

NAME OF STREAM MANNION CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows S.W. into Thornbrough Channel, S.W. side of

Gambier Is. - New Westminster Dist. POSITION 49 123 SE

LENGTH .5 MI. WIDTH FT. DRAINAGE SQ. MI.

COMPOSITION: BEDROCK BOULDER COARSE FINE

SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000

0.0 - 2.5

2.5 - 5.0

5.0 - 7.5

7.5 - 10.0

> 10.0

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

- Impassable falls at .5 mi.

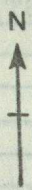
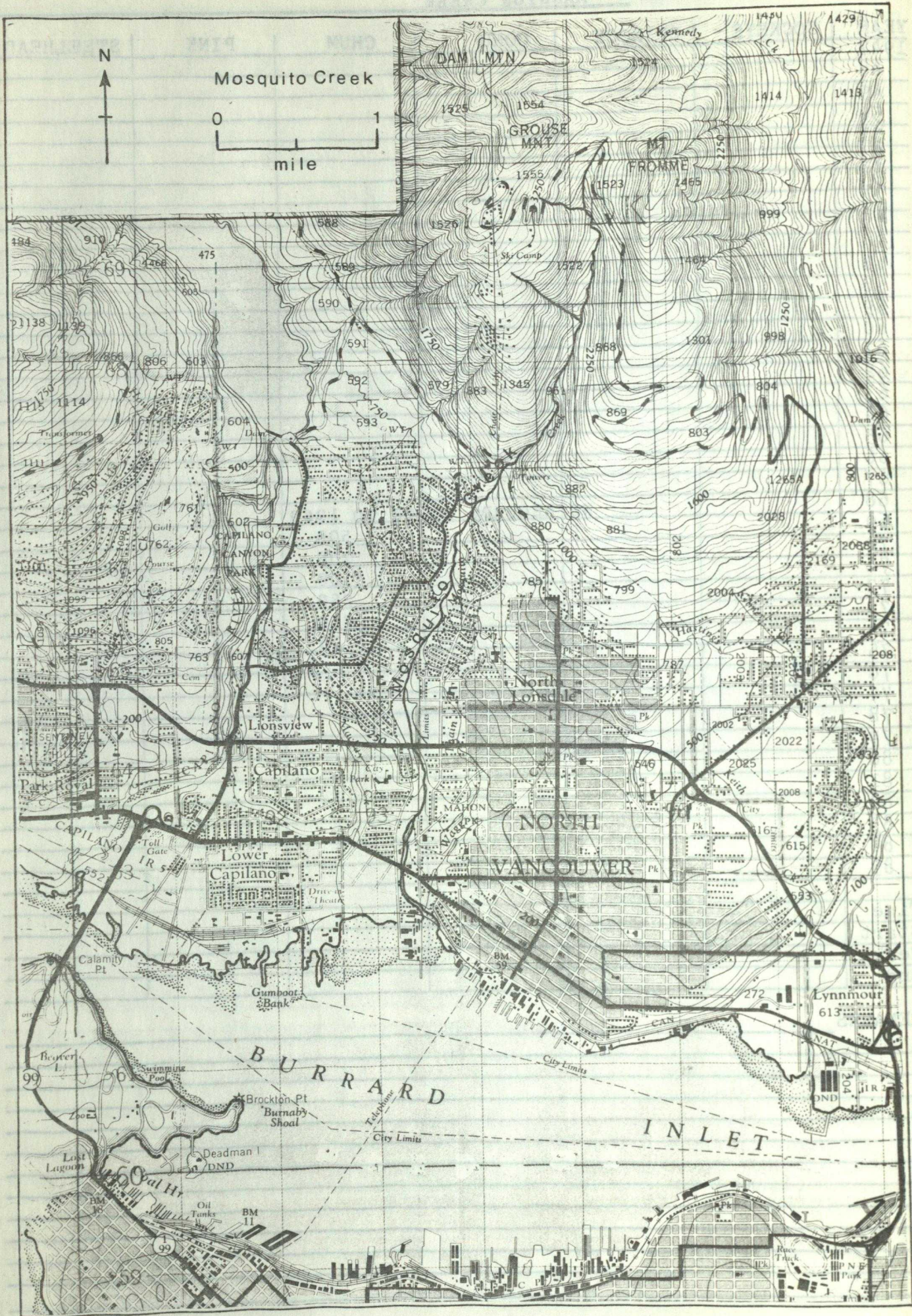
SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	lower .5 mi.
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

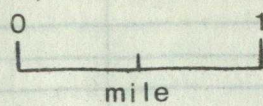
POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- A small stream with .5 miles of suitable spawning area. (1969)



Mosquito Creek



DAM MNT

GROUSE MNT

FRONNE

CAPILANO CANYON PARK

Lionsview

Capilano

Lower Capilano

NORTH VANCOUVER

BURRARD

INLET

Lost Lagoon

Brockton Pt

Burnaby Shoal

Deadman I

Oil Tanks

Lynnmour

613

DND

DND

DND

DND

DND

DND

DND

DND

DND

NAME OF STREAM MOSQUITO CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows S. through North Vancouver into Burrard Inlet - New Westminster Dist. POSITION 49 123 S.E.

LENGTH _____ MI. WIDTH _____ FT. DRAINAGE 2.1 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE * _____ CFS MAX 1470 cfs (Inst.) MIN 0.4 cfs (Inst.)

TEMPERATURE _____ 10/10/67 _____ 10/09/65

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION:

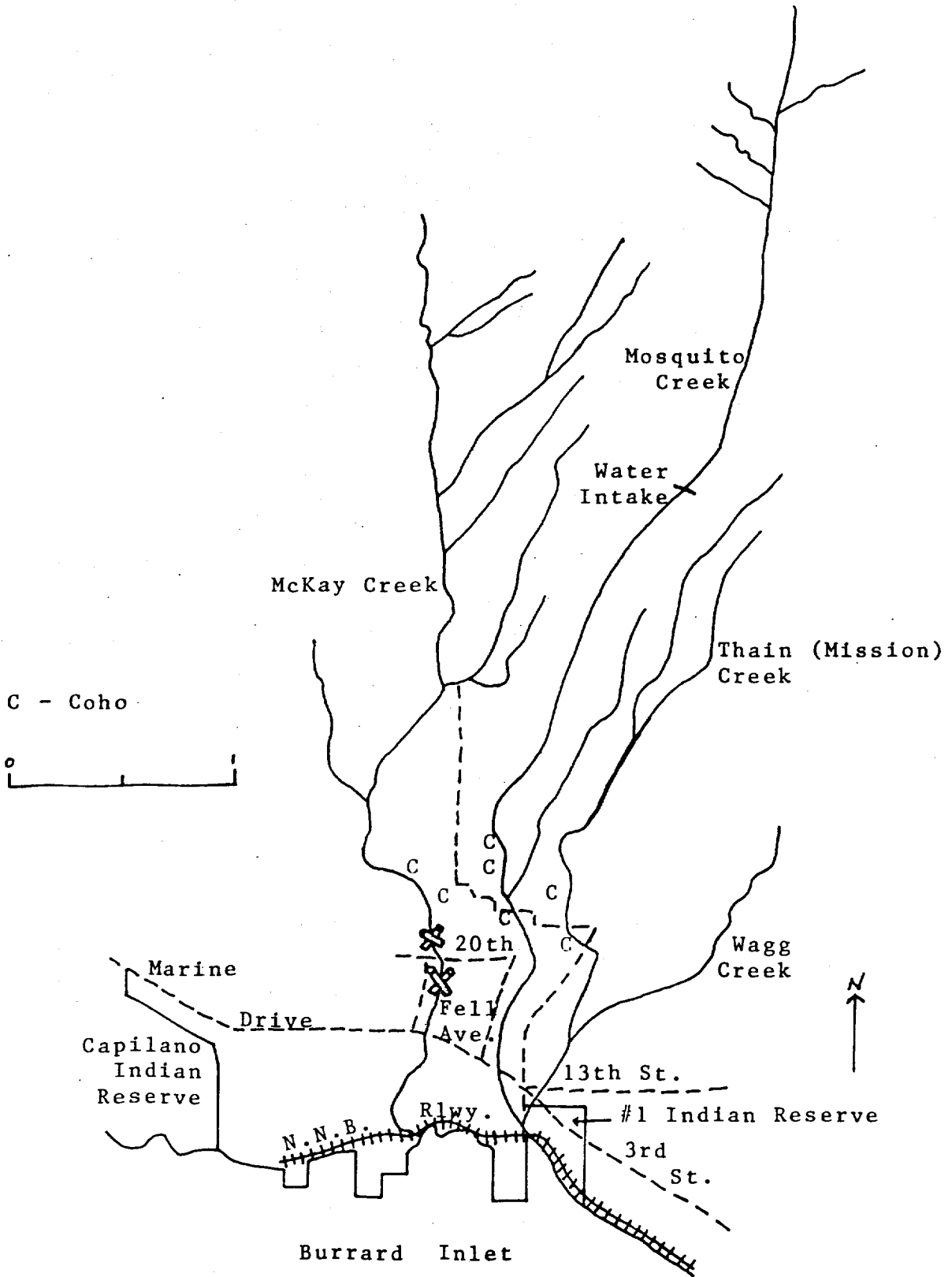
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

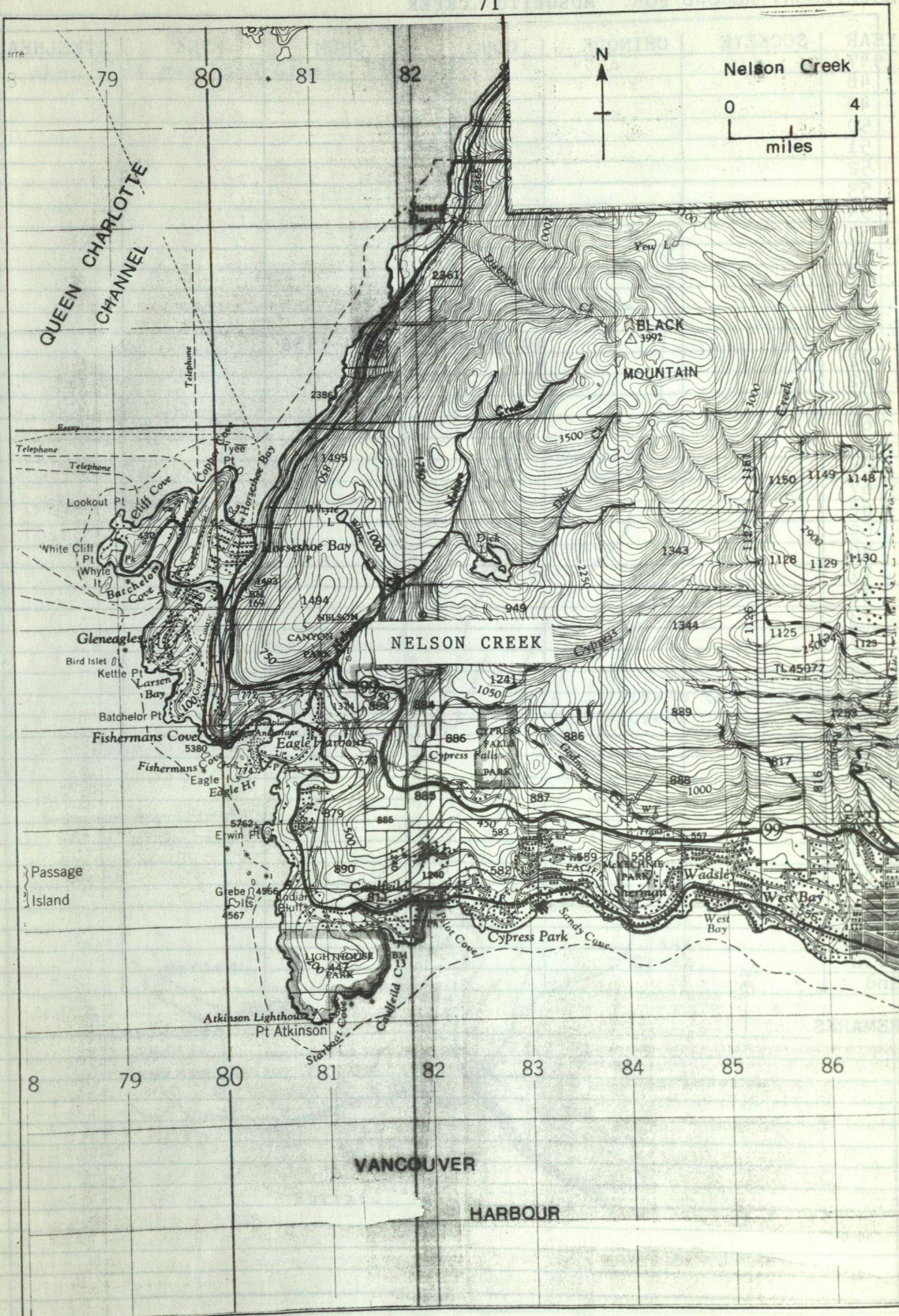
POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream is being continuously cleared as a flood control measure and very little area is left for spawning. (1956)
- Water conditions are seriously affected by extensive land clearing and residential development. During the past dry season, the stream beds were practically dry and a serious loss in resident coho fry is to be expected. (1958)
- * Records poor - flow affected by diversion.

Sketch of Mosquito Creek, 1948





QUEEN CHARLOTTE CHANNEL

Nelson Creek
0 4
miles

NELSON CREEK

VANCOUVER HARBOUR

NAME OF STREAM NELSON CREEK
 CONSERVATION DISTRICT 2 STATISTICAL AREA 28
 LOCATION OF MOUTH Flows S.W. into Fisherman's Cove, N. of Pt. Atkinson
- New Westminster Dist. POSITION 49 123 S.E.
 LENGTH .4 MI. WIDTH FT. DRAINAGE 4 SQ. MI.
 COMPOSITION: BEDROCK BOULDER COARSE FINE
 SILT & SAND UNCLASSIFIED

GRADIENT:
 FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.
 DISCHARGE CFS MAX MIN
 TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT
 - Impassable sluiceway at Marine Drive during low flows.
 - Passable falls at .25 mi.
 - Impassable road culvert on Cranley Drive at 2000'.
 - Impassable sluiceway under P.G.E. trestle in Nelson Canyon at 2500'.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	up to .4 mi.
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

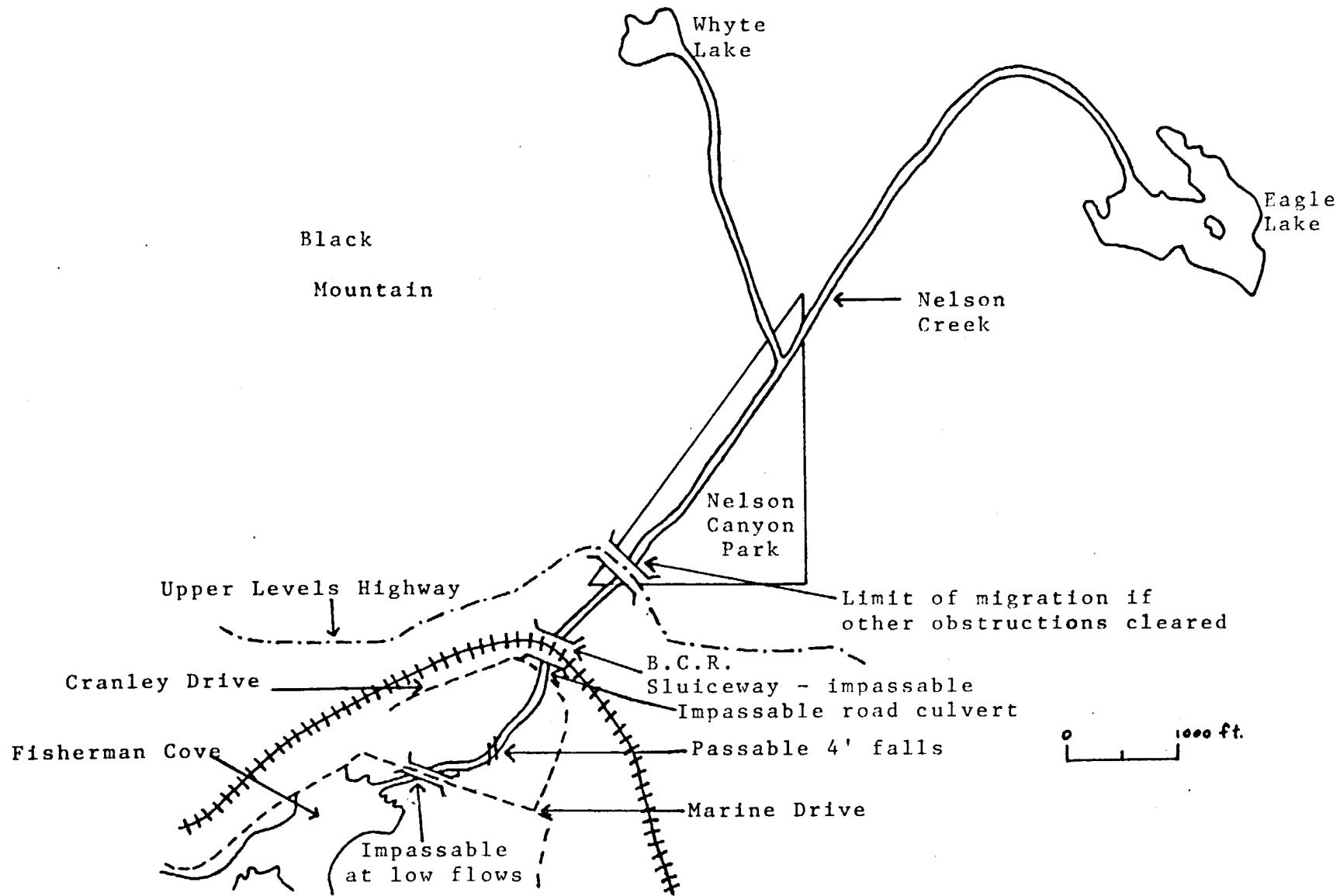
GENERAL REMARKS:
 - This stream flows through developed land and is confined to a man-made channel. Many sluiceways and culverts associated with the development are partial or total barriers to fish migration. A biological study conducted in 1967 concluded that rehabilitation of this stream would not be practical.
 - The stream bed consists mainly of coarse gravel and boulders. The upper mile has a very steep gradient.
 - In 1959, Fisheries Officers reported that this stream was unsuitable for chum salmon propagation because of deforestation, water draw-off,

GENERAL REMARKS: (Cont'd)

- housing, commercial development and poor passage at culverts.
- This stream is subject to very low water flows each year until the late fall rains commence. The water levels are low because water from Eagle Lake and the mainstem above the upper limit of migration is dammed and used for the municipality of West Vancouver's domestic water supply. (1958)
 - Logging and subdivision clearing has been responsible for denuding the forest cover. Consequently, resulting extremes of discharge cause gravel scouring and water temperature problems.
 - In 1967, Thunderbird Marina operators eliminated the lower 250' of the stream by dredging to enlarge the bay. As a result, salmon are only able to enter the creek when the tides are above 14'.

References:

- Rapp, O. & G.A.C. Wilson. 1967. Nelson Creek. Dept. of Fish., Pac. Reg. Memo. 31-1-N6. 3p.
- Hamilton, R. 1973. Nelson Creek. D.O.E., F.M.S., Pac. Reg. Memo. 31-1-N6. 2p.
- Spratley, L. 1973. Nelson Creek. D.O.E., F.M.S., Pac. Reg. Memo. 31-1-N6. 2p.
- Malcolm, J.R. 1972. Nelson Creek. D.O.E., F.M.S., Pac. Reg. Memo. 31-1-N6. 2p.



Sketch of Nelson Creek

E

Y
J
L

E

10

10

10

10

10

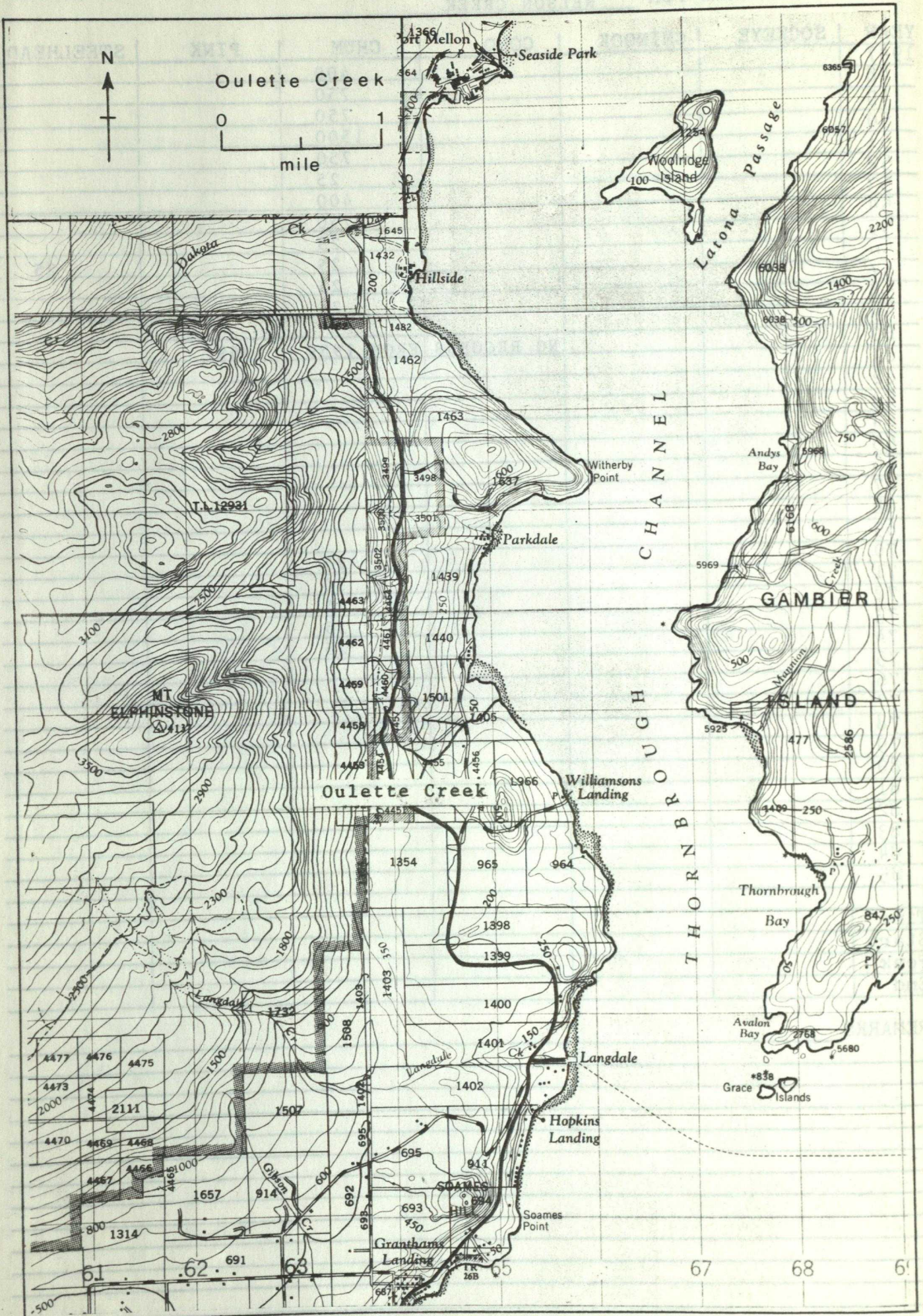
10

10

10

10

10



NAME OF STREAM OULETTE CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows into Thornbrough Channel, N. of Williamsons

Landing - New Westminster Dist. POSITION 49 123 S.E.

LENGTH MI. WIDTH FT. DRAINAGE SQ. MI.

COMPOSITION: BEDROCK BOULDER COARSE FINE

SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

SPAWNING DISTRIBUTION:

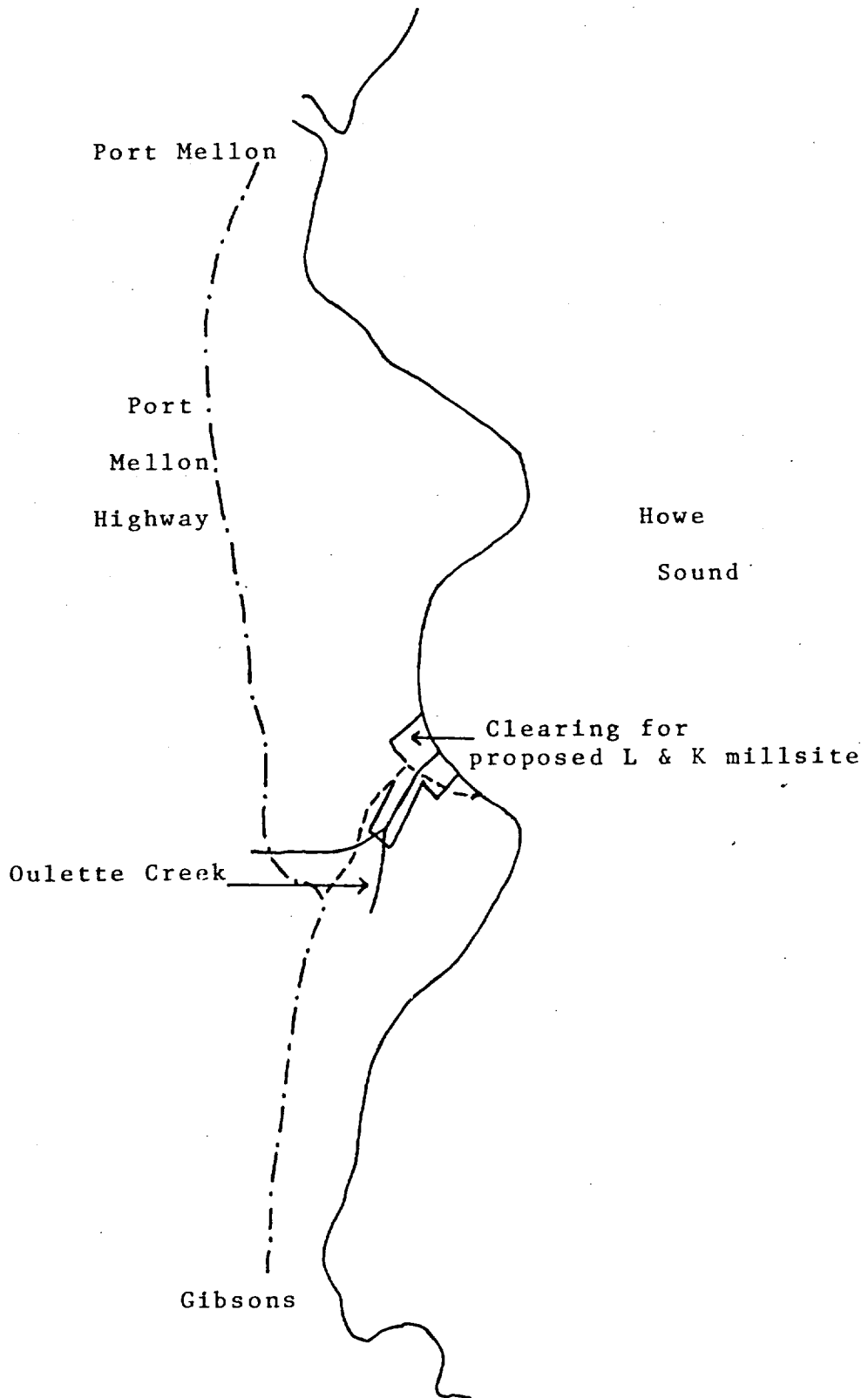
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	all suitable areas
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- A 20% loss of spawn occurred this year due to over spawning. (1968)
- The mouth of this stream was cleared by a lumber company for a saw-mill. (1969)
- The estimated loss to spawn due to Dec. floods was approx. 40%. (1972)

Sketch of Oulette Creek, 1969



NAME OF STREAM PILLCHUCK CREEK
 CONSERVATION DISTRICT 2 STATISTICAL AREA 28
 LOCATION OF MOUTH Flows S.W. into Squamish R., N.W. of mouth of
Cheakamus R. - New Westminster Dist. POSITION 49 123 NE
 LENGTH 3 MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000

0.0 - 2.5

2.5 - 5.0

5.0 - 7.5

7.5 - 10.0

> 10.0

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

- Impassable falls at 3 mi.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	evenly up to 3 mi.
CHUM	evenly up to 3 mi.
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- Heavy deposits of mud and silt can be found between the scattered gravel beds. (1971)
- This stream flows slowly along the flats up to 3 mi. (1971)
- In 1955, 30% of the stream bed was scoured during flooding in early Nov. and an estimated 40% of the coho spawn was lost. Most of the chum entered after the flood.

ES

YI

10

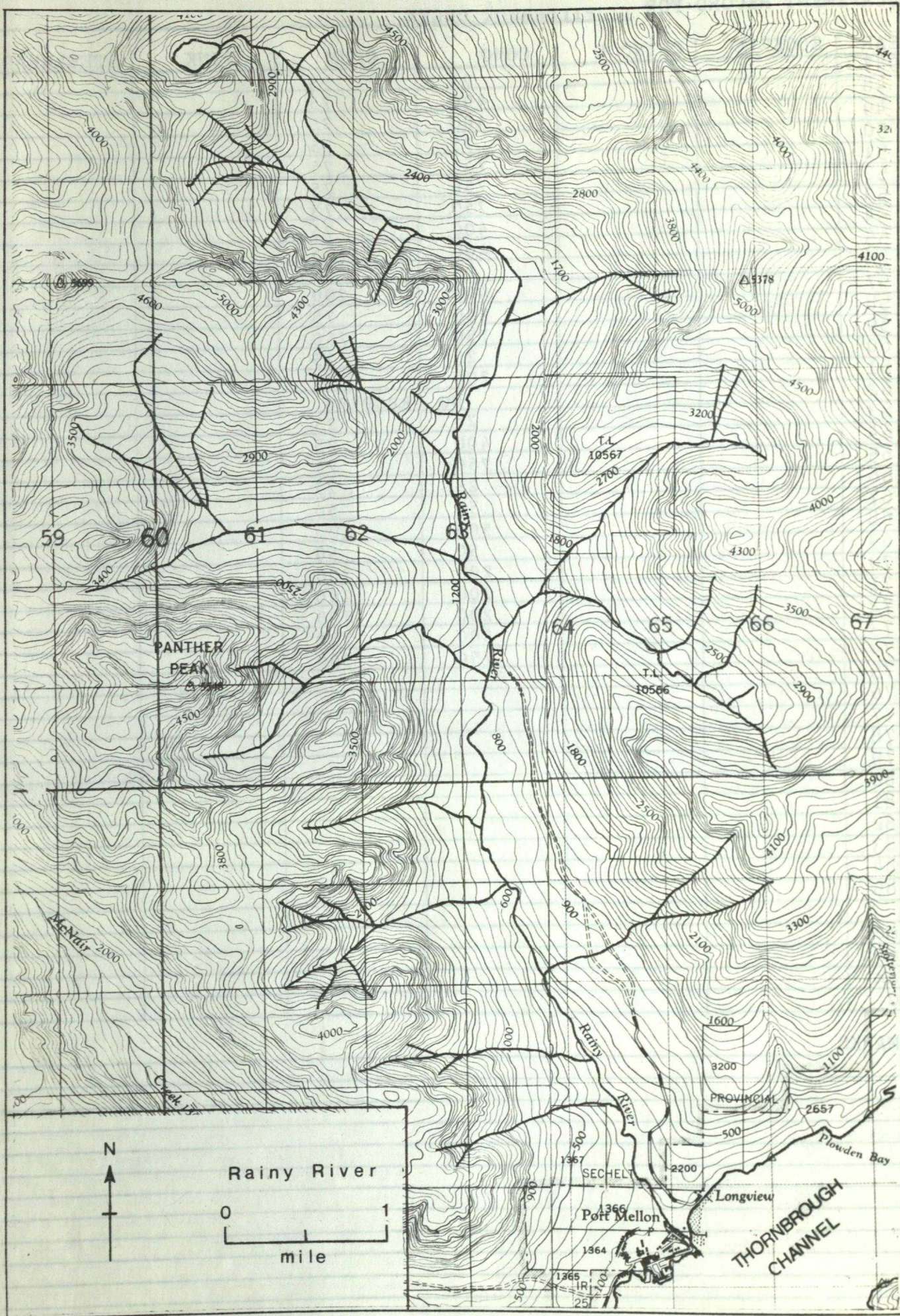
TI

ST

Pe

En

RE



NAME OF STREAM RAINY RIVER
 CONSERVATION DISTRICT 2 STATISTICAL AREA 28
 LOCATION OF MOUTH Flows S.E. into Thornbrough Channel at Port Mellon -
New Westminster Dist. POSITION 49 123 N.E.
 LENGTH 3.5 MI. WIDTH FT. DRAINAGE 26.4 SQ. MI.
 COMPOSITION: BEDROCK BOULDER COARSE FINE
 SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000

0.0 - 2.5

2.5 - 5.0

5.0 - 7.5

7.5 - 10.0

> 10.0

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.DISCHARGE * 307 CFS MAX 15100 cfs 01/12/58 MIN 0 cfs 30/09/63TEMPERATURE BARRIERS OR POINTS OF DIFFICULT ASCENT

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	above dam (.75 mi.)
CHUM	
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	above dam

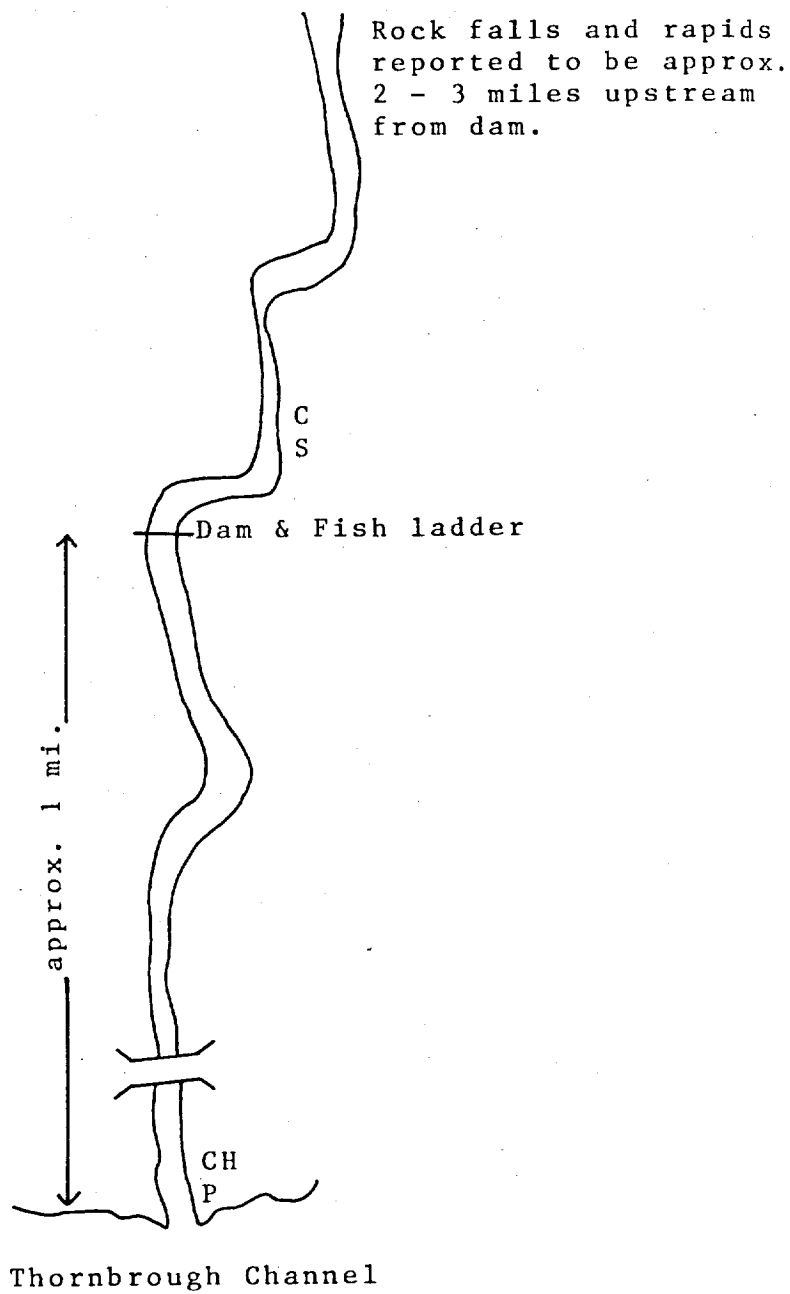
POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- To facilitate the water requirements of a pulp mill, constructed at the mouth prior to 1930, a diversion dam was built approx. .75 mi. upstream. To aid fish passage at the dam a Denile-type fishway was constructed in 1954.

* Flow affected by diversion to pulp mill.

Sketch of Rainy River, 1971
(lower spawning grounds)

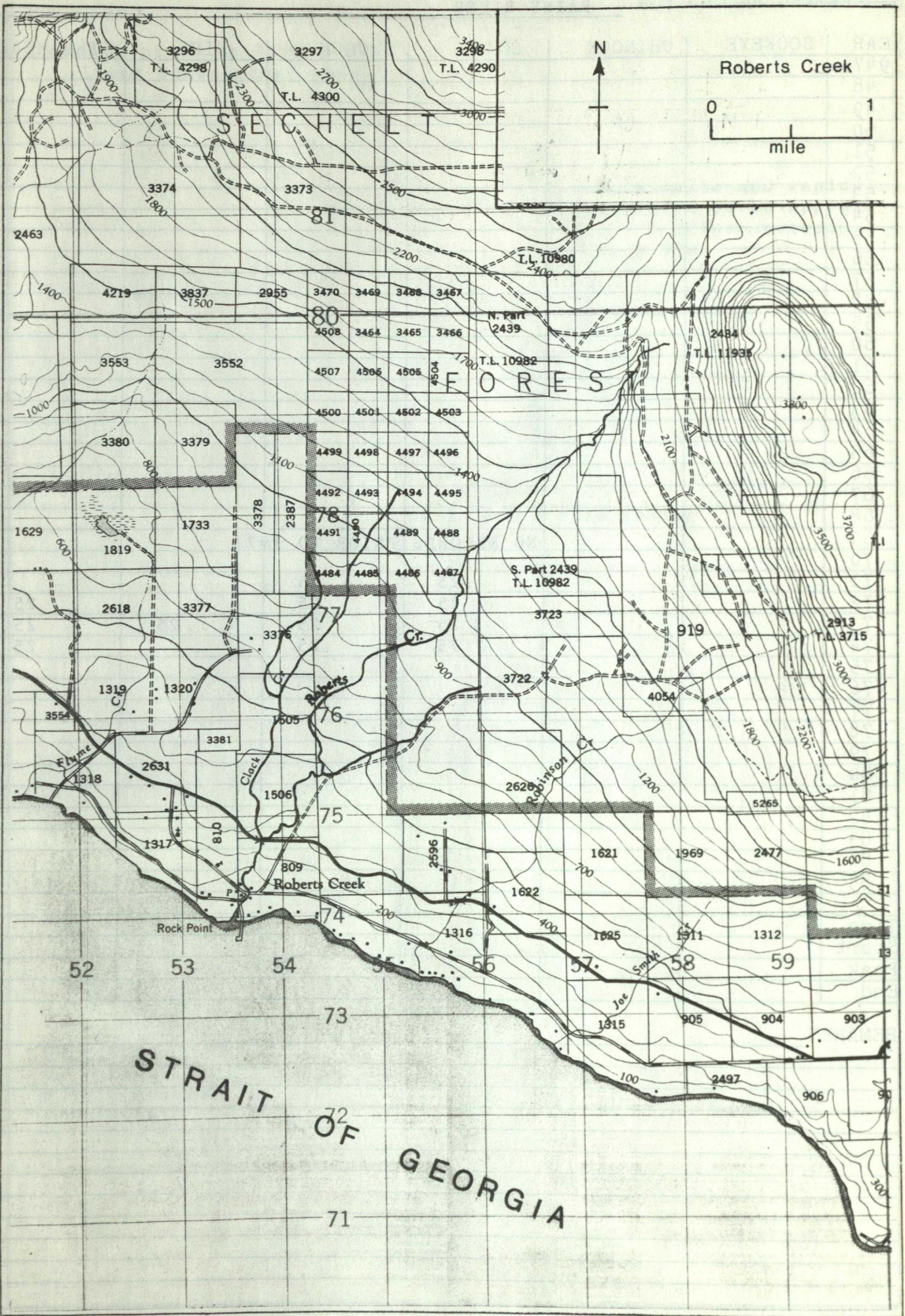


CH - Chum
C - Coho
S - Steelhead
P - Pink

ESCAPEMENT RECORD FOR RAINY RIVER

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			NO RECORDS PRIOR TO 1971				
71			25	25			
72			25	25		25	
73			25	25	25	25	
74			75	25		25	
75							
76							
77							
78							
79							
80							
81							
82							
83							
84							
85							
Time							
Start							
Peak							
End							

REMARKS



NAME OF STREAM ROBERTS CREEK
 CONSERVATION DISTRICT 2 STATISTICAL AREA 28
 LOCATION OF MOUTH Flows S. into Str. of Georgia, S.E. of Trail Bay -
New Westminster Dist. POSITION 49 123 SW
 LENGTH 0.75 MI. WIDTH _____ FT. DRAINAGE 11.3 SQ. MI.
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE 38.0 CFS MAX 1100 cfs 29/01/65 MIN 0.86 cfs 9+10/07/68

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

- Impassable falls at 0.75 mi.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	evenly distributed up to 0.75 mi.
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- In 1972, silting and erosion caused by high water levels affected about 20% of the spawning beds. An estimated 60-70% of the spawn was lost. (1972)
- In March/69, an eight foot wide trench was cut across the stream bed for the purpose of installing a waterline. The spawning grounds in this area were destroyed.
- It is recommended that the log jam below the falls be removed as it interferes with the natural movement of the gravel. (1969)

ES

YE

TO

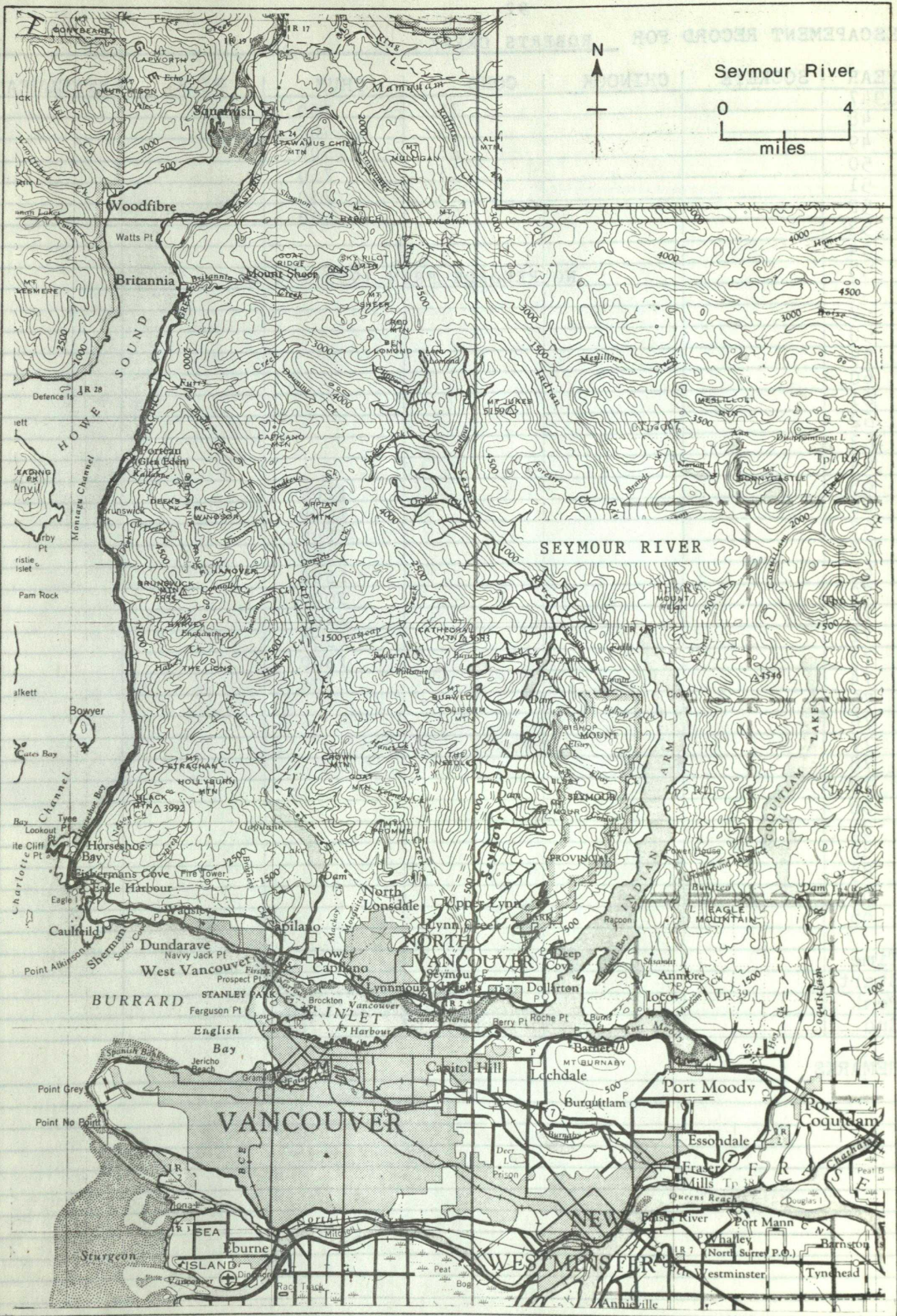
Edinburgh

R

ESCAPEMENT RECORD FOR ROBERTS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD	
1947			25	750			
48			25	400			
49			25	1500			
50			25	750			
51			75	750			
52			25	400			
53							
54							
55			NO RECORDS FROM 1953 - 1964				
56							
57							
58							
59							
60							
61							
62							
63							
64							
65				1200			
66				1000			
67				1500			
68				1200			
69				1500			
70				3000			
71				2100			
72				2500			
73				1300			
74				75			
75							
76							
77							
78							
79							
80							
81							
82							
83							
84							
85							
Time							
Start							
Peak							
End							

REMARKS



NAME OF STREAM SEYMOUR RIVERCONSERVATION DISTRICT 2 STATISTICAL AREA 28LOCATION OF MOUTH Flows S. into Second Narrows, Burrard Inlet - NewWestminster Dist. POSITION 49 123 S.E.LENGTH 12 MI. WIDTH FT. DRAINAGE 68 SQ. MI.COMPOSITION: BEDROCK BOULDER COARSE FINE SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000

0.0 - 2.52.5 - 5.05.0 - 7.57.5 - 10.0> 10.0WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.DISCHARGE *591 CFS MAX 22000 cfs 26/11/49 MIN 9.3 cfs 10/08/28TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

- Impassable G.V.W.D. dam at 12 mi. (minimum flow - 48 cfs).
- Narrow canyon containing large boulders at 2.5 mi. - passable at all but extremely high and low water levels.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	mainly in stretch 2 mi. below G.V.W.D. dam
CHUM	lower reaches
PINK (ODD YR)	lower reaches
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

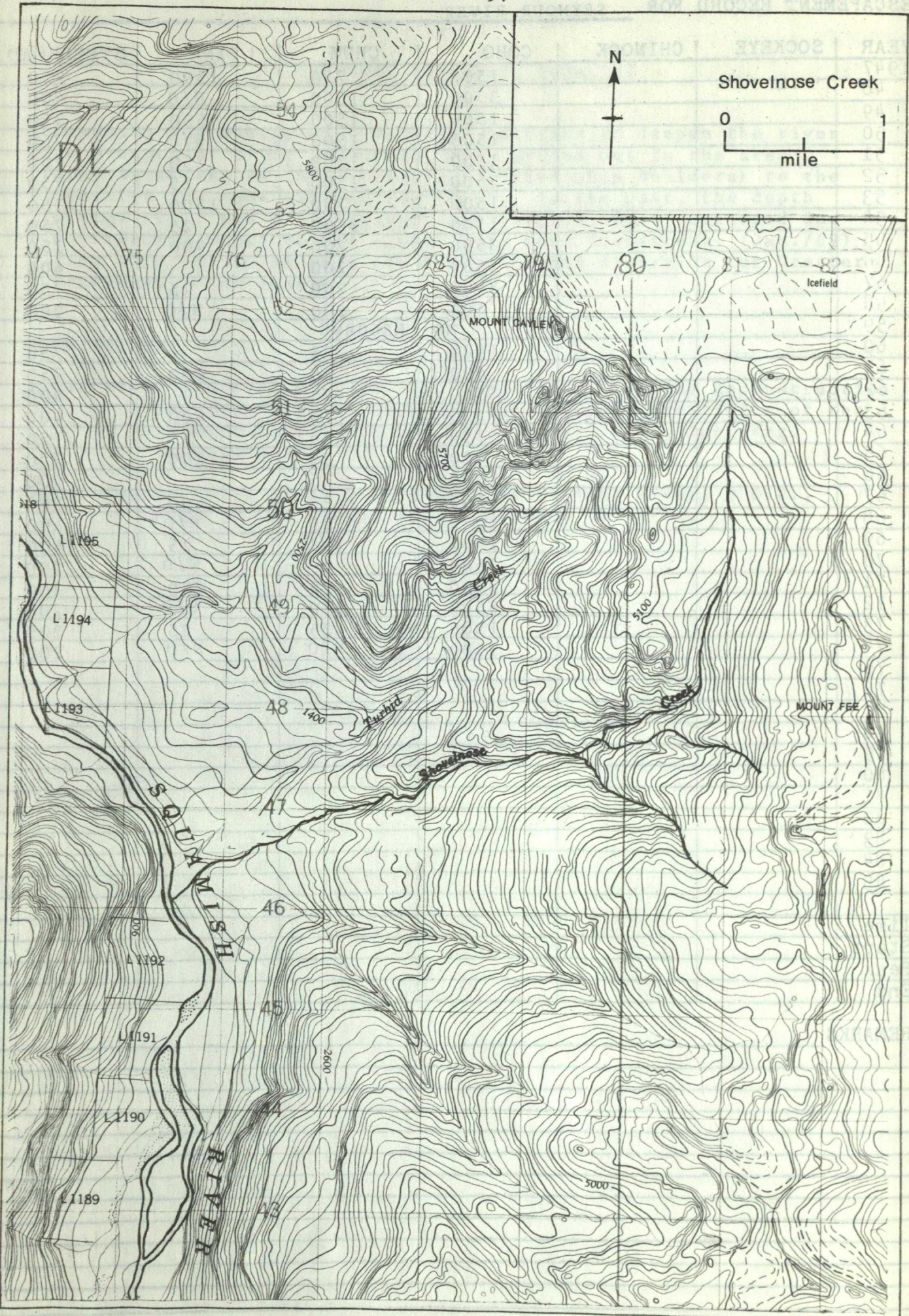
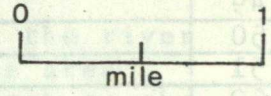
- There are numerous small streams and gravel beds situated from 4-20 mi. above the dam.

GENERAL REMARKS:

- This stream is subject to a heavy sport fishery because it is close to Vancouver. (1974)
- Precipitation in this area is relatively heavy. The average annual rainfall at the southern end of Seymour Lake is 147", while Vancouver's annual average is 59".
- Because of its plentiful water supply, Seymour River is looked upon as a reservoir that could supplement other systems, such as Capilano Lake and Coquitlam Lake in times of high demand. (G.V.W.D.)



Shovelnose Creek



N
C
L
W
L
C
G
F
—
—
—
W
D
T
B
—
—
—
S
S
S
C
C
C
P
P
S
P
G

NAME OF STREAM SHOVELNOSE CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows S.W. into Squamish R., S. of Elaho R. - New

Westminster Dist. POSITION 50 123 SE

LENGTH 1 MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____
- Impassable falls at 3 mi.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	<u>lower reaches - running parallel to Squamish R.</u>
COHO	<u>1 mi. up from the outlet</u>
CHUM	<u>90% in lower reaches - running parallel to Squamish R.</u>
PINK (ODD YR)	<u>1 mi. up from the outlet</u>
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- An ideal spawning stream with consistent water levels, good gravel and plenty of shaded areas. The stream is also groundwater fed.
- Back up water is forced into Shovelnose Cr. when Squamish R. floods.
- In 1974, 20,000 natural coho smolts in the Squamish R. system were tagged. Shovelnose Cr., a tributary of the Squamish R. was included in this project.

ES

YE

19

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

Tim

Sta

Pea

End

REM.

—

—

—

—

—

—

—

—

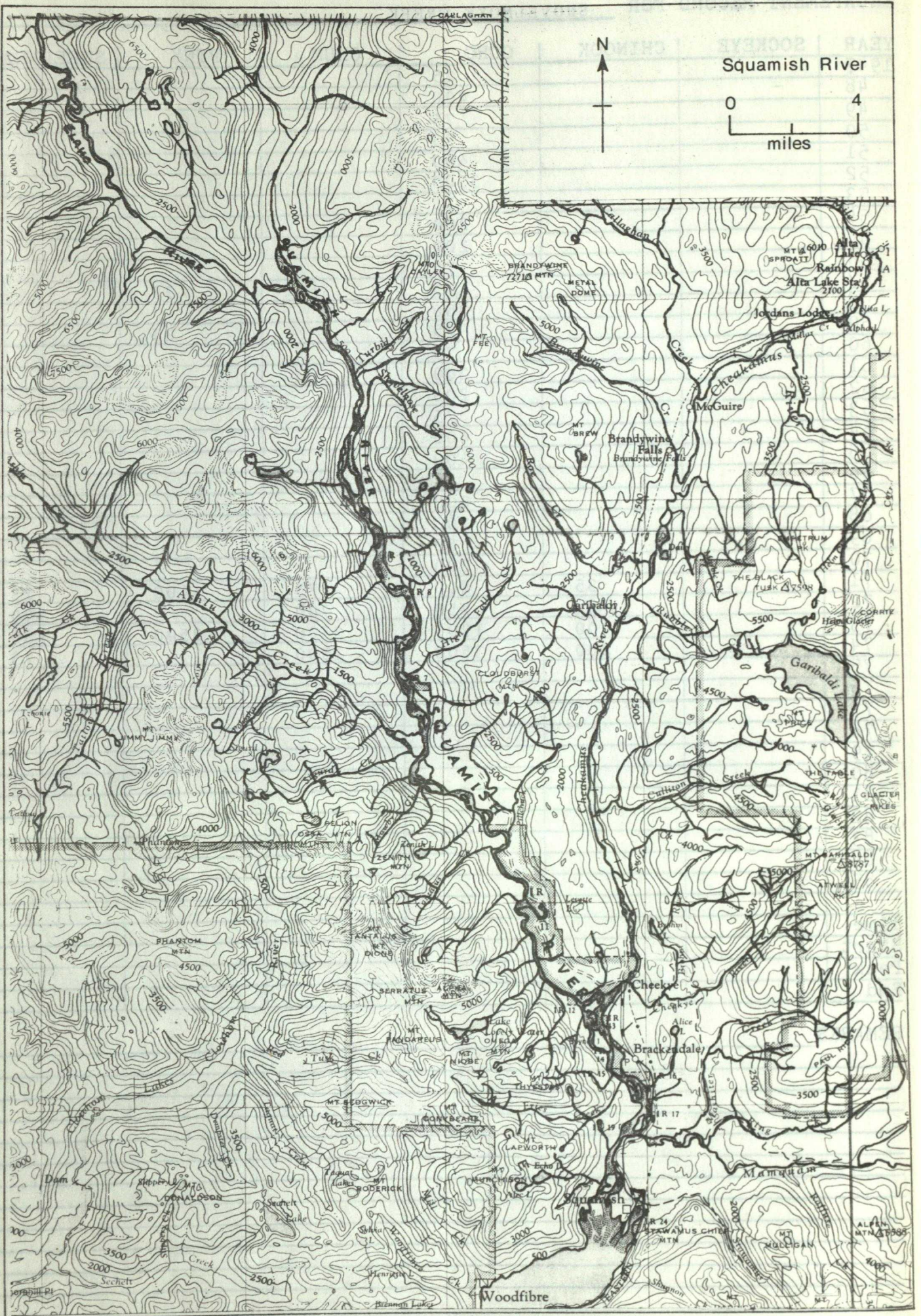
—

—

—

—

—



NA
 CO
 LO
 Di
 LE
 CO
 GR
 FA
 WE
 DI
 TE
 BA
 SP
 SP
 SO
 CH
 CO
 CH
 PI
 PI
 ST
 PO
 GEN

NAME OF STREAM SQUAMISH RIVER

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows S. into head of Howe Sd. - New Westminster

Dist. _____ POSITION 49 123 N.E.

LENGTH 43 MI. WIDTH _____ FT. DRAINAGE 904 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE *8700 CFS MAX 78600 cfs 06/09/57 MIN 388 cfs 12/02/23

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

- Impassable falls at 43 mi.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- Accessible tributaries: Elaho R.; Ashlu Cr.; Cheakamus R.; Shovelnose Cr.; Meighen Cr. and Mamquam R.
- Precipitation on the Squamish River watershed ranges from 60" to over 150". Short duration floods occur as a result of heavy rains enhanced by rapid snow melt. Heavy siltation occurs during these freshets.
- In 1963, Canadian Collieries extended the logging road to the mouth of the Elaho River. Thus, the upper reaches of the Squamish River are now accessible to the public.

GENERAL REMARKS: (Cont'd)

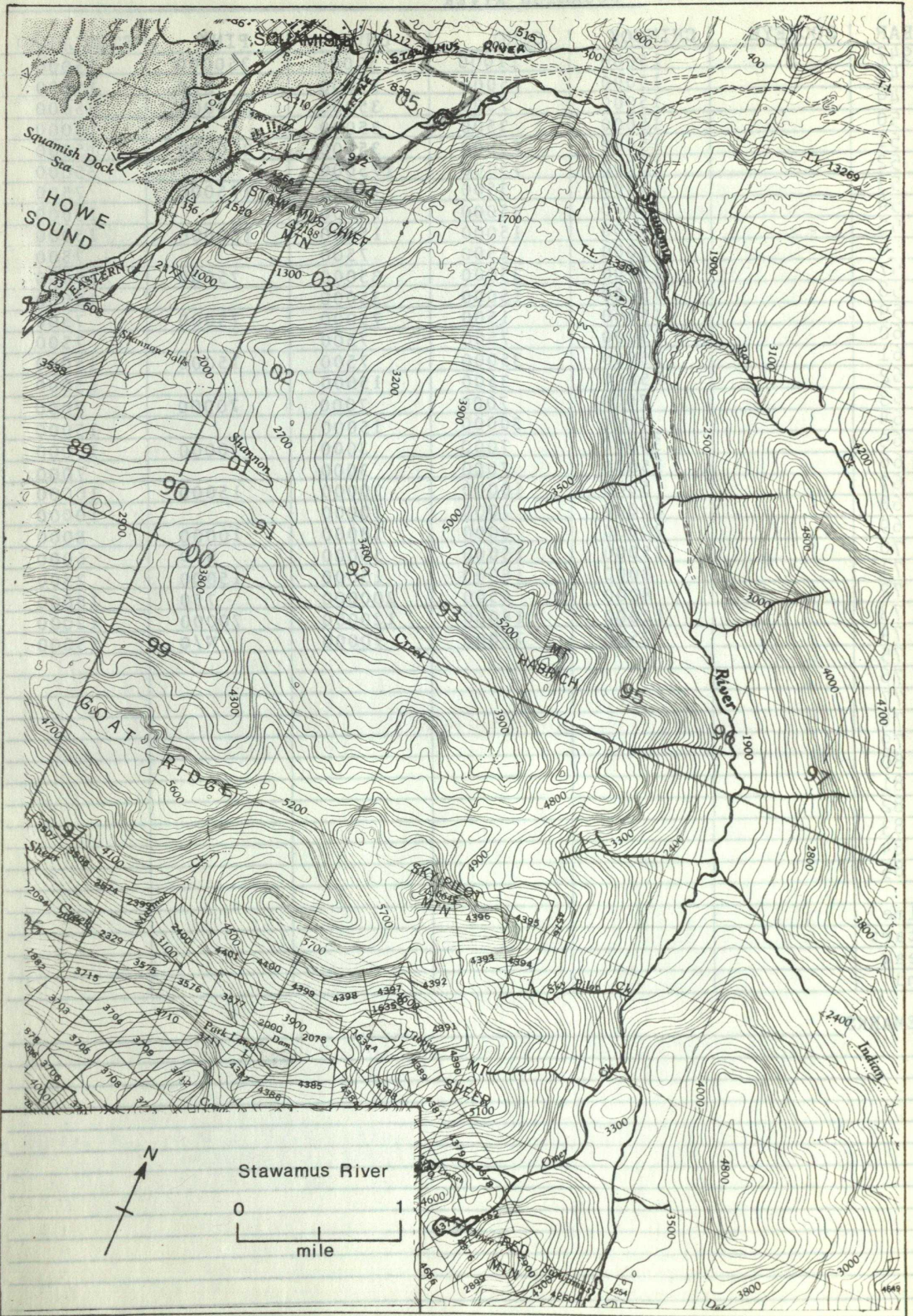
- Due to past development, a large part of the estuary in the area of Mamquam channel has been altered or eliminated by dredge and land fill operations and log storage. An additional port oriented land fill river training dyke and dredge spoil have recently eliminated nearly 100 acres of inter-tidal marsh and mud flat in the central portion of the estuary. B.C. Railway has also proposed expansion of existing port facilities to include a bulk and unit load port development which will occupy a major portion of the inner estuarine environment. In addition to direct habitat loss, this industrial development also causes environmental degradation. The remaining inner area constitutes the only source of inner estuarine food available to juvenile salmon, herring and other fish. Port development will permanently displace the fish which use the inner estuary into an exclusively outer estuarine environment. This could cause a huge decrease in fish populations.
- The logging practiced on this watershed will have an adverse affect on run-off for the next 20 years. (1963)
- Remedial work was carried out on Judds Slough in Sept. & Nov. /69 to help alleviate problems related to the extremely low water levels caused by lack of precipitation. The rock dyke at the head of Judds Slough was extended and the two thirty-six inch culverts were replace with one sixty inch culvert. Access to the main channel of the Squamish River and fresh water exchange between the main channel and inner delta is now possible.
- This stream supports a very heavy sports fishery and a large Indian food fishery. (1974)
- The course of this stream changes every year. (1974)
- * Flow affected by upstream diversion from the Cheakamus River beginning September 1957.

References:

- Cliff, D.D. & J.G. Stockner. 1973. Primary and Secondary Components of the Food-Web of the Outer Squamish River Estuary. Fish. Res. Board Can. MS Rep. 1214. 45p.
- Environment Can. 1972. Effects of Existing and Proposed Industrial Development on the Aquatic Ecosystem of the Squamish Estuary. Prepared for: Federal - Provincial Task Force on the Squamish Estuary Harbour Development by Fish. & Mar. Ser. and Fish. Res. Board.
- Graham, C.C. 1973. Coho Downstream Enumeration in Tenderfoot and Meighen Creeks. D.O.E., Fish. & Mar. Ser., Pac. Reg. Memo. 31-1-S44. 17p.
- Hoos, M.L. & C.L. Vold. 1975. The Squamish River Estuary Status of Environmental Knowledge to 1974. Fish. Res. Board. Special Ser. 2. 361p.

References cont'd:

- Levings, C.D. 1973. Inter-tidal Benthos of the Squamish Estuary.
Fish. Res. Board Can. MS Rep. 1218. 60p.
- Pomeroy, W.M. & J.G. Stockner. 1973. Distribution and Primary
Production of Benthic Algae on the Squamish River Delta.
Fish. Res. Board Can. MS Rep. 1215. 39p.



NAME OF STREAM STAWAMUS RIVER

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows N.W., S.W. and W. into head of Howe Sd. - New Westminster Dist. POSITION 49 123 NE

LENGTH 2 MI. WIDTH FT. DRAINAGE SQ. MI.

COMPOSITION: BEDROCK BOULDER COARSE FINE
SILT & SAND UNCLASSIFIED

GRADIENT:
FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

- Impassable falls at 2 mi.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	nearly all in Little Stawamus (tributary)
CHUM	up to the falls in Stawamus River
PINK (ODD YR)	up to the falls in Stawamus River
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- In the first .5 mi. downstream of the obstruction, this stream has fairly steep gradient and many large boulders. Although the lower 1.5 mi. has a tendency to meander, the stream bed has finer gravel and is better suited to spawning.
- This non-glacial stream has clear water and maintains a fairly constant flow throughout the year.
- Fish molestation and interference are a problem as 700-800 people live along the water course. (1974)
- The watershed was previously logged off but the second growth is now

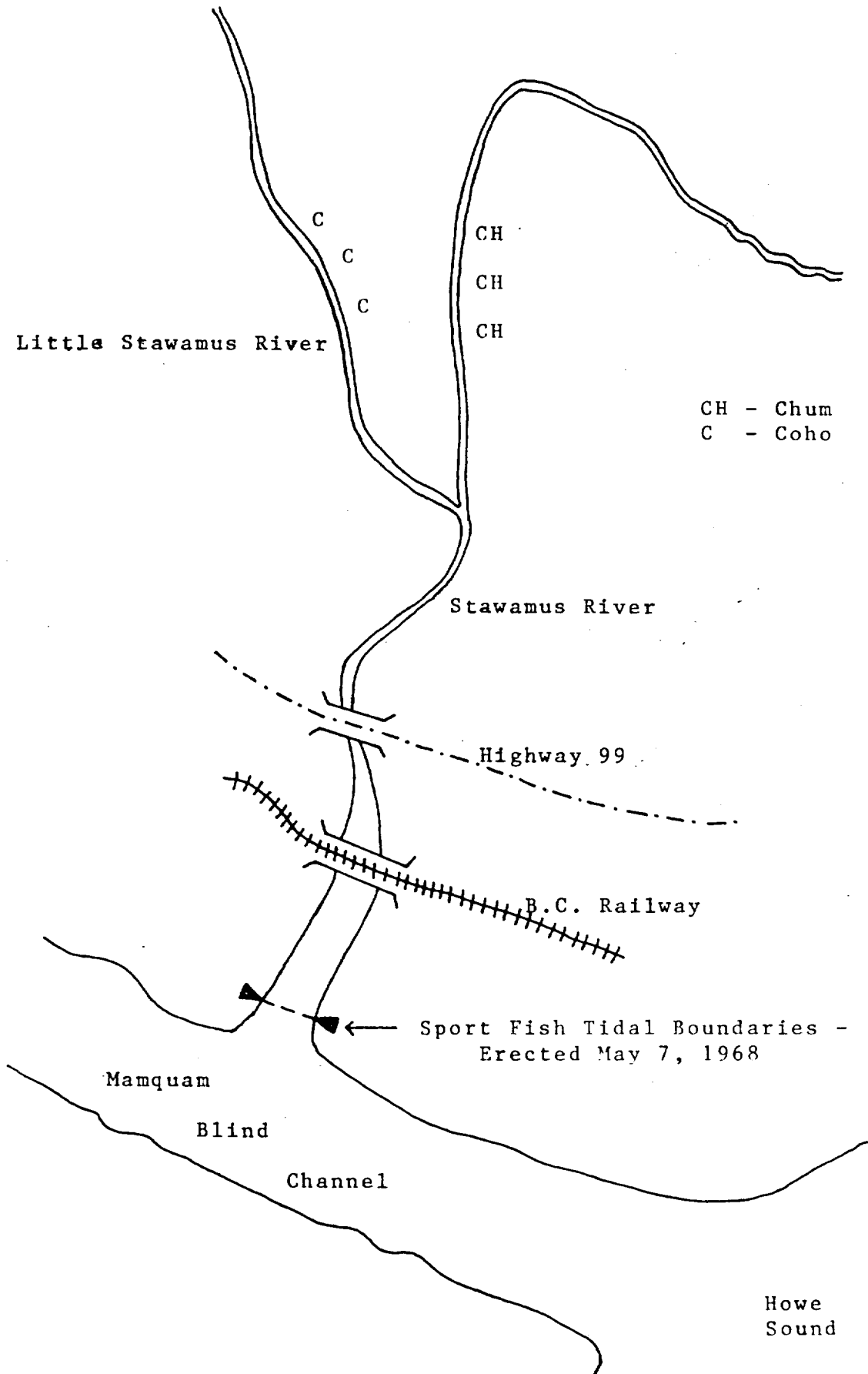
GENERAL REMARKS: (Cont'd)

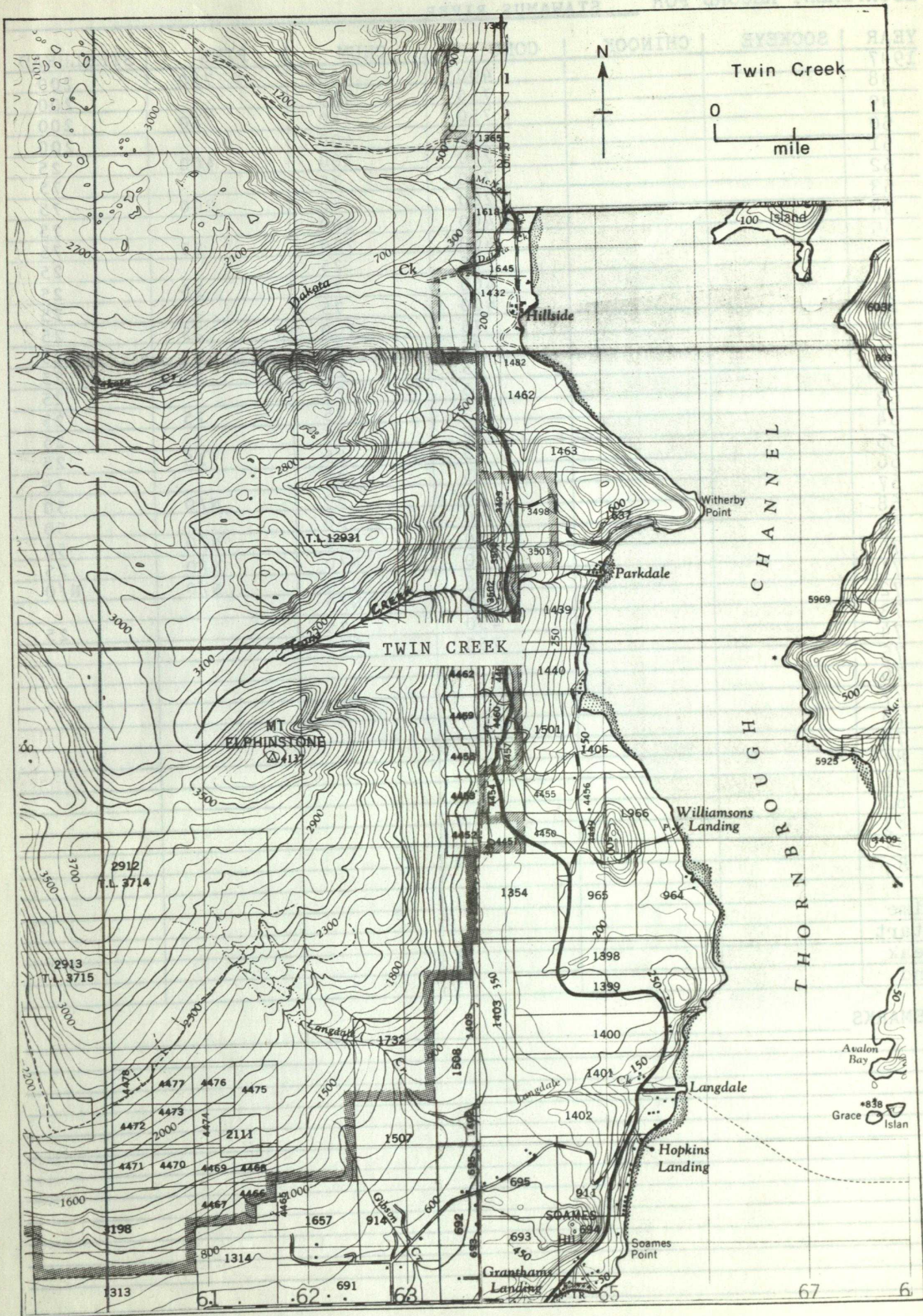
- well established. Water levels should stabilize during the next few years. (1973)
- This two mile spawning area is capable of supporting a large number of chum spawners. Some artificial means of re-establishing chum production on the stream should be given serious consideration. (1973)
 - Nearly all the coho in this system are in the Little Stawamus River. (1973-74)
 - The Little Stawamus main tributary is 2.5 mi. long, is ground-water fed and swamp fed. Coho escapement ranges from 150-1500 per year. (1973)
 - Bulldozer work and land clearing affected approx. 700 yds. of the stream bed of the Little Stawamus River. Trees and brush, from both banks, in the upstream end of the housing development project have been removed. Consequently, the banks have eroded in several places and silt has been deposited into the stream. There were pools in these affected areas before the land was cleared. The stream now has a man-made channelled appearance. The stream above and below the cleared area appears to provide an excellent habitat for rearing juvenile coho. There is an abundance of low brush and trees on the margins and small pools are distributed throughout the stream. Fry were seen below the cleared section and near the stream source. None were seen in the cleared section.

References:

- Bishop, G.D. 1974. Inspection of Damage to Little Stawamus River. D.O.E., Fish. & Mar. Ser., Pac. Reg. Memo. 31-1-S54. 2p.

Sketch of Stawamus River, 1968





NAME OF STREAM _____ (Twin Creek)

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows N.W. into Thornbrough Channel, S. of Port

Mellon - New Westminster Dist. POSITION 49 123 SW

LENGTH 0.5 MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

- Impassable falls at 0.5 mi.

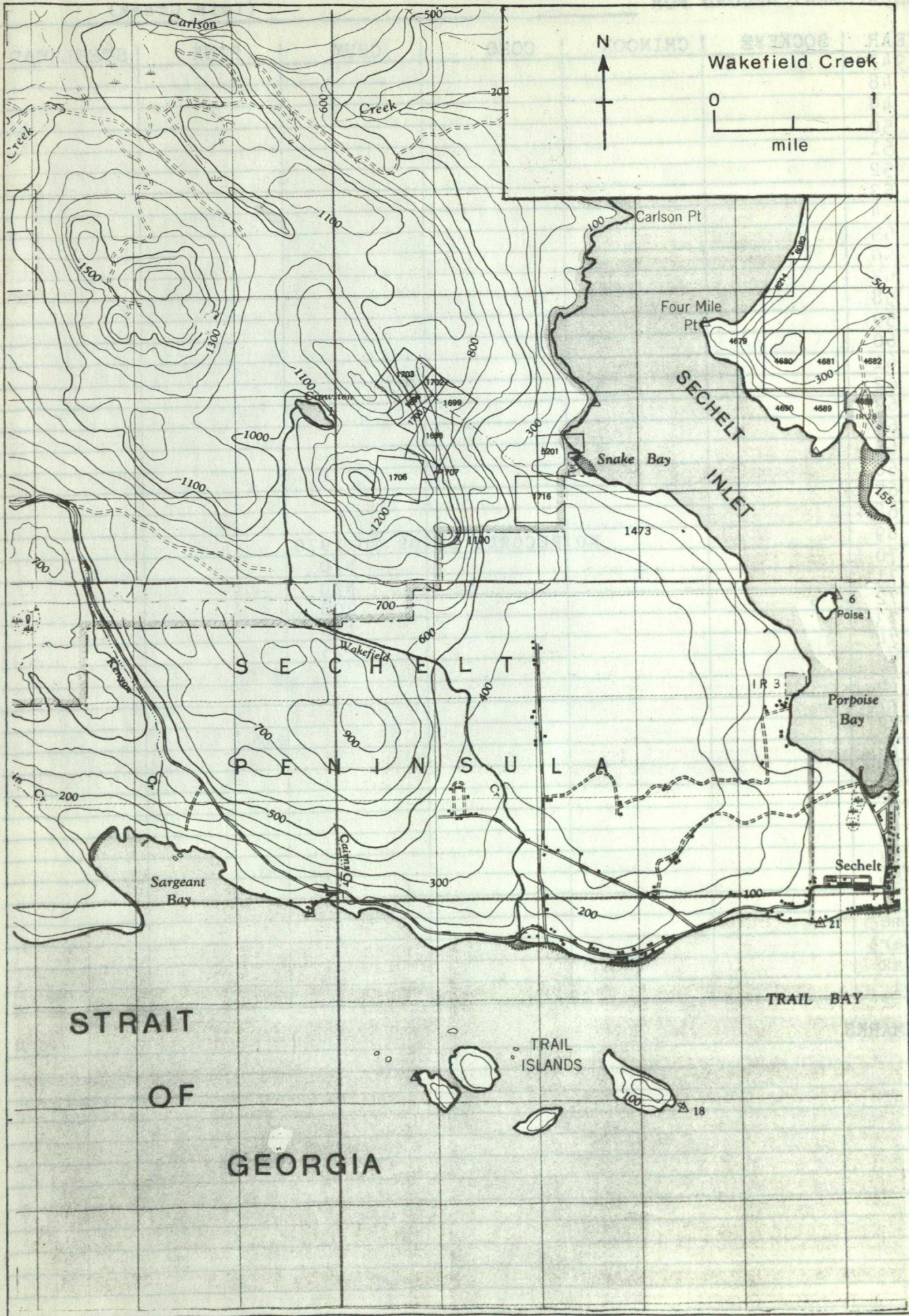
SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	evenly distributed throughout the first 0.5 mi.
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- The salmon spawners reported in 1972 were the first observed since the early sixties.
- An estimated 50% of the spawn was lost in 1972.



NAME OF STREAM WAKEFIELD CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows S.E. and S. into Str. of Georgia, W. of Sechelt - New Westminster Dist. POSITION 49 123 SW

LENGTH .08 MI. WIDTH FT. DRAINAGE SQ. MI.

COMPOSITION: BEDROCK BOULDER COARSE FINE
SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000
0.0 - 2.5
2.5 - 5.0
5.0 - 7.5
7.5 - 10.0
> 10.0

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

- Impassable falls and culvert at 150 yds.
- Impassable falls with large boulders at .75 mi.

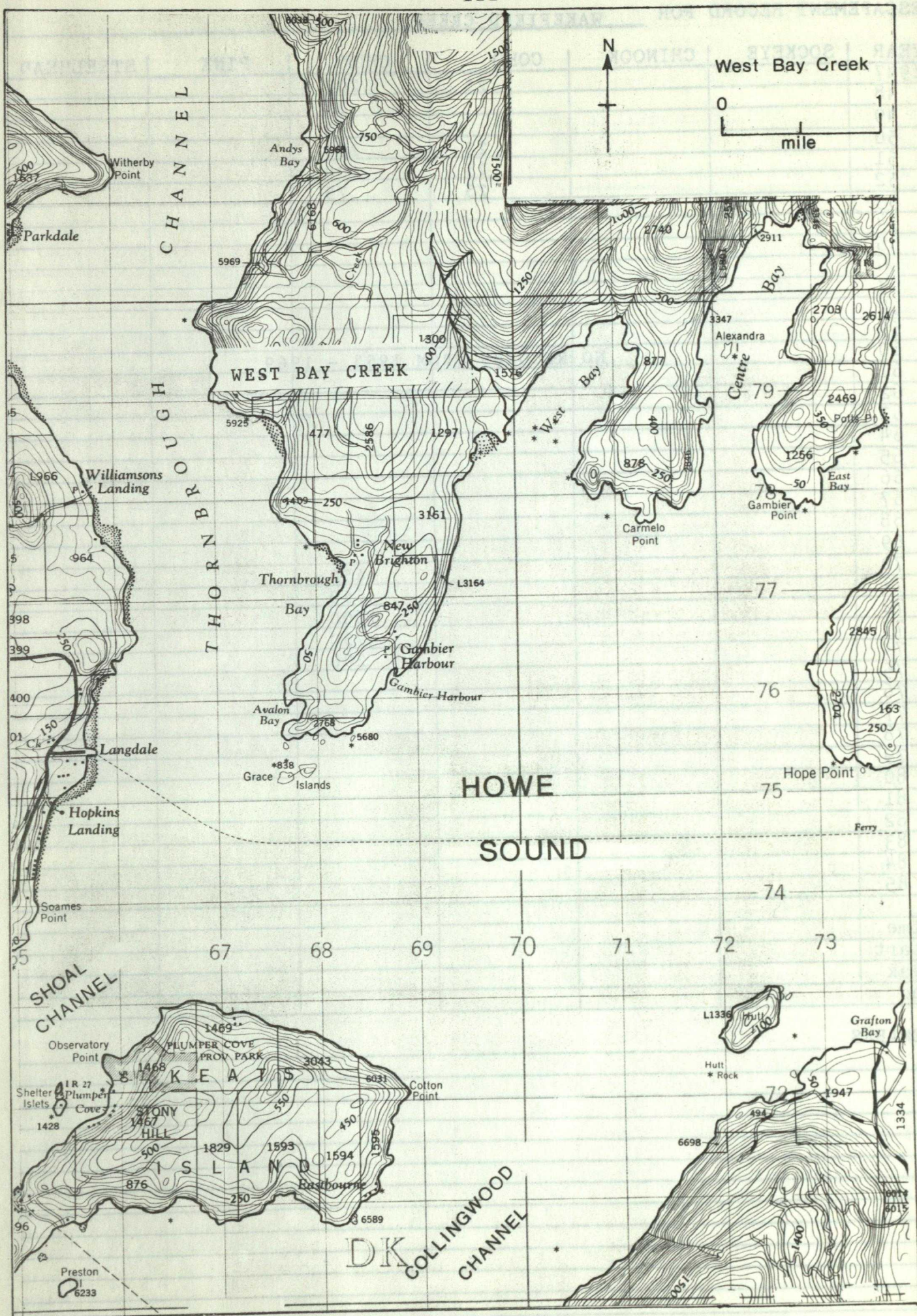
SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	evenly distributed throughout the inter-tidal zone
CHUM	evenly distributed throughout the inter-tidal zone
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- A very small creek which normally has a small spawning population. (1972)
- In 1970, it was recommended that the obstruction and culvert be removed to enable fish to utilize an additional 300 yds. of spawning grounds. Reports from old timers indicate that at one time coho and steelhead migrated as far as 3 mi.
- In 1974 it was recommended that the obstruction at 0.08 mi. be removed.



NAME OF STREAM _____ (West Bay Creek)

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows into West Bay, S. side of Gambier Is., Howe

Sound - New Westminster Dist. POSITION 49 123 SE

LENGTH .5 MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000

0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

- Impassable falls at .5 mi.

SPAWNING DISTRIBUTION:

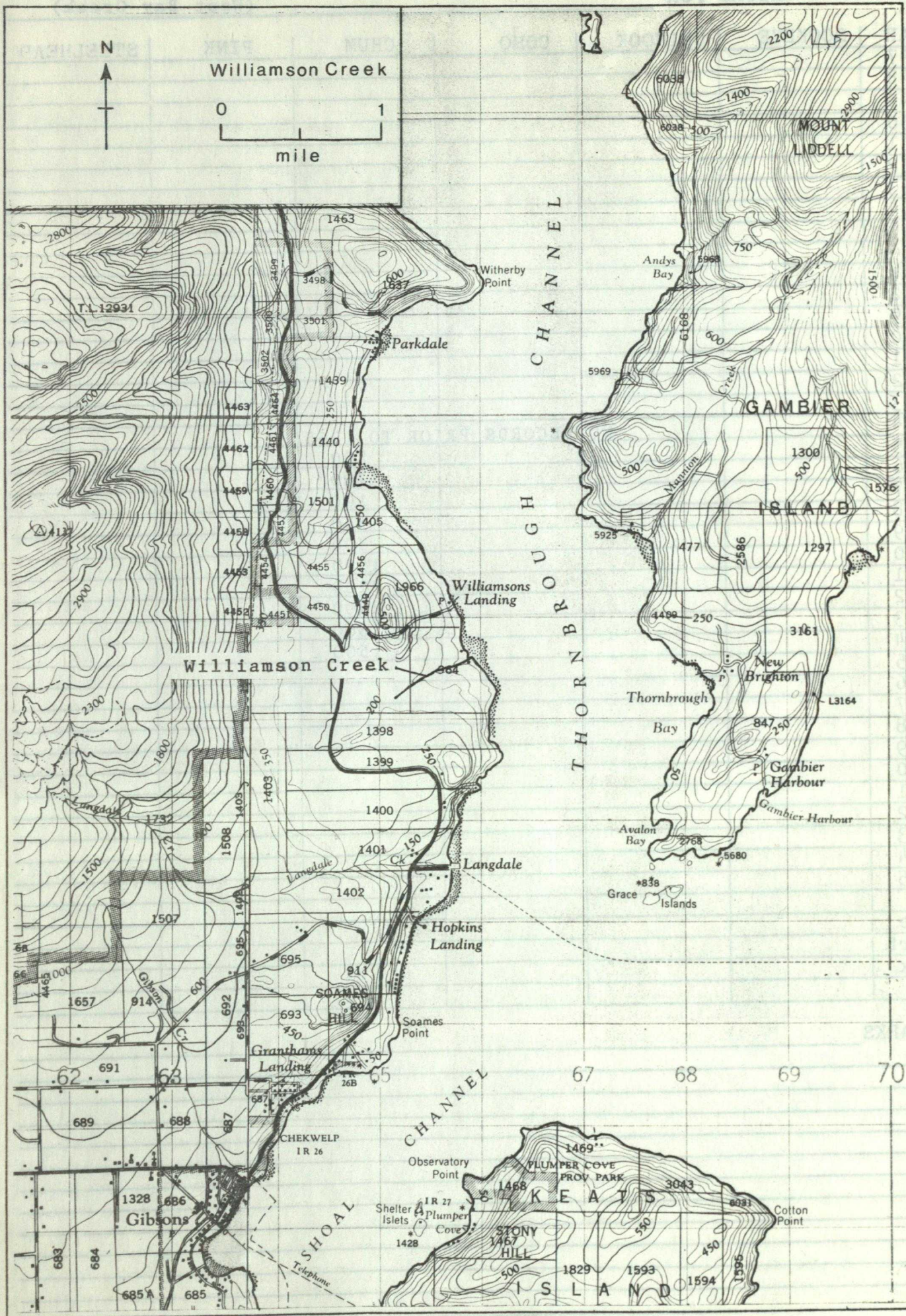
SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream is an exceptional producer for its size. (1971)

- Only .25 mi. of the stream is suitable for spawning - the remainder is too swift. (1969)



NAME OF STREAM WILLIAMSON CREEK

CONSERVATION DISTRICT 2 STATISTICAL AREA 28

LOCATION OF MOUTH Flows into Thornbrough Channel, S. of Williamsons

Landing - New Westminster Dist. POSITION 49 123 S.E.

LENGTH MI. WIDTH FT. DRAINAGE SQ. MI.

COMPOSITION: BEDROCK BOULDER COARSE FINE

SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA SQ. YD. SPAWNING AREA SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

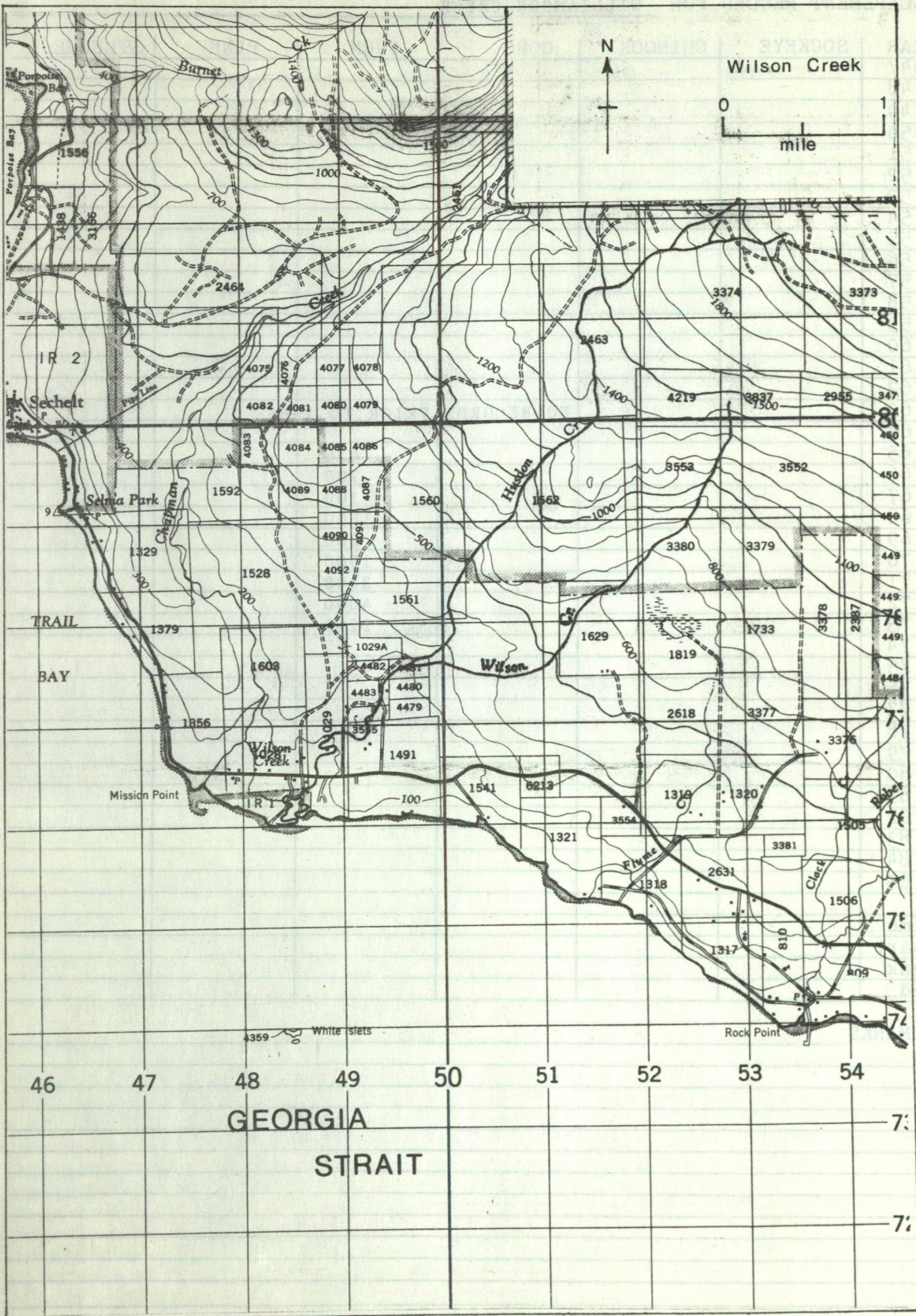
SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	evenly in the lower reaches
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- This is an excellent stream, approx. 12 ft. wide on the average, with a constant water depth of approx. 12-18 in. The possible capacity of this stream could be 6-8 thousand salmon. (1971)



N
C
L
P
L
C
G
F
W
D
T
E
=

NAME OF STREAM WILSON CREEK
 CONSERVATION DISTRICT 2 STATISTICAL AREA 28
 LOCATION OF MOUTH Flows S.W. into Str. of Georgia, E. of Wilson Creek
 P.O. - New Westminster Dist. POSITION 49 123 SW
 LENGTH 4-5 MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.
 COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____
 SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:
 FALL IN FT/000
 0.0 - 2.5 _____
 2.5 - 5.0 _____
 5.0 - 7.5 _____
 7.5 - 10.0 _____
 > 10.0 relatively steep - 60' in 1000' (overall)

WETTED AREA _____ SQ. YD. SPAWNING AREA _____ SQ. YD.
 DISCHARGE _____ CFS MAX _____ MIN _____
 TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT
- Impassable falls at 4 or 5 mi.

SPAWNING DISTRIBUTION:	SECTION OF STREAM USED
SPECIES	
SOCKEYE	
CHINOOK	
COHO	above Hudson's Creek junction
CHUM	lower 1.5 mi., mainly below the fish ladder
PINK (ODD YR)	
PINK (EVEN YR)	
STEELHEAD	above Hudson's Creek junction

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:
 - The lower 1.5 mi. of this stream is suitable for spawning. The stream bed is 15-20 ft. wide and has a gradient of 20' in 1000'. However, this section also contains some heavily silted pools caused by minor debris barriers.
 - This long, slow-moving stream with its reliable water supply has good potential. (1952)
 - The fish ladder at the mouth of the stream enters a log dumping area. The decomposition of organic material and the constant dumping of logs inhibits good production. (1974)

GENERAL REMARKS: (Cont'd)

- As the stream flows near the Peninsula highway and a small community, fish molestation is a problem. (1952)

References:

Wilson, G.A.C. 1968. Wilson Creek. D.O.E., Fish. & Mar. Ser.,
Pac. Reg. Memo. 31-1-W8. 2p.

Rapp, O. & K.G. Dietz. 1966. Wilson Creek Obstruction. D.O.E.,
Fish. & Mar. Ser., Pac. Reg. Memo. 31-1-W8. 2p.

ES

YH

10

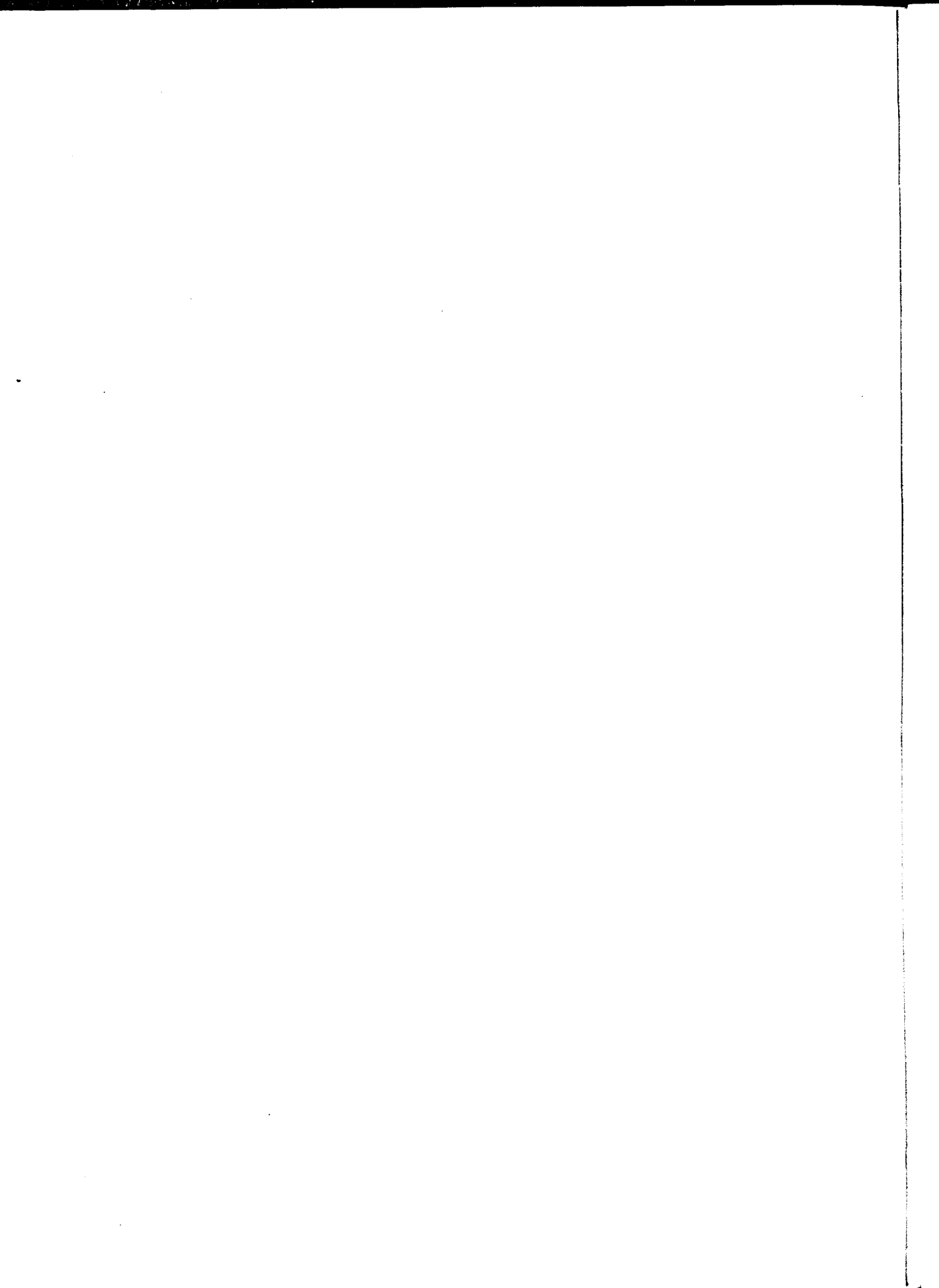
T

S

P

E

R



METRIC EQUIVALENTS

<u>Length</u>			<u>Area</u>		
cm.	=	.3937 in.	sq. cm.	=	.1550 sq. in.
meter	=	3.28 ft.	sq. m.	=	10.76 sq. ft.
meter	=	1.094 yd.	sq. m.	=	1.196 sq. yd.
kilometer	=	.621 mi.	sq. km.	=	.386 sq. mi.
inch	=	2.54 cm.	sq. in.	=	6.45 sq. cm.
foot	=	.3048 m.	sq. ft.	=	.0929 sq. m.
yard	=	.9144 m.	sq. yd.	=	.836 sq. m.
mile	=	1.61 km.	sq. mi.	=	2.59 sq. km.
			acre	=	.405 ha.
			hectare	=	2.47 acres
			acre	=	43560 sq. ft.

<u>Volume</u>			<u>Capacity</u>		
cu. cm.	=	.061 cu. in.	liter	=	.0353 cu. ft.
cu. m.	=	35.315 cu. ft.	liter	=	.21998 gal. (Br.)
cu. m.	=	1.308 cu. yd.	liter	=	61.023 cu. in.
cu. in.	=	16.38 cu. cm.	cu. in.	=	.0164 l.
cu. ft.	=	.028 cu. m.	cu. ft.	=	28.32 l.
cu. yd.	=	.7645 cu. m.	gallon	=	4.5459 l. (Br.)

Weight

gram	=	15.432 grs.	ounce	=	28.35 g.
gram	=	.0353 oz.	pound	=	.454 kg.
kilogram	=	2.2046 lbs.	ton (sht)	=	907.18 kg.
kilogram	=	.0011 ton (sht)	ton (sht)	=	.907 met. ton
met. ton	=	1.1025 ton (sht)	ton (sht)	=	2000 lbs.
grain	=	.0648 g.			

Degrees Centigrade = $5/9$ (Degrees Fahr.) - 32
 Degrees Fahrenheit = $9/5$ (Degrees Cent.) + 32

WATER QUANTITIES AND FLOW MEASUREMENT

1 cubic foot per second (cfs) or second foot	=	373.2 gallons per min. (gpm)
1 cubic foot per second (cfs) or second foot	=	.537408 million gallons
1 second foot	=	approx. 2 acre-feet per day
1 second foot	=	86400 cubic feet per day
1 million gallons per day	=	1.86 cfs
1 acre-foot	=	43560 cubic feet or 271379 gal.
1 cubic foot of water	=	6.23 gal. and weighs 62.4 lbs.
1 cubic meter per second	=	35.31 cubic feet per second (cfs)
1 meter per second	=	3.28 feet per second
1233.5 cubic meters	=	1 acre-foot

