



DEPARTMENT
OF REGIONAL
ECONOMIC
EXPANSION

THE CANADA LAND INVENTORY

CLI

LAND CAPABILITY
CLASSIFICATION FOR
OUTDOOR RECREATION

The Canada Land Inventory
Report No.6
1969

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DEPARTMENT OF REGIONAL
ECONOMIC EXPANSION
OTTAWA

Published under authority of
The Minister of Regional Economic Expansion

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Ottawa, 1970

Cat. No.: RE63-6/1969.....

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FOREWORD

This report, which describes the land capability classification for outdoor recreation developed for the Canada Land Inventory, is one of a series of reports being published by the Department of Regional Economic Expansion. The origin and purpose of the Canada Land Inventory is outlined in Report No. 1, "Objectives, Scope and Organization".

The basic approach to the classification was developed at Ottawa in February, 1965, with the help of a committee of the Federal-Provincial Parks Conference. Testing in 1965 suggested major modifications, and a revised approach was ratified in Ottawa at a national meeting of representatives of all interested agencies in February, 1966. Extensive experience in 1966 made possible a considerable expansion of the guidelines.

The responsibility for guiding the development of a national classification lay with the Recreation Sector of the Canada Land Inventory, under the direction of C.S. Brown, whose original concepts provided a framework for development and testing and for subsequent modifications. Major contributions to the Classification development and to implementation, and to this report, were made by the Regional Recreation Co-ordinators, M.R. Hargrave, H.C.R. Gavin and P.M. Rogers.

Without the help and guidance of many individuals, representing provincial recreation agencies, universities and private consultants; and in particular G.A. Hills, Ontario Department of Lands and Forests, who brought many years of experience to bear on the development of a system; many of the goals and objectives would not have been achieved.

The land classification for recreation is being applied to the settled portion of Canada and to fringe areas, the whole covering approximately one million square miles, as a Federal-Provincial co-operative program conducted through provincial authorities and financed 100% by the Federal Government.*

Two series of maps are being produced. One series is at a scale of 1:50,000 for municipal, provincial and federal governmental use in planning development and management of recreation lands; the other series, at a scale of 1:250,000 (approximately 1" to 4 miles) is being published in colour for public use. About 225 individual colour maps will be published, based on the national topographic series. They will be available through the Queen's Printer.

* In Newfoundland, the Province conducts the surveys in co-operation with the Canadian Forestry Service, who refund 90% of the cost.

1. INTRODUCTION

PURPOSE

The classification was developed for the purpose of compiling an inventory of natural outdoor recreational resources under the authority of the Agricultural Rehabilitation and Development Act (ARDA) as part of the Canada Land Inventory.¹

OBJECTIVES

The objectives of the recreational land capability classification program are:

- * To provide a reliable and authentic overview of the quality, quantity, and distribution of natural recreational resources within the settled parts of Canada.
- * To indicate comparative levels of recreational capability for non-urban lands, based on present popular preferences.
- * To indicate the type of recreation to which land is best suited.
- * To identify lands or features possessing outstanding or unique recreational values.
- * To provide basic information to aid governments in the formulation of policies and programs related to their functions of promotion, development and regulation of

¹See also "Objectives, Scope and Organization", Canada Land Inventory, Report No. 1, January, 1965.

lands for recreation.

- * To provide a mapping framework within which provinces may gather and record data concerning recreational resources.

REQUIREMENTS

The recreational land capability classification program meets the following requirements of the Canada Land Inventory:

- * Use of a 7-class rating scale with 1 as high;
- * Two standard map scales among sectors (where possible):
 - 1:50,000 for computer input purposes,
 - 1:250,000 for publication,
- * A narrative to accompany each 1:250,000 map,
- * Suitability of mapping conventions and symbols to facilitate computer handling,
- * A time limit which imposed an early start and rapid and efficient programming, without benefit of detailed preparatory research.

DEFINITION OF TERMS

Land, for the purpose of the inventory, comprises combinations of rock, soil, water, air, fauna, flora and cultural landscape. Water bodies as such are not classified. The recreational value of the water body accrues to the adjoining shores. A land unit is a discrete combination of the land elements

described.

A recreational feature is an aspect of a land unit providing opportunity for recreation.

Recreation is activity in which individuals voluntarily engage during leisure time, the motivation being personal satisfaction or pleasure derived before, during and after participation.

Activity, for the purpose of the inventory, pertains to the general category of activities known as "outdoor recreation", i.e. activity in an environment where the significant factors contributing to the opportunity for activity are natural as opposed to man-made.

Recreational Activities recognized in the inventory are those established as "popular" and include:

family bathing	organized camping
sun bathing	primitive camping
paddling	
swimming	wetland hunting
	upland hunting
downhill skiing	
cross-country skiing	still-water canoeing
	white-water canoeing
wildlife viewing	canoe tripping
general viewing	
recording	walking and hiking
viewing waterfalls and rapids	gathering and collecting
viewing glaciers	picnicking
	unorganized games
summer cottaging	horseback riding
winter cottaging	driving for pleasure

commercial lodging	exploration
family boating	nature interpretation
boat launching and landing	history and prehistory interpretation
water skiing	cultural and industrial interpretation
deep-water boating	rock climbing
boat mooring	ice climbing
boat wharfing	mountain climbing
boat tripping	snowshoeing
sailing	tobogganing
angling	auto-tobogganing
fish viewing	skating

"Quantity" could be expressed in terms of visitor days or visitor hours. Adequate size, suitability for specific activities and tolerance to use are important in estimating how much use may be "generated and sustained".

2. CLASSIFICATION

Conditions of Classification

Land is classified according to its natural capability to provide opportunity for recreation. The following assumptions are made:

- * Sound recreational land management and development practices are assumed for all areas in practical relation to the natural capability of each.

- * No judgment is made concerning the possibility of major modification of land which may make it suitable for recreation use.
- * Location and present access development do not influence classification.
- * Uniform demand and accessibility conditions are assumed throughout the inventory area.
- * Present use or management does not influence ratings except that: land at present firmly committed to intensive urban or industrial use is normally not classified; where there is permanent major artificial modification of the resource base, land (other than urban or industrial land) is evaluated in its present state; permanent man-made structures in a non-urban setting may be considered to be a recreational features.

Basis of Classification

The basis of classification is the quantity of recreation which may be generated and sustained per unit area of land per year under perfect market conditions. Constant attention must be given to the basis of classification, and ranking must be based on judgment of the relative capability of each land unit to attract and accommodate numbers of recreationists, assuming a common level of demand and accessibility for each land unit. On this basis, a Class 1 shoreland unit (e.g. beach) may be capable of generating and sustaining similar intensity

of use to a Class 1 upland unit (e.g. ski hill or historical site). Likewise, a Class 4 shoreland unit will have a similar capability to a Class 4 upland unit regardless of subclasses or features.

CAPABILITY CLASSES

There are seven capability classes:

Class 1 - Land units in this class have a very high capability for outdoor recreation.

These lands have natural capability to engender and sustain very high total annual use based on intensive activities.

Class 2 - Land units in this class have a high capability for outdoor recreation.

These lands have natural capability to engender and sustain high total annual use based on intensive activities.

Class 3 - Land units in this class have a moderately high capability for outdoor recreation.

These lands have natural capability to engender and sustain moderately high total annual use based usually on intensive or moderately intensive activities.

Class 4 - Land units in this class have moderate capability for outdoor recreation.

These lands have natural capability to engender and sustain moderate total annual use based usually on dispersed activities.

Class 5 - Land units in this class have moderately low capability for outdoor recreation.

These lands have natural capability to engender and sustain moderately low total annual use based on dispersed activities.

Class 6 - Land units in this class have low capability for outdoor recreation.

These lands either lack natural attractiveness or present severe obstacles to their enjoyment, but have the natural capability to engender and sustain low total annual use based on dispersed activities.

Class 7 - Land units in this class have very low capability for outdoor recreation.

These lands have very little capability for any popular types of recreational activity. There may, however, be some capability for very specialized activities with recreational aspects, or they may merely provide open space.

In some instances lands are not classified. These are lands firmly committed to intensive urban use, or lying within municipalities of over 1,000 population, military reserves, and national parks.

3. SUB-CLASSES - Recreational Features

There are 25 recreational features which represent the major uses of land for recreation as indicated by present

popular preferences. The opportunities for recreation provided by a feature or combination of features, and assessed in terms of quantity of use, determine the class of land unit. Although the recreational features are described individually, it is the exception rather than the rule that a land unit is ranked on the strength of a single feature. The class of a unit depends on the total quantity of recreation which the particular association of features within the land unit is judged capable of generating per unit area on an annual basis.

Recreation features are considered as aspects of land units providing opportunity for recreation. Units which rank low on the basis of the quantity of use which can be generated and sustained will be those which will only provide opportunity for dispersed use. Opportunity for dispersed use, such as hunting or wilderness enjoyment on larger units, is significant in terms of total number of users - though not in terms of use per unit area.

This is a national classification system, but clearly there have to be certain exceptions to allow for regional variations. For example, there is an abundance of sites of historical significance in Eastern Canada, and similarly numerous potential ski hills in British Columbia. It would be impractical therefore to attempt to define and classify all the historic sites in Eastern Canada and all the ski hills in British Columbia. In each of these cases, only the most significant sites or areas are selected for mapping and classification.

Unless an adequate development area is readily available, a recreational feature cannot generate intensive use; and where there is not enough space for car parks, picnic and campgrounds, or other general use, then a lower class for the unit shows these limitations. The requirements for a development area vary among features, but in general a high ranking unit needs more area than a lower class-unit. A Class 1 beach has very critical requirements (at least 25 acres within 1,000 feet); a Class 1 viewpoint or historic site may require a minimum (not optimum) development area of only 3 to 4 acres.

The following are *general guidelines*, rather than rigid rules, because the overall intent of the classification is to provide a basis for comparison of land units in terms of recreation which may be engendered and sustained.

SUBCLASS A - Angling: Land providing access to water with natural capability for production, harvesting and/or viewing of sport fish.

Characteristics:

Activities associated with this subclass include boating, canoeing, camping, lodging, viewing and recording, and water falls and rapids. Angling depends on a natural capability to produce and sustain sport fish species, or to provide access to spawning grounds for river and stream spawning species. Therefore the quality of the water (including pollution), the

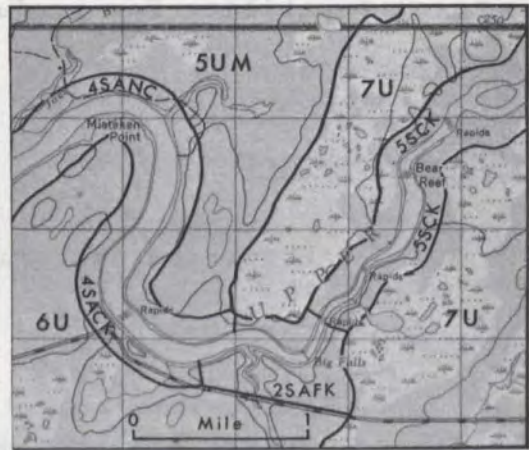


Figure 1. Here at Big Falls is the best salmon pool in insular Newfoundland, with capability for angling and for viewing salmon in migration. Added features are the continuous and full-flowing falls, and good capability

for camping, and associated activities. The Humber River is large enough for family boating, hence its banks are classed as shoreland. The arrow on the air photograph indicates the location of the ground photograph.

depth and flow, the bottom conditions and other limnological factors, also influence angling capability.

Not everybody goes fishing from a river bank. On bodies of water whose capability is primarily for angling from a boat, any dominant high ranking capability of a shoreland unit for angling must be related to its suitability as a base for boating. Most of the factors affecting family boating will apply.

Capability for angling on streams and small rivers is determined by normal sport fish populations (influenced strongly by limnological factors), by suitability of shore conditions for angling from shore, and by accessibility along the stream course. Ranking is influenced, to some degree, by the aesthetic quality of the stream and its surroundings.

Classification:

As a dominant feature: Although angling is often associated with other recreational features, it may be dominant in land units ranking Classes 2 to 7. Where the rank is high, use capability must be intensive in relation to land.

Class 2 - A truly outstanding angling site with complementary features.

Class 3 - Land units offering outstanding angling opportunities.

Class 4 - Land units bordering excellent fishing streams or with good capability for access by boat to adjoining excellent fishing waters.



Figure 2. A typical Maritime river valley, classified here as 5U AQO. Angling (A) is dominant; Q, showing diverse natural landscape, or land and water permitting a variety of activities, is secondary; O, for upland wildlife viewing or hunting, is a tertiary subclass.

Class 5 - This class will normally indicate moderate to high capability for stream fishing, or, in shoreland units lacking more dominant features, access by boat to water with moderate to good fishing capability.

Class 6 - This class will indicate access to a stream or other body of water offering low to moderate capability for angling.

Class 7 - Low capability for angling, in an unattractive setting.

As a subordinate feature: Angling may be a subordinate feature of a shoreland unit ranking from 1 to 6, or of an upland unit ranking from 1 to 6. In the former it may be subordinate to such features as B, N, Y, U or D.

SUBCLASS B - Beach: Shoreland capable of supporting beach activities.

Characteristics:

Activities associated with this subclass include family bathing, swimming, sunbathing, paddling, camping, walking, unorganized games, gathering and collecting, viewing, recording, boat landing and launching, water skiing. A beach is a part of shoreland adjacent to and extending into a body of water and comprises level to moderately sloping deposits of granular material ranging from fine sand to firm till, pebbles and cobbles. Bedrock may also be included.

Beaches are generally stable, tolerant to use for recreation, and free from conflict with uses other than for

recreation; but they may be vulnerable to industrial or other pollution and may change in size and usefulness through short or long cycle fluctuations in water levels or through influence of storm, current or tidal action.

Beaches are used for a wide range of activities, generally activities which do not decline markedly in user satisfaction as the number of users increases. The major activities, swimming and sunbathing, are dependent primarily on temperatures and the flow of water and air. Provided that these are above minimum comfort requirements, the usefulness of beaches is increased by their length, the size of the body of water (for boating and associated activities), the variety of water conditions (paddling to deep-water swimming), the amount and location of usable backshore, and the contrast of water, rock and vegetation (viewing and recording).

Classification:

Beaches are capable of engendering and sustaining intensive use and are very important recreational features. In general, warm water beaches (swimming) are classified 1 to 4, and cold water beaches (sunbathing and other uses except swimming) are classified 3 to 5. An otherwise exceptional beach with limited swimming capability on account of cool water temperatures may rank Class 2.

In a national system it has been found impossible to rank beaches according to the extent of dry beach, because the



Figure 3. Grand Lake has several excellent warm water beaches. Note the treatment of the beach in the area of the keyhole. The 2S BKY unit extends down to Pops Point, but the central part of the bar falls to class 3 because of lack of development area. The southerly portion of the bar is included under class 3 because of stoniness (evident in the photograph).

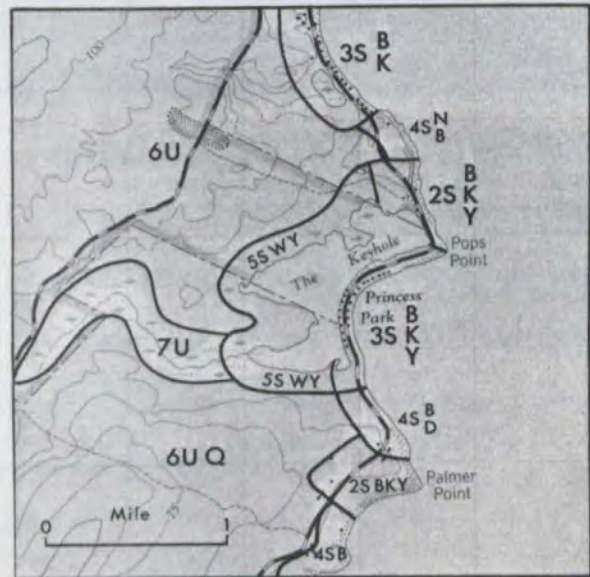




Figure 4. Grande Anse is on the scenic north shore of the Gaspé Peninsula. The beach in the foreground rates 3S BNK; it would be Class 1, but the cold water here downgrades it to Class 3. The subordinate subclasses show capability for private or commercial lodging (N) and organized camping (K). The small natural rock groynes improve the capability. There is attractive backshore for development purposes.

availability of dry beach often depends on fluctuating water levels. Where backshore for development is deficient or absent, a dry beach could partially serve as a substitute.

As a dominant feature:

Class 1 - A Class 1 beach should have the following:

- (1) Lake Size - situated on a water body which is 6 square miles in area or 10 miles long.
- (2) Water Quality - the quality of the water (i.e. "comfortable" temperature during season of peak use, clarity, freedom from hazards and aquatic nuisances) permits intensive use for family bathing and swimming.
- (3) Beach - the wet beach gradient ranges from 2 to 5%; material is composed of clean, fine-grained materials ranging from fine sands to pea-sized pebbles (i.e. it must be comfortable for naked feet to walk and play on). There should be 1,000 feet of beach within a $\frac{1}{4}$ mile length of shoreland.
- (4) Backshore - 25 acres of generally level to gently sloping backshore for supporting the development of facilities (e.g. access roads, car parks, games areas, sanitary facilities, picnic areas, camp-grounds, etc.), within 1,000 feet of the beach. There should be good soil cover, largely free of rocks and boulders, and with capability for good vegetative cover.

Lake size and water quality are critical, although some variation is permissible for beach and backshore. For example, there may be occasional cobbles or boulders on the beach or backshore; the beach may be divided by a rocky groyne; or there may be an accumulation of driftwood or debris on the beach which can be corrected with minimal capital input. There may be variable slopes in the backshore which offer a total of 25 acres for development, together with possibly a more pleasing aspect. There may be limited areas with steeper gradients in the wet beach, but no dangerous slopes.

Class 2 - As for Class 1 except:

- (a) the minimum usable beach is 300 feet;
- (b) beach materials may include fine sand, pea-sized gravel, pebbles or firm till;
- (c) the development area must be 15 acres;
- (d) the body of water must be at least one square mile in area, or two miles long.

Classes 2-5 - The table of limitations offers general guidelines to the downgrading of beaches due either to specific limitations or to the cumulative effect of a number of limitations. It should be noted that a Class 2 beach can be as outlined above, or it can be a "Class 1 type" beach with one or more limitations (to the value of 2).



Figure 5. Some of the finest river beaches are found along Rivière Rouge, north of Montreal. The figure below shows the usable nature of the wet beach. Such beaches are normally classified 2S BAK. Several commercial campgrounds and day-picnic grounds serve Metropolitan Montreal.

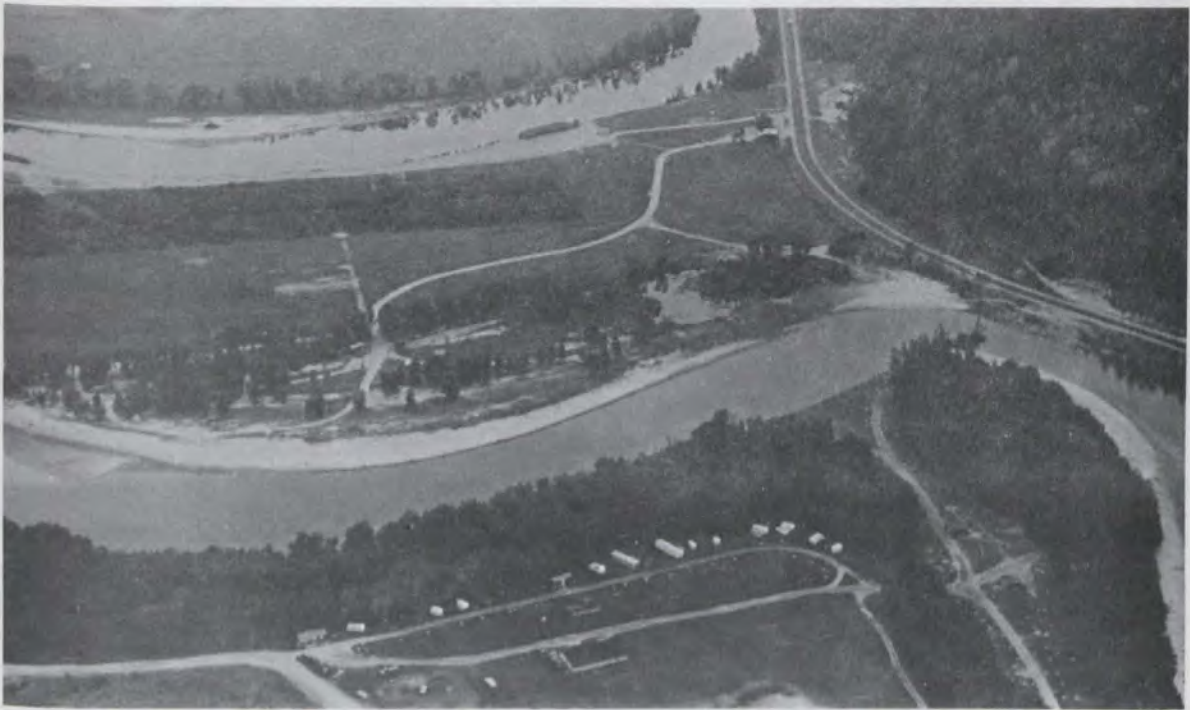
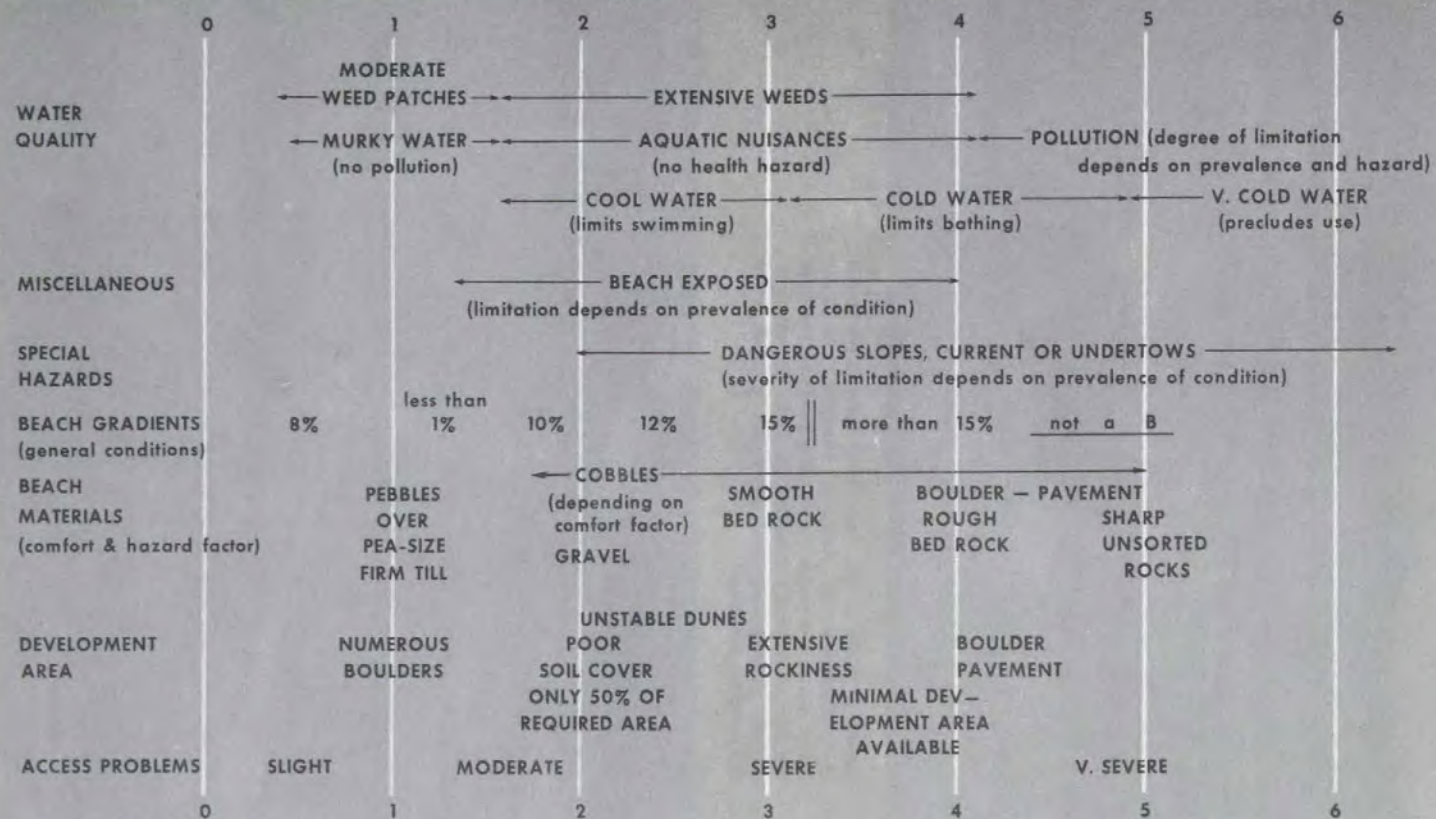


TABLE 1. LIMITATIONS AFFECTING CAPABILITY OF BEACHES



INSTRUCTIONS FOR USE:

1. Ascertain approximate value for individual limitations.

2. Total values for all limitations :
- | | | |
|---------|-------|-------------------------|
| value 2 | ----- | downgrade 1 class |
| 4 | ----- | 2 classes |
| 6 | ----- | 3 classes |
| 8 | ----- | 4 classes |
| 8+ | ----- | look for other features |

3. These are general guide lines. Do not deduct full points where limitations overlap (e. g. exposed beach and very cold water; aquatic nuisances and extensive weeds).

4. Presence of other recreation features may overcome a degree of limitation.

The table can be applied to "Class 1 and Class 2 type" beaches as outlined above, but care is taken not to downgrade "Class 2 type" beaches on a basis of firm till or pebble beach materials, or development area (from 15 to 25 acres). Note that lower class beaches do not have the critical requirement for development area that high class beaches have. Therefore if a shoreland unit rates Class 4 without the limitation for shortage of development area, further downgrading on account of that shortage may not be warranted. Suggested development area requirements are: Class 1 - 25 acres; Class 2 - 15 acres; Class 3 - 10 acres; Class 4 - 5 acres.

SUBCLASS C - Canoe Tripping: Land which fronts onto and provides direct access to, waterways with capability for canoe tripping.

Characteristics:

Activities associated with this subclass include primitive camping, angling, scenic viewing, wildlife hunting and viewing, gathering and collecting, and recording. The waterway must be of sufficient length and average summer flow to enable its use for canoe tripping. Water quality is important. Variations in water course, i.e. in width, current, gradient and direction, are positive attributes, given reasonable navigability or portaging capability. Variations in shore and backshore,

tree cover, profiles and materials are desirable and scenic terrain are assets. The absence of conspicuous evidence of human activity along part or all of the waterway is a positive attribute. Natural capability to support fish and wildlife is most desirable.

The C symbol presents obvious mapping problems. The capability must be related to land but the activity takes place on a waterway which will normally extend beyond the land unit boundaries. The C symbol may be applied to any or all units fronting on or straddling the canoeing waterway, given natural capability for access from the unit to the waterway. The omission of the C from any unit on a waterway indicated nearby to have canoe tripping capability will not imply a change in the waterway capability.

Classification:

Canoe tripping is normally a highly dispersed activity. Therefore any land unit fronting on or containing a portion of a canoeing waterway will not rank highly due to this feature.

As a dominant feature:

Class 4 - This class is possible in very special circumstances on a long unit which fronts a stretch of canoeing water with outstanding capability for fast water canoeing and with complementary features suited to associated activities.

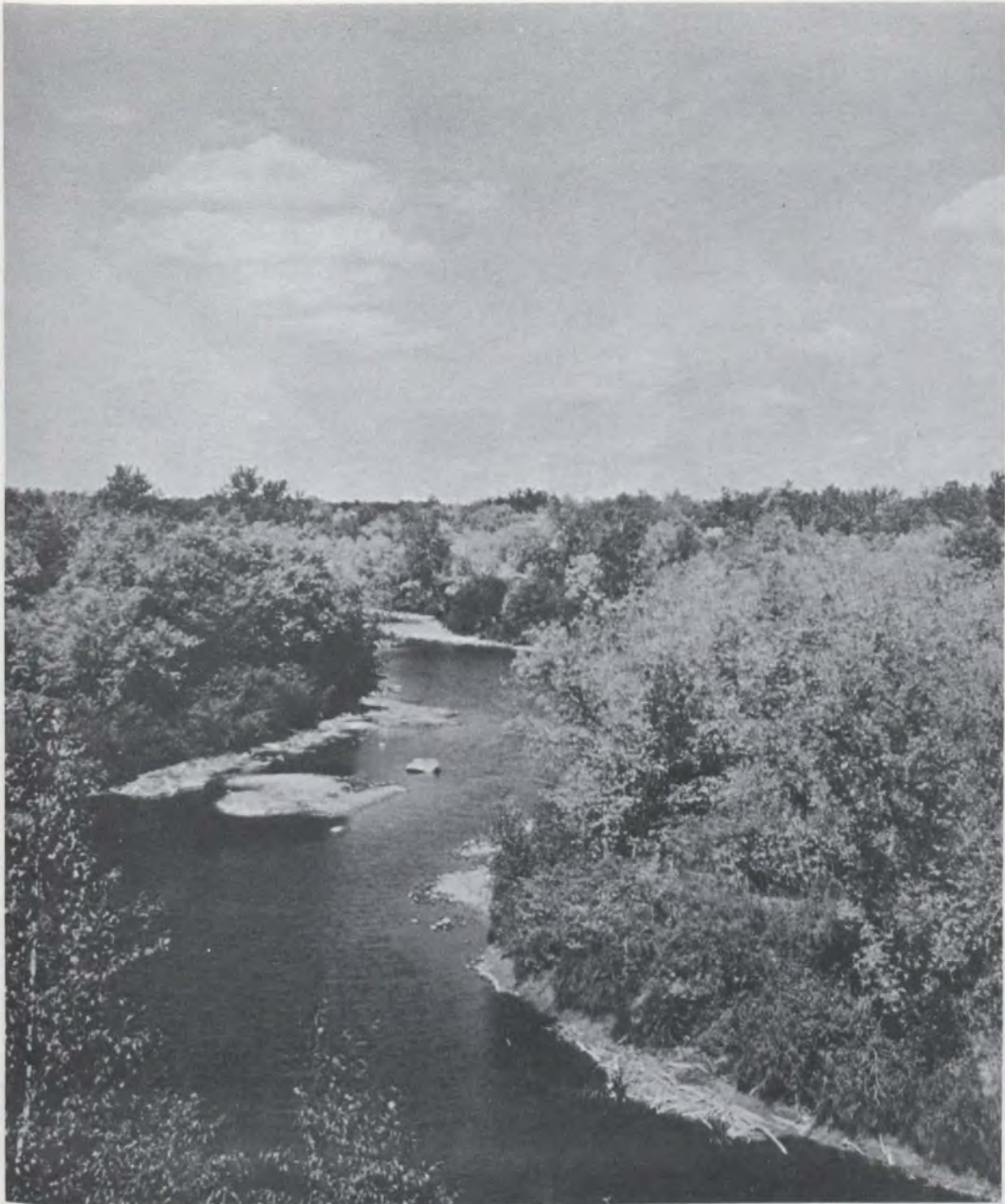


Figure 6. The Minn River, Manitoba, is not quite large enough for family boating, but is excellent for canoe trips, having a winding course and a variety of currents and depths. Rocks, debris, and minor hazards add to the opportunity for adventure; the surrounding tree cover offers shelter for stopovers. Angling and animal viewing

enhance the recreational value: 5U CAO is indicated.

However, the topographic variety of the valley (not apparent from the photograph), added to the angling facility, make the area very suitable for camping. The actual rating is 4U QKO.

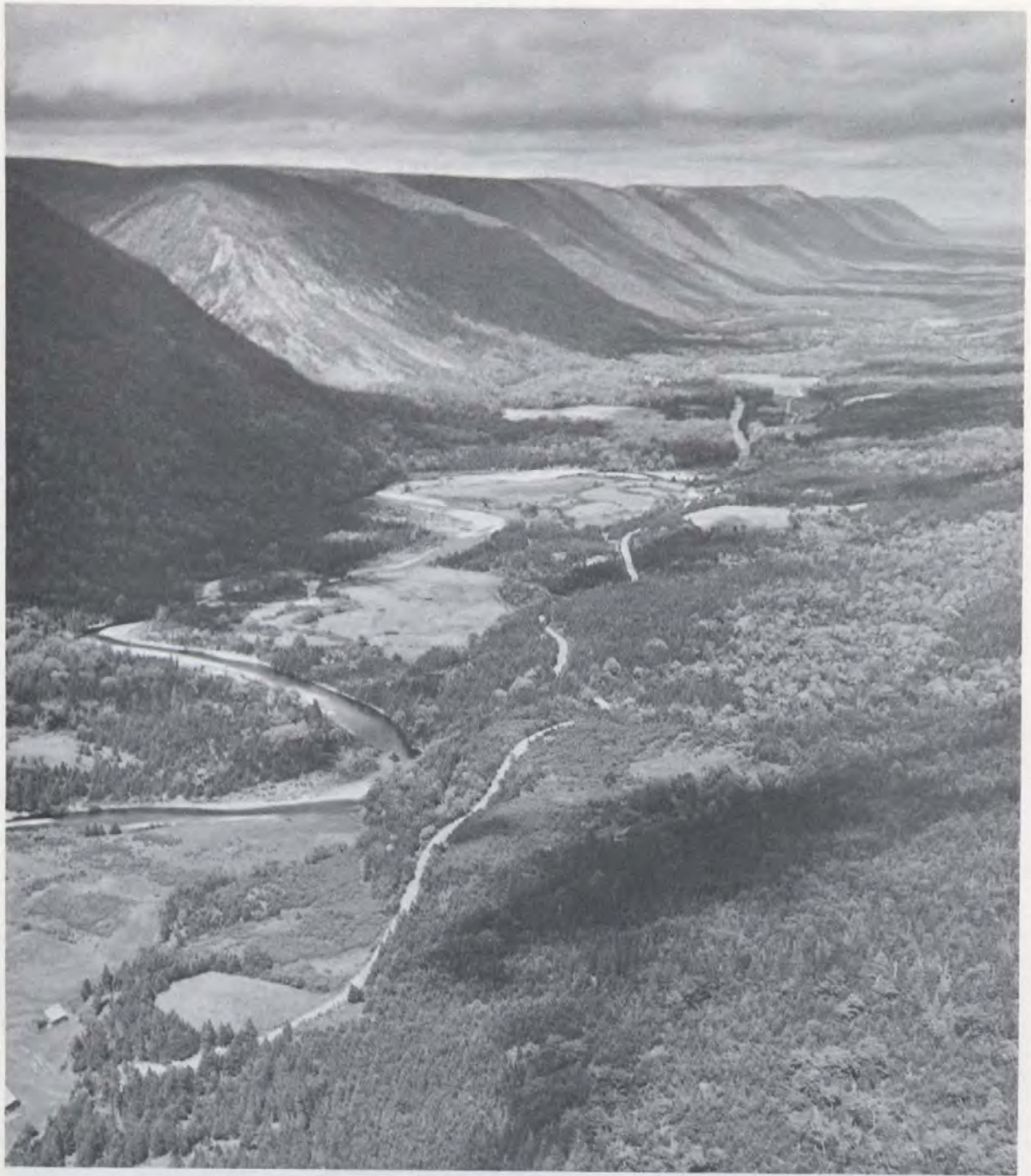


Figure 7. Looking upstream on the North Aspy River valley, Cape Breton Island, Nova Scotia. The river is full-flowing over a long route through a normal season, though with few stretches of challenging water. Excellent opportunity for dispersed activities exist because the river winds through attractive vegetation and cultivated farmland. This diversity, coupled with good opportunities for angling and camping, give the corridor Class 5U CAK.

Class 5 - A waterway with very good to moderate capability for canoe tripping in most respects and without any serious limitations. A minimum waterway length of 10 miles is suggested. Capability for associated dispersed activities may be complementary. A full season of adequate water flow is desirable.

Class 6 - This class indicates moderate to poor capability for canoe tripping.

As a subordinate feature: Canoe tripping may be a subordinate feature of a unit of any rank, but it is likely to appear as a subordinate feature in Classes 4,5, or 6.

SUBCLASS D - Deep Inshore Water: Shoreland with deeper water inshore suitable for swimming or boat mooring or launching.

Characteristics:

Activities associated with this subclass include lodging, camping, family bathing, angling, and any other shoreland activities. This symbol may be used to indicate a shoreline condition of moderately rapid drop-off from the water's edge which permits the mooring or docking, and possibly beaching and launching as well, of boats close inshore; or permits swimming close inshore.

D may be used as a subordinate to B to indicate a desirable variety of shoreline conditions within the unit suited to family bathing as well as deep water swimming and boat mooring, docking or beaching.



Figure 8. Where shoreland is unsuited for such intensive use as beach activities or cottaging, conditions may be best described as 5S D: offshore suitability for boat-mooring or swimming. Subordinate subclasses A,W, or O, would indicate capability for other dispersed activities: angling, hunting, or wildlife viewing. Where there is capability for intensive use, D is always subordinate, e.g. 2S NDY.

Figure 9. Deep inshore water: Half Way Rock Point, New Tobermory, Bruce Peninsula, Ontario. A typical D in a 4S ND situation, given a suitable backshore for N (lodging). In fact, this unit was classified 3S RVD because of its dominant features: fine limestone cliffs (R) and opportunities for viewing (V).



D will normally be used in a subordinate position to indicate a condition complementary to lodging - i.e. shore conditions suited to swimming and/or boat docking or mooring. Its use does not necessarily imply capability for both swimming and boat docking.

Classification:

D will normally be a subordinate feature appearing in units ranking Class 1 to 6, but may be a dominant feature of shoreland units ranking 5 or 6.

SUBCLASS E - Vegetation: Land with significant vegetation.

Characteristics:

Vegetation includes all forms of plant life significant to recreation, ranging from grasses to trees. However, unless the vegetation is outstanding in uniqueness and attractiveness, it will not affect capability rating. Class will tend to be determined by the presence of other features, and this feature symbol will be used to describe a positive condition of the land unit rather than as an indication of opportunity for specific activities. Associated activities include general viewing, walking, hiking and nature interpretation.

Classification:

As a dominant feature:

Class 2 - An outstanding mature stand of Douglas fir or white pine may be sufficiently tolerant to use and sufficiently



Figure 10. Large Douglas-fir, on level terrain in a Pacific coast forest. This is sufficiently unique, attractive, and tolerant to use for recreation, to rate Class 2. Use is primarily viewing, but with sound management there are possibilities for camping or picnicking on the open fringes (especially near lakes or streams). Douglas-fir has thick, protective bark; windfalls prevent indiscriminate use and destruction of ground vegetation. Only concentrations of large trees occurring on level or gently sloping ground receive high rating.

unique and attractive to rank Class 2, e.g., Cathedral Grove, Vancouver Island. However, a unique forest stand is unlikely to rank above Class 3.

Class 3 - An alpine meadow in a scenic setting lending itself to moderately intensive interpretive and viewing use may rank Class 3. It will normally not rank above Class 4.

Class 4 - A healthy stand of large trees of majestic or particularly attractive species, in park-like distribution, may be the dominant feature of a Class 4 unit.

Classes 5-6 - Tree cover for shelter, or in park-like distribution, lacking the recreational capability to rank higher, may rate Class 5. More commonplace cover will normally warrant Class 6, if it is a dominant feature.

As a subordinate feature: E may be used with any class in a subordinate position. There are unusual situations which may warrant use of E, such as off-shore seaweed beds attractive to scuba divers, or areas of "fiddleheads" (young fern shoots), or unusual edible mushrooms.

SUBCLASS F - Waterfalls and Rapids

Characteristics:

This is an intensive use feature; its ranking depends largely on a combination of water volume and scenic setting. Adequate development area for viewpoints, walks, and supporting



Figure 11. Webster's Falls, Greenville, Ontario, a typical Class 3 waterfall. With a fine view of the Dundas Valley, Hamilton, and Lake Ontario, the unit is ranked 2U FVQ: Q for variety of land, or land and water, permitting a variety of activities. This unit is part of a complex, where Spencer Creek flows over the Niagara Escarpment north of Dundas. (Complex, here, refers to a complex of activities within one land unit, e.g. where a common car park will serve a V,F, and Q.)

Figure 12. Montmorency is classified 2U SFR for volume and setting. S, for shoreland, is due to the immediate proximity of the St. Lawrence River; R is for rock formations with recreational interest. The unit of Class 2 embraces areas above and below the falls.



facilities (e.g. car parks, picnic grounds and possible camping) is necessary, especially in higher class units.

Classification:

As a dominant feature:

Class 1 - A waterfall having a large volume of water, and located in a very scenic setting, e.g. Niagara Falls.

Class 2 - Waterfalls or rapids which have a medium to large volume of water, with a scenic setting. Examples: Montmorency Falls, near Quebec City; Hell's Gate Canyon, British Columbia.

Class 3 - Waterfalls or rapids which may have a lesser volume of water but which have a scenic setting, or where restricted development area precludes a higher rank. Examples: Kakabeka Falls, near Fort William, Ontario; Grand Falls, New Brunswick.

Class 4 - Waterfalls or rapids which are of local significance but which lack volume, permanent flow, or high scenic value.

Class 5 - Waterfalls or rapids of small dimensions, lacking the capability to engender intensive use due to poor access, lack of permanent flow, or mediocrity.

As a subordinate feature: A waterfall is often found in association with an excellent fishing pool. If the falls or rapids are of small dimensions, the fishing may assume more importance than the falls or rapids. In such a case, the

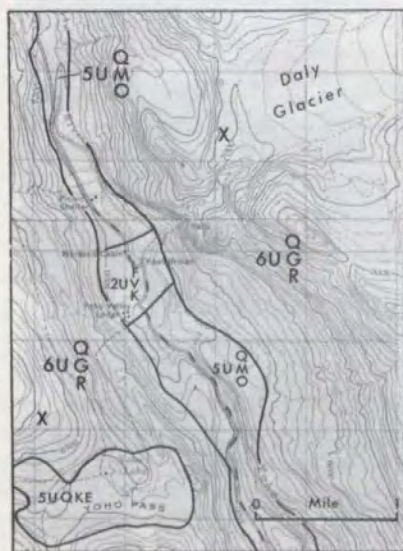


Figure 13. A viewpoint giving a glacier view such as this would rank Class 2. The photograph was taken from an airplane, because no intensive-use viewpoint was available. Two possible viewpoints are marked X on the map, but site conditions and accessibility are such that they cannot be delineated; G is merely appended to the general upland symbol. The Takkakaw Falls, with a 1,000 ft. drop and in a scenic location, merits 2U FVK, at its base. Upland wild-life (O) is not plentiful, and is included as a subordinate feature: 5U QMO. M is subordinate to Q where A,C, or W do not apply.

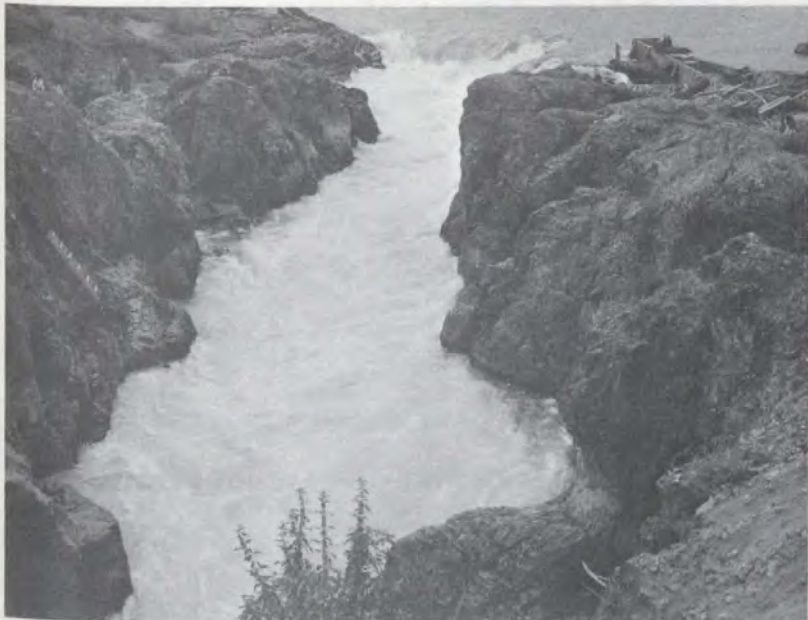


Figure 14. The falls alone would rate Class 4, but the unit ranks as 2U FAP because of other features. There is excellent fishing (A) from spring to fall for several types of salmon and for steelhead trout, and opportunity for viewing fish in the river, in small pools, and at the fish ladder. There is also traditional native fishing and associated smokehouses (P); the Indians use long poles with detachable hooks to gaff salmon swimming upstream. In addition, there is an Indian village, and a development area for parking, viewing, and access. Adjacent units offer camping, boating, and viewing.

The historical significance of the unit is overshadowed by the present Indian activities and by structures in use; hence the use of P.



two features will generate a higher level of use, and the rank of the unit should reflect this.

SUBCLASS G - Glacier: Area offering a glacier view or experience.

Characteristics:

There are regional variations in treatment due to the relative abundance or scarcity of glaciers. Where potential access to the margin of the glacier is extremely difficult, then the most significant viewpoint(s) only will be ranked, and the glacier itself will assume the rank of its adjacent area. Where access is either present or feasible, a portion of the glacier surface permitting close interpretation may also be included in the higher ranking unit.

Areas with G as a dominant symbol are those with capability for intensive use. It is therefore important that sufficient development area be present. The important factors are volume of ice, the quality of the setting, and interpretive aspects. The G symbol is confined to active glacier areas.

Classification:

As a dominant feature:

Class 1 - A majestic glacier vista, with high scenic attraction, or a close view of a major glacier permitting glacier interpretation (crevasses, moraines, etc.) with possibly a more restricted but nonetheless outstanding or imposing view.

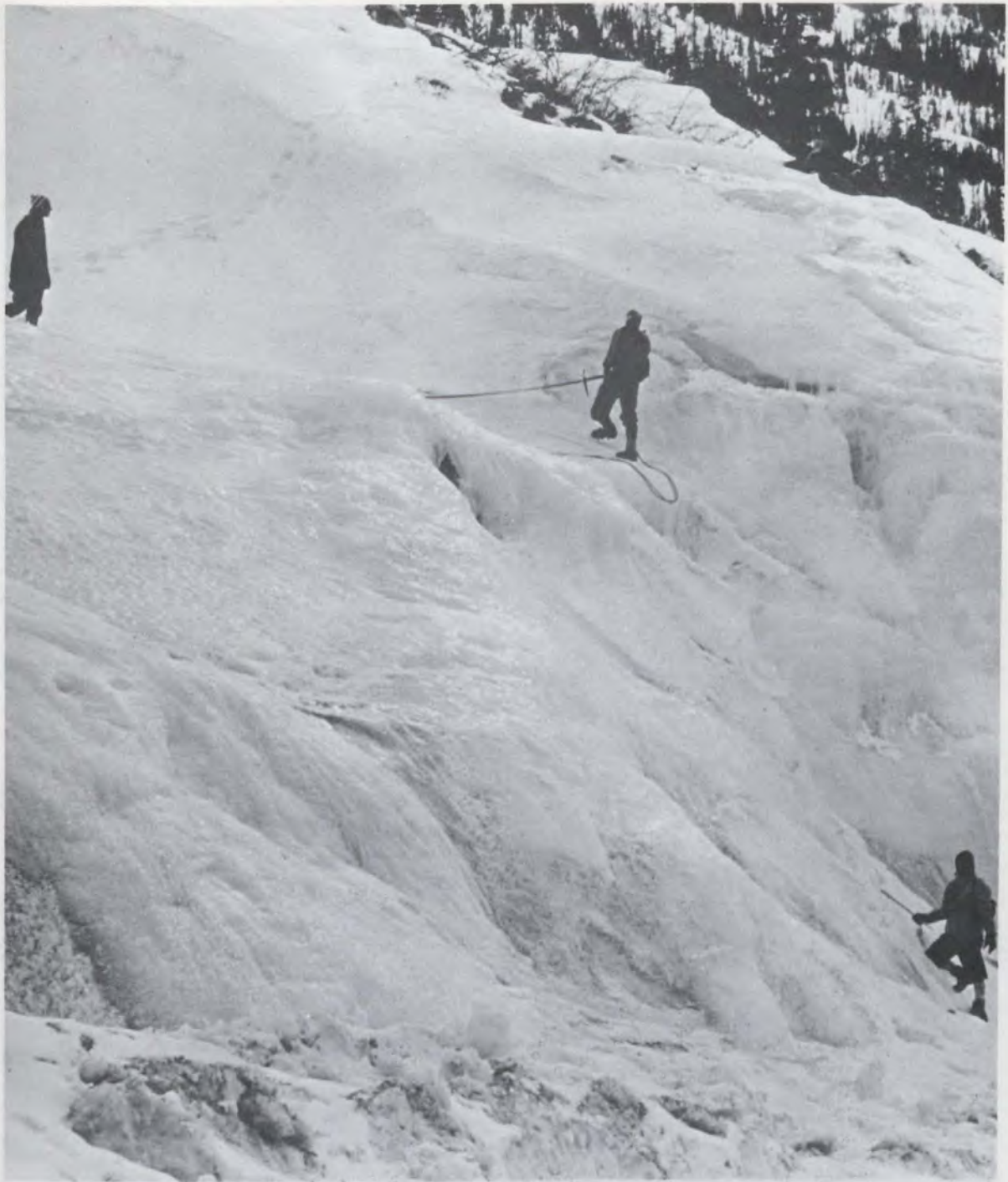
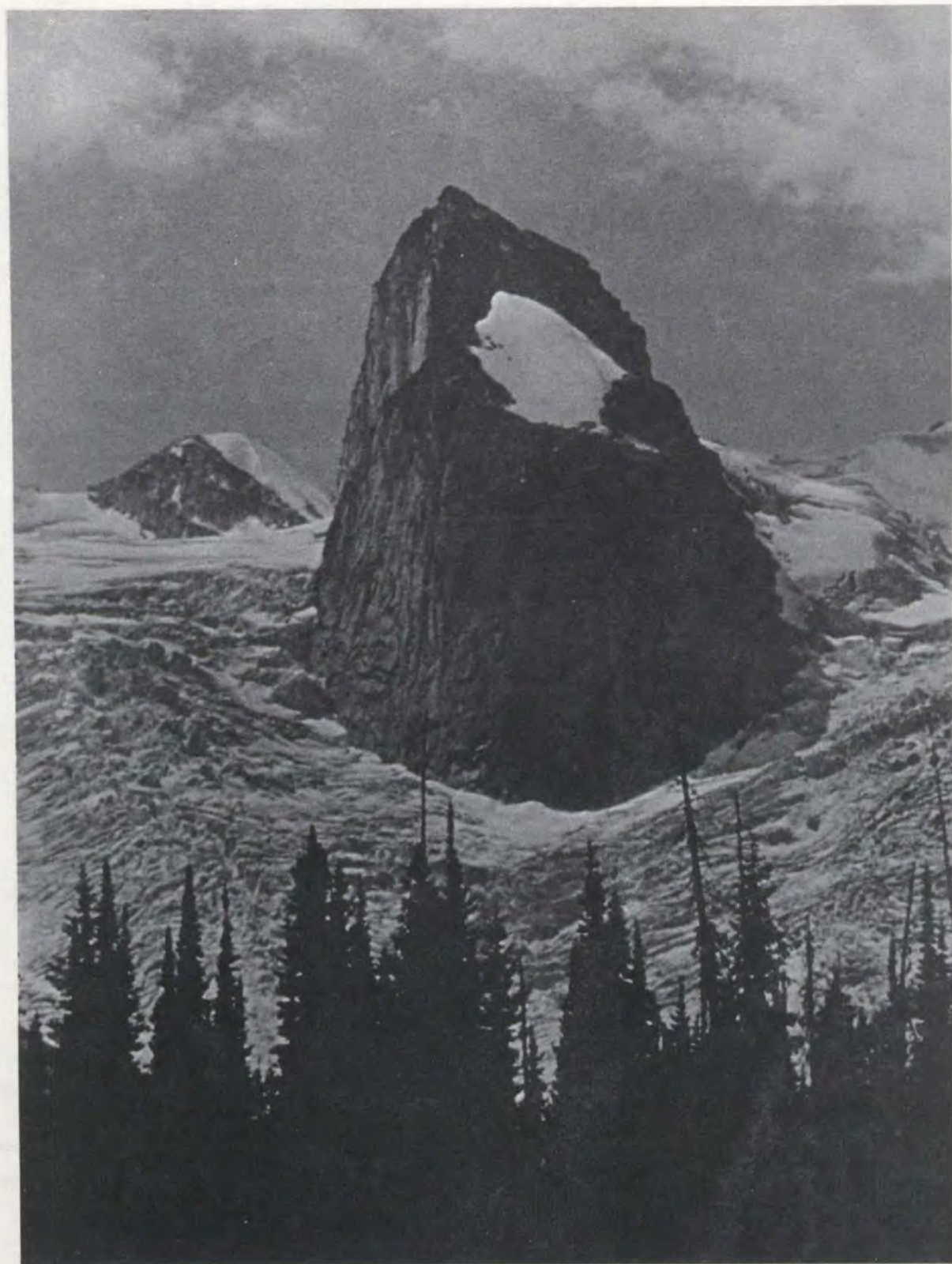


Figure 15. Glaciers are seldom put to direct use because of the obvious dangers and the difficulty of access. Activity here is specialized: snowmobile trips, adventure skiing, ice climbing, or access to mountain climbing. The high scenic value of the glacier, however, can generate intensive use of viewpoints, or even of parts of the glacier itself. A viewpoint, such as near Bugaboo Glacier

in British Columbia, ranks Class 2; the portion of the glacier in Jasper National Park accessible for climbing ranks Class 3. The extensive, relatively inaccessible, parts of the glacier or snowbank rank Class 5 or 6. Subordinate subclasses R and Q would indicate rock outcroppings and topographic variety.



Class 2 - A view of a major glacier, or a closer glacier experience with limitations of developable area, quality of interpretation, or setting.

Class 3 - A view or experience of a small glacier, or of the tongue of an ice field, or a portion of a larger glacier, with limited opportunity for interpretation but with good scenic qualities.

Class 4 - A view of a small inaccessible glacier, or a tongue of an ice field, or a portion of a longer glacier, with a very limited opportunity for interpretation and with limited scenic qualities.

Class 5 - Extensive scenic ice or snow fields at high elevations with capability for access, or limited glacier views or experiences (e.g. interpretation of geomorphological features left by recently receded glaciers).

Class 6 - Other high elevation snow or ice fields.

As a subordinate feature: Where a glacier is significant, it will be a subordinate feature only in a high ranking unit: e.g., V is dominant at Lake Louise, and G subordinate. Where small glaciers are plentiful, G may appear as subordinate to waterfalls, angling pools, or rivers, and may upgrade the unit by one class.

Where small glaciers are constant features in a region, and after the outstanding viewpoints have been delineated, then G will normally appear as a subordinate symbol to Q, L or R in extensive land units.

SUBCLASS H - Historic Site: Land with historic significance.

Characteristics:

Regional differences in treatment of historic sites are possible. What may be historically significant in Western Canada may be commonplace and lacking in recreational capability in the east, except, perhaps, insofar as it contributes to the general atmosphere or charm of a unit delineated.

Certain units earn a relatively high rank on account of their historical importance alone; others depend on original structures or reconstructions being present. Often the rank depends as much on the setting as on the historic object.

The role that promotion plays in the development of historic sites and exhibits is recognized. While the inventory requires the ranking of sites having physical evidence of their historical importance, or which have a valid historical basis, the successes of past promotion are acknowledged and units are ranked accordingly. Associated activities include interpretation, general viewing, and recording.

Classification:

Class 1 - Historic sites of major or nationwide significance, which have a very high capability to engender intensive use. Normally, the setting would have to be very attractive, or there should be structures with major appeal, or a paramount historical attraction, in order to warrant Class 1. Examples include Louisbourg, Nova Scotia; the Plains of Abraham; old Fort



Figure 16. This old hotel at Kitsumkalum Lake, near Terrace, in British Columbia, is part of a system of trails, cabins, and other hotels associated with the anticipated overland telegraph from New York to Europe via Alaska and Siberia. Portions were built and operated, but the first trans-Atlantic cable stopped construction. Most of the buildings, as well as the trail, have disappeared, but the remains are significant as focal points for historical interpretation and display. The small land unit is designated 5U HV.

Figure 17. Key sites often serve as focal points of attention to significant eras or events. Carcross, in the Yukon, is one such focal point, as "Gateway to the Klondike" and as the location of the last spike on the Whitepass and Yukon Railroad. History, legend, literature, and physical relics are potential foundations for a popular, attractive, and diverse interpretative program and would warrant a Class 1 rating for this land unit.

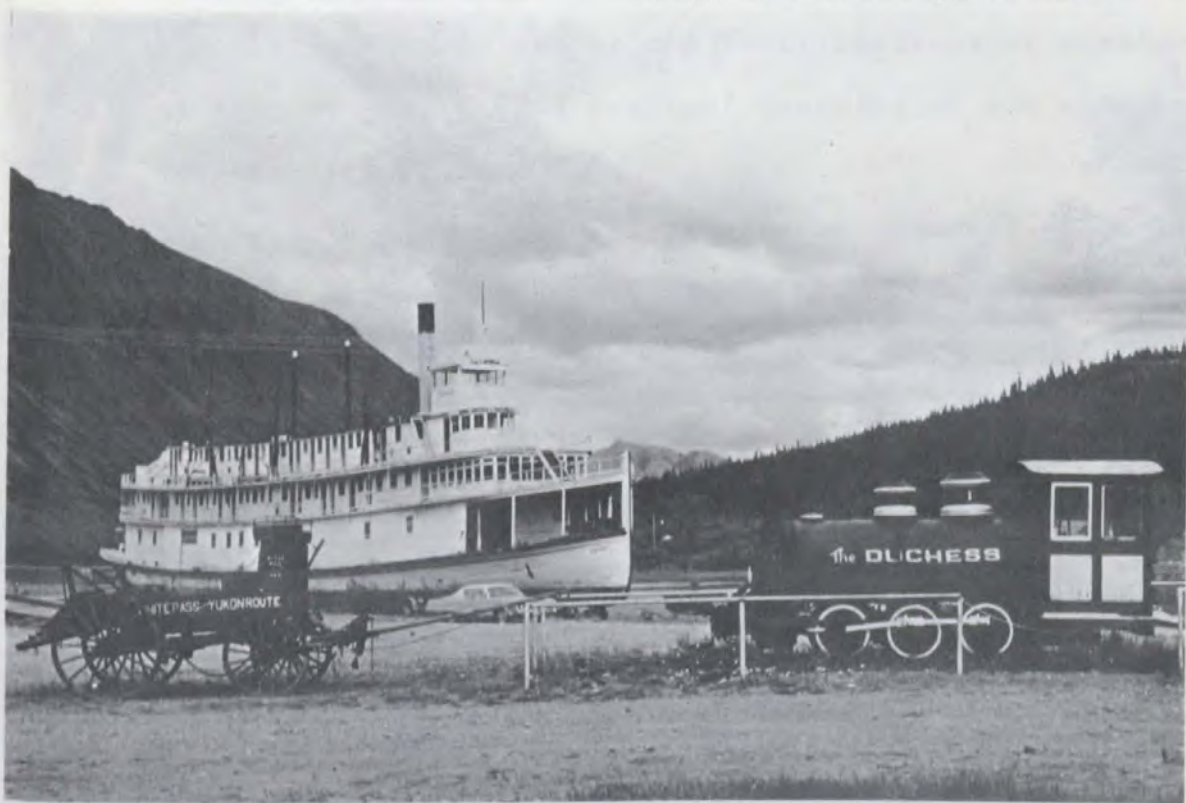




Figure 18. Totem poles *in situ* may be related to present cultural patterns of native Indians and provide a focus for interpretative programs based on legend, history, and past and present handicrafts. Such opportunities become rare as poles are removed to park displays and the remainder fall into disrepair. This example, at Kitwanga – near Hazelton, British Columbia – is classified 3U HPV.

Figure 19. Summer residence, The Little Seminary of Quebec, at Petit Cap, near St. Joachim. The buildings are set in a grove of lofty, mature, hardwood trees on a promontory overlooking the scenic valley of the St. Lawrence, and date from around 1665, when the residence was constructed by Mgr. Laval, Canada's first Bishop. This is ranked as 2U HZV.



Henry, near Kingston, Ontario; the Martyrs Shrine and Indian Village reconstruction at Midland, Ontario, together with associated archaeological sites; Barkerville, British Columbia; and Upper Canada Village. An authenticated Viking landing and archaeological site would merit Class 1 in view of its popular appeal.

Class 2 - An historic or archaeological site of major significance but which lacks the popular appeal to rate Class 1; or a site of regional significance having popular, or potentially popular, appeal. Normally, structures or archaeological evidence will have to be obvious. Examples are Lower Fort Garry, near Winnipeg; the Batoche Battlefield in Saskatchewan; Fort Steele, British Columbia; old fortifications of similar extent; or outstanding regional examples of old churches or other structures.

Class 3 - An historic or archaeological site of regional significance which may be lacking certain aspects precluding higher rating. These include the area capable of development, the quality of the setting, degree of decay (or lack of physical evidence), historical importance (relative to the region) etc. Examples include small fortifications such as can be found in Eastern Canada, minor battlefields, significant and well preserved early churches, mills or farm buildings, or the more significant early trading forts in Western Canada.

Classes 4-5 - Examples include the more important portages of early explorer or fur trade routes (these might rate higher if any structures remain) and historic sites which genuinely merit markers. Examples of Class 4 are illustrated in Figures 20 and 21. H is found as a subordinate feature in combination with a wide variety of other features and, if significant, may raise the rank by one or more classes.

SUBCLASS J - Gathering and Collecting: Areas offering particular opportunities for gathering or collecting items of popular interest.

Characteristics:

Examples of this activity include gathering or collecting wild fruits and nuts, rocks, minerals, fossils, shells, driftwood, and other materials.

Classification:

This activity is rarely intensive because of the intolerance of the resource base or limitations in biological productivity. Consequently, as a dominant feature, J occurs very rarely except in Classes 6 and 7: for example, a tidal flat without other capability but clam and shell gathering at low tide might rank 6 SJ.

SUBCLASS K - Organized Camping: Shoreland or upland associated with a recreational feature suited to organized tent or trailer camping.



Figure 20. This fossil, a nautiloid cephalopod, is about 18 inches long. Such fossils, and many less significant, are to be found in limestone beds of Ordovician (Paleozoic) age, along the shores of Green Island, Georgian Bay, in Ontario. Green Island is remote from the main groups of islands in Georgian Bay, and the rank 5S WJA indicates its relative difficulty of access. The W is for a heronry found on the island.

Characteristics:

Only those areas associated with a particular recreational feature will be evaluated for organized camping capability. Normally the associated feature or features must lend themselves to intensive use activity. However, K may be a dominant feature in a shoreland unit lacking a good bathing beach but lending itself to other popular water-oriented recreational activities.

The essential requirements for organized camping capability are: stable but unconsolidated surface materials, extensive area of low gradients or very frequent level terraces, proximity to potable water, tree cover to provide wind and sun shelter, and capability for vehicle or boat access. A scenic environment is desirable.

Classification:

Organized camping may be the dominant feature of a Class 3 or 4 shoreland unit with good to moderate capability, in terms of the essential requirements outlined above, for access to water and for such water-oriented activities as swimming and family boating.

The K symbol may appear as a subordinate feature in units ranking from 1 to 5 in association with any feature lending itself to intensive types of activity, including viewing attractions, and may influence the rank of the unit. K may be subordinate to a normally low intensity subclass such as angling or canoeing. Where suitable campsites along canoe routes are



Figure 21. Johnson Canyon, near Drumheller, in Alberta, is a small bad-land area with interesting micro-topography suited to trail-walking, viewing, and photography. Fossils and other prehistoric deposits, and exposed rock strata, have possibilities for interpretative programs. The area is unusual, but neither very dramatic nor scenic, and is rated as 3U LHR.

Figure 22. The Dutch Creek hoodoos, in the East Kootenay, British Columbia, have limited capability for direct use, and limited possibilities for interpretation. They do, however, make an interesting backdrop for the adjacent land, which is suitable for organized camping. Together with views of distant mountain peaks, the hoodoos form an association of features which could be a focal point for development. The complex is rated 3U LKV.



uncommon, areas offering good sites for small or primitive campsites may be defined by the K symbol; but in such a case, in view of the low intensity of use, it is not likely that they will raise the rank of the unit.

SUBCLASS L - Landforms: Areas containing natural landform features, other than rock formation (see R).

Characteristics:

Erosional or post-glacial features in unconsolidated sedimentary materials, which lend themselves to viewing or interpretive use, such as hoodoos, slump zones, badlands, glacial spillways, sand dunes, eskers and large drumlins. The viewing and interpretation activity may be from within the unit and in direct association with the feature, or from a distance.

Classification:

Significant factors in the classification of such features are relative scarcity, overall area, topographic prominence, distinctive or unique qualities, permanence and capability for access. L, as a dominant feature, is found in the following classes:

Class 2 - A highly unique landform with high capability for viewing and interpretation (see Figure 21).

Class 3 - A relatively unique (though not outstanding) landform capable of attracting and sustaining a moderately high use.



Figure 23. Dinosaur Provincial Park, to the north of Brooks, Alberta, ranks 2U LV in the concentration of badland and hoodoo features. The area (over 4,000 acres) is significant itself, but the feature is also permanent, accessible, and convenient for interpretative programs. The area is widely known for its abundant dinosaur fossils, and might reasonably be subdivided into smaller areas of Class 2 rank. The topographic variety here, and the many opportunities for viewing, justify the subordinate V. Less spectacular units, near or adjacent, are ranked 3U LV, 4U LV, and 5U LVP.



Class 4 - Landforms with good capability for dispersed activities, in addition to viewing and interpretation.

Class 5 - Units, usually extensive, in which landform features (rather than mere topographic variety) contribute to dispersed activity capability, and which lack the capability to rank higher.

Class 6 - Relatively insignificant landforms having little capability for viewing or interpretation.

SUBCLASS M - Small Surface Waters: Frequent small water bodies or continuous streams.

Characteristics:

The M symbol indicates frequent surface waters which are not large enough to warrant separation as shorelands. It is also used to indicate presence of stream water in a stream course corridor unit, where water-oriented subclasses such as A,C,F,W, or Y are not applicable. Associated activities include angling, cottaging, canoe tripping, camping and wildlife viewing.

Classification:

As a dominant feature M is most commonly used in Class 4, 5 and 6 units lacking more significant features, but may have application in Class 7 units dominated by marsh or muskeg.

As a subordinate feature, intensive use upland features in Classes 1, 2, or 3 may be complemented, but not usually influenced, by M. It has occasional application in



Figure 24. Here is a typical M situation where lakes are too small and too many to map individually. Only the large lake, at the right, can be inventoried as one or more shoreland units. The general landscape is fairly rugged, and limited in area for development, suggesting a 5 or 6 rating according to the likelihood of wildlife or fishing. Subclasses might include A,M,O, Q and W.

Figure 25. Bell Lake, in Manitoba, is generally suited to extensive primitive recreation, viewing of wetland and upland wildlife and angling. Raised portions of the shoreland would support limited cottage development, associated with these extensive forms of recreation, and would rank as 5N with subordinate subclasses W,A, and O in varying combinations.

The section shown, however, has offshore sandy bottom and a limited beach, enabling more intensive use. It warrants 3S BKY, indicating potential for beach activities, organized camping, and family boating.





Figure 26. A typical Maritime tidal flat estuary, almost entirely limited to bathing or recreational boating, but able to support vacation homes along this margin of higher land fronting onto the water. Such land is very limited where there are great tidal fluctuations, and sites that look undesirable will be developed because none better are accessible. This location is classified 5SNB.

Figure 27. This cottage shoreland at Purcell Lake, in the Muskoka District of Ontario, has an excellent backshore: deep soil and a moderate slope. This makes tiered development possible, and with a beach capable of moderately intensive use, Class 2 might be expected. In fact, there are some aquatic drawbacks, together with silt. The unit was downgraded to a good 3S NAY.



Class 4 associated with Q, to indicate frequent surface water in a unit with high capability for dispersed activities, and may contribute to the ranking.

SUBCLASS N - Lodging: Land suited to family cottage or other recreation lodging use.

Characteristics:

Activities associated with lodging include viewing, family bathing, swimming, fishing, family or deep water boating, walking, etc. (Lodging may then lead to high total annual use.) Lodging implies temporary or permanent occupation of non-urban land selected because of recreation capabilities and developed for private or commercial accommodation use.

Beach and water conditions affecting capability for fishing, swimming, bathing and boating are highly important. In contrast to B, where shallow beach gradients are favoured, steeper gradients are most suited to cottage use because there should be good capability for the beaching of boats and the construction of short stable docks. Backshore slopes may range from level, with reasonably good drainage, to very steep (30% - 100%); with moderate slopes (7% - 15%) the most suitable because they permit tiered development. Views are important, as is ease of access from shore. A terraced slope may be an asset. Shelter from winds, exposure to sun, capability for vegetative cover, outward aspect (viewing), soil materials for foundations and sewage disposal, and fresh water availability, are all

important factors. Capability for vehicle access is important, although on large water bodies water access may be an alternative. Nuisance elements such as industrial or traffic noise, air pollution or permanent water pollution, or serious insect infestation, will limit the capability.

Classification:

Lodging capability may be a dominant feature of land units classed from 2 to 5, or a subordinate feature in units classed 1 to 5. A class 1B shoreland will usually afford lodging use, but it is assumed that an excellent beach will normally attract and sustain more intensive use as a public beach supported with backshore uses also of a public nature. Guidelines for classes 2-5 are as follows:

Class 2 - Shoreland units with excellent physical attributes in all or most categories described above, with backshore capability for tiered lodging development (i.e. with a moderate slope) and beach capability for moderately intensive use.

Class 3 - Shoreland units with capability for a continuous row of lodging development (i.e. an average density of family units of one per 100-foot frontage throughout the unit) and with shorelands with enough capability for water-oriented recreation to attract that intensity of lodging use.

Class 4 - Shoreland units with natural capability for 50% cottage development (i.e. the equivalent of one cottage

every 200 feet), fronting water with capability for water-oriented activity.

Shoreland units with backshore with exceptionally good capability for lodging development in terms of all criteria except for severe limitations on the access to water, or to recreational use of the water, may rank Class 4N.

Class 5 - Shoreland units with backshore capable of sparse cottage development (i.e. the equivalent of one cottage every 500 feet), fronting on water lacking severe limitations to family water oriented activity. Shoreland units with backshore capability described in Class 4N, but with severe but not prohibitive limitations to water-oriented family activity, may rank Class 5N.

As a subordinate feature, lodging may be subordinate to any one or two features such as B,Y, or A, in units ranking from 1 to 5.

SUBCLASS 0 - Upland Wildlife: Land with capability for viewing or hunting of upland wildlife.

Characteristics:

Activities associated with upland wildlife include walking for pleasure, nature interpretation, scenic viewing, primitive camping, and recording.



Figure 28. In many parts of Canada wildlife can be seen even though it is unprotected. Even when there is only a glimpse from a passing vehicle, this adds to the complex interest of the changing scene. Some areas have suitable habitat and weather conditions to support large populations of several species, which increases the opportunities for viewing. The Kootenay River valley, British Columbia, is an example: deer, moose, elk, and goats are often visible. This can raise the extensive land units one class, from 6 to 5, and warrant still higher classes for particular vantage points.

Figure 29. Developed access may pass through a good wildlife habitat, or cross a migration route. If the animals are accustomed to humans at close range, visitors may take opportunities for viewing and photographing in a semi-natural environment. There is thus good reason to record small units of 3U O or 4U O.



The 0 symbol will be used to indicate the suitability of habitat for, and the probability of the presence of, reasonable numbers of one or more species of wildlife normally associated with upland areas, which because of their habits are likely to be of popular interest to hunters or other recreationists. The probability of viewing wildlife is influenced by terrain and vegetative cover.

Bears and all ungulates are included, as are upland birds such as grouse and pheasants and the larger rodents, while aquatic fur-bearing species are excluded. The daily and seasonal movement habits of most upland wildlife species in their natural state, and the usual wariness of most species, limit the natural capability of any small unit to engender intensive wildlife viewing or hunting use. Features such as prairie dog colonies are exceptions.

Classification:

Classes 3 to 7 are included in the dominant position.

Class 3 - A unique and outstanding opportunity for viewing and interpretation of one or more species of upland wildlife confined to a relatively small area.

Class 4 - Regional areas with exceptional capability for viewing and interpretation of upland wildlife, in which concentrations of wildlife are known to exist under normal conditions in the recreation season, and in which wildlife is considered to be the dominant recreation attraction.

Class 5 - Large areas with high capability for viewing or hunting of one or more upland wildlife species, but without other significant recreational capability.

Class 6 - Extensive areas with moderate capability for the viewing or hunting of dispersed upland wildlife species.

Class 7 - Areas with little recreation capability but in which wildlife viewing or hunting is a possibility.

SUBCLASS P - Cultural Landscape Pattern: Lands exhibiting diversity of cultural landscape.

Characteristics:

Examples of these patterns include pastoral landscapes and farming patterns, cultural activity and settlement patterns, small community patterns, coastal fishing villages, fur trading posts, and mining communities; and industrial landscapes.

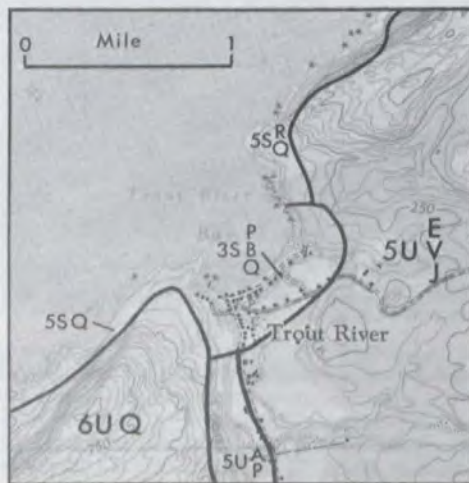
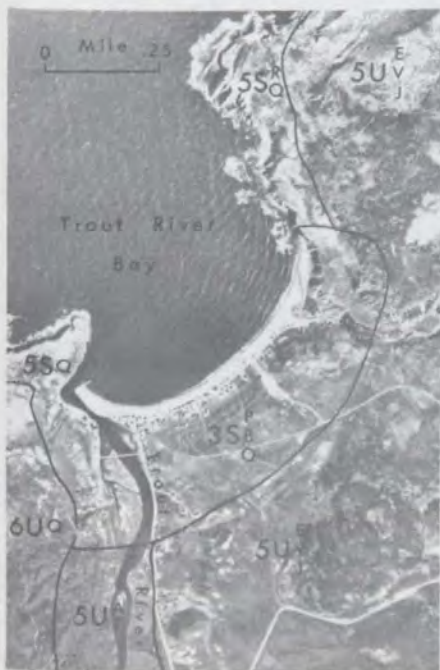
Cultural features, resulting from man's husbandry of the landscape, lend themselves primarily to viewing, interpretation and associated activities.

The symbol P commonly occurs throughout extensive agricultural areas with capability primarily for viewing land use patterns associated with driving for pleasure; it is therefore of low rank.

Abandoned farms or industrial lands where a park-like landscape remains may have recreational capability and will be indicated by P.



Figure 30. This low-angle oblique photograph of Trout River Bay, Newfoundland, shows an Atlantic coastal beach that would justify Class 1 except that water is very cold and moderately exposed. Cultural activities within the village enable the shoreland unit to be rated P, which in turn moderates the B limitation for very cold water and establishes the unit as 3S PBQ. The air photograph and map section clearly show the topographic diversity producing the Q.



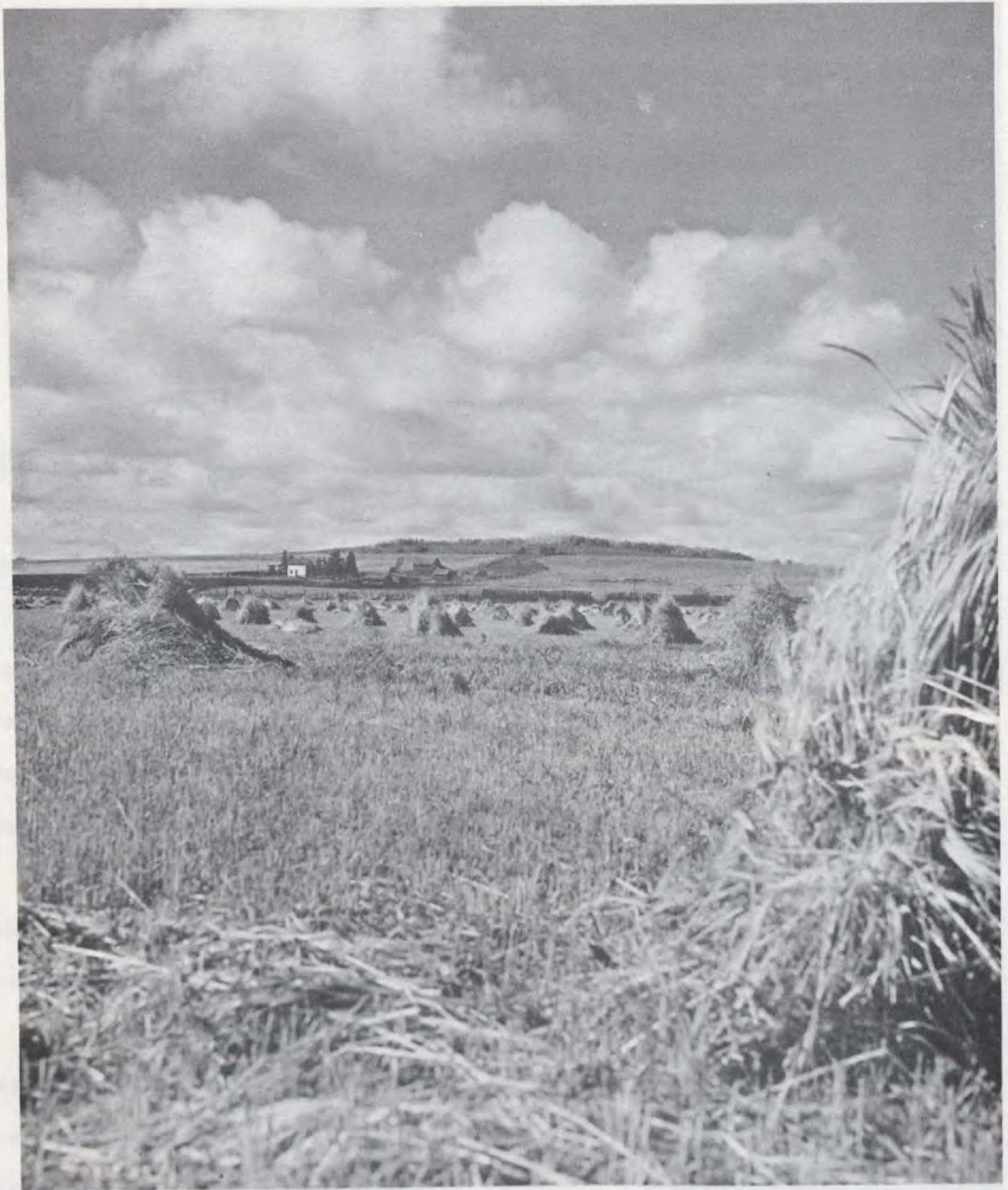


Figure 31. Prairie farmland such as this, south of Red Deer in Alberta, is extensive and has capability mainly for viewing associated with pleasure driving. Ponds and potholes, together with grain-fields, provide opportunity for dispersed wetland wildlife hunting and viewing, especially along the migratory routes. Q and E would

respectively indicate topographic variety and tree cover. Prairie farmland will usually rank Class 6, but sometimes the combination of features creates a park-like landscape or offers particular opportunity for interpretation of cultural pattern and will rank Class 6. The example is of land rated as 6U PW.

Classification:

Classes 2 to 6 are included in the dominant position.

Classes 2-3 - The P symbol is dominant in land units ranking class 2, where a unique cultural feature of outstanding interest lends itself well to viewing and interpretive attention; and in class 3 units where there are some limitations to intensive use of the unique feature.

Classes 4-5 - Areas exhibiting cultural features with high interest and attraction. An outstanding orchard area may rank class 4, as may a park-like landscape where the evidence of a past cultural activity has particular recreational appeal.

Class 6 - Extensive agricultural areas will normally rank class 6, although areas may be upgraded to class 5 when associated with Q.

Cultural features will frequently be subordinate to other features in units of all classes where they will have little influence on the ranking.

SUBCLASS Q - Topographic Patterns: Patterns of topography and landform, or land and water, exhibiting diversity of natural landscape.

Characteristics:

Diversity of landscape increases the aesthetic attractiveness and promotes a variety of activities which will



Figure 32. Physical layout and activities are both important in providing recreational interest. The Indian village of Fort Baline, in British Columbia, is partly supported by hunting, fishing and boat-building. Activities such as fish-curing, wood-working, and treatment of hides are much in evidence. The area rates Class 3 because of the diversity of interests and of the capability to attract and sustain a large number of visitors. Subclasses are P and A.

therefore increase capability.

Although a rugged topography can detract from intensive use capability, the Q symbol will be used to indicate a positive condition of recreation capability.

Q will indicate that the unit has some capability for one or more of such dispersed or resource-tolerant activities as hiking, riding, recording, gathering and collecting, hunting, nature study, primitive camping, walking, touring, picnicking, snow shoeing or auto-tobogganing. These will usually be complementary to other features.

Q is used also in combination with V and R in extensive mountainous areas.

Classification:

Classes 4 to 7 are included in the dominant position.

Class 4 - Units which are suited to dispersed activities in extensive areas of diverse terrain, and where there are frequent good viewing opportunities.

Class 5 - Units where natural landscape diversity is the dominant characteristic, supporting varied dispersed activities.

Class 6 - Units where variation in landscape is the prime characteristic and which support dispersed recreational activities.



Figure 33. Actual activity is important, in the consideration of cultural landscape, because of the interests engendered and sustained by changing patterns and scenes. Demonstrations of skills and processes for handicraft and commercial purposes lead to better understanding of basic enjoyments and artistic expressions. Where these activities are present and are clearly a genuine part of the environment, Classes 2 or 3 are justified.



Figure 34. Diversity of landscape provides opportunity for many dispersed-type activities throughout all seasons. Marginal farmland, combined with rugged forested upland, as illustrated, is suitable mainly for viewing associated with pleasure driving. Interpretation of the park-like cultural patterns and fairly continuous opportunities for hunting and viewing of upland game enable this site in Nova Scotia to rank 5U QPO.

Class 7 - Units with a low capability for dispersed activities, in a landscape with some topographic variation.

As subordinate to other symbols, Q will frequently be used to indicate diversity of landscapes contributing to the recreation capability in units of any class, where it will often influence the ranking.

SUBCLASS R - Rock Formations: Rock and rock formations or associated geological or erosional phenomena.

Characteristics:

Included are structural features such as exposed stratification; and erosional features such as caves, crevasses, arches, wave-cut embankments, lava flows and columnar basalts.

Associated with the close or distant viewing and interpretation of a feature will be such dispersed activities as hiking, climbing and collecting and/or gathering.

Classification:

The R symbol is usually dominant in classes 1 to 3.

Class 1 - A scenic phenomenon of outstanding and spectacular quality, lending itself exceptionally well to viewing, interpretation and to actual exploitation. An outstanding example is found at Percé Rock, Gaspé Peninsula, Quebec.

Class 2 - Rock features, outstanding within the region, with high capability for viewing and/or interpretation and exploration.



Figure 35. This photograph, of Ouimet Canyon, in the Thunder Bay District, is taken in the highlands overlooking the north shore of Lake Superior, which can be seen in the distance on a clear day. Areas with the capability for intensive use rank as 2U RVQ.

Figure 36. Hopewell Rocks Provincial Park, south of Moncton, New Brunswick; the "Rocks", or "Flowerpots", are the focal point of a small area which has high capability to attract and sustain intensive use. The area ranks 2S RVK. Cold water, extensive low tide flats, and strong high tide currents, preclude water-oriented activities except for interpretation of marine life deposited by the tides.





Figure 37. This small, natural stone bridge is located between Pertuis and Allen Mills, in Portneuf County, Québec. With proper development of this and other similar features, the area may rank Class 4. The subclass R may, in combination with other subclasses, advance the overall class rating by one over any other surrounding land unit having the same subclasses but no R.

Figure 38. There are about a dozen caves within a small area here in Cape Dundas, on the Bruce Peninsula of Ontario. The largest cave, from whose entrance this picture was taken, is 40 - 50 feet deep. There are no stalactites or stalagmites. These caves - Grieg's Caves - are ranked 3S RQV; they have no network of subterranean passages or water systems, or other geological phenomena to give a higher rating. The V denotes the viewing capability from the top of the cliff, this being part of the Bruce Trail.





Figure 39. The century old lava beds north of Terrace, in British Columbia, are 15 miles long and as much as 3 miles wide. In addition to the spectacular expanse of "moonscape", there are many micro-features: the volcanic cone, the caves, the unique ecosystem, the impressions of trees that fell on the molten rock (second picture) and the history and legends associated with the destruction of Indian villages. Underground and open streams, with migrating salmon, add to the interest. Particular units rank Class 1, but the major portion of the flow ranks Class 2 or 3. Subclasses are combinations of R,E,H, V,L and A, with R generally dominant.

Class 3 - Rock features that are capable of attracting considerable interest but unable to rank higher.

The R symbol can be subordinate to features in units of all classes. Where it is subordinate in classes 4,5 and 6, it will not influence the ranking.

SUBCLASS S - Skiing Area: A combination of slopes, snow conditions, and climate, capable of providing downhill skiing opportunities during a normal season.

Characteristics:

Associated with ski areas are outdoor winter activities such as tobogganing, auto-tobogganing, snowshoeing, cross-country skiing, ice skating, scenic viewing, exploration, and lodging.

The range of elevations (or the vertical drop) with continuous natural capability for skiing is the most important criterion. Other conditions being comparable, ski areas with the greatest drop will attract the greatest use. 2,000 feet or better is normally required for international competition.

Variety of Slope: Beginners prefer around 15% grades with level outruns; novices up to 25%; intermediates up to 40%; and advanced up to 50% with steeper pitches. Outruns should be from 150 to 250 feet. Concave slopes are much preferable to convex.

Extent of Slopes: Capability for multiple downhill runs (each around 125 feet or more wide) and tows is necessary



Figure 40. This ground photograph of the Wentworth Valley ski development near Truro, Nova Scotia, illustrates the topographic, vegetative, and snow conditions necessary to warrant ranking a slope Class 3 for skiing. Although fog and sun periodically cause deterioration of

the snow, this is offset by the protective vegetative cover and the diverse terrain on the slope and on either side of the development. It is also immediately accessible from the Trans-Canada Highway. The unit is classed as 3U SVQ.

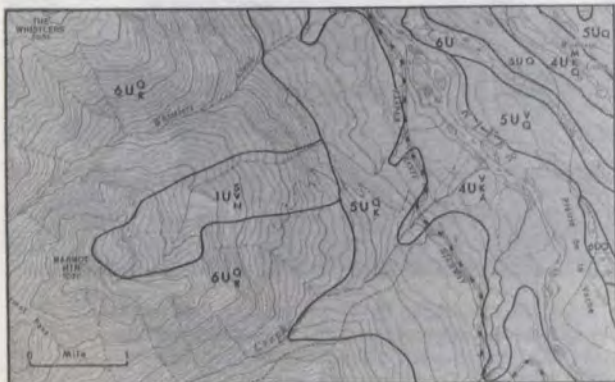


Figure 41. The Marmot Mountain ski area of Jasper National Park, in Alberta, is shown above and as the area classed 1U SVN on the map. The vertical drop, variety of slopes, and general orientation, justify the Class 1 rating. Elsewhere on the map the Athabasca River valley has high scenic value, extending into the uplands. The Class 4U boundaries are based on gentle gradients and proximity to water. The Class 5 - 6 boundary indicates usable slopes.

to intensive development. A basin shaped feature with capability for radiating runs downward to a central service area is ideal.

Snowfall: The quantity, the cumulative depth throughout the average winter, the average duration of continuous snow cover, and the variability from year to year, are important criteria.

Orientation to prevailing wind and to sun exposure may strongly influence both snow conditions and skiing weather. In most of Canada, slopes facing northerly or northeasterly are preferable.

Weather conditions through the snow season influence capability strongly. Average conditions and variability of humidity, daytime temperatures, hours of sunshine, wind duration and strength are all important.

Elevations of the base of the skiable slopes influence weather and snow conditions significantly but differently in different climatic zones of Canada.

Location and extent of land suited to support facility development is critical.

In other than very high average snowfall zones, the depth of soil cover, its stability, and distribution in relation to rock outcrops, are critical factors determining suitability of slopes for intensive skiing development.

Although clearing of runs in dense tree cover may be relatively expensive, greater flexibility of layout and greater



Figure 42. This photograph taken in the Laurentians, north of Montreal, shows very well the variety of slopes which make a good hill. This example appears to have a vertical fall of about 1,000 feet, and is probably a 2U SVQ.

wind protection are obtainable on forested slopes. In some areas forest cover is essential to a long season of snow cover.

Domestic water from ground or surface sources within reasonable pumping or gravity-feed reach is essential to intensive skiing use. In much of Canada, water for snow-making either regularly or in an emergency is almost equally essential. Security from avalanches is considered.

Classification:

Where there is intensive use through both summer and winter, the skiing area unit in association with another primary feature can warrant a ranking higher by one class than either feature independent of the other.

Class 1 to 3 skiing areas are included in the dominant position, but when there are no areas of these capabilities, normal requirements of class 3 units can be lowered to permit the mapping of lesser slopes.

Class 1 - Units of land including 2,000 feet or more of vertical drop; a variety of sheltered slopes suitable for all classes of skiing; average snow conditions to provide for a long season of use; and 100 acres or more of land capable of development at the base of the slopes for outruns and supporting facilities.

Class 2 - Units of land including 1,000 feet or more of vertical drop; a variety of slopes suitable for all classes of skiing; average snow conditions to provide for a reasonably long season of use and 50 acres or more of

land capable of development at the base of the slopes for outruns and supporting facilities.

Class 3 - Units of land including about 500 feet of vertical drop; a variety of slopes suitable for beginner, novice and intermediate skiers; average snow conditions for that area (or weather conditions suited to artificial snow-making) to provide 10 weeks or more of skiing; and 10 acres or more of land capable of development close to the slopes, and suitable for runouts and supporting facilities.

As a subordinate feature, S is used to indicate skiing capability in any unit ranked from 1 to 5.

SUBCLASS T - Thermal Springs: Land containing thermal springs.

Characteristics:

Aspects important in the ranking of units for T include: the potential for access and the development area for supporting facilities; the volume, temperature and composition of the water flow; geological and other scientific interest features; and the setting.

Classification:

The T symbol will be in a dominant position in classes 1 to 5.

Class 1 - A thermal spring with a very high capability for generating intensive use over a long season. The unit will include either an outstanding geological

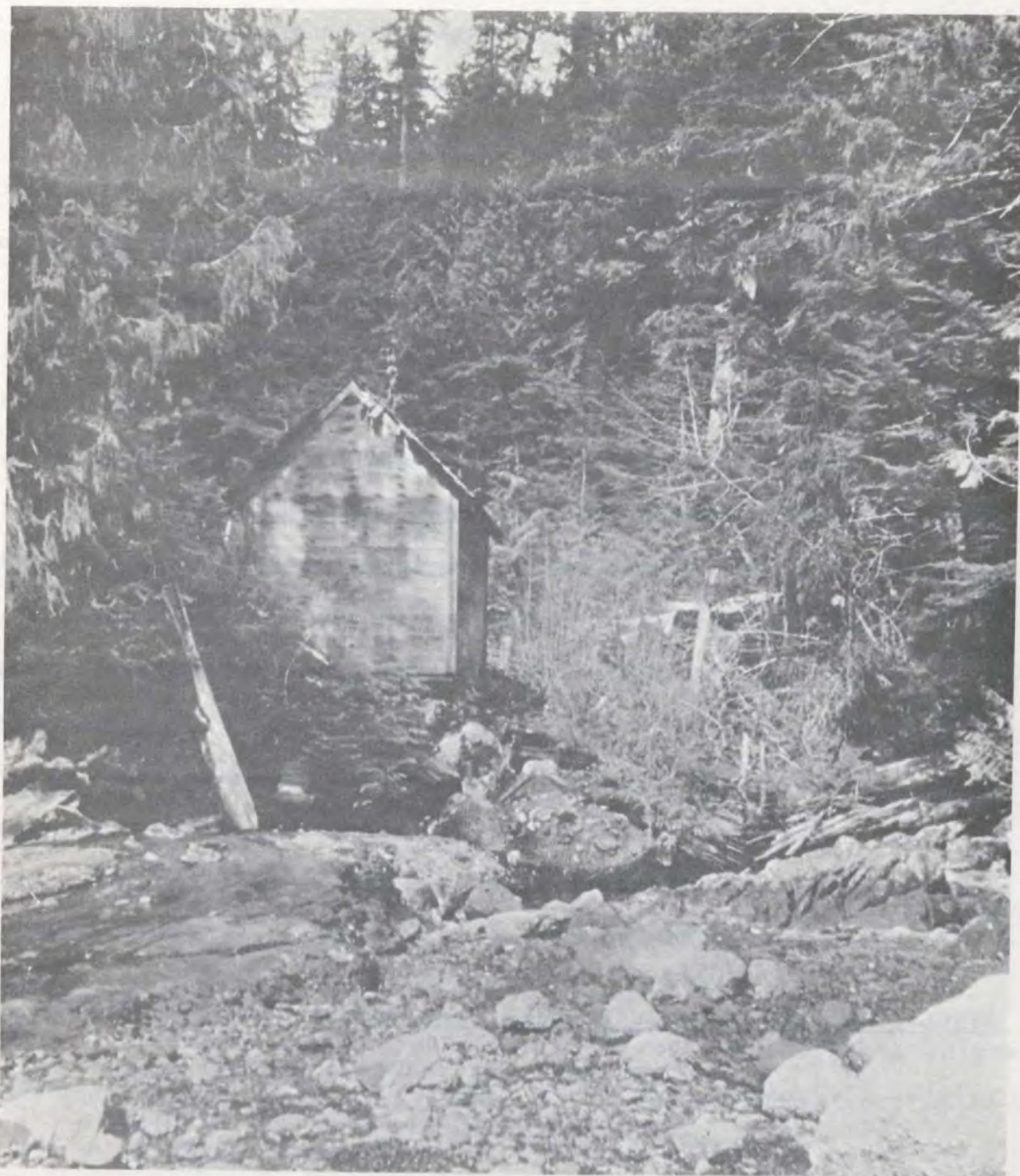


Figure 43. Many thermal springs in Western Canada are known to and used by local people who often construct a primitive shelter to permit year-round use and to protect the spring itself. Rugged terrain may preclude further development. The example shown, on the shore of Douglas Channel, near Kitimat, British Columbia, has suitable area for development and would rank Class 1 except that the flow is not adequate for this. The unit designation is 2S TKB.

or other scientific feature (with popular appeal),
or a volume and temperature of water that is capable
of accommodating at least 100 bathers at one time on
a year-round basis.

Class 2 - A thermal spring with a high capability for generating
intensive use. Included in the feature will be
interesting geological or other scientific aspects
with popular appeal, or a volume of water of a tem-
perature capable of accommodating up to 100 bathers
on a year-round or seasonal basis.

Class 3 - A thermal spring with a moderately high capability
for generating intensive use, but lacking a majority
of the characteristics attributable to a class 1 or
2 spring.

Classes 4-5 - Smaller thermal springs with moderate and moder-
ately low capabilities for generating intensive use.
These will exist as small units which provide a
focus within the broader area.

SUBCLASS U - Deep-Water Boating Area: Shoreland fronting water
suitable for yachts and other large craft:
yachting or deep water boat tripping.

Characteristics:

Activities associated with U include: boat mooring,
boat wharfing, boat tripping, boat launching, swimming, water
skiing, viewing and fishing.

Deep-water boating areas are usually associated with large water bodies which are not generally suitable for small boating activities, as defined later in subclass Y, but are more suited to larger craft which provide sleeping accommodation and safety for boat tripping.

Land units classified for this purpose will be located on such water bodies, and if units are ranked high they will provide shelter from prevailing winds, wave and ice action, and strong currents. Such shelter is usually found in bays, in natural or artificial harbours, or on the leeward side of headlands. The harbours in themselves may be suitable places for family boating and other aquatic activities. The deep-water boating features may then be either dominant or subordinate.

Deep-water harbours, in addition to providing shelter from hazards associated with the main body of water, should in themselves be largely hazard free. There should be sufficient channel entrance, depth of water, and space for manoeuvring boats, as well as freedom from submerged reefs or bars.

Sheltered areas on large water bodies are focal points for boating and other activities. Features enabling activities such as lodging, family boating, fishing, swimming, water skiing and viewing will enhance the surrounding shoreland. Other activities, such as log booming or storage, or commercial net fishing, may conflict with use for deep-water boating.

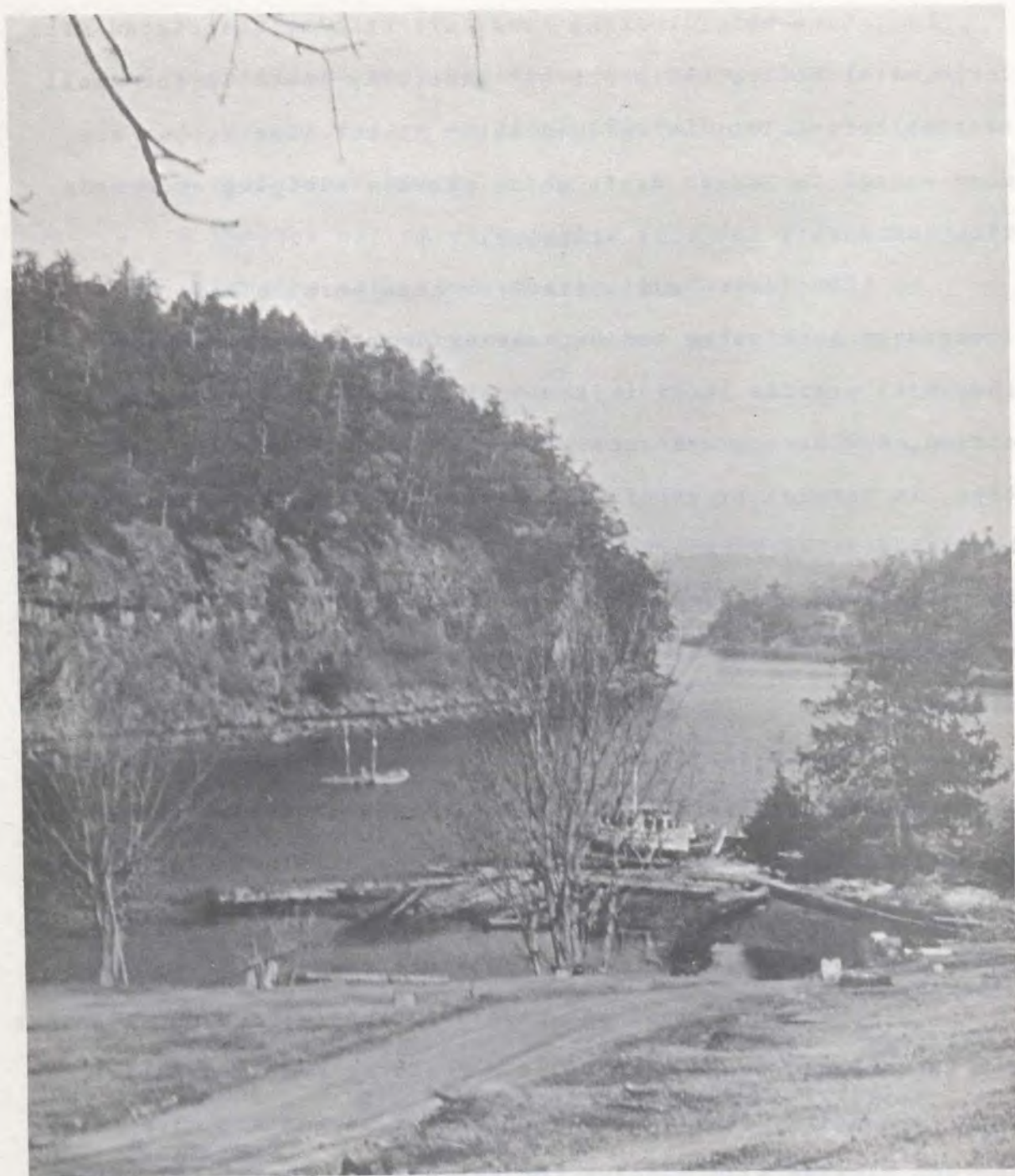


Figure 44. Boot Cove, Saturna Island, is a safe-water anchorage in British Columbia which can accommodate many large pleasure boats. These sheltered harbours are very necessary for the size of boat needed to cruise around the exposed islands and fjords, especially if there is also adequate space for the development of support services. This area warrants Class 2, with subordinate subclasses for angling and family boating.

Deep-water boating areas that are ranked high should have sufficient shoreland suitable for development of needed service facilities. Their capability is enhanced with parking space for cars and trailers, sites for docks and launching ramps, and capability for road access. A fresh-water source is important in salt-water areas.

In addition to harbours, this subclass may indicate frontage on a route for deep-water pleasure boats with safe and perhaps scenic attributes. Deep-water boating may be secondary to angling or to viewing wildlife or other features where access is primarily by water. Only those land units which allow safe fair-weather boat access close to shore have this subclass.

Classification:

The U symbol will be in a dominant position in units ranking classes 2 to 6.

Class 2 - A unit having frontage on an excellent natural harbour with water at least 6 feet deep 25 feet from shore; freedom from hazards to manoeuvrability; at least 10 acres of backshore capable of development; road access capability; and a minimum open season of six months. The harbour will be outstanding along an extensive waterway well suited to pleasure-boat tripping.

Classes 3-6 - Classes 3 to 6 will contain diminishing combinations of features ranging below those required of a class 2 unit, down to those units with precipitous

shores having no other capability than offering fair weather mooring for deep-water boats.

SUBCLASS V - Viewing: A vantage point which provides a superior view, or an area which provides frequent good viewing opportunities.

Characteristics:

Normally, use of V as a dominant feature in high ranking units is restricted to areas of limited extent offering the most outstanding views in the locality. A viewpoint is not necessarily the highest point of land; the converse may be true, and often mountain scenery is best experienced from a vantage point part way up a mountain. Capability for access and adequate development area should also exist. Associated activities include general viewing and recording.

Where viewpoints are very frequent, a few outstanding viewpoints are delineated. The viewing quality is acknowledged elsewhere by the class being raised, by the inclusion of V as a dominant or subordinate feature, and elaboration, where necessary, in the 1,000-word narrative.

Classification:

As a dominant feature, it is considered best to relate V to class structure by way of well-known examples. Class 1 - Lake Louise (1S VGQ). The rank and symbols used here are associated with the Lake Louise shoreland unit in which the famous resort hotel is situated. Since



Figure 45. Percé: one of the most scenic districts in eastern North America. The illustration does not do full justice to Percé Rock; the entrance can be seen only side-on. In the background is Bonaventure Island, which has, along the cliff visible in the picture, the most famous sea-bird colony in Canada; it is classified 1S WV for the combination of bird-watching and superb viewing. Further classification is shown on the maps at the back of this book. These show that Percé Rock is given 1S RV, a rating which includes the open area on the promontory pointing to the Rock. The foreground is part of a large natural amphitheatre set between the sea and Mont Ste-Anne. This area is rated 3U QV, for the superb views it offers of land and sea.

Figure 46. Some of the most spectacular look-outs and seascape viewing points in Eastern Canada are found in the northeastern part of the Cabot Trail, Cape Breton Highlands National Park, Nova Scotia. This shows a good 2S VQK, with ample area for development and access. There is a wide range of associated activities from shoreland camping to topographic diversity. The viewing point here is from within the shoreland unit.





Figure 47. This viewpoint – Bow Summit Lookout – is classified 2U VG; G is subordinate here because there are only limited views of the glacier. Such viewpoints as this, which have both capability for access and developable area, will be quite rare in rugged mountain country. There is a 4U GFQ unit at the tip of Peyto Glacier; the F refers to a small waterfall flowing over a hanging valley. Peyto Lake has the characteristic emerald water of active glacier areas. Angling is not significant, and is not indicated even as a subordinate. Upland wildlife (moose, elk, goats, grizzlies and small rodents) is indicated by subclass 0 in the valley but is not significant enough for higher rank or for delineation of smaller units.

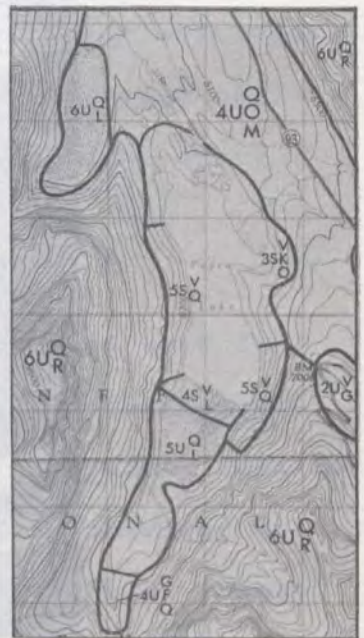




Figure 48. Here are two Class 3 viewpoints in Ontario. The Dorset viewpoint (above), which has also a fire tower and a Centennial lookout tower (Z), is in Haliburton District. The focus is on foreground detail; the ranking is 3U VZ. In the lower picture, Trafalgar Lookout (13 miles north of Hamilton) overlooks the "Golden Horseshoe" of Southern Ontario. It ranks 3U VQ, for a vista-type view.



the amphitheatre which contains Lake Louise is several square miles in extent, it will also contain units in lower classes. While the amphitheatre is limited in size, the entire basin would stand out in class above the surrounding region.

Class 2 - Views from the most outstanding overlooks in the Saguenay area of the St. Lawrence North Shore; restricted areas in the vicinity of Cape Gaspé, Gaspé Peninsula; the most outstanding view obtainable along the Cabot Trail, Cape Breton Island; or the Lake Superior North Shore. Figures 46 and 47 are excellent examples of class 2 viewpoints.

Class 3 - The most outstanding views obtainable in the Saint John River Valley, New Brunswick, or the Qu'Appelle Valley (e.g., the overview obtained of Buffalo Pound Lake, near Moose Jaw) in Saskatchewan; the best views obtainable from the Niagara escarpment.

Class 4 - Numerous examples of views which are locally superior but which do not rival the above examples.

Class 5 - A small hill on an edge of an escarpment may offer a view of uninteresting land classified as 6. These viewpoints may be designated 5V.

SUBCLASS W - Wetland Wildlife: Land with capability for viewing or hunting of wetland wildlife.

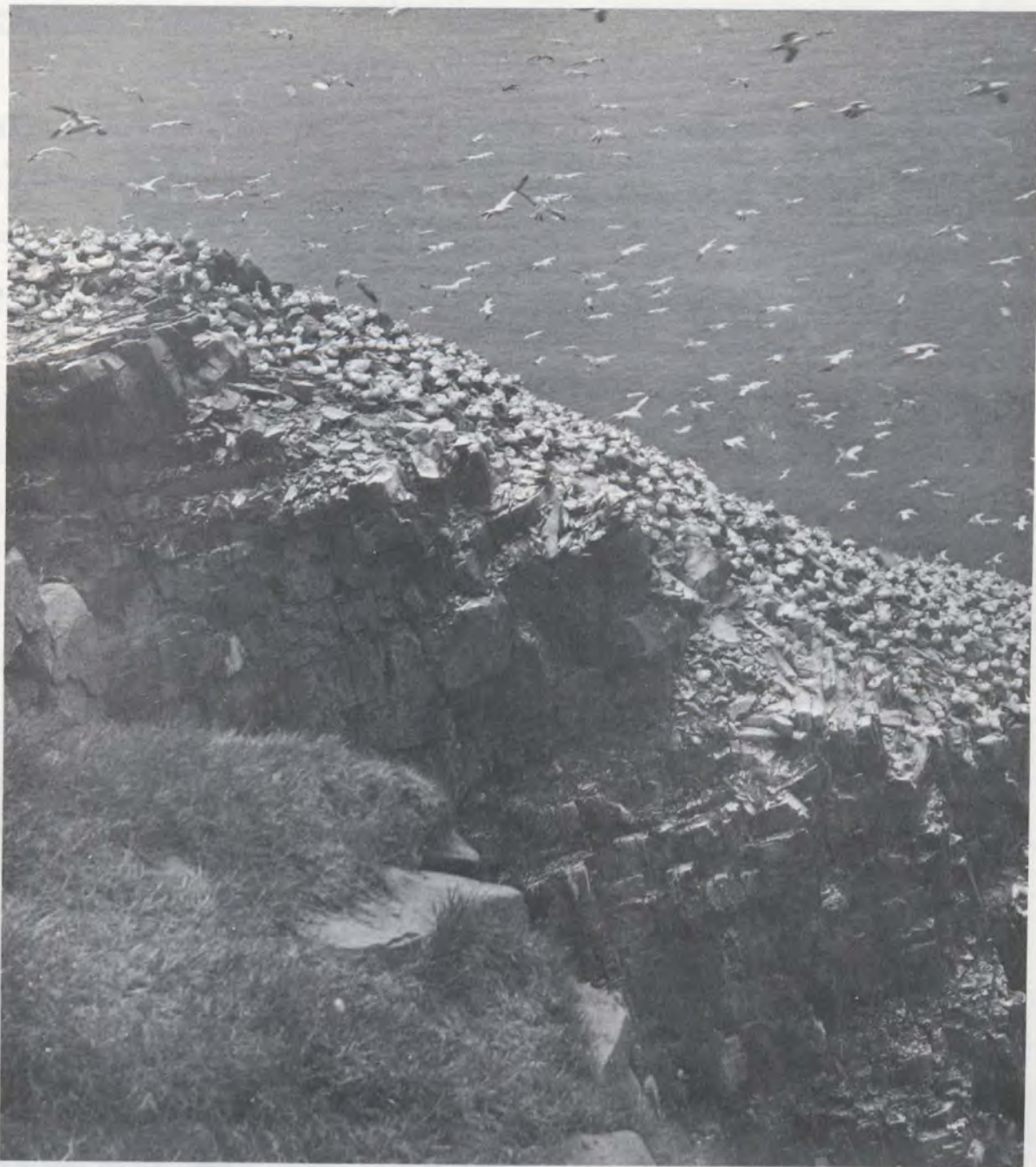


Figure 49. This Gannet colony is situated on a chimney rock at Cape St. Mary's on the south coast of the Avalon Peninsula, Newfoundland. It is rated the seventh largest in the world and is readily accessible. Given a cautious approach, there can be intensive use for interpretation and recording of all stages of the gannet life-cycle. In conjunction with excellent sea-scape viewing and the patterns of compatible farmland husbandry throughout the backshore, the colony merits a Class 2S WVP.



Figure 50. Lake Windermere, in British Columbia, has an excellent setting for viewing and for physical access to the lake for wildlife observation and other activities. This portion is very significant as a concentration and breeding area for wetland birds, including Canada geese. The shoreland unit is rated 1S WV.



Figure 51. This island, where murre live and breed, is in an exposed situation half a mile off the rugged north east of Newfoundland, near Bonavista. Thus there is fair-weather anchorage only to the lee of the island, which is classified 6S W. On a mainland point, or on a larger island with good accessibility, an outstanding colony would merit Class 2.

Characteristics:

Wetland wildlife species include waterfowl, shore birds, marsh birds and aquatic mammals. Concentrations of certain of these species in favoured habitat locations are well-known phenomena. The most conspicuous examples are nesting areas of waterfowl, some of which reach spectacular proportions.

Migration routes and favoured resting places can result in heavy concentrations of transitory waterfowl during the fall, enabling very intensive hunting activity in restricted areas during short periods annually. Total annual use, however, remains fairly low.

Wetland wildlife species in mating and nesting areas vary in the tolerance of human activity. This tolerance influences recreational capability ranking. Sound management to minimize disturbance by intensive human activity is assumed.

In instances such as the sandhill crane resting and nesting areas in Saskatchewan, where birds feed over fairly extensive upland areas from a concentrated traditional resting and nesting water area, viewing opportunities are concentrated within a limited distance of the water area.

Classification:

Wetland wildlife will frequently be a dominant feature in Classes 5,6 and 7. It will occasionally be dominant in Classes 4,3, and possibly 2, where concentrations occur, or even 1 where it is supported by a strongly complementary feature. It may be a subordinate feature in any class, but more normally in Classes 3 to 6 inclusive.

- Class 2 - A wetland wildlife area could be sufficiently spectacular over a long enough season annually to warrant Class 2 ranking in terms of engendering intensive viewing and interpretive use, and be able to sustain this high level of use, given adequate management.
- Class 3 - Class 3 ranking indicates an area where waterfowl regularly congregate in such numbers over long periods as will generate a high intensity of viewing and interpretive use, given management for this purpose. An example may be the sandhill crane congregating area on Last Mountain Lake in Saskatchewan.
- Class 4 - Areas with viewing capability associated with spectacular concentrations of waterfowl in season, but with limitations on accessibility, length of season, or tolerance of the species to human activity, will merit class 4. They may be those units which contain less outstanding concentrations of wildlife, but which are regionally significant and can engender and sustain fairly intensive viewing, interpretive and hunting activity.
- Class 5 - Units containing small but significant concentrations of wetland species with capability for interpretation and viewing, or more extensive areas with high capability for hunting activity, or combinations of features with comparable use capability, will merit class 5.

Class 6 - Areas with moderately low to moderately high capability for waterfowl hunting or wetland wildlife viewing.

Class 7 - Lands with little other capability for recreation than very mediocre waterfowl hunting or wildlife study may warrant Class 7W.

SUBCLASS X - Miscellaneous: A unit denoted by the letter x represents an area with a recreational feature not adequately covered by any other symbol. Appropriate explanatory notations are made in the small-scale map narrative and legend.

SUBCLASS Y - Family Boating: Shoreland adjacent to water suitable for popular forms of family boating activity.

Characteristics:

Family boating is concerned with a variety of activities on small water bodies or sheltered portions of large water bodies. These include activities associated with both land and water. Family boating is essentially "day boating". This means that boat launching opportunities are important, as well as parking space for cars and trailers.

Areas providing launching opportunities are focal points for family boating, particularly if the backshore permits the development of support facilities and road access.

A shoreland unit lacking reasonable capability for overland access to the shore can have capability for family



Figure 52. A diversity of water-oriented activities – sunbathing, swimming, and viewing—can be intensively sustained at such recreational focal points as this lake in New Brunswick. The shoreland unit is also ranked for family boating. The topography of the back shore limits development for public park or for cottages, downgrading the unit from Class 2 to 3S YBV.

boating if it is convenient for boat beaching, landing or mooring. Availability of backshore suited to use in associated activities by boating families arriving by boat will complement boat landing capability.

Classification:

Family boating is normally a fairly dispersed type of activity and therefore any land unit fronting on a family boating waterway will not usually rank high for this factor. Where a shoreland unit is highly suited to use as a boating headquarters, and is relatively alone in this respect on a waterway well suited otherwise to family boating, very intensive use of that unit could be generated and sustained because of family boating. There are all degrees of this capability. Thus Y may be a dominant feature of units ranking from 1 to 6. Normally a shoreland unit well suited to family boating use will have high capability with respect to other features such as a bathing beach, lodging or organized camping. Only when family boating is the obvious dominant use has the Y symbol been used in a dominant position.

Class 1 - An extreme instance of the condition described in the paragraph above may warrant Class 1 ranking. The water body or adjacent water area is excellent for family boating. The land unit provides an ideal natural range of boat launching, beaching and mooring conditions on a large scale, as well as good natural capability for overland vehicle access, and extensive

backshore suitable for complete support facilities. The site is unique on a water body, or within a wide radius if on a large water body.

- Class 2 - A shoreland unit ideally suited to boat launching, beaching and mooring, to provision of access and support facilities, located on a waterway with minor limitations for family boating, or with fairly frequent comparable sites; or a unique site on an excellent boating waterway but with minor limitations in the site capability.
- Class 3 - A shoreland unit with particular capability for use as a focal point for family boating activity, but in which one or more of the site, the backshore, the shore, or the water body, have moderate limitations.
- Class 4 - A shoreland fronting a water body suited to family boating activity which provides access between land and water for boating activity at fairly frequent intervals, but which lacks individual locations or sites with capability for more intensive use.
- Class 5 - Shorelands fronting water with family boating capability, but with only occasional moderately low capability sites for land to water access, may rank Class 5.
- Class 6 - Shorelands fronting water with family boating capability, but with very limited capability at infrequent sites for water to land access, may rank Class 6.

Shorelands classified as 5 or 6 will obviously have very limited or minimal capability for recreational activity, other than as a possible stopping place (with moderate to severe limitations) for boating parties.

SUBCLASS Z - Man-made Features: Areas exhibiting major, permanent, non-urban, man-made structures of recreational interest.

Characteristics:

Hydro-electric dams, such industries as pulp and paper mills, quarries, mines, or airports, may have considerable recreational capability. The recreational interest in hydro dams is obvious; with other industries or structures, the areas with recreational capability may be viewpoints or overlooks. Development area for car parks and supporting facilities is important. Associated activities will include industrial interpretation, general viewing and recording.

Classification:

Class 2 - A major dam site offering superior viewing opportunities of the dam site and operations, fishways, etc. A reservoir formed by the dam is, of course, classified for shoreland use, and often a useable shoreline in conjunction with the dam site itself results in a combination of uses which may rank Class 1. A spectacular lock in an attractive setting on a canal system (particularly a well-used canal) may

rate Class 2, and, while no other examples are offered, the possibility of other man-made structures ranking Class 2 is not ruled out.

Class 3 - This class includes such features as imposing lighthouses, and sites which offer an excellent overview of interesting industrial or mining operations in a rural setting. Examples include a pulp mill operation or spectacular open-pit mining activity, such as at Murdochville, Gaspé Peninsula, Quebec, or at Steep Rock Lake, Ontario, where dredging and deep man-made cuts can be seen. A unique covered bridge such as the "world's longest" at Hartland, New Brunswick, merits Class 3. Normally, smaller covered bridges will rank one class higher than the surrounding valley, although in highly significant features it is possible to ascribe a class for the feature alone. In general, consideration is accorded to both the site (feature) and the situation (setting). Modern bridges which represent outstanding engineering or architectural accomplishments fit into this category, as also might harbour works (breakwaters, piers, jetties, etc.) in a rural setting if a sufficient area capable of development is available.

Classes 4-6 - Depending on the quality, the degree of interest, and the setting, a number of man-made structures can well be delineated. If the features are of no great



Figure 53. Many industrial establishments detract from the natural quality of the landscape, but the variety of activities and the changing patterns may present interesting aspects to the viewer and traveller. This sawmill at Adams Lake, British Columbia, is the focal point of extensive logging operations, and is a good example of a basic and important industrial operation. The setting, and opportunity for viewing, warrant Class 4S ZV.

Figure 54. There are excellent views of man-made features to be seen along the St. Lawrence Seaway. Here is an ocean freighter at the St. Catherine Lock, Lachine, Québec. The rating is 4S ZVU.





Figure 55. The lighthouse on Grand Manan Island, New Brunswick, is a distinctive landmark well known to artists and photographers. Fairly intensive landward use of this man-made feature is possible, with views of the seascape and surrounding rocks. However, water-oriented activities are few because of cold water, wave action, and fog; access is somewhat limited and the island is exposed. The unit therefore ranks no higher than 4S ZVR.

Figure 56. Here is a small (about 25 acres) open-cast quarry – the Columbian Mine, near Oka, Quebec. It has a fairly scenic setting with excellent interpretative overlooks and is given Class 3U ZRJ.



significance, it is sufficient to draw a line around the site without changing the class. If, however, the feature is significant, and provides an additional focus (over and above the features of the larger surrounding unit), then its greater capability to attract and sustain use is reflected by a higher rank. In other words, the site is ranked one class or more higher than the region which contains the site (see Figures 37-39). Undeveloped peat bogs are normally of low capability, but developed peat bogs have a higher capability. Examples include the Irish type diggings near Rivière-du-Loup, Quebec, or the mechanized harvesting of peat near Port Colborne, Ontario.

4. GUIDELINES FOR MAPPING

Basis of Classification

Land is classified by land units, each of which normally comprises one or more recreation features. Due to mapping limitations, a maximum of three recreational features are recorded for each land unit. Two series of maps are required by the Canada Land Inventory:

- (a) A large-scale manuscript capability map with scale as near as possible to 1:50,000, depending on the availability of suitable base maps for input into the computer. This is the scale of data that will be analyzed and combined

with relevant data from other sources for land use planning, development and management.

(b) A small-scale capability map for publication in colour at a scale of 1:250,000 on the national topographic series base.

(a) Large-Scale Mapping:

(i) All new mapping will be produced on autopositive base materials.

(ii) Each land unit is assigned a combination of symbols indicating:

(a) capability class, 1 to 7

(b) whether shoreland (S) or upland (U)

(c) up to three subclasses (recreational features), appearing in order of significance, vertically or horizontally.

(iii) Typical Symbols:

B

2 S K or 2SBKA indicates a Class 2 shoreland

A

unit with a bathing beach (B), terrain suited to camping (K), and accessible to adjoining angling water (A), in that order of importance.

P

5 U L or 5UPLR indicates a Class 5 upland unit,

R

displaying interesting land use patterns (P), land forms (L), and rock formation (R), in that order of importance. (See also Figure 57.)

(iv) For computer purposes a distinction is made on the large-scale maps between shoreland and upland units (S and U). *Shoreland* is defined as those units of land separated for classification purposes which front on a water body either capable of supporting popular recreational activity or large enough to do so. In practice, water bodies capable of supporting family boating are considered necessary before a shoreland designation can be given to adjacent land. Water bodies which are not considered large enough in terms of area (a pond or small lake) or wide enough, as in the case of stream corridors, are considered as upland even though the dominant recreational feature (e.g. angling or canoeing) may be associated with water. The S or U designation does not appear on the small-scale published maps.

(v) Because of losses in accuracy when measuring areas where a dimension falls to 1/8", the minimum dimension in any direction of a shoreland or upland unit is 3/16".

(vi) The large-scale map information is drafted onto the autopositive base map, providing a uniform, legible and accurate data source for computer input. All land unit boundary lines are shown closing onto themselves, or up to a natural map margin or water boundary. The drafted boundary lines dividing shoreland units along

the perimeter of a water body are drawn at right-angles to the water line and end precisely at this point of contact.

(vii) Leaders (arrows) are used where necessary to associate a symbol with an area.

(viii) Widths of shoreland units will reflect their capability and the presence of physical barriers.

The minimum width drawn is 3/16", and for a class 1 shoreland unit on a large lake the maximum may be 1 1/4", or one mile. The land unit of an isthmus will normally be divided longitudinally, thereby allowing shoreland to front onto a water body on either side. If dimensional restrictions do not permit this, then either of the following will indicate the classification:

(a) The unit in total is symbolized by a higher class, indicating a complementary mix of sub-classes;

or

(b) The isthmus may be arbitrarily segmented into a central unit with shoulder units at either end, and each component classified independently.

Offshore island or island complexes, with capability accruing to the shoreland unit on which they front, are indicated as included in that shoreland unit and may require a leader (arrow) to associate them with the symbol.

(b) Small-Scale Mapping:

A series of maps at a scale of 1:250,000 (about 4 miles to the inch) is being published in colour and folded into a convenient pocket-sized holder. Each 1:250,000 map sheet is intended to be a reduction of the component 1:50,000 sheets, in that each unit shown on the large-scale maps will appear on the small-scale map. For the larger units there should be accurate reduction, but for the smaller units and for corridor or shoreland units, scale distortion is necessary to avoid units of less than 1/8 inch. Each map sheet when published will incorporate:

(a) A completely coloured format that, for broad and general planning purposes, will provide a visual impression of the quantity and distribution of land by recreational capability class. (See MAP 2).

(b) The class and all subclasses for each unit, but not the Shoreland and Upland designations. The conventional symbols used in the large-scale computer mapping, excluding S and U, will also be employed with these published maps.

(c) A standard legend describing the capability classes, the subclasses, the basis of classification, and examples of conventions and symbols.

(d) A narrative, in both English and French, of approximately 1,000 words in length, which will explain

and supplement the recreational information on the map.

(See Appendix.)

(c) Narrative to Accompany Small-Scale Mapping:

The narrative supplies pertinent information both explaining and supplementing the information found on the map sheet. The narrative may supply some regional background, and relate the recreational capability of the area covered by the map to that of the broader region in which it is contained. To this end, it is important that the narrative reveal pertinent characteristics and potentials that will aid regional planners in their eventual assessment of the area for proposed development.

On each small-scale map sheet some information will be lacking, or at least not readily evident, on the basic land resources covered by the sheet. The scope of the narrative will encompass such information as relates directly to the recreational capability of the area in question. The narrative describes areas, and such interests as historical significance, climate and vegetation; and those recreational features that are significant throughout the map-sheet area, but for various reasons cannot be symbolized or described in particular sites. Elaboration is made on the recreational capability features as they appear or are implied on the small-scale map sheet. The style of the narrative will vary somewhat, from author to author, but more notably from

one province to another as each puts different emphasis on the natural attributes and tourist attractions within its boundaries.

GLOSSARY OF TERMS

ACTIVITY

- outdoor recreational activities in an environment where the significant factors contributing to the opportunity for activity are normally natural as opposed to man-made.

Backshore:

See under "Shoreland".

Bar:

An embankment of sand, gravel, or other detritus carried by shore currents and deposited in the form of spits connecting two headlands, or across shore indentations or embayments. Bars may be submerged, or may be built above water.

The ends of a bar need not be attached to the land. In this respect a bar differs from a spit.

Bathing:

Beach activity for family groups including non-swimmers and children.

Capability:

See under "Recreational Use Capability".

Capital Input:

In this context, capital input refers to the financial investment necessary in order to overcome a natural physical limitation, e.g. the backshore of an otherwise excellent beach

may be slightly hummocky and, in its natural state, unsuitable for parking; but if this limitation can be overcome with minimal capital input, the capability rating will not be lower because of the slight limitation.

Carrying Capacity:

The measure of the capacity of a lake for boating, water skiing, bathing, recreational use in general, and residential occupation of the shore and shore border-land without patent overcrowding, pollution and consequent danger to health and safety. Carrying capacity may be greatly limited if a single use is given priority; it may be expanded if the surface area of the lake is zoned for particular uses and the time for use in each zone is specified.

Some of the factors involved in determining carrying capacity are: size, shape, depth, character and location of swimming areas and beaches, regulatory and zoning restrictions, season of year, accessibility (public or private), available services (boat liveries, marinas), level of pollution or smirchment, parking facilities, usable frontage, and fish (abundance, species).

Development Area:

The area, immediately adjoining a recreational feature, which is required for supporting activities and facilities (see under "Facilities").

Developed Shore:

Shoreland that has been occupied by man, or modified

for his use. The development may take the form of buildings for residential use, resorts, commercial structures, or improvements for recreational purposes.

Dispersed Activity:

Any of those recreational activities listed which either:

- (a) have a high acreage requirement per person or family participating at any particular time for optimum user satisfaction, e.g. fishing and hunting, or
- (b) are highly tolerant in resource requirements and can therefore be enjoyed in a wide range of land types, e.g., picnicking, and walking or driving for pleasure.

Dry Beach:

See under "Shoreland".

Facilities:

Man-made structures usually needed to facilitate visitors' use of recreational features; includes roads, parking areas, buildings, sanitary and water works, ski tows, etc.; but does not include normal landscape improvements.

Family Boating:

Popular forms of boating available to the average family; normally implying a relatively small boat capable of being launched and transported by an automobile-drawn trailer for inland waters, or a type of family boat common to the region.

Gathering and Collecting:

Any of those recreational activities associated with gathering fruits, berries, nuts, rocks, gemstones, shells, insects, etc., whether on a casual or serious basis.

Intensive Use:

A relative term referring to a recreational feature or land unit which could attract and sustain a high level of use in terms of visitor-days per unit area per annum; or a type of recreational activity usually requiring a relatively small land area per person.

Lake Access:

A path, road or right of way over which a person may travel in order to enter upon or depart from the surface of a lake.

Land:

Land, for the purpose of the inventory, comprises combinations of rock, soil, water, air, fauna, flora and cultural landscape. In this inventory, however, water bodies as such are not classified: the recreational value of the water body accrues to the adjoining shores.

Land Unit:

An area of land with a discrete combination of land elements (rock, soil, water, etc.) which, from an inventory point of view, has a uniform capability in relation to the feature or features found therein.

Lodging:

Use of land for seasonal or continuous habitation in more or less permanent buildings, under private, group, or commercial operation.

National System:

The system in official use for the recreational sector of the Canada Land Inventory.

Organized Camping:

Camping in grounds developed for the purpose.

Pebble Beach:

A beach composed of well-rounded rock fragments of gravel size, smaller than cobbles. According to the Wentworth size classification pebbles have a range in diameter from 4mm to 64mm.

Perfect Market Conditions:

This term, where used in this outline, implies that market or demand conditions, such as location in relation to population centres, and accessibility, are equal for all areas and therefore do not influence the relative capability for any area.

Primitive Camping:

Camping in small or large individual groups in more or less undeveloped sites selected for the occasion.

Recording:

Photography, sketching, painting, bird song recording or similar activities.

Recreational Use Capability (or "Capability"):

The natural capability of land for use for any one or more of the types of recreation listed.

Region:

The terms *region* or *regional* in this document refer to the large natural divisions of Canada: British Columbia, the Prairies, Ontario and Quebec, and the Atlantic Provinces less Labrador.

Shore-Based Activity:

Any popular recreational activity which customarily depends upon land-water boundaries; e.g. bathing, swimming, family boating, summer cottaging, water skiing and lake angling.

Shoreland:

A broad term embracing the various components of land fronting on a water body which is either capable of supporting recreational activity, or is large enough to do so. In practice, water bodies capable of supporting family boating are considered necessary for a shoreland (S) designation. Shoreland extends from the 5-foot depth contour at normal low water, inland from the shoreline to a natural boundary, or to a boundary which encompasses the direct zone of influence of the water body. In this inventory the zone of influence is assumed to reach a

maximum of one mile in width for a Class 1 unit on a large lake: other shoreland units will vary in width from about 800 feet (the minimum allowable at the 1:50,000 scale) to one mile, depending on the nature of the shoreland and on its capability for recreation. Cartographic limitations at the 1:250,000 scale require a minimum width of 1/8" (approximately one-half mile). Shoreland components are defined as follows:

(a) Wet Beach: the area of a beach below the normal high water line, usually outward to the 5-foot depth contour at normal low water;

(b) Dry Beach: the area of a beach above the normal summer high-water or high-tide level, but normally subject to wash by high water, or storm waves;

(c) Beach: the width of the shore zone which includes the wet and dry beaches;

(d) Backshore: that part of the shoreland reaching inland from the dry beach normally as far as the extreme extent of storm action or ice erosion. For purposes of the inventory, however, backshore refers to the zone of influence of the water body embracing the associated development area.

Upland:

All land other than shoreland.

Urban Land:

Land within communities of generally over 1,000 population which have a permanent urban character. Such lands are

not classified: they should be delineated and designated as Class 8.

Water Bodies:

Recreational values of a water body accrue to the adjoining shore land unit (S) and as such are not classified.

Credits for Photographs

C. Mondore, Quebec Dept. of Tourism, Fish and Game: Fig. 5.
R.V. Peiluck, Manitoba CLI: Figs. 6,25.
G.H. Staines: Figs. 8, 17, 44, 50.
K. Bramley, Ontario Dept. of Lands and Forests: Figs. 9, 11, 38, 48.
W.C. Yeomans and Associates, Victoria, B.C.: Fig. 15.
E.M. Cressman, Ontario Dept. of Lands and Forests: Fig. 20.
C.A. Banks: Fig. 26.
V. Mann, Ontario Dept. of Lands and Forests: Figs. 27, 28.
M.C. Taylor, Ontario Dept. of Lands and Forests: Fig. 35.
Government of Alberta: Fig. 41.
Quebec Dept. of Tourism, Fish and Game: Fig. 42.
Newfoundland Dept. of Mines, Agriculture and Resources: Fig. 51.
T. Clifford Hodgson, St. John, N.B.: Fig. 52.
G. Groleau, Quebec Dept. of Tourism, Fish and Game: Fig. 54.

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DESCRIPTIVE LEGEND

Seven classes of land are differentiated on the basis of the intensity of outdoor recreational use, or the quantity of outdoor recreation, which may be generated and sustained per unit area of land per annum, under perfect market conditions.

"Quantity" may be measured by visitor days, a visitor day being any reasonable portion of a 24 hour period during which an individual person uses a unit of land for recreation.

"Perfect market conditions" implies uniform demand and accessibility for all areas, which means that location relative to population centres and to present access do not affect the classification.

Intensive and dispersed activities are recognized. Intensive activities are those in which relatively large numbers of people may be accommodated per unit area, while dispersed activities are those which normally require a relatively larger area per person.

Some important factors concerning the classification are:

- The purpose of the inventory is to provide a reliable assessment of the quality, quantity and distribution of the natural recreation resources within the settled parts of Canada.
- The inventory is of an essentially reconnaissance nature, based on interpretation of aerial photographs, field checks, and available records, and the maps should be interpreted accordingly.
- The inventory classification is designed in accordance with present popular preferences in non-urban outdoor recreation. Urban areas (generally over 1,000 population with permanent urban character), as well as some non-urban industrial areas, are not classified.
- Land is ranked according to its natural capability under existing conditions, whether in natural or modified state; but no assumptions are made concerning its capability given further major artificial modifications.
- Sound recreation land management and development practices are assumed for all areas in practical relation to the natural capability of each area.
- Water bodies are not directly classified. Their recreational values accrue to the adjoining shoreland or land unit.
- Opportunities for recreation afforded by the presence in an area of wild-life and sport fish are indicated in instances where reliable information was available, but the ranking does not reflect the biological productivity of the area. Wildlife capability is indicated in a companion series of maps.

LANDS IN THIS CLASS HAVE VERY HIGH CAPABILITY FOR OUTDOOR RECREATION.

Class 1 lands have natural capability to engender and sustain very high total annual use based on one or more recreational activities of an intensive nature. Class 1 land units should be able to generate and sustain a level of use comparable to that evident at an outstanding and large bathing beach or a nationally known ski slope.

CLASS 2 LANDS IN THIS CLASS HAVE A HIGH CAPABILITY FOR OUTDOOR RECREATION.

Class 2 lands have natural capability to engender and sustain high total annual use based on one or more recreational activities of an intensive nature.

LANDS IN THIS CLASS HAVE A MODERATELY HIGH CAPABILITY FOR OUTDOOR RECREATION.

Class 3 lands have natural capability to engender and sustain moderately high total annual use based usually on intensive or moderately intensive activities.

CLASS 4 LANDS IN THIS CLASS HAVE MODERATE CAPABILITY FOR OUTDOOR RECREATION.

Class 4 lands have natural capability to engender and sustain moderate total annual use based usually on dispersed activities.

CLASS 5 LANDS IN THIS CLASS HAVE MODERATELY LOW CAPABILITY FOR OUTDOOR RECREATION.

Class 5 lands have natural capability to engender and sustain moderately low total annual use based on dispersed activities.

CLASS 6 LANDS IN THIS CLASS HAVE LOW CAPABILITY FOR OUTDOOR RECREATION.

Class 6 lands lack the natural quality and significant features to rate higher, but have the natural capability to engender and sustain low total annual use based on dispersed activities.

CLASS 7 LANDS IN THIS CLASS HAVE VERY LOW CAPABILITY FOR OUTDOOR RECREATION.

Class 7 lands have practically no capability for any popular types of recreation activity, but there may be some capability for very specialized activities with recreation aspects, or they may simply provide open space.

SUBCLASSES

Subclasses indicate the kinds of features which provide opportunity for recreation. They are, therefore, positive aspects of land and do not indicate limitations to use. Features may be omitted from a unit, either because of the imposed three-feature limit, or because their presence was unknown or unconfirmed.

The degree to which these features are judged capable, collectively, of generating and sustaining use for recreation, determines the class. The sequence in which they are listed indicates the order of their significance. Subordinate features may be relatively insignificant and the class of a unit should not be interpreted to indicate the capability of a secondary or tertiary feature.

The subclasses are:

SUBCLASS A—Land providing access to water affording opportunity for angling or viewing of sport fish.

SUBCLASS B—Shoreland capable of supporting family beach activities. In high class units this will include family bathing. In Classes 4 and 5, the activities may be confined to dry land due to cold water or other limitations.

SUBCLASS C—Land fronting on and providing direct access to waterways with significant capability for canoe tripping.

SUBCLASS D—Shoreland with deeper inshore water suitable for swimming or boat mooring or launching.

SUBCLASS E—Land with vegetation possessing recreational value.

* **SUBCLASS F**—Waterfall or rapids.

* **SUBCLASS G**—Significant glacier view or experience.

SUBCLASS H—Historic or pre-historic site.

SUBCLASS J—Area offering particular opportunities for gathering and collecting items of popular interest.

SUBCLASS K—Shoreland or upland suited to organized camping, usually associated with other features.

SUBCLASS L—Interesting landform features other than rock formations.

SUBCLASS M—Frequent small water bodies or continuous streams occurring in upland areas.

SUBCLASS N—Land (usually shoreland) suited to family or other recreation lodging use.

* **SUBCLASS O**—Land affording opportunity for viewing of upland wildlife.

SUBCLASS P—Areas exhibiting cultural landscape patterns of agricultural, industrial or social interest.

SUBCLASS Q—Areas exhibiting variety, in topography or land and water relationships, which enhances opportunities for general outdoor recreation such as hiking and nature study or for aesthetic appreciation of the area.

SUBCLASS R—Interesting rock formations.

* **SUBCLASS S**—A combination of slopes, snow conditions and climate providing downhill skiing opportunities.

* **SUBCLASS T**—Thermal springs.

* **SUBCLASS U**—Shoreland fronting water accommodating yachting or deep water boat tripping.

SUBCLASS V—A vantage point or area which offers a superior view relative to the class of the unit(s) which contain it, or a corridor or other area which provides frequent viewing opportunities.

SUBCLASS W—Land affording opportunity for viewing of wetland wildlife.

SUBCLASS X—Miscellaneous features with recreational capability.

SUBCLASS Y—Shoreland providing access to water suitable for popular forms of family boating.

SUBCLASS Z—Areas exhibiting major, permanent, non-urban man-made structures of recreational interest.

CONVENTIONS

Large arabic numerals denote capability classes.

Upper case letters denote subclasses.

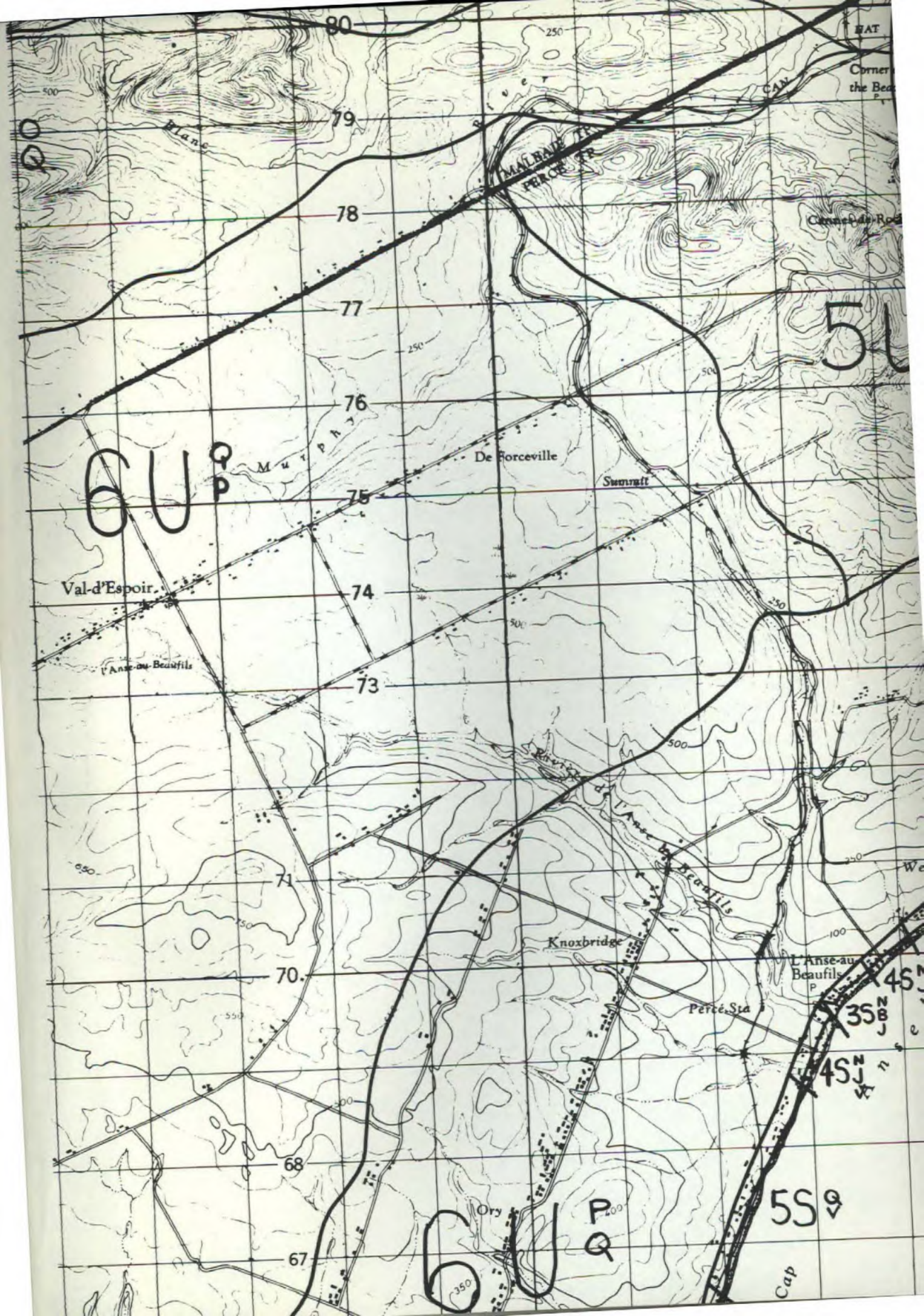
There may be area distortion due to scale limitations, particularly in the case of corridor-shaped units.

* Denotes class or subclass not present on this map.

EXAMPLES

An area of Class 1 shoreland with very high capability to generate intensive family bathing and beach activities, fronting and providing access to a water body suited to family boating, and with a backshore suited to organized camping is shown thus:

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PERCÉ TR

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Summit

6U P

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Val-d'Espoir

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L'Anse-au-Beaufils

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Knoxbridge

L'Anse-au-Beaufils
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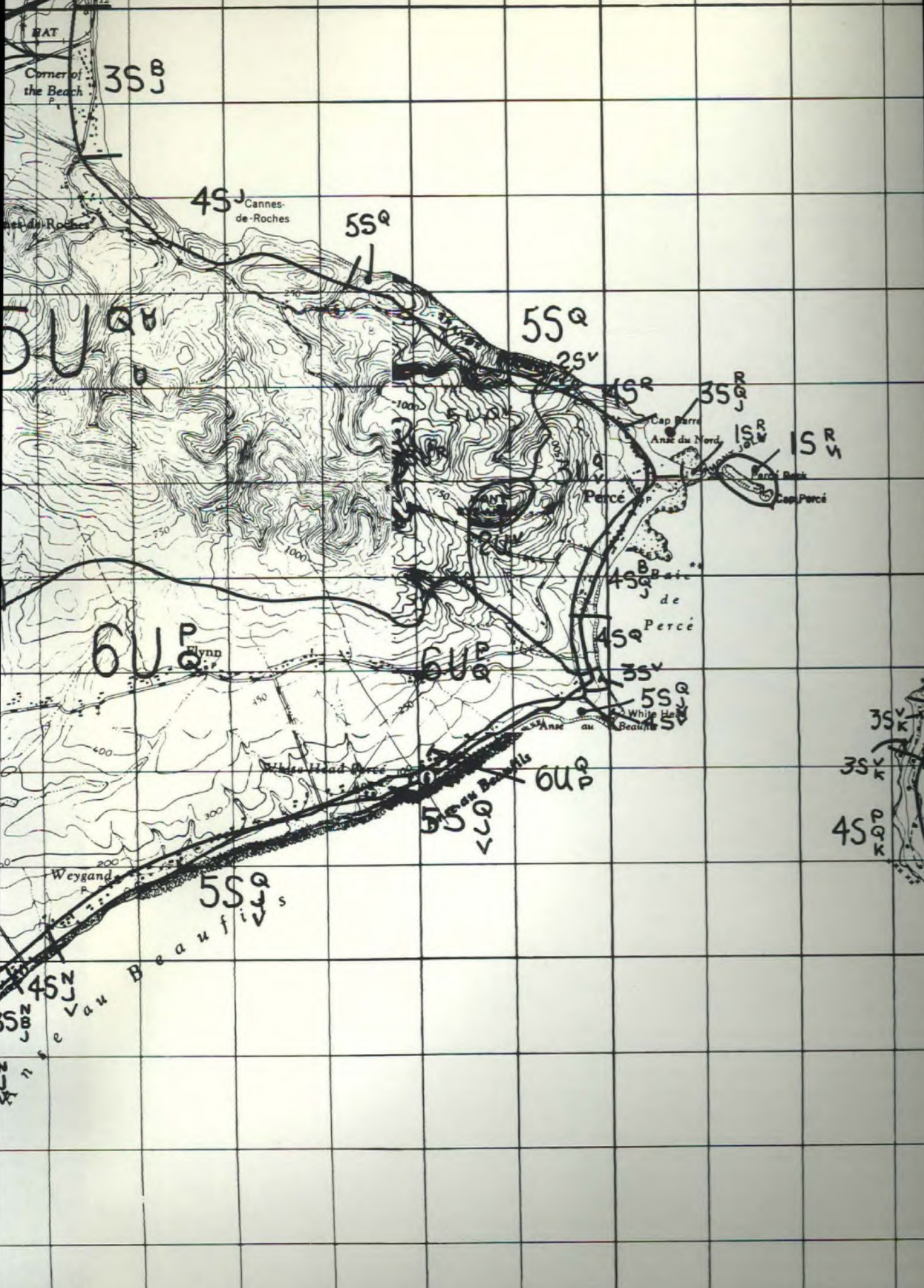
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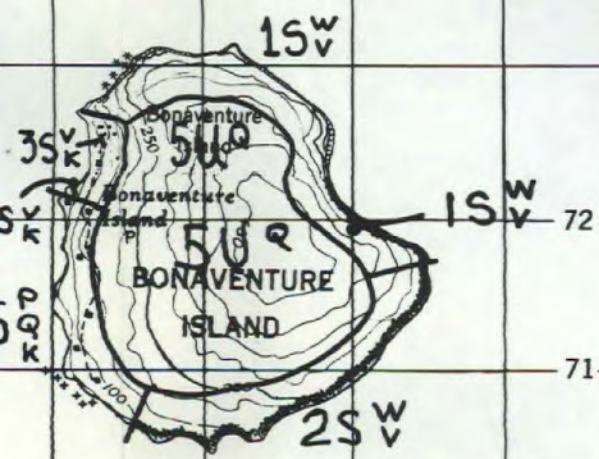
6U Q

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