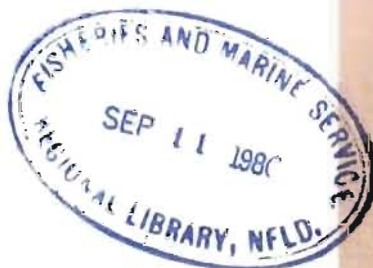


Catalogue of Salmon Streams and Spawning Escapements of Cariboo Subdistrict

C.I. Manzon and D.E. Marshall

Department of Fisheries and Oceans
1090 West Pender Street
Vancouver, B.C. V6E 2P1



June 1980

Canadian Data Report of
Fisheries & Aquatic Sciences
No. 211



Government of Canada
Fisheries and Oceans

Gouvernement du Canada
Pêches et Océans

Canadian Data Report of Fisheries and Aquatic Sciences

These reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of Data Reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Numbers 1-25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26-160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was changed with report number 161.

Data Reports are not intended for general distribution and the contents must not be referred to in other publications without prior written clearance from the issuing establishment. The correct citation appears above the abstract of each report.

Rapport statistique canadien des sciences halieutiques et aquatiques

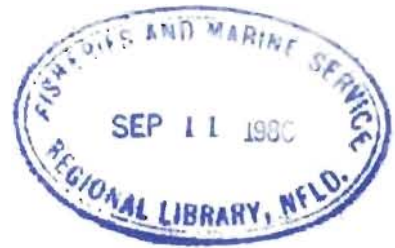
Ces rapports servent de base à la compilation des données de classement et d'archives pour lesquelles il y a peu ou point d'analyse. Cette compilation aura d'ordinaire été préparée pour appuyer d'autres publications ou rapports. Les sujets des Rapports statistiques reflètent la vaste gamme des intérêts et politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les numéros 1 à 25 de cette série ont été publiés à titre de Records statistiques, Service des pêches et de la mer. Les numéros 26-160 ont été publiés à titre de Rapports statistiques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 161.

Les Rapports statistiques ne sont pas préparés pour une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au haut du résumé de chaque rapport.

Fisheries and Oceans
Canadian Data Report of
Fisheries and Aquatic Sciences
No. 211

June 1980



CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF
CARIBOO SUBDISTRICT

by

C.I. Manzon and D.E. Marshall

Fisheries and Oceans
Enhancement Services Branch
1090 West Pender St.
Vancouver, B.C. V6E 2P1



© Minister of Supply and Services Canada 1980

Cat. No. Fs 97-13/211

ISSN 0706-6465

Correct citation for this publication:

Manzon, C.I. and D.E. Marshall. 1980. Catalogue of salmon streams and spawning escapements of Cariboo Subdistrict. Can. Data Rep. Fish. Aquat. Sci. 211. xv + 51 pp.

ABSTRACT

Manzon, C.I. and D.E. Marshall. 1980. Catalogue of salmon streams and spawning escapements of Cariboo Subdistrict. Can. Data Rep. Aquat. Sci. 211: 51 pp.

Catalogue containing each stream's location, spawning distribution, barriers and points of difficult ascent, escapement records and other general data pertaining to the stream. The catalogue also includes a topographical map of the stream's location and in some cases a sketch which further describes the surrounding area.

Key words: British Columbia, Cariboo, salmon streams, spawning escapements.

RÉSUMÉ

Manzon, C.I. and D.E. Marshall. 1980. Catalogue of salmon streams and spawning escapements of Cariboo Subdistrict. Can. Data Rep. Aquat. Sci. 211: 51 pp.

Le catalogue donne la situation géographique des cours d'eau, la distribution des aires de reproduction, les obstacles et les points d'ascension difficile, des données sur la remonte et autres données générales relatives au cours d'eau. Le catalogue comporte également une carte topographique de la situation du cours d'eau et, dans certains cas, une esquisse qui décrit plus en détail la région environnante.

Mot clés: Colombie-Britannique, Cariboo, rivière à saumon, saumon de remonte.

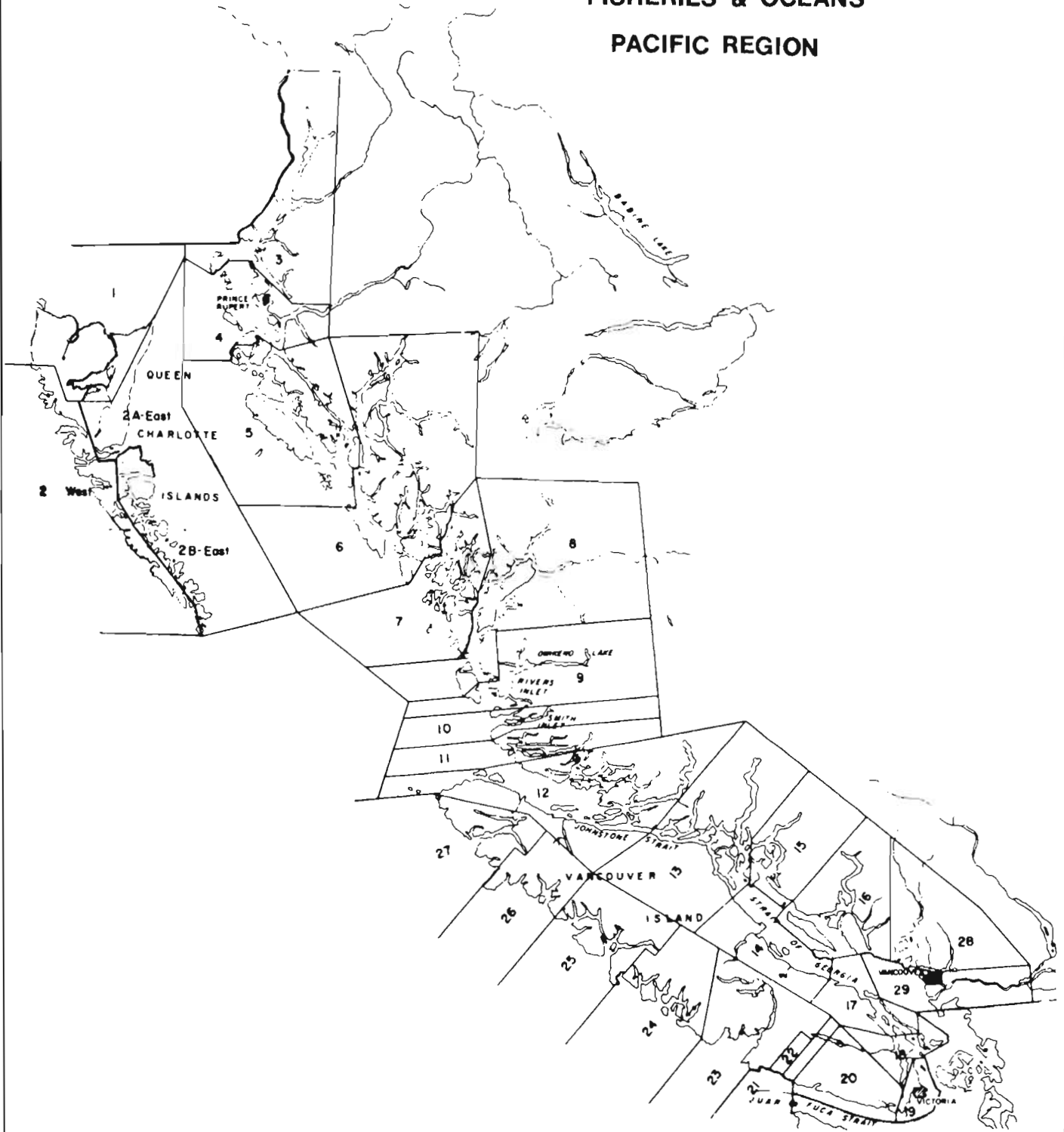
CONTENTS

Abstract/Résumé	iii
Statistical Area	vi
Management Divisions	vii
Federal Fisheries Districts	viii
Fraser River Watershed	x
Map References	xi
Standards Used on Stream Data Page	xii
Salmon Spawning Streams of Cariboo Subdistrict	xiv
Escapement Record for Cariboo Subdistrict	xv

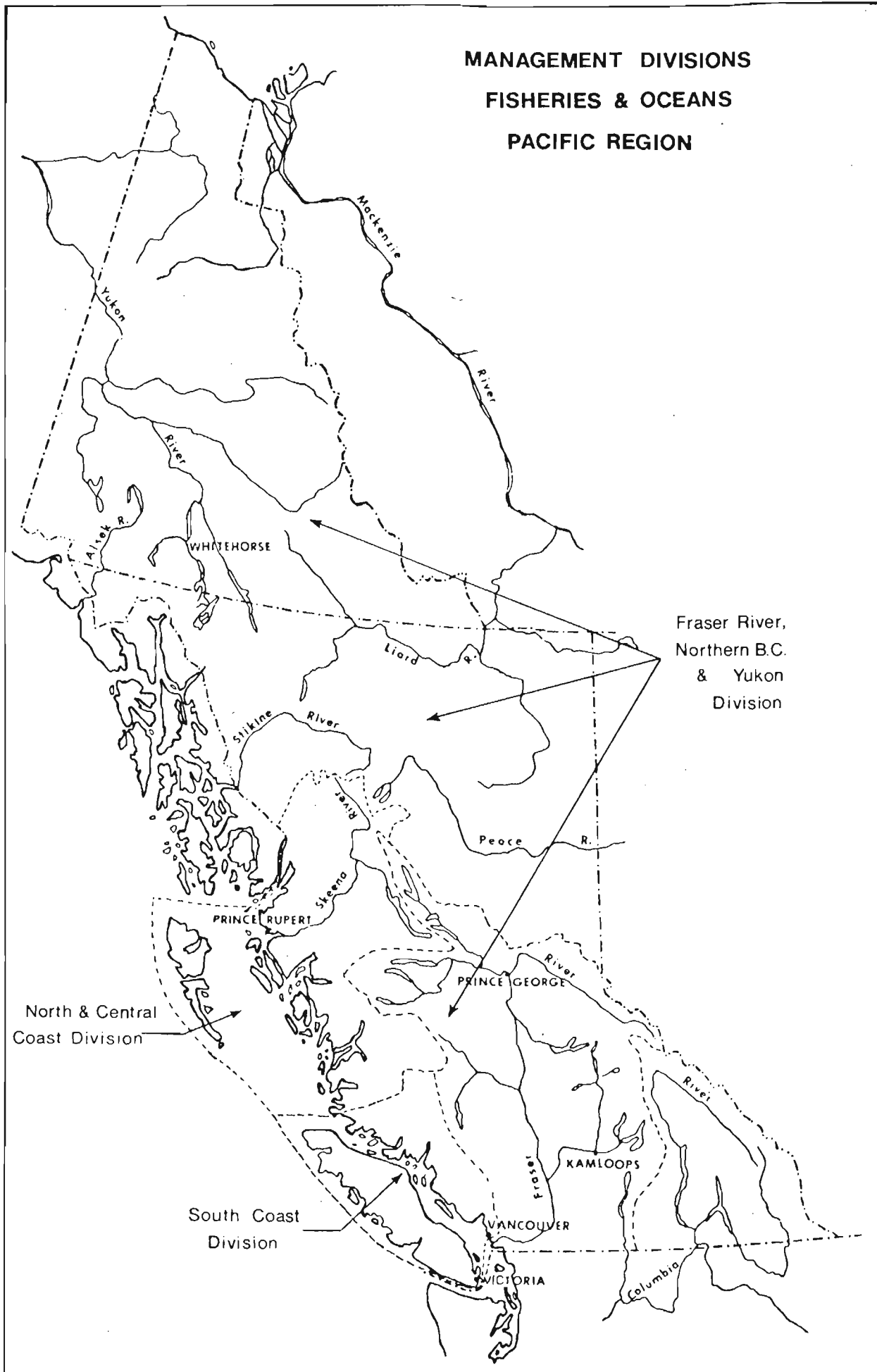
STREAM DATA

Bear River	(see Bowron River)
Blackwater River	(see West Road River)
Bowron River	1
Chilcotin River	7
Chilko River	11
Cottonwood River	15
Elkin Creek	19
Horsefly River	23
Little Horsefly River	29
Mitchell River	33
Quesnel River	37
Taseko River	43
West Road River	47
Whitewater River	(see Taseko River)
Metric Equivalents	51

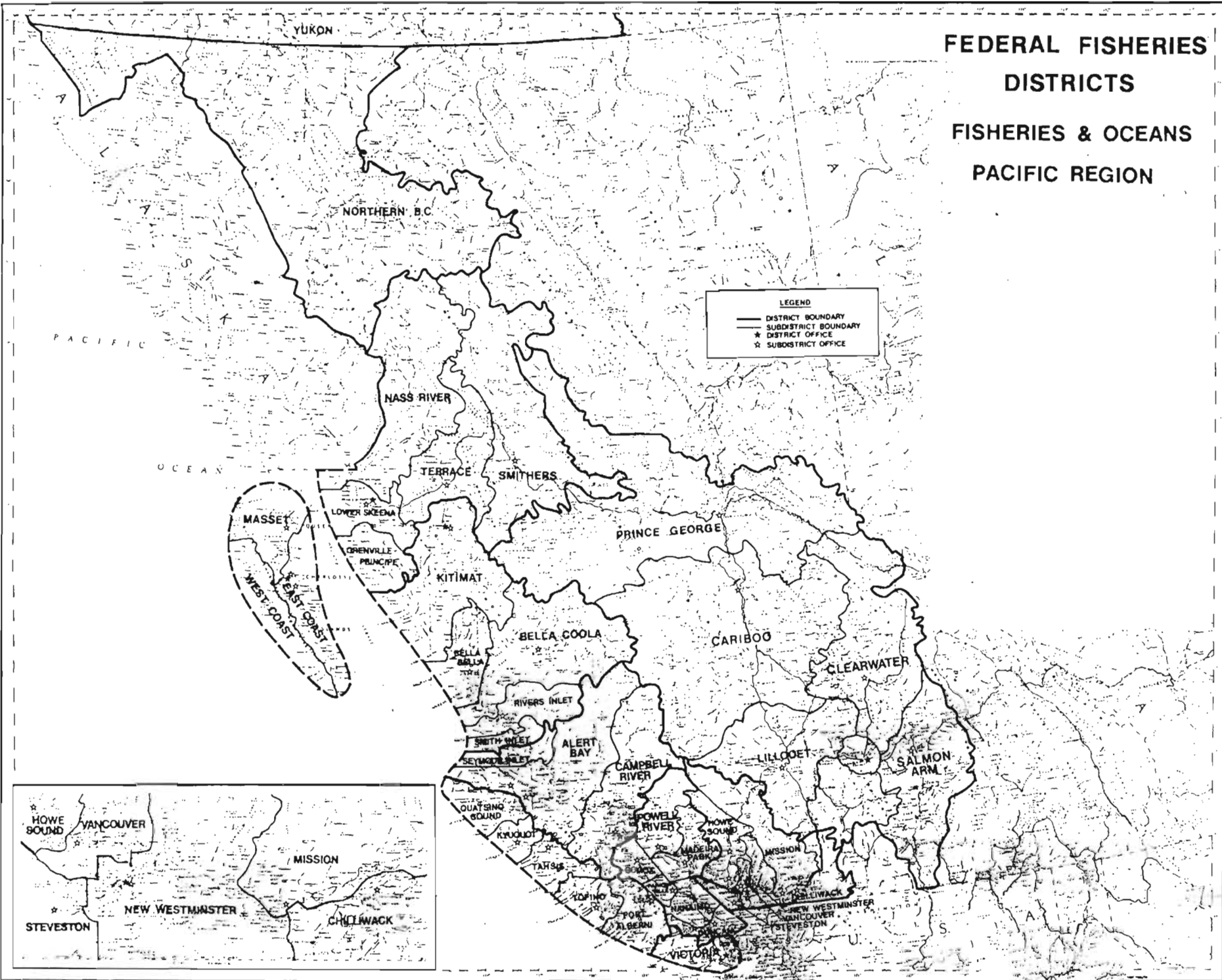
**STATISTICAL AREAS
FISHERIES & OCEANS
PACIFIC REGION**



**MANAGEMENT DIVISIONS
FISHERIES & OCEANS
PACIFIC REGION**



**FEDERAL FISHERIES
DISTRICTS
FISHERIES & OCEANS
PACIFIC REGION**



1111

FEDERAL FISHERIES DISTRICTS FISHERIES & OCEANS PACIFIC REGION

DISTRICT AND SUBDISTRICT OFFICES	ADDRESSES	TELEPHONE NUMBERS
DISTRICT #1 KAMLOOPS	202 Federal Bldg., 317 Seymour St., Kamloops, B.C., V2C 2E9	374-4322
Salmon Arm	Box 1160, Salmon Arm, B.C., V0E 2T0	832-8037
Prince George	Box 267, Postal Stn. A, Prince George, B.C., V2L 4S1	564-7030
Clearwater	P.O. Box 610, P.O. Building, Clearwater, B.C., V0E 1N0	674-9633
Lillooet	Box 315, Lillooet, B.C., V0K 1V0	256-4525
Caribou	Box 4340, Quesnel, B.C., V2J 3J3	992-2434
DISTRICT #2 NEW WESTMINSTER	309 - 549 Columbia St., New Westminster, B.C., V3L 1B3	545-7181
Surrey	309 - 549 Columbia St., New Westminster, B.C., V3L 1B3	545-7181
Vancouver Waterfront	309 - 549 Columbia St., New Westminster, B.C., V3L 1B3	545-7181
Mission	Box 3308, Mission, B.C., V2V 4J5	826-3664
Chilliwack	Ste. 5, 9 Mary Street, Chilliwack, B.C., V2P 4G9	792-6011
Steveston	1255 No. 1 Road, Richmond, B.C., V7E 1T7	274-7217
Coquitlam	309 - 549 Columbia St., New Westminster, B.C., V3L 1B3	545-7181
Squamish	Box 85, Squamish, B.C., V0N 3G0	892-3230
DISTRICT #3 NANAIMO	204 - 60 Front St., Nanaimo, B.C., V9R 5H7	876-274
Parksville	Box 1120, Parksville, B.C., V0R 2S0	248-6710
Comox	Box 1328, Comox, B.C., V9N 3Z9	339-2031
Duncan	Box 241, Duncan, B.C., V9L 3X3	746-6221
Powell River	4770 Joyce Ave., Powell River, B.C., V8A 3B6	485-9621
Pender Harbour	Box 10, Madeira Park, B.C., V0N 2H0	883-2313
DISTRICT #4 PORT ALBERNI	P.O. Box 280, Federal Bldg., Port Alberni, B.C., V9Y 7M7	724-0195
Tofino	Box 48, Tofino, B.C., V0R 2Z0	725-3468
Tahsis	Box 549, Tahsis, B.C., V0P 1X0	934-6606
Port Hardy	Box 10, Port Hardy, B.C., V0N 1P0	949-6422
DISTRICT #5 CAMPBELL RIVER	215 - 950 Alder St., Campbell River, B.C., V9W 2P8	287-2102
Port Hardy	Box 10, Port Hardy, B.C., V0N 2P0	949-6422
Alert Bay	Box 263, Alert Bay, B.C., V0N 1A0	974-5216
DISTRICT #6 VICTORIA	116 - 816 Government St., Victoria, B.C., V8W 1W9	566-3252
Saanich	116 - 816 Government St., Victoria, B.C., V8W 1W9	566-3252
Sooke	Box 831, Sooke, B.C., V0Z 1N0	642-5322
DISTRICT #7 KITIMAT	312 - 450 Federal Bldg., City Centre, Kitimat, B.C., V8C 1T6	632-6158
Butedale	312 - 450 Federal Bldg., City Centre, Kitimat, B.C., V8C 1T6	632-6158
Bella Bella	Box 38, Bella Bella, B.C., V0T 1B0	957-2312
Bella Coola	Box 130, Bella Coola, B.C., V0T 1C0	799-5345
Rivers Inlet	Dawsons Landing P.O., Rivers Inlet, B.C., V0N 1M0	Radio Ph.
DISTRICT #8 PRINCE RUPERT	109 - 417 Second Ave. West, Prince Rupert, B.C., V8J 1G8	624-9137
Lower Nass	109 - 417 Second Ave. West, Prince Rupert, B.C., V8J 1G8	624-9137
Upper Nass	P.O. Box 29, Nass Camp P.O., B.C., V0N 3J0	633-2408
Skeena	109 - 417 Second Ave. West, Prince Rupert, B.C., V8J 1G8	624-9137
Grenville-Principe	109 - 417 Second Ave. West, Prince Rupert, B.C., V8J 1G8	624-9137
Hazelton	Box 327, Hazelton, B.C., V0J 1Y0	842-6327
Terrace	4721-B Lazelle Ave., Terrace, B.C., V8G 1R6	635-2206
Smithers	Box 578, Smithers, B.C., V0J 2N0	847-2312
DISTRICT #9 QUEEN CHARLOTTE	Box 99, Q.C. City, Queen Charlotte Islands, B.C., V0T 1S0	559-4413
Sandspit	Box 222, Sandspit, B.C., V0T 1T0	637-5340
Masset	Box 99, Masset, B.C., V0T 1M0	626-3316
DISTRICT #10 WHITEHORSE	122 Industrial Road, Whitehorse, Yukon Territories, Y1A 2T9	403- 667-2235
Haines Junction	P.O. Box 5341, Haines Junction, Y.T., Y0B 1L0	403- 667-2235

MAP REFERENCES

Roads:

hard surface, all weather	more than 2 lanes	
hard surface, all weather	2 lanes, Route No. 18	
loose surface, all weather	2 lanes wide or more	
" less than 2 lanes	all weather	
	dry weather	
Private Road, Trail	Private Road	
	Trail	

Railways:

normal gauge, multiple track	
normal gauge, single track	
abandoned, or under construction	
narrow gauge, single track	
Bridge, underpass or overpass	
Tunnel	

Boundary, International

Province	
County or District	
Township or Parish	
City or Town	
Reservation, Indian, Military, etc	
Power Transmission Line	
Telephone or Telegraph, trunk route	
Horizontal Control Point	
Boundary Marker	
Bench Mark	
Spot Elevation, (in feet)	
Mine or Pit	

Road, Hard Surface, All Weather

Loose Surface, All Weather	
Loose Surface, Less than 2 lanes	
Private (Logging, Mining, etc)	
Four Wheel Drive	
Trail	
Railway	
Main Telephone Line	
Main Electric Power Line	
Horizontal Control Station	
Contours (Interval 500 feet)	
Elevation in feet above mean sea-level	
Intermittent Stream	
Swamp or Marsh	
Dam	
Spring	
Navigation Light	
Mine	
Glacier	
Customs Office	

House, Building	
School	
Church	
" with conspicuous Tower or Spire	
Post Office	
Tower, Radio Mast, Lookout, etc.	
Cemetery	
Quarry	
Sand or Gravel Pit	
Cliff	
Cutting	
Embankment	
Saw Mill	

Lighthouse	
Wharf or Pier	
Foreshore Flats	
Swamp or Marsh	
Lake or Pond, intermittent	
Glacier or Snowfield	
Stream, intermittent	
Irrigation Canals, Ditches	
Inundated Land, seasonal	
Contours, elevation	
" depression	
" approximate	
Forest, unclassified	

Surveyed timber license number	TL 2841
Lot number	L 124 or 566
Building	
School	
Non-perennial stream	
Marsh or Swamp	
Glacier	
Foreshore flats	
Contours, elevation	
Contours, depression	
Forest	

City or large town	
Town	
Village or settlement	
Streams:	
intermittent or dry	
indefinite	
Irrigation canal or ditch	
Rapids, falls	
Aerodrome	
Landing ground	

Post office	
School	
Church	
Intermittent lake	
Marsh or swamp	
Sand, gravel or mud	
Wooded areas	
Seaplane base	
Seaplane anchorage	

Streams	
Highways	
Roads	
Trails	
Houses	
Railroad	
Falls	
Rapids	
Rip-Rap	
Bridges	
Dam	
Log Jams	
Log	
Power Line	
Coho	
Chum	
Pink	
Chinook	
Sockeye	

STANDARDS USED ON STREAM DATA PAGE

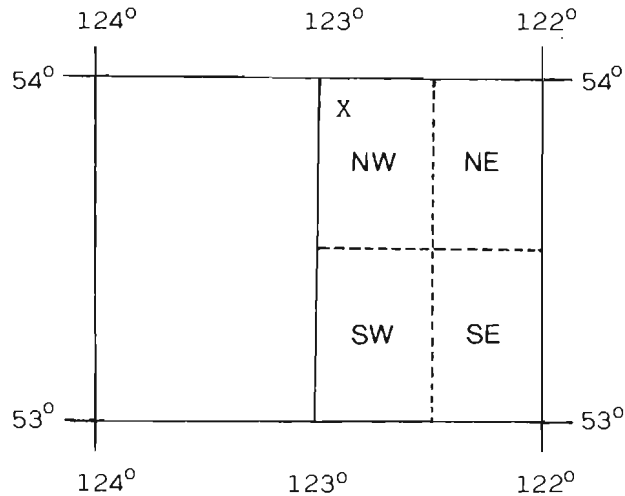
Name of Stream: Name as given in Gazetteer of Canada, British Columbia 1966 edition; local or non-gazetted names are added in lower case type.

Conservation District: As defined by the Conservation and Protection Service (April 1965).

Statistical Area: As defined by Department of the Environment, Fisheries Operations Statistical Map (January 1974).

Location and Position: Defined by quadrant indexing. Each geographical quadrilateral of the earth's surface of 1 degree in extent in latitude and longitude is divided into the SE, SW, NE and NW quarters. The south-east corner of each quadrilateral gives the initial point for the figure of reference (Gazetteer of Canada).

EXAMPLE "X"
53° 122° NW



Length: The portion of the stream accessible to spawning salmon.

Width: Average width, estimated to the nearest metre for the described length.

Drainage: Area in square kilometres of the entire drainage basin feeding the stream.

Composition:

Bedrock	bedrock
Boulder	>256 mm
Coarse	50.9 - 256 mm
Fine	3.37 - 50.8 mm
Sand & Silt	<3.37 mm
Unclassified	where bottom cannot be observed, e.g. log jams, pools, water colour, etc.

Gradient: Expressed as a percentage

Wetted Area: Number of square metres of stream bed under water at average flows within the described length.

Spawning Area: Estimated square metres of stream bed suitable for salmon spawning within the described length.

Discharge: Mean annual discharge. Maximum and minimum values are either daily means or instantaneous discharges. The latter are identified by (Inst.). Discharge data is taken from "Historical Stream Flow Summary", British Columbia, Water Survey of Canada.

Temperature: As described. (°C)

Barriers and Points of Difficult Ascent: Complete and partial barriers to salmon and their distance from the stream mouth. Species likely to be affected may be listed. Both natural and man-made obstructions are defined.

Spawning Distribution: Portion of the stream utilized by each species. Distribution is indicated by brief comments opposite the species.

Potential of Inaccessible Portion of Stream: Indicates whether or not the inaccessible portion of the stream could be utilized by spawning salmon.

General Remarks: Emphasizes features of stream and spawning populations. Also includes industrial activity, routes of accessibility, etc. The comments with dates are taken from "Annual Reports of Salmon Streams & Spawning Grounds" (B.C. 16's). In some cases, references to additional information not included in the General Remarks may be given.

Escapement Records: The escapement represents the mid point of the coded range of escapement for each species. For example: the letter "H" representing 5000-10000 fish would be entered as 7500. Where absolute numbers are provided by Fisheries Personnel, these numbers are entered. N/O means the stream was inspected but no fish were observed; UNK means there was evidence of fish present but no estimates were made; NO RECORDS means no escapement records for the applicable years could be found in the escapement files.

Timing: Dates which salmon arrive in the stream, begin to spawn, reach peak spawning period and finish spawning.

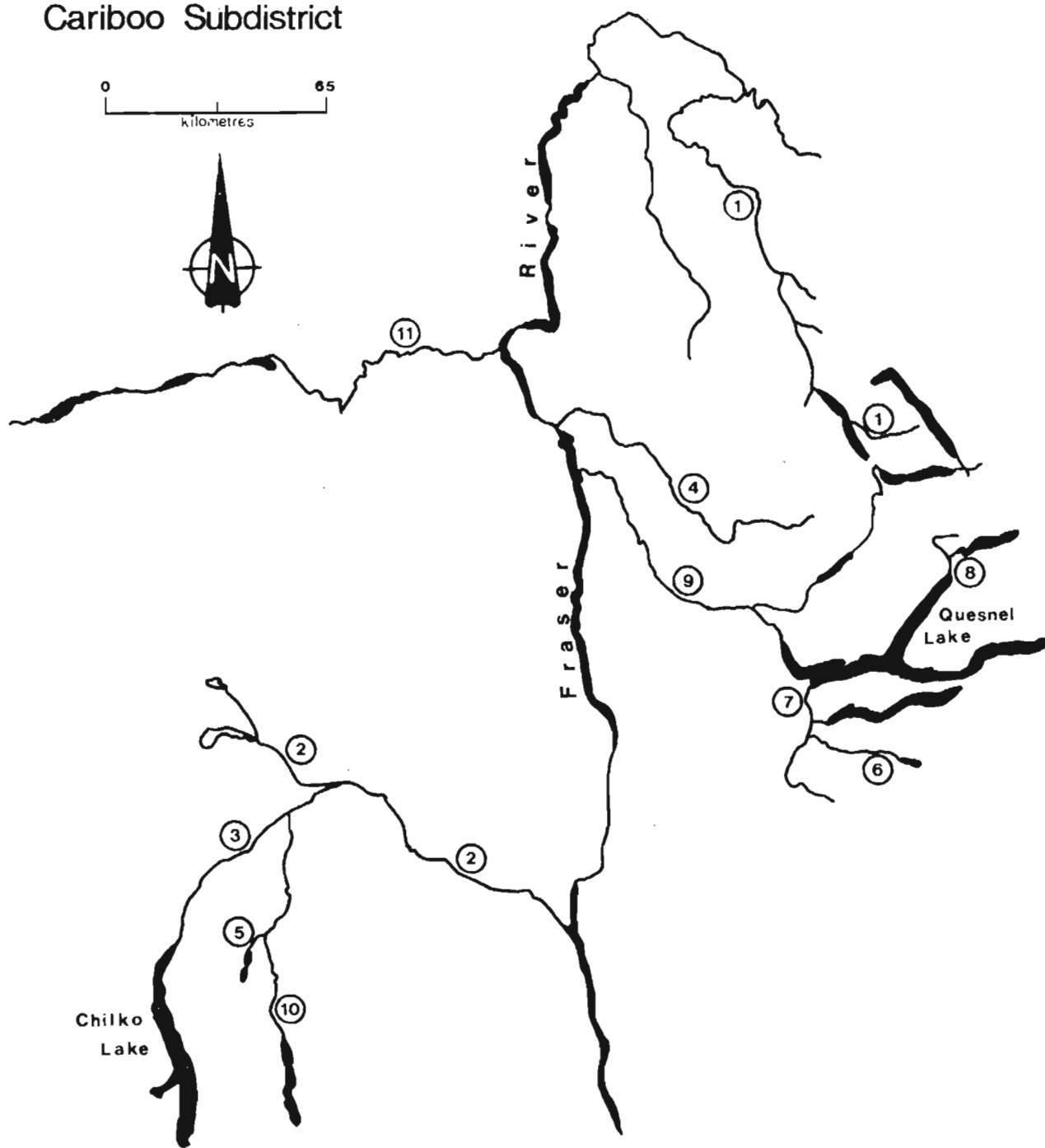
E = early (1st to 10th of the month)

M = mid (11th to 20th of the month)

L = late (21st to end of the month)

NB: Distance references are from the mouth of the stream unless otherwise stated.

Salmon Spawning Streams of Cariboo Subdistrict



1. Bowron River
2. Chilcotin River
3. Chilko River
4. Cottonwood River
5. Elkin Creek
6. Horsefly River

7. Little Horsefly River
8. Mitchell River
9. Quesnel River
10. Taseko River
11. West Road River

ESCAPEMENT RECORD FOR CARIBOO SUBDISTRICT

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	74611	1775				
48	125551	2325				
49	93750	2750				
50	56810	2800				200
51	147930	3080				200
52	127977	2345				
53	222200	2625				200
54	53730	2975				200
55	111025	2500				600
56	114550	2100				200
57	402025	2625				200
58	122950	5100				200
59	550050	6300				UNK
60	111050	2900				400
61	150050	2750				400
62	79675	5850				200
63	220075	3600				750
64	122424	13225				400
65	142708	7625				400
66	255475	6750				1500
67	190782	7117				
68	449295	7575				
69	401700	9775				
70	102350	15650				
71	218700	8850			3500	
72	607600	6017				
73	344107	11850				
74	79850	6425				
75	565700	15800			600	
76	553700	10600				
77	569030	12375			1500	
78	266525	14100				
79	425400	9350			500	
80						
81						
82						
83						
84						
85						

TIMING

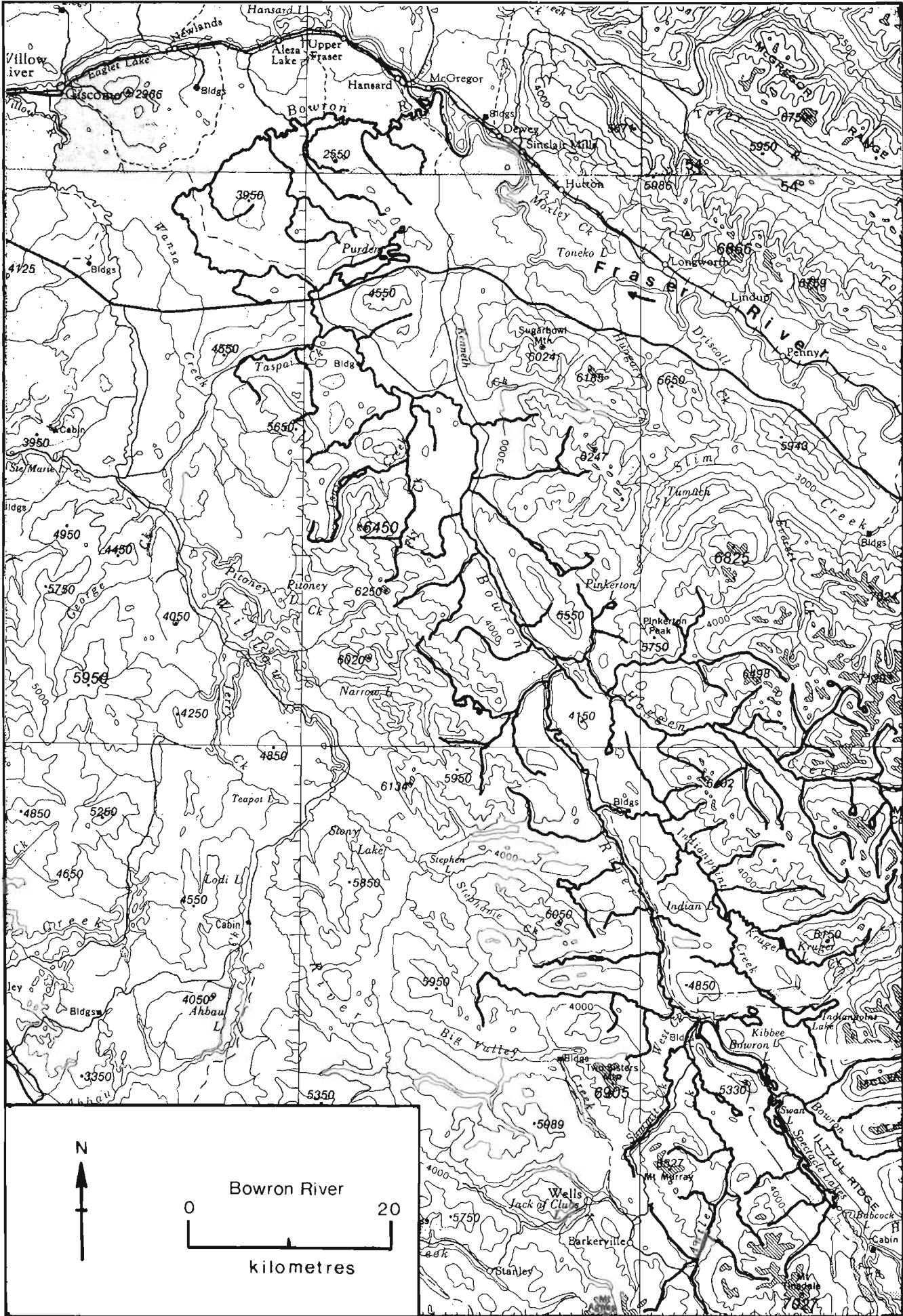
ARRIVE						
START						
PEAK						
END						

REMARKS



STREAM DATA

CARIBOO SUBDISTRICT



NAME OF STREAM BOWRON RIVER (Bear River)
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows E. into Fraser R., SE. of Hansard L., Cariboo Dist.
 POSITION 54 121 SW.
 LENGTH 185 km WIDTH m DRAINAGE 3600 km²
 COMPOSITION: BEDROCK BOULDER COARSE FINE
 SILT & SAND UNCLASSIFIED

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA m² SPAWNING AREA m²

DISCHARGE (m³/s)

TEMPERATURE (°C) 11.1 (76/08/09); 8.0 (75/08/26); 15.0 (71/08/10); 12.7 (71/08/29)

BARRIERS OR POINTS OF DIFFICULT ASCENT

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- upper Bowron
CHINOOK	- lower Bowron
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

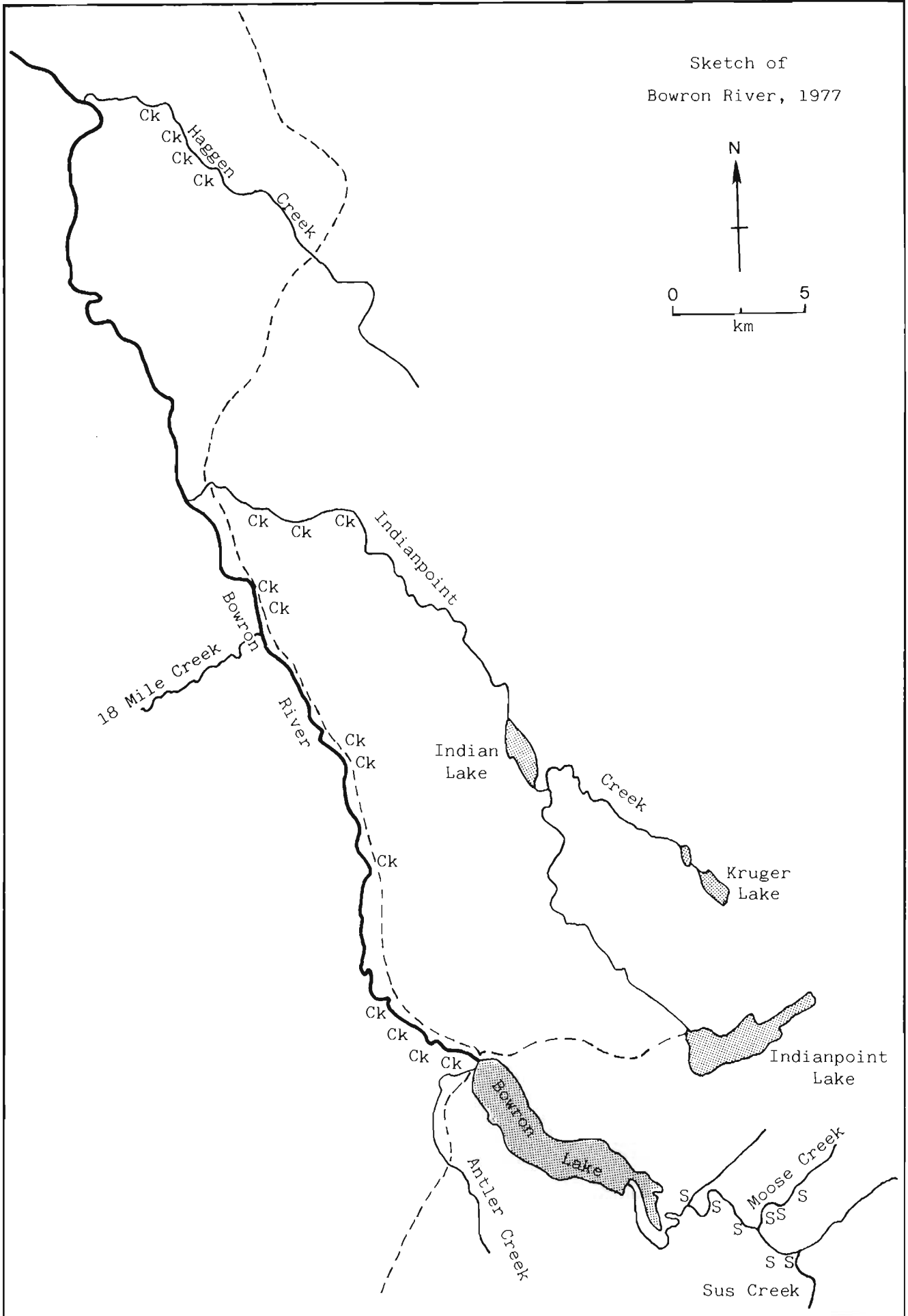
GENERAL REMARKS - I.P.S.F.C. maintains a counting fence at the outlet of Bowron L.
 - Furthest point of access is 32 km above Bowron Lake, 13 km of which is navigable.
 - 1961. 75% of early sockeye run died before spawning.
 - 1963. Extensive loss of early sockeye run from an unknown cause.
 - 1971. Considerable silt was evident in the chinook spawning grounds in the lower Bowron.
 - 1974. B.C. Water Rights removed a quantity of gravel at Antler Creek and Bowron River in June to alleviate flooding problem.
 - 1975. High water level during spawning period. Extensive silting on the spawning grounds have an effect on this year's return. Spawning was only 50% of the brood year.
 - 1976. Dredging of Bowron River between the lake outlet and Antler Creek in 1975

GENERAL REMARKS (cont.) - Bowron River

has assisted in preventing flooding of adjacent properties. Dredging took place in a non-spawning area and had no effect on the salmon habitat of this river.

- 1978. Chinook observed spawning in Indianpoint Creek for the first time.
- 1979. 40% of spawning fish on Sus Creek was taken by grizzly.
- Tributaries:
 - Antler Creek - Flows NE. into Bowron R., Cariboo Dist.
 - Position: 53 121 SE.
 - Stream is accessible by road from Wells, B.C.
 - Spring salmon utilize this creek.
 - Stream is often muddy and heavy overgrowth throughout.
 - Haggen Creek - Flows W. into Bowron R., N. of Bowron L., NE. of Stony L., Cariboo Dist.
 - Position: 53 121 NW.
 - Spring salmon spawn in this creek.
 - Crystal clear water.
 - Lots of good gravel interspersed among large gravel and boulders.
 - Canyon at 13 km.
 - Indianpoint Creek - Flows W. into Bowron R., N. of Bowron L., Cariboo Dist.
 - Position: 53 121 SW.
 - Some spring salmon spawn on this creek
 - Sus Creek - Flows N. into Bowron R., W. of Spectacle Ls., Cariboo Dist.
 - Position: 53 121 SE.
 - Sockeye utilize this stream.
 - Heavy grizzly bear predation.
 - Huckey Creek - Moose Creek (local name)
 - Flows W. into Bowron R., S. of Isaac L., Cariboo Dist.
 - Position: 53 121 SE.

Sketch of
Bowron River, 1977



ESCAPEMENT RECORD FOR

BOWRON RIVER

(Bear River)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	24611	400				
48	25100	500				
49	22300	1000				
50	16000	600				
51	22500	400				
52	18672	500				
53	15000	750				
54	15000	750				
55	7500	400				
56	7500	400				
57	15000	750				
58	15000	1500				
59	35000	400				
60	7500	400				
61	7500	750				
62	3500	1500				
63	35000	400				
64	1500	750				
65	2660	750				
66	3500	750				
67	35000	400				
68	3750	400				
69	4000	400				
70	1500	3500				
71	25000	1200				
72	4100	1300				
73	4100	1500				
74	1350	1000				
75	12000	1200				
76	2200	800				
77	4000	950				
78	3200	1600				
79	25000	1350				
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE	E. AUG	E. AUG				
START	M. AUG	L. AUG				
PEAK	L. AUG	E. SEPT				
END	E. SEPT	M. SEPT				

REMARKS

- 1950. Escapement includes 200 sockeye to Antler Creek.
- 1978. Escapement includes 400 chinook to Indianpoint Creek.

NAME OF STREAM CHILCOTIN RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows SE. into Fraser R., Lillooet Dist.
 POSITION 51 122 NE.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) _____

TEMPERATURE (°C) 13.3 (77/08/30); 12.2 (73/09/07); 15.3 (72/08/22); 20.5 (71/07/20)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- in the vicinity of Redstone
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

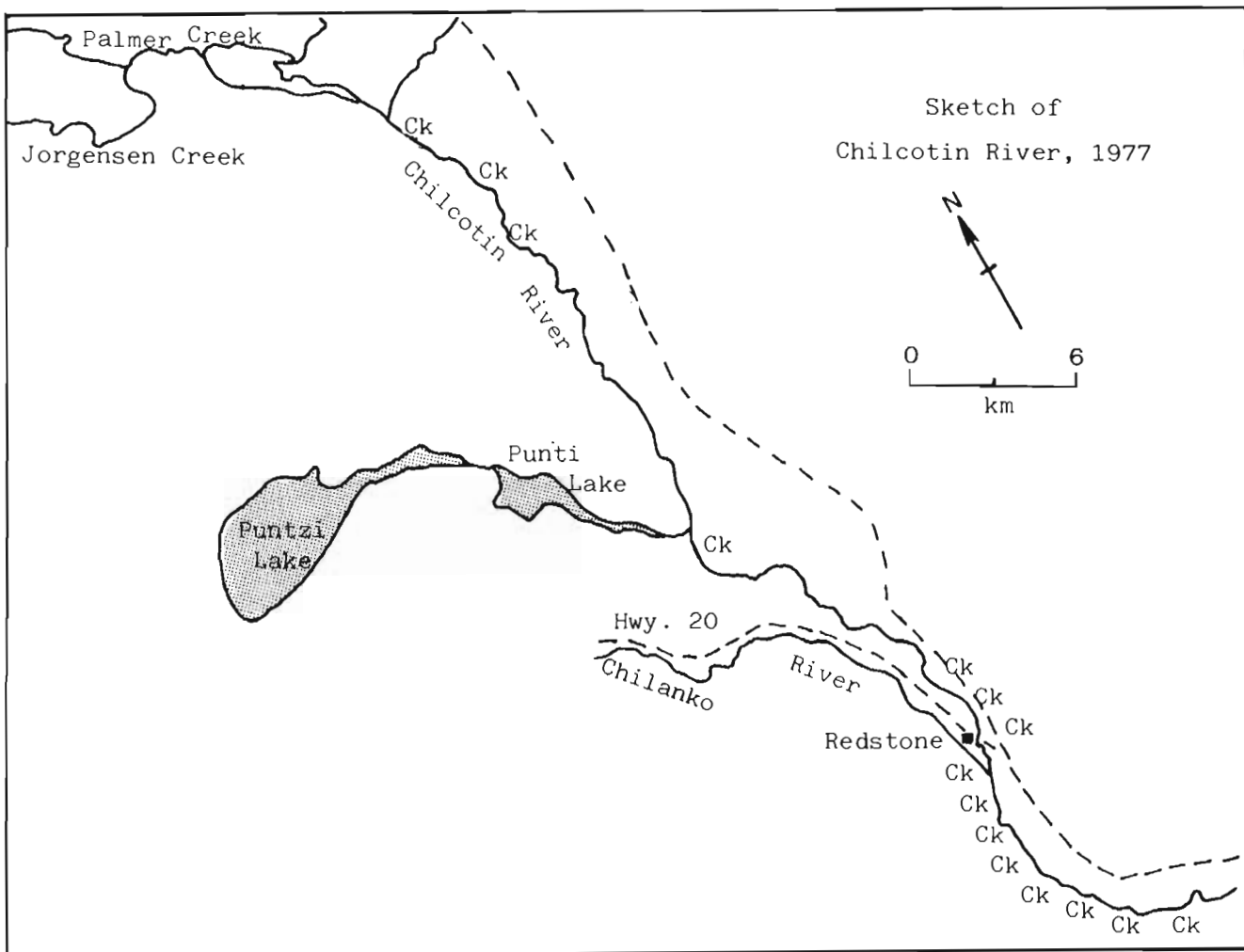
GENERAL REMARKS - Abundant trout populations.
 - Chilko race, one of the two dominant runs in the Fraser River, passes through this river enroute to Chilko River and Lake.
 - I.P.S.F.C. constructed three fishways at Farwell Canyon on the Chilcotin River.
 - 1964. A massive slide occurred at Farwell Canyon in the lower Chilcotin River on August 19.
 - 1967. River is shallow and slow flowing during low water levels at spawning season.
 - 1968. B.C. Forest Service's engineering crew erected a bridge at Farwell Canyon.
 - 1973. Rock slide occurred at 2.5 km upstream from Fraser River confluence.
 - 1975. Some illegal fishing observed.
 - 1976. Enumeration difficult due to high water levels.

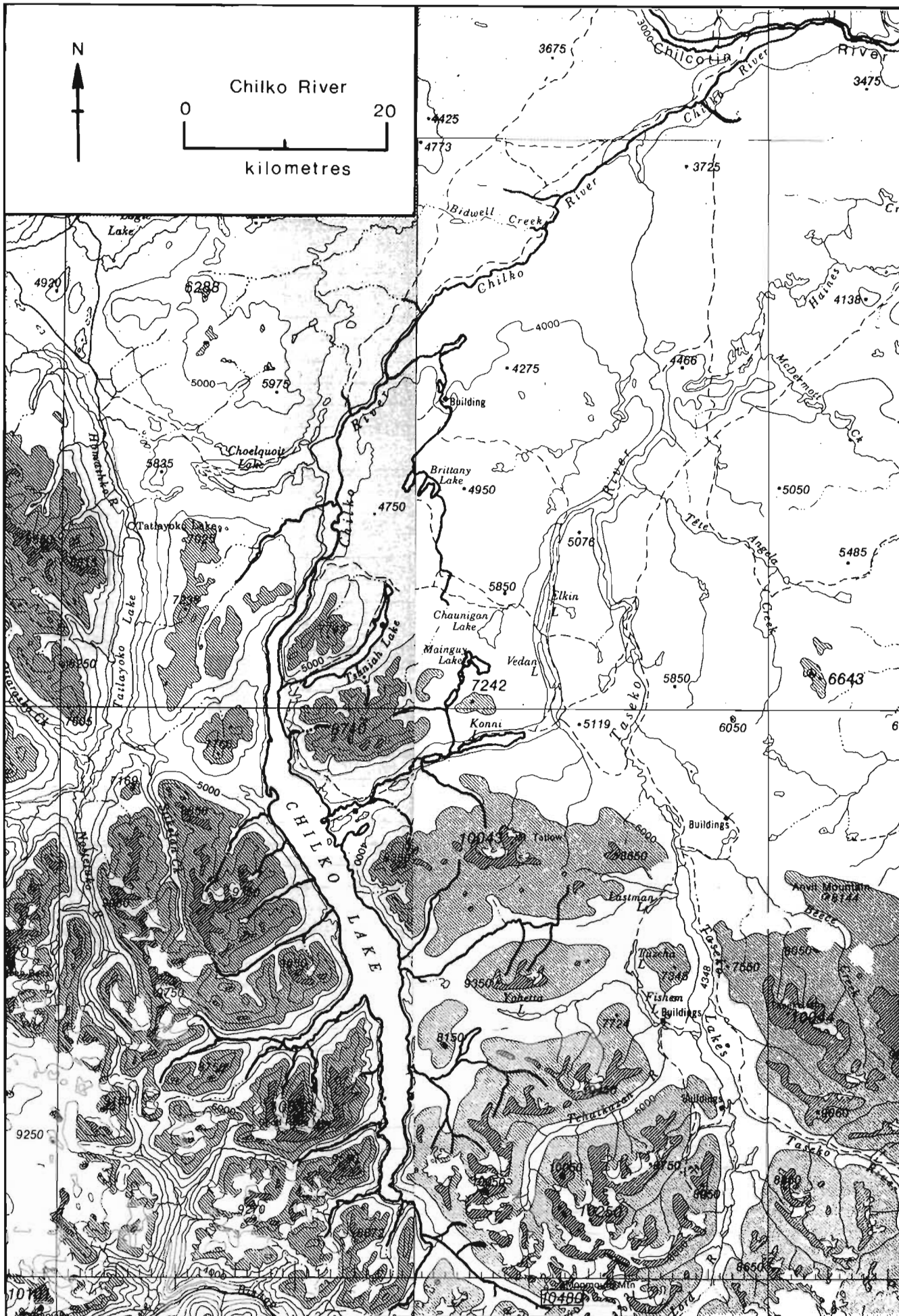
GENERAL REMARKS (cont.) - Chilcotin River

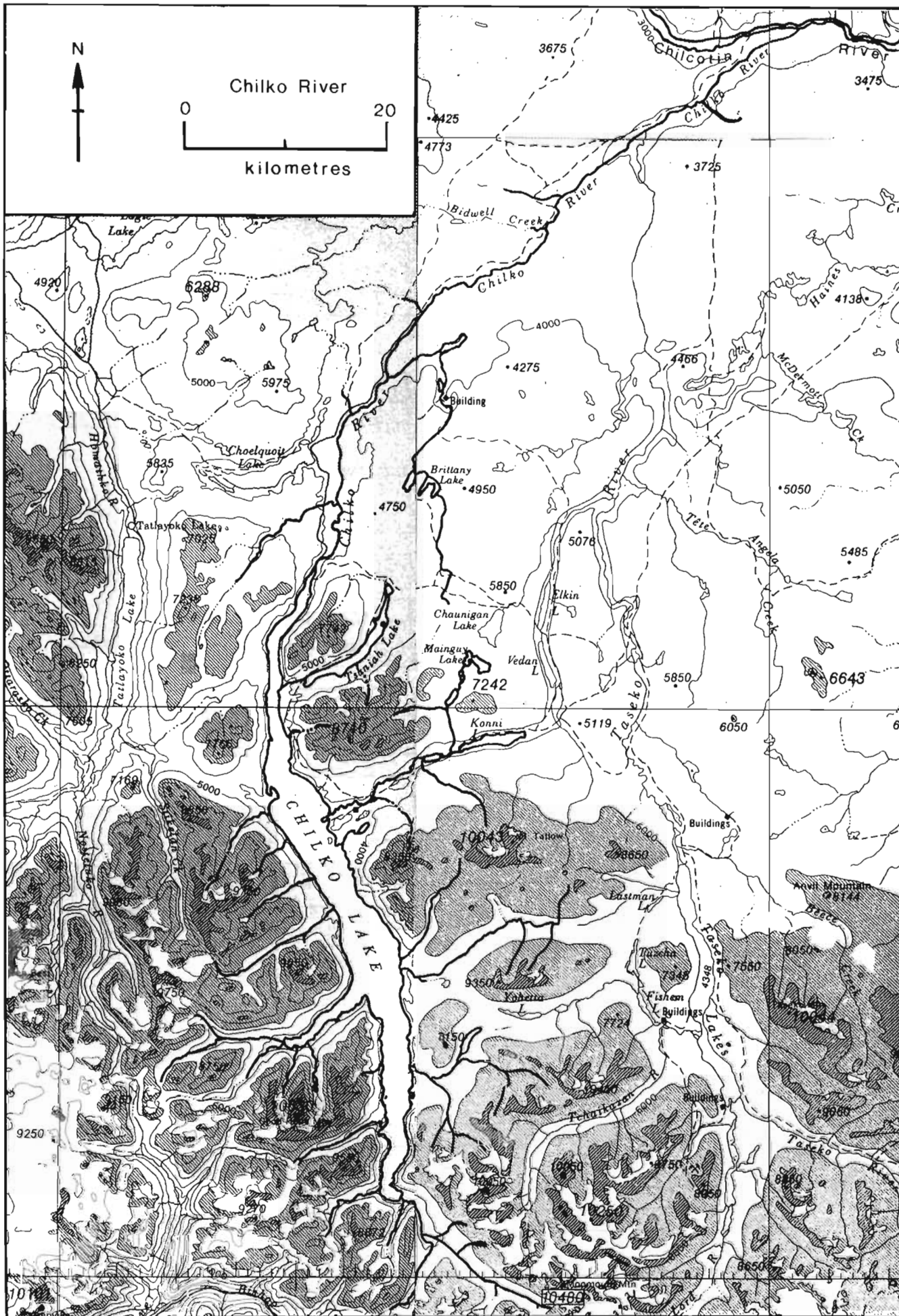
- 1977. Fish and Wildlife Branch staff in Williams Lake, B.C., reported having observed pink salmon near Alexis Creek in October.
- 1978. Fish and Wildlife Branch staff in Williams Lake, B.C., reported a coho caught from this river near Alexis Creek by an angler.
- Tributaries:
 - Alexis Creek - Flows SE. into Chilcotin R., SW. of Stum L., Cariboo Dist.
 - Position: 52 123 SE.
 - Chilanko River - Flows SE. into Chilcotin R., S. of Puntzi L., Cariboo Dist.
 - Position: 52 123 SW.
 - Some chinook spawning in this river.
 - Puntzi River - Flows SE. into Chilcotin R., NW. of Redstone, Cariboo Dist.
 - Position: 52 123 SW.
 - Heavy chinook spawning near mouth.

References:

- Bell, M.C., C.H. Clay, R.N. Gordon, and A.C. Cooper. 1965. Report on evaluation of the need for remedial measures at the Chilcotin River slide. Dept. of Fisheries and Oceans; File No. 31-3-C32, Vol. 2. 4 pp.
- Bell, M.C. 1946. Preliminary report on Farwell Canyon remedial work Chilcotin River. I.P.S.F.C. 5 pp.
- Brennan, B.M. 1946. The effect of Farwell Canyon on the migration of sockeye salmon on the Chilcotin River. I.P.S.F.C. 21 pp.







NAME OF STREAM CHILKO RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NE. into Chilcotin R., S. of Redstone, Cariboo Dist.
 POSITION 52 153 SE.
 LENGTH _____ km WIDTH _____ m DRAINAGE 8365 km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
>1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 68 max = 234 (70/06/28) min = 13 (70/03/30)

TEMPERATURE (°C) 12.8 (77/09/10); 7.8 (71/09/21)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- throughout
CHINOOK	- Lingfield Creek confluence and islands below Henry's crossing
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS

- Abundant populations of trout, whitefish and Dolly Varden char.
- 1961. Early sockeye run has 100% prespawning mortality.
- 1963. 100% prespawning mortality in lake spawning sockeye.
- 1970. Some chinook egg mortality at Lingfield Creek due to very low water levels.
- 1976. Possibility of sockeye egg mortality on river shelves near lake outlet due to low water levels during winter and spring.
- 1979. Powerboats were observed on the sockeye spawning grounds.

References:

Brannon, E.L. 1967. Genetic control of migrating behaviour of newly emerged sockeye salmon fry. I.P.S.F.C. Progress Report No. 16. 29 pp.
 Colgrove, D.J. and J.W. Wood. 1966. Occurrence and control of Chondrococcus

GENERAL REMARKS (cont.) - Chilko River

columnaris as related to Fraser River sockeye salmon. I.P.S.F.C. Progress Report No. 15. 51 pp.

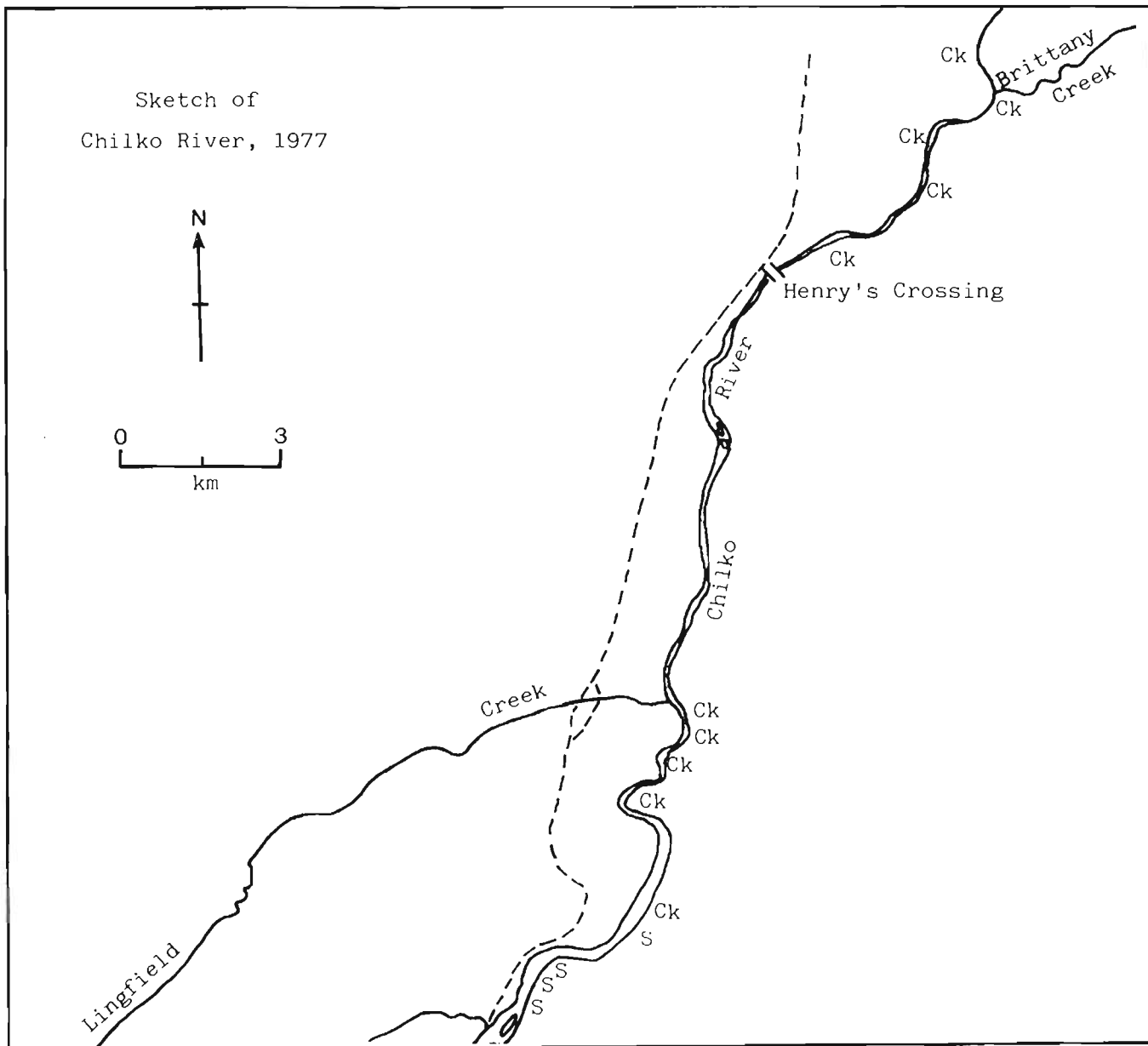
Idler, D.R. and W.A. Clemens. 1959. The energy expenditures of Fraser River sockeye salmon during spawning migration to Chilko and Stuart Lakes. I.P.S.F.C. Progress Report No. 16. 79 pp.

Pacha, R.E. MS 1964. Incidence of Chondrococcus columnaris among Chilko River sockeye in 1963. I.P.S.F.C., Unpublished Report.

Saito, W. and J.C. Woodey. MS 1973. Analysis of the sockeye spawning population at the south end of Chilko Lake. I.P.S.F.C., Unpublished Report. 8 pp.

Williams, I.V. 1977. Investigation of the prespawning mortality of sockeye in Chilko River in 1971. I.P.S.F.C. Progress Report No. 35. 22 pp.

Williams, I.V. and D. Stelter. 1977. Investigation of the use of antibiotics to control the prespawning mortality of the 1971 Chilko population. I.P.S.F.C. Progress Report No. 35. 16 pp.



ESCAPEMENT RECORD FOR CHILKO RIVER

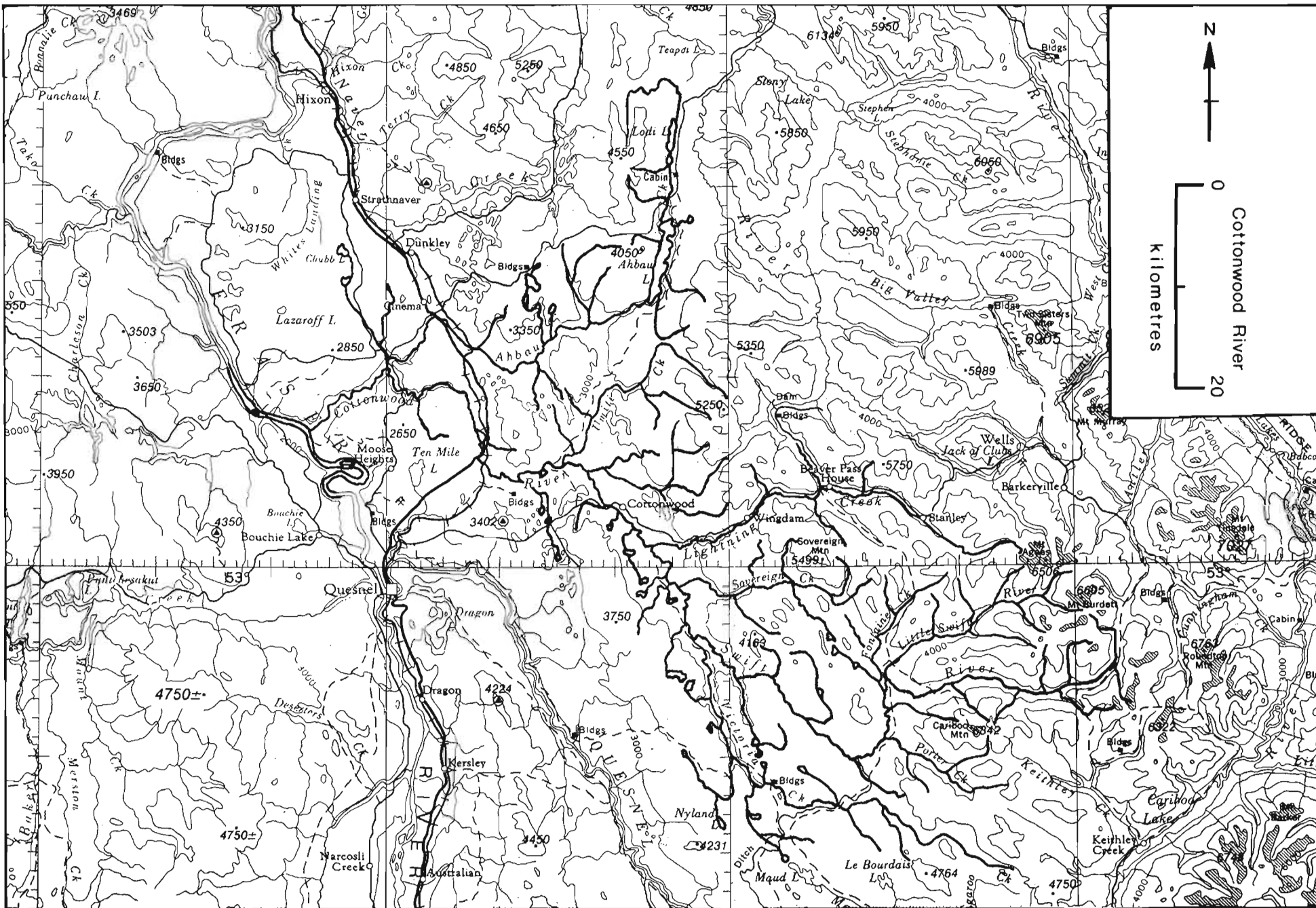
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	50000	400				
48	100000	400				
49	60000	500				
50	40000	500				200
51	125000	500				200
52	100000	400				
53	100000	400				200
54	35000	400				200
55	100000	400				400
56	100000	400				200
57	180000	400				200
58	100000	750				200
59	500000	3500				UNK
60	100000	400				400
61	35000	400				400
62	75000	1500				200
63	150000	1500				750
64	100000	7500				400
65	35000	3500				400
66	250000	3500				1500
67	150000	4000				
68	437500	4500				UNK
69	75000	7000				UNK
70	100000	7500				
71	190000	4000				
72	600000	2000				
73	80000	7000				
74	75000	1500				
75	550000	11000				
76	550000	6500				
77	50000	7000				UNK
78	250000	7500				
79	400000	3300				
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE	M. AUG	M. AUG				
START	E. SEPT	E. SEPT				
PEAK	L. SEPT	M. SEPT				
END	E. OCT	E. OCT				

REMARKS

- 1950. 32% of sockeye run was composed of jacks.
- 1967. I.P.S.F.C. figure for sockeye was 178,000.



NAME OF STREAM COTTONWOOD RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows SW. into Fraser R., S. of Prince George, Cariboo Dist.
 POSITION 53 122 SW.
 LENGTH 64.0 km WIDTH _____ m DRAINAGE 888 km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	_____
0.25 - 0.50	_____
0.50 - 0.75	_____
0.75 - 1.00	_____
> 1.00	_____

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 19 max = 193.4 (70/06/04) min = 2.4 (70/04/06)

TEMPERATURE (°C) 17.8 (74/08/30); 16.9 (73/08/23); 13.9 (72/08/21); 12.8 (71/09/02)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	_____
CHINOOK	- throughout
COHO	_____
CHUM	_____
PINK (ODD YEAR)	_____
PINK (EVEN YEAR)	_____
STEELHEAD	_____

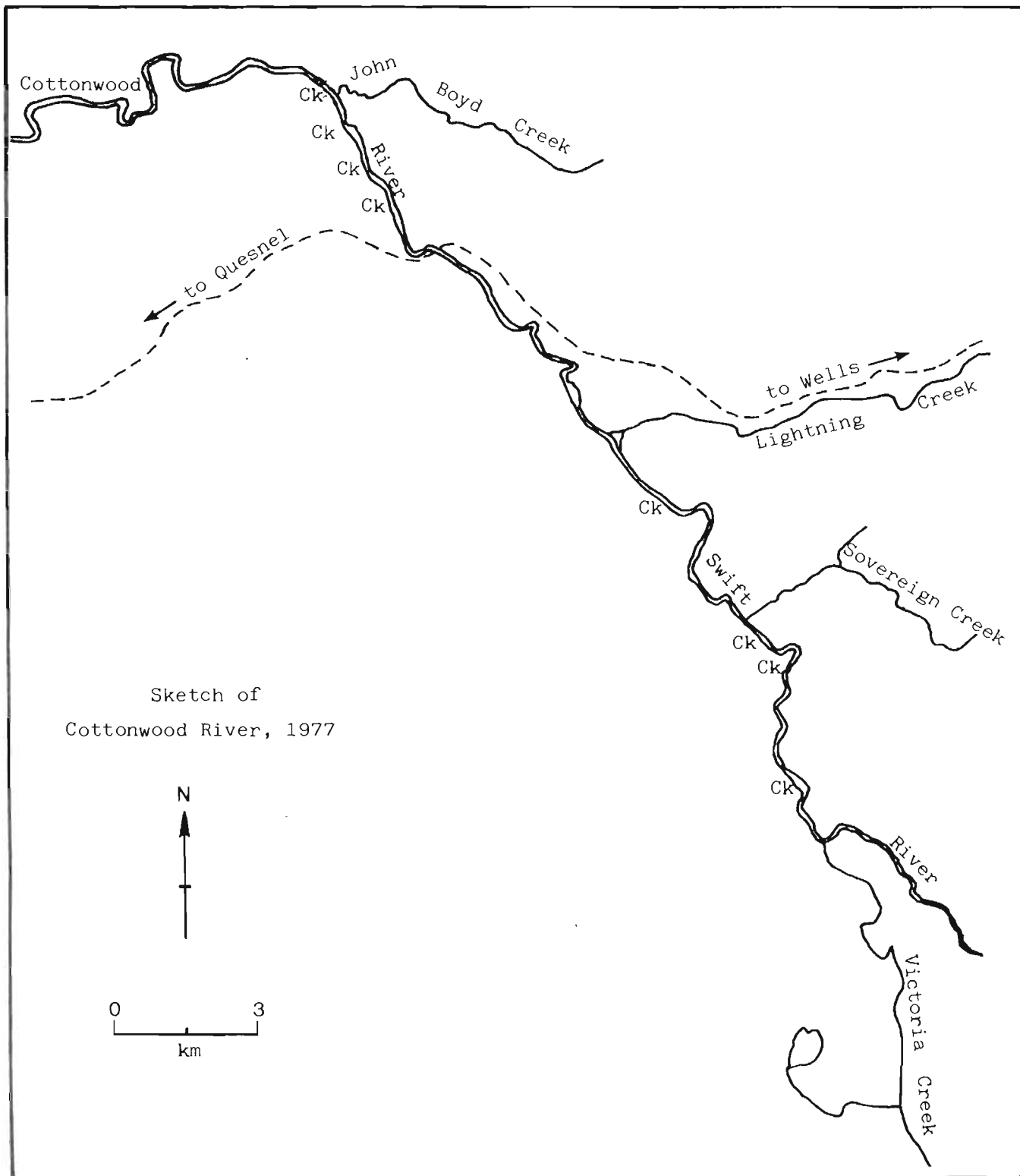
POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

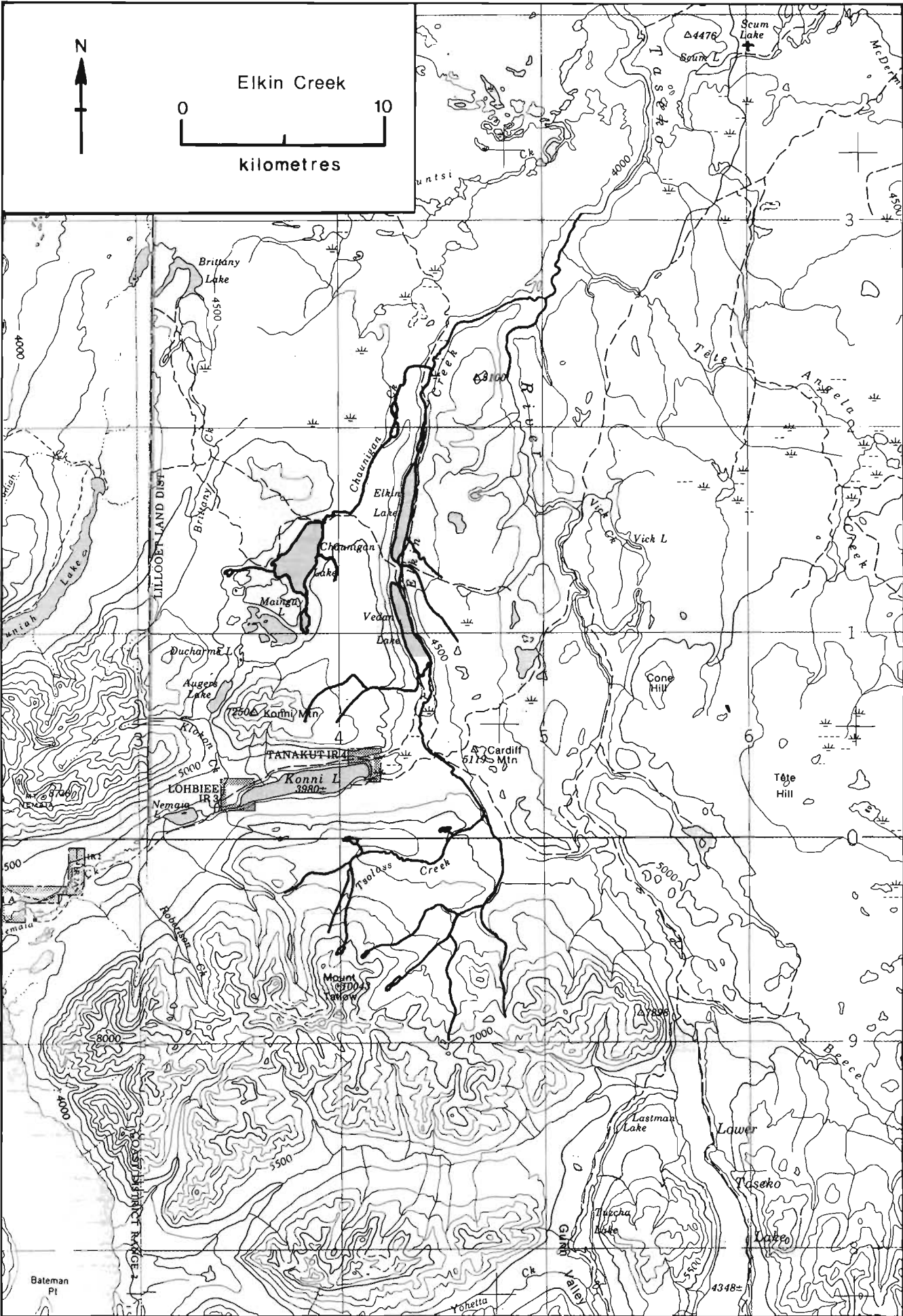
GENERAL REMARKS

- 1947. Cottonwood River was very muddy and silty throughout summer and fall due to mining operations in Lightning Creek.
- 1948. Swift River was dredged but the main channel was not affected.
- 1949. Cottonwood River carried extensive silt and mud throughout the year due to mining operations in Lightning Creek.
- 1950. Extensive mud and silt flowed into Swift River from Lightning Creek, where placer mining is in operation.
- 1953. Water was clear throughout the spawning season in Swift River.
- 1963-72. Extensive logging and placer mining caused the river to be very muddy most of the year.
- 1972. One dead sockeye found in Ahbau Creek on August 21.

GENERAL REMARKS (cont.) - Cottonwood River

- 1973-74. Extensive poaching with nets.
- Tributaries:
 - Ahbau Creek - Flows S. into Cottonwood R., near Cinema, Cariboo Dist.
 - Position: 53 122 SE.
 - Swift River - Flows NW. into Cottonwood R., Cariboo Dist.
 - Position: 53 122 SE.
 - Bottom composition upstream from Hwy. 5 is composed of pebble and cobble.





NAME OF STREAM ELKIN CREEK
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NE. into Taseko R., NE. of Elkin L., Lillooet Dist.
 POSITION 51 123 NW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

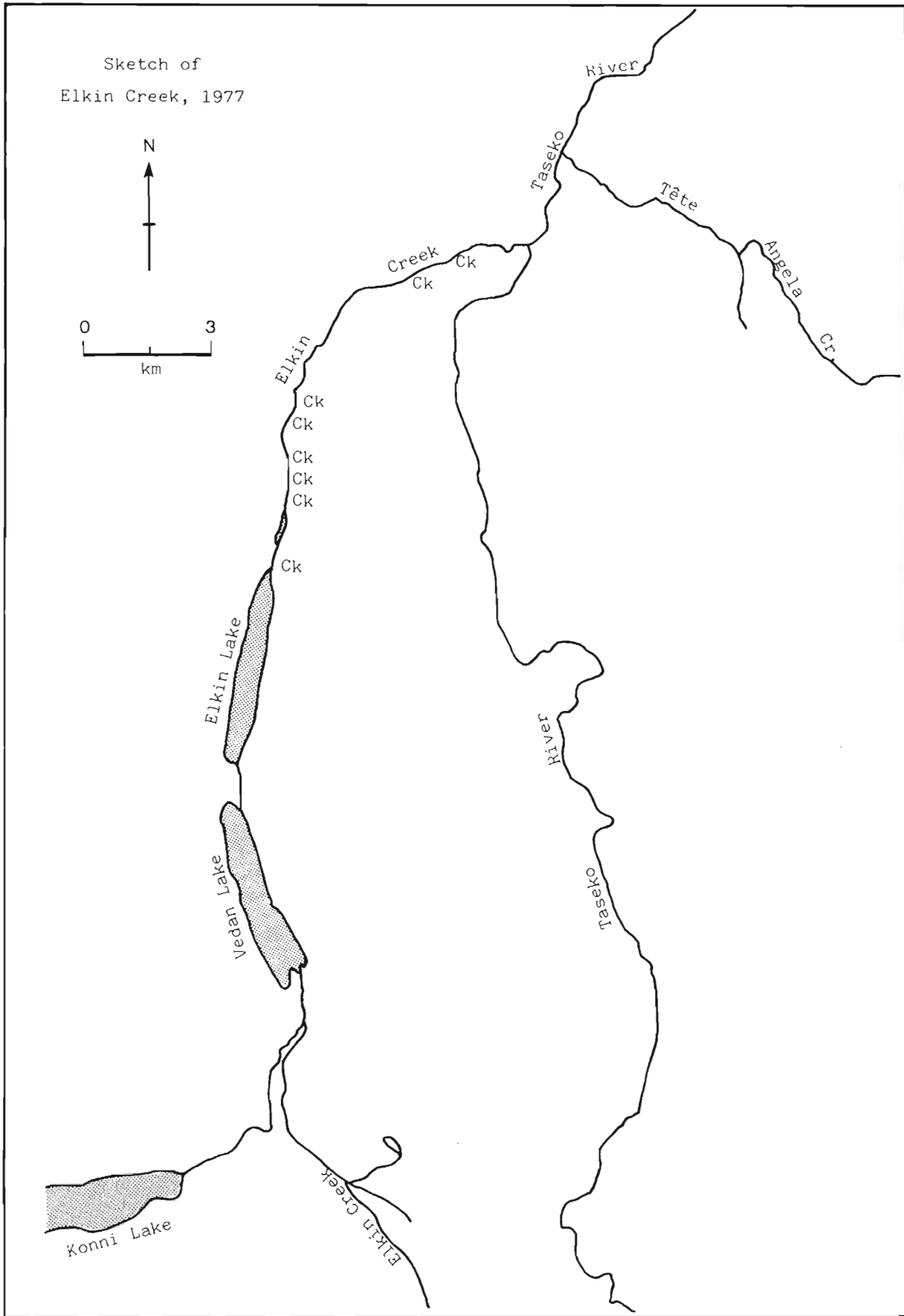
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- Elkin Lake to 9 km upstream
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS

- 1971. This creek is difficult to enumerate due to inaccessibility.
- 1978, 1971-1975. Silty conditions on the meadow 14.5 km below Elkin Lake outlet.

Sketch of
Elkin Creek, 1977



ESCAPEMENT RECORD FOR ELKIN CREEK

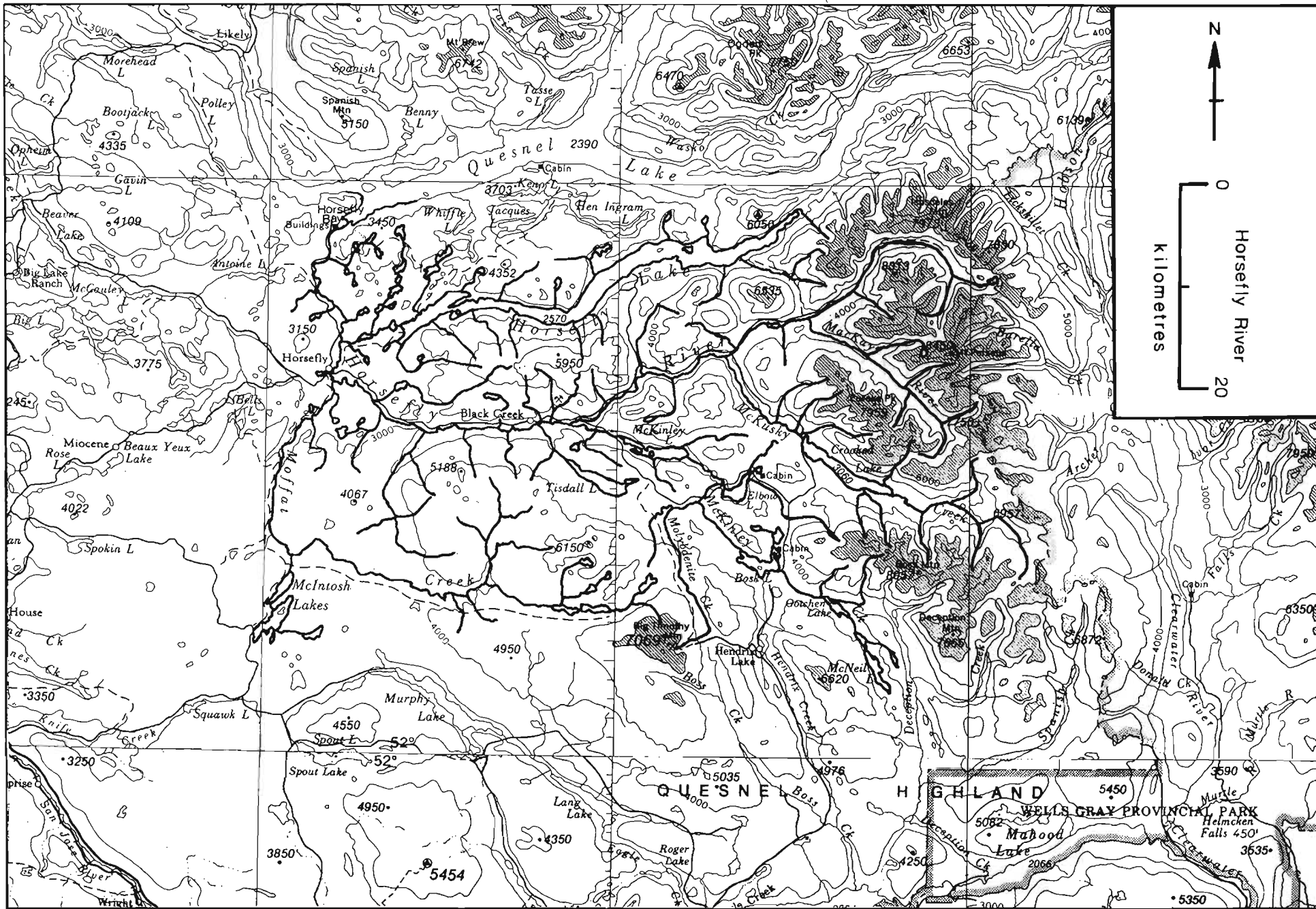
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71		400				
72		267				
73		200				
74		100				
75		100				
76		350				
77		450				
78		350				
79		200				
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE		E. AUG				
START		L. AUG				
PEAK		E. SEPT				
END		M. SEPT				

REMARKS

Escapements to this creek prior to 1971 are included with Taseko River.



NAME OF STREAM HORSEFLY RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows W. into Horsefly Bay, Cariboo Dist.
 POSITION 52 121 SE.
 LENGTH 80.0 km WIDTH _____ m DRAINAGE _____ km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 13.0 max = 96.3 (73/06/06) min = 2.8 (73/04/03)

TEMPERATURE (°C) 13.3 (74/08/01); 15.0 (71/08/28); 1.1 (70/11/03)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____
Impassable falls 3 km above McKinley Creek on Horsefly River.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- mostly from Black Creek to lower McKinley Creek
CHINOOK	- McKinley Creek
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____
Considerable amount of good spawning area above the falls.

GENERAL REMARKS - Abundant populations of whitefish and trout.
 - Quesnel Field Station is located at Horsefly Lake.
 - 1949. Some debris which drifted down during last year's flood is breaking up the main channel into several small channels.
 - 1961. 75% prespawning mortality among both species.
 - 1964. Poor observation due to high water conditions during the spawning period.
 - 1967. 20% sockeye prespawning mortality.
 - 1969. The water temperature average 12°C throughout the spawning period.
 - 1970. Water temperatures ranged between 12°C and 14°C throughout the spawning period.
 - 1973. 25% sockeye prespawning mortality. One coho was caught by a sports fisherman near Black Creek. A section of gravel below the bridge at Horsefly

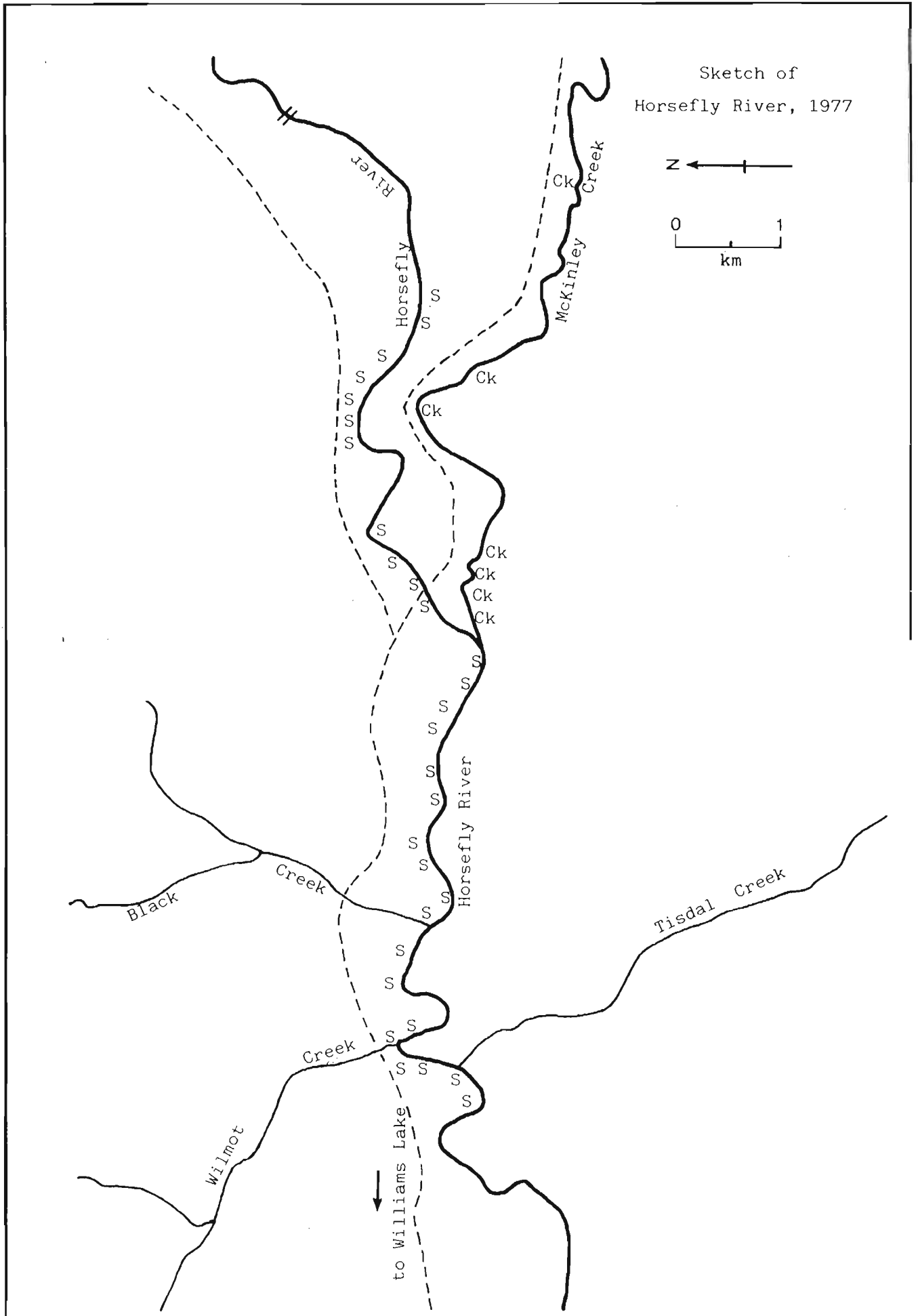
GENERAL REMARKS (cont.) - Horsefly River

- was cleaned and loosened for sockeye spawning.
- 1975. A coho was caught by hook-and-line at 2.5 km above the Village of Horsefly.
 - 1976. Logging in the upper reaches has created turbid water on the spawning grounds in Black Creek.
 - 1977. Large numbers of sockeye were observed attempting to overcome Horsefly Falls. 40% sockeye prespawning mortality. Water temperatures ranged from 18°C and 20°C during peak of spawning. Considerable silting below Patenaude Creek and on spawning grounds near McKinley Creek.
 - Tributaries:
 - Black Creek - Flows S. into Horsefly R., Cariboo Dist.
 - Position: 52 121 SE.
 - McKinley Creek - Flows W. into Horsefly R., Cariboo Dist.
 - Position: 52 121 SE.
 - Chinook salmon observed spawning below McKinley Lake.
 - Mostly gravel bottom in the creek up to and beyond McKinley Lake for 8 km.

References:

- Colgrove, D.J. and J.W. Wood. 1966. Occurrences and control of Chondrococcus columnaris as related to Fraser River sockeye salmon. I.P.S.F.C. Progress Report No. 15. 51 pp.
- Cooper, A.C. 1973. Temperature control during sockeye spawning period of McKinley Creek in 1969. I.P.S.F.C. Progress Report No. 27. 34 pp.
1956. A study of the Horsefly River and the effect of placer mining operations on sockeye spawning grounds. I.P.S.F.C. 78 pp.
- Hamilton, R. and R. Goodlad. 1956. Effect of the Horsefly River falls on downstream migrant sockeye salmon. I.P.S.F.C. 78 pp.
- I.P.S.F.C. 1966. Problems in rehabilitating the Quesnel sockeye run and their possible solution. Admin. Report. 85 pp.
- Mead, R.W. 1969. Summary of 1969 Horsefly River studies. I.P.S.F.C. 10 pp.
- Williams, I.V. 1973. Investigation of the prespawning mortality of sockeye in Horsefly River and McKinley Creek in 1969. I.P.S.F.C. Progress Report No. 27. 42 pp.
1973. Test with Ni-furpirinol (P 7138) to control prespawning mortalities of Fraser River sockeye. I.P.S.F.C. Progress Report No. 28. 30 pp.

Sketch of
Horsefly River, 1977



ESCAPEMENT RECORD FOR HORSEFLY RIVER

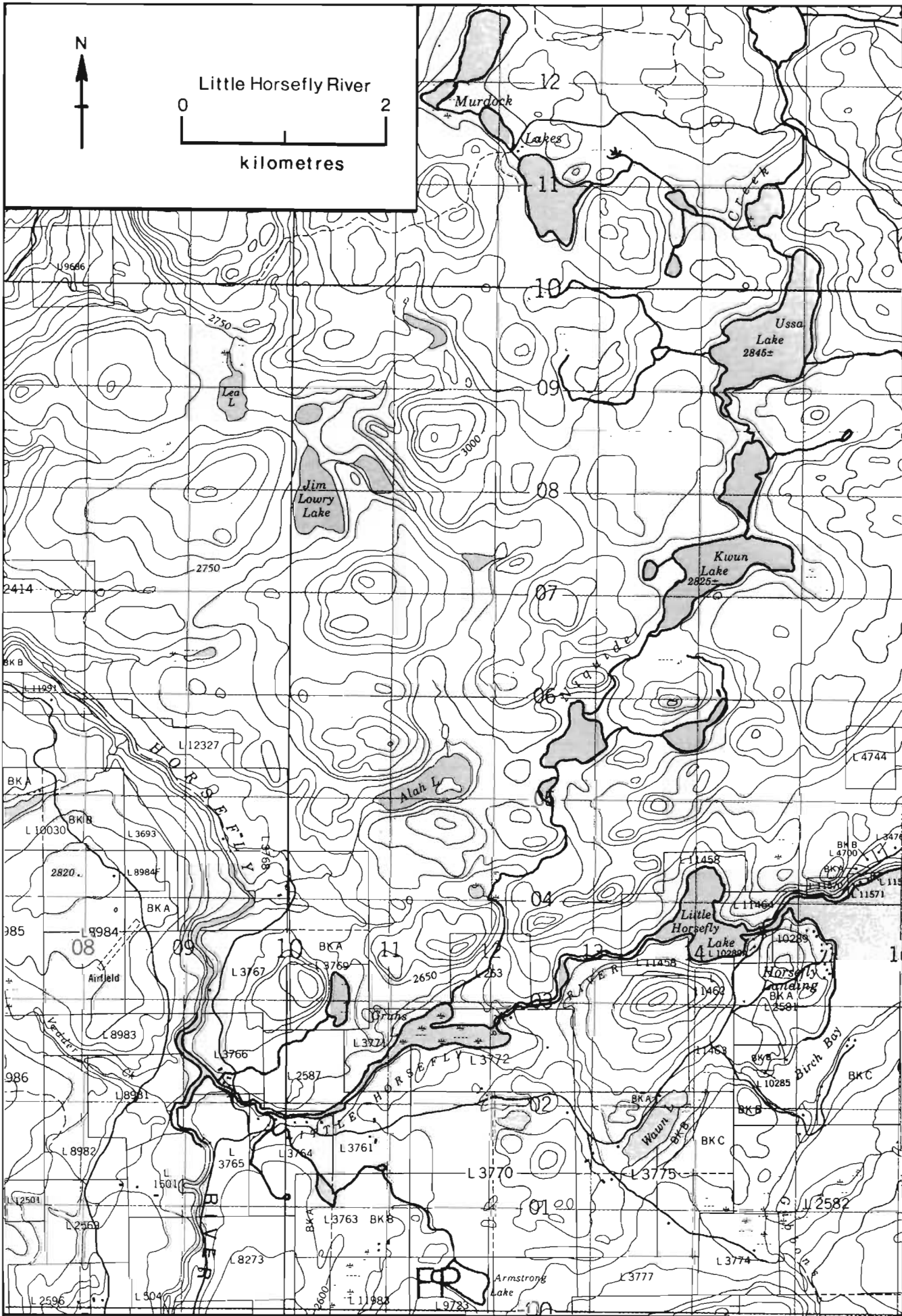
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	N/O	75				
48	51	25				
49	1100	50				
50	300	50				
51	30	130				
52	5800	95				
53	100000	75				
54	200	75				
55	25	75				
56	3525	25				
57	200000	75				
58	400	200				
59	25	75				
60	3525	75				
61	100000	200				
62	400	200				
63	75	75				
64	20000	400				
65	100000	200				
66	1500	200				
67	82	192				
68	7500	200				
69	310000	200				
70	750	750				
71	200	200				
72	3500	200				
73	230000	200				
74	3500	75				
75	200	200				
76	1500	200				
77	475000	200				
78	13000	300				
79	400	350				
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE	M. AUG	M. AUG				
START	L. AUG	L. AUG				
PEAK	E. SEPT	E. SEPT				
END	M. SEPT	M. SEPT				

REMARKS

- 1956, 1960. Only 25 adult sockeye observed.
- 1964. 93% of sockeye run was composed of jacks.
- 1968. 90% of sockeye run was composed of jacks.
- 1972. 97% of sockeye run was composed of jacks.
- 1974. I.P.S.F.C. figure.



NAME OF STREAM LITTLE HORSEFLY RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows W. into Horsefly R., Cariboo Dist.
 POSITION 52 121 SE.
 LENGTH 6.5 km WIDTH m DRAINAGE km²
 COMPOSITION: BEDROCK BOULDER COARSE FINE
 SILT & SAND UNCLASSIFIED

PERCENT GRADIENT

0.00 - 0.25

0.25 - 0.50

0.50 - 0.75

0.75 - 1.00

> 1.00

WETTED AREA m² SPAWNING AREA m²DISCHARGE (m³/s) TEMPERATURE (°C) BARRIERS OR POINTS OF DIFFICULT ASCENT

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- between Gruhs Lake & Horsefly River
CHINOOK	
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

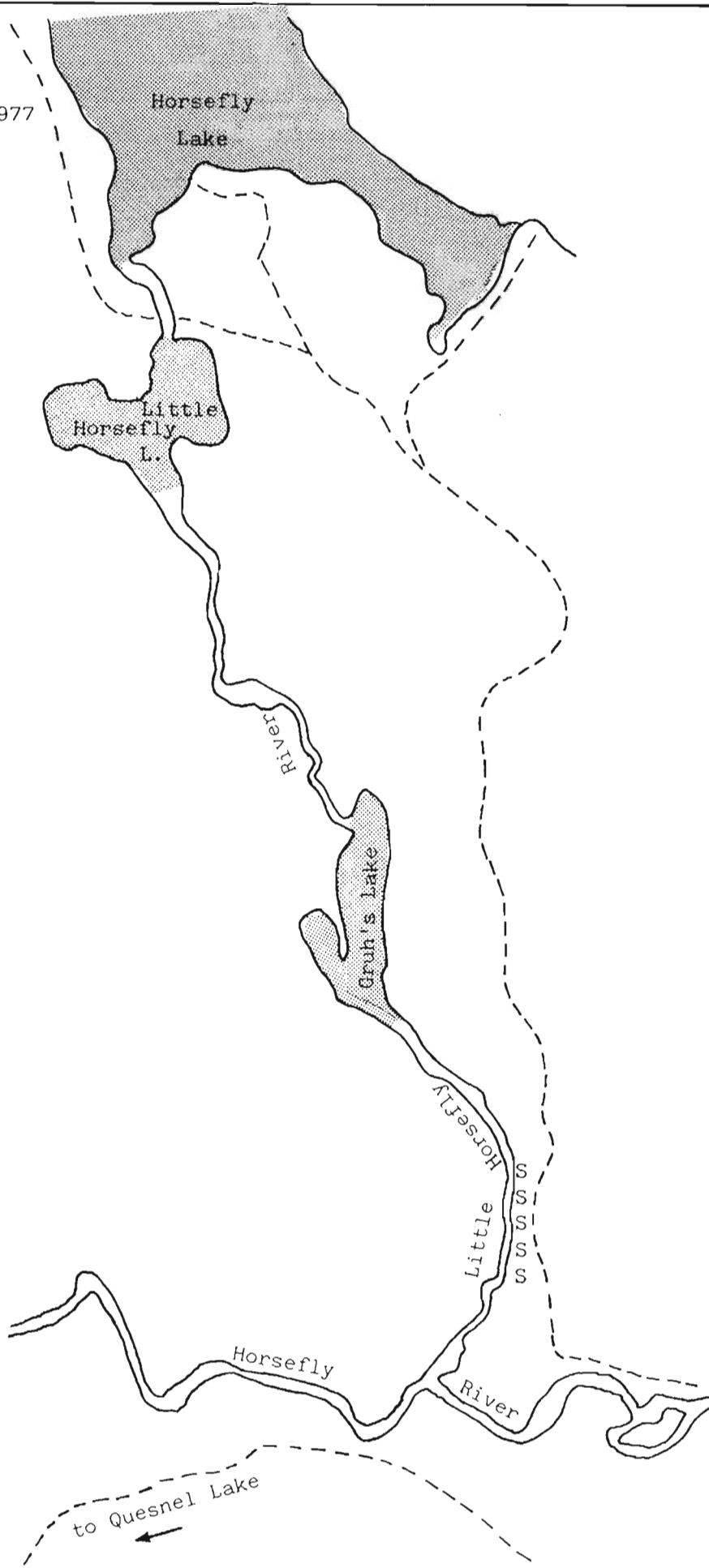
POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS - Excellent gravel bottom in most length of the river.
- Sockeye spawning in this river are stray migrants from Horsefly River.
- 1957. Sockeye observed in this stream were the result of the 1953 artificial
pond hatch and release into Horsefly Lake.
- 1975. Very poor spawning stream.

Sketch of
Little Horsefly River, 1977

Z ←

0 1
km



ESCAPEMENT RECORD FOR LITTLE HORSEFLY RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	NO RECORD					
48	NO RECORD					
49	NO RECORD					
50	5					
51	NO RECORD					
52	11					
53	200					
54	5					
55	NO RECORD					
56	N/O					
57	25					
58	N/O					
59	25					
60	N/O					
61	25					
62	N/O					
63	N/O					
64	355					
65	48					
66	N/O					
67	N/O					
68	141					
69	N/O					
70	N/O					
71	N/O					
72	N/O					
73	7					
74	N/O					
75	N/O					
76	N/O					
77	30					
78	25					
79	N/O					
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE						
START						
PEAK						
END						

REMARKS

- 1957. An additional 19 sockeye were observed at Hatchery Field Station drainage outlet.
- 1968. I.P.S.F.C. count.



NAME OF STREAM MITCHELL RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows SW. into Quesnel L., Cariboo Dist.
 POSITION 52 120 NW.
 LENGTH 11.0 km WIDTH _____ m DRAINAGE _____ km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 11.5 max = 48.4 (70/06/08) min = 1.8 (70/12/22)

TEMPERATURE (°C) 12.2 (72/03/19)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____
Impassable falls at 11 km.

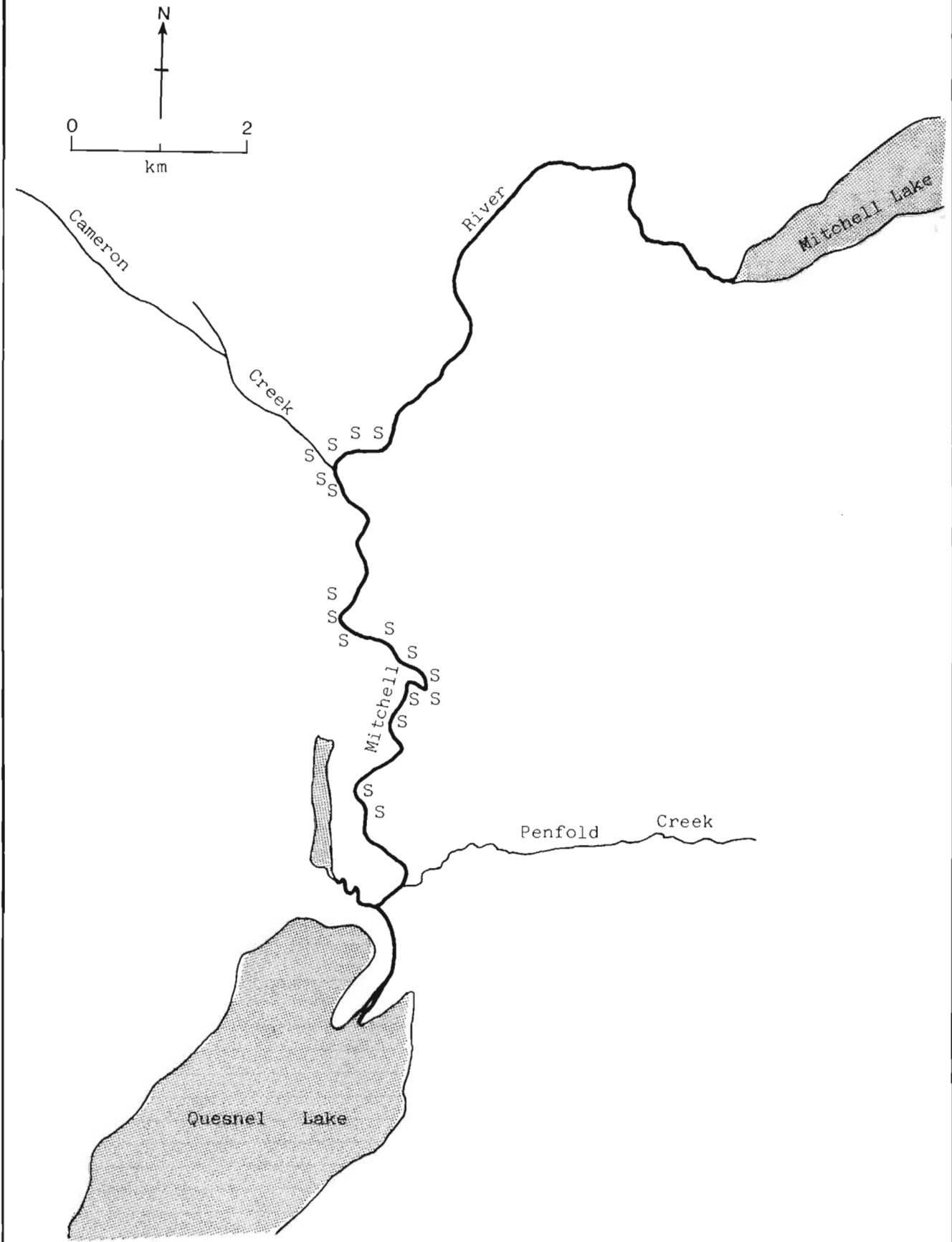
SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- between Penfold and Cameron Creeks
CHINOOK	
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____
No suitable spawning area above the falls.

GENERAL REMARKS - Cycle year spawning stream.
- 1961. Heavy mortality prior to spawning.
- 1978. First time chinook salmon utilized this stream.

Sketch of
Mitchell River, 1977



ESCAPEMENT RECORD FOR MITCHELL RIVER

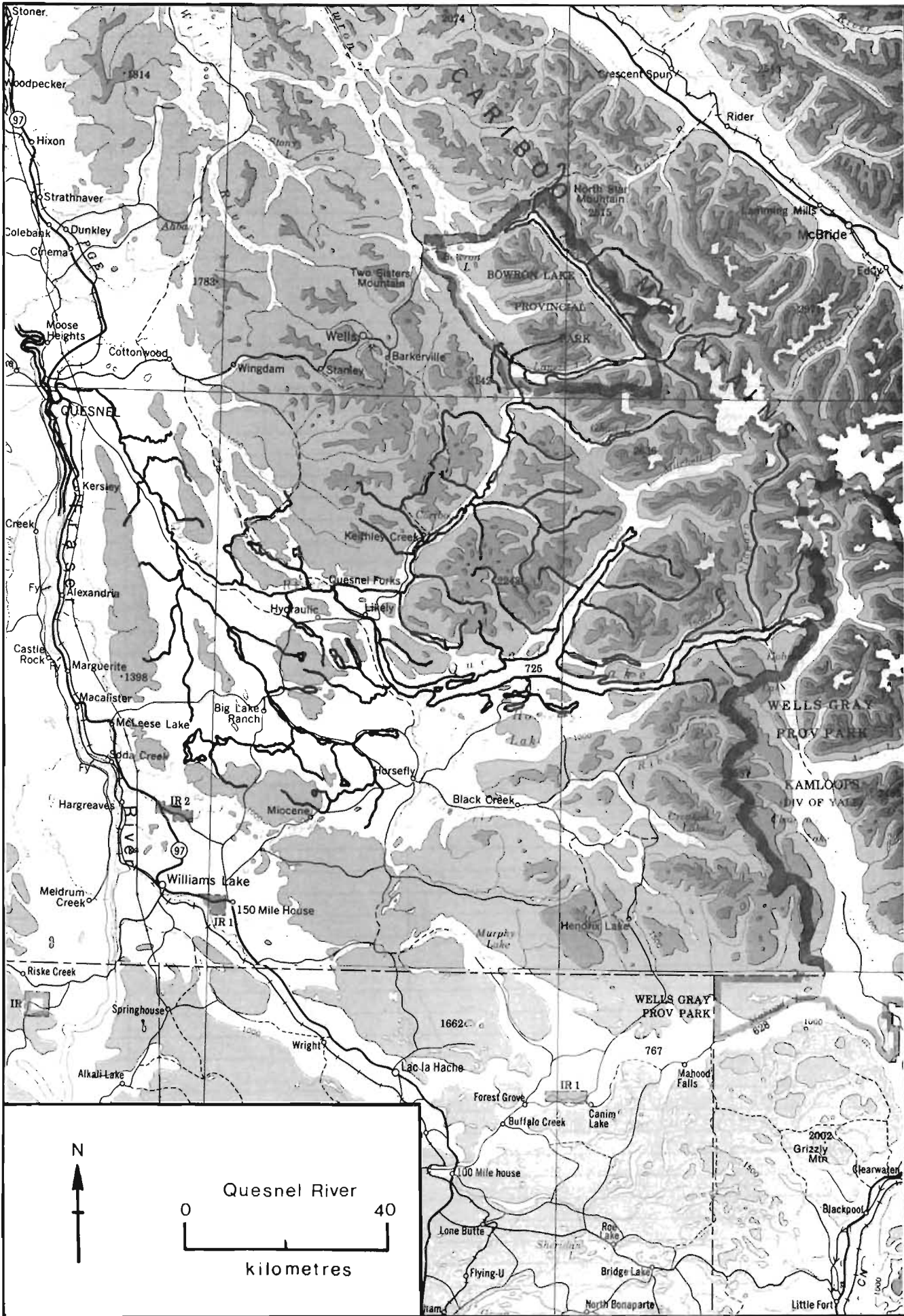
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	N/O					
48	N/O					
49	400					
50	5					
51	NO RECORD					
52	NO RECORD					
53	3500					
54	25					
55	N/O					
56	25					
57	3500					
58	50					
59	N/O					
60	25					
61	7500					
62	25					
63	N/O					
64	169					
65	5000					
66	75					
67	N/O					
68	4					
69	12500					
70	75					
71	N/O					
72	N/O					
73	30000					
74	N/O					
75	N/O					
76	N/O					
77	40000					
78	300	25				
79	N/O					
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE	M. AUG					
START	L. AUG					
PEAK	E. SEPT					
END	M. SEPT					

REMARKS

- 1956. 100% of this run was composed of jacks.
- 1964. 100% of this run was composed of jacks.
- 1968. I.P.S.F.C. count.



NAME OF STREAM QUESNEL RIVER
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NW. and SW. into Fraser R., Cariboo Dist.
 POSITION 52 122 NE.
 LENGTH 96.0 km WIDTH _____ m DRAINAGE 12,147 km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	_____
0.25 - 0.50	_____
0.50 - 0.75	_____
0.75 - 1.00	_____
> 1.00	_____

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 194.0 max = 770.0 (70/06/07) min = 46.4 (70/03/17)

TEMPERATURE (°C) 8.9 (72/09/29); 16.7 (72/08/21); 9.4 (71/10/18); 11.7 (71/09/16)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____
Passable canyon (Big Canyon) at 13.7 km.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	_____
CHINOOK	<u>- narrows and bridge at Likely</u>
COHO	_____
CHUM	_____
PINK (ODD YEAR)	<u>- near town of Quesnel</u>
PINK (EVEN YEAR)	_____
STEELHEAD	_____

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS - Abundant populations of Dolly Varden char, whitefish, trout, burbot and other coarse fish.
- 1949. Drillings were carried on at various points by B.C. Power Authority with view towards storage dam on Quesnel Lake and power head dams near Little and Big Canyons.
- 1952. Streambed below "Bullion Mine" dump is now widening out causing an easier passage for ascending salmon.
- 1960. Extremely high water level throughout spawning period.
- 1967. Very poor visibility in Quesnel River making enumeration impossible.
- 1976. A massive earth slide occured on Quesnel River at Moorehead Creek on May 4. The river was completely blocked for a short period of time. The river has now washed out a channel and the existing blockade offers no obstruction to fish

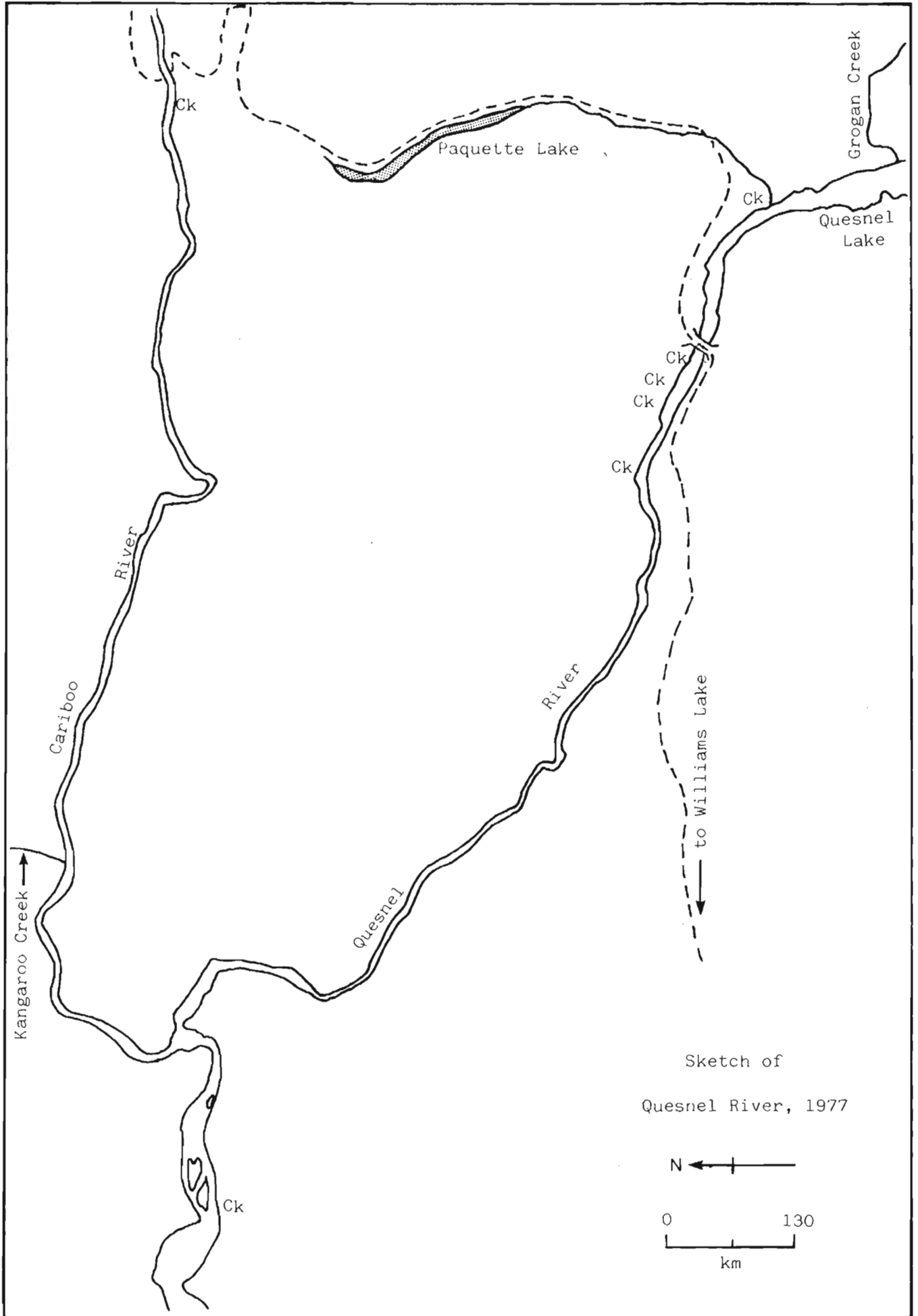
GENERAL REMARKS (cont.) - Quesnel River

passage.

- 1979. Quesnel-Cariboo River log drive conducted every year since 1963. Quesnel River Hatchery (proposed chinook salmon hatchery site) located 1.6 km West of Likely, B.C.
- Tributaries:
 - Cariboo River - Flows SW. into Quesnel R. at Quesnel Forks sett., Cariboo Dist.
 - Position: 52 121 NW.
 - Some chinook utilize this stream for spawning.
 - Drains 3,626 square kilometres.
 - The Cariboo River below Cariboo Lake is unnavigable.

References:

- Dept. of Fisheries and Oceans, Fisheries Research Board of Canada and the I.P.S.F.C. 1954. Report on the operation of a proposed kraft pulp mill in the Quesnel area and its effect on the sockeye salmon. 38 pp.
- Elvidge, R.E. and G.S. Wickerson. 1974. An impact assessment of the 1973 Quesnel-Cariboo log drive on the aquatic environment. Dept. of the Environment; Fisheries and Marine Service. Tech. Rept. Series No. PAC/1-74-2. 46 pp.
- I.P.S.F.C. 1966. Problems in rehabilitating the Quesnel sockeye run and their possible solution. Admin. Rept. 85 pp.



Sketch of
Quesnel River, 1977

N

0 130
km

ESCAPEMENT RECORD FOR QUESNEL RIVER

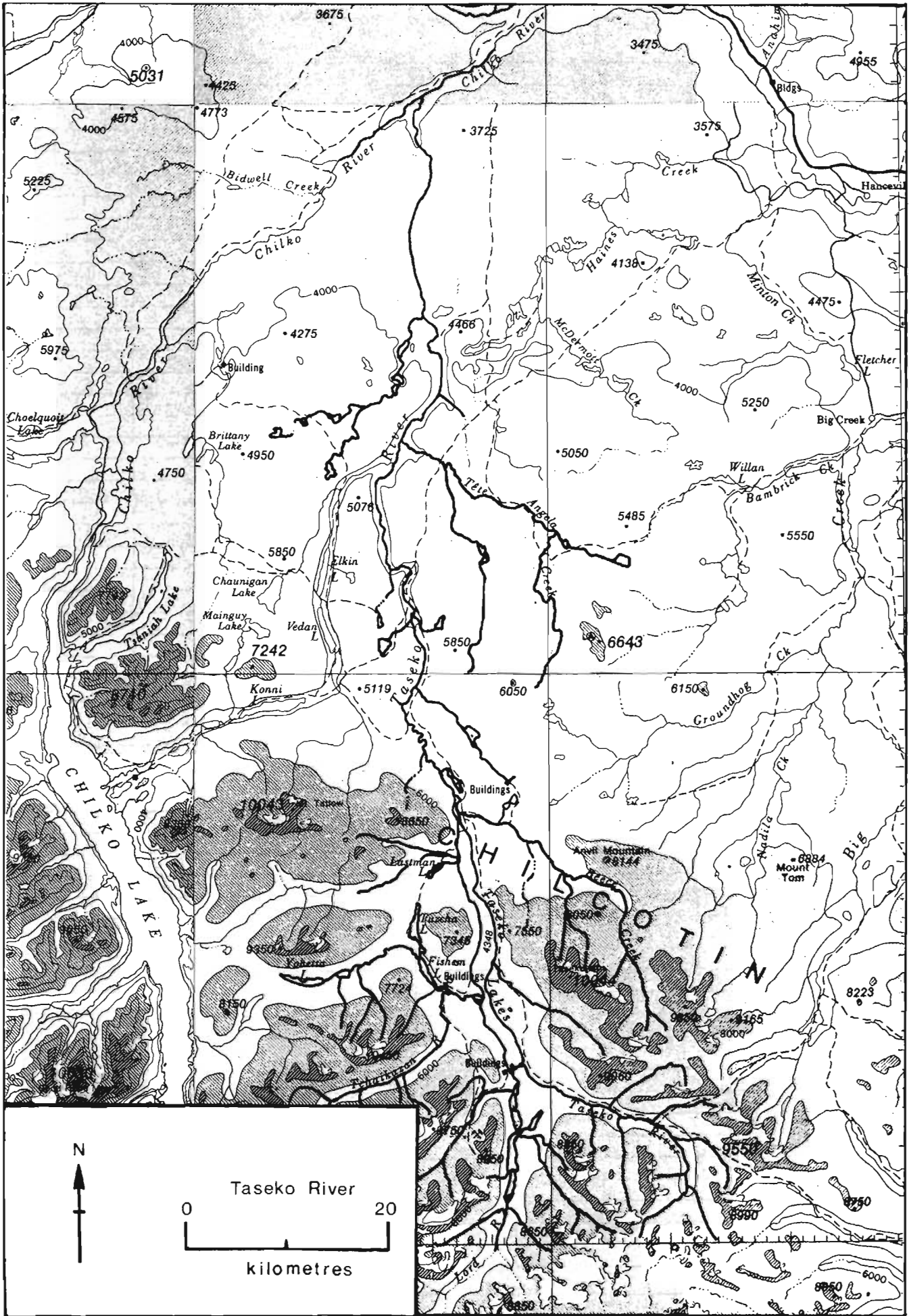
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947		400				
48		500				
49		350				
50		500				
51		1200				
52		450				
53		400				
54		400				
55		750				
56		400				
57		400				
58		750				
59		750				
60		400				
61		400				
62		750				
63		750				
64		1500				
65		2500				
66		750				
67		950			UNK	
68		1100				
69		1100				
70		1800				
71		750			3500	
72		900				
73		1100				
74		1000				
75		1000			600	
76		1000				
77		1400			1500	
78		1200				
79		900			500	
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE		E. SEPT				
START		M. SEPT				
PEAK		E. OCT				
END		M. OCT				

REMARKS

- 1978. Escapement includes 50 chinooks to Cariboo River.



NAME OF STREAM TASEKO RIVER (Whitewater River)
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NE. into Chilko R., S. of Redstone, Cariboo Dist.
 POSITION 52 123 SW.
 LENGTH 130.0 km WIDTH _____ m DRAINAGE _____ km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25
0.25 - 0.50
0.50 - 0.75
0.75 - 1.00
> 1.00

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	- Taseko Lakes
CHINOOK	- Taseko Lakes outlet
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS - Abundant populations of trout and whitefish.

- 1953, 1957. Clear seepage flow from Canime Creek provided suitable spawning area for a few sockeye.

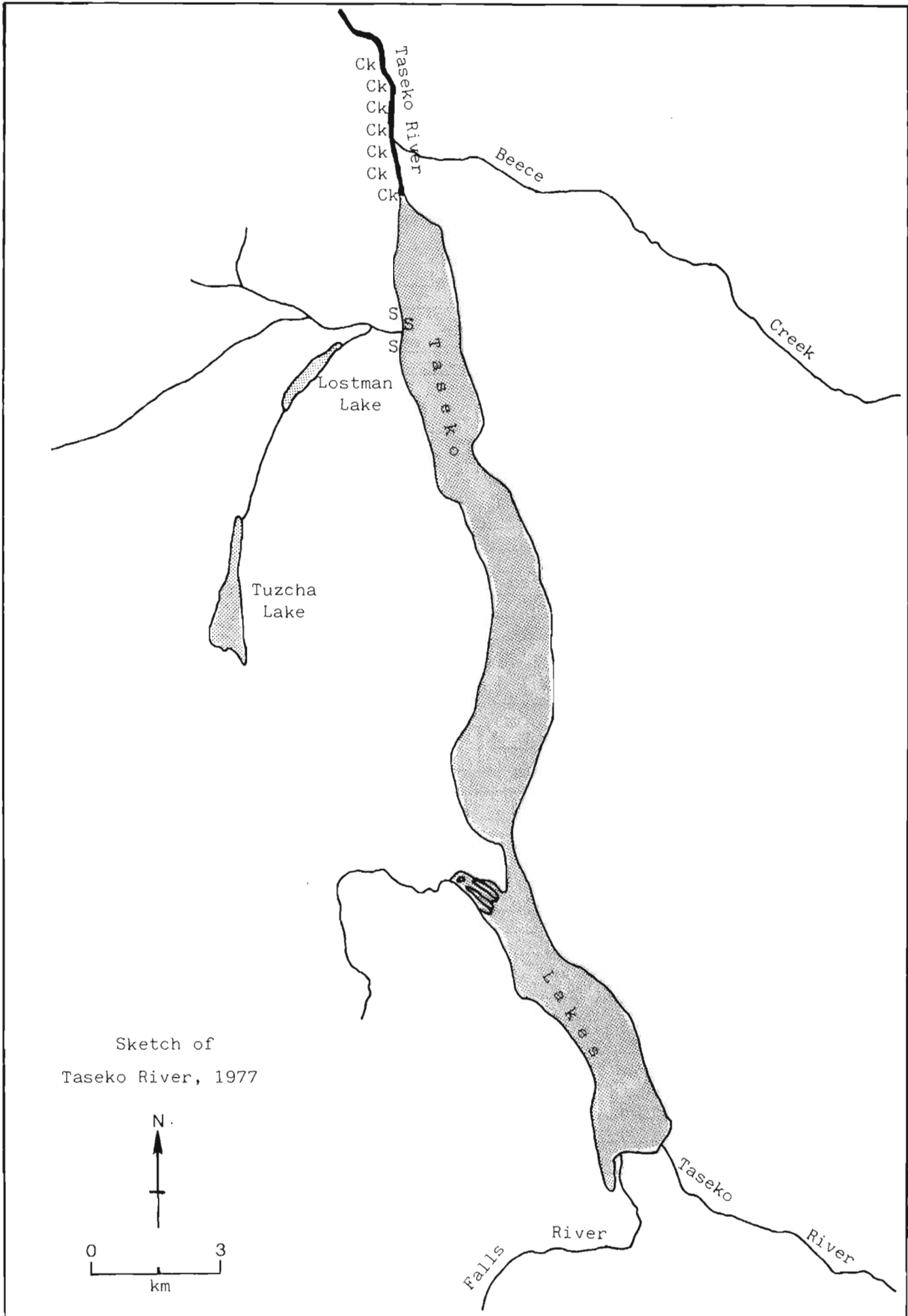
- 1963. Probable percentage of success on the total return was only 20%.

- 1967. Small tagging program and dead recovery by I.P.S.F.C. personnel at Taseko Lakes.

- 1968. This stream is inaccessible and can only be inspected by the use of an aircraft.

- 1971. 350 sockeye were tagged by I.P.S.F.C. personnel at Taseko Lakes.

- 1979. Enumeration difficult due to glacial silt. Glacial silt is a constant problem in this stream.



ESCAPEMENT RECORD FOR TASEKO RIVER (Whitewater River)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	NO RECORD					
48	400	400				
49	50	300				
50	500	500				
51	400	350				
52	3500	400				
53	3500	400				
54	3500	400				
55	3500	400				
56	3500	400				
57	3500	400				
58	7500	750				
59	15000	750				
60	3500	400				
61	25	400				
62	750	750				
63	35000	400				
64	400	750				
65	UNK	UNK				
66	400	400				
67	5700	600				
68	400	400				
69	200	400				
70	25	750				
71	3500	200				
72	N/O	N/O				
73	N/O	N/O				
74	N/O	N/O				
75	3500	350				
76	N/O	25				
77	N/O	UNK				
78	UNK	300				
79	N/O	50				
80						
81						
82						
83						
84						
85						

TIMING

ARRIVE	E. AUG	M. JULY				
START	E. AUG	M. AUG				
PEAK	M. AUG	L. AUG				
END	E. SEPT	E. SEPT				

REMARKS

- 1965. 30 chinook were counted at Elkin Creek.
- 1967. 200 chinooks were counted at Elkin Creek.
- 1970. 600 chinooks were counted at Elkin Creek.
- 1975. I.P.S.F.C. count for sockeye only.

NAME OF STREAM WEST ROAD RIVER (Blackwater River)
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NE. into Fraser R., W. of Strathnaver, Cariboo Dist.
 POSITION 53 122 SW.
 LENGTH 161.0 km WIDTH _____ m DRAINAGE 11,655 km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25
 0.25 - 0.50
 0.50 - 0.75
 0.75 - 1.00
 >1.00

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 22.3 max = 86.0 (70/05/19) min = 8.9 (70/12/28)

TEMPERATURE (°C) 12.2 (76/09/05); 13.3 (75/08/29); 12.8 (73/09/05); 16.0 (72/08/28)

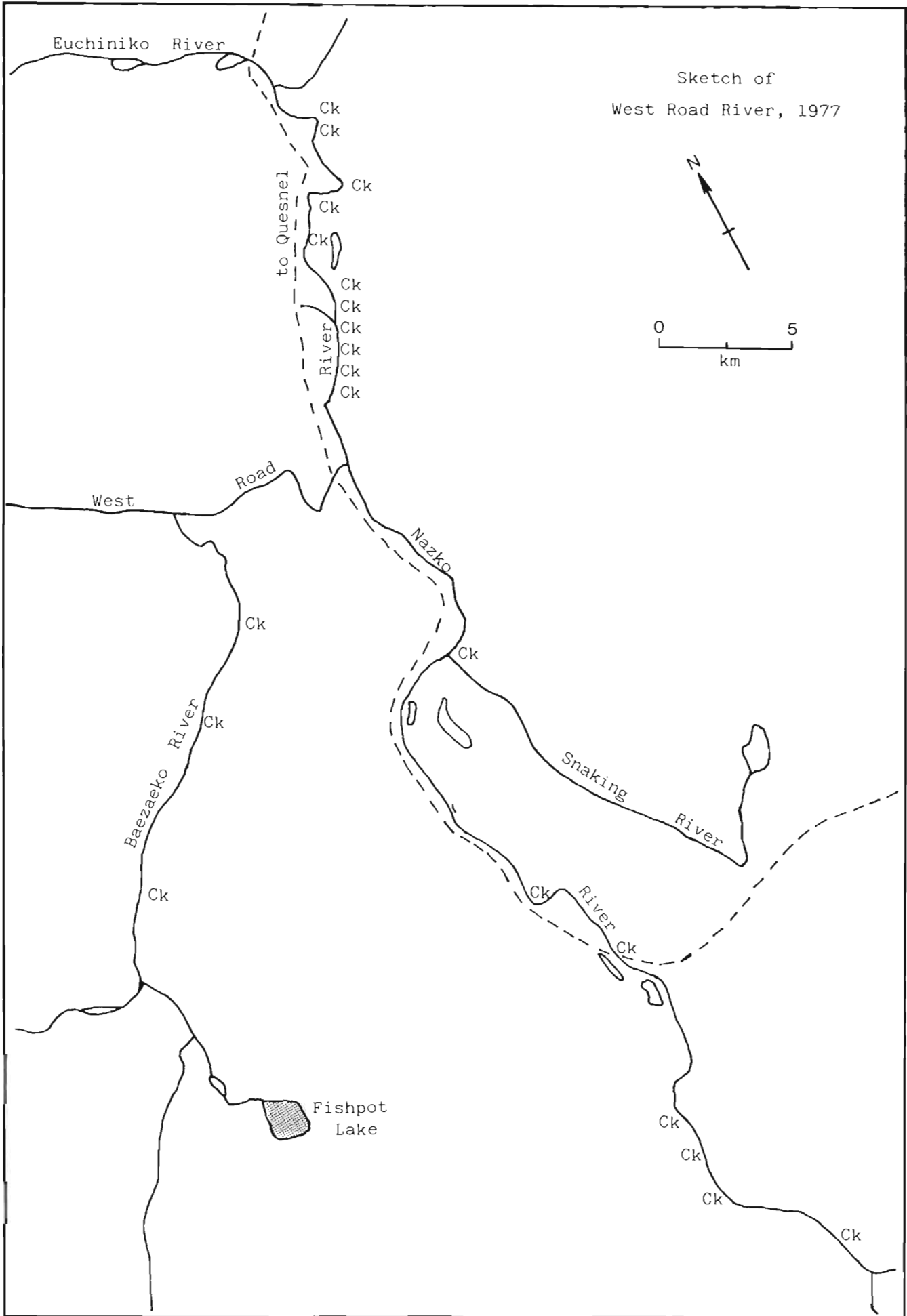
BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- West Road R. between Nazko & Euchiniko Rivers (main portion of run); Baezaeko River and Nazko River
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS - Abundant populations of trout, squawfish, suckers and chubs.
 - 1951. Mollusca such as large freshwater clams and snails are found in great abundance throughout the river bottom above the Nazko River.
 - 1964. The main spawning area between 3.2 - 12.2 km below the Nazko River confluence is very stable and productive.
 - 1966-67, 69. Enumeration difficult due to dark coloured water.
 - 1968. The main spawning grounds are inaccessible.



NAME OF STREAM WEST ROAD RIVER (Blackwater River)
 CONSERVATION DISTRICT 1 SUBDISTRICT Cariboo
 LOCATION OF MOUTH Flows NE. into Fraser R., W. of Strathnaver, Cariboo Dist.
 POSITION 53 122 SW.
 LENGTH 161.0 km WIDTH _____ m DRAINAGE 11,655 km²
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

PERCENT GRADIENT

0.00 - 0.25	
0.25 - 0.50	
0.50 - 0.75	
0.75 - 1.00	
> 1.00	

WETTED AREA _____ m² SPAWNING AREA _____ m²

DISCHARGE (m³/s) mean = 22.3 max = 86.0 (70/05/19) min = 8.9 (70/12/28)

TEMPERATURE (°C) 12.2 (76/09/05); 13.3 (75/08/29); 12.8 (73/09/05); 16.0 (72/08/28)

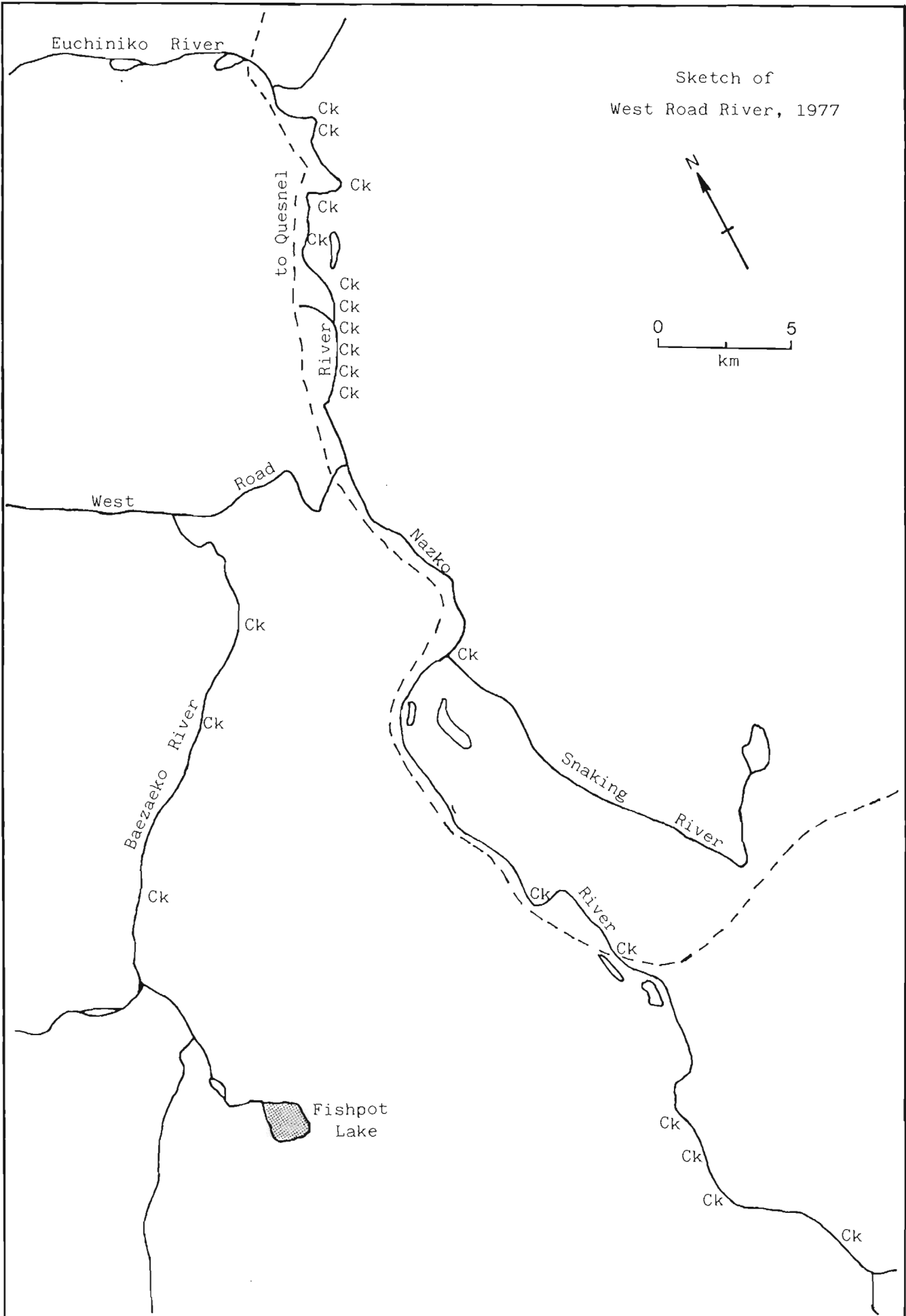
BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- West Road R. between Nazko & Euchiniko Rivers (main portion of run); Baezaeko River and Nazko River
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS - Abundant populations of trout, squawfish, suckers and chubs.
 - 1951. Mollusca such as large freshwater clams and snails are found in great abundance throughout the river bottom above the Nazko River.
 - 1964. The main spawning area between 3.2 - 12.2 km below the Nazko River confluence is very stable and productive.
 - 1966-67, 69. Enumeration difficult due to dark coloured water.
 - 1968. The main spawning grounds are inaccessible.



METRIC EQUIVALENTSLength

centimeter (cm) = 0.394 in
 meter (m) = 3.280 ft
 meter (m) = 1.094 yd
 kilometer (km) = 0.621 mi

inch (in) = 2.540 cm
 foot (ft) = 0.305 m
 yard (yd) = 0.914 m
 mile (mi) = 1.609 km

Area

square centimeter (in²) = 0.155 in²
 square meter (m²) = 10.760 ft²
 square meter (m²) = 1.196 yd²
 square kilometer (km²) = 0.386 mi²
 hectare (ha) = 2.470 a

square inch (in²) = 6.451 cm²
 square foot (ft²) = 0.093 m²
 square yard (yd²) = 0.836 m²
 square mile (mi²) = 2.590 km²
 acre (a) = 0.405 ha

Volume

cubic centimeter (cm³) = 0.061 in³
 liter (L) = 61.023 in³
 liter (L) = 0.035 ft³
 liter (L) = 0.264 U.S. gal
 = 0.220 Imp. gal

cubic meter (m³) = 35.315 ft³
 cubic meter (m³) = 1.308 yd³

cubic inch (in³) = 16.387 cm³
 cubic inch (in³) = 0.016 L
 cubic foot (ft³) = 0.028 m³
 cubic foot (ft³) = 28.320 L
 cubic yard (yd³) = 0.765 m³
 U.S. gallon (gal) = 3.785 L
 Imp. gallon (gal) = 4.546 L

Weight

gram (gm) = 0.035 oz
 kilogram (kg) = 2.205 lb
 kilogram (kg) = 0.001 ton (short)
 tonne (t) = 1.103 ton (short)

ounce (oz) = 31.103 gm
 pound (lb) = 0.373 kg
 ton (short) = 907.180 kg
 ton (short) = 0.907 t

Velocity

meter per second (m/s) = 3.280 ft/s
 feet per second (ft/s) = 0.305 m/s

Discharge

cubic meter per second (m³/s) = 35.315 ft³/s
 cubic foot per second (ft³/s) = 0.028 m³/s
 cubic meter per second (m³/s) = 15350.879 U.S. gal/min
 = 13198.628 Imp. gal/min

Temperature

Degrees Centigrade (°C) = 5/9 (Degrees Fahrenheit - 32)
 Degrees Fahrenheit (°F) = 9/5 (Degrees Centigrade) + 32