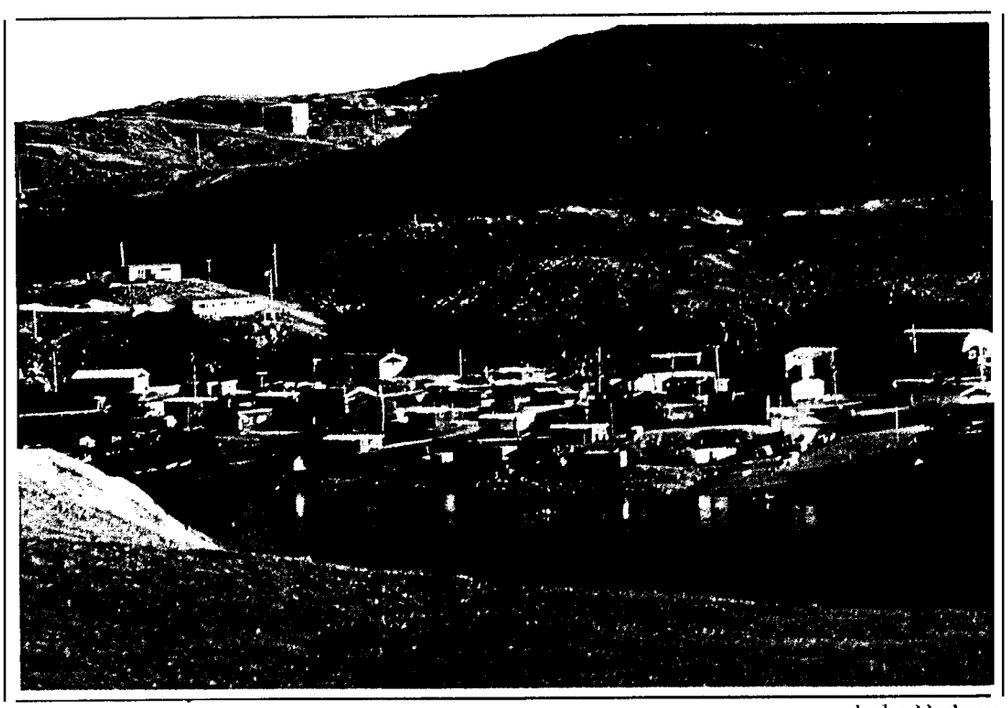


Fig. 2

Inlet a twenty minute walk from Soper Lake. People in the community are frequent users of Soper Lake and the river valley for travel, hunting, trapping, berrypicking and related activities. Little tourism has occurred in the community since no attractions have been developed in the area. The community is internationally renowned for its carving and a few guided hunts have taken place in recent years. A new hotel and the formation of a Tourism Committee in the community under the auspices of the Hamlet Council attest to the interest in developing and supporting increased tourism activity. There are three scheduled flights per week between Lake Harbour and Iqaluit.

Iqaluit is the major eastern arctic regional centre. It is the hub of all travel in the region and will inevitably be very positively affected by the recognition which CHRS status will bring to the Soper River. With such easy access to the river valley directly from Iqaluit, and the opportunities for visitors to use guides and charter services from Iqaluit to access the area, tourism opportunities which already figure largely in the economy of Iqaluit will definitely increase. The community has a full range of tourist facilities such as three major hotels with a total of 265 beds, an increasing supply of bed and breakfast accommodation, a regional hospital, international airport, a wide variety of retail outlets including specialty shops for local arts, crafts and foods, air and boat charter companies, guide/outfitters, and a number of good quality restaurants. A major new regional visitor centre will also open in the fall of 1991.



(Photo: P. Pownall)

Lake Harbour

4. Heritage and Integrity Values

4.1 General

Purpose of Section: to describe the method used for information collection and evaluation, andtoshowthe location of significant features on a map.

4.1.1 Study Method and Synopsis

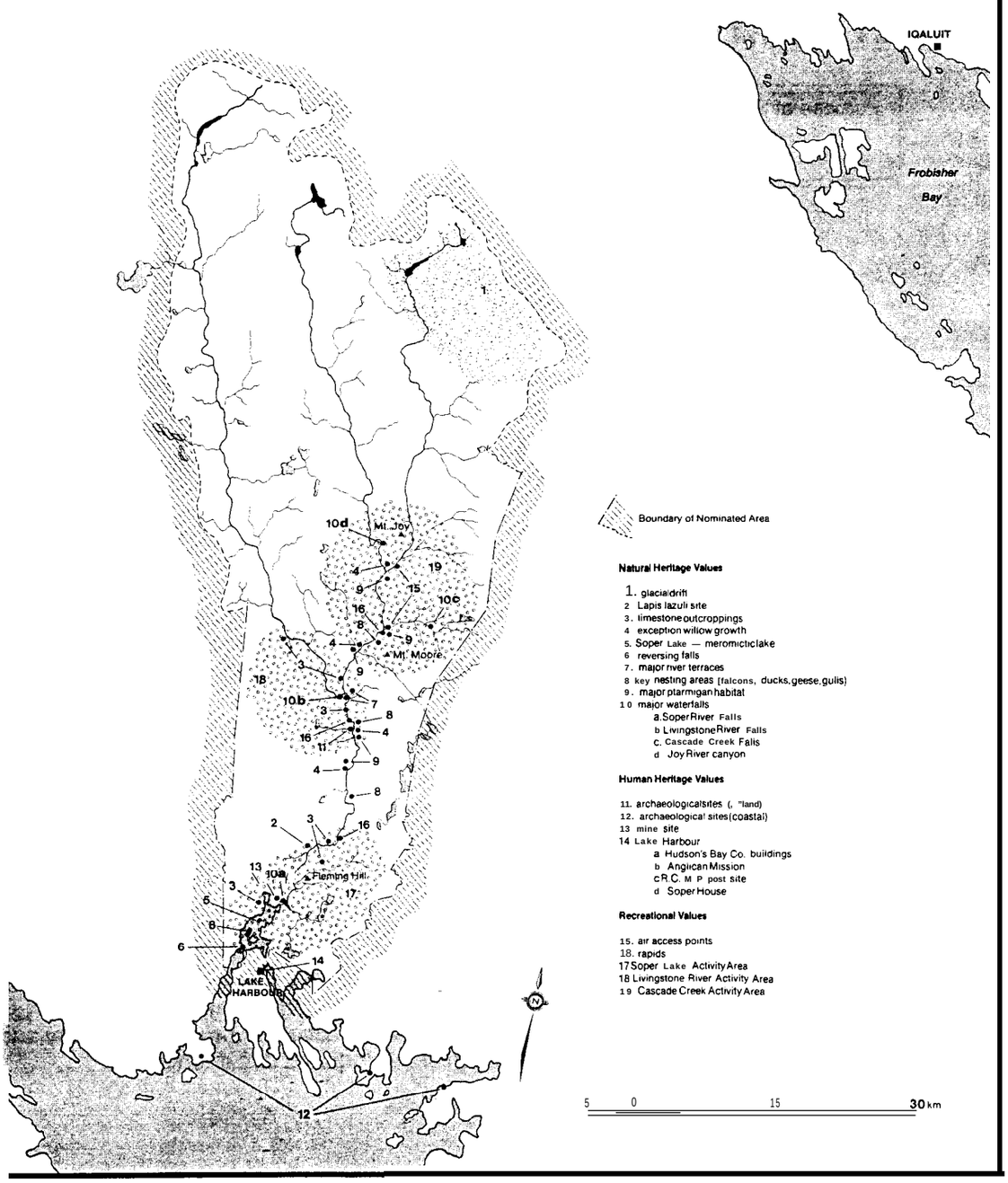
Regional tourism planning undertaken in the Baffin Region in the early 1980's stimulated consideration of the potential of different parts of the region for conservation and recreation related to a wide variety of resources. Focus had typically been on the cultural sites in the region, but with the evolution of an expanding Territorial Parks System and increased cooperative activity with the Federal Government related to National Park and Canadian Heritage River initiatives, awareness was growing with respect to the potential benefits of natural heritage conservation. In June of 1989, the Department of Economic Development and Tourism contracted PRP Inc. of Victoria, B.C. to undertake a feasibility study to determine the potential for park development and CHRS status in the Soper River Valley north of Lake Harbour, and for a long distance hiking trail across the Meta Incognita Peninsula to the south shore of Frobisher Bay across from the town of Iqaluit. The feasibility study included an extensive literature review of the natural and historic features of the study area. That review was supplemented by extensive community consultation through which local knowledge of the areawasdocumented. In addition, field studies both by air and on the ground were undertaken.

Community involvement in the process was crucial and the consulting team spent a month in the community of Lake Harbour discussing the idea with members of the community and collecting ideas about and information on the protection, management and use of the study area. Consultation with the community on the progress of planning has continued since that time.

The results of the 1989/90 study indicated significant park, CHRS and trail potential for the Soper River valley and a preliminary development concept for a park, to be located in the southern reaches of the river, was outlined (see PRP Inc., 1990). Among others, the recommendations of the study suggested that the GNWT pursue the nomination of the Soper River to the Canadian Heritage Rivers System. This would necessitate the conduct of the further study and planning work and the preparation of the required documentation.

Fig. 3

SOPER RIVER: Significant Features



Community support for the study recommendations and proposed activities was formalized in a letter from the Hamlet Council to the GNWT Department of Economic Development and Tourism in June of 1990. Subsequently approval of the initiative was given by the Minister and park and heritage river status planning were able to proceed to the second phase.

4.1.2 Significant Features Map

Figure #3 illustrates the location of primary heritage resources which are related to each of the three CHRS values. They are crucial to the Soper River's nomination and are discussed in greater detail in the following sections of this nomination document. In addition, a more detailed identification and assessment of the resource values is contained in the preliminary draft of the CHRS Background Study of the Soper River which is scheduled for publication in the fall of 1991.

4.2 Natural Heritage Values

4.2.1 Description of Natural Heritage Values

Purpose of Section: to describe the outstanding natural heritage features of the river and its immediate environment.

Remarkable in its richness and variety for such a northern environment, the Soper River Valley displays many outstanding, unique and representative natural history themes of Canadian significance.

Geology

A northern extension of the Canadian Shield, the Soper River Valley area consists predominantly of granite, migmatite and quartz-feldspar gneissic rocks with intrusions of crystalline limestone, schists and quartzite. The Precambrian bedrock shows signs of intense metamorphism, dated at 1,740 million years ago, and complex folding along axes trending generally north-south.

The Soper Valley system is part of the Frobisher Upland, a tilted peneplain with a high ridge trending northwestward along the edge of the peninsula. This ridge reaches up to 760 m asl., sloping downward to the southwest towards Hudson Strait. The plateau across the central portion of the peninsula consists of a rugged and rocky surface of exposed bedrock which has been heavily glaciated. The little glacial drift that is present, has accumulated in the creek and river bottoms.

Considerable mineralization produced by the intense metamorphism of the Precambrian rocks created many special sites of geological interest in the Soper Valley including:

- **a small but extremely important deposit** of Lapis lazuli (a distinct, deep blue gemstone, one of December's birthstones) located in the southern reaches of the Soper Valley (see Fig. #3). Although not of the highest quality, this deposit is one of the few occurrences known in the world; and

- mica found extensively throughout the area in conjunction with schists and crystalline limestone deposits. Large crystals are plentiful especially around sites where previous mining activity was carried out around the turn of the century (see 4.3.1 Human Heritage Values).

Physiography

Within the region, the Soper River is a remarkable example of river development that has resulted in the longest and deepest river valley along the south coast, with many significant illustrations of that process. These include:

- characteristic drainage pattern typical of rugged bedrock terrain with many small lakes occupying bedrock depressions connected by short, fast-flowing streams;

- numerous rapids and falls along short, fast flowing streams southward to Hudson Strait;

- the longest and only navigable river along the south coast, the Soper River;

- the deep valley of the Soper River which in the middle reaches of the river cuts over 305 m below the level of the plateau

- dominant landmarks including: Mt. Joy (61 O m), at the mouth of the Joy River; Mt. Moore (535 m), across from the confluence of the Soper and Livingstone rivers; and, Fleming Hill rising to 275 m above the river flats near the falls into Soper Lake; and

- clearly defined river terraces from old river beds through most of the navigable segment of the river, from Fleming Hill to Willow Creek, varying in height from a mere 2.5 m to about 34 m above the current river level.

Hydrology

The upper reaches of rivers and streams in the area are characterized by poorly defined courses that have barely worked their way below the surface of the plateau, while the lowerreachestend to display more incised channels. As in all of the rivers draining the plateau, water flows in the Soper River are very seasonal, Since precipitation in the region is generally low (4.7 cm; annually) high run-off volumes cannot be expected. However, snowmelt (June) and the heaviest precipitation period (July/August) occur during a relatively short portion of the year.

The resulting volume of flow in the Soper River is unusually high for this region making the river navigable for a distance of over 50 km inland earty in the summer. Even so, the shallowness of the river creates many small sections of rapids which vary in their character during the summer season. Tributaries of the Soper River originate in the upland plateau on either side of the deep valley and consequently display frequent and often spectacular fails and rapids enroute to their confluence with the Soper.

Another special hydrological feature of the study area is Soper Lake itself, located at the head of Pleasant Inlet. The tidal range in Hudson Strait is the greatest in the Canadian Arctic and among the highest in the world. Tides rise as high as 10.6 m producing some exceptionally strong tidal currents in the narrow channels and bays of the south coast. The entrance to Soper Lake from the ocean has three channels and all are reversing falls due to the high tidal range. The result is that Soper Lake is meromictic, a mixture of both salt and fresh water.

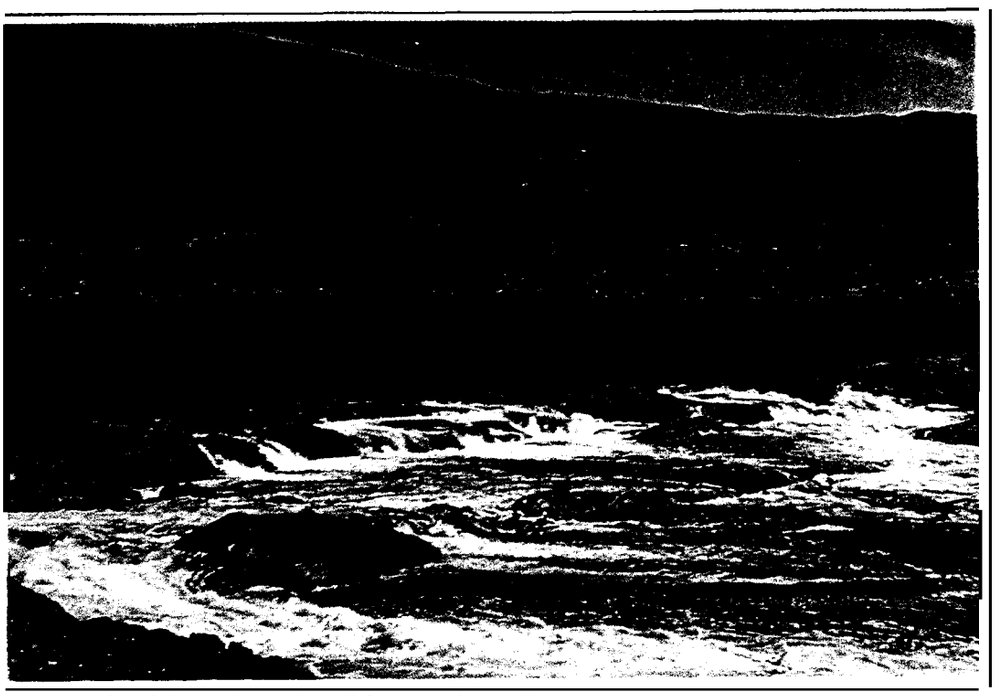
Vegetation

The Soper Valley contains flora representative of the Canadian Eastern Arctic, although due to the warmer micro-climatic conditions, the unique lushness of the area is also noteworthy. Local people recognize and appreciate the valley for its smell because of the difference in plant growth. During the remarkable four month growing season, three months are usually frost free. The vegetation varies with the local geology - from areas of limestone substrata to areas of gneiss/granite substrata (basic vs. acidic substrata). It is also highly impacted by elevation. Vegetation is relatively lush at 245 m, and still prevalent at 305 m, but above this level, one generally finds oniy barren glaciated rock.

The Soper Valley and surrounding areas can be described as containing four distinct plant communities:

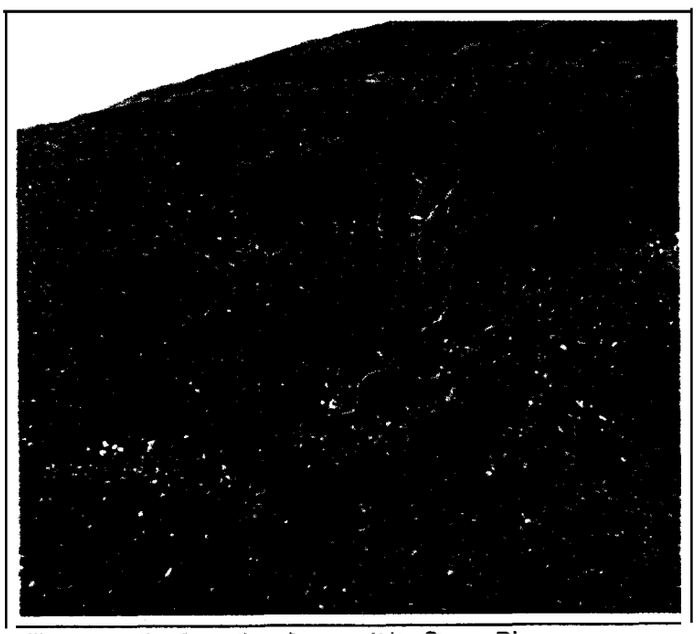
a) dwarf shrub/heath tundra community
- the most diverse and most colourful of the plant communities
- occupies areas of varying slope up to 210 m
- more luxuriant growth in sheltered depressions where water retention is high and wind abrasion is iow
- bedrock conditions significantly influence species distribution
- common species include: willow, dwarf birch, Arctic heather, Labrador tea, lapland rosebay, bearberry, bilberry and cranberry.

b) grassland tundra community
- damper soils of the river flats and the edges of small, low elevation lakes
- high water content and differential frost heave, result in extensive tussock development
- common species include: sedges, cottongrass, sphagnum moss, yellow mountain saxifrage, bistort and willow.



(Photo: B. Downie)

'he reversing falls at the outlet of Soper Lake to the ocean



(Photo: B. Downie)

. Willow growth along the shores of the Soper River

c) bedrock/hill summit community
- little humus development
- generally profuse lichen growth (eg. Cetraria nivalis) with the number of species outnumbering all other plant species
- other plants tend to be dense mats or flattened cushions
- common flowering species include: arctic poppy, purple saxifrage, mountain avens, broad leaved willow-herb and chickweed.

d) snowpatch community
- areas of late snow melt where drifting has slowed the seasonal development of the plants
- typically moist areas
- ring-like zones of vegetation occur towards the centre providing different moisture regimes and lengths of growing season
- mosses are common in the centre; then a zone of dwarf willows and herbs such as mountain sorrel; then commonly Arctic heather on the outer rings

A relatively warm micro-climate has meant that the vegetation of the Soper Valley is considerably more lush and verdant than that of other valleys nearby and indeed of the Arctic in general. One of the best indicators of this is the unusual growth of willow bushes along the valley bottom and side creeks. Dewey Soper recorded willow bushes reaching heights of 3.6 m (Soper, 1981) in the valley in 1931 (for sample locations see Fig. #3). Wildflowers bloom in great abundance and diversity during late July and early August. The valley also produces what many people claim to be the largest and most delicious berries in the southern Baffin region (PRP Inc., 1990).

Wildlife

Wildlife in the Soper River valley is an excellent example of the diversity of species typical in the southern Baffin region. However, with its rich vegetation and generally more moderate climate, the Soper Valley provides a refuge for wildlife that causes concentrations of species and population numbers that other areas do not. Barren-ground caribou are plentiful in the valley. Part of the 2,000 to 3,000 animals making up the South Baffin caribou herd that roams the Meta Incognita Peninsula, they tend to spend the winter and spring on the plateau areas where the lichens (their primary food source) are more free of snow than in the valleys. Calving areas have not yet been determined but it is believed that the caribou rear their newborns on the uplands, then move into the valleys in the summer to feed on the relatively luxuriant growth.

In addition to caribou, the abundant plant growth nurtures a variety of small mammals and birds. Lemmings (both the Collared and the Brown lemming), arctic hare and arctic fox, along with ptarmigan and waterfowl are particularly plentiful. The importance of the lemmings in the ecosystem is unmatched by any other species solely because of the food source they provide to such a wide variety of other animals. Their populations are subject to enormous fluctuations which usually peak-every 3-4 years.

Upland and shorebirds found in the area include the rock ptarmigan, snowbunting, Lapland longspur, horned lark, sandpipers, semi-palmated plover,

and water pipit. The ptarmigan and snowbunting are the most abundant. The ptarmigan are year round residents supported by the extensive berry and willow growth in the valley, while the snowbuntings are the earliest arriving migrants and leave after all the other species have gone. Ducks and geese are common as well, mostly along the coast. The red-breasted merganzer and Canada goose nest in the flat marshy areas along the river and around small lakes on the river terraces while species such as the red-throated, common and arctic loon, phalarope, black guillemot, thick billed murre, arctic tern and gulls (Iceland and Glaucous) prefer the coastal areas in the south end of the study area.

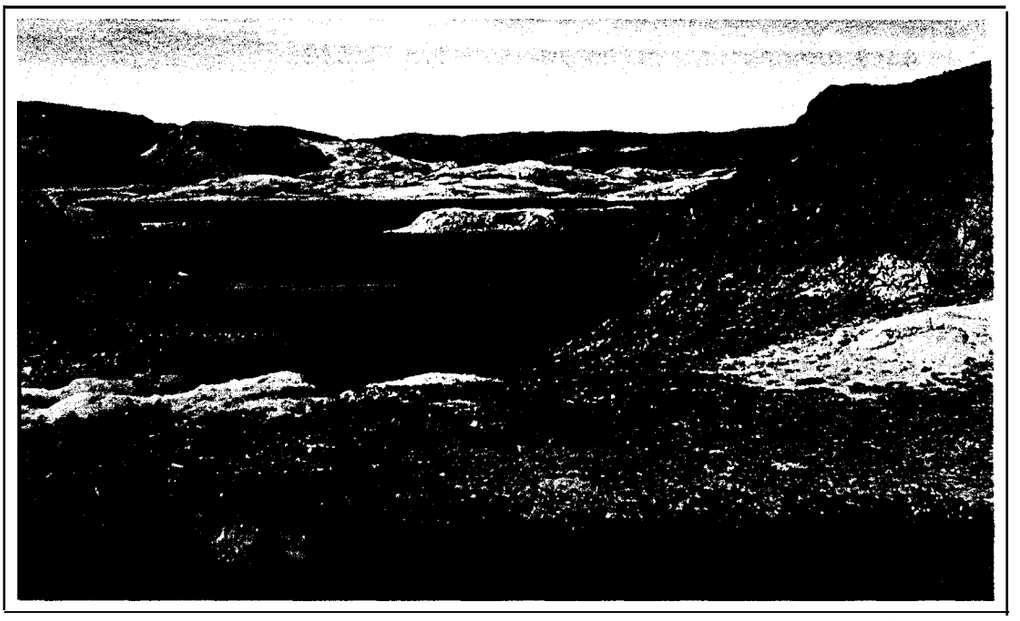
Raptors are also a significant part of the bird life of the area, especially peregrine and gyrfalcons which are found locally in 'relative' abundance. The gyrs prefer nesting on or near the coast, while the peregrine prefer inland sites along the cliffs of the Soper Rivervalley. Rough-legged hawks and snowy owls have also been reported in the area but are not common.

Arctic char are the major fish species of the area and are an important local food resource. They can be landlocked (confined to lake water), lake dwelling (preferring fresh water) or anadromous (migrating to the ocean each June and returning to fresh water each September).

Scenery

The scenic resources of the Soper study area are significant in a national context. The area encompasses a great diversity of Arctic landscapes: the rocky coastline along the outlet of the Soper, sand bars near the river mouth and in Soper Lake, the broad lower river valley, narrow incised upper river valley, numerous waterfalls and rapids, and barren ice-scoured upland areas. A variety of vantage points are also readily accessible to the visitor, creating significantly different viewscapes i.e. from the river, from the lower valley slopes, and from the main valley ridge on the uplands. Some of the most significant scenic aspects of the area include:

- moderate relief providing highly scenic vistas, viewpoints and excellent hiking that is well within the range of the moderately fit;
- Mt. Joy, a dominant landscape feature, isolated by its location between the Soper River and one of its major tributaries, the Joy River;
- a noteworthy example of the attractive, sharply defined valley walls that dominate the river corridor, at a site locally known as Sujugiituq ('where you can't walk') (see Fig. #3);
- abundant attractive waterfalls, side creeks and rapids;
- two majorwaterfalls in the upper reaches of the river: Livingstone River Falls at the base of the Soper Valley wall - a spectacular sight with the falls almost a hundred metres across and approximately 10 metres high; Cascade Creek Falls, higher on the valley side which have etched a free drop of approxirnately30 metres out of the rocky valley walls (see Fig. #3);

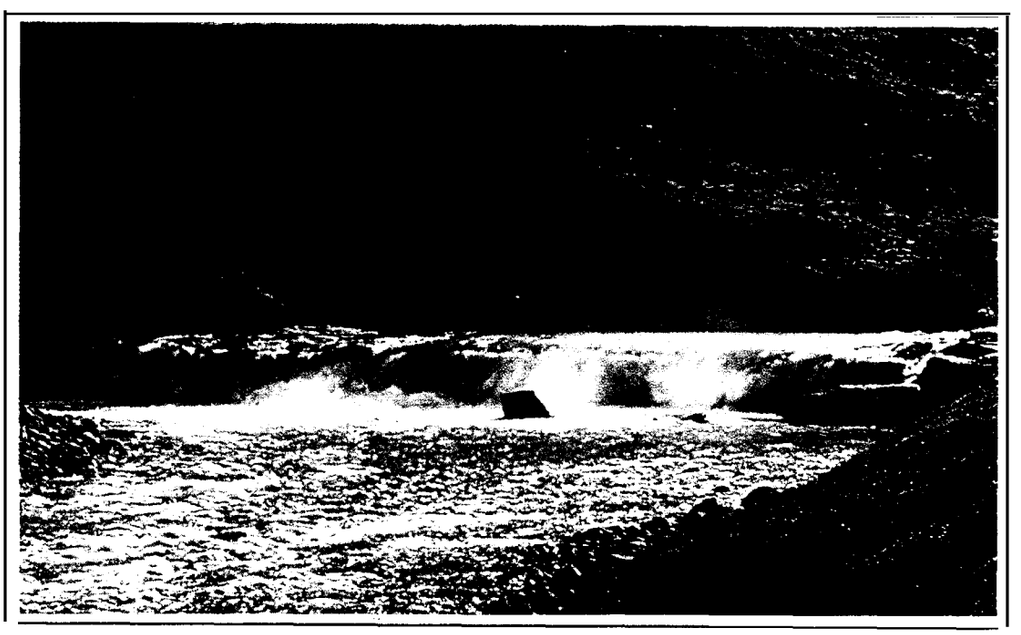


(Photo: B. Downie)

Looking westward across Soper Lake

- the mouth of the Soper River, channeled through a massive, white limestone chute and into Soper Lake (see Fig. #3) . The river at this point is impassable by boat and a portage route parallels the rapids; and

- a set of reversing falls driven by the force of the tides which rise over 10 metres at the outlet of Soper Lake to the ocean (see Fig. #3).



(Photo: B. Downie)

The Livingstone River Falls

4.2.2 **Assessment of Natural Heritage Values**

Purpose of Section: to identify which of the natural heritage selection guidelines appear to be met by the river, by quoting **each** guideline and briefly describing the natural heritage values that appear to meet them.

The Soper River drainage area demonstrates a number of representative and exceptional characteristics that reflect the interests identified in the CHRS natural heritage value guidelines. Each of the guidelines is noted below followed by an explanation of the associated relevant attributes of the Soper River system. Each of the four natural heritage value guidelines is met.

.is an outstanding example of river environments as they are affected by the major stages and processes in the earth's evolutionary history which are represented In Canada. This would include rivers which best represent the major periods of geological time In which the surface of the earth underwent major changes and stream modification

The Soper River satisfies this criterion.

In few other areas of Canada is the Precambrian landscape so openly and clearly displayed. The 1,750 million year old foundations of this area are truly a symbol of the earth's evolutionary history. The massive scale of metamorphism, folding and faulting that are integral to that history, are evident ail along the river corridor in exposed bedrock formations, bare of the kinds of vegetation that mask these formations in parts of the Precambrian Shield close to the major populations of southern Canada. As a result, occurrences of a wide variety of minerals such as graphite, garnet, marble, soapstone, mica, quartz and feldspar that also make the area geologically remarkable are readily seen and of great interest. In particular a rare internationally significant deposit of Lapis lazuli is noteworthy.

Evidence of glaciation is found all across the highland areas lining the valley. The nature of the relief, smooth rounded bedrock, striations and small accumulations of glacial drift, all provide evidence of the glacial action that are readily visible to the visitor. Close to the centre of the Wisconsin glaciation, the area was deglaciated as recentiy as 8,300 years B.P. making the transition from ancient structural history, to recent landscape alteration, to life on the surface today, both readily available and exciting to experience.

.Is an outstanding representation of significant ongoing f luvial, geomorphological and biological processes. As distinct from the periods of the earth's development this focuses upon ongoing processes In the evolution and form of the rlver and Its associated plant and animal communities

The Soper-River satisfies this criterion.

The Soper River drainage is an outstanding representation of both geomorphological and biological processes. Significantly the candidate area . includes the entire river drainage from the headwaters on the Meta Incognita Peninsula to its eventual discharge into the ocean. This ecological unity is strengthened even further when the relatively large size and scale of the basin compared with others along the south coast of Baffin Island are considered. The character of the landscape evolution processes as evidenced by the erosion of the valley walls, the tributary waterfalls and canyons, the differential erosion forming landmark mountains alongside the river and the prominent river terraces along the lower half of the valley, will make a valuable contribution to a representative national system of rivers.

In addition, the biological richness of the valley, makes the Soper River valley an important example of the ecosystem of the southern Baffin region. This rich environment displays the full variety of plant species typical of the region. Similarly an extremely wide range of wildlife species is present although a number of species tend to be occasional visitors as opposed to seasonally common or resident. The extension of the area from highest uplands to the coast, further adds to the Soper's value as a candidate Canadian Heritage river. Classical examples of ecological relationships such as those involving the falcons, ptarmigan, foxes, lemmings and willow exist in the Soper Valley.

.contains along its course unique, rare or outstanding examples of natural phenomena, formations or features, or areas of exceptional natural beauty

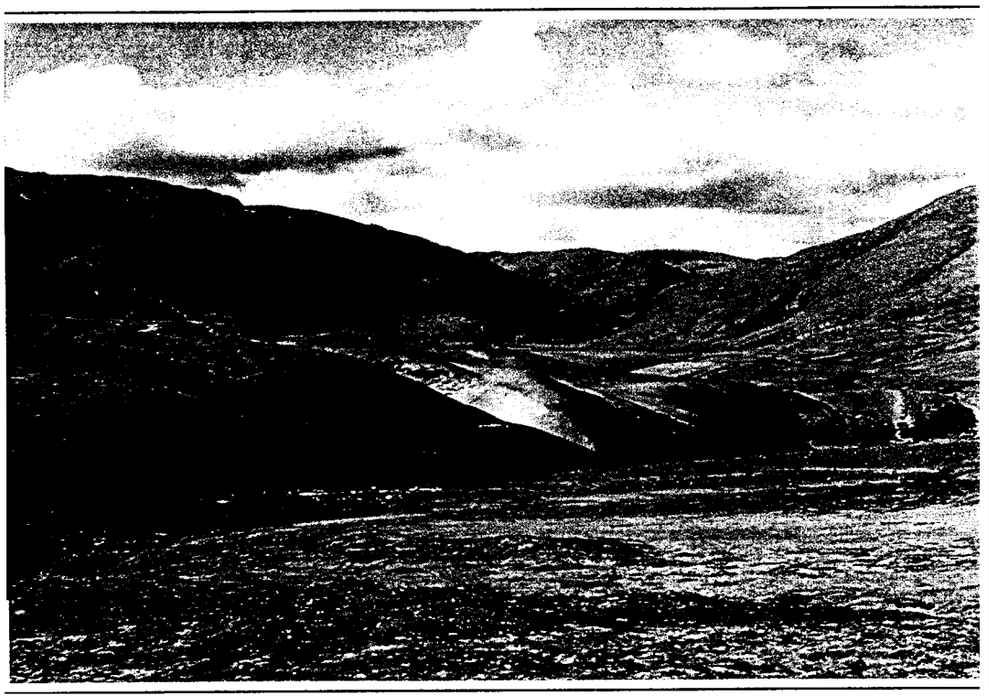
The Soper River satisfies this criterion.

Certainly Soper Lake is an outstanding, if not rare, example of a meromictic lake and coupled with the reversing falls at the southern outlet, it is a natural feature and phenomenon worthy of recognition. Similarly the river terraces of the Soper Valley can be considered outstanding examples of that landform, particularly two well developed examples near the confluence of the Livingstone and Soper rivers with elevations of 24 and 34 m.

In addition, the area is scenically outstanding within the region. Both the lushness and colour of the vegetation and the colour and variety of the rock contribute to this appeal. However, the extent and character of the relief in the area is perhaps even more significant. Cliffs along the valley walls and innumerable waterfalls and rapids in both the main river channels and the small tributary creeks make the Soper basin an especially scenic place.

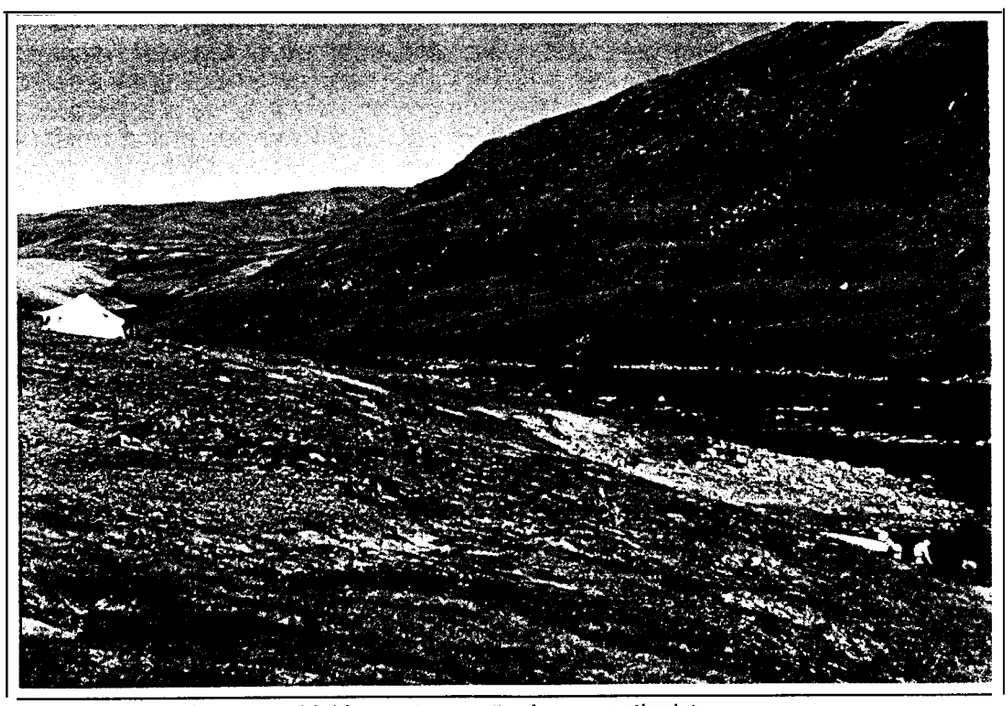
*** contains along its course habitats of rare or endangered species of plants and animals. This would also include areas where outstanding concentrations of plants and animals of Canadian interest and significance are found**

The Soper River satisfies this criterion,



(Photo: B. Downie)

The area at the confluence of the Livingstone River with the Soper River



(Photo: B. Downie)

The Soper River is a pure drinking water source for recreationists

It is the concentration of biological resources in the Soper River drainage that is its most outstanding characteristic. The richness of the valley in terms of the diversity and numbers of both plant and animal species brought out by the micro-climate provides a unique environment in the arctic islands. Plant species include mountain sorrel, buttercups, arctic poppy, yellow mountain saxifrage, crowberry, Labrador tea, arctic heather, lapland rosebay, bearberry, bilberry, cranberry, and harebells. The most significant population densities among the animal species are the lemmings, ptarmigan and caribou. Individual species with impressive characteristics are also present. The most significant is the occurrence of willow growing over 3.6 m tall in this northern latitude, 800 km north of the treeline. Also the relatively abundant presence of falcons, elsewhere endangered, is a valuable asset of the area.

4.2.3 Natural Integrity

Purpose of Section: to describe how the river appears to meet the natural integrity guidelines.

.rivers should not have any man-made impoundments within the nominated section

The Soper River satisfies this criterion since no man-made impoundments exist within the watershed.

.all key elements and ecosystem components must be unaffected by impoundments located outside the nominated section

The Soper River satisfies this criterion since the watershed, which is free of impoundments itself, is included in the nominated area. Thus no activities external to the area could affect the drainage system.

.natural values for which a river is nominated must not have been created by impoundments

The Soper River satisfies this criterion since no man-made impoundments exist within the watershed.

.the river's outstanding natural heritage features and key elements of ecosystems must be unimpaired by human land uses

The Soper River satisfies this criterion since no land based resource use other than hunting and trapping takes place on the entire peninsula. These activities are not considered to have had a detrimental impact on the natural ecosystem at the present time. The Soper River is a virtually undisturbed river system. A reservation for extraction of minerals at the Lapis lazuli site has been requested as part of the iand claim settlement with provisions for all environmental considerations to control the possible extraction and transport of ore.

*** the river's water must be uncontaminated to the extent that its natural aquatic ecosystem Is intact**

The Soper River satisfies this criterion since no active land use other than seasonal travel takes place within the watershed. The water quality in all the drainage basins on the peninsula is assumed to be pristine. There have been no water quality or flow monitoring stations established, nor has any intermittent documentation been established for the Soper River system. No alterations to the water course at any point along the full length of the nominated section is or ever has been undertaken.

4.3 Human Heritage Values

4.3.1 Description of Human Heritage Values

Purpose of Section: to describe the outstanding human heritage features of the river and its immediate environment.

Although the cultural resources of the Soper Valley are considered to be secondary to natural heritage values with respect to this CHRS nomination, they are nevertheless significant at least in a regional and territorial, if not national context. The cultural history of the area can best be described under five theme groupings, each discussed below.

Travel

By virtue of its size and relative navigability, the Soper River was consistently used as the main travel corridor to inland destinations and even some other areas along the coast. The list of locally named landmarks along the valley is clear evidence of this use (see Soper River CHRS Background Study). Of utmost importance was the access the valley provided to caribou hunting areas.

The valley provided access to other varied destinations for different purposes. In earlier times the valley was used to reach Amadjuak Lake, a rendezvous point where Inuit people from the Cape Dorset, Iqaluit and Lake Harbour areas would meet in the spring or early summer. A dog-sled route to Iqaluit (now mostly used by snowmobiles) also follows the valley, veering off to the east up and over the plateau just past Mt. Joy. Another dog-sled route passes through the area heading northwest from Soper Lake over to Markham Bay also on the coast. This is the site of a large outpost camp used up until the early 1960's and still used as the primary soapstone quarry for the community of Lake Harbour. Although travel to the Markham Bay area is mostly by boat, stone quarried in the summer is often stored on the site to be retrieved in the late winter by snowmobile.

Another important aspect of the Soper River access patterns relates to the outlet of Soper Lake to the ocean. Since the tidal rapids clear the channel of ice in spring often three weeks earlier than in Westbourne Bay, the people of Lake Harbour use Soper Lake as an early season access route to the sea.

Subsistence

Although the Inuit were primarily a maritime people, exploiting the resources of the sea, they were opportunists taking advantage of the full diversity of resources available to them including those on the land. This maritime focus goes back centuries. The Lake Harbourregion is one of the best studied areas for its Dorset period archaeological sites. There are many excavated sites in close proximity to the Soper River system, although all are coastal sites. Study of these sites has led to the conclusion that this area may have been one of the core areas for Dorset technology due to the minimal distinction between Pre-Dorset and Dorset artifacts. Evidence of habitation here extends to4000 years BP. It is possible to speculate on the on-going importance of inland sites such as the Soper Valley throughout this period, although inland sites have not been documented. Moreau Maxwell describes the animal remains typical of the period 700 BC to 60 AD: "in a rough estimate, seventy percent of the animal bones come from the smaller seals and twenty percent from caribou. The remaining ten percent include ducks, geese, the bearded seal, walrus, polar bear, beluga, right whale . . . and fox." (Maxwell, M.S. 1973)

Concentrations of the necessary resources made the Soper Valley an important location of inland activities. Stone weirs were used to fish for char in the river in the summer and char and cod could be caught by jigging through the ice in the spring. The Soper Valley was always a focal point of caribou hunting activity, especially when caribou were scarce and long trips inland were necessary. Smaller game hunted for food and clothing included arctic hare, arctic fox, and ptarmigan. Berrypicking was prominent in the late summer, the berries in the valley being the biggest and best in the region. Many roots and plants were also gathered for a wide variety of uses (see GNWT, 1991). This pattern of subsistence use has continued to the present day, although the extent of activity has lessened, along with the decreased reliance on a subsistence lifestyle.

There is little archaeological evidence of these subsistence activities since no systematic surveys have been conducted inland. One old campsite located about half way up the valley is well known locally and would appear, by lichen and surrounding plant growth, to be at least of Thule origin.

Pre European Settlement

Contact between the Inuit of the Lake Harbour region and the European fur traders and explorers occurred as early as the late seventeenth century. Hudson's Bay Company supply ships on route to destinations in Hudson Bay would follow the north coast of Davis Strait to avoid pack ice and were met by people from the region wanting to exchange skins for ammunition, food or other commodities. The late 1800'sbrought the whalers to the region and in 1898 the Scottish whaling ship the 'Active' set up summer headquarters in the Lake Harbour area. With a declining whaling activity, however, the whalers established a small mica mining industry which utilized a warehouse and employed a number of local people. About 17 tons of mica from the Soperdrainage area were ready for shipment by the end of the 1903 season with additional supplies of graphite and garnet also being mined. The effort didn't last and by 1912 the operation was abandoned.

of graphite and garnet also being mined. The effort didn't last and by 1912 the operation was abandoned.

Post European Settlement

It was the arrival of Rev. E. J. Peck, J.W. Bilby and A.L. Fleming in 1909 that marked the enduring white contact in the area. They came to establish an Anglican mission, originally constructed on the site across the bay from the current settlement. Subsequently, in 1911, the Hudson's Bay Company established their second trading post in the eastern arctic in Lake Harbour. This was a major incentive for the first trapping activity, particularly of fox, in the area.

Similar to other communities where other activities were undertaken to diversify the Hudson's Bay Company interests, in the late 1920's, the Company started a resurgence of the earlier mining activity. Several hundred mining claims were staked in the area around Lake Harbour, with the focus as before on mica, with some work on graphite and garnet. Numerous test pits are still in evidence around the community and along the shores of Soper Lake and the Soper River.

The Lapis lazuli site was staked in 1958 by Trans-World Mining and Exploration Ltd. thinking it to be composed of azurite. When its true composition was described, the claims were allowed to lapse. The site is currently being claimed by the Inuit, as part of their land claim settlement, for future consideration.

Today the village of Lake Harbour is home to some 350 Inuit who have evolved a lifestyle that effectively combines the traditional and the contemporary. Snowmobiles have in large part replaced dog teams, but they still carry the Inuit seasonally to the floe edge for harvesting marine mammals or to inland areas for harvesting caribou. Carvers utilize attractive green soapstone from a site between Lake Harbour and Cape Dorset to create works of art featuring subjects of importance to the people of this area, both past and present. The carvers and carvings from this part of South Baffin are internationally renowned.

Dewey Soper

Dewey Soper was a relatively short term resident of Lake Harbour from 1930-1931. He was commissioned by the federal Department of the Interior to conduct zoological investigations and exploratory surveys in the vicinity of Lake Harbour. He built Soper House in the fall of 1930 with the help of four local Inuit and two employees of the Hudson Bay Co. The building remains in use today with relatively minor alteration from the original design and construction. Soper conducted asurveyof the river valley in the early summer of 1931 as far north as 63 degrees 15 minutes (as far as the height of navigation). His notes included records of crystalline limestone deposits, massive river terraces, Canada geese nesting areas, the abundance of rapids and waterfalls, the river gorges, the impressive rugged scenery, caribou populations and the abundance of arctic hares. But in particular he noted the luxuriant plant growth, the presence of willows the size of trees and the abundance of wildflowers.

Soper had a distinguished career as naturalist and was the author of numerous books and articles focussing particularly on wildlife. Born near Guelph, Ontario, he was a member of the Canadian Arctic Expedition in 1923 ' as the National Museum's resident naturalist. Among his other activities were included research on the nesting grounds of the blue goose, bison research in Wood Buffalo National Park and an appointment as the Chief Federal Wildlife officer for Alberta, Yukon and the Northwest Territories. Dewey Soper died in 1982 at the age of 89 in Edmonton, Alberta. His prominence and relationship to the area resulted in the naming of Soper Lake and the Soper River after him.

4.3.2 Assessment of Human Heritage Values

Purpose of Section: to identify which of the human heritage selection guidelines appear to be met by the river, by quoting each guideline and briefly describing the natural heritage values that appear to meet them.

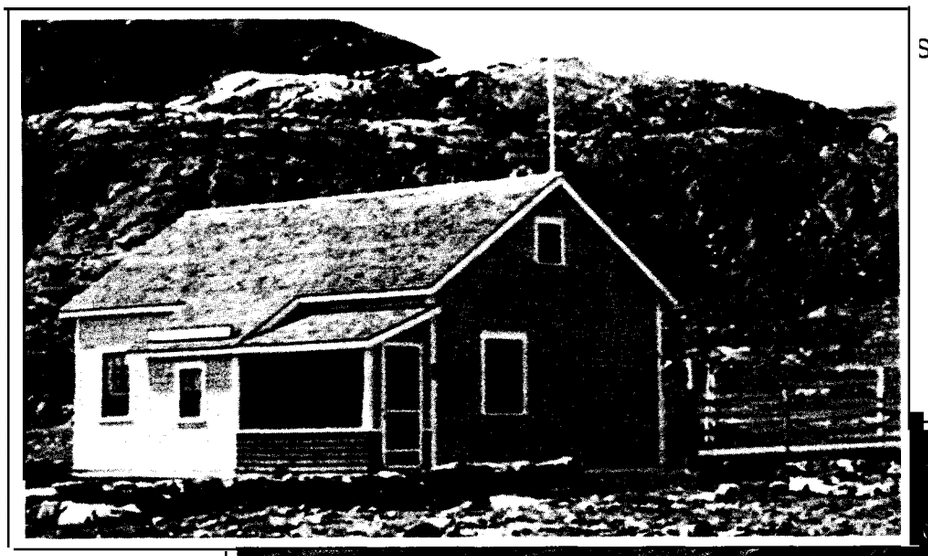
The human heritage values of the Soper River are considered to meet the first two of the guidelines for CHRS nomination. The latter two guidelines may be met following further research. Comprehensive documentation of the full extent of these resources has not been undertaken to date, either in the individual disciplines and subject areas discussed in the historic resource description, or in the field surveys specific to CHRS studies. What information is available suggests that human heritage values are an important part of the overall value of the Soper River to the CHRS but may not be independently sufficient to warrant nomination. In conjunction with the natural heritage values noted previously, however, those human heritage considerations strengthen the candidacy of the Soper River as a Canadian Heritage River.

The assessment of the human heritage resources in relationship to the established CHRS guidelines is described below. The first two of the four guidelines are met by the Soper River, while the last two are partially met.

. is of outstanding Importance owing to Its Influence, over a period of time, on the historical development of Canada through a major impact upon the region In which It Is located or beyond; this would include its role in such significant historical themes as native people, settlement patterns and transportation

The Soper River satisfies this criterion.

Perhaps the strongest aspect of the Soper River corridor is its influence on the native people of the region and the historical development of their settlement, activity and transportation patterns. Most importantly the area was essential for hunting, providing caribou, ptarmigan and hare for food and clothing, as well as for yielding berries and many other plant materials. As a summer camp, the valley was a critical part of the yearly cycle of life for the Inuit people. Furthermore it represents one of the few overland travel corridors known to have significance to these maritime people. The Soper River corridor can contribute significantly to the CHRS, by adding an excellent example of the use of inland routes and coastal areas by the Baffin Region Inuit, better than any other river in the Baffin Region.



(Photo: National Archives of Canada)

Soper House, Lake Harbour

(Photo: B. Downie)

Archaeological site along the Soper River: tent ring

Broader significance of this same theme is encompassed in the parallels between recent Inuit cultural activity and the Pre-Dorset and Dorset people living in the region centuries before. Although there is little written documentation at present linking the lifestyle of these people with the Soper River valley, there inconsiderable evidence to suggest such a connection. Furthermore, the strong link between the Pre-Dorset and Dorset cultures in this particular region is an important element of Canadian cultural history.

- Is strongly **associated with persons, events, movements, achievements, ideas or beliefs of Canadian significance**

The Soper River satisfies this criterion.

The Soper-River valley is most strongly associated with the activity of Dewey Soper after whom the river and the lake were officially named. He was a prominent Canadian figure in his field and was recognized with an honorary

Law degree from the University of Alberta in 1960, the Commissioner's Award (NWT) in 1978 and the Douglas H. Pimlott Conservation Award in 1980. The , Lake Harbour area also played an important part in the development of the Hudson's Bay Co. in the eastern arctic near the turn of the century. Today the population of Lake Harbour includes an impressive number of artists whose carvings in green soapstone from the local region enjoy a national and international reputation.

• contains historical or archaeological structures, works or sites which are unique, rare or of great antiquity

The Soper River partially satisfies this criterion.

One key **archaeological site along the river has been identified but not studied and no formal** survey of the valley has *been* conducted. What is known of the use of the area and the resources that exist, suggests that rare and valuable sites exist in the valley but the extent and significance of their occurrence is undocumented. Further research is greatly needed in this regard.

Other historic structures representing some of the earliest buildings in Lake Harbour also still stand within the community. Although not within the CHRS **corridor they represent historic activity directly associated with Soper Lake and** Soper River.

• contains outstanding examples or concentrations of historical or archaeological structures, works or sites which are representative of major themes in Canadian history

The Soper River partially satisfies this criterion.

With respect to extant resources of the Soper River valley relating to its cultural heritage, less is known. Tent sites which may have been very common throughout the valley from Thule times or even earlier have not been adequately studied. Many of these sites may have been used right up until recent times, making archaeological assessment of their importance or of other previous occupations and use extremely difficult. While the themes are important in the Canadian context, the evidence is scanty. Considerable research in the valley focusing on the cultural resources and historic use of the area would be extremely valuable.

With respect to the mining activity of the area physical evidence is more readily available. This theme in the Canadian context, is less significant but the mining of mica and the association of this industry with the Scottish whalers and the Hudson's Bay Company are at least significant at the Territorial level (P. Goldring, corresp. April, 1991)

4.3.3 Historical Integrity

Purpose of Section: to describe how the river appears to meet the historical integrity guidelines.

in addition to meeting at least one of the above guidelines, for a river to be judged to have outstanding Canadian human heritage value, it should possess all of the following historical integrity values:

.In every case consideration should be given to the state of preservation of the river environment relative to Its visual appearance during the historic period In which the waterway is considered to be of outstanding Importance

- most of its regime should have the same visual appearance as it had during the period of the river's historical importance; and

- most of the artefacts comprising the values for which the river is nominated must be unimpaired by impoundments and human land uses

The Soper River satisfies this criterion since no other land use beyond traditional subsistence and recreational activity and no man-made impoundments exist within the watershed.

.neighboring land uses must not serlously affect the historical experience offered by the river environment

The Soper River satisfies this criterion since no other land use beyond traditional subsistence and recreational activity exist within the watershed.

.the biophysical quality of the water must be suitable for non-contact recreation

The Soper River satisfies this criterion.

As recognized in the assessment of the natural heritage integrity, the Soper River valley is virtually pristine. It has all the physical and visual characteristics that it had centuries ago and presents an outstanding opportunity for people to experience the historic and prehistoric environment.

No land based resource use other than hunting and trapping takes place on the entire peninsula and no active land use other than seasonal travel takes place on the river. Thus the water quality in all the drainage basins on the peninsula is assumed to be pristine. There have been no water quality or flow monitoring stations established nor has any intermittent documentation been established for the Soper River system. No alterations to the watercourse at any point along the full length of the nominated section is or ever has been undertaken.

The minimal activity that does continue in the valley may have had some impact on the presence of other historical resources within the corridor. Insufficient research has been undertaken to establish the probable extent of these resources or the level of impact resulting from the valley's continued used **for travel, subsistence and recreation.**

It is clear from the apparently pristine character of the area that the human heritage integrity guidelines of the CHRS are met by the Soper River and its major tributaries.

4.4 Recreational Values

4.4.1 Description of Recreational Values

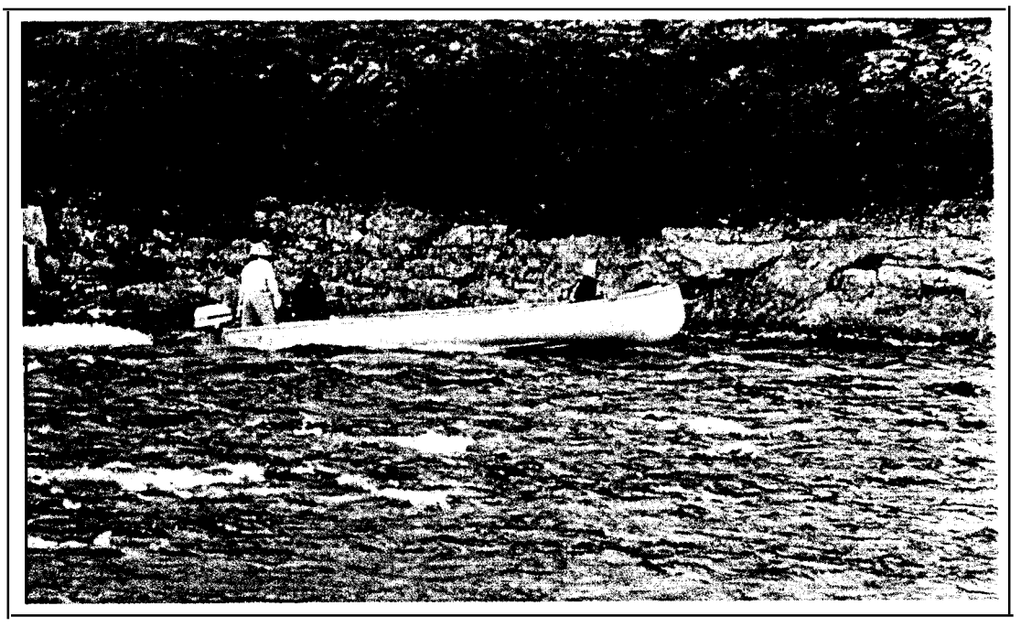
Purpose of Section: to describe the outstanding recreational features of the river and its immediate environment.

The recreational potential of the Soper valley is very high and this potential is currently being recognized in the intended establishment of the Kuujuaq Territorial Park. Both the park proposal and CHRS corridor nomination reflect the potential of the river and the valley to support a variety of recreational activities for a wide range of visitors. The activities described below have been categorized according to orientation towards the river or towards the upland area associated with the river and the major tributaries being nominated for CHRS status. Although the majority of visitor use will occur during the summer, there are also rewarding recreational opportunities available during the winter months, particularly in the spring. The following descriptions summarize the recreational pursuits possible in the area. Other than local activity by the people of Lake Harbour, there has been little recreational use in thevalleytodate. Only in the last two or three years has any recreational activity taken place and one or two parties totalling 20 people at the most have used the river each year (B. Downie, pers. comm.) Local use on the other hand has been and continues to be extensive. The most use is in the spring when the river valley is accessible by snowmobile. Hunting (ptarmigan and caribou) and travel to Iqaluit are the primary activities. The lower portion of the river is also used fairly extensively in the fall. Then the activities are caribou hunting and berrypicking as well as general recreation. The discussion below primarily concerns the recreational potential.

River Oriented Activities

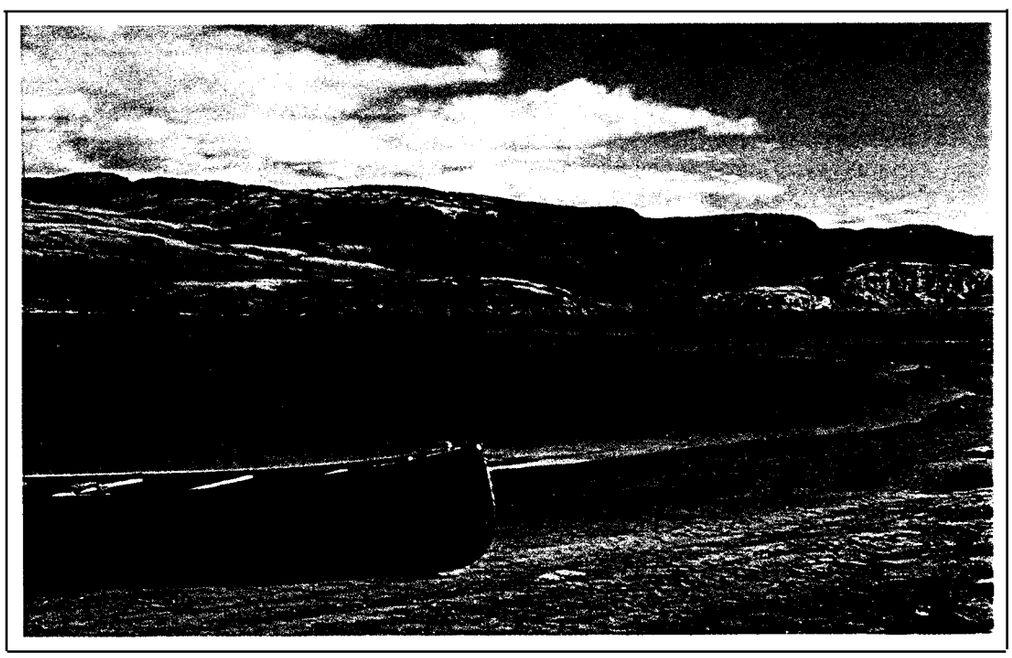
As only a few rivers in the southern Baffin region are even partially navigable, the Soperis unique. It can be traveled the furthest inland of all south coast rivers and offers superb scenery along its length. Canoeing, kayaking and rafting are all possible along its course south of Mount Joy. Portaging is necessary at certain points depending upon the seasonal water levels and the skill level of the recreationists. There is an abundance of convenient camping spots for river travelers on the sandy river terraces that line the river bottom. Wildlife is commonly sighted from the river, particularly caribou and raptors. Fishing for arctic char in the rivers and upland lakes and for Greenland cod in Soper Lake is popular with local residents, as the fish are abundant here.

The river corridor also provides excellent opportunities for guided tours by motorized canoe up the river on a day use and overnight basis. This form of travel originating in Lake Harbour, and including short excursions off the river to points of various interest as an essential component of the trip, will have the broadest appeal and the greatest potential for visitor use. Similarly, Soper Lake offers excellent potential for boat tours.



(Photo: B. Downie)

Boating on the Soper River



(Photo: B. Downie)

Excellent opportunities to explore along the shores of the Soper River

Although boating is not possible during eight months of the year, fishing remains a popular pastime year round. Ice fishing is a common spring activity for the residents of Lake Harbour. At this time, the days are long, **the sun warm and the ice not too thick, allowing easy penetration of the auger.**

Land Oriented Activities

A variety of land oriented recreational activities will be readily promoted in the Soper valley. Travel on foot will be a primary form of travel in the area. Hiking through the valley and onto the upland area is a rewarding experience offering diversity and contrast in hiking terrain. The unusually lush vegetation, abundance of wildlife and attractive waterfalls combined with scenic vistas and wildflowers make the valley a wonderful place to pursue photography and nature study. The abundance of interesting minerals and the presence of the gemstone lapis lazuli will also feed the interests of confirmed and budding geology buffs.

In wintertime the land takes on a whole new character as does the related land based recreation. Although recreation is possible throughout the winter months, the majority of activity occurs during the spring when the days are long and the snow crisp. Cross-country skiing up the valley will offer spectacular scenery with only a low level of difficulty. Both dog team travel and snowmobiling are rewarding forms of travel up the valley in the winter and both will be encouraged in the management plan to follow.

Activity Areas

Although essentially a linear corridor, there are many areas of the Soper valley holding considerable interest and potential for extended recreational activity beyond the river valley. Three significant locations have been recognized for their attractiveness and their proximity to concentrations of resources or access to other areas of high recreation potential. it is intended that the existing recreational potential be enhanced with the provision of basic facilities. The three areas are identified and described below and located on Map #3.

Soper Lake Activity Area:

This area includes Soper Lake and the rapids at the mouth of the river. This area will receive relatively high use levels due to its proximity and potential for overland access from Lake Harbour. it is a highly scenic area and provides excellent opportunities for hikes to other points of interest. Access to the western portion of the area will require boat travel in summer. Both to the east and west, river systems on the uplands above the Soper Valley contain many beautiful lakes and waterfails.

Livingstone River Activity Area:

This activity area focuses on the junction of the Livingstone River and the Soperand extending to the west. The falls on the Livingstone River are a major attraction of the area. The uplands to the west just beyond the main valley are both attractive and readily accessible. The area contains major river terrace formations, extensive willow growth and habitat for a wide variety of wildlife.

Cascade Creek Activity Area:

Cascade Creek drops from the uplands to the east over a 30 m cliff and through a “series of scenic rapids. interesting vegetation and wildlife are abundant and the hiking potential in the upland areas as weli as along the Soper River-is excellent. The mouth of Cascade Creek is aiso considered the most consistent starting point for river trips down the Soper due to the suitability of

water levels. The upper reaches of the river can be explored from here before descending by boat.

Other Factors Increasing Recreational Potential

The Soper valley is generally several degrees warmer than other areas in southern Baffin due to the unique microclimate of the Lake Harbour region. Weather conditions in the valley also tend to be better than those in the community of Lake Harbour by virtue of the river stretching inland away from the more foggy and cloudy coastline. Winds are often less fierce although high winds do persist at certain sites in the valley.

Accessibility is one of the valley's greatest assets. There is regularly scheduled air service from Iqaluit to Lake Harbour three times each week. Since Iqaluit has direct service from Montreal and Ottawa, the Soper River is more readily accessible to the majority of Canadians than is almost any other area of the Arctic islands. Access from the community to the valley is either by boat, air or on foot. Overland access to the upper Soper Valley is from Iqaluit by boat in the summer and by ski or snowmobile in the winter and spring seasons across Frobisher Bay.

Infrastructure in Lake Harbour, although minimal, is adequate for the initially expected levels of use. The Kimik Coop Hotel has 16 beds, and the Coop and the Baystoresstocksupplies and souvenirs. Lake Harbour, also has three trained guides and one existing outfitting company to serve the needs of visitors. Scheduled air service is available from Iqaluit.Iqaluit is a full service regional centre offering direct aircharterservice to landing sites along the river. There is also a variety of outfitting services available there.

The Lake Harbour area possesses a variety of other complementary visitor opportunities related to a rich array of natural and cultural features. Many sites can be reached in short half day and day trips (the R. C.M.P. station across Westbourne Bay from the community, the Anglican church in town, the Hudson's Bay Company Buildings at the northern end of town, and scenic McKellar Bay to the east of the community) as well as longer trips to destinations beyond the community (Thule sites along the coast and the soapstone quarry at Markham Bay). In addition, wildlife viewing along the coast has great potential. Species such as beluga and bowhead whales, ringed and bearded seals, king eider ducks and polar bears could all be viewed around the community and along the south coast.

Soper House is a significant historic structure of interest within the community. It is proposed that itserve as a visitor reception centre forthe area. This building is a two story frame house built by Dewey Soper in the fall of 1930 to serve as his base of operations for his year of survey work. The house is located in the centre of town in a clearly visible and central position, readily accessible to visitors. Over the years the building has served a number of purposes, including the nursing station. It is currently used as office space by the Housing Corporation. An agreement has been reached to turn the building over for park use subsequent to the development of a new warehouse and office complex for the Housing Corporation. The centre would interpret the resources of the Soper Valley and highlight the nomination of the river to the CHRS.

4.4.2 **Assessment of Recreational Values**

Purpose of Section: to identify whether or not the two selection guidelines for recreational values appear to be met by the river and, if so to quote the guidelines and briefly describe how the river's recreational values appear to meet these guidelines.

Recognizing that the man-land relationship is of great **importance** in recreation, outstanding recreational value will be recognized when a river environment meets the following general guidelines:

.possesses an appropriate combination of recreational opportunities and related natural values which together provide a capability for an outstanding recreational experience:

- recreational opportunities include such activities as boating, hiking, swimming, camping, wildlife viewing, and human heritage appreciation;

- natural values Include natural visual aesthetics, that is, diversity and quality of scenic beauty and physical essentials, such as sufficient flow, navigability, rapids, accessibility and suitable shoreline

The Soper River is considered to satisfy this criterion.

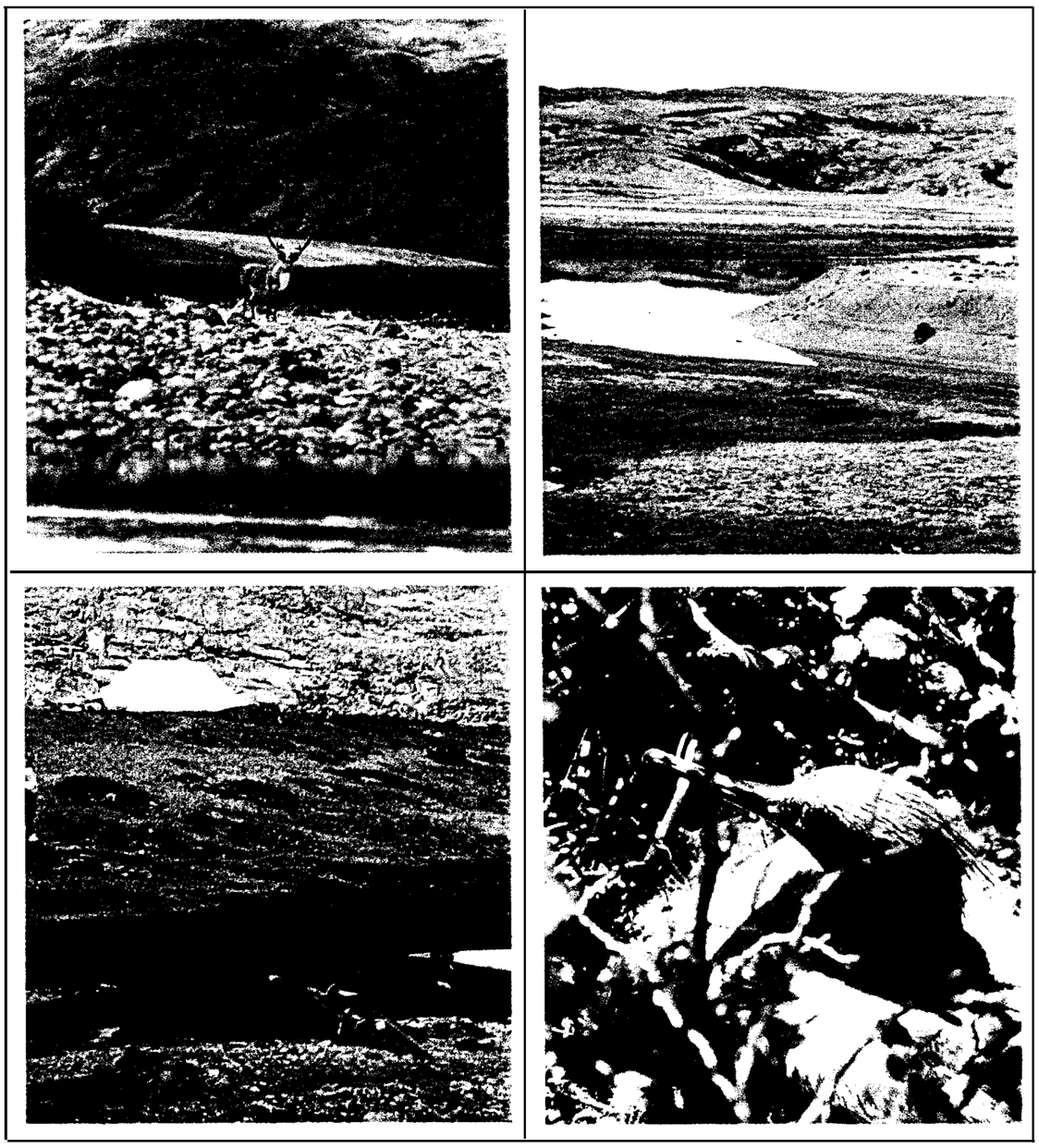
The recreational potential of the Soper River valley is exceptional. Not only is this true in terms of the diversity and quality of the recreational experiences it provides, but also by comparative terms with other areas throughout the eastern arctic. The area is unique in its ability to provide an inland, river boating experience of such diverse character. It is also unique in terms of the concentration of wildlife and the lushness of vegetation that it supports. These characteristics make the valley an enjoyable and manageable recreational experience for a wide range of visitors.

Many exceptional features are of particular interest and are readily accessible to the visitor such as the reversing falls, spectacular waterfalls and rapids, the impressive willow growth and the variety of mineral deposits in the area. Scenically the Soper River valley is unmatched in the southern Baffin for its diversity, colour and inviting character.

Of special interest is the cultural heritage of the area. The continued use of the valley by local Inuit and their participation in the visitor experience will enrich the memories of the Soper River. The pristine qualities of the environment, retaining the historical integrity of the river environment adds to the experience of heritage appreciation. Campsites all along the river are vivid reminders of the historic and present use of the area and bring the visitor in closer touch with the true character of the valley.

By comparison, the *only* other major park or designated wilderness recreation area on southern Baffin Island is Auyuittuq National Park Reserve on the Cumberland Peninsula. The extremely rugged landscape of Auyuittuq demands afar higher level of physical fitness, skill and preparedness than does

the Soper Valley and serves a much more restricted visitor market. While the glacial landscape of Auyuittuq may be more dramatic, and a distinct attraction for specific user groups such as mountaineers, the vegetation and wildlife of the national park are not as rich as in the Soper valley. Human heritage resources in the primary visitor area of the national park are also minimal. Finally, Auyuittuq is much less accessible requiring a boat trip to reach the park which is dependent upon open water conditions in the fiord and is very susceptible to weather conditions both for feasibility and comfort.



.be capable of supporting recreational uses without significant loss or Impact on its natural, historical or aesthetic values.

The Soper River is considered to satisfy this criterion.

Levels of recreational use within the Soper River valley are expected to be consistent with the wilderness character of the corridor. It will be an important objective of visitor management in the area not only to maintain the quality of the natural and cultural resources of the area but also to retain the quality of the experience. Nearly the whole of the river corridor is easily capable of supporting considerably higher levels of use. Isolated sites, such as areas of major willow growth and nesting sites for falcons and geese are more vulnerable to indiscriminant use. Public education of appropriate use and management actions to ensure respect and protection of the resource values, will ensure maintenance of the resources and recreational qualities of the area.

4.4.3 **Recreational Integrity**

Purpose of Section: to describe how the river appears to meet the **recreational** integrity guidelines.

In addition to meeting both of the above guidelines for recreational values, for a river to be judged to have outstanding Canadian recreational value it should possess water of a quality suitable for those recreational opportunities for which it is nominated.

As indicated previously, no land-based resource use other than hunting and trapping takes place on the entire peninsula, and no active land use, other than seasonal travel, takes place on the river, all of which leave the Soper River a virtually undisturbed river system. Thus the water quality in all the drainage basins on the peninsulas assumed to be pristine. Visually as well as physically the quality of the water in the Soper River is definitely suitable for all forms of recreational activity, in fact it is suitable as a drinking water source for recreationists in the valley.

It should be noted, however, that there have been no water quality or flow monitoring stations established on the river nor has any intermittent documentation been established for the Soper River system. It is intended with increased recreational activity generated by the CHRS status that water quality monitoring will be undertaken. A local Tourism Committee of the Lake Harbour Hamlet Council, is interested in the recreational potential of the area and will monitor and advise on the ongoing issues with respect to increased use of the area.

It is clear from the pristine character of the area that all the recreation integrity guidelines of the CHRS **are readily met by the Soper River and its major tributaries.**

5. River Integrity

Purpose of Section: to describe how the river meets general CHRS integrity guidelines, with specific reference to values not addressed in the preceding integrity sections. The feasibility of maintaining the river's integrity may also be addressed

In addition to the specific heritage value and integrity guidelines, a river and its immediate environment must meet general integrity guidelines for designation to the Canadian Heritage Rivers System:

- they should be of sufficient **size and contain all or most of the key interrelated and Inter-dependent elements (elements are defined as resources or groupings of resources identified as having values essential to the nomination of a river) to demonstrate the key aspects of the processes, features, activities or other phenomena which give the river its outstanding value;**

The Soper River satisfies this criterion.

The entire watershed of the Soper River and its major tributaries, the Joy and the Livingstone rivers are encompassed in the area selected for nomination. The Soper is over 100 km in length with half of that distance being navigable. This represents by far the longest navigable river system in the region. The ecosystem characteristics that have developed will be sustained in this complete watershed system. Being identified as holistically as possible by including the entire length of the river, the area is almost totally independent and virtually self-sustaining with the exception of migratory animal species. These important ecosystem characteristics are the same characteristics that make the river corridor an exciting and interesting place to experience.

- they **should** contain those ecosystem components required **for the continuity of the species, features or objects to be protected;**

The Soper River satisfies this criterion.

The Soper River system is a natural system virtually untouched **by the** development or activity **of** man. The landscape, water and **air** exude this pristine quality, making the Soper valley an exceptional place to visit. As a ecological unit the watershed contains all the components necessary for sustaining these pristine qualities.

The management plan for this Canadian Heritage Riverwillprovide for the maintenance of these qualities through **a variety of** both resource and visitor management strategies. Public education **will** be **an** important **part of the** strategy since the area-will continue **to have a** wilderness focus and visitors will need to demonstrate *considerable* personai responsibility in the effective

protection of the area. Basic facilities at key activity areas as described previously will also provide the basis for concentrating use in appropriate areas. They will also provide the basis for more effective monitoring and regulating of visitor activity.

The plan will stress the importance of cooperating with other agencies and groups in the monitoring, research and management of the full range of natural resource values in the river corridor. For example, the Department of Renewable Resources along with the Lake Harbour Hunter's and Trapper's Association manage thewildlife populations of the area and cooperation in the context of river corridor conservation will be required.

- **the quality of the water should be such as to provide for the continuity and/or improvement of the resource upon which 'value' to the system has been determined.**

The Soper River satisfies this criterion.

As noted and described earlier, the water quality of the Soper River is suitable for drinking and assured to be pristine. Water quality testing will be conducted to establish a baseline water quality condition for the Soper River soon after inclusion in the CHRS. No developments are planned for the Soper River valley which could have any possible negative effect on the river's water quality.

6. Selected Bibliography

Purpose of Section: to identify the major literature sources used inthepreparation of this document.

Acres International. 1988. Baffin Visitors Survey 1988. Report prepared for Dept. of Economic Development and Tourism, G. N. W. T.: Yellowknife.

Bethune, W.C. 1934. Canada's Eastern Arctic: Its History, Resources, Population and Administration. Ottawa: King's Printer.

Blackadar, R.G. 1967. Geological Reconnaissance, Southern Baffin Island. District of Franklin. Geological Survey of Canada Paper 66-47. Ottawa: Department of Energy Mines & Resources.

Clarke Peter. "A note on the glacial geology and postglacial emergence of the Lake Harbour region, Baffin Island, N. W. T." in Canadian Journa of Earth Sciences Vol. 22, 1985, pp. 1864-1871.

GNWT. 1991. "Soper River Background Study: Canadian Heritage River System" Unpublished Draft Report. Prepared by the Department of Economic Development and Tourism, Iqaluit.

Goldring, P. 1987. "Joseph Dewey Soper (1893 - 1982)" Agenda Paper. Historic Sites and Monuments Board of Canada. Staff report. Ottawa.

Kemp, William B. 1984. "Baffinland Eskimo" in Handbook of North American Indians. Smithsonian Institute, Washington. pp. 463-475.

Maxwell, Moreau S. 1985. Prehistory of the Eastern Arctic. New York: Academic Press Inc.

Maxwell, Moreau S. 1973. Archaeology of the Lake Harbour district, Baffin Island. Ottawa: National Museum of Canada.

Maxwell, Moreau S. 1984. "Pre-Dorset and Dorset Prehistory of Canada" in Handbook of North American Indians. Smithsonian Institute, Washington. pp.359-368.

Mercer, J. H. "Geomorphology and glacial history of southernmost Baffin Island" in Bulletin of the Geological Society of America Vol. 67, May 1956, pp. 553-570.

Millward, A.E. ed. 1930. Southern Baffin Island: An Account of Exploration, Investigation, and Settlement During the Past Fifty Years. Ottawa: Department of the Interior.

Pitseolak, P. and D. Eber. 1975. People from our Side. Edmonton: Hurtig.

Porsild, A.E. 1964. Illustrated Flora of the Canadian Arctic Archipelago National Museum of Canada Bulletin No. 146. Ottawa: Queen's Printer. pp. 218.

Polunin, Nicholas. 1948. Botany of the Canadian Eastern Arctic: Parl III Vegetation and Ecology National Museum of Canada, Bulletin No. 104, Biological Series No. 32"

PRP Parks: Research & Planning Inc. 1990. "Kuujuaq Territorial Park: Feasibility Study". Report prepared for the Baffin Regional Office of the Department of Economic Development and Tourism, GNWT. Iqaluit.

Soper, J. Dewey. "Lake Harbour" in Canadian Arctic Recollections Baffin Island 1 by J. Dewey Soper. Saskatoon: Institute for Northern Studies, University of Saskatchewan, 1981. pp. 96-102

Soper, J. Dewey. "The Lake Harbour Region, Baffin Island" in Geographical Review, Vol 26, 1936.

Soper, J. Dewey. "Solitudes of the Arctic" in Canadian Geographical Journal, September 1933, Vol. VII, No. 3, pp. 102-115.

Nomination Decision

Based on the information contained in this nomination document it is the recommendation of the Canadian Heritage Rivers Board that the nomination to the CHRS of the section of the Soper River, located on Baffin Island in the Northwest Territories, as described in the foregoing document

( ) be accepted

( ) not be accepted

If accepted, it is further recommended that the Minister responsible for the Canadian Parks Service and the Minister of Economic Development and Tourism in the Northwest Territories, and the Minister of Indian Affairs and Northern Development, on receipt by the Board of a management plan for the river, designate the said river as a Canadian Heritage River.

17/08/91
Date

Chairperson
Canadian Heritage Rivers Board