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Catalogue of Salmon Streams
and Spawning Escapements
of Statistical Area 29
New Westminster Subdistrict

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No. 495



Fisheries
and Oceans

Pêches
et Océans

Canada

Canadian Data Report of Fisheries and Aquatic Sciences

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CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF

STATISTICAL AREA 29
NEW WESTMINSTER SUBDISTRICT

by

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ABSTRACT

Hancock, M.J. and D.E.Marshall, 1985. Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 29, New Westminster Subdistrict. Can. Data Rep. Fish and Aquat. Sci. 495: xiii + 90p.

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 and in some cases a sketch map which further describes the surrounding area.

Keywords: British Columbia, Statistical Area 29, New Westminster, Lower Fraser River, salmon streams, spawning escapements.

RÉSUMÉ

Hancock, M.J. and D.E.Marshall, 1985. Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 29, New Westminster Subdistrict. Can. Data Rep. Fish and Aquat. Sci. 495: xiii + 90p.

Le présent répertoire donne l'emplacement de chaque cours d'eau, la répartition de fraie, les points de remonte difficile, les données sur les saumons de remonte et d'autres information générales concernant le cours d'eau. On y trouve aussi une carte topographique de l'emplacement du cours d'eau et, dans quelque cas, un croquis décrivant la zone environte.

Mots-cles: Colombie-Britannique, zone statistique 29, New Westminster, inferieur de la Fraser, cours d'eau à saumons, remonte.



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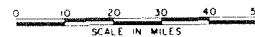
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COQUITLAM RIVER	22
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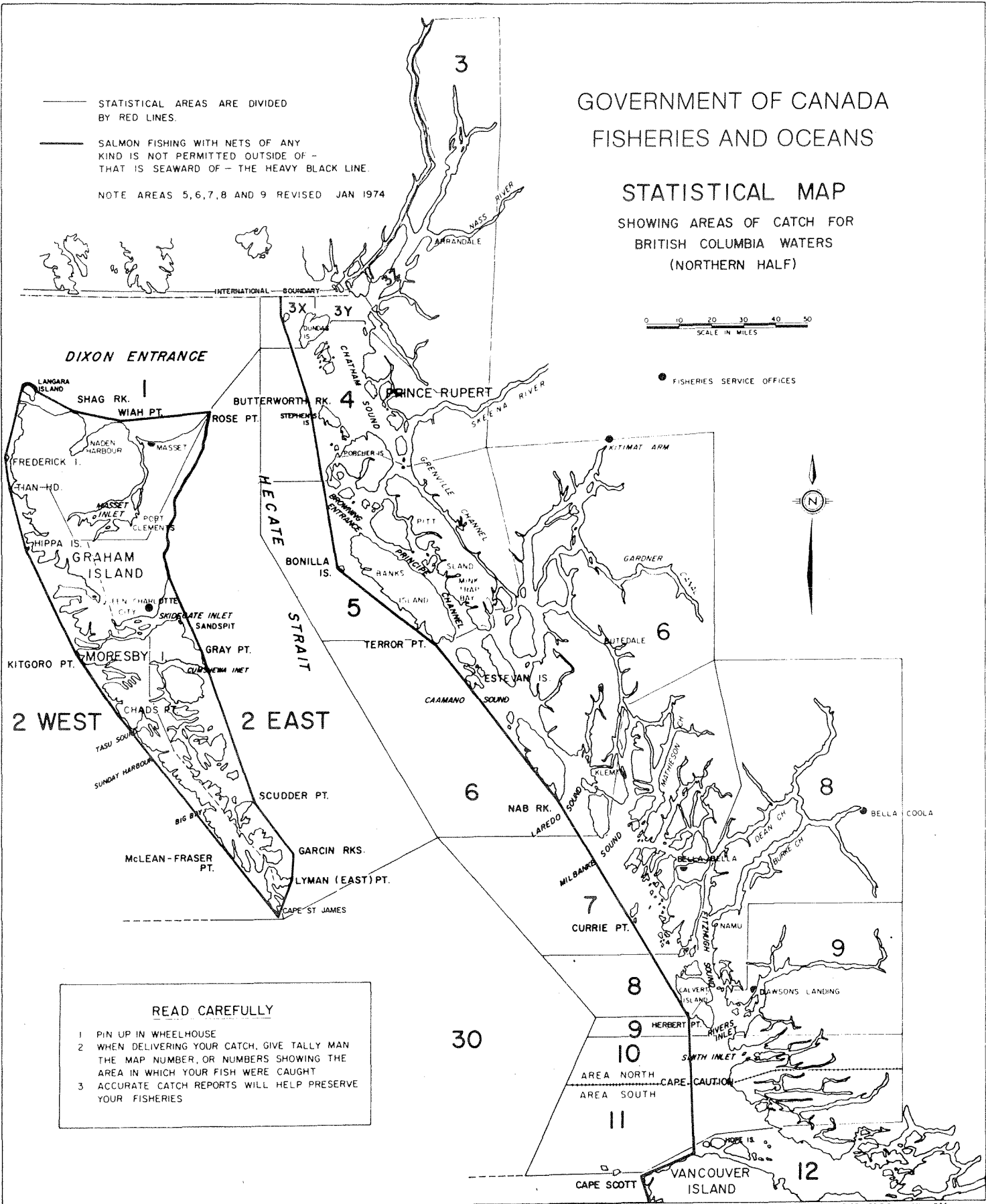
GOVERNMENT OF CANADA
FISHERIES AND OCEANS

STATISTICAL MAP

SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
(NORTHERN HALF)



● FISHERIES SERVICE OFFICES



— STATISTICAL AREAS ARE DIVIDED BY RED LINES.

— SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF — THAT IS SEAWARD OF — THE HEAVY BLACK LINE.

NOTE AREAS 5,6,7,8 AND 9 REVISED JAN 1974

DIXON ENTRANCE

INTERNATIONAL BOUNDARY

HECATE STRAIT

READ CAREFULLY

- 1 PIN UP IN WHEELHOUSE
- 2 WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT
- 3 ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES

30

AREA NORTH
AREA SOUTH

READ CAREFULLY

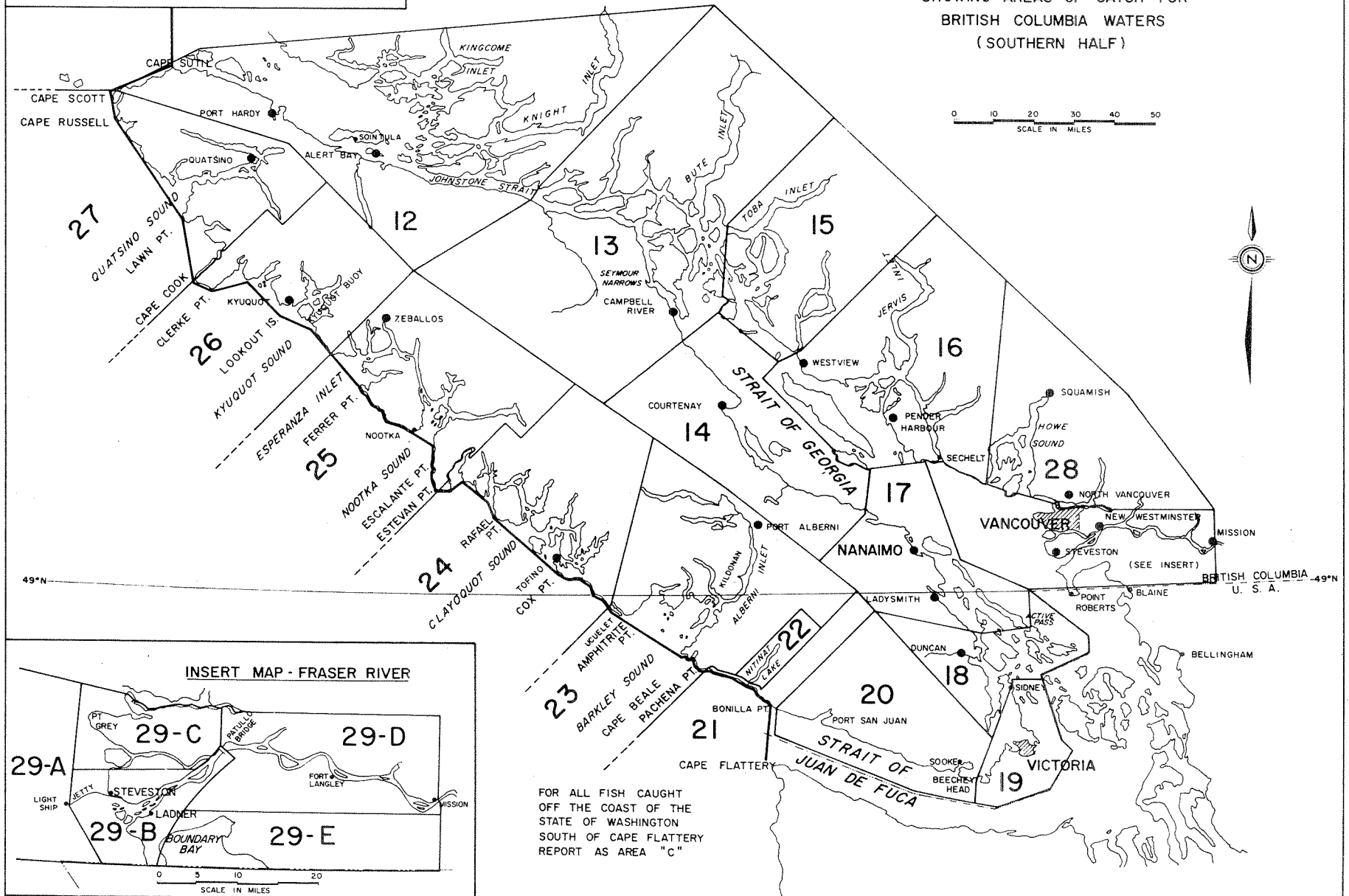
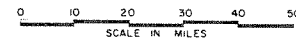
1. PIN UP IN WHEELHOUSE.
2. WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT.
3. ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES.
4. FOR COMPLETE DETAILS, CONSULT BRITISH COLUMBIA FISHERIES REGULATIONS.

- STATISTICAL AREAS ARE DIVIDED BY RED LINES
- SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF - THAT IS SEAWARD OF - THE HEAVY BLACK LINE.
- FISHERIES SERVICES OFFICES

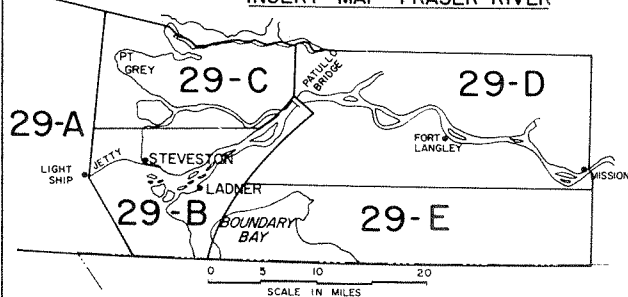
DEPARTMENT OF THE ENVIRONMENT
FISHERIES SERVICE

STATISTICAL MAP

SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
(SOUTHERN HALF)

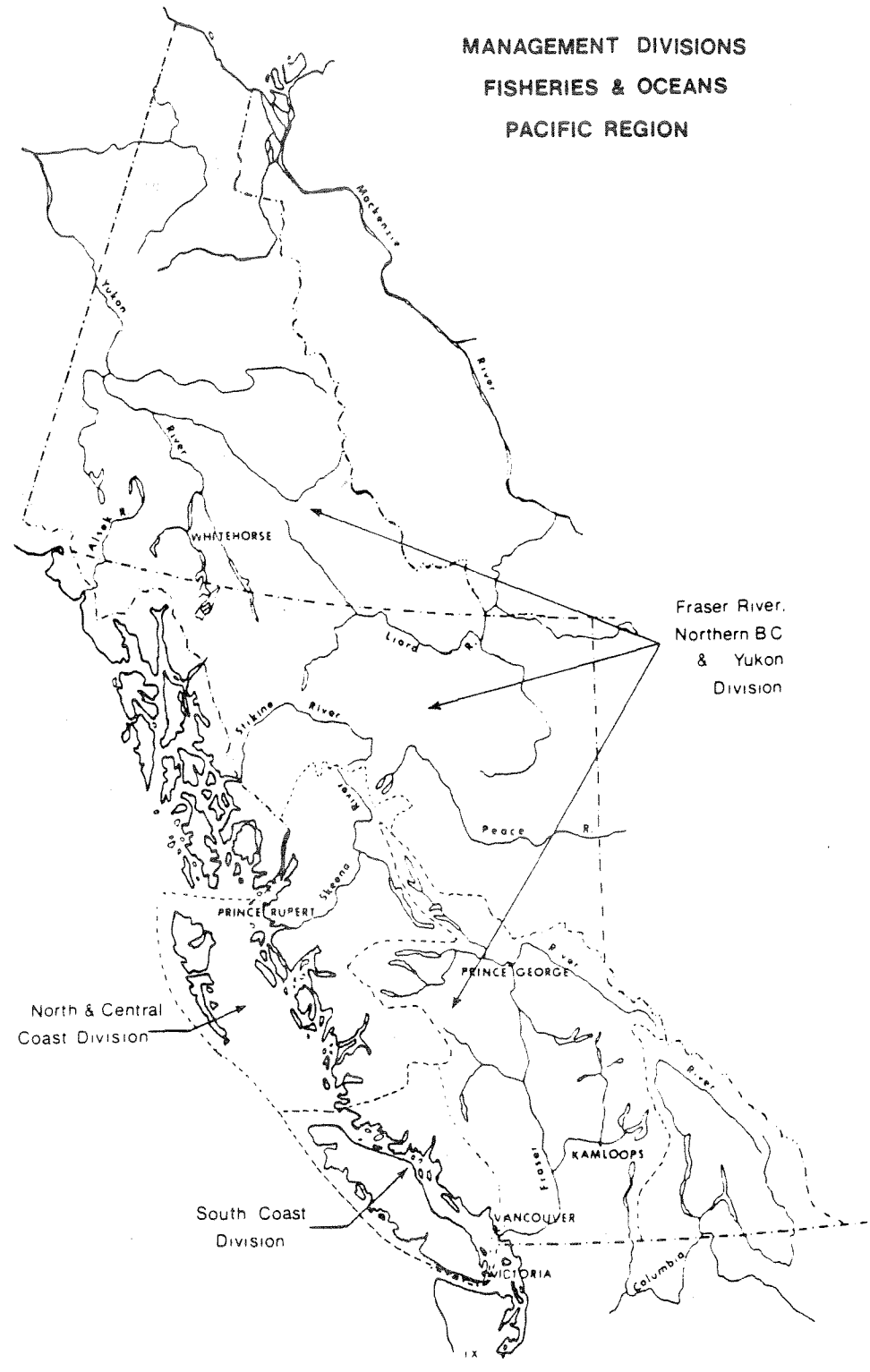


INSERT MAP - FRASER RIVER



FOR ALL FISH CAUGHT
OFF THE COAST OF THE
STATE OF WASHINGTON
SOUTH OF CAPE FLATTERY
REPORT AS AREA "C"

MANAGEMENT DIVISIONS
FISHERIES & OCEANS
PACIFIC REGION

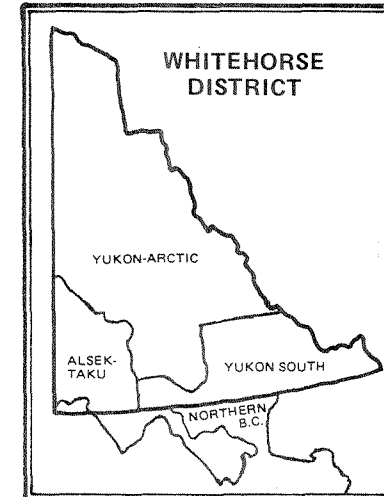


YUKON SOUTH

BRITISH COLUMBIA

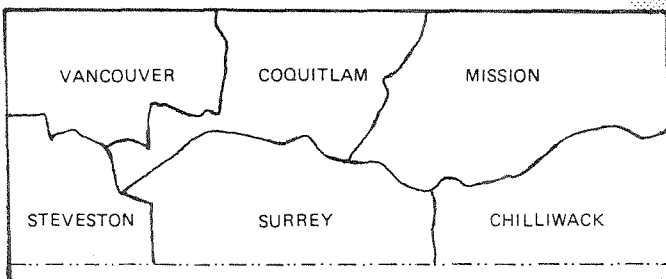


FISHERIES & OCEANS - Pacific Region
DISTRICTS AND SUBDISTRICTS



LEGEND

DISTRICT BOUNDARY ———
SUBDISTRICT BOUNDARY ———



STANDARDS USED ON STREAM DATA PAGE

Name of Stream: Name given in Gazetteer of Canada, British Columbia 1966 edition;

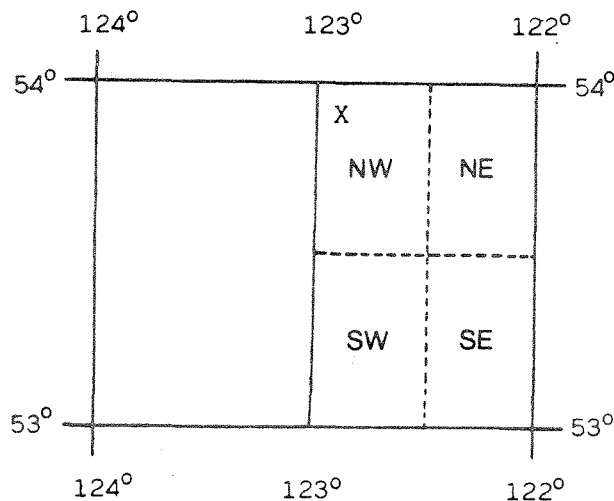
Statistical Area: As defined by D.F.O. showing areas of catch for B.C. waters
(Map dated Jan. 1974)

Districts and Subdistricts : As defined by D.F.O. (Map 1985)

RAB Numbers : The Aquatics Unit of the Resource Analysis Branch, Ministry of the Environment have assigned a hierarchical coding system (RAB number) to drainage basins of British Columbia. RAB numbers classify catchment areas and river channels. Further information on RAB coding system can be found in 'A Hierarchical Watershed Coding System for British Columbia', RAB Technical Paper #3, Ministry of the Environment, Victoria, B.C. June 1980.

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.

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

Discharge: Extremes of maximum and minimum daily discharge for the period of the last 30 years. Discharge date is taken from "Historical Stream Flow Summary", British Columbia, Water Survey of Canada.

Temperature: As described ($^{\circ}\text{C}$)

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.

General remarks: Emphasizes features of stream and spawning populations. Also includes industrial activity, routes of accessibility, etc. The comments and dates are taken from "Annual Reports of Salmon Streams and Spawning Grounds". 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.

FISHERIES & OCEANS - Pacific Region

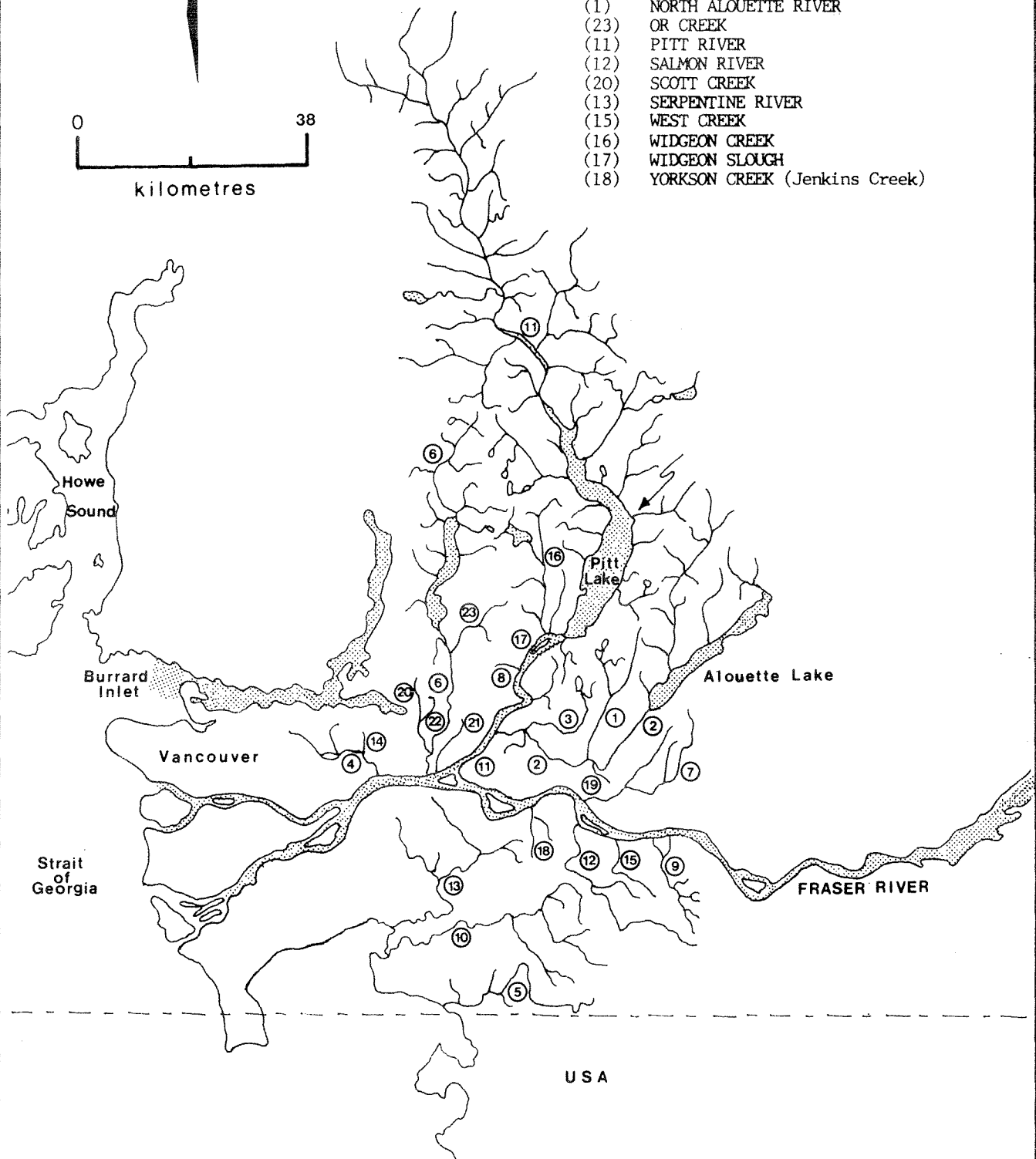
DISTRICT/SUB-DISTRICT OFFICES

<u>DISTRICT/SUB-DISTRICT</u>	<u>ADDRESS</u>	<u>TELEPHONE</u>	<u>SUB-DISTRICT NUMBER</u>
<u>DISTRICT #1 - Kamloops</u>	202 - 317 Seymour St., Kamloops, V2C 2E9	374-4322	
Salmon Arm	Box 1160, 461 Beatty Ave. NW, Salmon Arm V0E 2T0	832-8037	29K
Prince George	2392 Ospika Blvd., Prince George, V2N 3N5	564-7030	29I
Clearwater	Box 610, Clearwater, V0E 1N0	674-2633	29J
Lillooet	Box 315, Lillooet, V0K 1V0	256-4525	29F
Quesnel	Box 4340, Quesnel, V2J 3J3	992-2434	29H
Williams Lake	540 Borland St., Williams Lake, V2G 1R9	398-6544	29G
<u>DISTRICT #2 - New Westminster</u>	309 - 549 Columbia St., New West., V3L 1B3	524-7181	
Vancouver	309 - 549 Columbia St., New West., V3L 1B3	524-7306	28A
Surrey	309 - 549 Columbia St., New West., V3L 1B3	524-7171	29B
Coquitlam	309 - 549 Columbia St., New West., V3L 1B3	524-7169	29C
Steveston	1255 No. 1 Road, Richmond, V7E 1T7	274-7217	29A
Squamish	Box 85, Squamish, V0N 3G0	892-3230	28B
Mission	Box 3308, Mission, V2V 4J5	826-3664	29D
Chilliwack	Suite 5, 9375 Mary St., Chilliwack, V2P 4G9	792-6011	29E
<u>DISTRICT #3 - Nanaimo</u>	60 Front St., Nanaimo, V9R 5H7	754-3257	
Nanaimo/Ladysmith	60 Front St., Nanaimo, V9R 5H7	754-3257	17
Qualicum Beach	Box 1270, Qualicum Beach, V0R 2T0	752-9712	14S
Comox	Box 1328, Comox, V9N 3Z0	339-2031	14N
Duncan	Box 241, 191 Ingram St., Duncan, V0L 3X3	746-6221	18
Powell River	4488 Marine Avenue, Powell River, V8A 2K2	485-9621	15
Pender Harbour	Box 10, Madeira Park, V0N 2H0	883-2313	16
<u>DISTRICT #4 - Port Alberni</u>	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	
Port Alberni	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	23
Quatsino Sound	Box 10, Port Hardy, V0N 2P0	949-6422	27
Kyuquot	Box 549, Tahsis, V0P 1X0	934-6606	26
Tahsis	Box 549, Tahsis, V0P 1X0	934-6606	25
Tofino	Box 48, Tofino, V0R 2Z0	725-3468	24
<u>DISTRICT #5 - Campbell River</u>	215 - 950 Alder St., Campbell River, V0W 2P8	287-2102	
Campbell River	215 - 950 Alder St., Campbell River, V0W 2P8	287-2102	13
Seymour Inlet	Box 10, Port Hardy, V0N 2P0	949-6422	11
Alert Bay	Box 10, Alert Bay, V0N 1A0	974-5216	12
<u>DISTRICT #6 - Victoria</u>	116 - 816 Government St., Victoria, V8W 1W9	566-3252	
Victoria/Saanich	116 - 816 Government St., Victoria, V8W 1W9	566-3252	19
Sooke	Box 460, Sooke, V0Z 1N0	642-5322	20
<u>DISTRICT #7 - Kitimat</u>	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	
Butedale	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	6
Bella Bella	Box 38, Bella Bella, V0T 1B0	957-2363	7
Bella Coola	Box 130, Bella Coola, V0T 1C0	799-5345	8
Rivers Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		9
Smith Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		10
<u>DISTRICT #8 - Prince Rupert</u>	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Waterfront	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Skeena	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	4A
Greenville - Principe	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	5
Lower Nass	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	3A
Upper Nass	Box 29, Nass Camp, V0J 3J0	633-2408	3B
Hazelton	Box 327, Field Street, Hazelton, V0J 1Y0	842-6327	4C
Smithers	Box 578, Smithers, V0J 2N0	847-2312	4D
Terrace	4721-B Lazelle Ave., Terrace, V8G 1R6	635-2206	4B
<u>DISTRICT #9 - Queen Charlotte Is.</u>	Box 99, Queen Charlotte City, V0T 1S0	559-4413	
West Coast Q.C.I.	Box 99, Queen Charlotte City, V0T 1S0	559-4413	2W
Masset	Box 99, Masset, V0T 1M0	626-3316	1
Sandspit	Box 222, Sandspit, V0T 1T0	637-5340	2E
<u>DISTRICT #10 - Whitehorse</u>	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	
Yukon South/Northern B.C.	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	120
Yukon-Arctic	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	110
Alsek-Taku	Box 5341, Haines Junction, Y.T., Y0B 1L0	634-2235	130

SALMON SPAWNING STREAMS
 STATISTICAL AREA 29
 NEW WESTMINSTER



- (2) ALOUETTE RIVER (South Alouette River)
- (3) BLANEY CREEK
- (4) BRUNETTE RIVER
- (5) CAMPBELL RIVER
- (19) (Coho Creek)
- (6) COQUITLAM RIVER
- (22) HOY CREEK
- (7) KANAKA CREEK
- (8) MACINIYRE CREEK (McDonald Creek)
- (21) (Maple Creek)
- (9) NATHAN CREEK (Beaver Creek)
- (10) NICOMEKL RIVER
- (1) NORTH ALOUETTE RIVER
- (23) OR CREEK
- (11) PITT RIVER
- (12) SALMON RIVER
- (20) SCOTT CREEK
- (13) SERPENTINE RIVER
- (15) WEST CREEK
- (16) WIDGEON CREEK
- (17) WIDGEON SLOUGH
- (18) YORKSON CREEK (Jenkins Creek)

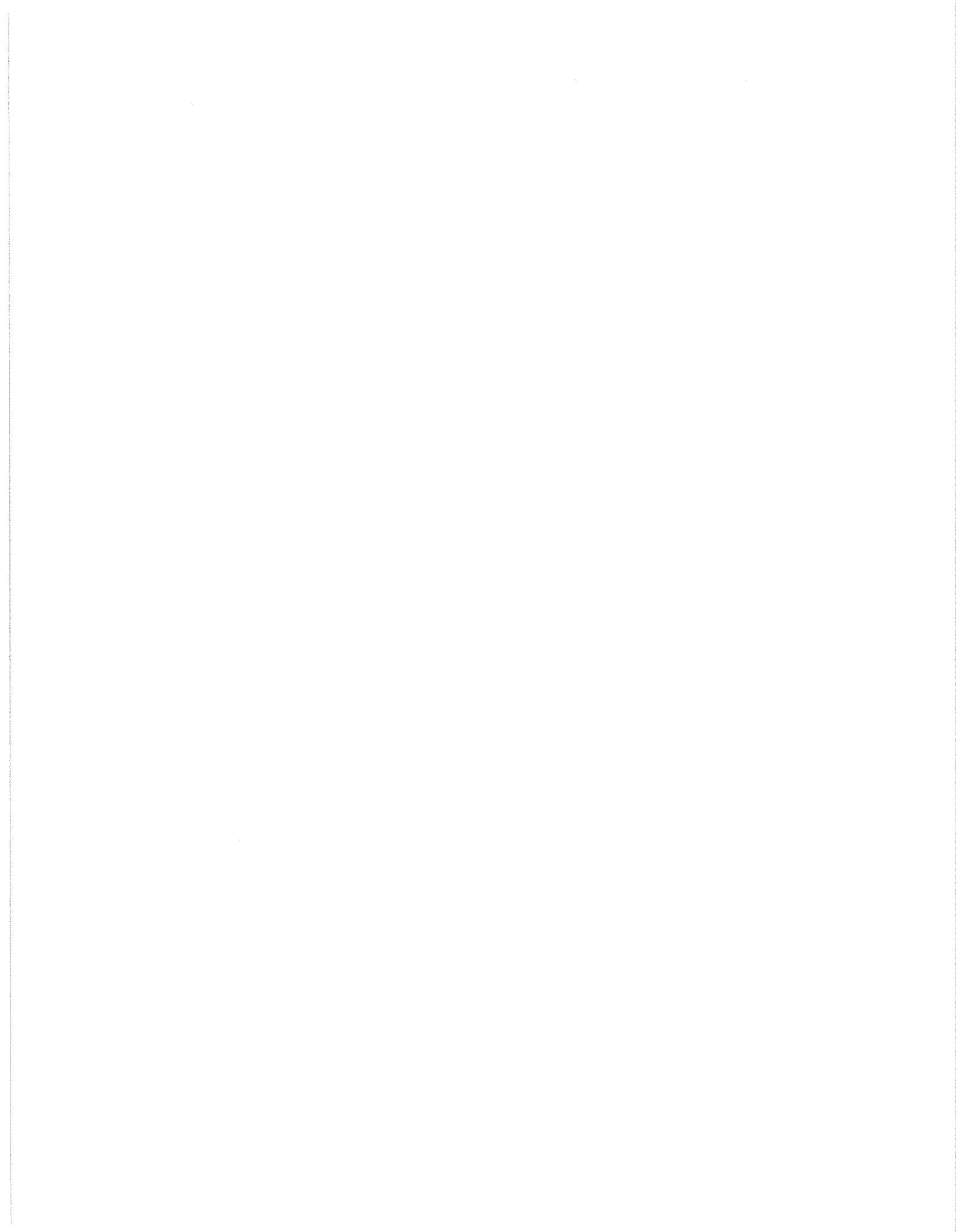


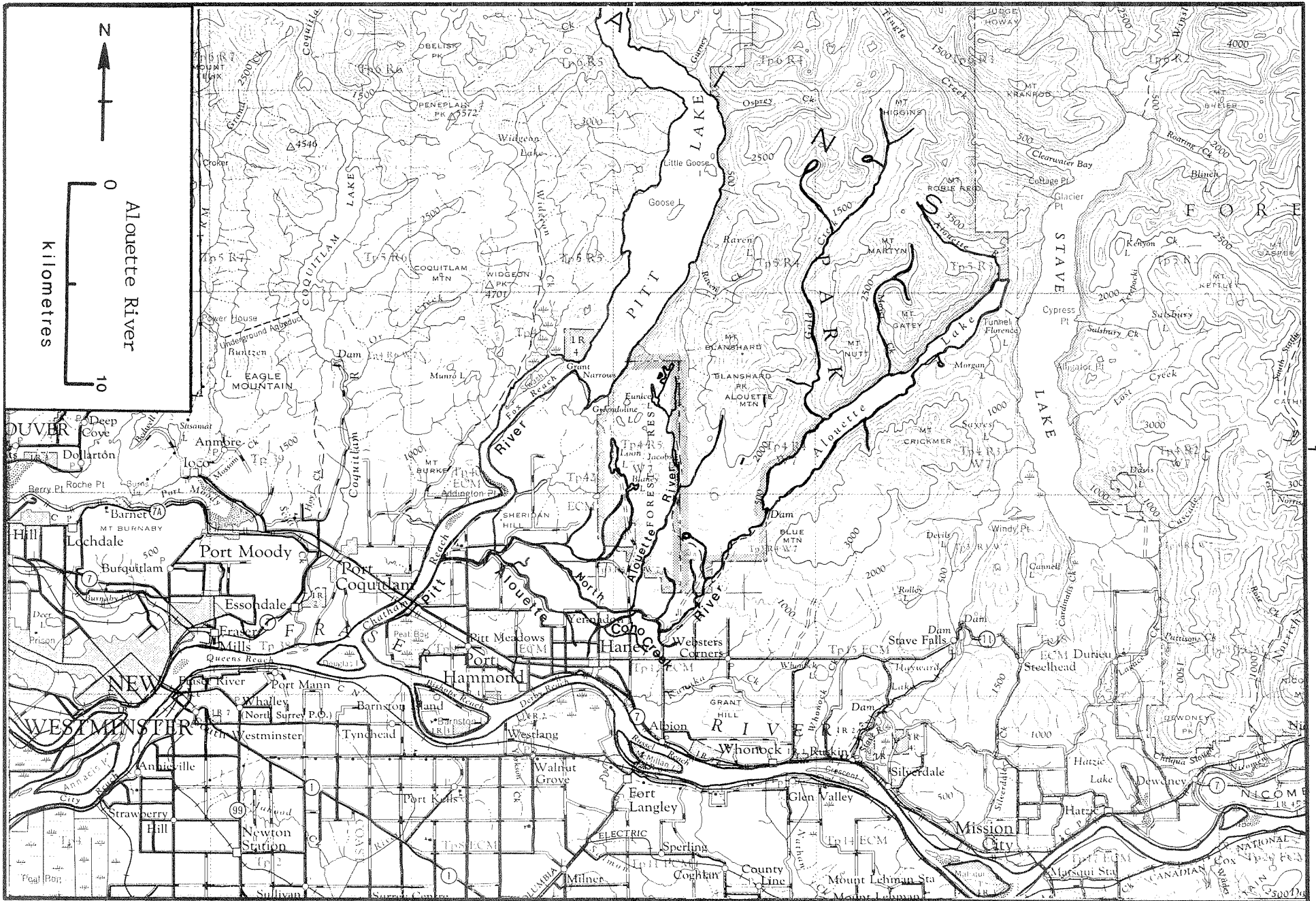
SUMMARY

ESCAPEMENT RECORD FOR STATISTICAL AREA 29 - NEW WESTMINSTER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	75,750		5,600	6,275	27,775	
48	75,750	25	5,625	4,375		25
49	8,250	25	4,525	22,150	9,975	
50	35,750	750	7,400	21,700	25	75
51	35,750	750	13,675	31,150	8,500	1,250
52	76,500	1,500	27,700	26,100		2,675
53	16,500	1,500	24,050	22,450	34,550	2,550
54	15,400	750	12,000	5,250		
55	15,200	750	9,750	14,725	14,400	1,650
56	35,075	1,500	6,150	1,550		1,425
57	16,500	1,500	5,850	5,425	500	1,075
58	16,500	3,500	8,000	3,300		550
59	16,500	750	4,700	5,375		325
60	35,400	400	3,500	2,450		
61	16,500	400	8,675	2,075	9	100
62	15,750	3,500	10,550	3,650		
63	15,400	750	2,550	2,025		
64	14,471	1,500	19,150	2,325		
65	7,381	400	3,875	1,625	5	25
66	21,751	1,500	6,825	6,100		75
67	11,306	750	3,525	1,200		200
68	18,540	400	2,325	7,742		
69	25,620	200	1,800	1,700		
70	7,000	1,500	10,600	3,150		
71	15,863	7,500	52,000	4,750		
72	13,714	750	16,925	15,200		
73	12,328	750	17,850	18,100		
74	22,435	500	20,050	9,200		
75	40,850	300	20,475	6,000		
76	37,920	750	21,625	10,700		
77	17,725	700	22,715	22,750		
78	26,435	50	52,790	8,665		
79	38,157	275	15,880	7,790		
80	17,389	150	11,287	13,825		
81	25,200	337	11,240	23,999		
82	9,215	379	18,128	25,418	2	10
83	17,802	85	10,004	20,237		
84						
85						
TIMING						
ARRIVE						
START						
PEAK						
END						

REMARKS





NAME OF STREAM ALOUETTE RIVER (South Alouette River) RAB NO. 00-0200-050
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows W. into Pitt R., S. of Pitt Lake, New Westminster Dist.
 POSITION 49 122 SW.
 LENGTH 22 km WIDTH _____ m DRAINAGE _____ km²
 Near Haney
 DISCHARGE (m³/s) MAX 95.4F. Jan. 15 1961 MIN 0.184 Jun. 17 1963
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable B.C. Hydro dam at 22km

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout middle and upper reaches
CHUM	- concentrated in middle reach
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical characteristics: 1950/59 90% erosion and silting (1955)
1956/59 10-30% erosion and silting -- fairly heavy scouring.
1960/69 50-75% erosion and silting -- extreme scouring -- every bar in river changed.
Scouring intermediate to high depending on Hydro spills (61/63)
Heavy scouring -- estimate 60% loss of spawn (66)
1971/78 Controlled flow through dam maintained -- good conditions.
1979 Gravel shifting and scouring due to heavy rain and spillage from dam.

Biological conditions:

1972/75 Some egg digging by late spawners.
1980/81 Some overspawning.

Predation: Birds and bears, also numerous reports of molestation by public.

General remarks:

1950/59 This stream is affected by B.C. Hydro dam at the outlet of Alouette Lake.
When lake level becomes too high, water is spilled over the dam and causes
unusual rise in stream causing adverse effect on fish habitat (50)
The heavy rainstorm of early November caused a break in the dam. The
resulting rush of overspill caused serious damage and disruption to this once
productive river. (55)
Gravel removal operations have created unstable conditons(56/57) and spawning
poorly distributed.

continued.....

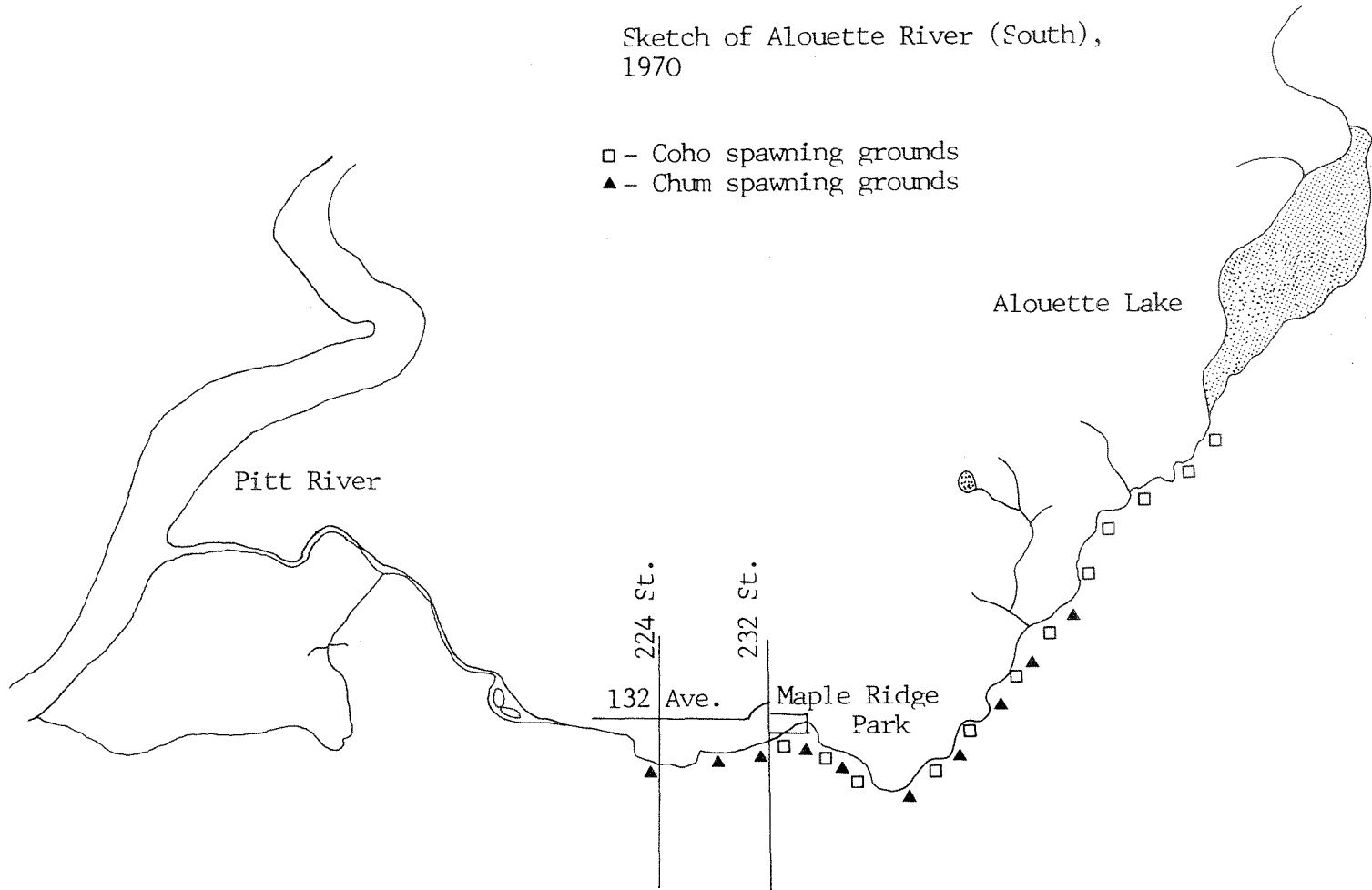
ALOUETTE RIVER

- 1960/69 Flood conditions in December and January and rush of water over the dam seriously damaged spawning habitat. Present condition of this river is extremely unstable and a very high egg loss is expected. Gravel removal operations were limited in 1965 in order to attempt preservation of the natural stream bed. (65/66)
- 1970/71 Measured water release at the dam maintained good flows throughout the summer and fall. Beaver problem (78) Dams removed in 79.
- 1981 Constant urban pressure is being applied to this system. Yearly flood protection work by stream-side residents will likely occur unless a more permanent solution can be found.



Sketch of Alouette River (South),
1970

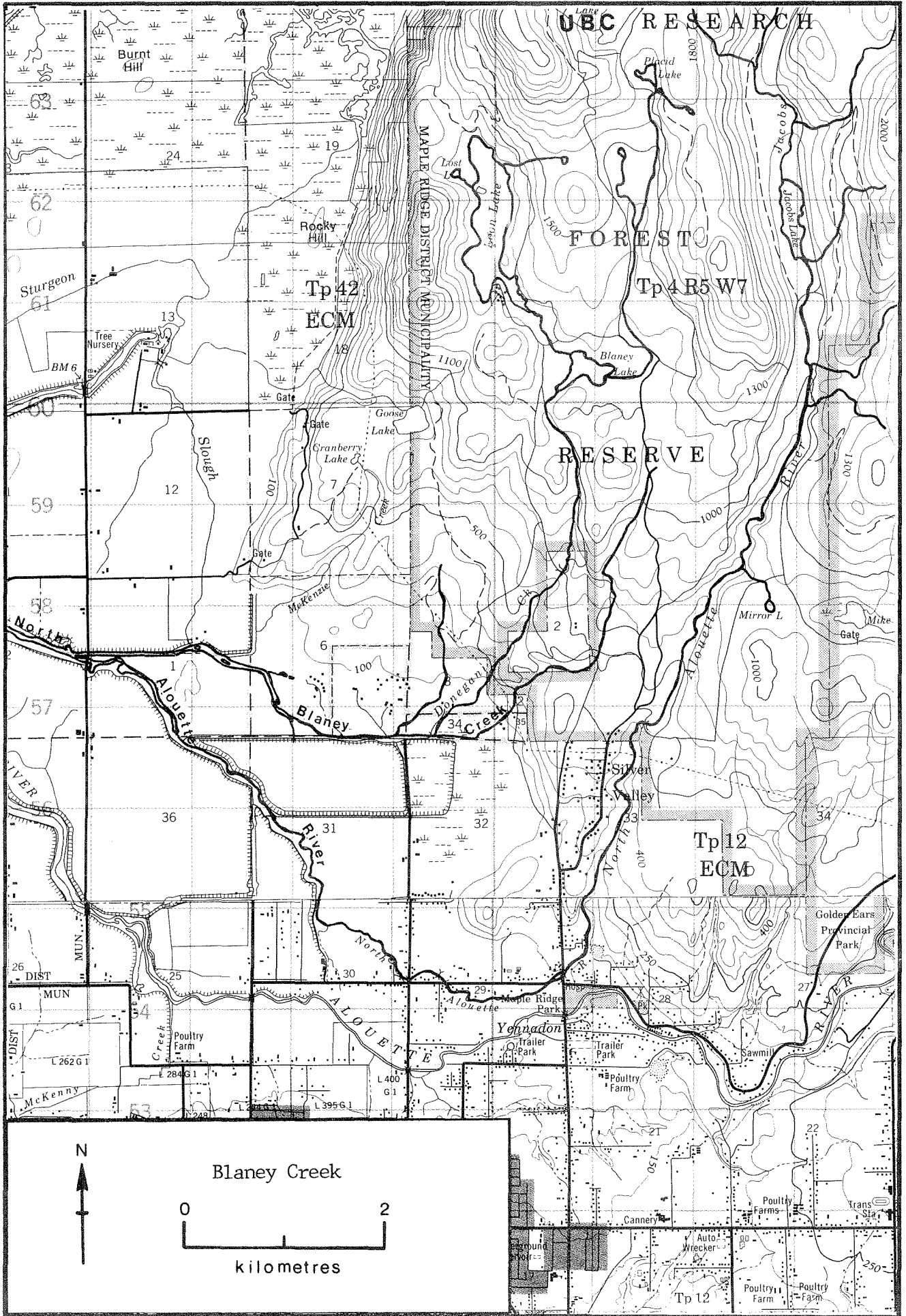
- - Coho spawning grounds
- ▲ - Chum spawning grounds



ESCAPEMENT RECORD FOR ALOUETTE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	750	15,000	
48			750	750		UNK
49			200	3,500	3,500	
50			400	3,500		
51			750	7,500	1,500	75
52			1,500	3,500		400
53			750	3,500	3,500	400
54			200	200		
55			750	3,500	3,500	200
56			400	200		200
57			400	750	25	200
58			400	400		200
59			25	750		200
60			200	750		
61			25	400		
62			75	400		
63			75	400		
64			75	750		
65			75	200		
66			200	3,500		
67			75	400		
68			75	3,500		
69			25	400		
70			750	750		
71			750	1,500		
72			400	7,500		
73			750	7,500		
74			750	4,500		
75			700	2,800		
76			400	7,500		
77			650	7,000		
78			250	6,000		
79			400	4,500		
80			400	8,500		
81			750	10,000		
82			600	18,500		
83			100	15,000		
84						
85						
TIMING:						
ARRIVE			OCT.	E. OCT.		
START			E. NOV.	M. OCT.		
PEAK			L. NOV.	E. NOV.		
END			L. DEC.	L. NOV.		

REMARKS



NAME OF STREAM BLANEY CREEK RAB NO. 00-0200-050-020-020

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 29

LOCATION OF MOUTH Flows S. towards North Alouette R., New Westminster Dist.

POSITION 49 122 SW.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX _____ MIN _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 1.6km from mouth.
Beaver dams on lower portions -- passable during periods of
high water.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- in upper reaches
CHUM	- in middle portion, scattered throughout available gravel.
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:

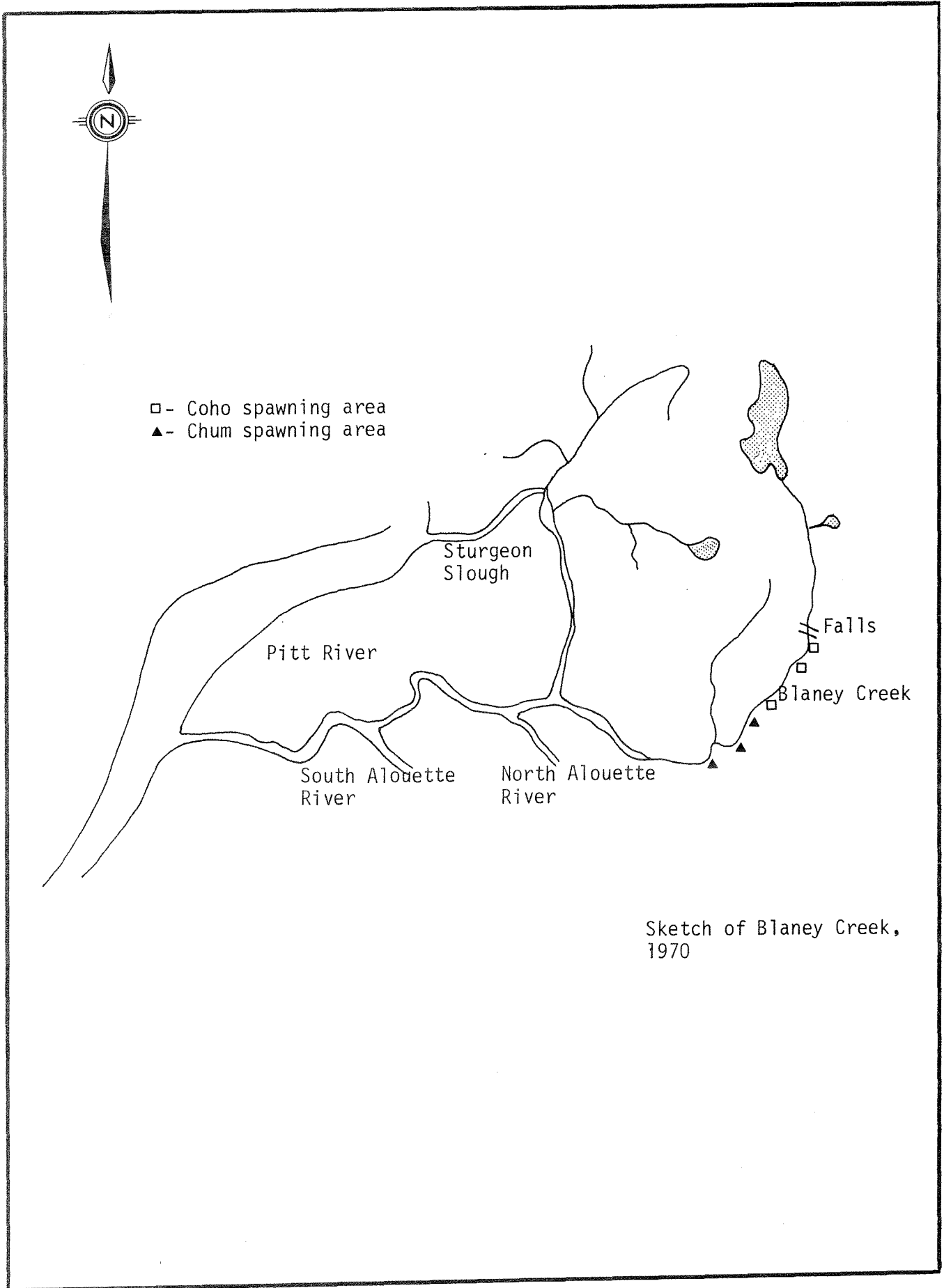
Usual fluctuations in water levels. 1979 Flash floods. 1980 Reported severe flooding
in late December.

Biological conditions:

Some overcrowding of chum. Predation by birds, bears and people 1980/83.

1969 Stream is a very stable chum salmon producer and should be considered for
future development to increase spawning area.

1972 A lease agreement was made between the Dept of Fisheries and U.B.C. for 2.9
acres in the U.B.C. Research Forest to conduct a pilot program employing
fish egg incubation boxes to increase the Blaney Creek chum salmon run.
The incubation boxes have a capacity of 1.5 million eggs. The egg to fry
survival rates for the last 5 years have averaged 87%. The first incubation
box returns in 1976 were poor but the 1977 returns increased to 5000.

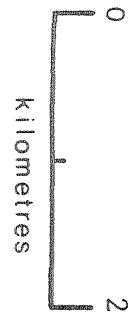
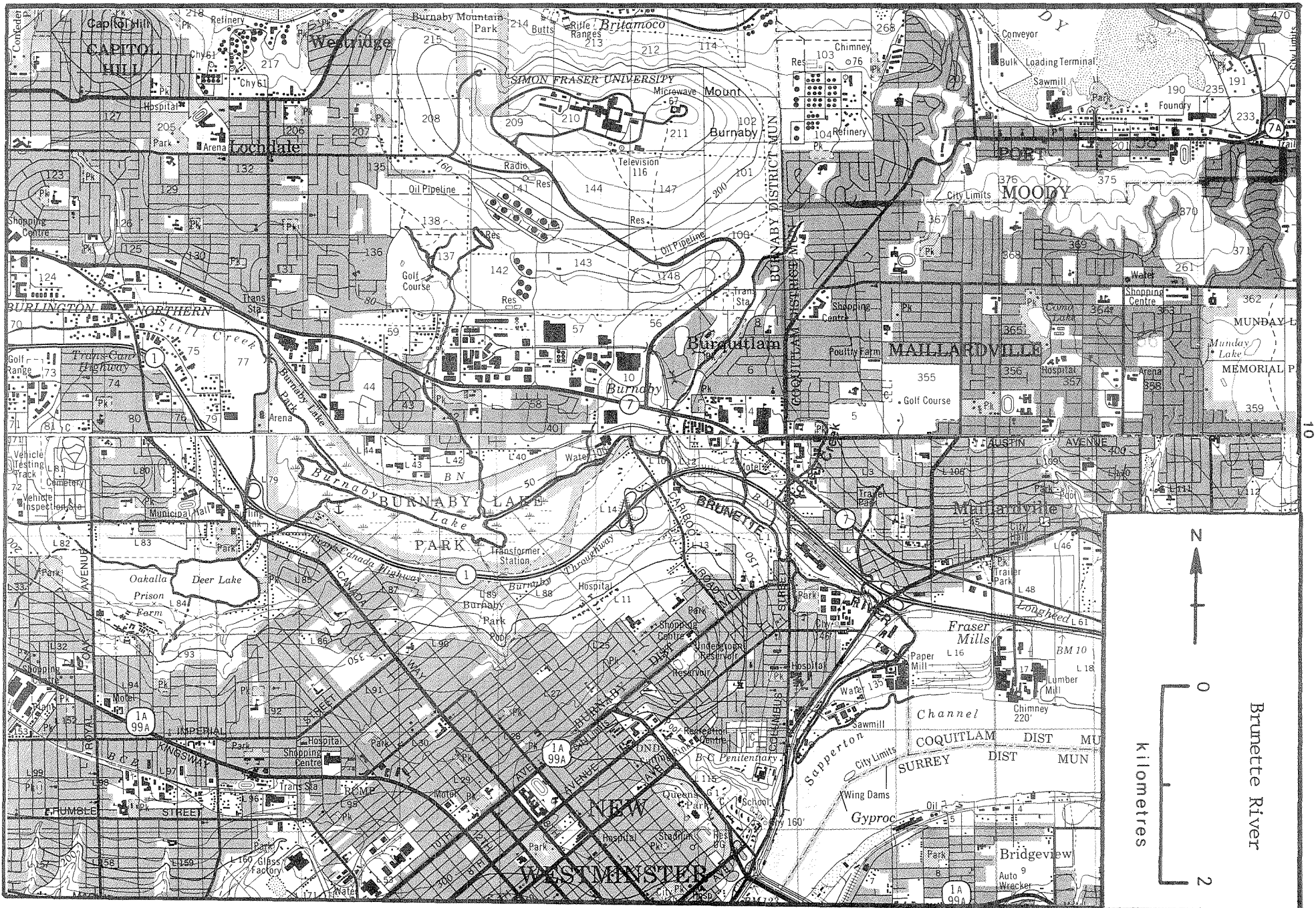


Sketch of Blaney Creek,
1970

ESCAPEMENT RECORD FOR BLANEY CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				200		
49			25	750	75	
50			200	750		
51			200	750	400	
52			200	400		
53			200	750	200	
54			200	400		
55			75	750	75	
56			25	25		
57			75	200		UNK
58			25	75		UNK
59			25	25		
60			75	400		
61			25	750		UNK
62			75	25		
63			25	200		
64			200	750		
65			75	400		
66			75	400		
67			25	200		
68			25	750		
69			25	400		
70			200	400		
71			200	750		
72			200	750		
73			75	1,500		
74			150	450		
75			100	200		
76			25	200		
77			30	3,000		
78			60	240		
79			30	360		
80			100	1,100		
81			100	3,200		
82			100	1,000		
83						
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			E. NOV.	L. OCT.		
PEAK			L. NOV.	E. NOV.		
END			M. DEC.	L. NOV.		

REMARKS _____



Brumette River

NAME OF STREAM BRUNETTE RIVER RAB NO. 00-0100
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SE. and S. through New Westminster into Fraser R. New West.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 At Sapperton
 DISCHARGE (m³/s) MAX 72.2 Jan. 19, 1968 MIN 0.003 Jul 1, 1965
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable G.V.W.B. Dam 4km from mouth --
 culvert at Lougheed Highway.

SPAWNING DISTRIBUTION

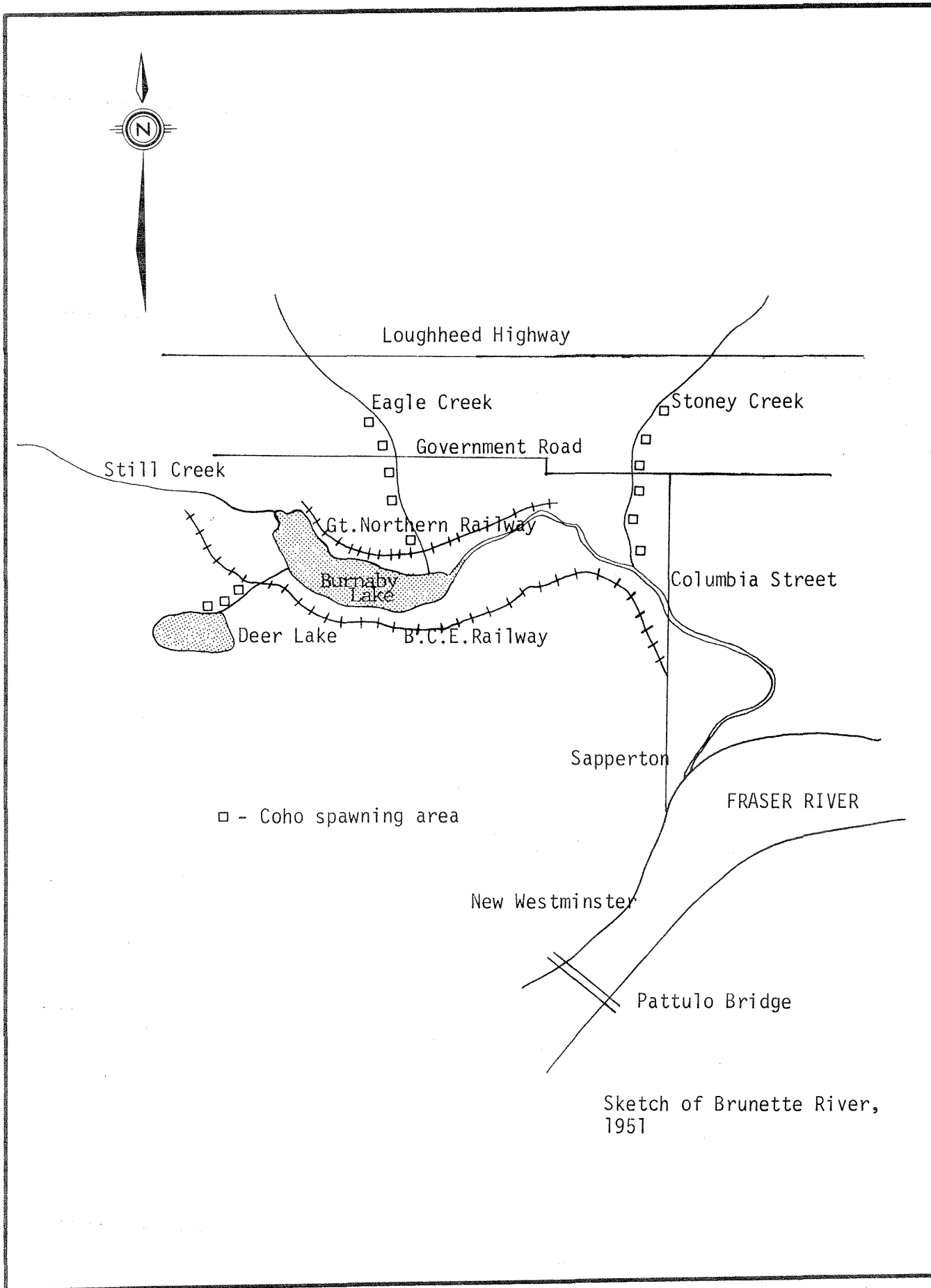
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- evenly over available gravel below dam and Eagle Cr., Still Cr.
CHUM	and Deer Creek at high W/L
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:
 1956 30-50% erosion and silting -- very heavy scouring from flash floods in
 early December.
 1957/60 Erosion and silting ranged between 30-75% -- 1960 reported extreme scouring
 in most small tributaries.
 1961 Numerous small course changes due to highway construction.
 1962/63 Great fluctuations in W/L due to G.V.W.B. Dam at Lake outlet.

General comments:

1950/59 Information during this period supplied by Mr. Dick G.V.D.B. employee
 who assisted coho over Lake dam by dip net. 1952 One thousand plus
 coho assisted over the dam and spawned in Eagle, Still and Deer Creeks.
 1956 Flash flood in early December resulted in extremely heavy damage.
 1957/60 Rapid industrial and population expansion in Burnaby is gradually having
 an adverse effect on the coho runs to this system.
 1965/67 Continued industrial and residential developments in the area have created
 unstable conditions. Stream should be written off as a salmon producer.
 1982/83 No brood year reports. Fish lift in place
 1983 Escapement figures from S.E.P. Community advisor.

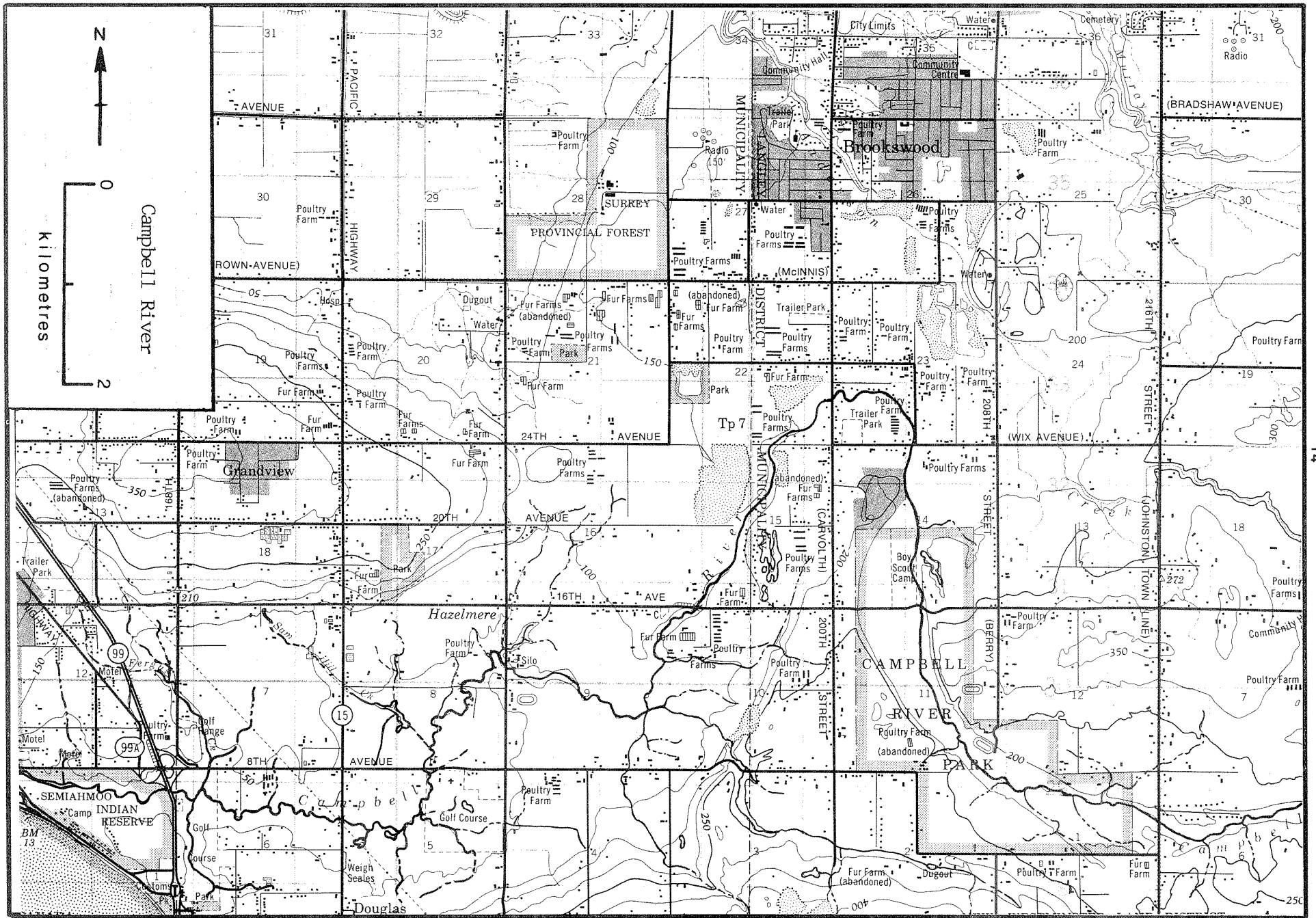
Predation: small loss to juveniles 1956/60



ESCAPEMENT RECORD FOR BRUNETTE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49			400			
50			200			
51			1,500			
52			1,500			
53			1,500			
54			3,500			
55			75			75
56			200			UNK
57			750			UNK
58			75			UNK
59			25			
60			75			
61			75			UNK
62			75			UNK
63			25			UNK
64			75			
65			NIL			
66			NIL			
67			NIL			
68	SPAWNING RECORDS DISCONTINUED AFTER 1967					
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82			6	30		
83			46	12		
84						
85						
TIMING:						
ARRIVE						
START						
PEAK						
END						

REMARKS _____



NAME OF STREAM CAMPBELL RIVER RAB NO. 90-0080

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 29LOCATION OF MOUTH Flows W. and S. into Semiahmoo Bay, New Westminster Dist.POSITION 49 122 SW.LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²DISCHARGE (m³/s) MAX _____ MIN _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Heavy beaver activity on this river -- dams at various distances from mouth. Monitored and cleared at migration time. Field and forest debris.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- scattered in middle and upper reaches of river
CHUM	- lower reaches
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:1950/59 Normal W/L except during November flood -- slight erosion and silting.1960/69 1962/63 15/20% erosion and scouring in lower reaches as a result of highway construction.1970/79 Low during summer months -- flood conditions in December.1980/83 Normal seasonal fluctuations in water levels.General comments:1950/59 Slow running stream through the lower reach. Tends to become full of grass and weeds, but sufficient water for spawning.1956/57 Small Indian fishery-- set net operations at mouth of stream.1959/60 Heavy coho sport fishery near mouth. Continued land clearing adjacent to spawning areas denudes shelter for coho rearing.1961 Minor changes to river course due to new highway construction.1965/66 Land clearing, highway construction and residential development will affect the stability of this stream. Lowering of water table results in low summer flows.1970 Fishing closure to relieve sports fishing pressure.1975 Limited Indian food fishery based on estimated returns. Sports fishery closure to remain in effect.1978 First identifiable run of chinook to this river.1979 Some chinook arrived in river but it is doubtful if they reached spawning grounds due to poaching.

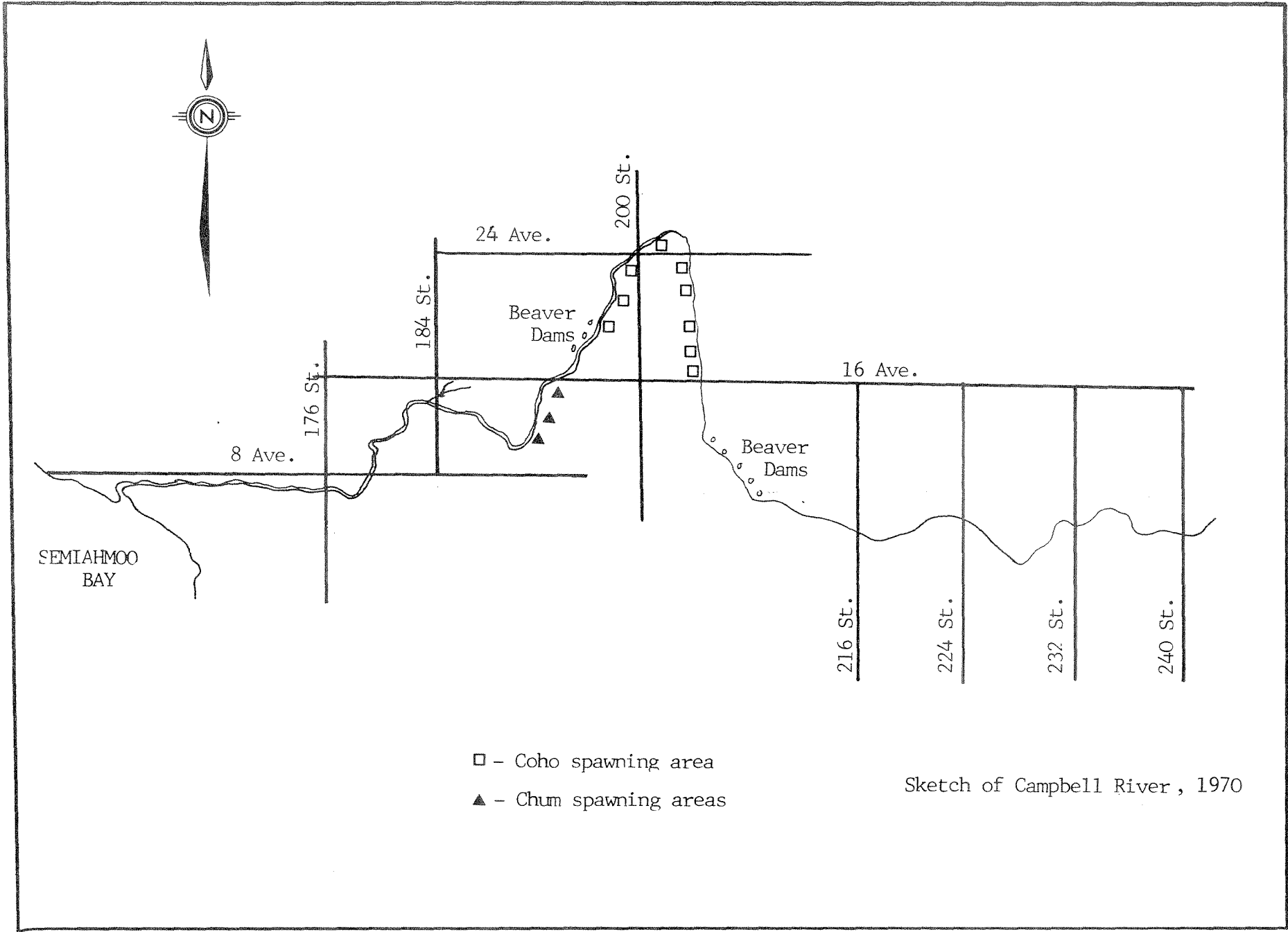
continued.....

continuation

CAMPBELL RIVER

- 1980 A counting fence was placed by Semiamhoo Fish and Game Club, but was washed out on two occasions.
- 1981 Fence reconstructed throughout the summer and proved to be extremely valuable for a more accurate count.
- 1982/83 Fence worked well this season. S.E.P. mini hatchery at 184th St. is nearing completion.

Predation: Mainly poaching, jigging and nets.



Sketch of Campbell River, 1970

ESCAPEMENT RECORD FOR CAMPBELL RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			1,500	200		
48			750	200		
49			400	750		
50			750	750		75
51			3,500	750		400
52			1,500	1,500		400
53			1,500	1,500		400
54			750	N/O		
55			400	200		75
56			750	200		200
57			400	75		UNK
58			400	75		UNK
59			750	25		UNK
60			400	75		
61			400	75		UNK
62			200	25		UNK
63			400	25		UNK
64			750	75		UNK
65			200	25		
66			400	75		
67			200	N/O		
68			200	N/O		
69			200	25		
70			750	200		
71			750	200		
72			7,500	400		
73			3,500	200		
74			3,500	250		
75			2,200	400		
76			3,500	200		
77			1,500	100		
78		50	2,800	50		
79		25	1,500	75		
80		30	2,500	200		
81		10	1,900	149		
82		75	3,087	205		10
83	1	85	3,000	700		
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			L. OCT.	E. NOV.		
PEAK			M. NOV.	M. NOV.		
END			M. DEC.	L. NOV.		

REMARKS

(Coho Creek)

See ALOUETTE RIVER p.

NAME OF STREAM (Coho Creek) RAB NO.

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29

LOCATION OF MOUTH Flows into S. Alouette River

POSITION 49 122 SW.

LENGTH km WIDTH m DRAINAGE km²

DISCHARGE (m³/s) MAX MIN

TEMPERATURE (°C)

BARRIERS OR POINTS OF DIFFICULT ASCENT

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- in lower reaches
CHUM	- " "
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Predation by birds bears and public

Normal water levels

ESCAPEMENT RECORD FOR (Coho 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						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82				8	2	
83			N/O	50	-	
84						
85						
TIMING:						
ARRIVE			-	-	-	
START						
PEAK						
END						

REMARKS _____



Coquitlam River



kilometres

NAME OF STREAM COQUITLAM RIVER RAB NO. 00-0180
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows S. through Coquitlam Lake into Fraser River, W. of Pitt River
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 DISCHARGE (m³/s) MAX _____ MIN _____
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable water storage dam 16km from
mouth at outlet of Coquitlam Lake

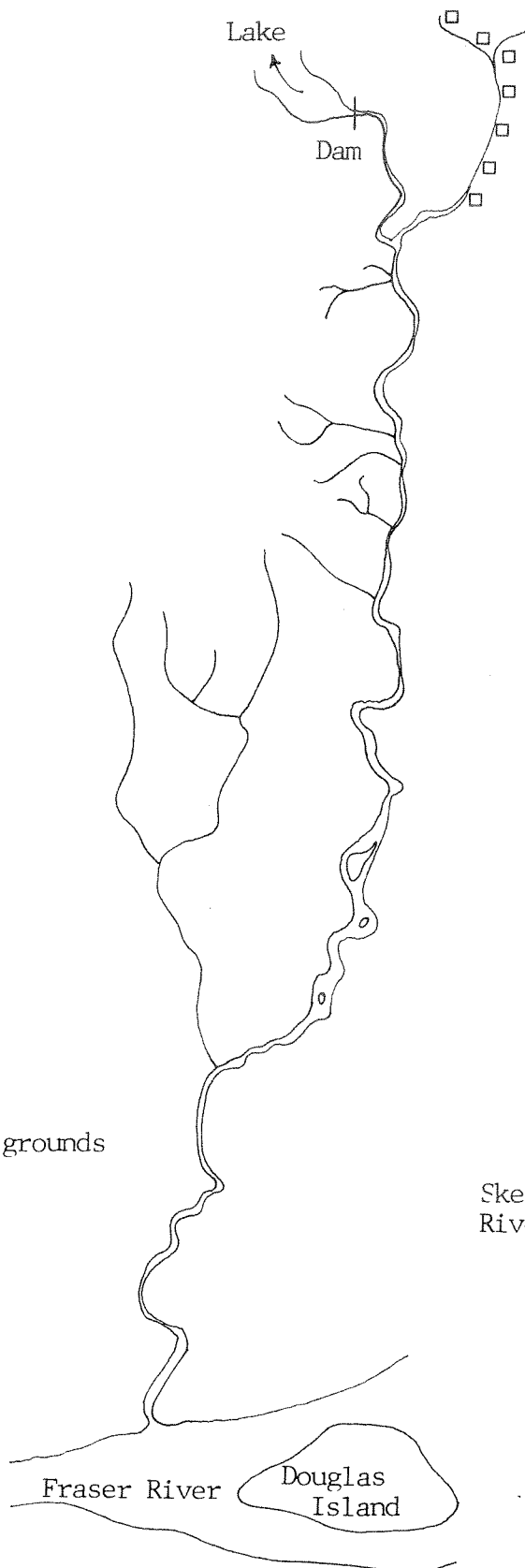
SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- Scattered in Hoy, Scott, Maple, Hyde and Smiling Creeks.
CHUM	- mainly centre portion of mainstem -- some in tribs.
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:
 1950/59 Continuous removal of gravel and flood control work has created extremely unstable spawning conditions. Water diversion dam at outlet of lake has also contributed to loss of spawning habitat.
 1960 100% erosion and silting. December flood decimated river.
 1961 New dyking program contributes to unstable conditions. 100% of stream bed affected.
 1962/69 50/60% erosion and scouring.
 1968/71 Silt from natural slides and gravel pit operations.
 1972/83 Continuous heavy silting from gravel pit operations.

General remarks:

1950/59 The effects of the water diversion dam causes severe fluctuations in water levels. Continuous removal of gravel created unstable conditions and lower spawning areas are almost finished for salmon reproduction purposes.
 1960/69 Continued gravel operations plus flood control programs have resulted in very poor spawning conditions. Gravel continues to move downstream leaving beds bare (1962)
 Gravel removal operations are now confined to requirements for flood control (66)
 This stream has ceased to function as a chum producer of any consequence (69)
 1970/79 Land reclamation had a beneficial effect on the stream -- less silt was noted in the main river during the summer. Main spawning occurs in tributaries.
 1975/79 Gravel operations still a cause of concern.
 1980/82 Gravel operations on the upper reaches are seriously hampering efforts to rebuild the returns.



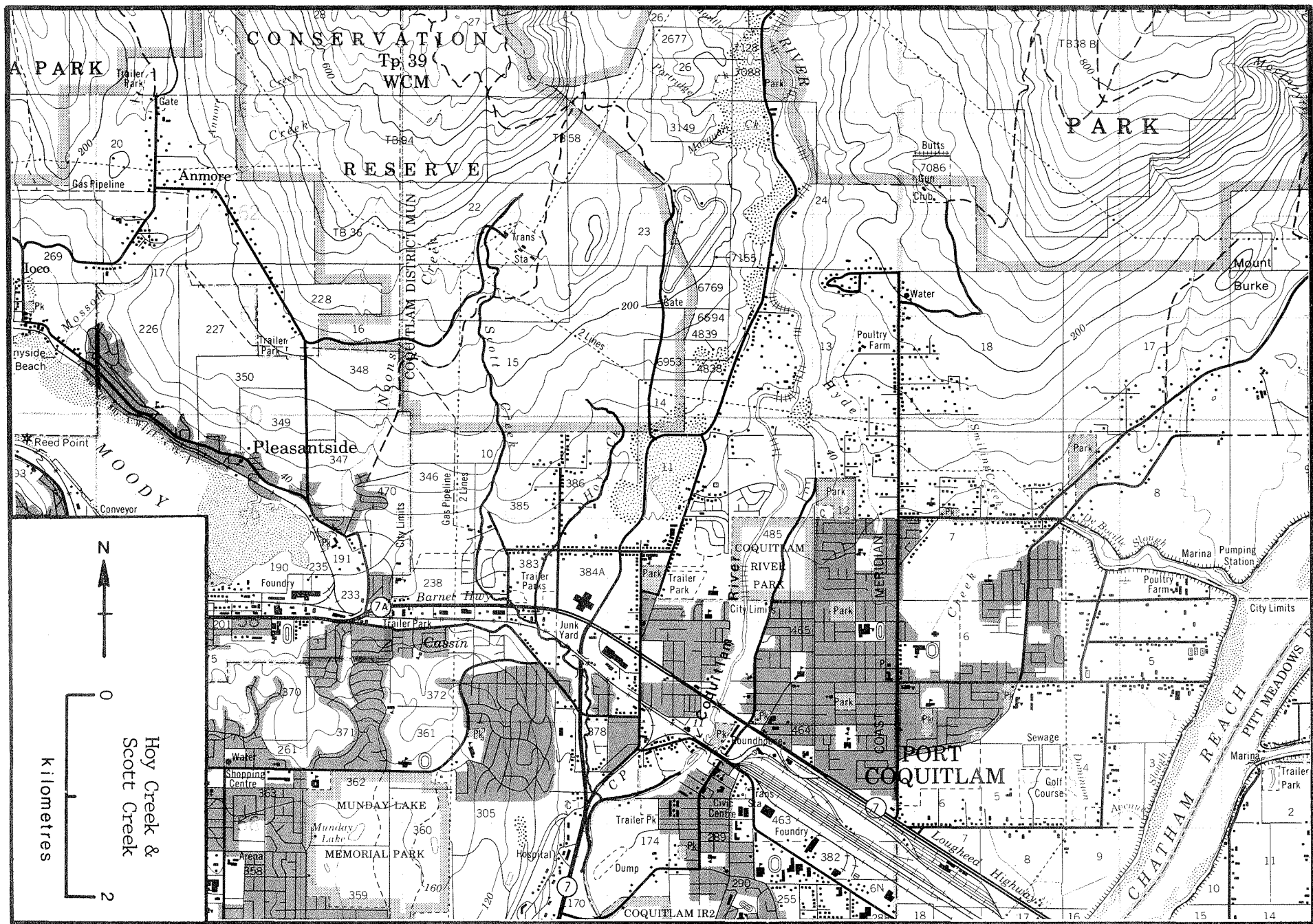
□ - Coho spawning grounds

Sketch of Coquitlam River, 1970

ESCAPEMENT RECORD FOR COQUITLAM RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75	1,500	3,500	
48			200	1,500		
49			750	7,500	1,500	
50			75	7,500		UNK
51			750	7,500	1,500	200
52			750	7,500		400
53			1,500	3,500	3,500	400
54			200	400		UNK
55			750	1,500	1,500	200
56			200	200		75
57			200	750	25	200
58			400	200		200
59			75	1,500		25
60			200	200		
61			25	25		25
62			75	75		
63			75	25		
64			200	75		
65			75	75		25
66			200	25		75
67			200	25		200
68			75	75		
69			25	25		
70			750	200		
71			750			
72			400	3,500		
73			750	750		
74			300	850		
75			600	400		
76			400	1,500		
77			450	2,500		
78			25	850		
79			300	935		
80			400	1,000		
81			200	1,500		
82			100	800		
83			100	550		
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			L. OCT.	M. OCT.		
PEAK			L. NOV.	M. NOV.		
END			L. DEC.	M. NOV.		

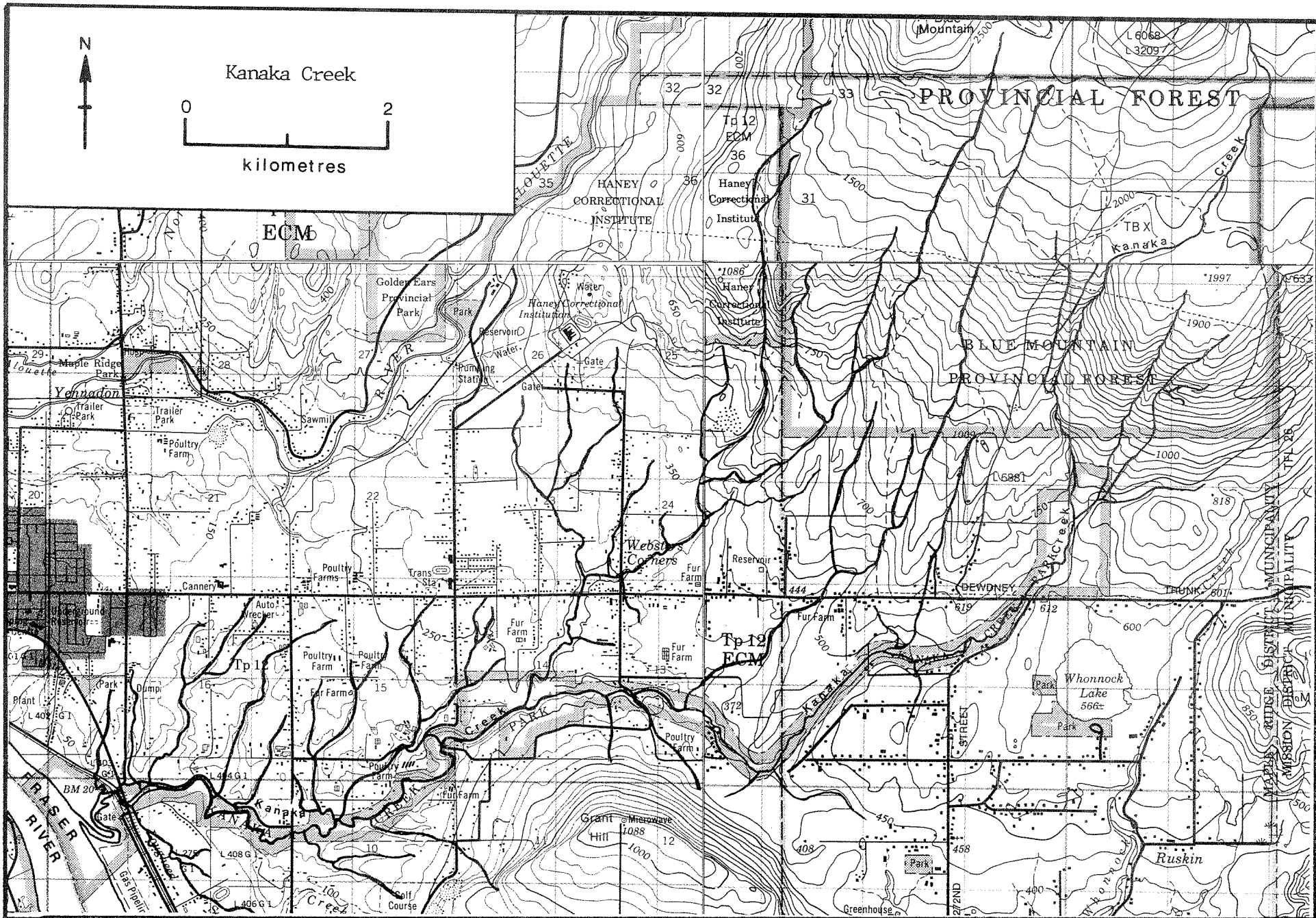
REMARKS _____



ESCAPEMENT RECORD FOR HOY 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						
72						
73						
74						
75						
76						
77						
78						
79						
80			12	50		
81			50	500		
82			10	200		
83			6	300		
84						
85						
TIMING:						
ARRIVE			OCT.-NOV.	OCT.		
START			OCT.-NOV.	OCT.		
PEAK			NOV.-DEC.	OCT.-NOV.		
END			NOV.-JAN.	NOV.		

REMARKS _____



NAME OF STREAM KANAKA CREEK RAB NO. 00-0290
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows W. into Fraser River, NW. of McMillan Island, New Westminster
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 DISCHARGE (m³/s) MAX 86.2 Dec. 14 1979 MIN 0.065 Aug. 28 1961
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable 10m rock falls 8km from mouth

Beaver activity 1978,1979 monitored and dams removed as required.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout upper reaches - up to falls
CHUM	- throughout central and lower reaches
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical Conditions: 1950/59
 1955 50% erosion and silting. Fairly heavy scouring from early November rain storms. otherwise small channel changes during heavy runoff.
 1960/69 High January flood 40-50% erosion and silting. Heavy scouring -- many stream bed changes (1960). Other years -- light erosion and minor scouring.
 1970/79 No unusual conditions.
 1980 Good flow year round.
General remarks:
 1952 The very low water conditions prevented the escapement of the early run fish to this stream.
 1955 Early Novemeber rain storms caused fairly heavy damage, however a very fine run of pinks spawned in this river.
 1956 The flash flood in early December caused fairly heavy damage to the already very weak spawning of chum.
 1959 A continued decline to a once very productive stream.
 1960 A very light spawning from a very light seeding. The flood of Jan 15, 1961 caused very heavy damage to the seeding and a high egg loss is expected. Stream conditions at present very unstable.
 1961 Continued declines of all species to this river. Pink returns becoming almost non-existent.
 1962 River flows directly into the Fraser River making adult migrants very vulnerable to the commercial fishery.

continued.....

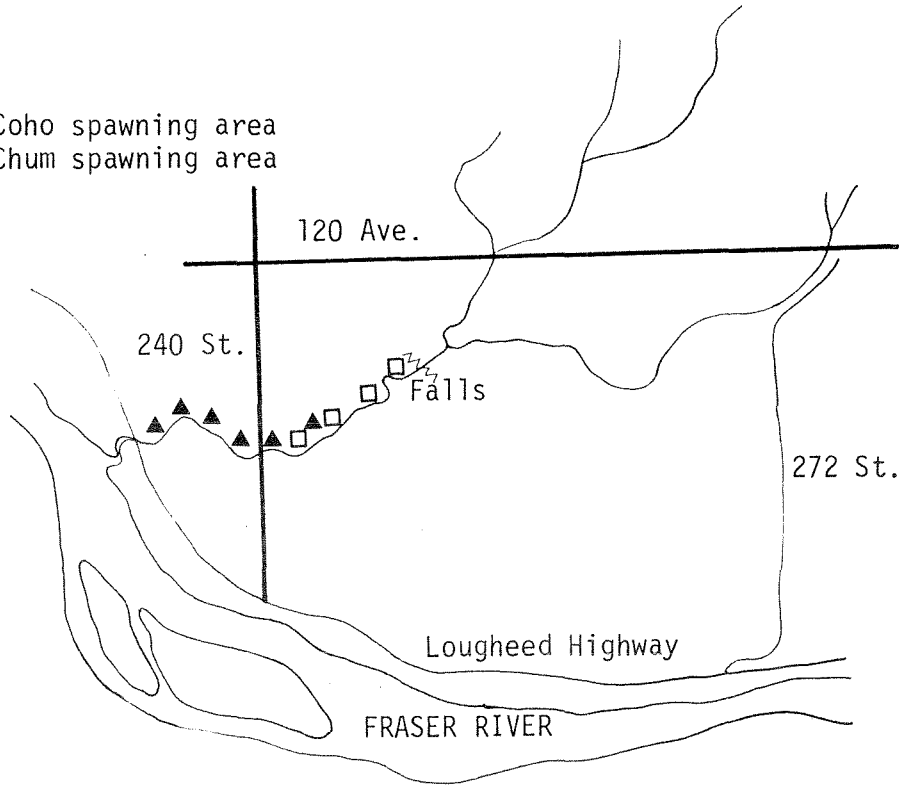
continuation

KANAKA CREEK

- 1974 Fish held in lower reaches of stream due to very low flows until very late in season.
- 1979 Beaver dams on system created obstructions, removed by personnel.



- - Coho spawning area
- ▲ - Chum spawning area

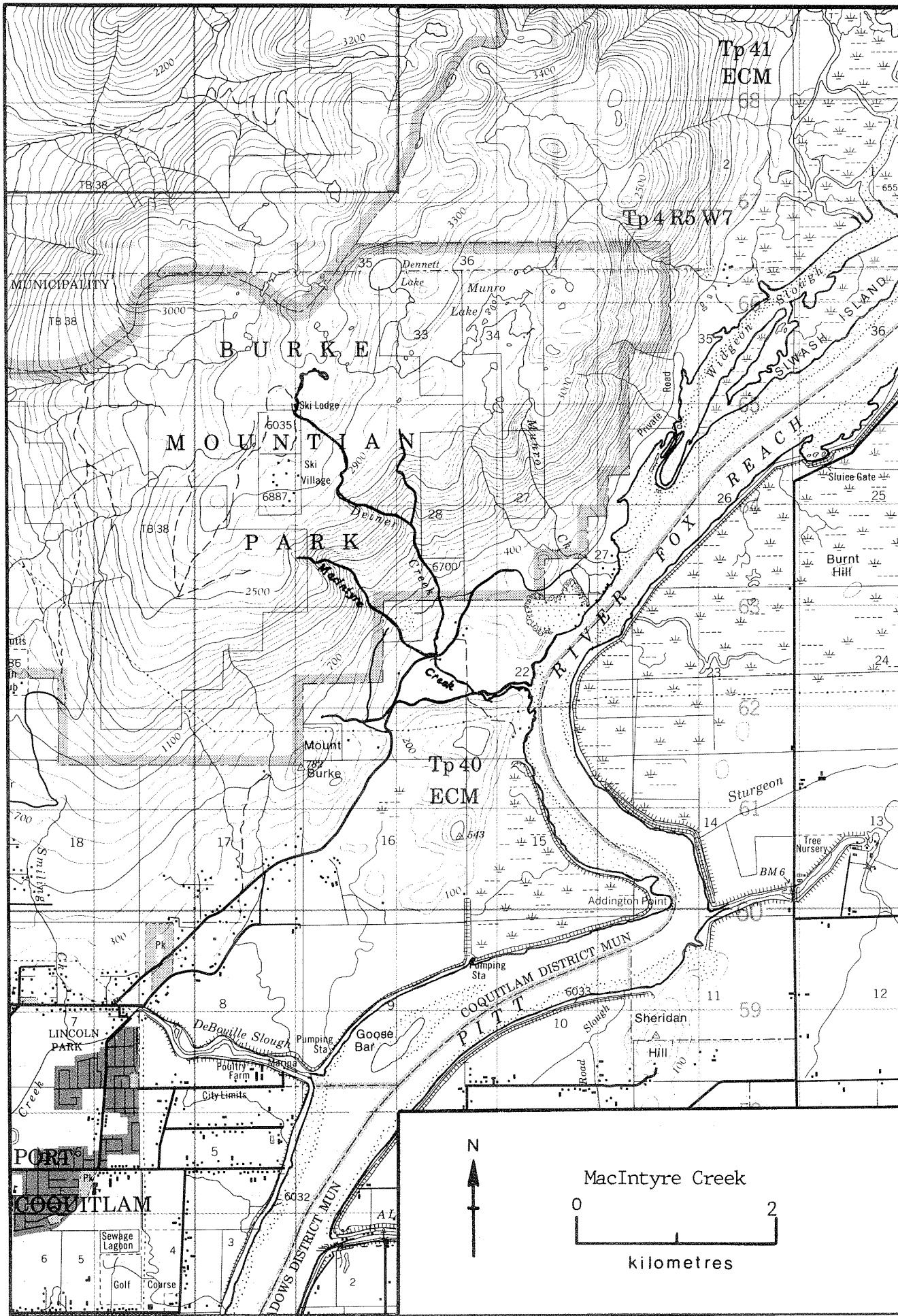


Sketch of Kanaka Creek,
1970

ESCAPEMENT RECORD FOR KANAKA CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	400	750	
48			N/O	75		
49			25	1,500	1,500	
50			25	400		UNK
51			400	1,500	750	75
52			400	1,500		200
53			400	3,500	7,500	200
54			75	400		N/O
55			200	3,500	3,500	200
56			200	200		200
57			200	750	200	75
58			200	400		75
59			25	400	N/O	75
60			75	200		
61			25	75	7	75
62			25	200		
63			25	75	N/O	
64			200	75		UNK
65			75	75	5	
66			75	400		
67			75	25	N/O	
68			25	75		
69			25	25		
70			400	400		
71			400	400		
72			400	1,500		
73			400	3,500		
74			500	1,000		
75			100	800		
76			200	200		
77			150	1,500		
78			30	150		
79			200	300		
80			200	1,300		
81			200	1,200		
82			150	1,300		
83			200	1,000		
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			E. NOV.	M. OCT.		
PEAK			L. NOV.	L. OCT.		
END			L. DEC.	M. NOV.		

REMARKS



NAME OF STREAM MacINTYRE CREEK RAB NO. 00-0200-080
 LOCAL NAME (McDonald Creek)
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SE. into Fox Reach, Pitt River, New Westminster Dist.
 POSITION 49 122 SW
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX _____ MIN _____
 TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Some beaver activity -- monitored and removed as required. Numerous dams -- passable at high water.

SPAWNING DISTRIBUTION

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

GENERAL REMARKS This is a small stream with limited spawning area. The upper reaches of the stream dry out each summer.

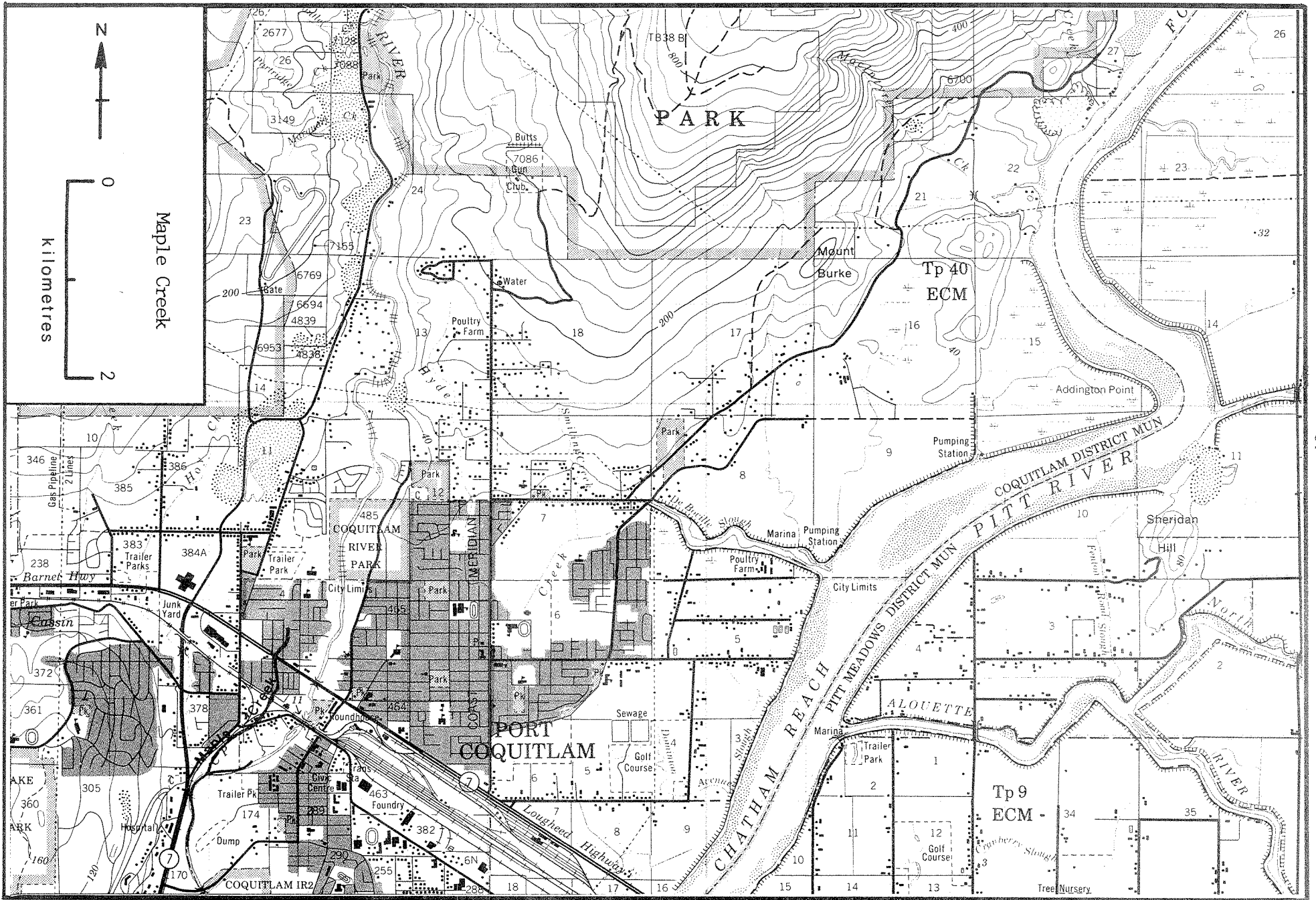
1964/67 Reported 10/15% erosion and silting. Moderate scouring. Some flooding in Autumn rains 1970/71

Predation by birds, bears and public.

ESCAPEMENT RECORD FOR MacINTYRE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	750		
48			75	75		
49			200	750	400	
50			200	750		
51			200	750	400	
52			200	200		
53			200	200	200	
54			75	75		
55			75	75	75	
56			25	25		
57			25	200		
58			25	25		
59			25	750		
60			25	75		
61			25	200		
62			25	200		
63			25	75		
64			200	75		UNK
65			75	400		
66			75	75		
67			75	75		
68			75	200		
69			25	200		
70			200	200		
71			200	200		
72			75	200		
73			75	200		
74			50	100		
75			75	100		
76			25	75		
77			35	500		
78			25	50		
79			50	20		
80			50	100		
81			40	150		
82			30	100		
83			15	400		
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			E. NOV.	L. OCT.		
PEAK			L. NOV.	M. NOV.		
END			M. DEC.	L. NOV.		

REMARKS _____



NAME OF STREAM (Maple Creek) RAB NO. _____

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 29

LOCATION OF MOUTH Flows into Coquitlam River

POSITION 49 122 SW.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX _____ MIN _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- upstream of Lougheed Highway
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

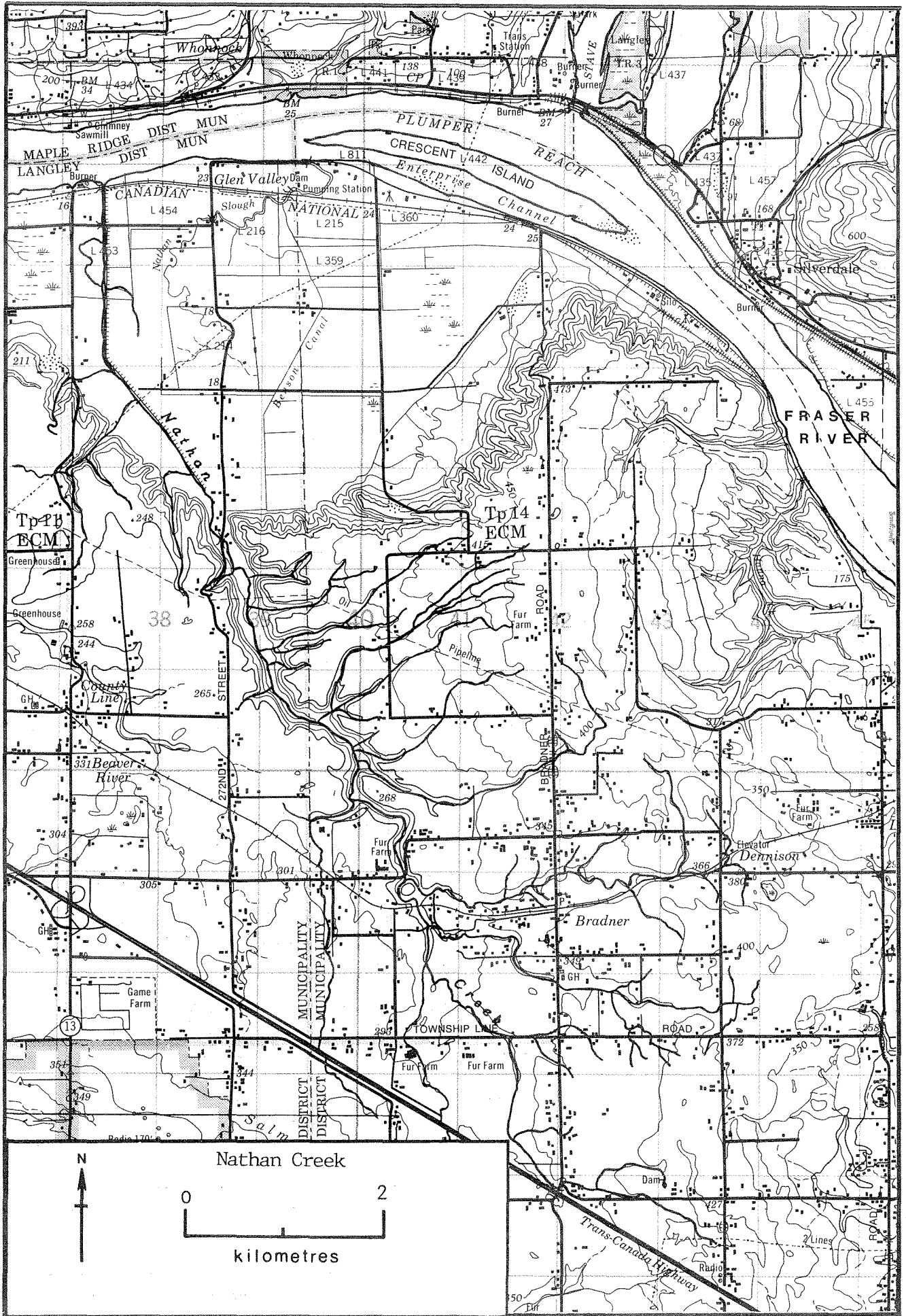
GENERAL REMARKS 1982 Small stream, not done previously

1982 Heavy silt upstream of Lougheed Highway
Predation by birds and public

ESCAPEMENT RECORD FOR (Maple 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						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82			14	N/O		
83			N/O	N/O		
84						
85						
TIMING:						
ARRIVE			OCT.	-		
START			OCT.	-		
PEAK			DEC.	-		
END			DEC.	-		

REMARKS _____



NAME OF STREAM NATHAN CREEK RAB NO. 00-0360
 LOCAL NAME (Beaver Creek)
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows N. into Fraser R., S. of W. end of Crescent I., New Westminster.
 POSITION 49 122 SE.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX 31.7 Jan. 10 1961 MIN 0.028 Jan. 13 1963

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT

1951/54	Log jams and debris accumulations 3.2km from mouth of stream.
1955/56	Debris and jams cleared to assist salmon migration.
1957/64	Passable debris accumulations
1982	Culvert on Bradner Rd. too high for passage.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- most spawning in mainstem -- upper river and scattered in tribs.
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

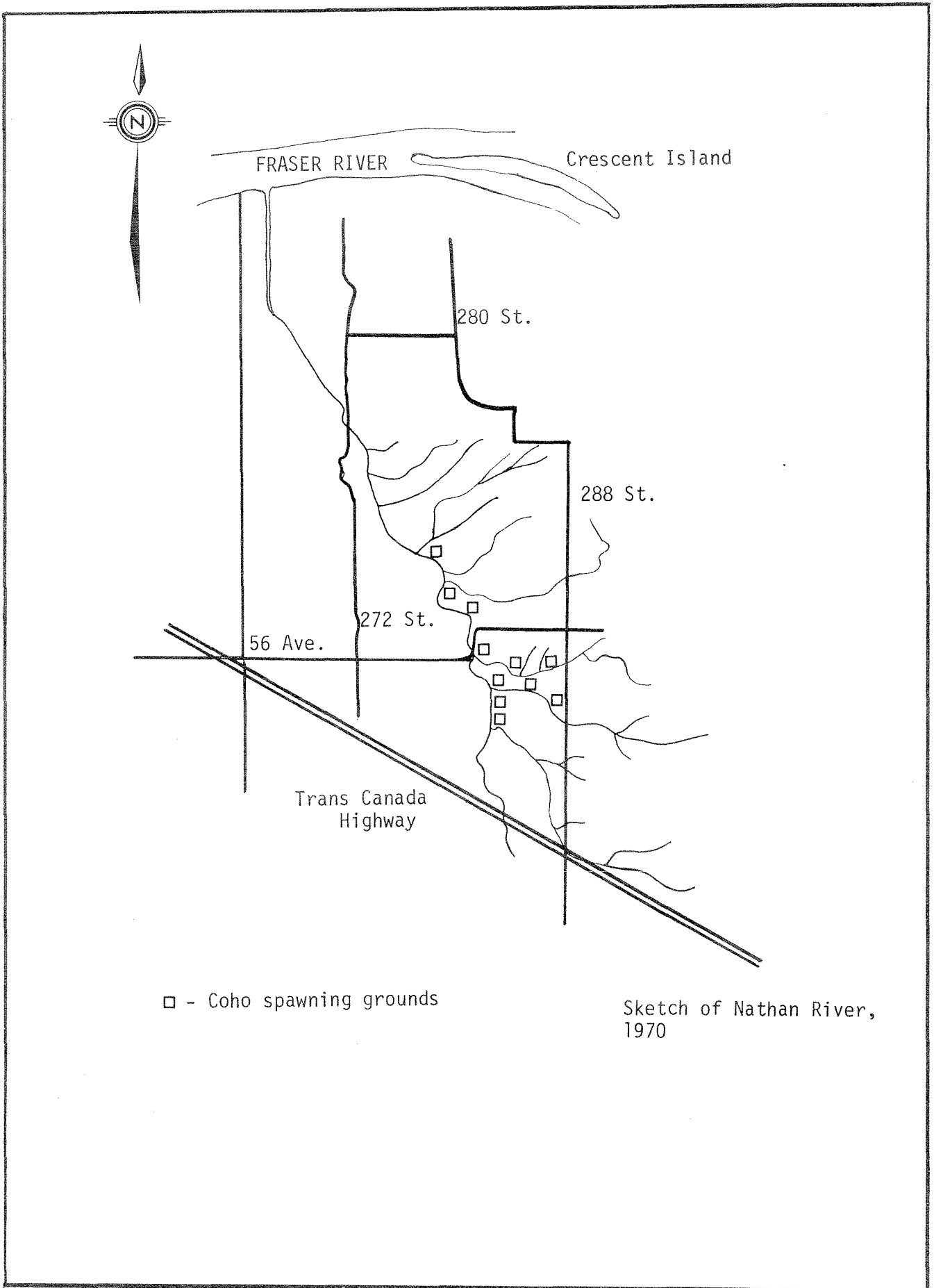
GENERAL REMARKS Physical conditions:

1955/56 Reported 10-30% erosion and silting -- some scouring from Nov/Dec floods
 1960 40% erosion and silting -- numerous course changes
 1961/66 Continued course changes during high water conditions
 1967 to present Only minor scouring and course changes reported.

General remarks:

This stream has good potential -- the area is relatively undeveloped.
 Water quality good and watershed could support much higher run.

1971 No salmon frequent the lower four Eastern tribs.
 1979 Creek has been target of dyking commission but has been refused by us.
 Spawning was later than usual as low flows delayed arrival in streams.
 Fish were ripening in the Fraser R. and coming in only to spawn which made counting difficult.



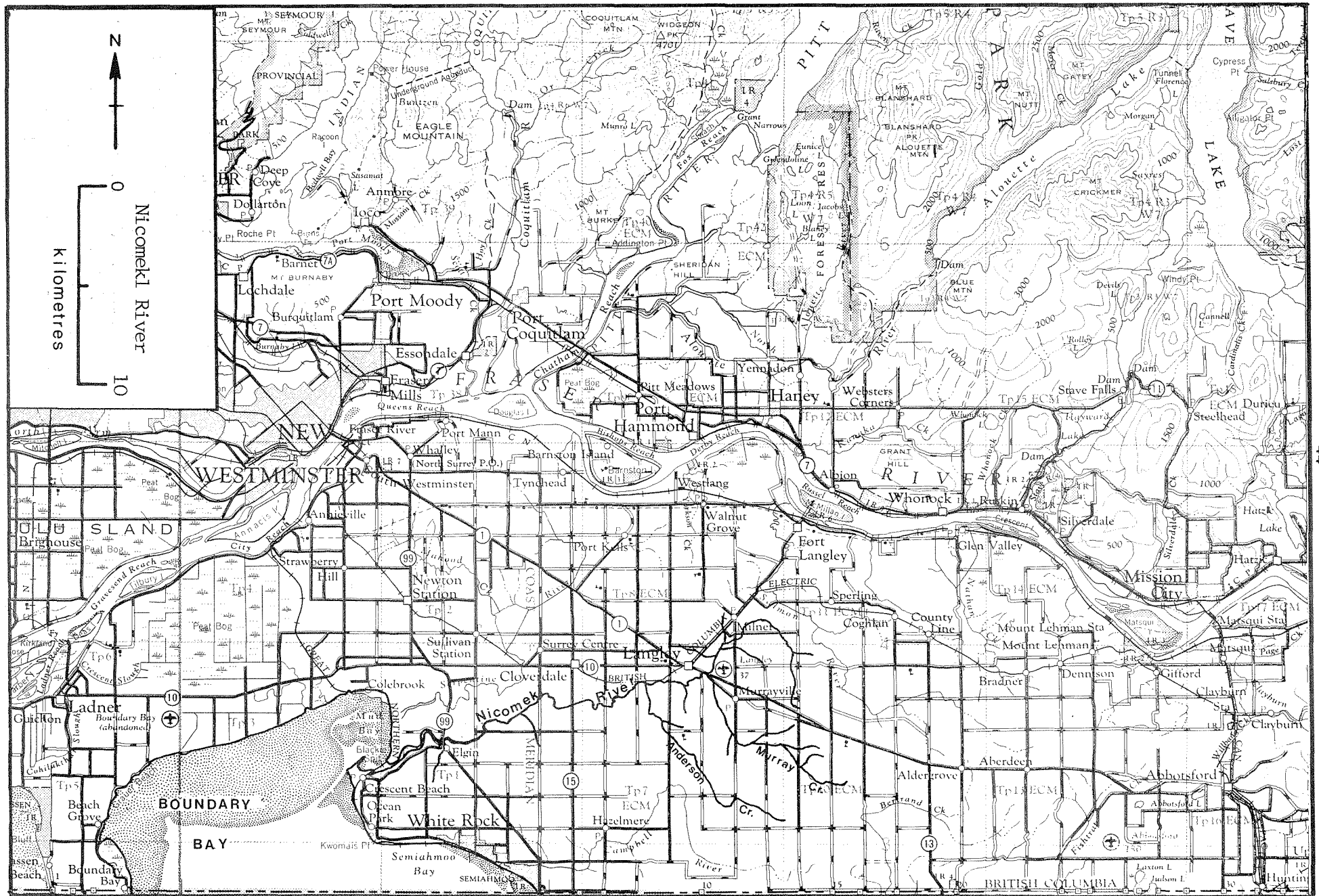
□ - Coho spawning grounds

Sketch of Nathan River,
1970

ESCAPEMENT RECORD FOR NATHAN CREEK (Beaver Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	25	1,500	
48			200	25		
49			NO RECORD			
50			200	400		
51			200	400		
52			1,500	1,500		75
53			3,500	750		
54			200	N/O		
55			400			
56			200	25		
57			200	25		
58			400	25		
59			750	N/O		
60			200	75		
61			200	25		
62			75	N/O		
63			75	N/O		
64			200	25		
65			75	25		
66			200	N/O		
67			75			
68			25			
69			25			
70			200			
71			400			
72			750			
73			750			
74			1,200			
75			1,000			
76			1,500			
77			750			
78			1,200			
79			1,200			
80			375			
81			300			
82			700			
83			325			
84						
85						
TIMING:						
ARRIVE			OCT.			
START			E. NOV.			
PEAK			L. NOV.			
END			L. DEC.			

REMARKS _____



NAME OF STREAM NICOMEKL RIVER AND TRIBUTARIES RAB NO. 90-0100
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SW. into Mud Bay, New Westminster Dist.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

At 192nd St.
 DISCHARGE (m³/s) MAX 35.4E Feb. 21 1961 MIN 0.125 Aug. 14 1961
 TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____
Small log jams and debris at various distances from mouth -- monitored and removed as necessary. 1981 Beaver dam on Murray Creek, recommend removal.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- evenly distributed over upper reaches and tribs -- Anderson,
CHUM	Murray and Trigg
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions: 1950/59 Only minor erosion and silting 10-20% (1955)
1957 Very low water levels hampered coho runs until mid November.
1960/69 1960/65 10-15% erosion and silting. Light scouring from Dec, Jan floods.
1970/79 Usual seasonal fluctuations in water levels. 1974 reported fish were late moving onto spawning grounds because of low water. A dyke ruptured near 184th, but no fish mortality noted (1975). Erosion and scouring 10-15%. Anderson Creek-- high water caused channel changes.
1981 Head waters altered by owner of Tall Timbers Golf Course.
1982 W/L low during summer months, very poor water quality, near zero D.O. for Jul. and Aug.

General Remarks:

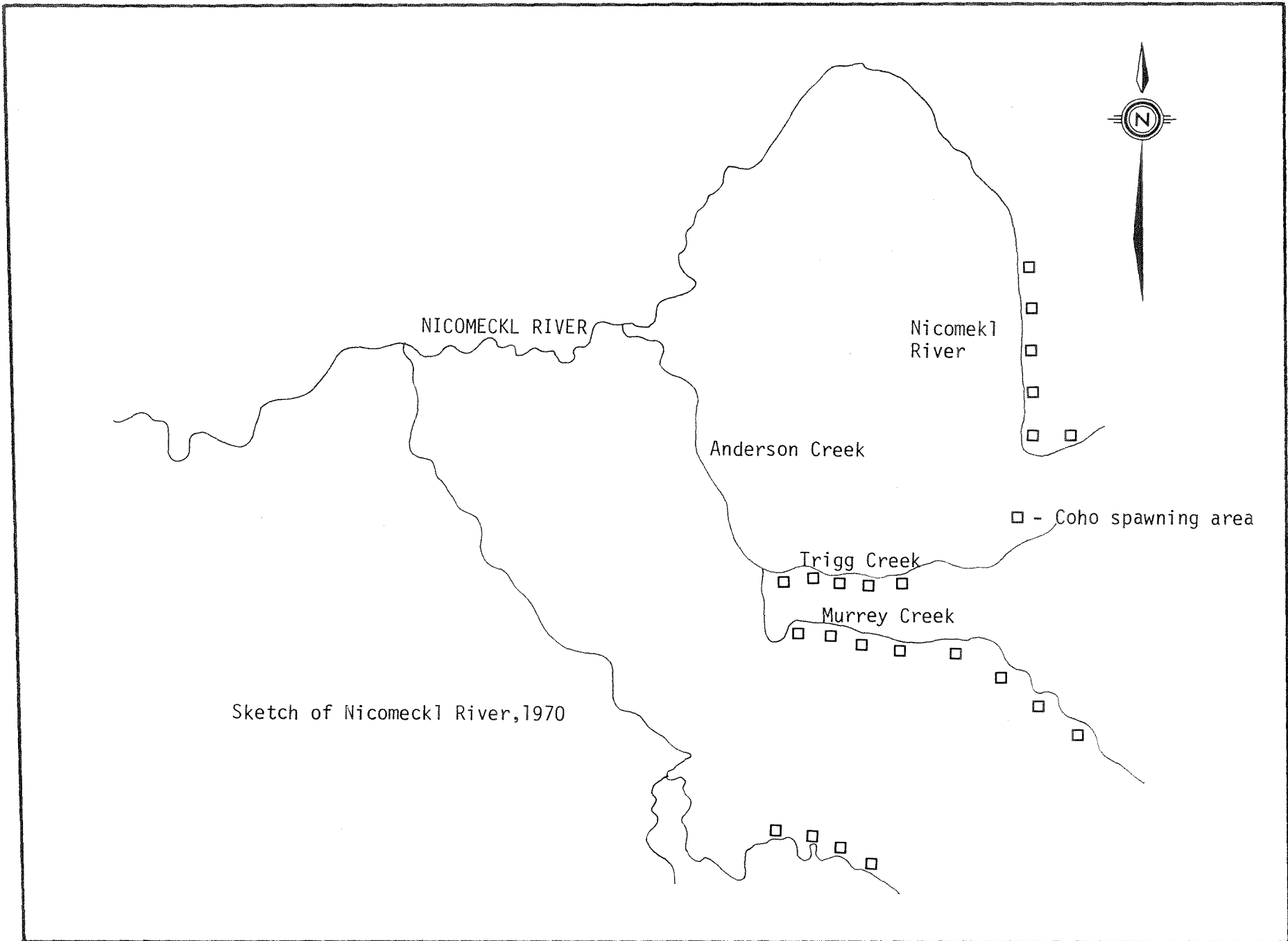
1950/59 Coho are subject to very heavy sport fishery in lower reaches.
1954 Set nets were not permitted this season, but trolling by small boats has increased.
1960/69 Highway building, land clearing and urbanization during the past 15 years has produced additional environmental stresses on salmon and progeny. The Nicomekl is a popular sport angling stream due to its convenient location close to large population (1963)
1969 Extensive residential and agricultural development has resulted in low flows during summer. The use of pesticides and herbicides on lands adjacent to the stream may have had some effect on water quality.

continued.....

continuation

NICOMEKL RIVER

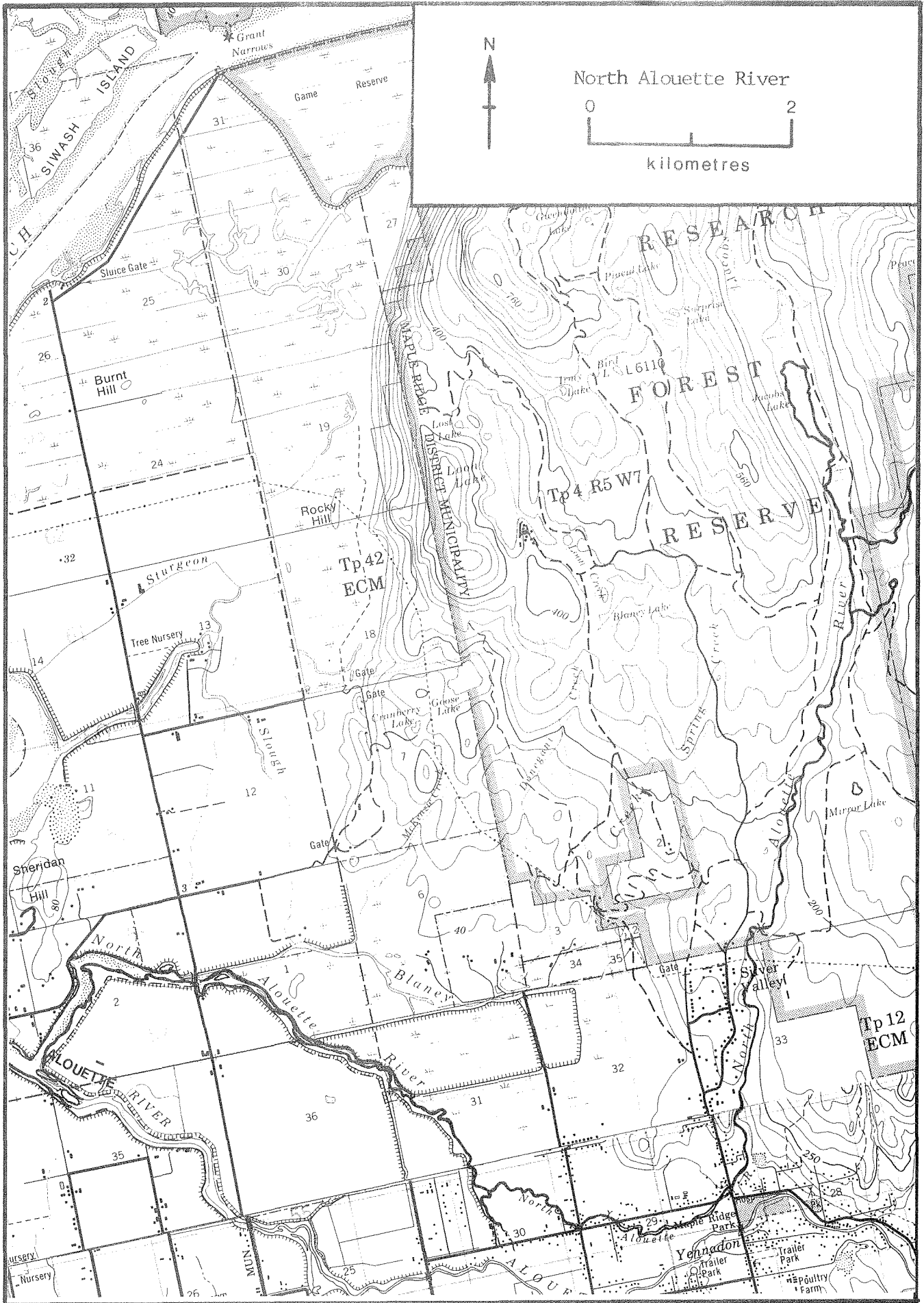
- 1970/79 Extremely low flows during summer months resulted in late arrival and spawning ('79)
- 1980 Nicomekl has a small run of chinook -- observed in lower reaches.
- 1981 Anderson Creek had gabions placed both instream and streamside for bank protection and flow restrictions during 1981. This was done in conjunction with Fish and Wildlife and this Department.
- 1982 The water quality in the systems is very poor, especially during low flows. This is a cumulative effect brought on by development -- residential, industrial and agricultural all contribute. There is no simple factor.
- 1983 Due to continued development throughout, drainage has altered flow rates and water quality.



ESCAPEMENT RECORD FOR NICOMEKL RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			1,500			UNK
48			1,500			UNK
49			1,500			
50			1,500			UNK
51			1,500			75
52			3,500			
53			3,500			
54			3,500			UNK
55			1,500			UNK
56			1,500			75
57			750			UNK
58			750			UNK
59			750			UNK
60			750			
61			3,500			UNK
62			200			UNK
63			200			UNK
64			7,500			UNK
65			200			
66			400			
67			400			
68			200			
69			75			
70			1,500			
71			3,500			
72			1,500			
73			3,500			
74			2,500			
75			3,500			
76			3,500			
77			3,400			
78			1,500			
79			1,500			
80			1,750			
81			1,000			
82			1,200			
83			1,000			
84						
85						
TIMING:						
ARRIVE			SEP.			
START			E. NOV.			
PEAK			L. NOV.			
END			L. DEC.			

REMARKS _____



NAME OF STREAM NORTH ALOUETTE RIVER RAB NO. 00-0200-050-020
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SW., N. and SW. into Alouette R., E. of Pitt L., New West
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

At 232 St. Maple Ridge
 DISCHARGE (m³/s) MAX 76.2 Dec. 23 1963 MIN 0.071 Aug 30 1961

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Floating debris and log jams at various distances from mouth -- passable at high water.

SPAWNING DISTRIBUTION

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

GENERAL REMARKS Physical conditions: 1950/59
 1955 75% erosion and silting. Heavy scouring from early November rains.
 1957/59 Stream improvement and flood control work continue to create unstable spawning conditions.
 1960/69 40/50% erosion and silting -- heavy scouring due to breakthrough of South Alouette River (1960)
 1961/64 20% erosion and silting -- moderate scouring
 1965 40-50% erosion -- stream very unstable -- heavy scouring.
 1970/79 Some scouring and gravel shifting in spawning areas during winter floods.
 1981 Instream work along 132nd st. created some very good chum spawning areas which were heavily utilized.

General Remarks:

1950/59 1953 This stream suffers from very high water levels after a heavy rain as the headwater slopes have been logged off. This flash flood condition tends to scour the spawning beds and deposit the eggs and young alevins up in the grass and brush along the banks.
 1955 During the rain storm of early November, part of the South Alouette River was diverted into this river. Bulldozers used to put part of the stream bed back into position.
 1956/57 Logging and land clearing are causing accumulations of logs and brush in the lower reaches. Unstable conditions in spawning areas from stream flood control work done by bulldozers.

continued.....

continuation

NORTH ALOUETTE RIVER

- 1959 Continued logging and housing development clearing programs have, and will continue to have, adverse effect on this very productive stream.
- 1960 The South Alouette River broke through into this river at Maple Ridge Park and further upset this spawning stream. Unstable conditions now exist and a considerable loss in eggs is expected.
- 1961 Dyking on the South Alouette River has prevented any further breakthrough to this river as was the situation during 1960-61. Spawning conditions remained fairly stable during this past season.
- 1965/66 Gravel removal operations were restricted to attempt rehabilitation of stream bed.
- 1972 Stream subject to considerable variation in flow during rainfall. This causes a certain amount of gravel shifting.
- 1973 Chum salmon in greater numbers moved higher in the stream (above 232 Ave.)
- 1980 This stream is prone to severe flooding downstream from 232 St.

Predation : birds bears and public.

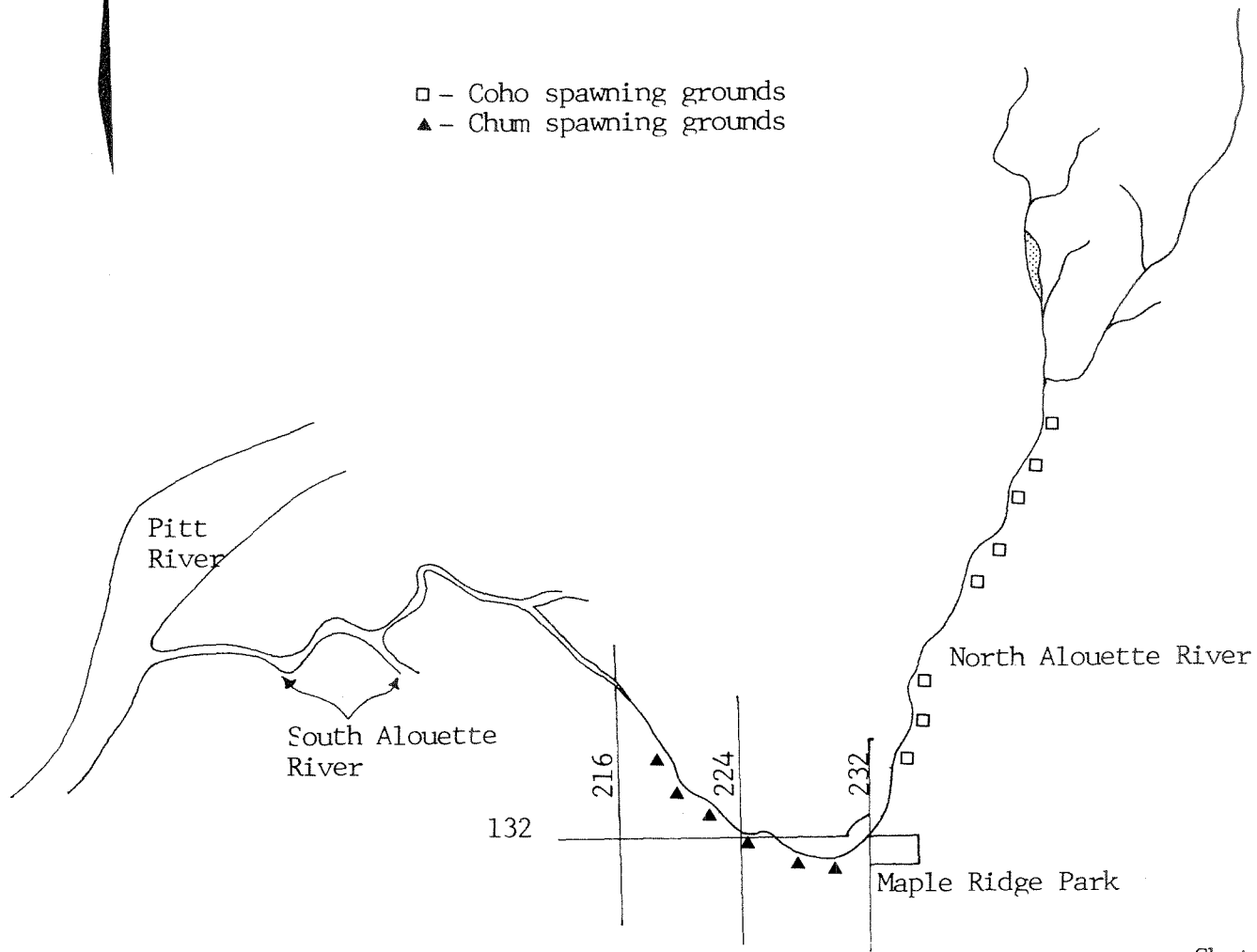
ESCAPEMENT RECORD FOR NORTH ALOUETTE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75	1,500	3,500	
48			25	400		25
49			75	3,500	1,500	
50			400	1,500		UNK
51			400	3,500	1,500	75
52			750	3,500		400
53			750	3,500	3,500	400
54			200	750		
55			400	3,500	3,500	75
56			200	200		200
57			200	750	25	200
58			200	200		75
59			25	750		25
60			200	400		
61			25	400		
62			200	400		
63			200	400		
64			400	400		
65			75	200		
66			200	400		
67			200	75		
68			25	400		
69			25	200		
70			750	400		
71			750	750		
72			400	750		
73			750	3,500		
74			350	1,300		
75			600	750		
76			25	25		
77			450	5,000		
78			250	240		
79			50	350		
80			300	500		
81			400	5,500		
82			250	1,500		
83			150	1,500		
84						
85						
TIMING:						
ARRIVE			OCT.	OCT.		
START			E. NOV.	L. OCT.		
PEAK			L. NOV.	M. NOV.		
END			L. DEC.	L. NOV.		

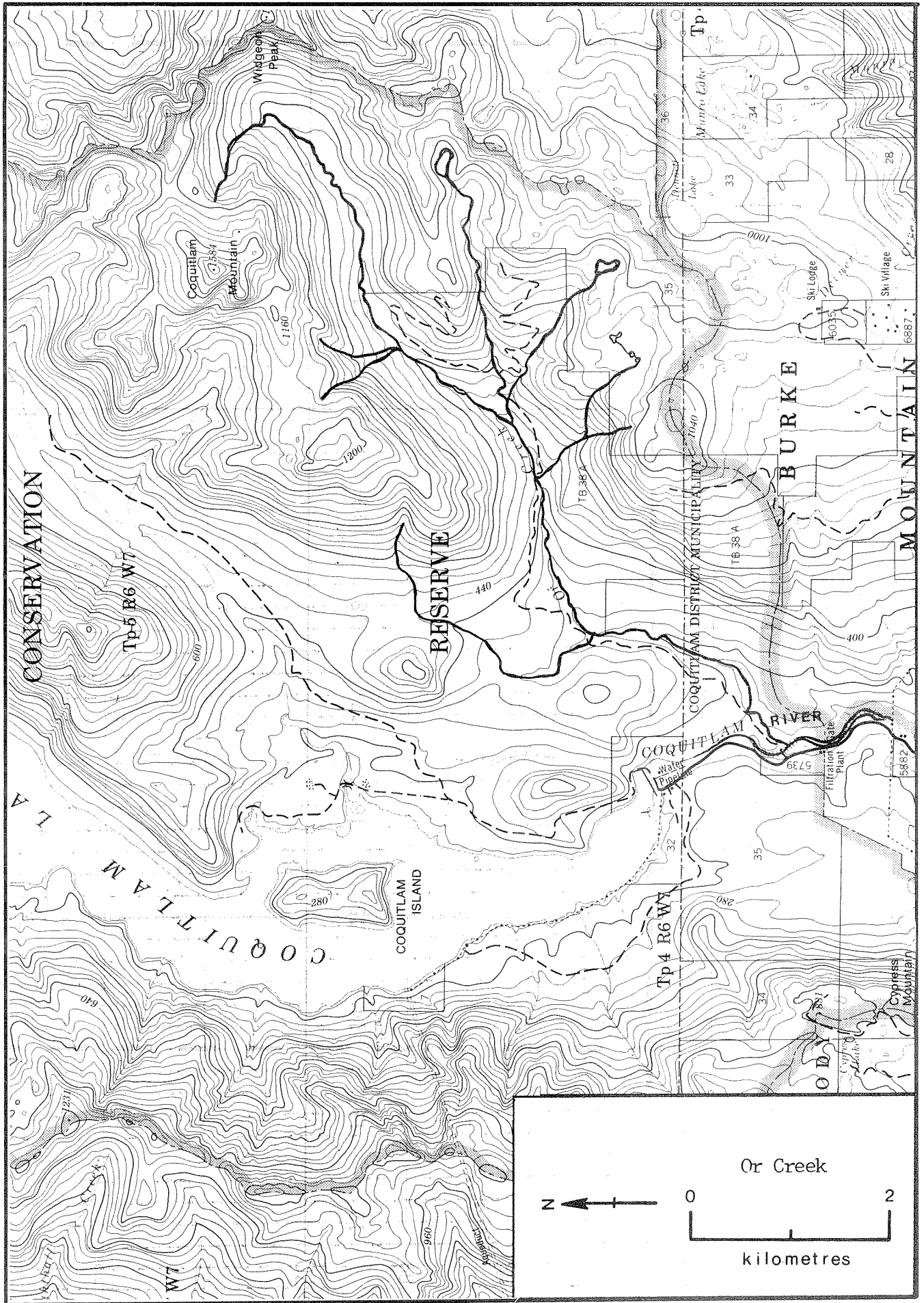
REMARKS



□ - Coho spawning grounds
▲ - Chum spawning grounds



Sketch of N. Alouette River, 1970



NAME OF STREAM OR CREEK _____ RAB NO. 00-0180-150

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 16

LOCATION OF MOUTH Flows SW. into Coquitlam River, S. of Coquitlam L., New Westminster.

POSITION 49 122 SW.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

Near Port Coquitlam

DISCHARGE (m³/s) MAX 22.8A Nov. 5 1954 MIN 0.071 Oct. 10 1957

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

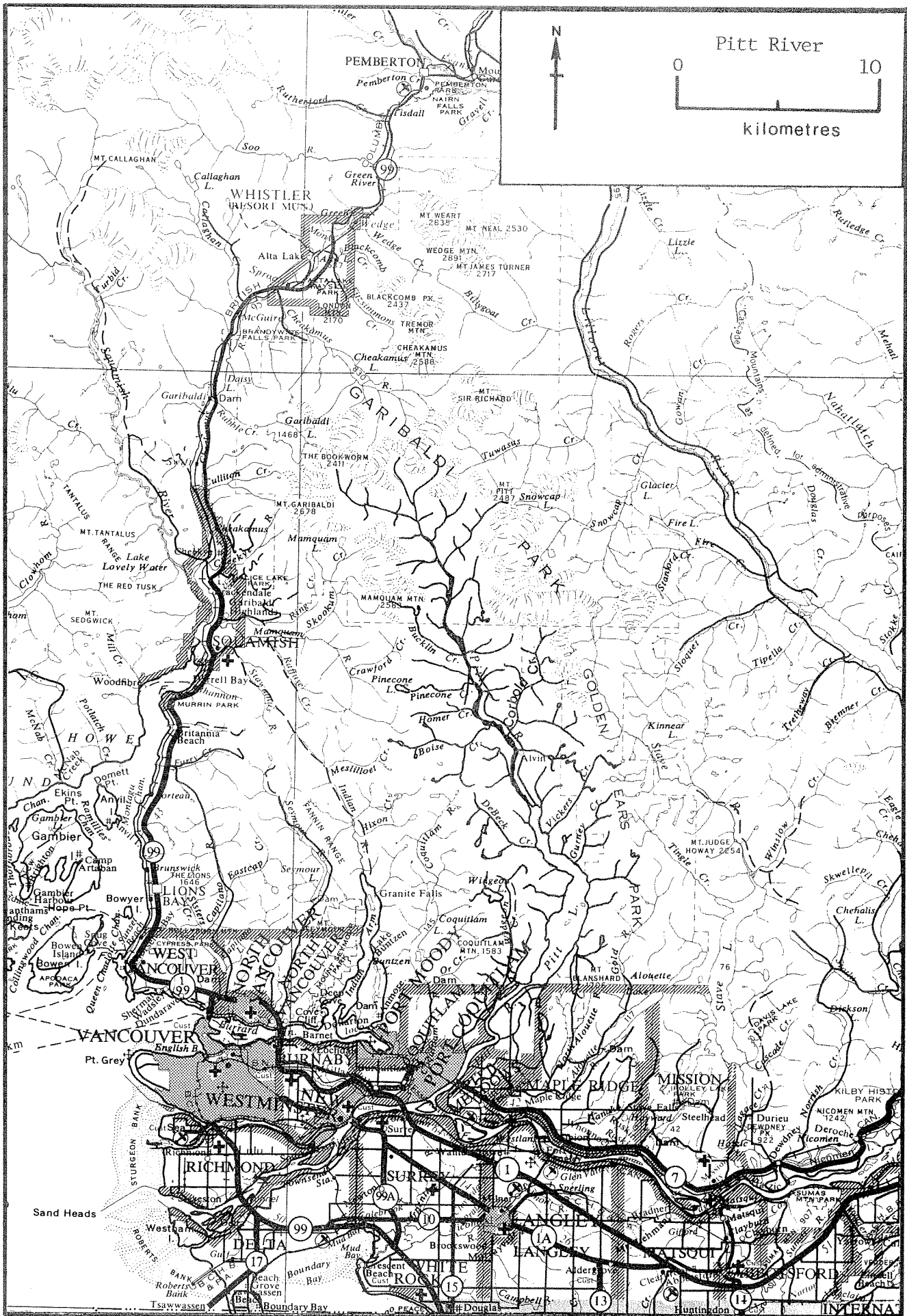
SPECIES	SECTION OF STREAM USED
SCKEYE	
CHINOOK	
COHO	- in upper reaches
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

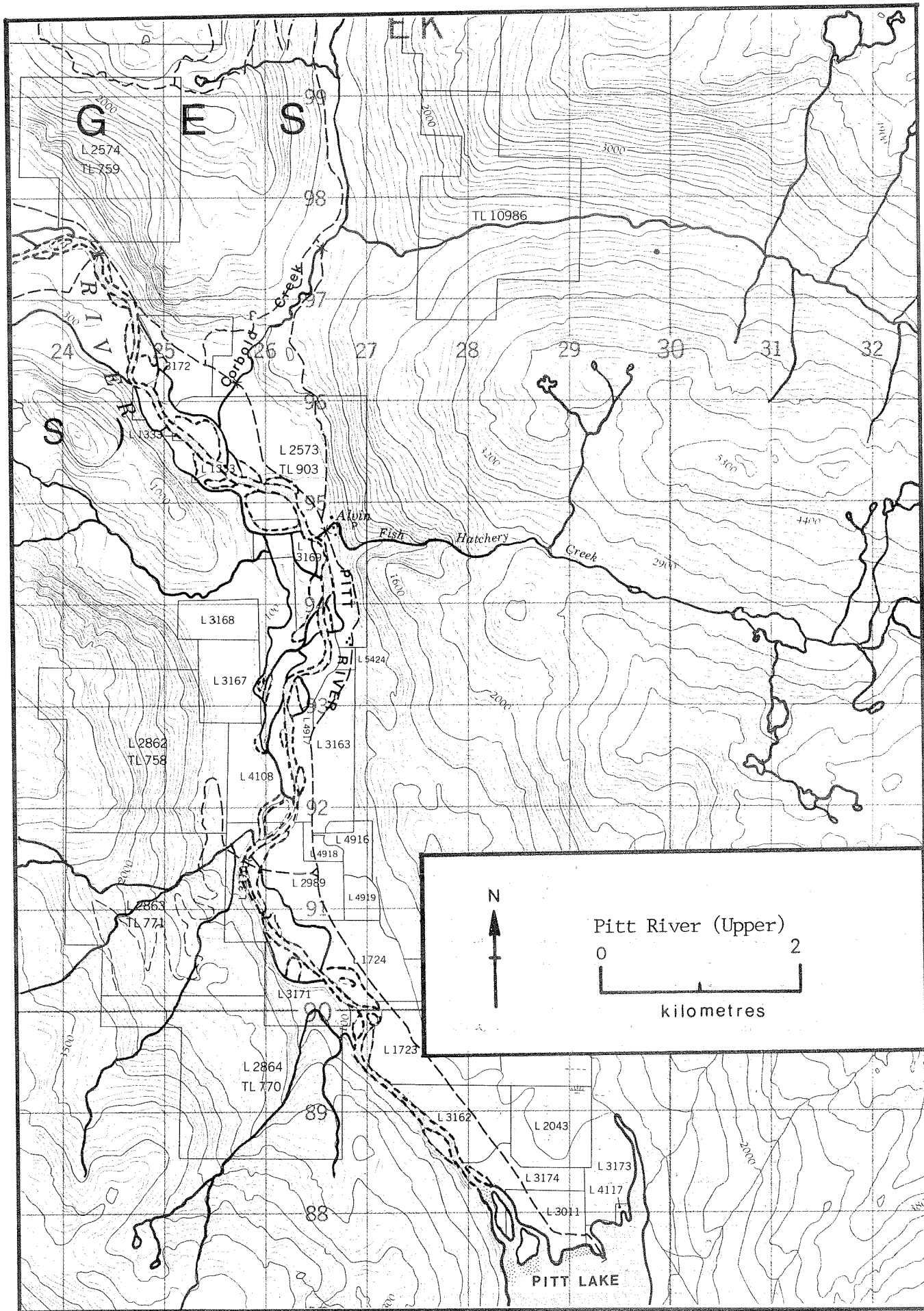
GENERAL REMARKS 1982/83 Reported some gravel movement. Normal water levels.

ESCAPEMENT RECORD FOR _____ OR 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						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82				16		
83				12		
84						
85						
TIMING:						
ARRIVE			OCT.			
START			NOV.			
PEAK			DEC.			
END			JAN.			

REMARKS _____





NAME OF STREAM PITT RIVER (UPPER) RAB NO. 00-0200
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SW. into Fraser R., New Westminster Dist.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 Near Alvin
 DISCHARGE (m³/s) MAX 597E Nov. 3, 1955 MIN 5.10 Feb. 18, 1956
 TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT

Beaver dams cause some blockages in the main Pitt Valley and on tributaries -- monitored and cleared at migration time.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- heavy in blue creek
COHO	- scattered in all tributaries -- heavy in main river above canyons.
CHUM	- in lower side channels
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS PHYSICAL CONDITIONS:

1950/59

Heavy erosion and silting 50% - heavy scouring. Many minor changes in gravel bars (1955)

1958 15% erosion and silting -- continual changes in stream course.

1960/69 Erosion and silting ranges from 25-50%. Heavy scouring -- estimated 50% loss of sockeye spawn (1966)

1970/79 Usual seasonal fluctuations in water levels.

1981 Signs of bank erosion throughout system. 1982 Gravel shifting.

1983 Large amount of gravel movement yearly.

GENERAL REMARKS

1950/59 Continuous high lead logging of watershed is creating more unstable spawning conditions each year. Main river murky with glacial silt making enumeration difficult.

1960-70 Tributaries subject to quick run off due to logging. This is expected to increase as logging operations expand.

1963 International Pacific Salmon Fisheries Commission started operation of a hatchery and incubation channels in 1963 at Corbold Creek, a tributary of the Pitt River. The purpose of these facilities is to increase the sockeye salmon run from the Pitt River. Eggs are taken from the salmon at the natural Pitt River spawning grounds in late August. They are fertilized and incubated at the hatchery until they reach the eyed stage

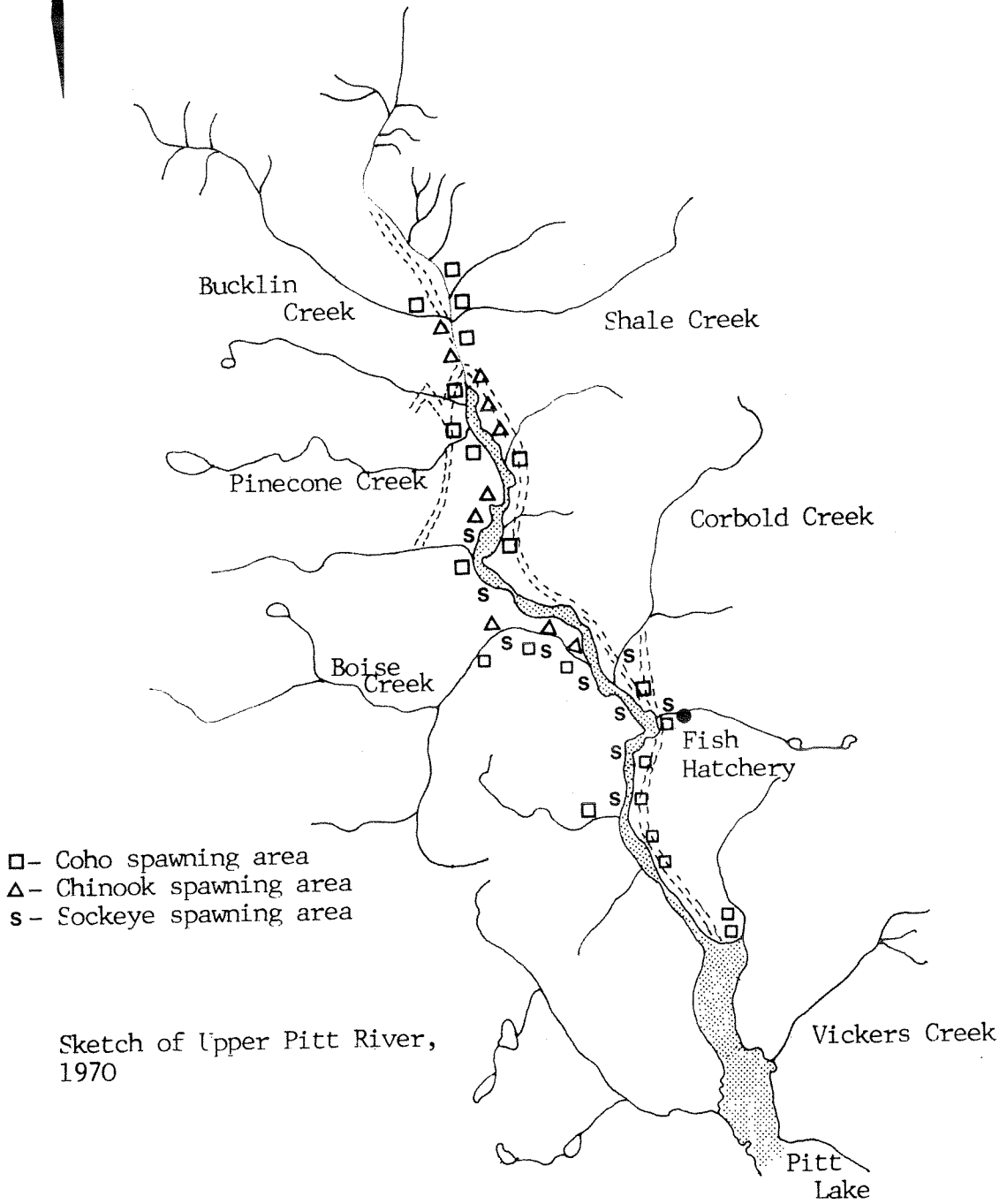
continued

continuation

PITT RIVER (UPPER)

and then placed in incubation channels. The young sockeye rear in Pitt Lake for 1 or more years in the deep section of the lake between the Upper Pitt and Lower Pitt River estuaries. I.P.S.F.C. has estimated that Pitt Lake has the capacity to rear 10 million sockeye fry.

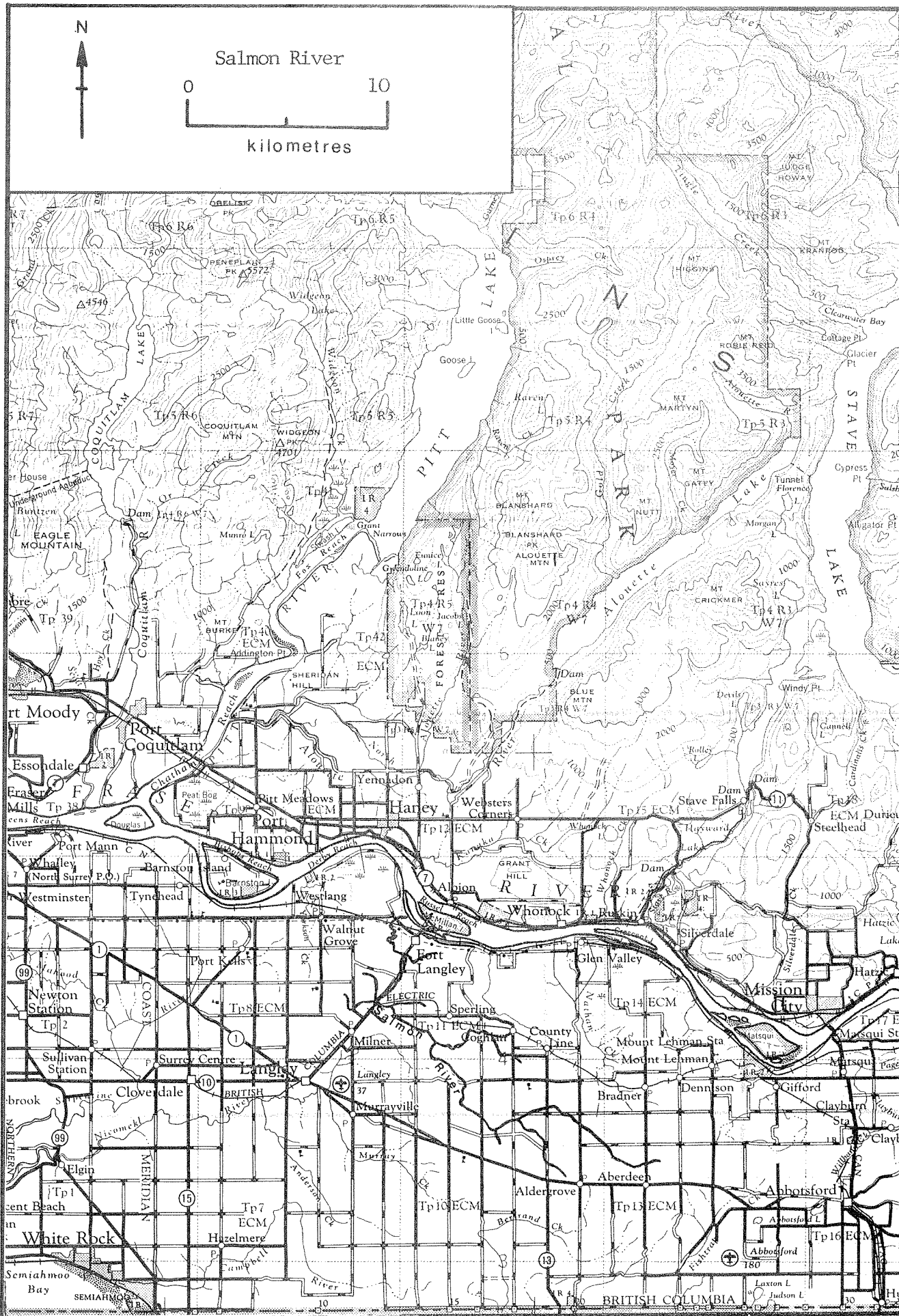
- 1970-80 Heavy beaver activity -- removed by trapping.
- 1980 Extreme flooding in December caused large amounts of scouring and gravel shifting throughout the river.
- 1982 Coho estimate derived from disc tagging program.
- 1983 Very few chum spawn in Upper Pitt.
Chinook not checked this year -- local fishermen reported same as in 1982 -- 300.



ESCAPEMENT RECORD FOR PITT RIVER (UPPER)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	75,000			UNK		
48	75,000	25		UNK		
49	7,500	25				
50	35,000	750	400	750	25	UNK
51	35,000	750	400	1,500	750	200
52	75,000	1,500	7,500	3,500		400
53	15,000	1,500	3,500	1,500	7,500	750
54	15,000	750	400	750		UNK
55	15,000	750	3,500	750	1,500	750
56	35,000	1,500	400	200		400
57	15,000	1,500	1,500	25	25	400
58	15,000	3,500	3,500	200		
59	15,000	750	400	400		
60	35,000	400	400	N/O		
61	15,000	400	3,500	25	2	
62	15,000	3,500	7,500	1,500		
63	15,000	750	400	N/O		
64	13,804	1,500	7,500	N/O		
65	6,981	400	1,500			
66	20,867	1,500	3,500	75		
67	10,300	750	1,500	N/O		
68	16,988	400	750	N/O		
69	24,905	200	750			
70	6,600	1,500	1,500			
71	15,469	7,500	35,000			
72	13,412	750	1,500			
73	11,928	750	3,500			
74	20,792	500	3,500			
75	39,900	300	3,000			
76	36,530	750	3,500	400		
77	17,300	700	8,000			
78	24,835	-	40,000			
79	37,558	250	5,000			
80	17,000	120	2,500	25		
81	25,000	325	3,500	-		
82	8,700	300	7,500	N/O		
83	16,858	N/O	3,500	10		
84						
85						
TIMING:						
ARRIVE	AUG.	AUG.	OCT.	OCT.		
START	SEP.	L. AUG.	E. NOV.	OCT.		
PEAK	M. SEP.	E. SEP.	L. NOV.	M. OCT.		
END	L. SEP.	SEP.	L. DEC.	NOV.		

REMARKS



NAME OF STREAM SALMON RIVER RAB NO. 00-0300
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows NW. and NE, into Bedford Channel, Fraser River, New Westminster
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

At 72 Ave. Langley

DISCHARGE (m³/s) MAX 34.6 Dec. 17 1979 MIN 0.099 Oct. 1 1975

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Flood gates at mouth of river--small forest and field debris at various distances from mouth of stream.

1975 A steep pass ladder was installed at 64th Ave. Minor problems occurred with debris but no delay in passage of fish.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- Scattered throughout upper portion of river, mainstem and tribs.
COHO COHO	Heaviest in upper reaches of Coghlan Creek
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:

1950/59 Light erosion and silting -- 10/30%. Minor scouring due to land development and December floods.

1960/69 1960 Reported 30-40% erosion and heavy scouring from Jan '61 flood. Otherwise light to moderate.

1970/79 1972 Minor shifting of gravel during flood.
1979 Low water throughout summer months. Flooding during December.

1981 River fluctuates drastically with the slightest precipitation -- river drops as fast as it rises.

General comments:

1950/59 This river runs through a large farming belt and is used for irrigation purposes (1951) Flood gates at mouth are kept open during migration.

1956 Coho subject to heavy sport fishery in lower tidal reaches.

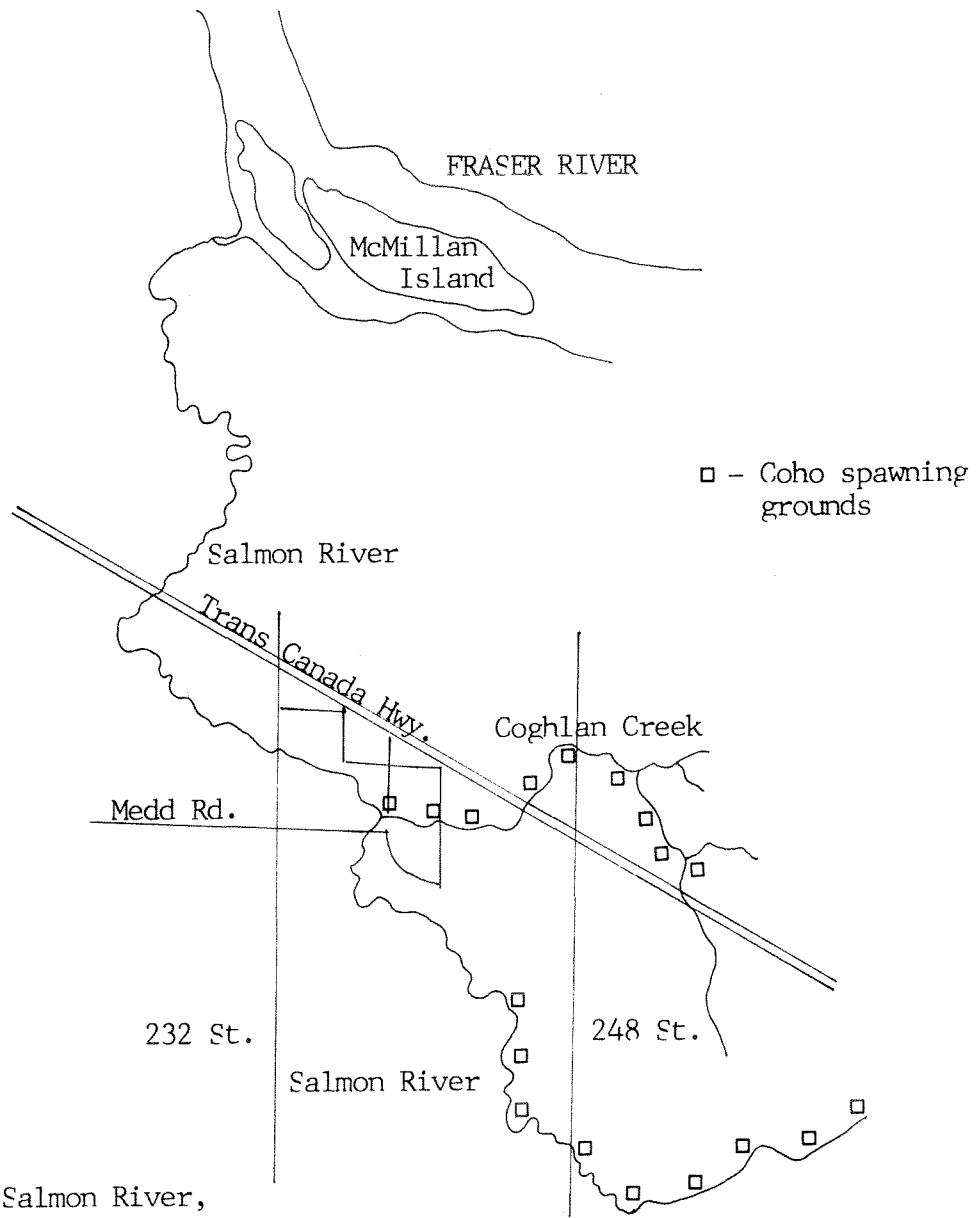
1958 Land development and increased population continues to have adverse effect on this stream.

1960/69 Low flow conditions due to extensive residential and agricultural development. Some loss to juveniles molesting fish.

1977/80 Low rainfall -- bulk of spawners arrived later than usual.

1981 A counting fence was installed at the flood gates of the Salmon River. This allowed for a more accurate enumeration during spawning migration Coho were clipped during the operation.

1982 Some chinook spawned below the fence, by the powerline.



Sketch of Salmon River,
1970

ESCAPEMENT RECORD FOR SALMON RIVER

YEAR	SUCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75			
48			200			
49			NO REC			
50			200			
51			400			
52			3,500			
53			3,500			
54			400			
55			200			
56			200			
57			200			
58			200			
59			75			
60			200			
61			200			
62			75			
63			75			
64			200			
65			200			
66			200			
67			200			
68			200			
69			75			
70			1,500			
71			3,500			
72			1,500			
73			750			
74			3,500			
75			3,600			
76			3,500			
77			3,500			
78			3,500			
79			3,500			
80			1,500			
81			1,200			
82			3,000			
83			1,000			
84						
85						
TIMING:						
ARRIVE			OCT.			
START			E. NOV.			
PEAK			L. NOV.			
END			L. DEC.			

REMARKS _____

SCOTT CREEK

See HOY CREEK p.

NAME OF STREAM SCOTT CREEK RAB NO. 00-1800-100

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 29

LOCATION OF MOUTH Flows S. into Coquitlam River, S.E. of Port Moody, New Westminister

POSITION 49 122 SW.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX _____ MIN _____

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls

SPAWNING DISTRIBUTION

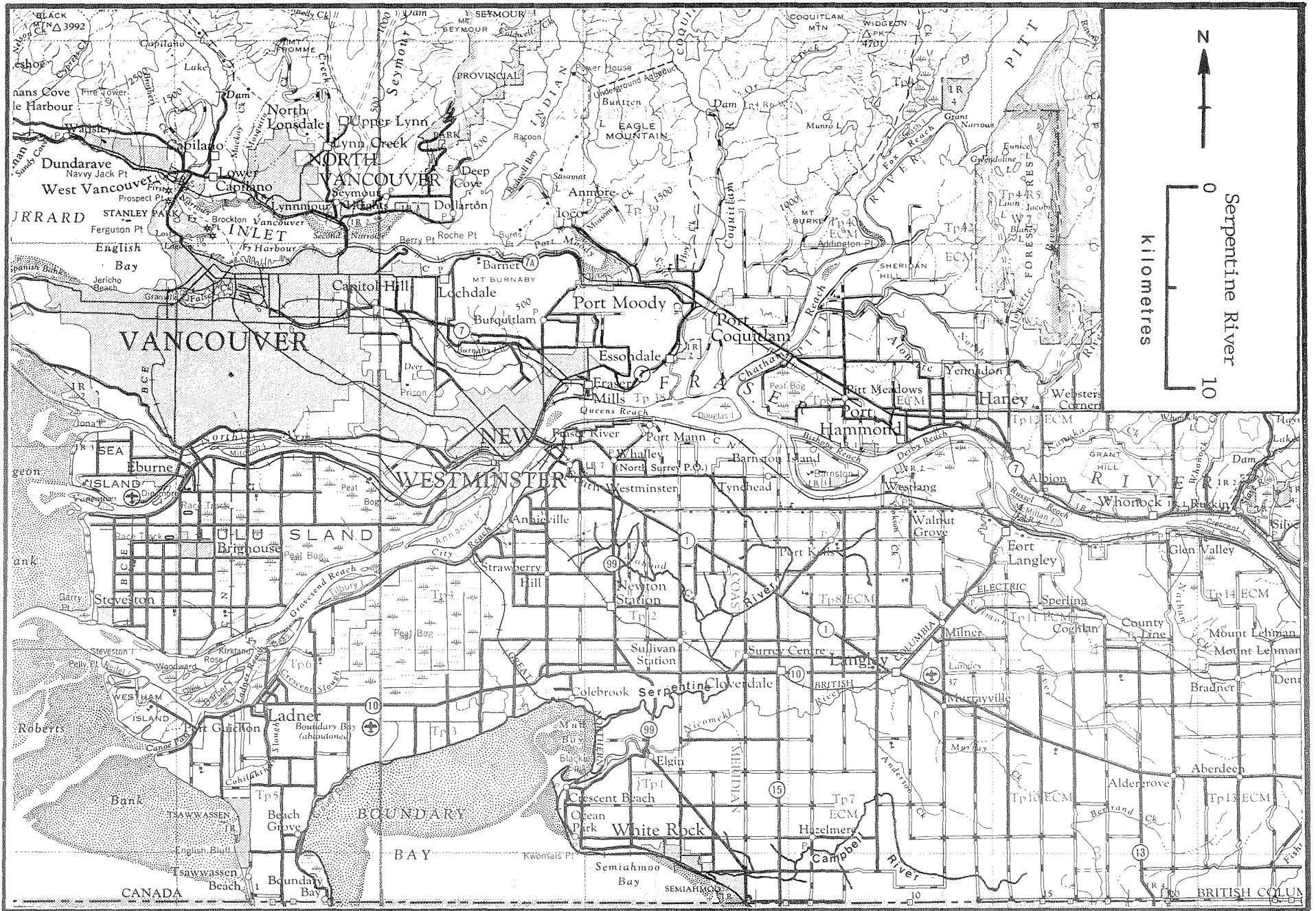
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	- above junction of Scott and Hoy Creeks
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Water levels -- normal
Predation by birds and public

ESCAPEMENT RECORD FOR SCOTT 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						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82			15	200		
83				100		
84						
85						
TIMING:						
ARRIVE			OCT.	NOV.		
START			OCT.	NOV.		
PEAK			OCT.	DEC.		
END			NOV.	JAN.		

REMARKS _____



NAME OF STREAM SERPENTINE RIVER RAB NO. 90-0200
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows SW. into Mud Bay, New Westminster District.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

Near Port Kells

DISCHARGE (m³/s) MAX 2.92 Jan 2 1962 MIN 0 Aug 1 1961

TEMPERATURE (°C) _____

BARRIERS OR POINTS OF DIFFICULT ASCENT This river has had problems with brush and debris accumulations -- monitored and removed as required.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- upper reaches of mainstream . Bear Creek, Hyland Creek, Andersen
COHO	Creek and Murray Creek
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:
 1950/59 5-10% erosion and silting -- normal seasonal fluctuations in water levels
 1960/69 20-35% erosion and silting -- moderate scouring during high water levels
 1970/79 Urban and agricultural development has resulted some problems with silt in upper reaches of main river and Bear Cr.
 1972 Minor silting in smaller tributaries. Main stream greatly improved, otherwise normal seasonal fluctuations.
 1982 Water levels very low during summer months.
 1983 Some erosion and silting due to flooding in mid. November.

General remarks:

1950/59 The U.S. seine and gillnet fishery depleted the runs bound for this area. Heavy sports fishery in lower reaches. Continuous clearing taking place in upper spawning areas denuding the necessary stream cover (1956)
 1960/69 Heavy sport fishery during coho migration. Sub-division developments and land clearing operations continue to have an adverse effect on this very productive stream. Continued land clearing denudes river banks of protective covering for adult and juvenile salmon.
 1968 Extensive residential and agricultural development has resulted in extreme low flows in the smaller tributaries during the summer months.

continued.....

continuation

SERPENTINE RIVER

1970/79

Latimer Creek, Hyland Creek and minor tribs of Mahood Creek had a good seeding of coho. These tributaries seem to contribute the major portion of stocks to the Serpentine (1971)

Main stem of river improved in quality during 1972. Other tributaries maintained quality this year(1972)

This stream is affected by urban development in the Surrey area.Changes in flow patterns and minor silting due to land clearing and construction(1974)

Several construction operations in Surrey have muddied the creeks considerably this year, especially Bear Creek tributaries(1976)

Late spawning related to low water levels (1978/79)

Due to a biological factor (human waste) the Serpentine River experienced a large fish kill. Species affected were coho, springs and cutthroat. This is a serious problem and would recommend future investigations by HPD. Estimated loss approx 800. (1980)

Two chinook were observed in the Serpentine River up above 96th Ave.

The river has numerous obstructions (garbage) between 96th and 104th Ave.(1981)

There were two fish kills in lower sections of river, mainly downstream from flood gates. This caused low O/2 levels and an estimated 200 mature coho were lost. Recommend airators be installed in lower sections.(1983)

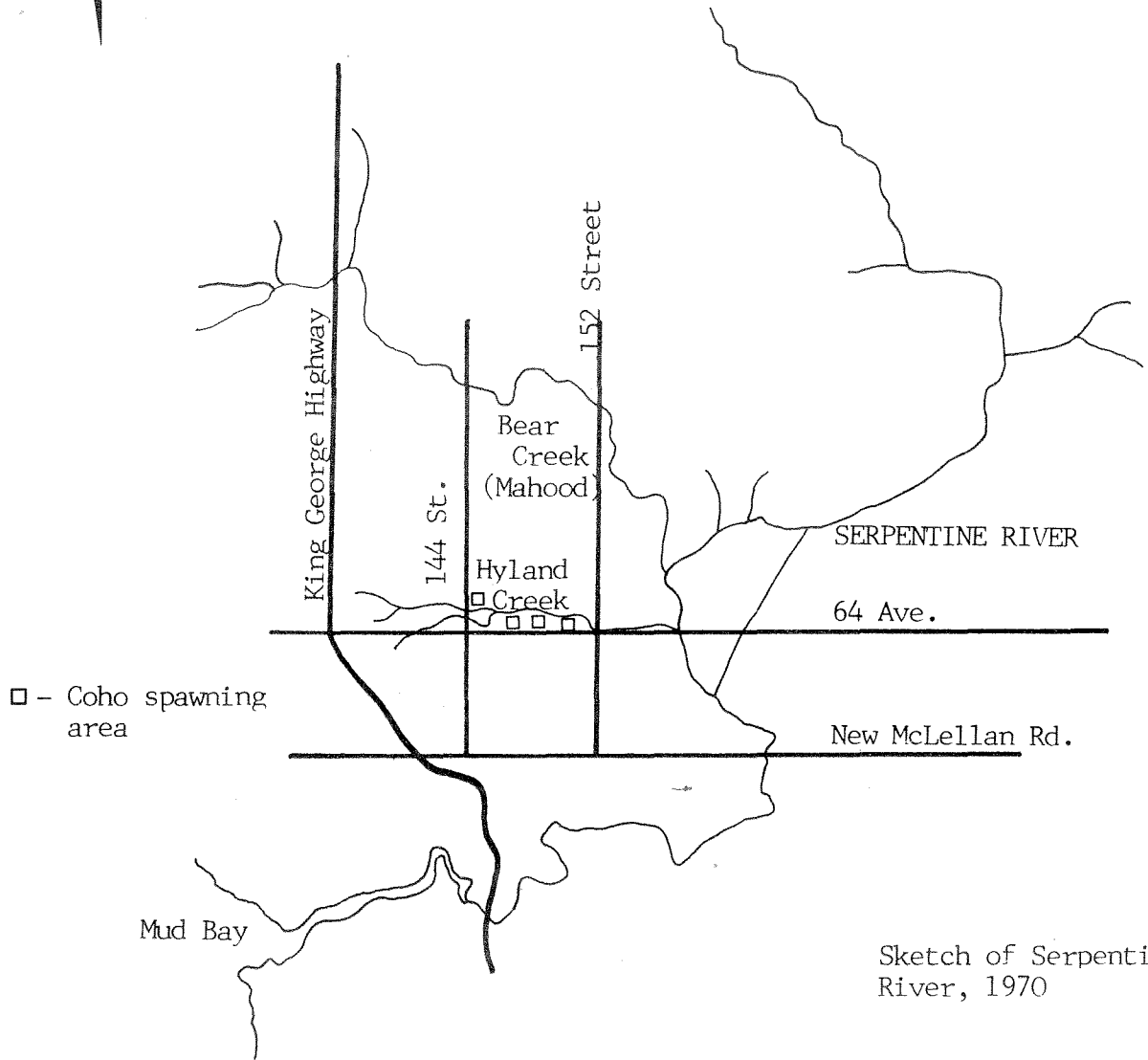
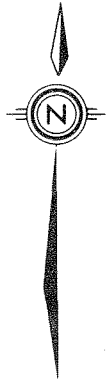
Predation:

1950/59 Fish molested by local juveniles. Heavily fished in lower reaches by sport fishermen.

1960 Moderate loss to juveniles and sport fishermen.

1964 Increasing loss die to growing population -- anglers and juveniles.

1970/79 Herons killed most of the jacks 76,77. Jigging in lower reaches a serious problem.



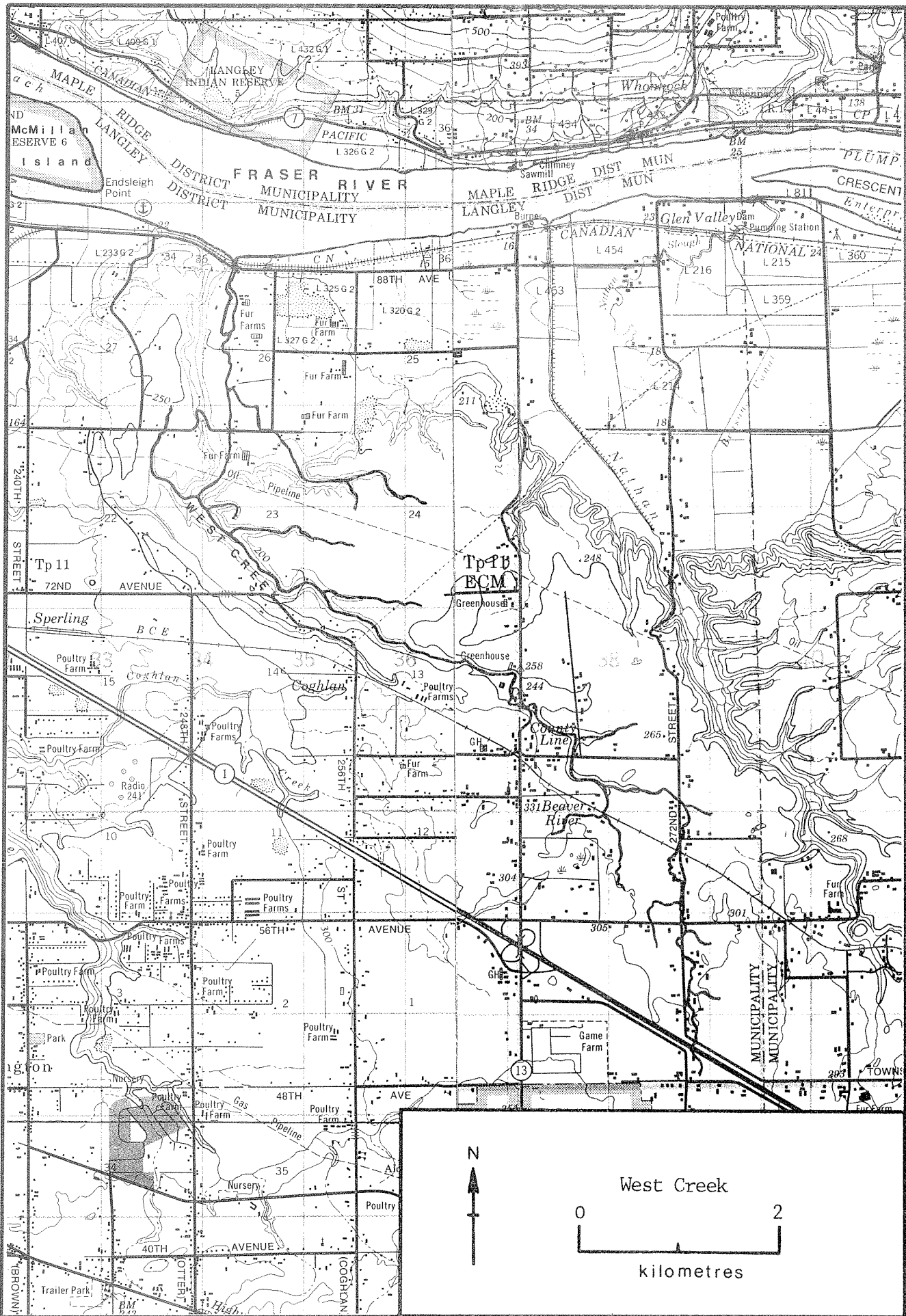
□ - Coho spawning area

Sketch of Serpentine River, 1970

ESCAPEMENT RECORD FOR SERPENTINE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			750			N/O
48			1,500			UNK
49			400			
50			1,500			UNK
51			1,500			75
52			1,500			
53			1,500			
54			750			UNK
55			750			UNK
56			1,500			UNK
57			400			UNK
58			750			UNK
59			1,500			UNK
60			400			
61			400			
62			400			
63			400			
64			750			
65			400			
66			400			
67			200			
68			200			
69			75			
70			750			
71			3,500			
72			1,500			
73			1,500			
74			2,000			
75			2,800			
76			3,500			
77			2,400			
78			1,800			
79			1,500			
80			500			
81		2	1,100			
82		4	600			
83		UNK	350			
84						
85						
TIMING:						
ARRIVE			OCT.			
START			L. OCT.			
PEAK			M. NOV.			
END			L. DEC.			

REMARKS



NAME OF STREAM WEST CREEK RAB NO. 00-0330
 LOCAL NAME _____
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows N. into Fraser River, New Westminster Dist.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 Near Fort Langley
 DISCHARGE (m³/s) MAX 12.8 Dec 23, 1963 MIN 0.006 Aug 19, 1966
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT Passable debris accumulations (1955/61)
1981 An old bridge has fallen into creek -- some small log jams --
recommend removal.
1982 Requires general cleanup of debris downstream from 84th Ave.

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- scattered in mainstream and tribs. as far as headwaters.
CHUM	- in lower reaches
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions: Some minor erosion and silting reported on
this stream (10%) Subject to flash floods after heavy rains.
 1975 Water very high in December due to record rainfall -- some minor scouring.

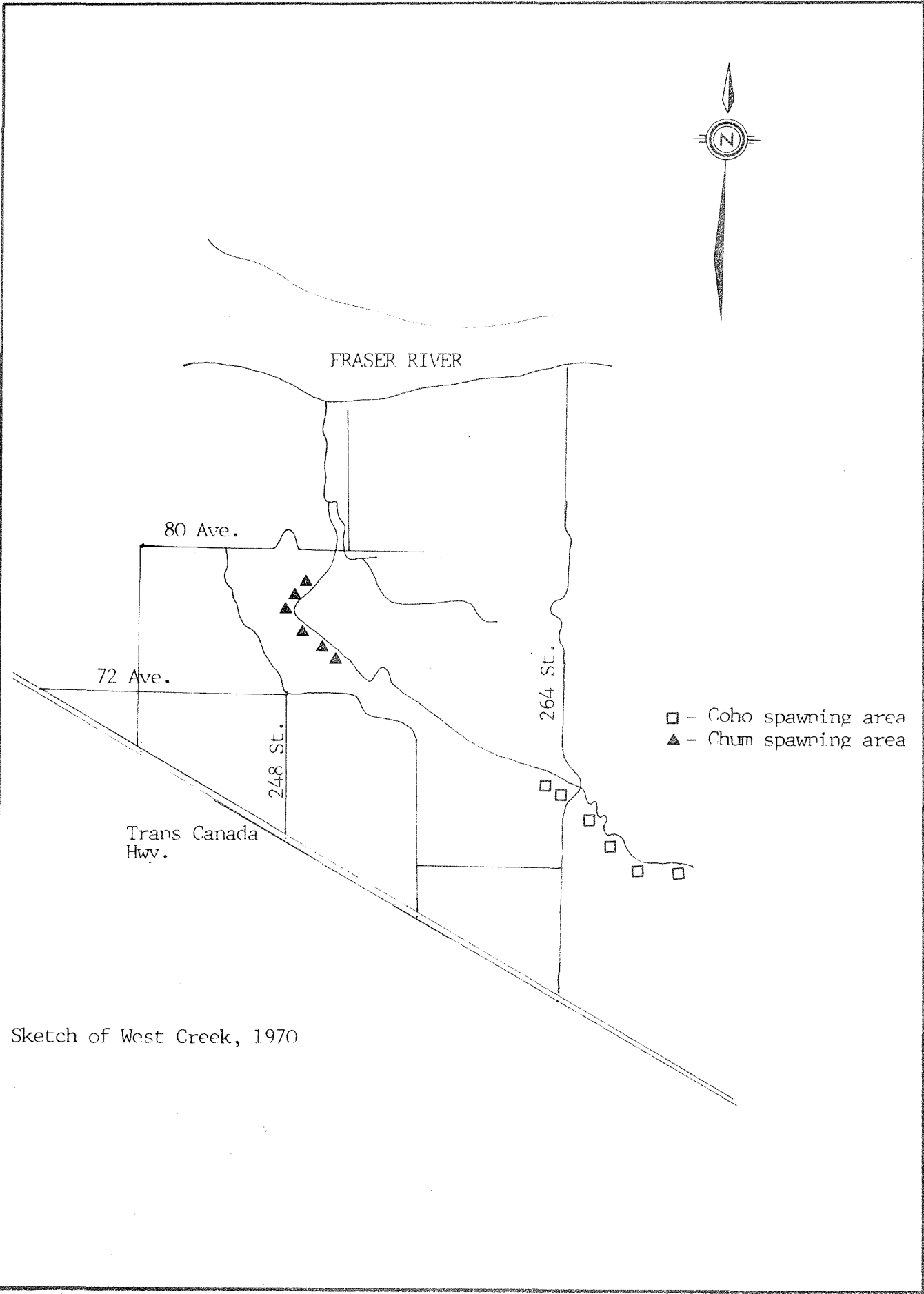
General Remarks:

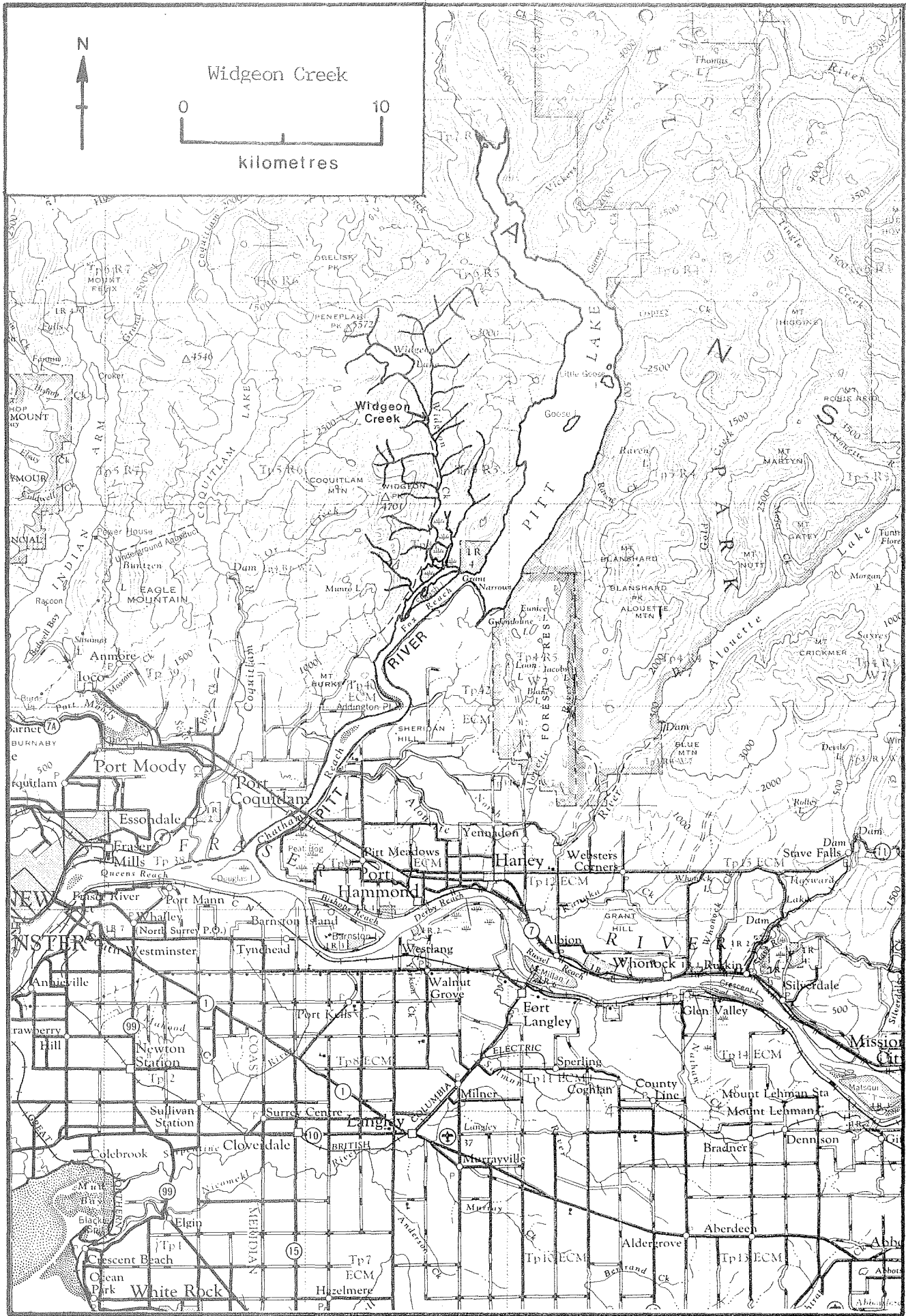
1961 Late run of chums appeared to have suffered from the late gillnet opening.
 1962 No protection at mouth leaves upstream migrants in a vulnerable position.
 1963 A "late" chum salmon stream. Chum escapements during recent cycles are
far below potential.
 1979 Figures for both chum and coho are rough estimates.
 1980 Due to heavy rains during December West Creek was reported to be at
historic highs.
 1981 Recommend that a volunteer group S.E.P. be sent into the creek to clear
out old bridge that has fallen into creek.
 1982 Requires general cleanup of debris downstream of 84th Ave.

ESCAPEMENT RECORD FOR WEST CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	400	25	
48			200	400		
49				400		
50			400	3,500		
51			400	3,500	200	
52			1,500	1,500		
53			400	1,500	400	
54			400	1,500		
55			200	200		
56			75	75		
57			75	400		
58			200	1,500		
59			25	750		
60			75	75		
61			25	25		
62			25	75		
63			75	750		
64			75	25		
65			25	25		
66			75	400		
67			75	200		
68			25	25		
69			25	25		
70			200	200		
71			400	200		
72			200	200		
73			750	200		
74			850	300		
75			1,200	200		
76			400	400		
77			750	150		
78			200	150		
79			100	50		
80			150	50		
81			100	100		
82			250	75		
83			100	15		
84						
85						
TIMING:						
ARRIVE			OCT.	NOV.		
START			E. NOV.	L. NOV.		
PEAK			L. NOV.	M. DEC.		
END			L. DEC.	L. DEC.		

REMARKS





NAME OF STREAM WIDGEON CREEK RAB NO. 00-0200-150
 LOCAL NAME (Silver Creek)
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows S. into Widgeon Slough, Pitt River, W. of Pitt Lake,
New Westminster. POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²

DISCHARGE (m³/s) MAX _____ MIN _____
 TEMPERATURE (°C) _____

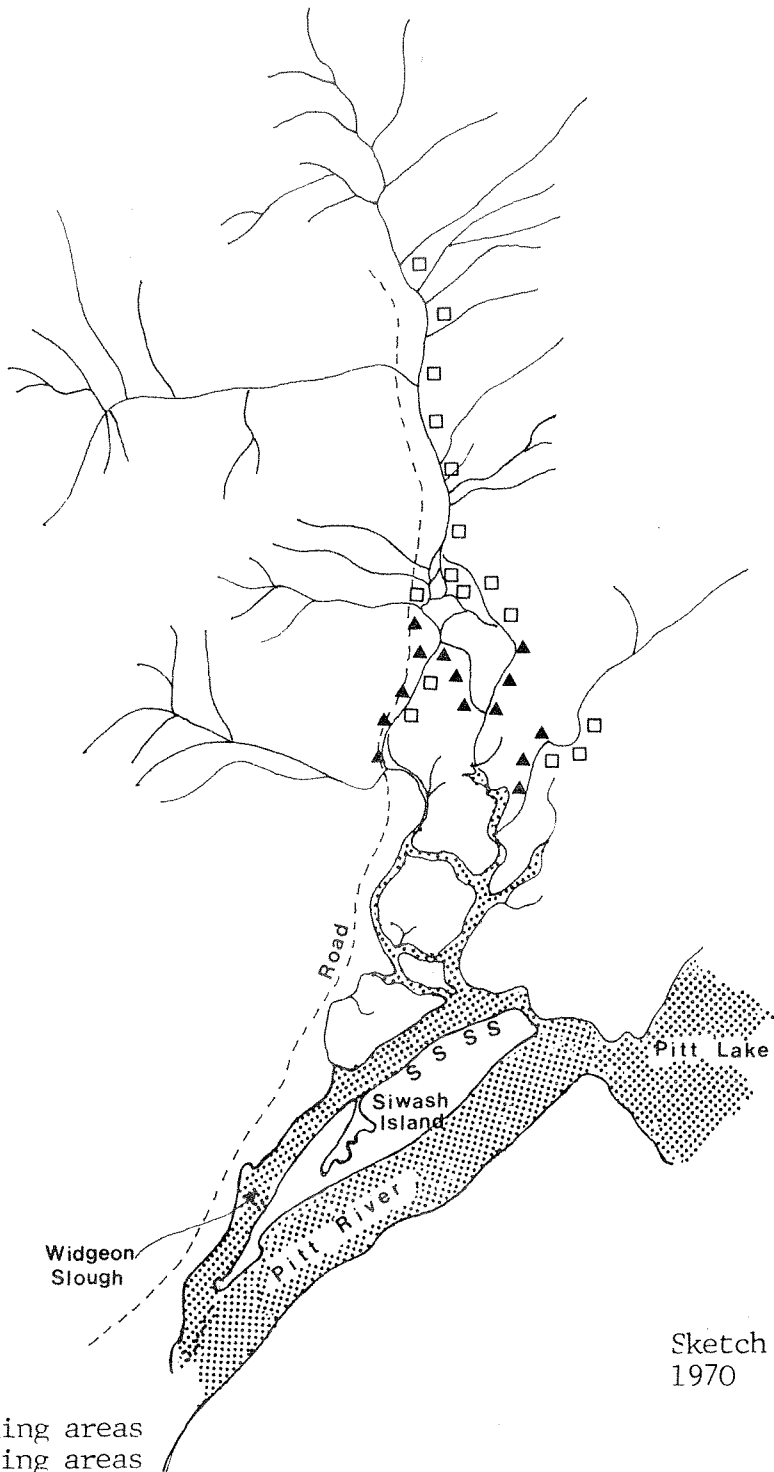
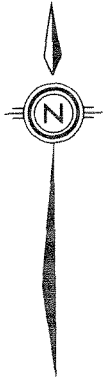
BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls at 9.6km
 1953 Log jams -- passable at certain w/l recommend removal
 1956 Debris accumulation
 1968 Beaver dams -- recommend removal -- passable at high water
 1979 Passable log jams
 1983 Log jams 3.2km upstream

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	- in Widgeon Slough
COHO	- throughout in middle and upper reaches and all side channels
CHUM	- in lower middle area above tidal influence
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Physical conditions:
 1955 75% erosion and silting. Heavy scouring -- many minor changes.
 1956 20-30% erosion and silting -- heavy scouring.
 1960/69 Erosion and silting ranges between 15-50%. Increased scouring and stream
 bed changes due to increase of logging operations. Changes in river bed and
 stream course.
 1970/79 Some minor scouring during freshets. Normal/low water levels reported 76/78
 1980 Evidence of floods in some areas 1981.
 1983 Normal fluctuations in W/L
General remarks:
 1956 Full scale logging of watershed continues making for more unstable
 conditions each year. Early December flash flood caused heavy damage
 to already very light seeding. (57,58,59)
 1960 A very small return from a very unstable light seeding in 1956.
 Stream is presently in a very unstable condition.
 1961 Creek continues to suffer from past years flash floods.
 1962 Excellent returns of both species this year.
 1968 Beaver populations appear to be increasing in this area. Recommend trapping
 program. (1969)
 1973/4 Increase in sports fishery this past year. Should be monitored closely.
 1983 Sockeye figures taken from Salmon Commission count.

Predation: birds and bears.



- - Coho spawning areas
- ▲ - Chum spawning areas
- s - Sockeye spawning areas

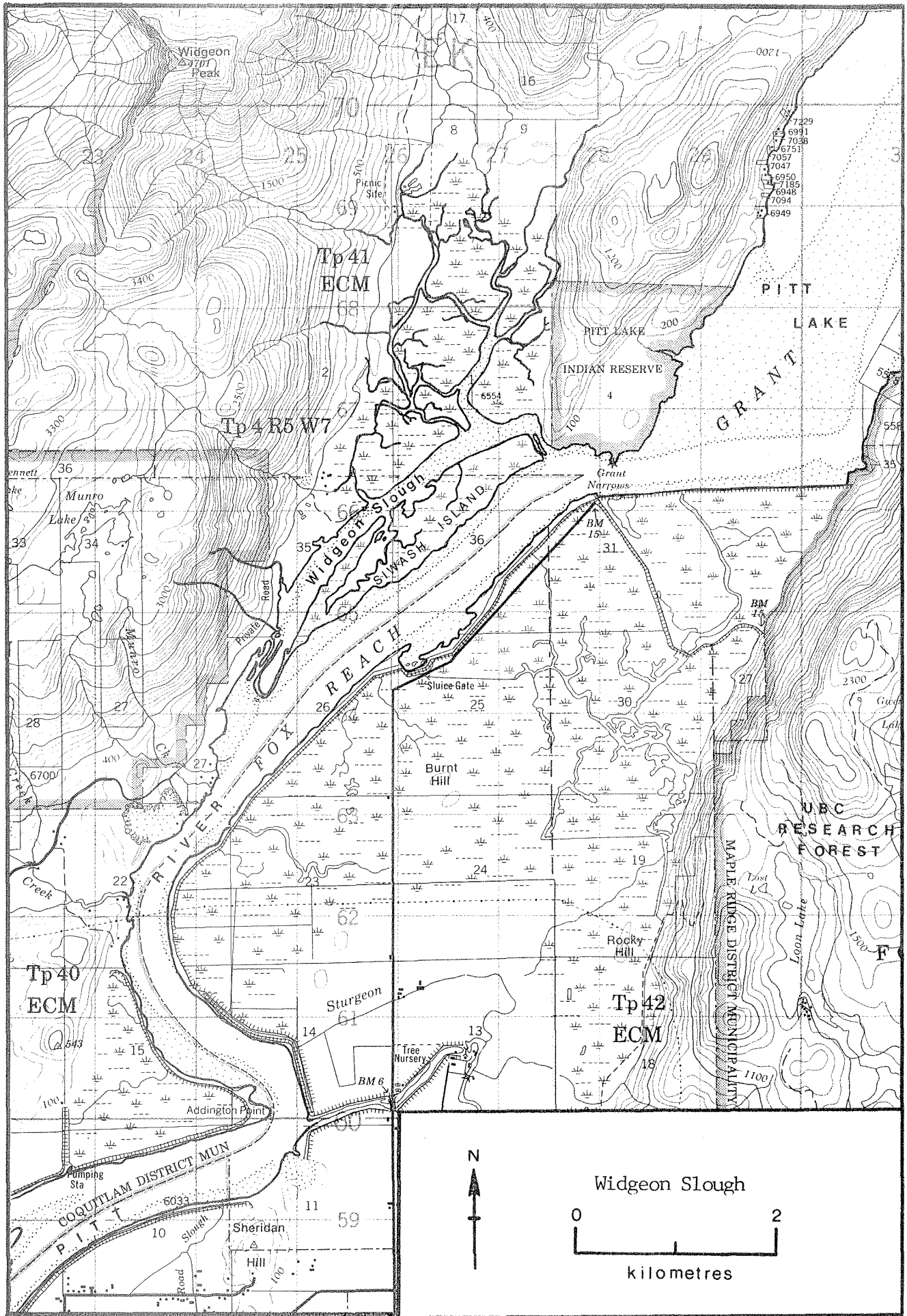
Sketch of Widgeon Creek,
1970 (Silver Creek)

ESCAPEMENT RECORD FOR WIDGEON CREEK (SILVER CREEK)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400	750	3,500	
48			200	750		
49			400	3,500	1,500	
50			750	1,500		
51	750		1,500	3,500	1,500	75
52	1,500		1,500	1,500		400
53			750	1,500	7,500	
54	400		750	750		N/O
55	200		400	750	750	75
56	75		200	200		75
57	1,500		400	1,500	200	UNK
58	1,500		400	200		
59	1,500		25	25		
60	400		200	200		
61	1,500		200	75		
62	750		1,500	750		
63	400		400	75		
64	667		750	75		
65	400		750	200		
66	884		750	750		
67	1,006		200	200		
68	1,552		400	750		
69	715		400	400		
70	400		750	400		
71	394		1,500	750		
72	302		400	400		
73	400		400	750		
74	1,643		250	450		
75	950		400	350		
76	1,390		400	200		
77	425		300	3,000		
78	1,600		1,000	935		
79	599		400	1,200		
80	389		350	1,000		
81	200		300	1,700		
82	515		400	1,500		
83	943		N/O	600		
84						
85						
TIMING:						
ARRIVE	SEP.		OCT.	OCT.		
START	SEP.		E. NOV.	E. NOV.		
PEAK	OCT.		L. NOV.	M. NOV.		
END	E. NOV.		M. DEC.	L. NOV.		

REMARKS

Escapements from 1954 and onwards include Widgeon Slough escapements.



NAME OF STREAM WIDGEON SLOUGH

CONSERVATION DISTRICT 2 STATISTICAL AREA 29

LOCATION OF MOUTH W. of Siwash Island, Pitt River, New Westminster Dist.

POSITION 49 122 SW.

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	
COHO	
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

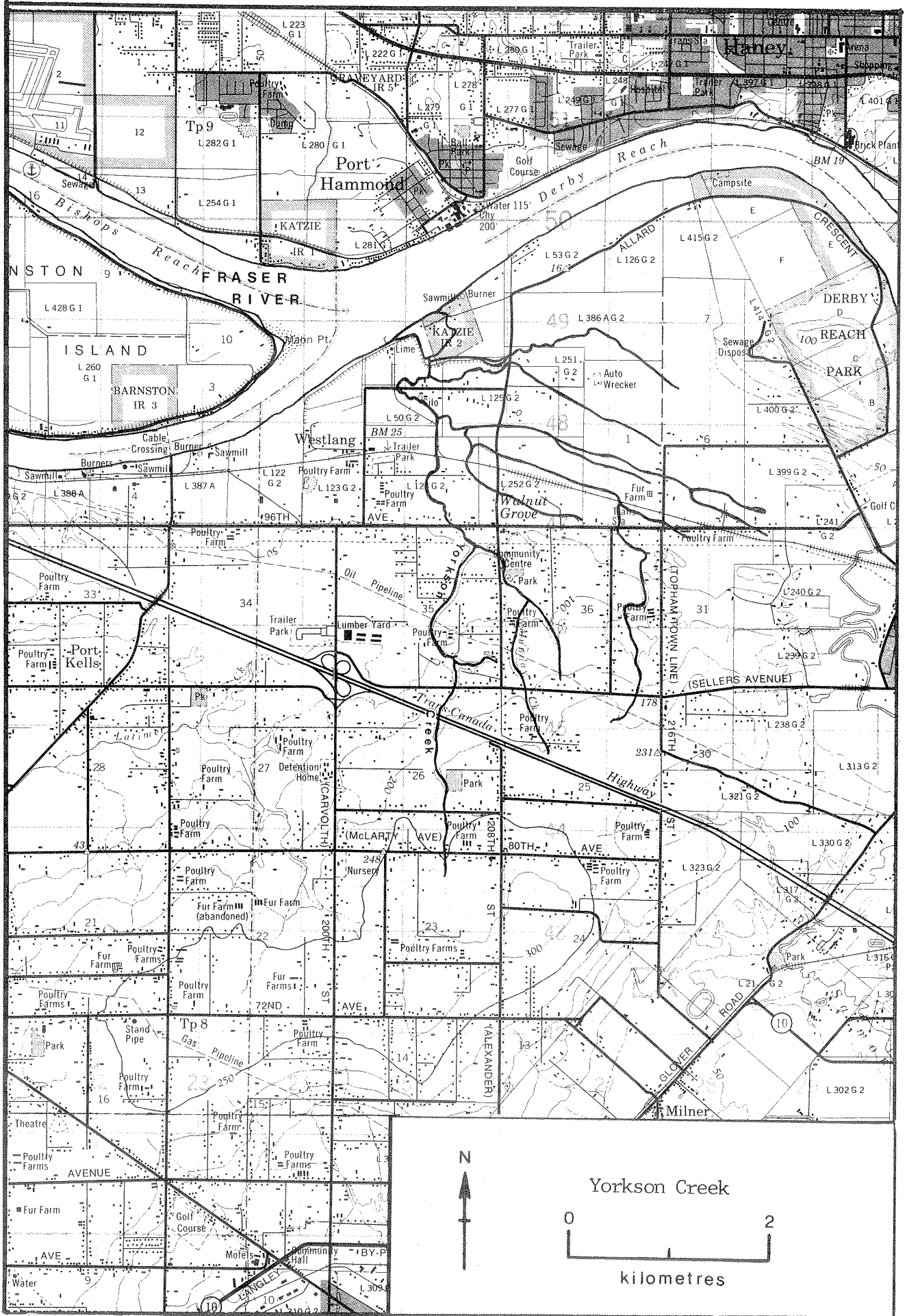
GENERAL REMARKS After 1953 Widgeon Slough information and escapements are included in the Widgeon Creek report.

ESCAPEMENT RECORD FOR WIDGEON SLOUGH

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	750					
48	750					
49	750		75			
50	750		200	400		
51	N/R		N/R	N/R		
52	N/R		N/R	N/R		
53	1,500		400	750	750	
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
TIMING:						
ARRIVE						
START						
PEAK						
END						

REMARKS

Escapements from 1954 and onwards are included with the Widgeon Creek escapements.



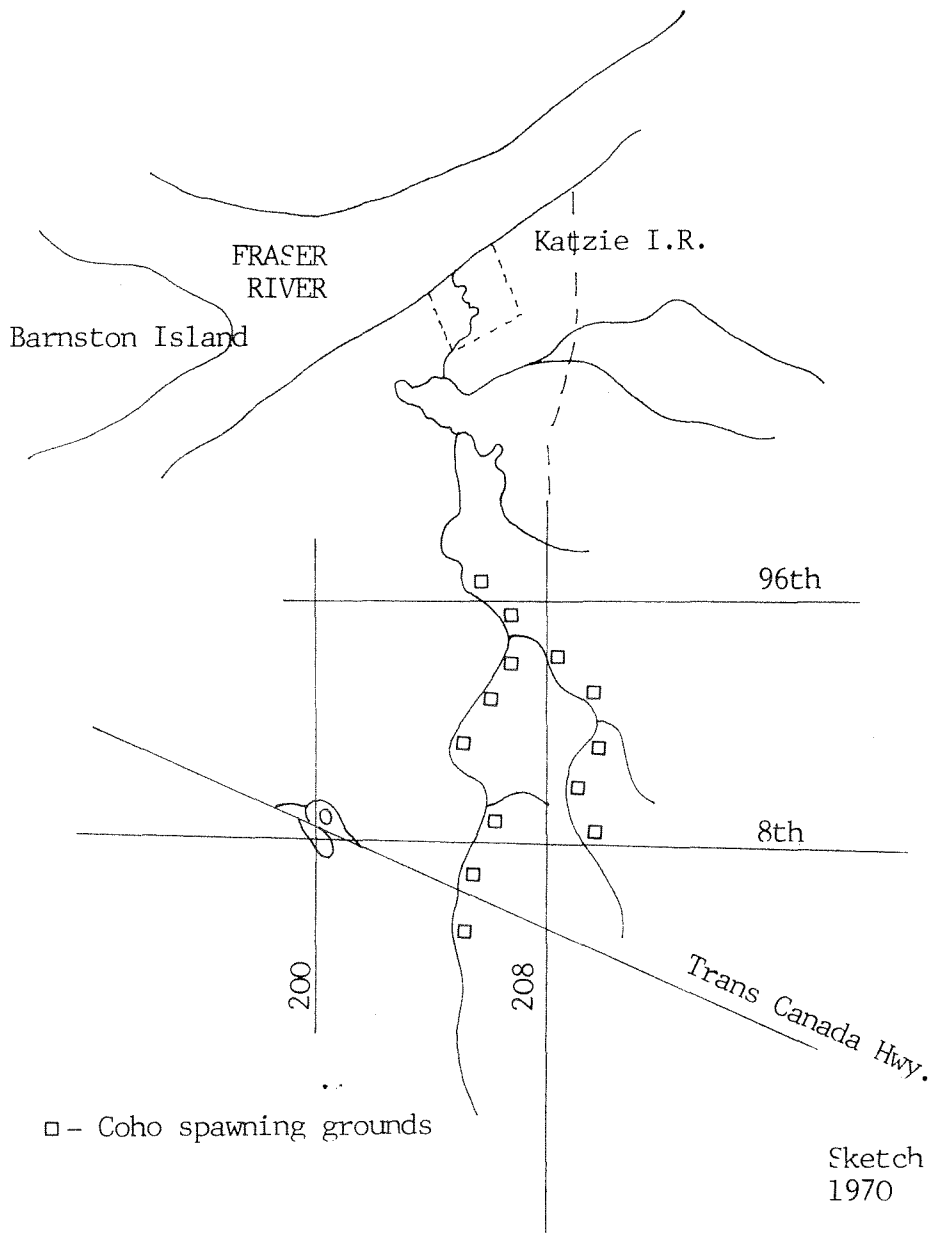
NAME OF STREAM YORKSON CREEK RAB NO. 00-0260
 LOCAL NAME (Jenkins Creek)
 DISTRICT 2 STATISTICAL AREA 29
 LOCATION OF MOUTH Flows N. into Derby Reach, Fraser R., E. of Barnston Island.
 POSITION 49 122 SW.
 LENGTH _____ km WIDTH _____ m DRAINAGE _____ km²
 DISCHARGE (m³/s) MAX 5.10 Jan. 30, 1965 MIN 0.008 Jul. 19, 1977
 TEMPERATURE (°C) _____
 BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout upper stream and in tributaries (Mundy Cr. - heavy)
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	
STEELHEAD	

GENERAL REMARKS Usual seasonal fluctuations in water levels.

This is a small stream with limited potential.
1957 Light fall rains hampered the coho migrations to this small stream.
1979 This figure is an estimate based on previous year's return and the brood year. Probably underestimated
1981 A new housing development established relatively close to the creek. As a result a small fish kill occurred during the summer months. The kill was a result of unknown chemicals being dumped into the storm sewer near the development.
1982 Area is presently being developed for mainly residential use. Should be patrolled regularly to protect habitat.



Sketch of Yorkson Creek,
1970

ESCAPEMENT RECORD FOR YORKSON CREEK (Jenkins Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400			
48			25			
49			75			
50			NO REC			
51			75			
52			400			
53			200			
54			400	25		
55			75			
56			75			
57			75			
58			75			
59			200			
60			25			
61			25			
62			25			
63			75			
64			75			
65			75			
66			75			
67			25			
68			25			
69			25			
70			400			
71			400			
72			200			
73			400			
74			650			
75			600			
76			750			
77			350			
78			150			
79			150			
80			200			
81			100			
82			100			
83			100			
84						
85						
TIMING:						
ARRIVE			OCT.			
START			E. NOV.			
PEAK			L. NOV.			
END			L. DEC.			

REMARKS

Metric Equivalents

CONVERSION FACTORS

The following list of convenient equivalents of measure gives the relationship between imperial units and the International System of Units (SI).

1 inch equals 2.54 cm (centimetres)
1 foot equals 0.3048 m (metre)
1 statute mile equals 1.6093 km (kilometres)
1 cm (centimetre) equals 0.393 70 inch
1 m (metre) equals 3.2808 feet
1 km (kilometre) equals 0.621 37 mile
1 acre equals 43 560 square feet
1 acre equals 0.404 69 ha (hectare)
1 square mile equals 640 acres
1 square mile equals 2.5900 km ² (square kilometres)
1 square mile equals 259.0 ha (hectares)
1 ha (hectare) equals 10 000 m ² (square metres)
1 ha (hectare) equals 2.4710 acres
1 km ² (square kilometre) equals 0.386 10 square mile
1 cubic foot equals 6.2288 imperial gallons
1 imperial gallon equals 4.546 09 L (litres)
1 imperial gallon equals 1.2010 U.S. gallons
1 U.S. gallon equals 0.133 68 cubic foot
1 cubic foot equals 0.068 317 m ³ (cubic metre)
1 m ³ (cubic metre) equals 35.315 cubic feet
1 cubic foot per second for one day equals 1.9835 acre-feet
1 cubic foot per second for one day covers one square mile to a depth of 0.037 19 inch
1 acre-foot equals 1.2335 dam ³ (cubic decametres)
1 m ³ /s (cubic metre per second) for one day equals 86.4 dam ³ (cubic decametre)
1 m ³ /s (cubic metre per second) for one day covers one square kilometre to a depth of 0.0864 m (metre)
1 foot per second equals 0.6818 mile per hour
1 mile per hour equals 1.467 feet per second
1 m/s (metre per second) equals 3.6 km/h (kilometre per hour)
1 km/h (kilometre per hour) equals 0.2778 m/s (metre per second)
1 cubic foot per second equals 0.028 317 m ³ /s (cubic metre per second)
1 m ³ /s (cubic metre per second) equals 35.315 cubic feet per second
1 pound equals 0.453 59 kg (kilogram)
1 kg (kilogram) equals 2.2046 pounds
1 short ton (2000 pounds) equals 0.907 18 t (tonne)
1 t (tonne) equals 2204.6 pounds
degrees Celsius = 5/9 (degrees Fahrenheit - 32)
degrees Fahrenheit = 9/5 (degrees Celsius) + 32

FACTEURS DE CONVERSION

Voici une liste des unités de mesure impériales et leurs équivalences dans le Système international d'unités (SI).

1 pouce vaut 2.54 cm (centimètres)
1 pied vaut 0.3048 m (mètre)
1 mille terrestre équivaut à 1.6093 km (kilomètre)
1 cm (centimètre) équivaut à 0.393 70 pouce
1 m (mètre) équivaut à 3.2808 pieds
1 km (kilomètre) équivaut à 0.621 37 mille
1 acre vaut 43 560 pieds carrés
1 acre équivaut à 0.404 69 ha (hectare)
1 mille carré vaut 640 acres
1 mille carré équivaut à 2.5900 km ² (kilomètres carrés)
1 mille carré équivaut à 259.0 ha (hectare)
1 ha (hectare) vaut 10 000 m ² (mètres carrés)
1 ha (hectare) équivaut à 2.4710 acres
1 km ² (kilomètre carré) équivaut à 0.386 10 mille carré
1 pied cube équivaut à 6.2288 gallons impériaux
1 gallon impérial vaut 4.546 09 L (litres)
1 gallon impérial équivaut à 1.2010 gallon américain
1 gallon américain équivaut à 0.133 68 pied cube
1 pied cube vaut 0.068 317 m ³ (mètre cube)
1 m ³ (mètre cube) vaut 35.315 pieds cubes
1 pied cube par seconde pendant un jour équivaut à 1.9835 acre-pied
1 pied cube par seconde pendant un jour équivaut à un volume d'un mille carré par 0.037 19 pouce
1 acre-pied équivaut à 1.2335 dam ³ (décamètres cubes)
1 m ³ /s (mètre cube par seconde) pour un jour vaut 86.4 dam ³ (décamètre cube)
1 m ³ /s (mètre cube par seconde) pour un jour couvre un kilomètre carré à une profondeur de 0.0864 m (mètre)
1 pied par seconde équivaut à 0.6818 mille par heure
1 mille par heure équivaut à 1.467 pied par seconde
1 m/s (mètre par seconde) vaut 3.6 km/h (kilomètre par heure)
1 km/h (kilomètre par heure) vaut 0.2778 m/s (mètre par seconde)
1 pied cube par seconde équivaut à 0.028 317 m ³ /s (mètre cube par seconde)
1 m ³ /s (mètre cube par seconde) équivaut à 35.315 pieds cubes par seconde
1 livre équivaut à 0.453 59 kg (kilogramme)
1 kg (kilogramme) équivaut à 2.2046 livres
1 tonne courte (2000 livres) équivaut à 0.907 18 t (tonne)
1 t (tonne) équivaut à 2204.6 livres
degrés Celsius = 5/9 (degrés Fahrenheit - 32)
degrés Fahrenheit = 9/5 (degrés Celsius) + 32