Preliminary Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 1 - Queen Charlotte Islands

R.F. Brown and M.M.Musgrave

Enhancement Services Branch
Fisheries and Oceans
Vancouver, B.C. V6E 2P1

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April 1979

Fisheries & Marine Service
Data Report No. 132

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

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Rapports statistiques

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

Les numéros 1-25 de cette série ont été publies à titre de Records statistiques, Service des pêches et de la mer, par la Station biologique du Pacifique, Nanaimo (C.-B.). Le nom de la série a été modifie à partir du numero 26.

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ABSTRACT

Brown, R. F. and M. M. Musgrave. 1979. Preliminary catalogue of salmon streams and spawning escapements of Statistical Area 1 - Queen Charlotte Islands. Fisheries & Marine Service Data Report No. 132. 67 pp.

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

Key Words: British Columbia, Queen Charlotte Islands, Statistical Area 1, salmon streams, spawning escapements

RÉSUMÉ

Brown, R. F. and M. M. Musgrave. 1979. Preliminary catalogue of salmon streams and spawning escapements of Statistical Area 1 - Queen Charlotte Islands. Fisheries & Marine Service Data Report No. 132. 67 pp.

Catalogue contenant la situation de chaque cours d'eau, la distribution de l'aire de reproduction, les barrières et les points de remontée difficile, les données sur la remonte et d'autres données générales sur le cours d'eau. Le catalogue comprend aussi une carte topographique montrant la situation du cours d'eau et, dans certain cas, un schéma de la région environnante.

Mots-clés: Colombie-Britannique, îles Reine-Charlotte, zone statistique n^{O} 1, rivière à saumon, remontes de saumon.

CONTENTS

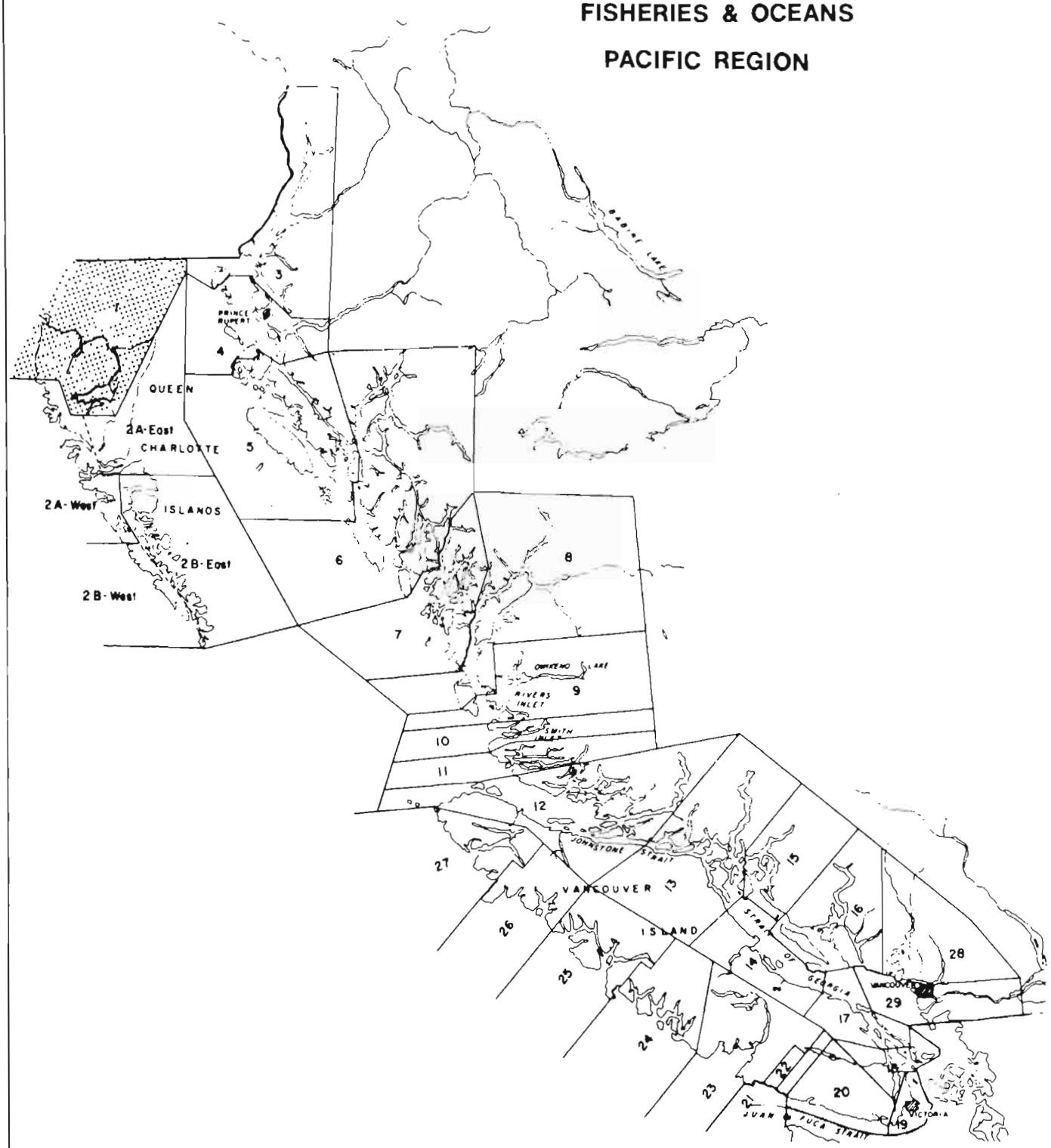
Abstract/Résumé i
Statistical Areas iii
Conservation Districts iv
Management Divisions v
Map References vi
Standards Used on Stream Data Page vii
Salmon Spawning Streams of Statistical Area 1 ix
Escapement Record for Statistical Area 1 x

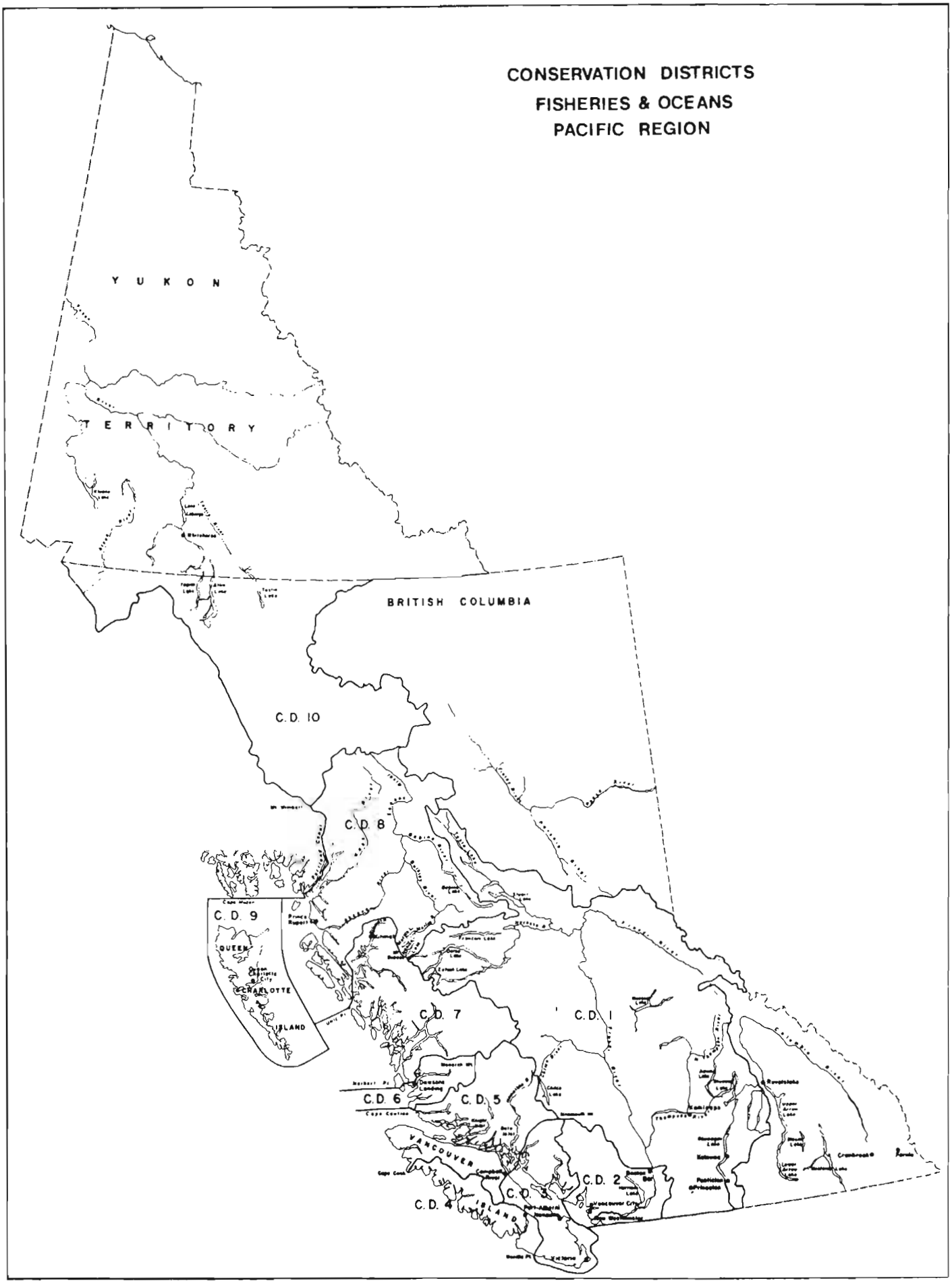
STREAM DATA

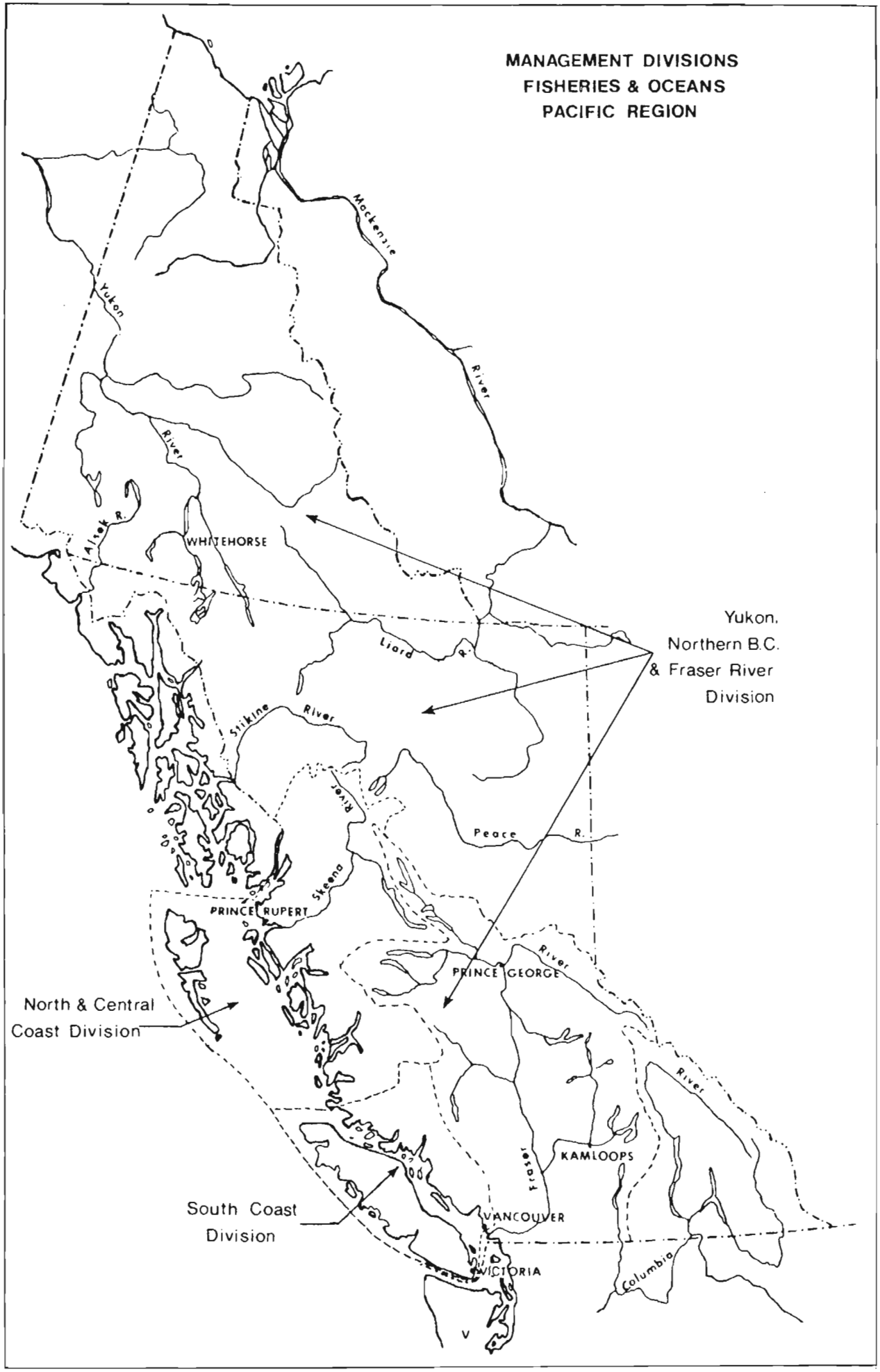
AIN RIVER 1
AWUN RIVER 7
DATLAMEN CREEK 11
DAVIDSON CREEK 15
DINAN CREEK 19
HIELLEN RIVER 23
JALUN RIVER 27
KUMDIS CREEK 31
LIGNITE CREEK 35
MAMIN RIVER 39
McCLINTON CREEK 43
NADEN RIVER 47
SANGAN RIVER 53
STANLEY CREEK 57
YAKOUN RIVER 61

Metric Equivalents 67
Water Quantities and Flow Measurements 67

STATISTICAL AREAS
FISHERIES & OCEANS
PACIFIC REGION




CONSERVATION DISTRICTS
FISHERIES & OCEANS
PACIFIC REGION
YUKON
TERRITORY
BRITISH COLUMBIA
C.D. 10
C.D. 8
C.D. 9
QUEEN
CHARLOTTE
ISLAND
C.D. 7
C.D. 1
C.D. 6
C.D. 5
VANCOUVER
ISLAND
C.D. 4
C.D. 3
C.D. 2

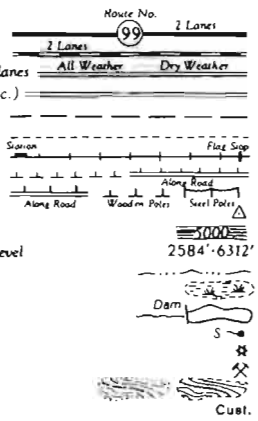

MANAGEMENT DIVISIONS
FISHERIES & OCEANS
PACIFIC REGION
Yukon
Mackenzie
River
River
Alsek R.
WHITEHORSE
Liard
River
Stikine
River
Skeena
River
PRINCE RUPERT
Peace
R.
PRINCE GEORGE
River
Fraser
KAMLOOPS
River
VANCOUVER
VICTORIA
Columbia
Yukon,
Northern B.C.
& Fraser River
Division
North & Central
Coast Division
South Coast
Division

MAP REFERENCES

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

Railways:
- normal gauge, multiple track — Station
- normal gauge, single track — Stop, Siding
- abandoned, or under construction
- narrow gauge, single track
- Bridge, underpass or overpass
- Tunnel

- Boundary, International
- " Province
- " County or District
- " Township or Parish
- " City or Town
- " Reservation, Indian, Military, etc
- Power Transmission Line
- Telephone or Telegraph, trunk route
- Horizontal Control Point
- Boundary Marker
- Bench Mark — BM 2975
- Spot Elevation, (in feet) — 5752
- Mine or Pit



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

- House, Building
- School — S
- Church — +
- " with conspicuous Tower or Spire
- Post Office — P
- Tower, Radio Mast, Lookout, etc. — ⊙
- Cemetery — Cem
- Quarry
- Sand or Gravel Pit
- Cliff
- Cutting
- Embankment
- Saw Mill — SM

- Lighthouse
- Wharf or Pier
- Foreshore Flats — Sand, Mud
- Swamp or Marsh
- Lake or Pond, intermittent
- Glacier or Snowfield
- Stream, intermittent
- Irrigation Canals, Ditches
- Inundated Land, seasonal
- Contours, elevation — 500, 400
- " depression — 500, 400
- " approximate — 500, 400
- Forest, unclassified

- Surveyed timber license number ..... TL 2841
- Lot number ..... L 124 or S 66
- Building
- School
- Non-perennial stream
- Marsh or Swamp
- Glacier
- Foreshore flats — Sand
- Contours, elevation — 500
- Contours, depression
- Forest

- City or large town
- Town
- Village or settlement
- Post office — P
- School
- Church
- Boundary monument
- Astronomical position
- Horizontal control point

Streams:
- intermittent or dry
- indefinite
- Irrigation canal or ditch
- Rapids; falls — R F
- Aerodrome
- Landing ground
- Intermittent lake
- Marsh or swamp
- Sand, gravel or mud
- Wooded areas
- Seaplane base
- Seaplane anchorage

- Streams
- Highways
- Roads
- Trails
- Houses
- Railroad
- Falls
- Rapids
- Rip-Rap
- Bridges
- Dam
- Log Jams
- Log
- Power Line
- Coho — CO
- Chum — CM
- Pink — P
- Chinook — CK
- Sockeye — S

STANDARDS USED ON STREAM DATA PAGE

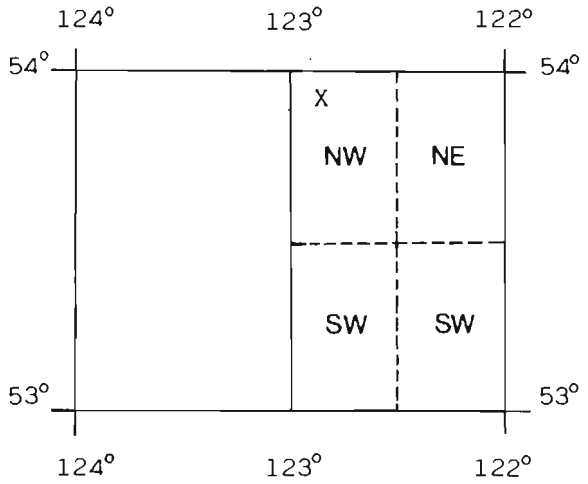
Name of Stream: Name as given in Gazetteer of Canada, British Columbia edition; local or non-gazetted names are added in lower case type.

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

Statistical Area: As defined by Department of Fisheries Statistical Map (June 1957).

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

EXAMPLE "X"
53° 122° NW



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

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

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

Composition:

Bedrock	bedrock
Boulder	>256 mm (>10")
Coarse	50.9 - 256 mm (2 - 10")
Fine	3.37 - 50.8 mm (1/8 - 2")
Sand & Silt	<3.37 mm
Unclassified	where bottom cannot be observed, e.g. log jam, pools, water colour, etc.

Gradient: Average vertical drop per thousand linear feet.

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

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

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

Temperature: As described.

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

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

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

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

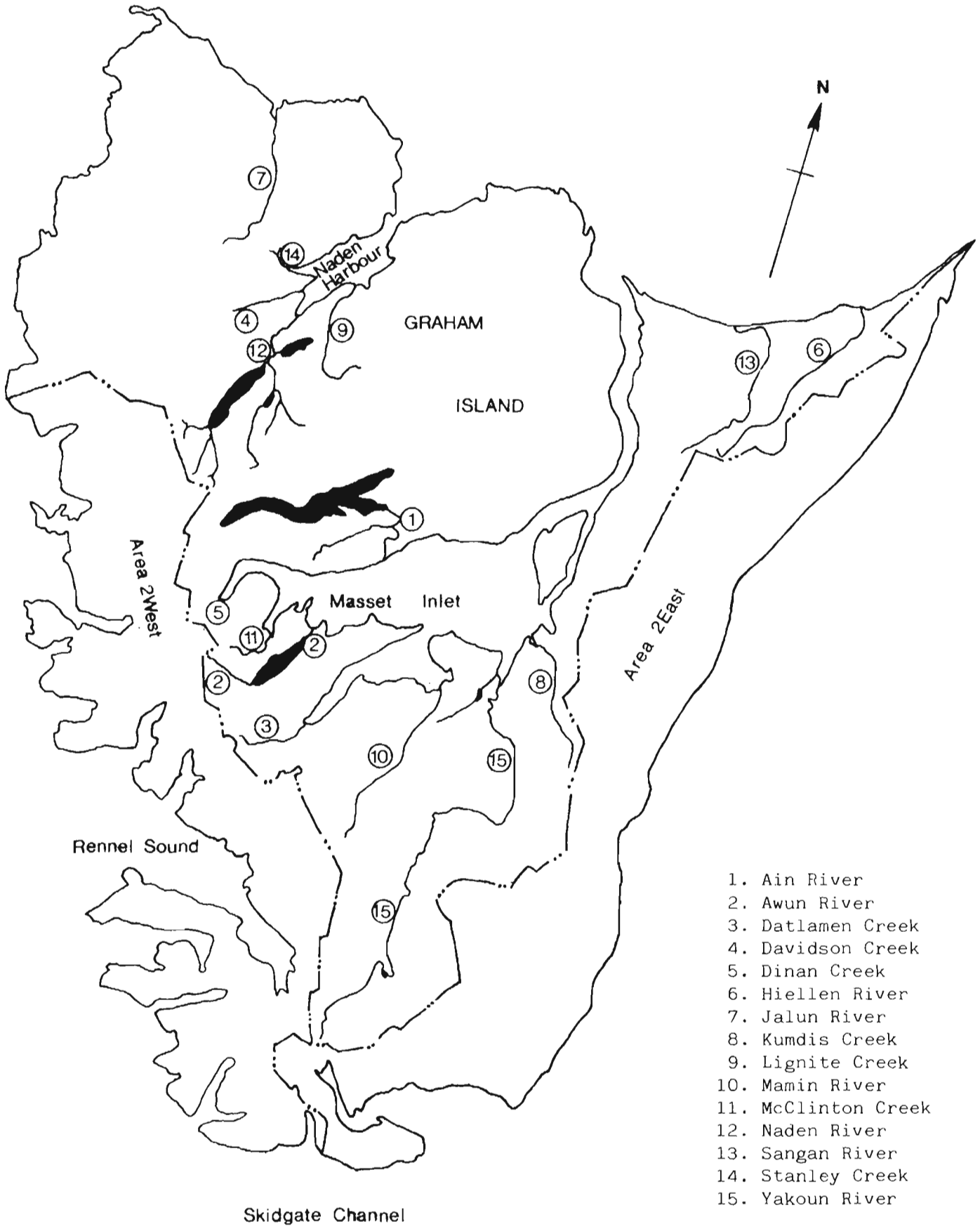
Escapement Records: The escapement represents the mid point of the coded range of escapement for each species. For example: the letter "H" representing 5000-10000 fish would be entered as 7500. Where absolute numbers are provided by Fisheries Personnel, these numbers are entered. N/O means the stream 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 31st of the month)

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

Salmon Spawning Streams of Statistical Area 1



ESCAPEMENT RECORD FOR STATISTICAL AREA 1

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	10700	1500	13475	43225	1500	
48	11000	750	47900	40100	3756500	
49			4700	20400	3500	
50			16500	11000	277500	
51	22000		44900	119200	3500	
52	7400	1500	12950	50800	541400	
53	5000		1200	121475	3500	
54	1500		10400	90750	301200	
55			5050	22650		
56	3500	750	7675	3700	440500	
57	3050	1500	13550	146775	18500	
58	39325		5150	23500	402000	
59	12500	3500	20200	18525	18000	
60	13250	750	14150	15125	98575	
61	12250	3500	23850	26025	20000	
62	35100	1500	35800	14575	175675	
63	13250		12575	10700	18575	
64	25500	7500	60300	95025	441825	
65	10250	15000	77850	161600	33550	
66	5425	7500	13025	93950	1068825	
67	8525	1500	23625	31575	150	
68	20400	1500	10250	37500	1335900	
69	48500	1500	6825	45000	200	
70	26500	800	24050	24800	432650	
71	16500	500	14335	44500	6050	
72	17500	1000	26150	8600	329900	
73	38000	900	58350	50000	4000	
74	39000	1000	97100	41800	201400	
75	16500	1500	47000	188050	3950	
76	40900	700	153500	53500	285050	
77	26750	800	55400	59300	4900	
78	20300	600	61250	56200	217500	
79						
80						
81						
82						
83						
84						
85						

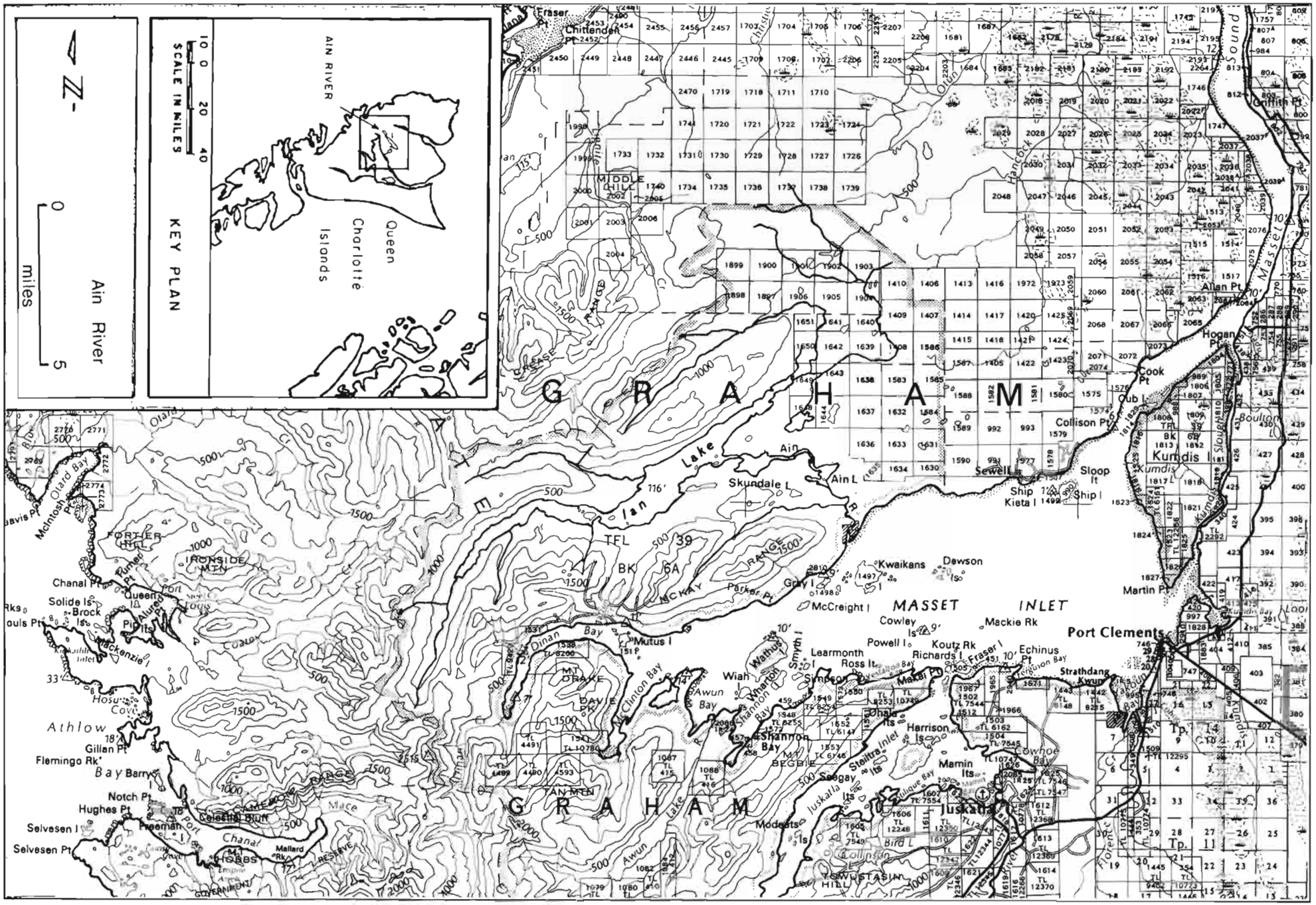
TIMING:

ARRIVE						
START						
PEAK						
END						

REMARKS

STREAM DATA

STATISTICAL AREA 1


Ain River
0
5
miles
SCALE IN MILES
10 0 20 40
KEY PLAN
AIN RIVER
Queen Charlotte Islands
GRAHAM
Ain Lake
Skundale L
Ain L
Sewell
Ship Kieta I
Sloop It
Ship I
Kumdis
Kumdis L
Collison Pt
Cook Pt
Hogan Pt
Allan Pt
Griffith Pt
Sound
Massett
Boulton
Hancock
Olun
Otard
Otard Bay
McIntosh Pt
Davis Pt
FORTER HILL
IRONSIDE MTN
Chanal Pt
Tunnel Pt
Port Louis
Queen Alured Pt
Pid Its
Solide Is
Brock Is
Rks
Louis Pt
Mackenzie I
Coaton
Hosu Cove
Athlow Bay
Gillan Pt
Flemingo Rk
Barry I
Notch Pt
Hughes Pt
Selvesen I
Selvesen Pt
Freeman Pt
Port Chanal
Celestial Blun
Mace Lake
Mallard Rk
RESERVE
GOVERNMENT
MT HOBBS
TAN MTN
MT BEGBIE
MT DRAKE
DAVE PK
RANGE
MCKAY RANGE
TFL 39
BK 6A
Dinan Bay
Mutus I
Wathus
Smyth I
Wiah
Awun Bay
McClinton Bay
Shannon Bay
Wharton
Simpson
Learmonth
Ross It
Makai
Kwaikans
Dawson Is
Parker Pt
Gray I
McCreight I
MASSET INLET
Cowley Is
Powell I
Koutz Rk
Richards I
Fraser I
Mackie Rk
Port Clements
Martin Pt
Echinus Pt
Strathdang
Kwun
Cowhoe Bay
Harrison Is
Marmin Its
Juskatla
Juskatla Inlet
Seegay Its
Steiltra Inlet
Modests Is
Bird L
Collinson
TSOWISTASIAN HILL
Florence
Tp. 14
Tp. 11
Tp. 10
Tp. 9

NAME OF STREAM AIN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows SE. from Ain Lake into Masset Inlet, Queen Charlotte Dist.

POSITION 53 132 NE

LENGTH 4.8 MI. WIDTH 90 FT. DRAINAGE 118.4 SQ. MI.

COMPOSITION: BEDROCK 20% BOULDER 20% COARSE 16% FINE 16%

SILT & SAND UNCLASSIFIED 28%; pools

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	1.25 - 4.8 miles (outlet of Ian Lake)
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.0 - 1.25 miles

WETTED AREA 257,000 SQ. YD. *SPAWNING AREA 80,000 SQ. YD.

DISCHARGE ** CFS MAX 2900 cfs (Jan. 5/64) MIN 67.5 cfs (Aug. 29/63)

TEMPERATURE (73.0° F, Aug. 3/72: 63.0° F, Aug. 30/66)

BARRIERS OR POINTS OF DIFFICULT ASCENT

1) 3.5 foot falls at 1.5 miles
2) 4.0 foot falls at 2.0 miles
3) Falls at 2.5 miles. (5 foot drop over horizontal distance of 4.5 feet on right bank and a 6 foot drop over a distance of 15 feet on the left bank)

The 3 falls were impassable at some water levels until 1977. (See General Remarks)
Fish now have access to the whole system.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	- to Ian Lake & Ian Lake feeder streams
CHINOOK	
COHO	- throughout system
CHUM	- to 2.5 miles
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- to 1.5 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

* Spawning Area: River mouth to Ain Lake = 60,000 sq. yds. (lower half has good gravel, upper half is mainly bedrock and boulder)
  - between Ain and Skundale Lakes and Skundale and Ian Lakes = 20,000 sq. yds.
  - Ian Lake tributaries = 35,000 sq. yds.

** Sample Discharges: 319 cfs (June 27/62); 146 cfs (July 25/62); 357 cfs (Aug. 31/62) 1100 cfs (Sept. 30/62)

- The stream water is tea-coloured.


Lake
1649
1643
1638
Ian
1648
1644
1637
G R
1629
1647
1645
1636
P R O V I N C I A L
Ain
Skundale Lake
Skundale Lake
1646
Ain Lake
River
G R A H A M I S L A N D
G R A H A M P R O V I N C I A L
AIN IR 6
RANGE
F O R E S T
Queen Charlotte Islands
AIN RIVER
10 0 20 40
SCALE IN MILES
KEY PLAN
2810
Buckley Cove
Gray Island
1498
Sinclair Rk
Kwaikans 1497 Island
McCreight Rock
McCreight Island
Masset Inlet
AIN RIVER
SCALE IN MILES

GENERAL REMARKS (cont.) - Ain River

Watershed Lakes:

1. Ian Lake	7.2 sq. mi.
2. Skundale Lake	0.4 sq. mi.
3. Ain Lake	0.2 sq. mi.
Total lakes area	7.8 sq. mi.

Accessible Tributaries:

Ain River

1. Right bank at 1.4 miles. This stream as observed from aerial flight is heavily wooded and appears to contain good spawning gravel for approximately 2 miles.

Ian Lake

1. North shore tributary (largest tributary)
   - average width = 20 ft.
   - accessible distance is approximately 0.75 miles (at which point there is a series of impassable falls)
   - low gradient
   - 60% of the length (4500 sq. yds.) contains good spawning gravel
   - water is tea-coloured
   - some scouring of streambed
2. North east arm, head stream
   - lower reaches marshy
   - falls (12 ft. drop over 60 ft.) at 4.0 miles
   - streambed from mouth to falls contains 20,000 sq. yds. gravel
   - coho fry observed above and below the falls
   - suitable spawning tributary at 0.6 miles
3. Extreme west end tributary
   - average width = 15 - 20 ft.
   - water is tea-coloured
   - good spawning gravel
   - salmon fry to forks at 1.1 miles (observed June 22/70)

- The theoretical production levels for the three lakes and their tributaries are: sockeye - 78,000; coho - 17,500 (catch plus escapements)
- There is an Indian food fishery for sockeye and chum on this stream, however, fishing activity has been declining since 1968.
- 1977. The Dept. of Fisheries bypassed the three falls providing the salmon with access to the whole river. Bypassing was accomplished in the following ways:
  Lower falls - bypassed with a fishway
  Middle falls - restructured by blasting to form two steps of pools to minimize the drop
  Upper falls - i) widened to reduce the velocity of water flow and, ii) three side pools were blasted in the rock for resting areas

References:

Walker, C. E. 1968. Areas for pink and chum salmon development in the Queen Charlotte Islands and a programme for fishery regulation in Masset Inlet. Memo. 31-2-Y1 Vol. 3. 22 pp.

ESCAPEMENT RECORD FOR AIN RIVER

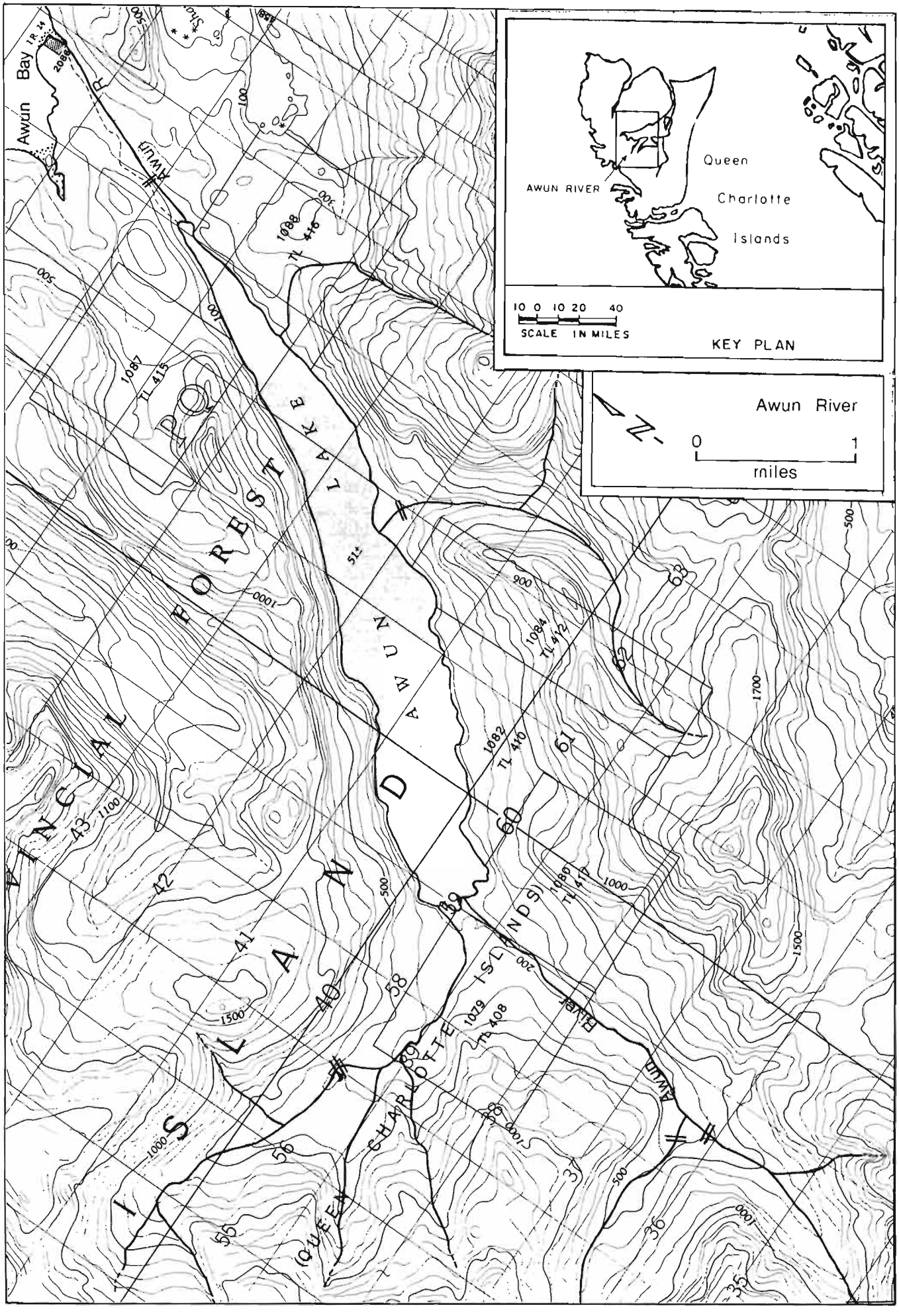
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	3500		400	3500		
48	2500		5000	3500	35000	
49	N/O		N/O	5000		
50	N/O		3500	7500	15000	
51	3500		3500	75000		
52	N/O		N/O	35000	75000	
53	N/O		400	75000		
54	N/O		3500	75000	7500	
55			SEE	REMARKS		
56	N/O		N/O		7500	
57	400		3500	75000		
58	750		400	400	1500	
59	750		3500	7500		
60	1500		750	7500	750	
61	750		200	7500		
62	3500		7500	3500	750	
63	1500		750	3500		
64	1500		7500	15000	3500	
65	750		7500	125000	400	
66	750		UNK	75000		
67	400		3500	15000		
68	750		1500	15000	1500	
69	7500			15000		
70	UNK		UNK	5000	5000	
71	500		75	14000		
72	1000		2000	2500	2500	
73	3000		2000	10000		
74	1500		2000	8000	2000	
75	2000		2500	25000		
76	1000		2500	30000	1500	
77	1500		2500	19000		
78	1200		3000	25000	2500	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE	E. JUN		E. AUG	E. OCT	L. AUG	
START	L. AUG		L. SEP	OCT	L. AUG	
PEAK	L. SEP		L. SEP	OCT	M. SEP	
END	M. OCT		OCT	NOV	SEP	

REMARKS

1955. The river water was too high and too discoloured to make any observations.


Awun Bay
AWUN
AWUN RIVER
Queen
Charlotte
Islands
10 0 10 20 40
SCALE IN MILES
KEY PLAN
Awun River
0
1
miles
PROVINCIAL FOREST
AWUN
QUEEN CHARLOTTE ISLANDS
TL 416
TL 415
TL 412
TL 408

NAME OF STREAM AWUN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into S. side of Masset Inlet, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 2.5 MI. WIDTH 75 FT. DRAINAGE 28.8 SQ. MI.

COMPOSITION: BEDROCK 25% BOULDER 25% COARSE 23% FINE

SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	0.0 - 1.5 miles (lake outlet)
7.5 - 10.0	
> 10.0	

WETTED AREA 66,000 SQ. YD. SPAWNING AREA 15,000 SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT

1) Passable 4 foot falls and rapids at 0.75 miles

2) Impassable (except to coho and sockeye) falls at 2.5 miles (Passable at high water)

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	- Awun Lake and tributaries
CHINOOK	
COHO	- to Awun Lake
CHUM	- to Awun Lake
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- in lower 2 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- This is a swift flowing stream which runs almost entirely through a steep rock canyon. It contains many deep pools.
- The limited spawning area is composed of coarse gravel and large rocks.
- The water is very dark, making accurate counts impossible.
- There was an Indian food fishery for sockeye and chum on this stream until 1968, at which time fishing activity started to decline. Now the food fishery is almost non-existant.

(Temperature: 66.0° F, Aug. 8/62 Discharge; 30 cfs, Aug. 3/62)

GENERAL REMARKS (cont.) - Awun River

Awun Lake: length = 4.0 miles
width = 0.8 miles
area = 3.2 sq. miles

The lake is surrounded by steep mountains and has very little beach or shoreline.

Accessible tributaries:

1. Upper Awun River (Grant Creek), head of Awun Lake
   - 15,000 sq. yds. good spawning gravel (the rest of the stream is bedrock)
   - accessible for 2 miles at which point the stream forks (impassable falls at beginning of both branches)
2. West Inlet Creek, head of Awun Lake
   - breaks into several small branches at one mile
   - average width is 18 feet
   - 6,000 sq. yds of spawning gravel
   - main branch accessible for 1.6 miles at which point there is a series of impassable falls and an extreme increase in gradient

3 & 4. The two other tributaries flowing into Awun Lake are very small and contain limited spawning area. They each have impassable falls at their mouths.

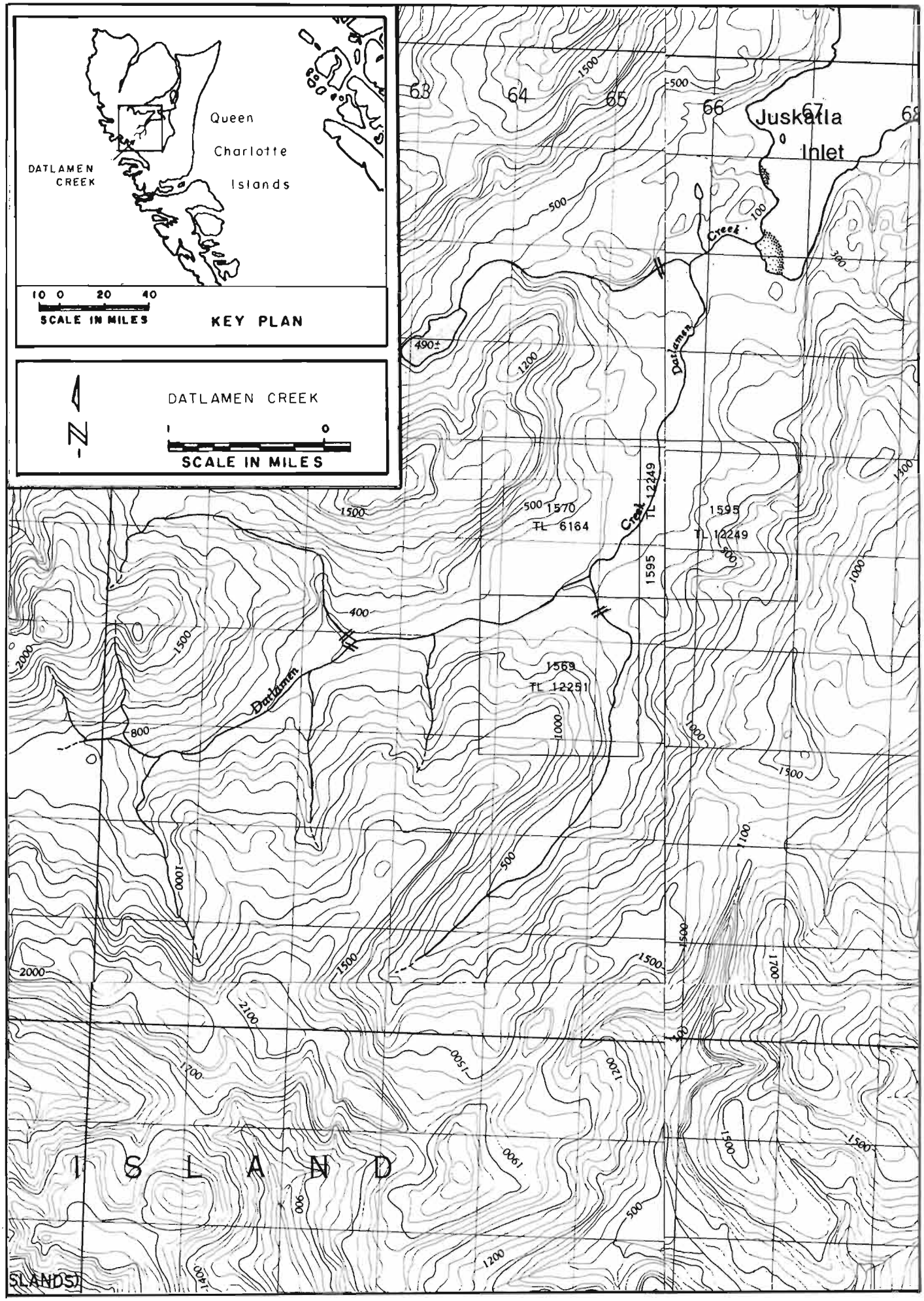
ESCAPEMENT RECORD FOR AWUN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	200		200	3500		
48	1500		400		15000	
49			400	400		
50			400	3500	7500	
51			400	7500		
52	400			15000	35000	
53	750		400	35000		
54	1500		750	15000	3500	
55			750	15000		
56			200	3500	3500	
57	400		750	35000		
58				7500	3500	
59	750		750	3500		
60			400	3500	200	
61	400		750	3500		
62	1500		1500	3500	3500	
63	750		400	3500		
64	1500		1500	3500	750	
65	400		1500	75		
66	400		200	3500	200	
67	200		200	1500		
68	400			7500	N/O	
69	7500		200	15000		
70	UNK		600	10000	6000	
71	UNK		150	8000		
72	1500		500	1000	2000	
73	2000		500	7000		
74	1500		1000	8000	1500	
75	1000		1500	15000		
76	800		1500	500	1000	
77	1000		1000	4000		
78	1000		1500	10000	2000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE	MAY		L. AUG	SEP	L. AUG	
START	AUG		L. SEP	M. OCT	L. AUG	
PEAK	L. SEP		OCT	L. OCT	M. SEP	
END	M. OCT		NOV	NOV	L. SEP	

REMARKS


Queen
Charlotte
Islands
DATLAMEN
CREEK
10 0 20 40
SCALE IN MILES
KEY PLAN
N
DATLAMEN CREEK
1 0
SCALE IN MILES
63
64
65
66
67
Juskatla
Inlet
Creek
Datlamen
490±
1570
TL 6164
1595
TL 12249
1569
TL 12251
ISLAND

NAME OF STREAM DATLAMEN CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Juskatla Inlet, Queen Charlotte Dist.

POSITION 53 132 NE

LENGTH 4.5 MI. WIDTH 35 FT. DRAINAGE 24.0 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 15% COARSE 30% FINE 40%

SILT & SAND UNCLASSIFIED

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	1.0 - 3.0 miles
> 10.0	0.0 - 1.0 miles; 3.0 - 4.5 miles

WETTED AREA 92,000 SQ. YD. SPAWNING AREA 64,400 SQ. YD.

DISCHARGE CFS MAX MIN

TEMPERATURE (60° F, Aug. 4/62; 44° F, Oct. 23/70)

BARRIERS OR POINTS OF DIFFICULT ASCENT

1. A 0.5 mile long canyon at 0.75 miles has been reported as a barrier to chums.
2. Impassable falls at 4.5 miles. Stream forks at this point and both branches are impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- to 2.0 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- This stream has high gravel content (70%) to 3.2 miles. Above this point the stream bed narrows and becomes bouldery with frequent windfalls and log jams.
- There are accessible tributaries at 0.5 and 3.2 miles. Both have impassable falls within 0.5 miles of their mouths.
- (Sample discharge: 8 cfs, Aug. 4/62)

References:

Neave, Ferris. 1955. Notes on the seaward migration of pink and chum salmon fry. J. Fish. Res. Bd. Can. 12(3): 369-374.

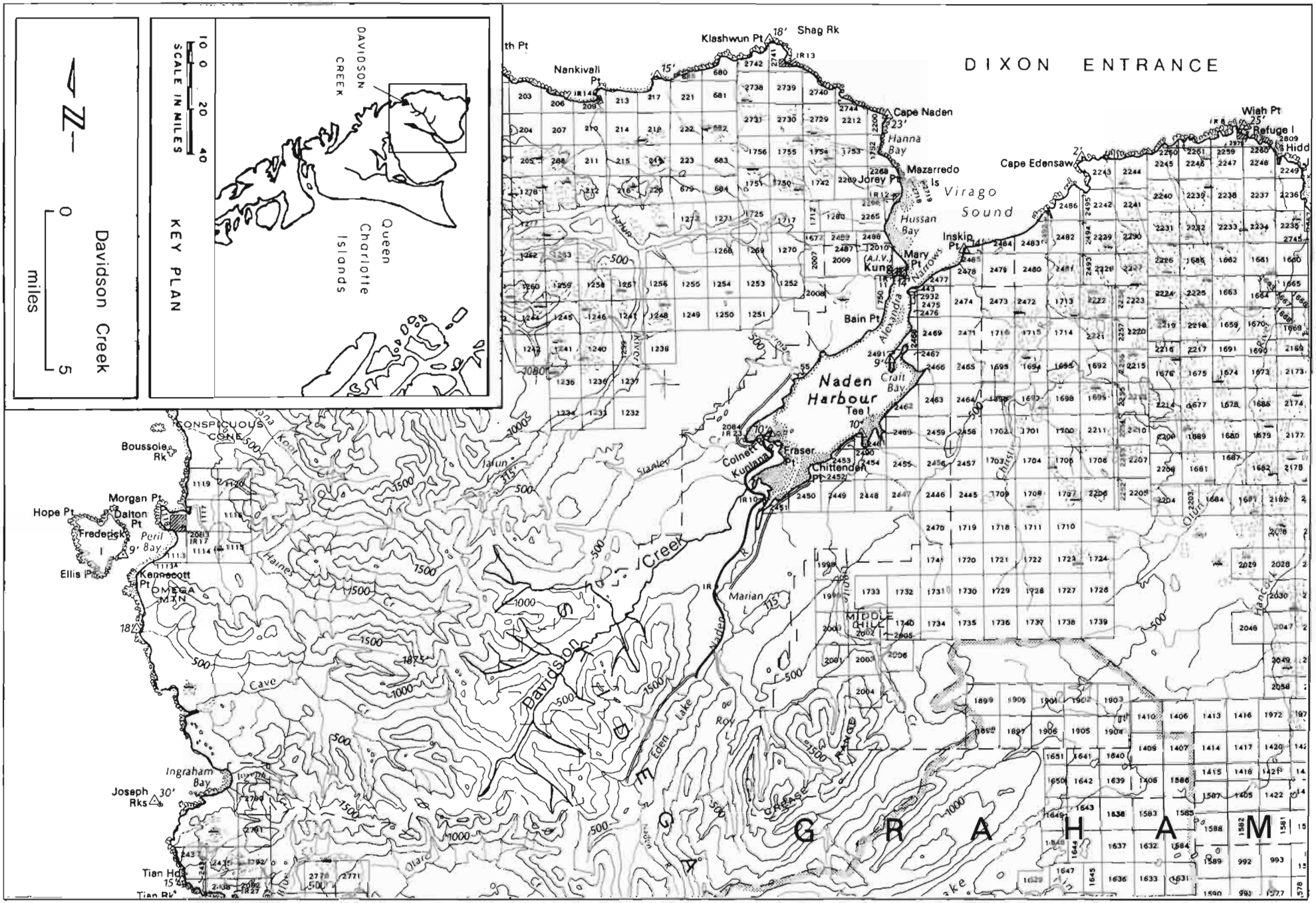
ESCAPEMENT RECORD FOR DATLAMEN CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400	750		
48			1500	1000	75000	
49						
50			400		15000	
51			200			
52			400	200	35000	
53				75		
54			200		100000+	
55				75		
56			200		100000+	
57				75		
58			200		75000	
59			400			
60			200		3500	
61	25		200			
62	25					
63						
64			75		75	
65			75			
66			25		75000	
67			25			
68			25		75000	
69			UNK			
70			200		50000	
71			250			
72			200		5000	
73			200			
74			1500		2000	
75			1000			
76			1500		1000	
77			500			
78			750		1500	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG		L. AUG	
START			L. SEP		L. AUG	
PEAK			OCT		SEP	
END			DEC		L. SEP	

REMARKS


Davidson Creek
0
5
miles
SCALE IN MILES
10 0 20 40
KEY PLAN
DAVIDSON CREEK
Queen Charlotte Islands
DIXON ENTRANCE
Klashwun Pt
Shag Rk
Nankivali Pt
Cape Naden
Hanna Bay
Mazarredo Is
Jorey Pt
Virago Sound
Hussan Bay
Cape Edensaw
Wiah Pt
Refuge I
Inskip Pt
Mary Pt
Kung
Narrows
Bain Pt
Alexandria
Naden Harbour
Crait Bay
Tee I
Fraser Pt
Colnett Pt
Kunlana
Chittenden Pt
Stanley
CONSPICUOUS CONE
Boussole Rk
Morgan Pt
Hope Pt
Dalton Pt
Frederick I
Peril Bay
Ellis Pt
Kennecott Pt
OMEGA MTN
Haines
Davidson Creek
Marian
MIDDLE CHILE
Naden R
Cave
Ingraham Bay
Joseph Rks
Tian Hd
Tian Rk
Eden Lake
Olaire
GRAHAM
Virago Sound

NAME OF STREAM DAVIDSON CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows NW. into Naden Hr., Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 12.0 MI. WIDTH 42 FT. DRAINAGE 46.4 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 25% FINE 25%

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	0.0 - 6.0 miles
5.0 - 7.5	6.0 - 9.2 miles
7.5 - 10.0	9.2 - 12.0 miles
> 10.0	

WETTED AREA 295,600 SQ. YD. SPAWNING AREA 148,000 SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout
CHUM	- to 4 miles
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- to 8 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream, as observed from the air appeared to be of excellent quality for spawning. No obstructions were observed throughout its entire length and where the bottom could be observed, it appeared that at least 50% of the wetted area would be suitable for spawning.
- The watershed is heavily timbered throughout.

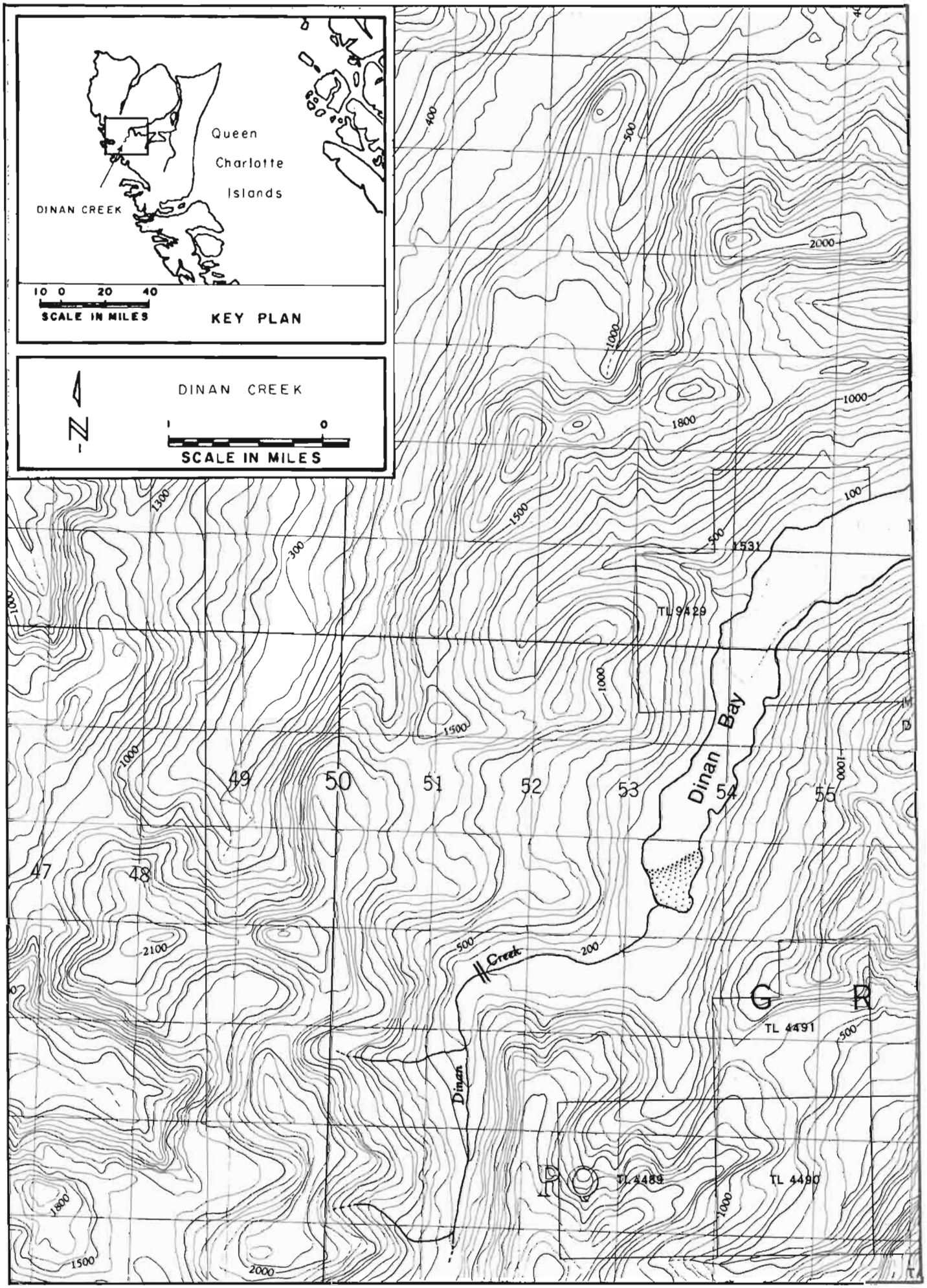
ESCAPEMENT RECORD FOR DAVIDSON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			200	400	3500	
49						
50						
51						
52						
53						
54						
55		NO RECORDS FROM 1949 -		1963		
56						
57						
58						
59						
60						
61						
62						
63						
64				25	1500	
65						
66				25	3500	
67						
68					7500	
69						
70				200	3000	
71			100	N/0		
72			200	N/0	100000	
73			15000	5000	2000	
74			25000	2500	40000	
75			5000	1000	1500	
76			60000	4000	50000	
77			10000	5000	N/0	
78			15000	2000	10000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG	OCT	AUG	
START			OCT	OCT	SEP	
PEAK			NOV	OCT	SEP	
END			NOV	NOV	SEP	

REMARKS


Queen
Charlotte
Islands
DINAN CREEK
10 0 20 40
SCALE IN MILES
KEY PLAN
DINAN CREEK
N
0
SCALE IN MILES
Dinan Bay
Creek
Dinan
TL 9429
TL 4491
TL 4489
TL 4490
47
48
49
50
51
52
53
54
55
400
500
2000
1000
1800
1000
1000
1500
100
1531
1300
300
1000
1500
1000
1000
100
500
200
500
2100
1800
1500
2000
1000

NAME OF STREAM DINAN CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Dinan Bay, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 1.25 MI. WIDTH 45 FT. DRAINAGE 6.4 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 14% FINE 13%

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	throughout

WETTED AREA 22,000 SQ. YD. SPAWNING AREA 6,000 SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE (57° F, Aug. 3/62; 48° F, Oct. 20/69)

BARRIERS OR POINTS OF DIFFICULT ASCENT

1. Passable series of cascades at 1 mile with a total drop of 12 feet over a length of 150 ft. The largest single drop is 5 ft.
2. Impassable falls at 1.25 miles - series of drops totalling 170 feet.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0 - 1.25 miles
CHUM	0 - 1.25 miles
PINK (ODD YEAR)	
PINK (EVEN YEAR)	0 - 1.25 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- This stream flows from the mountains and is subject to rapid run-off.
- The water is very clear.
- Only scattered pockets of suitable spawning gravel exist; the remainder of the streambed is coarse gravel and rock.
  (Sample discharges: 10 cfs, Aug. 3/62; 50 cfs, Oct. 20/69)
- 1970. This was the first year since 1948 that there was a run of chums to this stream.
- 1976. Logging activities throughout the watershed reached the east side of the river.

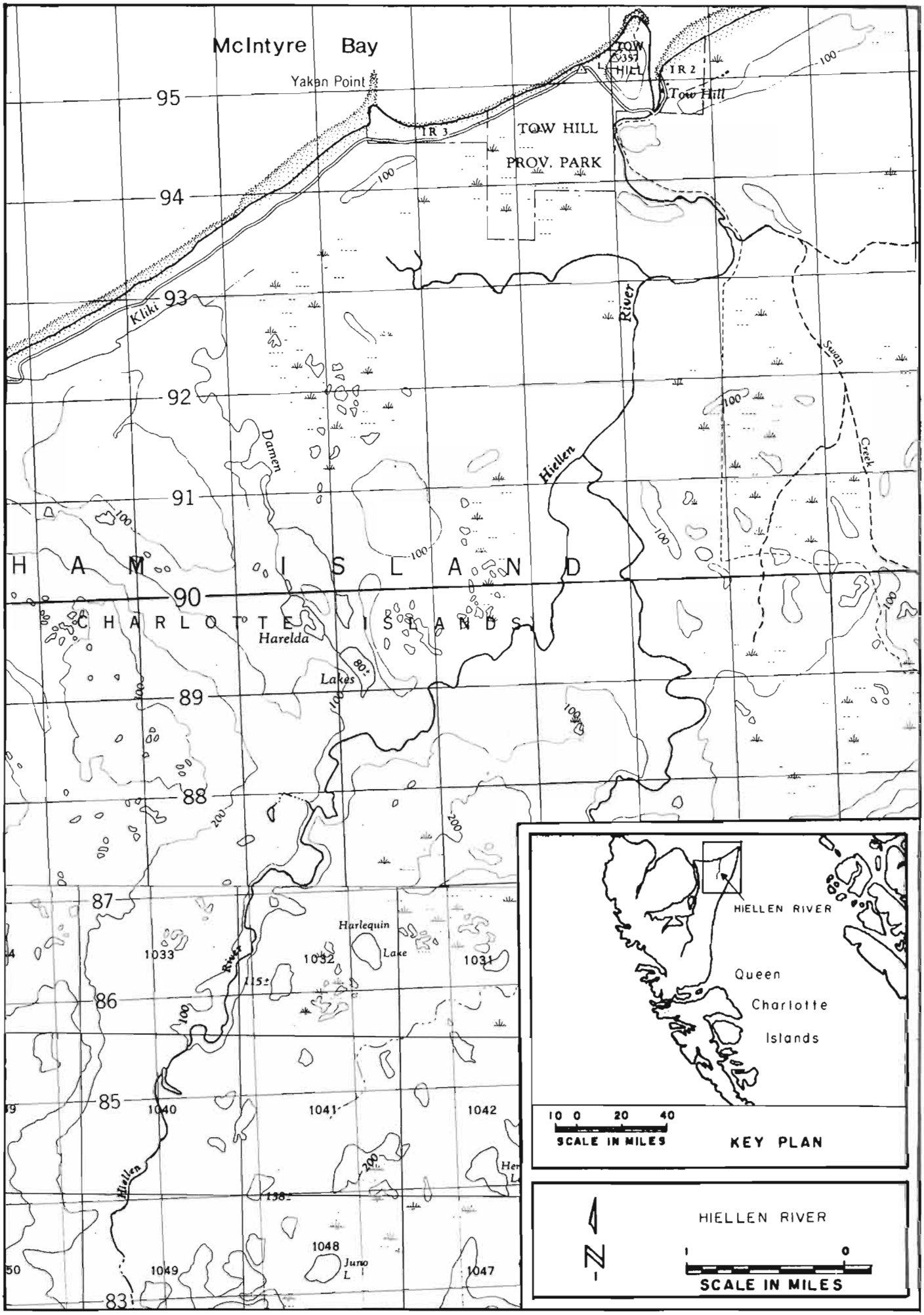
ESCAPEMENT RECORD FOR DINAN CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	75		
48			400	200	7500	
49			200			
50			400		7500	
51			400			
52			400		35000	
53			200			
54			200		200	
55			200			
56			75		15000	
57			200			
58			400		7500	
59			400			
60			75		200	
61			400			
62			400			
63			200			
64			200			
65			200			
66			200		75	
67			75			
68			75			
69			UNK			
70			75	400	2500	
71			75	N/O		
72			300	100	N/O	
73			200	N/O		
74			800	500	1000	
75			500	50		
76			1000	300	1000	
77			600	100		
78			1000	500	1000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			SEP	OCT	L. AUG	
START			OCT	OCT	L. AUG	
PEAK			OCT	M. OCT	SEP	
END			NOV	L. OCT	L. SEP	

REMARKS


McIntyre Bay
Yakan Point
TOW HILL
TOW HILL PROV. PARK
IR 2
IR 3
Tow Hill
Kliki
River
Swan
Creek
Damen
Hiellen
H A M I S L A N D
C H A R L O T T E I S L A N D S
Harelda
Lakes
Harlequin
Lake
River
Hiellen
Juno L
95
94
93
92
91
90
89
88
87
86
85
83
1033
1032
1031
1040
1041
1042
1048
1049
1047
HIELLEN RIVER
Queen
Charlotte
Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
N
HIELLEN RIVER
1 0
SCALE IN MILES

NAME OF STREAM HIELLEN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into McIntyre Bay, Queen Charlotte Dist.

POSITION 54 131 SW

LENGTH 10.0 MI. WIDTH _____ FT. DRAINAGE 59.2 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	1.0 - 10.0 miles
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	- throughout
CHUM	
PINK (ODD YEAR)	- first 1.0 mile
PINK (EVEN YEAR)	- first 1.0 mile
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- The stream drains a large muskeg area causing the water to be very dark (coffee-coloured). Observation of the salmon is very difficult, therefore, escapements are usually calculated from sport fishing returns.
- The river is silty in its upper reaches.
- Easy road access makes the river available to sport fishermen. There are heavy coho and steelhead sport fisheries on this stream.

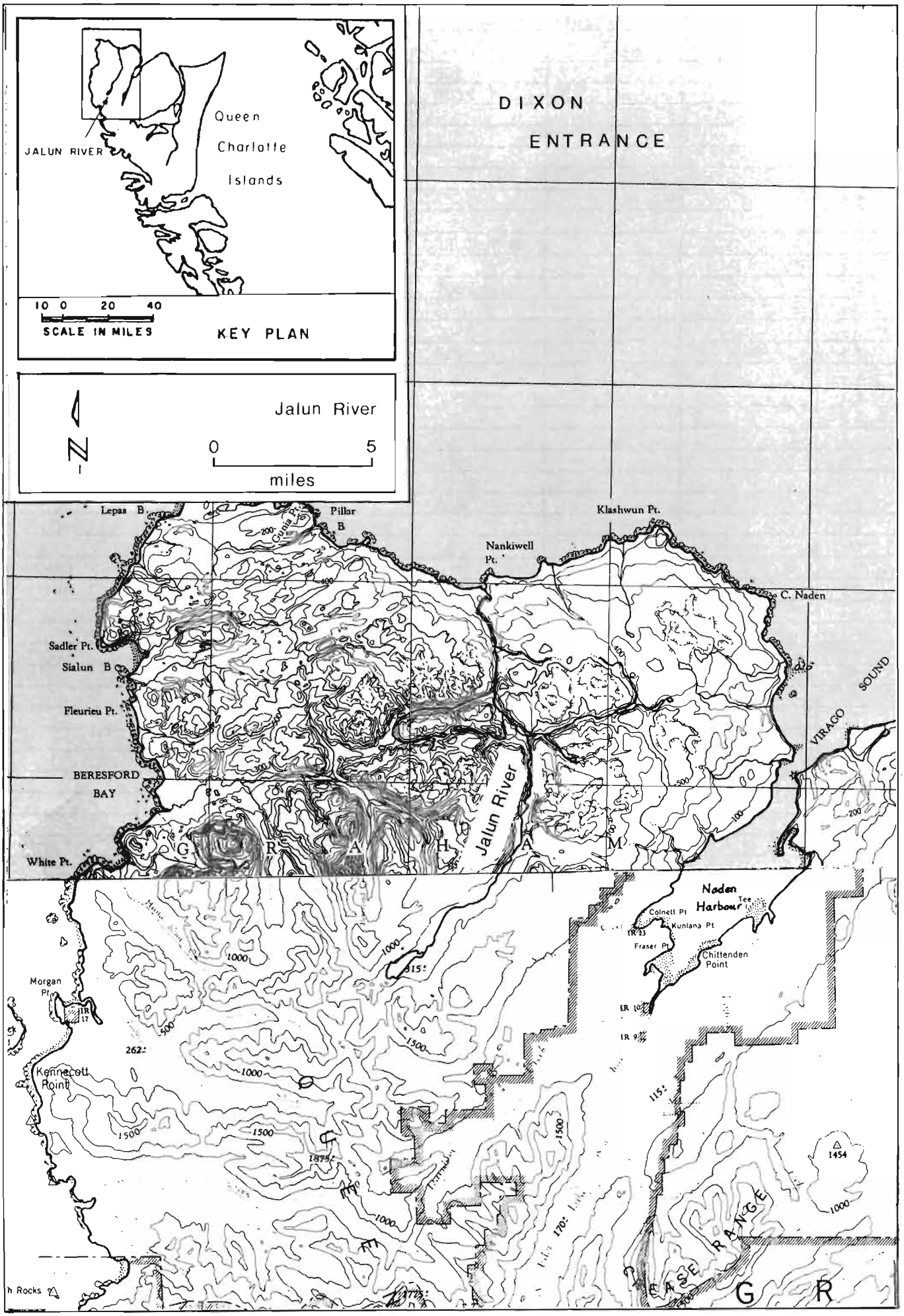
ESCAPEMENT RECORD FOR HIELLEN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200		1500	
48			7500		3500	
49					3500	
50					UNK	
51					3500	
52					7500	
53					3500	
54						
55			NO RECORDS	FROM 1954 –	1956	
56						
57			1500		7500	
58					7500	
59			3500		3500	
60			750		3500	
61			3500		7500	
62			3500		7500	
63			750		3500	
64			3500		7500	
65			7500		7500	400
66			1500		3500	200
67			400			200
68			400		1500	400
69			750			75
70			350		400	UNK
71			300		5000	UNK
72			300		1000	
73			350		N/O	
74			1000		500	100
75			1000		750	
76			1000		500	
77			500		100	
78			1000		1500	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG		AUG	
START			L. SEP		AUG	
PEAK			M. OCT		E. SEP	
END			DEC		M. SEP	

REMARKS


JALUN RIVER
Queen
Charlotte
Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
DIXON
ENTRANCE
Jalun River
N
0 5
miles
Lepas B
Pillar
B
Klashwun Pt.
Nankiwell
Pt.
C. Naden
Sadler Pt.
Sialun B
Fleurieu Pt.
BERESFORD
BAY
White Pt.
Jalun River
SOUND
VIRAGO
Naden
Harbour
Colnett Pt
Kunlana Pt
IR 23
Fraser Pt
Chittenden
Point
IR 10
IR 9
Morgan
Pt
IR
17
Kennecott
Point
262:
315:
115:
170:
1454
1875:
1000
1500
500
100
200
300
400
h Rocks
G R A H A M
E A G L E R A N G E
G R

NAME OF STREAM JALUN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Dixon Entrance W. of Nankivell Point, Queen Charlotte Dist. POSITION 54 132 SW

LENGTH 14.5 MI. WIDTH 50 FT. DRAINAGE 78.4 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	4.4 - 14.5 miles
7.5 - 10.0	0.0 - 4.4 miles
> 10.0	

WETTED AREA 425,000 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	- to Jalun Lake and throughout its feeder streams
COHO	- throughout
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- lower 3 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- From aerial observations it appears that suitable conditions for spawning exist throughout the entire length of this river.
- The mid-reaches are bouldery.
- The river drains a large muskeg area which causes the water to be dark. The dark colour and difficulty of access make inspection and estimation of escapements almost impossible.
- Accessible tributaries:
  1. At 4.0 miles, left bank
     - suitable for spawning for at least 1.0 mile

GENERAL REMARKS (cont.) - Jalun River

2. At 6.0 miles, right bank
   - good gravel from mouth to headwater lake at 3.0 miles

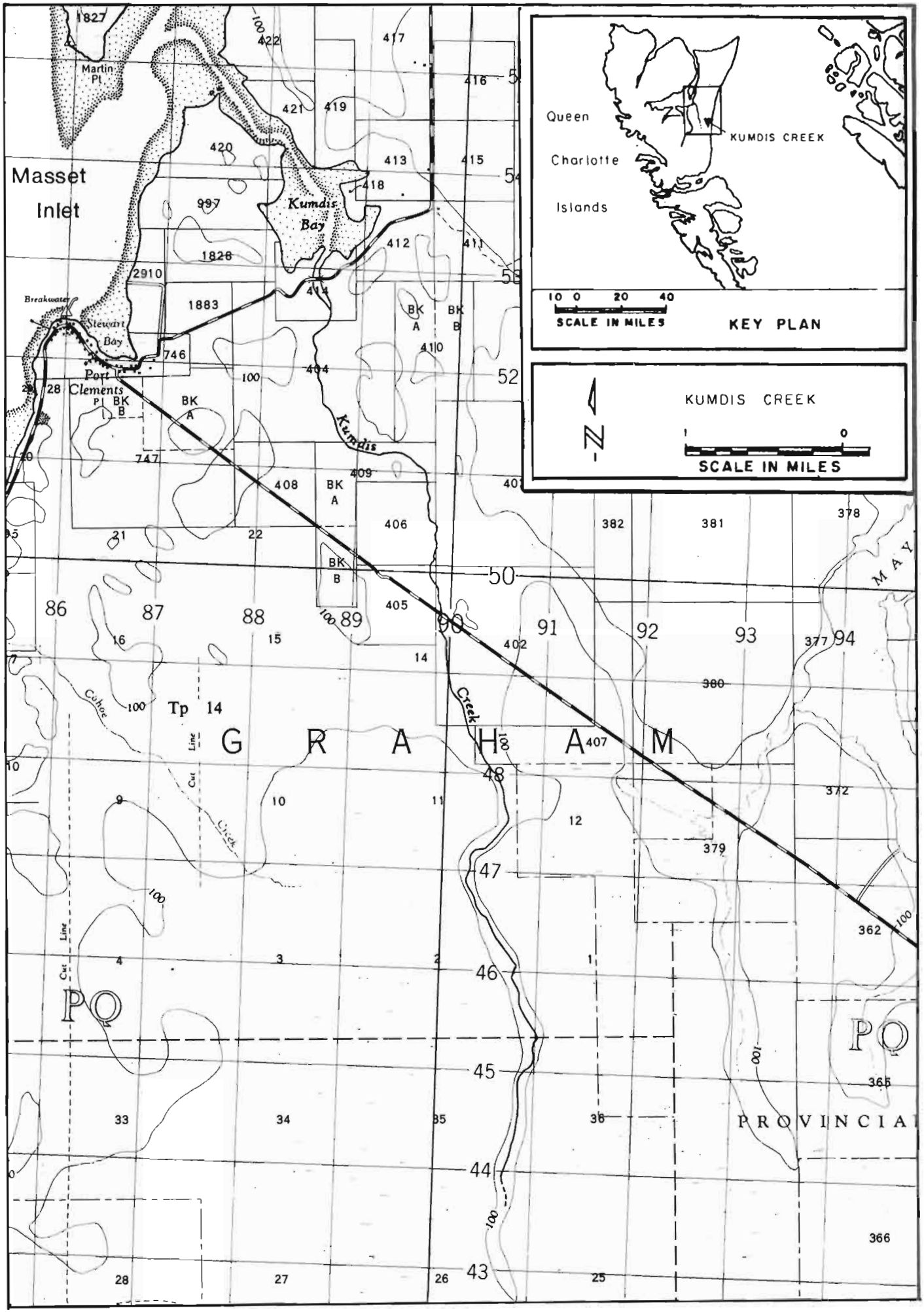
ESCAPEMENT RECORD FOR JALUN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50					15000	
51	3500					
52					15000	
53	750					
54					NO REC	
55					NO REC	
56					7500	
57					7500	
58					7500	
59					3500	
60			1500		15000	
61					3500	
62					35000	
63			1500		7500	
64			3500		35000	
65	75		15000		7500	
66					35000	
67			3500		75	
68					75000	
69	3500				200	
70	750		2000		40000	
71	UNK		300		N/O	
72	UNK		800		10000	
73	1000		1000		N/O	
74	800		1000		15000	
75	1000		1500		N/O	
76	1000		2000		20000	
77	1200		1000		N/O	
78	1000		2500		8000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE	MAY		L. AUG		M. AUG	
START	AUG		L. SEP		AUG	
PEAK	M. AUG		L. OCT		AUG	
END	M. SEP		DEC		SEP	

REMARKS


Masset Inlet
Kumdis Bay
Martin Pt
Breakwater
Stewart Bay
Port Clements
Kumdis
Tp 14
GRAHAM
Queen Charlotte Islands
KUMDIS CREEK
KEY PLAN
SCALE IN MILES
KUMDIS CREEK
N
SCALE IN MILES
PROVINCIAL

NAME OF STREAM KUMDIS CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Kumdis Bay, Queen Charlotte Dist.

POSITION 53 132 NE

LENGTH 6.4 MI. WIDTH 20 FT. DRAINAGE 11.2 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

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

WETTED AREA 75,000 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	- throughout
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- lower 0.5 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream, for its size is probably the best coho producer in the area. It drains a large muskeg area near the center of Graham Island which causes the water to be extremely discoloured (black during heavy rains).
- The land at either side of the stream mouth is mainly swamp.
- The spawning beds are composed of very fine gravel and begin at approximately 2 miles from tidewater.

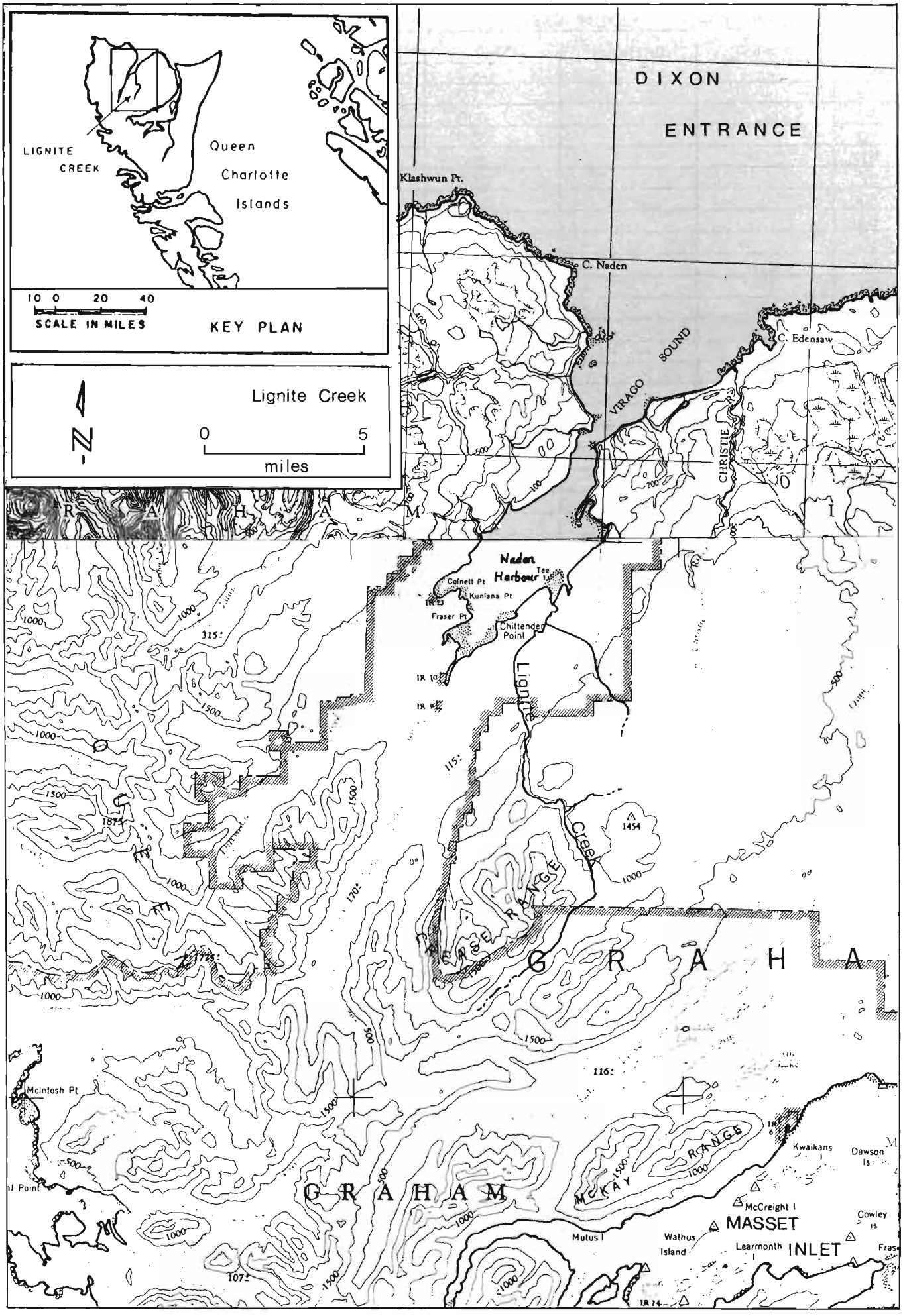
ESCAPEMENT RECORD FOR KUMDIS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400			
48			7500			
49			400			
50			400			
51			200			
52			200			
53			N/O			
54			1500			
55			400			
56			N/O			
57			3500			
58			1500			
59			750			
60			1500			
61			3500			
62			3500			
63			1500			
64			7500			
65			7500			
66			1500			
67			750			
68			750			
69			400			
70			500			
71			350			
72			4500		1000	
73			1000			
74			2500		700	
75			2000			
76			5000		1000	
77			2000			
78			2000		1000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG		L. AUG	
START			OCT		L. AUG	
PEAK			L. OCT		SEP	
END			DEC		L. SEP	

REMARKS


LIGNITE CREEK
Queen Charlotte Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
N
Lignite Creek
0 5
miles
DIXON ENTRANCE
Klashwun Pt.
C. Naden
C. Edensaw
VIRAGO SOUND
CHRISTIE
R A H A M I
Naden Harbour
Colnett Pt
Kunlana Pt
Fraser Pt
Chittenden Point
IR 23
IR 10
IR 9
Lignite Creek
1454
1875
1775
FRASER RANGE
G R A H A
McIntosh Pt
G R A H A M
McKAY RANGE
Kwaikans
Dawson Is
McCreight I
MASSET
Cowley Is
Mutus I
Wathus Island
Learmonth
INLET
IR 6
IR 24

NAME OF STREAM LIGNITE CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Naden Harbour, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 4.2 MI. WIDTH 30 FT. DRAINAGE 51.2 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 32% FINE 33%

SILT & SAND 35% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	7.1 - 11.5 miles
5.0 - 7.5	11.5 - 15.1 miles
7.5 - 10.0	0.0 - 4.2 miles; 4.7 - 7.1 miles
> 10.0	4.2 - 4.7 miles

WETTED AREA 74,000 SQ. YD. SPAWNING AREA 48,000 SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE (59° F. Aug. 1/62)

BARRIERS OR POINTS OF DIFFICULT ASCENT

Impassable (to all salmon spp.) series of falls at 4.2 miles.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout (to falls)
CHUM	- lower 3 miles
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- lower 3 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

From aerial observation, it appears that suitable spawning and rearing conditions exist for 10 miles above the falls. The gradient is moderate (5-10 ft/000) and the gravel appears to be of good quality and quantity throughout.

GENERAL REMARKS:

- This stream drains a muskeg area, therefore, the water tends to be very dark.
- The stream banks are low, mainly alder flats. There is the occasional high clay bank.
- The lower 1.5 miles of the streambed are mud and sand. This section of the stream is subject to silting, bank erosion and course changes.
- There is a great deal of debris from windfalls on the stream.
- 1968. Logging operations commenced in this watershed.
- 1969. The lower, west side of the creek has been logged off.

(Sample discharge: 10 cfs Aug. 1/62)

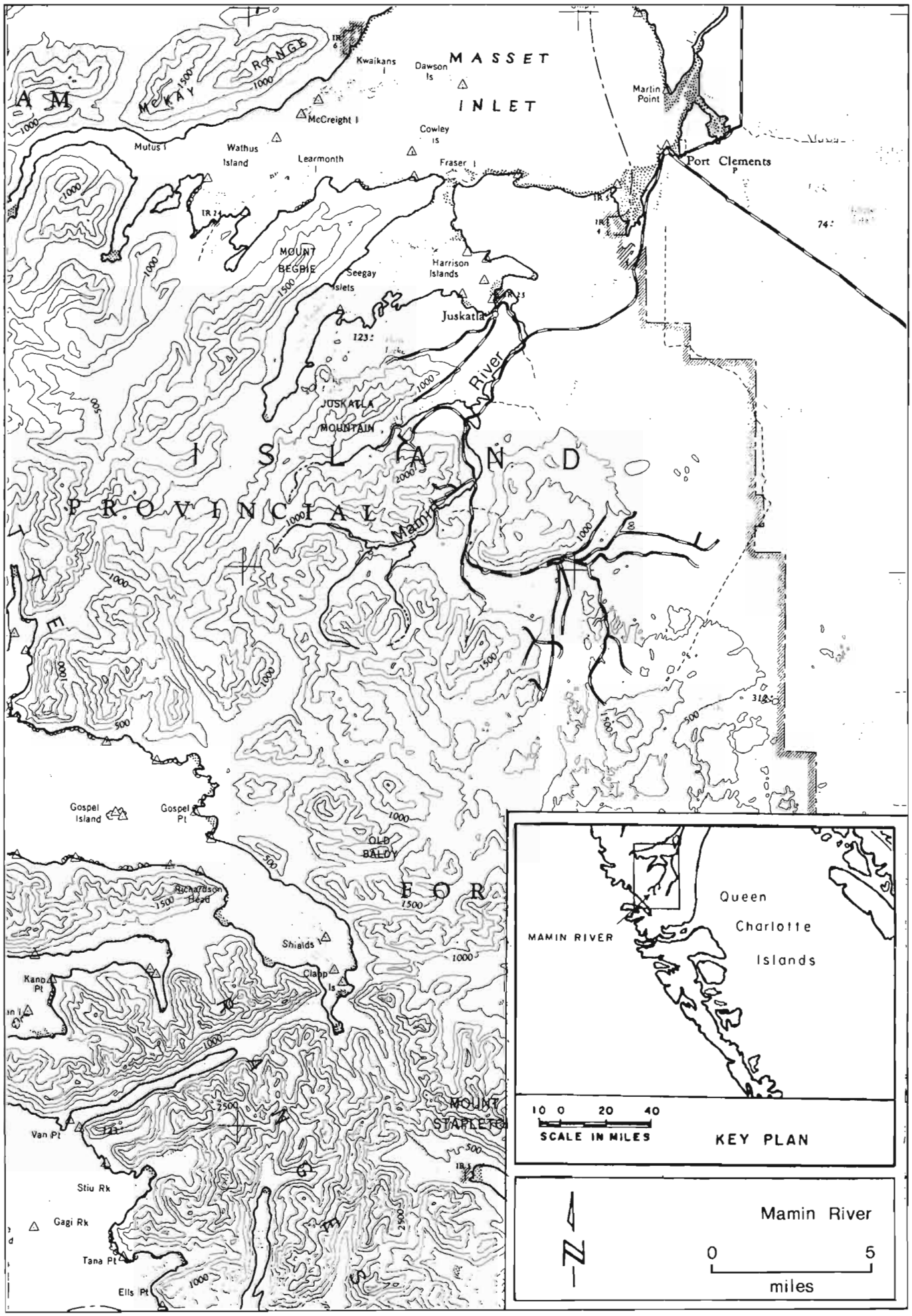
ESCAPEMENT RECORD FOR LIGNITE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75			
48			200		3500	
49			N/O			
50			N/O		35000	
51			NO RECORD			
52			N/O		3500	
53			N/O			
54			3500			
55			NO RECORD			
56			N/O		3500	
57			200			
58			400	200	3500	
59			400			
60			200		3500	
61			400			
62			750		15000	
63			400			
64			1500		7500	
65			3500		25	
66			200	200	15000	
67			200		75	
68			400		100000	
69			N/O			
70			150	200	8000	
71			1500		50	
72			2500		35000	
73			10000	5000		
74			15000	3000	10000	
75			5000	1000	100	
76			10000	500	10000	
77			8000	3000		
78			5000	1500	5000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG	OCT	L. AUG	
START			OCT	OCT	AUG	
PEAK			NOV	L. OCT	SEP	
END			NOV	NOV	SEP	

REMARKS


MASSET INLET
Kwaikans I
Dawson Is
Marlin Point
McCreight I
Cowley Is
Mutus I
Wathus Island
Learmonth I
Fraser I
Port Clements
MOUNT BEGBIE
Seegay Islets
Harrison Islands
Juskatla
JUSKATLA MOUNTAIN
Mamin River
PROVINCIAL
Gospel Island
Gospel Pt
OLD BALDY
Richardson Head
Shields I
Clapp Is
Kano Pt
MOUNT STAPLETON
Van Pt
Stiu Rk
Gagi Rk
Tana Pt
Ells Pt
Queen Charlotte Islands
MAMIN RIVER
10 0 20 40
SCALE IN MILES
KEY PLAN
Mamin River
0 5
miles

NAME OF STREAM MAMIN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Juskatla Inlet, Queen Charlotte Dist.

POSITION 53 132 NE

LENGTH 13.0 MI. WIDTH 60 FT. DRAINAGE 51.2 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	2.8 - 10.8 miles
2.5 - 5.0	
5.0 - 7.5	0.0 - 2.8 miles
7.5 - 10.0	10.8 - 13.0 miles
> 10.0	

WETTED AREA 457,000 SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT

Impassable falls at 13.0 miles.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	- to 5 miles
CHINOOK	
COHO	- to 13 miles on Mamin River; to falls on Cedar Creek
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- lower 0.75 miles
STEELHEAD	- to 13 miles

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- Logging and gravel removal operations have been carried on throughout this watershed for a number of years. Both operations have damaged the river by leaving pools and potholes in the stream, causing erosion of the streambanks, silting and widening of the streambed, accumulation of debris and the replacement of gravel with rock and boulders.
- The stream flows through mountainous country. It has a canyon area from 2.75 to 4.25 miles.
- The water is very clear.

GENERAL REMARKS (cont.) - Mamin River

- Accessible tributaries:
    1. Cedar Creek (Blackwater Creek)
        - impassable 20 foot falls at 0.5 miles
- 1977. A large log jam at the mouth of the river is causing the development of braided channels. Some of the new channels are becoming blocked with debris.

References:

Neave, F. 1955. Notes on the seaward migration of pink and chum salmon fry. J. Fish. Res. Bd. Canada 12(3): 369-374.

Walker, C. E. 1968. Areas for pink and chum salmon development in the Queen Charlotte Islands and a programme for fishery regulation in Masset Inlet. Memo. 31-2-Y1 Vol. 3. 22 pp.

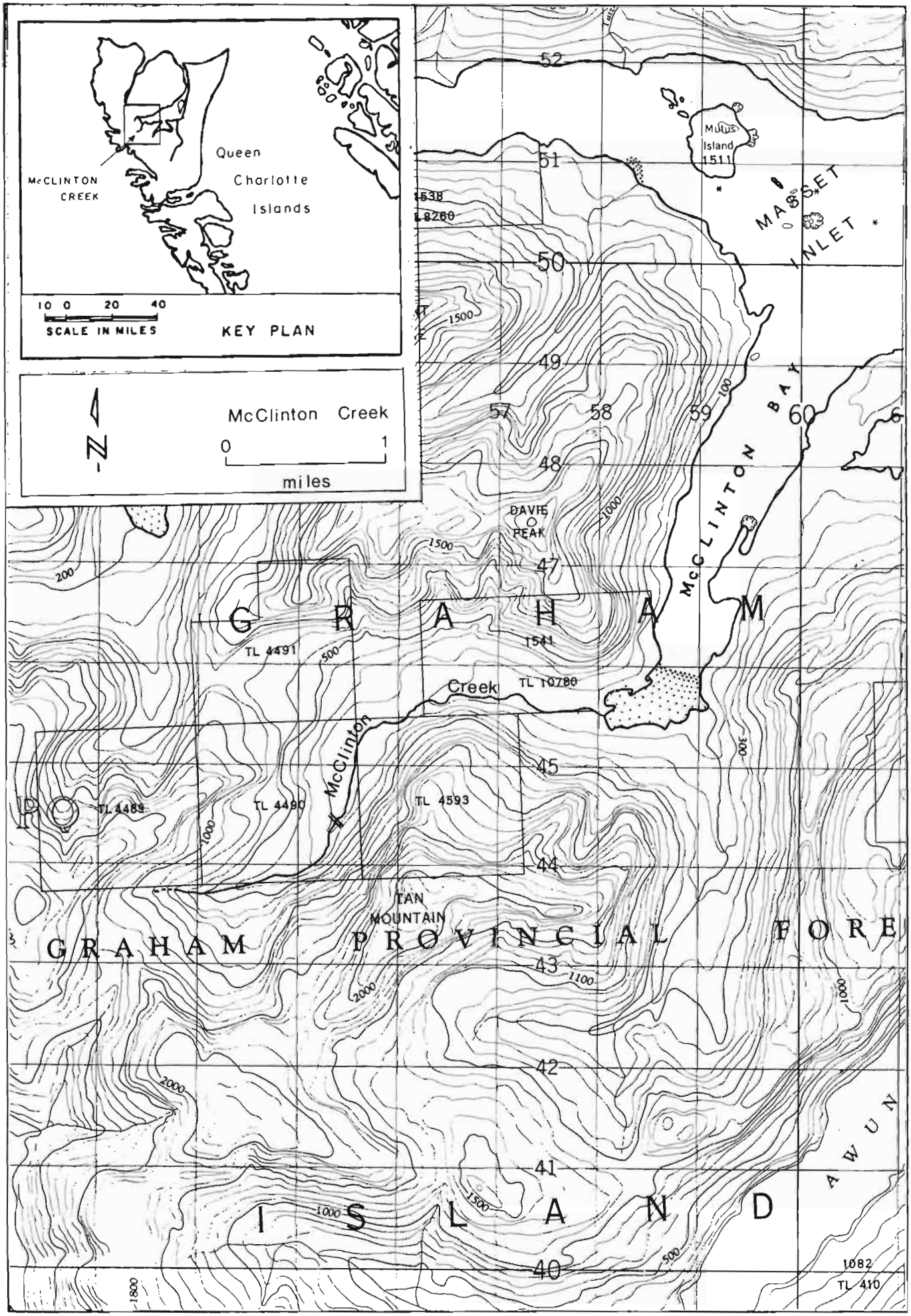
ESCAPEMENT RECORD FOR MAMIN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400			
48			5000		150000	1000
49			3500			
50			3500		75000	
51			1500			
52			750		100000+	
53						
54					75000	
55						
56					100000+	
57			400			
58	75				35000	
59						
60	750		200		25	
61	75		200			
62	75		75		25	
63			75			
64			1500		7500	
65	25		1500			750
66	25		1500		100000+	400
67	25		3500			400
68	750		1500		75000	750
69			200			400
70			2500		35000	300
71			400			500
72			2500		10000	UNK
73			1000			400
74	200		3000		10000	200
75			4000			200
76	100		5000		8000	400
77	50		3000			200
78	100		4000		8000	200
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG		AUG	
START			OCT		AUG	
PEAK	M. SEP		NOV		M. SEP	
END			DEC		L. SEP	

REMARKS


McCLINTON CREEK
Queen Charlotte Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
N
McClinton Creek
0 1
miles
Mulus Island 1511
MASSET INLET
McCLINTON BAY
DAVIS PEAK
1538
8260
1541
TL 4491
TL 10780
Creek
McClinton
TL 4489
TL 4490
TL 4593
TAN MOUNTAIN
GRAHAM PROVINCIAL FORE
ISLAND
AWUN
1082
TL 410

NAME OF STREAM (McClinton Creek)

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows E. into McClinton Bay, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 2.5 MI. WIDTH 45 FT. DRAINAGE 8 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	throughout

WETTED AREA 66,000 SQ. YD. SPAWNING AREA 30,000 SQ. YD.

DISCHARGE * CFS MAX _____ MIN _____

TEMPERATURE (39.2° F, Nov. 21/51; 36° F, Feb. 4/52; 58° F, Sept. 9/62; 44° F, Oct. 23/70)

BARRIERS OR POINTS OF DIFFICULT ASCENT

Impassable 20 foot falls at 2.5 miles

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- to falls at 2.5 miles
CHUM	
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- lower 0.5 miles
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- This stream runs through a valley between high mountains but the land on either side of it is flat for 200 yds. There is some undercutting of the banks.
- The best spawning area is located from 0.5 miles to 1.5 miles where 80% of the gravel is suitable for spawning.
- The water is very clear.
- The stream is subject to flash floods which causes overflowing of the banks.

* Sample discharges: 5 cfs, Sept. 3/62; 100 cfs, Oct. 23/70

GENERAL REMARKS (cont.) - McClinton Creek

References:

Neave, F. 1955. Notes on the seaward migration of pink and chum salmon fry. J. Fish. Res. Bd. Canada 12(3): 369-374.

Pritchard, A. L. 1931. A report of the pink salmon investigations in British Columbia. Prog. Rept. Biol. Bd. Canada 10: 5-9.

_____ 1937. Variation in the time of run, sex proportions, size and egg content of adult pink salmon (Oncorhynchus gorbuscha) at McClinton Creek, B. C. J. Fish. Res. Bd. Canada 3(5): 403-416.

_____ 1938. Transplantation of pink salmon (Oncorhynchus gorbuscha) into Masset Inlet, British Columbia in the barren years. J. Fish. Res. Bd. Canada 4(2): 144-150.

_____ 1938. The findings of the British Columbia pink salmon investigation. Prog. Rept. Fish. Bd. Canada 35: 14-17.

_____ 1939. Natural propagation of pink salmon in Masset Inlet, British Columbia. Prog. Rept. Fish. Res. Bd. Canada 41: 6-9.

_____ 1939. Homing tendency and age at maturity of pink salmon (Oncorhynchus gorbuscha) in British Columbia. J. Fish. Res. Bd. Canada 4(4): 233-251.

_____ 1941. The recovery of marked Masset Inlet pink salmon during the season 1940. Prog. Rept. Fish. Res. Bd. Canada 48: 13-17.

_____ 1944. Physical characteristics and behaviour of pink salmon fry at McClinton Creek, B. C. J. Fish. Res. Bd. Canada 6(3): 217-227.

_____ 1948. Efficiency of natural propagation of the pink salmon (Oncorhynchus gorbuscha) in McClinton Creek, Masset Inlet, B. C. J. Fish. Res. Bd. Canada 7(5): 224-236.

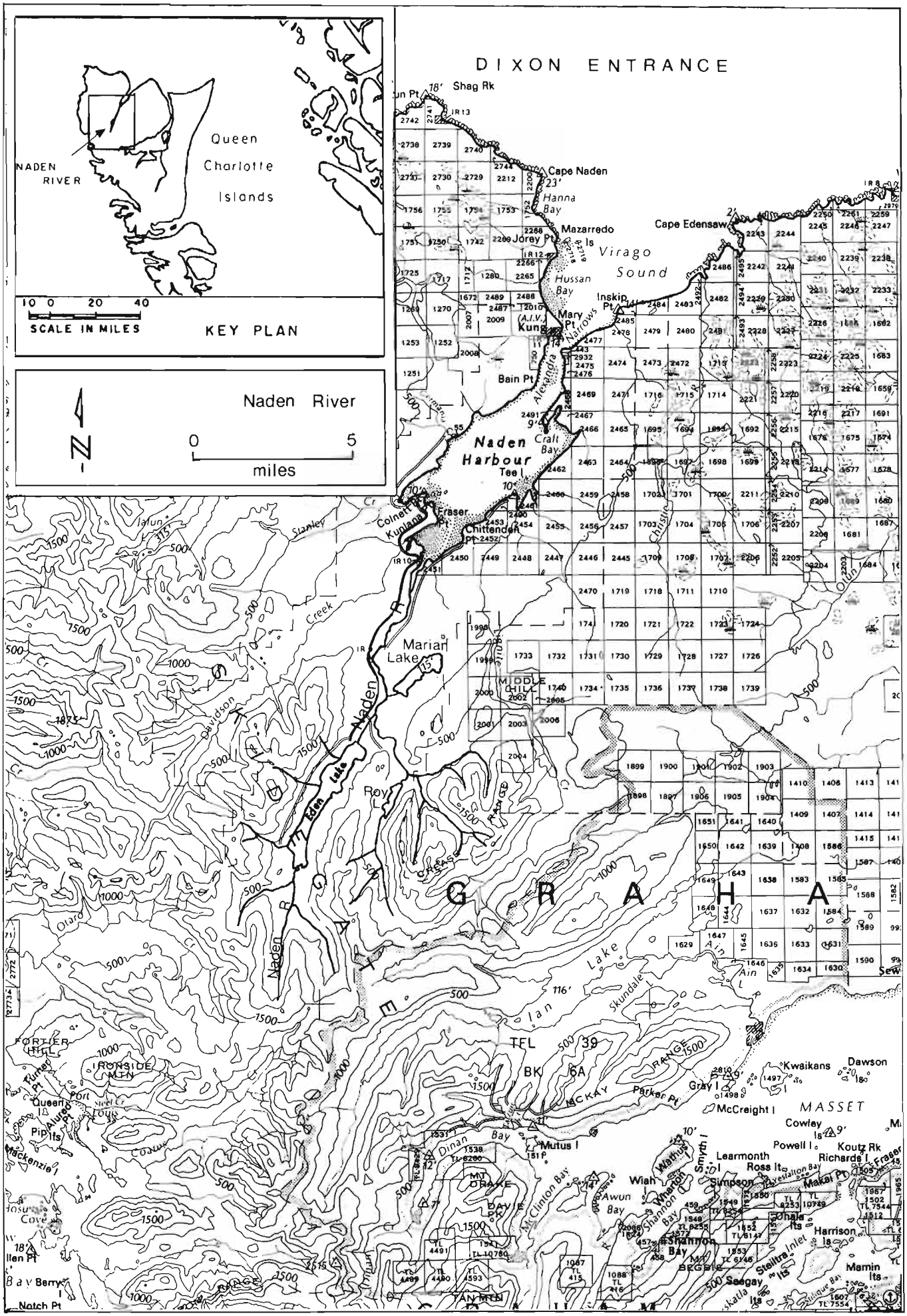
ESCAPEMENT RECORD FOR McCLINTON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	400		
48			1500		35000	
49			200			
50			400		7500	
51			200	1500		
52			200	400	35000	
53			200	3500		
54			750	750	15000	
55			200	75		
56			200	200	3500	
57			N/O	N/O		
58				200	7500	
59				25		
60			75	25	400	
61			200			
62			75		400	
63				200		
64			25			
65			75			
66			200	25	400	
67			75			
68			400			
69			75			
70			600		2000	
71			10			
72			50		400	
73			100			
74			300		500	
75			500			
76			500		250	
77			300			
78			500	1000	200	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			SEP		L. AUG	
START			OCT		E. SEP	
PEAK			NOV		M. SEP	
END			NOV		L. SEP	

REMARKS


DIXON ENTRANCE
Queen Charlotte Islands
NADEN RIVER
KEY PLAN
10 0 20 40
SCALE IN MILES
Naden River
N
0 5
miles
Shag Rk
Cape Naden
Hanna Bay
Cape Edensaw
Mazarredo Is
Jorey Pt
Virago Sound
Hussan Bay
Inskip Pt
Mary Pt
Narrows
Kung
Bain Pt
Alexandra
Craft Bay
Naden Harbour
Tee
Colnett Pt
Kuniana
Fraser Pt
Chittenden Pt
Chaistis
Olun
Stanley
Creek
Marian Lake
Davidson
Naden R
Edem Lake
Roy
Range
Creek
Naden River
Otard
Lake
Skundaal
Ian
Ain
Ain L
TFL 39
BK 6A
McKay
Parker Pt
Gray I
McCreight I
MASSET
Kwaikans
Dawson
Cowley Is
Powell I
Koutz Rk
Richards I
Fraser
Learmonth
Ross Is
Simpson
Makai Pt
Wah
Awun Bay
Wharton
Shannon Bay
Shannon Bay
Ohale Its
Harrison Is
Steiltra Its
Inlet
Mamin Its
Seagay
Skatla Is
MT BEGBIE
MT DRAKE
BAY IR PK
Dinan Bay
Mutus I
M Clinton Bay
Smyth I
Wathus
Tunnel Pt
Queen Pt
Allued Pt
Pip Its
Mackenzie I
Port Louis
FORTIER HILL
IRONSIDE MTN
Hosu Cove
Ilen Pt
Bay
Berry I
Notch Pt
TANNER
MIDDLE HILL
RANGE
Yan
Ain
Sew

NAME OF STREAM NADEN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Naden Harbour, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 7.0 MI. WIDTH 85 FT. DRAINAGE 68.8 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 30% FINE 30%

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

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

WETTED AREA 350,000 SQ. YD. SPAWNING AREA 210,000 SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE (62° F, Aug. 1/62)

BARRIERS OR POINTS OF DIFFICULT ASCENT

Two fishways were installed in 1957 to provide improved access over 10 ft. falls at 3.5 miles and over 8 ft. falls at 4.0 miles.

SPAWNING DISTRIBUTION:

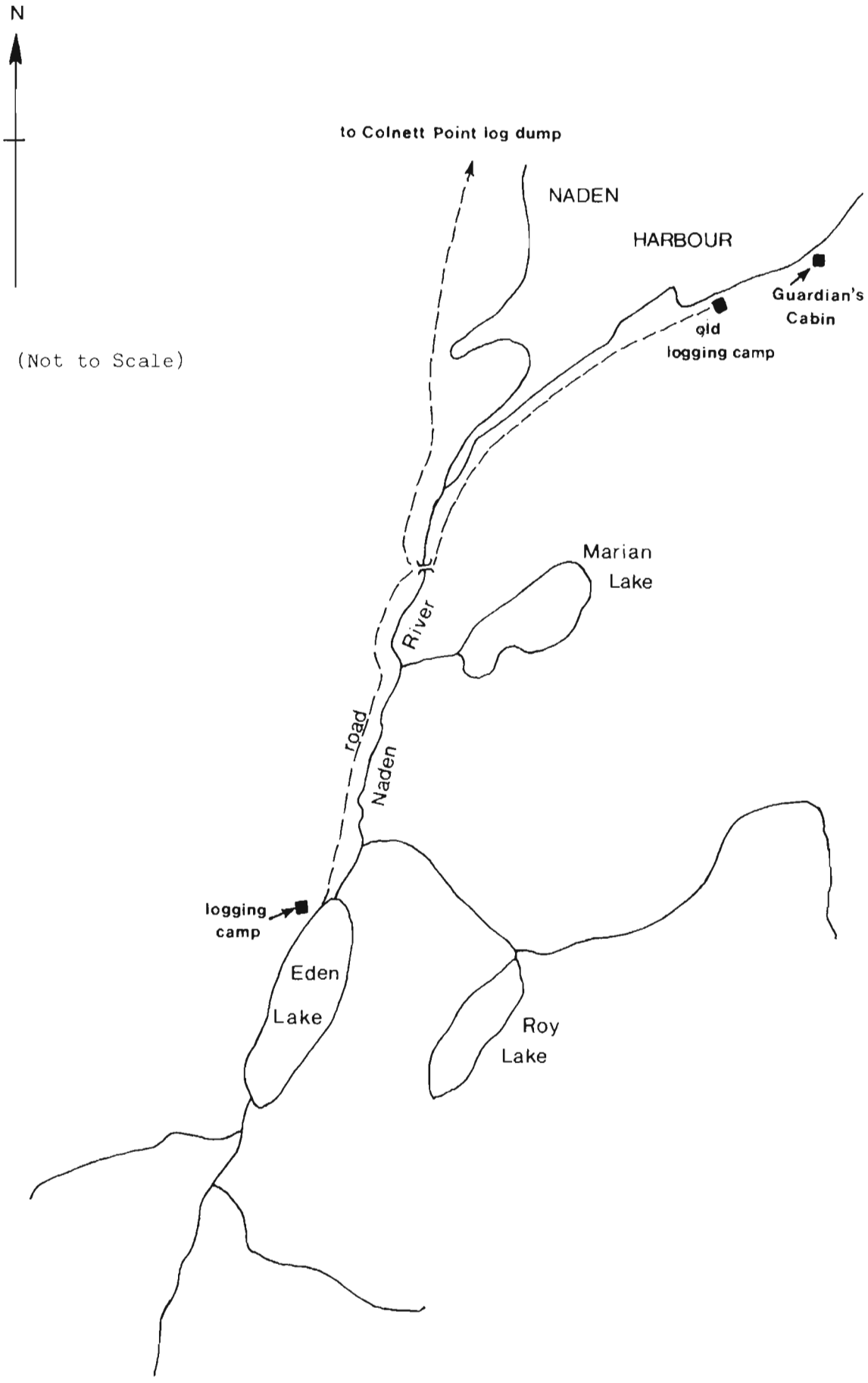
SPECIES	SECTION OF STREAM USED
SOCKEYE	- to Eden Lake and lake feeder streams
CHINOOK	
COHO	- throughout
CHUM	- to Eden Lake
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- throughout
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- Naden River has the fourth largest watershed of the Queen Charlotte Islands and is the largest chum salmon producer of Statistical Area 1.
- Accessible tributaries:
  1. Marian Lake - drains into Naden R. via a very small creek
     - has no known salmon population
  2. Unnamed creek at 5.75 miles
     - drains Roy Lake into Naden R.
     - two sets of falls at approximately 3.0 miles

Sketch of Naden River Spawning Grounds (1970)



GENERAL REMARKS (cont.) - Naden River

- good gravel content to falls
- creek forks just above the falls with south branch flowing from Roy Lake and the north branch draining a mountain valley; some good gravel areas on north fork.

Eden Lake: length = 4.4 miles
width = 0.5 miles
area = 2.2 sq. miles

Eden Lake - accessible tributaries

1. Upper Naden River
   - stream forks into two branches at 2.0 miles from lake
   - impassable falls on both branches just above fork
   - 9,500 sq. yds. of good spawning gravel
   - average width = 30 ft
   - discharge = 15 cfs
   - a tributary at .25 miles from lake has a series of falls over bedrock at .25 miles from its mouth and has less than 1000 sq. yds. of good gravel
2. Other tributaries entering Eden Lake are small with limited spawning area. They have high gradients and impassable falls near their mouths.

- 1969. A road was constructed along the left bank of the Naden River extending from the river mouth to Eden Lake.
- 1970 & 1972. A counting fence for pink salmon was set up.
- 1971. Logging has become very active throughout the entire watershed.
- 1974. The downstream end of both fishways are gradually deteriorating. The upper fish ladder needs to have gravel regularly removed from its entrance.

References:

Walker, C. E. 1968. Areas for pink and chum salmon development in the Queen Charlotte Islands and a programme for fishery regulation in Masset Inlet. Memo. 31-2-Y1 Vol. 3. 22 pp.

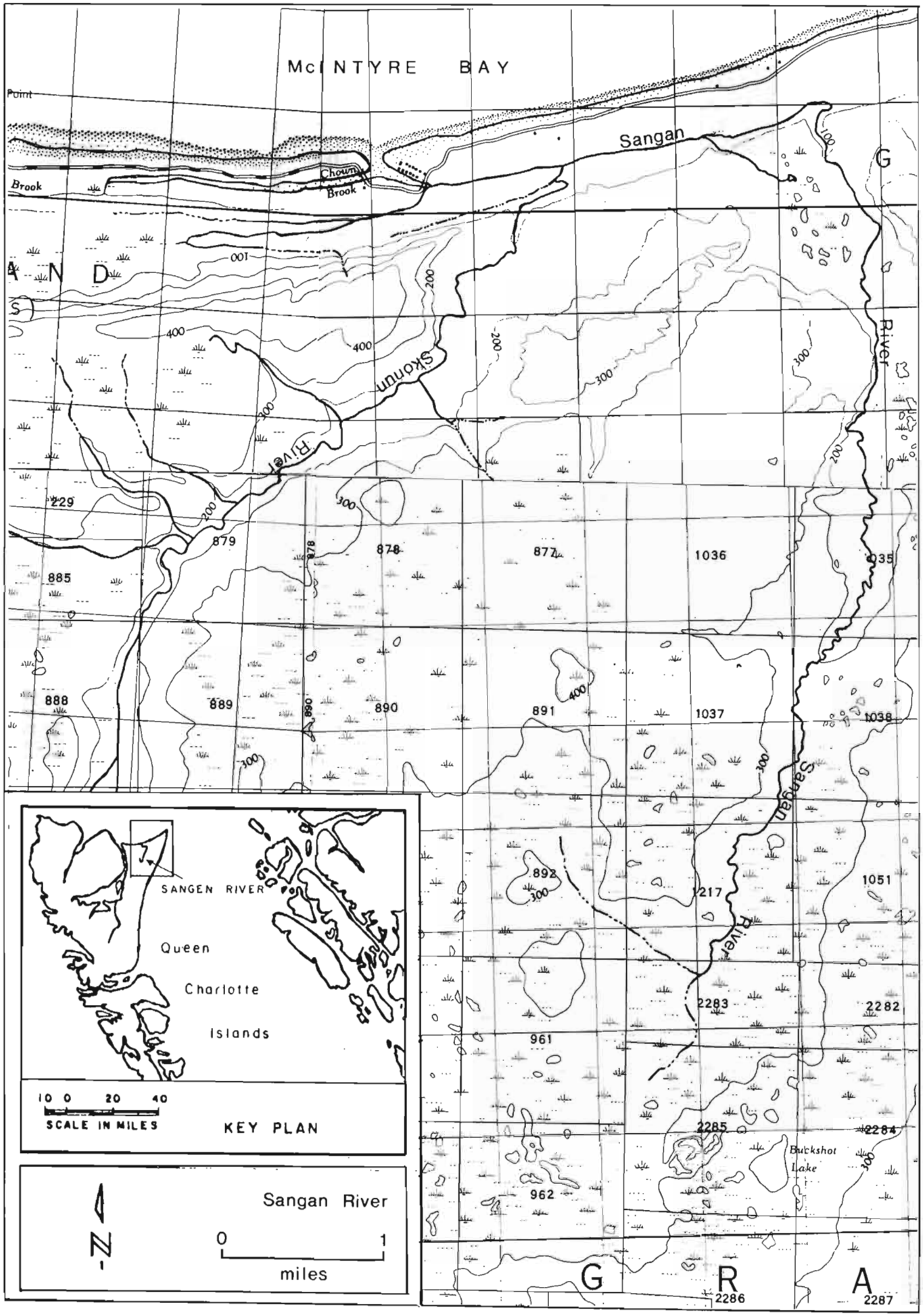
ESCAPEMENT RECORD FOR NADEN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	3500		3500	35000		
48	3500		3500	35000	175000	
49	N/O		N/O	15000		
50	N/O		N/O	N/O	UNK	
51	7500		3500	35000		
52	3500		3500		100000+	
53	3500			7500		
54			NO	RECORD		
55			3500	7500		
56	3500		3500		100000+	
57	1500		3500	35000		
58	35000		1500	15000	75000	
59	3500		3500	7500		
60	3500		3500	3500	35000	
61	7500		7500	15000		
62	15000		7500	7500	75000	
63	3500		3500	3500	75	
64	7500		15000	75000	75000	
65	1500		15000	35000	25	
66	750		7500	15000	35000	
67	400		3500	15000		
68	3500		1500	15000	250000	
69	15000		3500	15000		
70	750		1500	6000	30000	
71	10000		150	20000	UNK	
72	10000		3000	3000	100000	
73	20000		15000	20000	1000	75
74	20000		25000	15000	40000	
75	3000		15000	10000	500	100
76	30000		50000	15000	40000	50
77	20000		15000	25000	4000	2000
78	5000		12000	15000	25000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE	E. JUL		AUG	SEP	AUG	
START	L. AUG		OCT	E. OCT	AUG	
PEAK	E. SEP		OCT	M. OCT	SEP	
END	SEP		NOV	NOV	OCT	

REMARKS


McINTYRE BAY
Point
Brook
Chown Brook
Sangan
River
Skonun
River
Sangan River
100
200
300
400
229
879
878
877
1036
1035
885
888
889
890
891
1037
1038
892
1217
1051
961
2283
2282
2285
2284
962
Bukkshot Lake
2286
2287
SANGEN RIVER
Queen Charlotte Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
N
Sangan River
0
1
miles

NAME OF STREAM SANGAN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into McIntyre Bay, Queen Charlotte Dist.

POSITION 54 131 SW

LENGTH 10.0 MI. WIDTH _____ FT. DRAINAGE 59.2 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	3.5 - 10.0 miles
5.0 - 7.5	0.0 - 3.5 miles
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	- throughout
CHUM	- lower 1.5 miles; some tidal spawning
PINK (ODD YEAR)	- lower 1.5 miles
PINK (EVEN YEAR)	- lower reaches
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream drains a muskeg region and, therefore, the water is very dark. Water colour and access difficulty (access to 1.5 miles only) makes escapement estimation almost impossible.
- Accessible tributaries
  1. Skonun River
     - very low gradient (<2.5/000)
- There is a heavy steelhead and coho sport fishery on this stream.
- 1969. The lower reaches of the river have been logged.

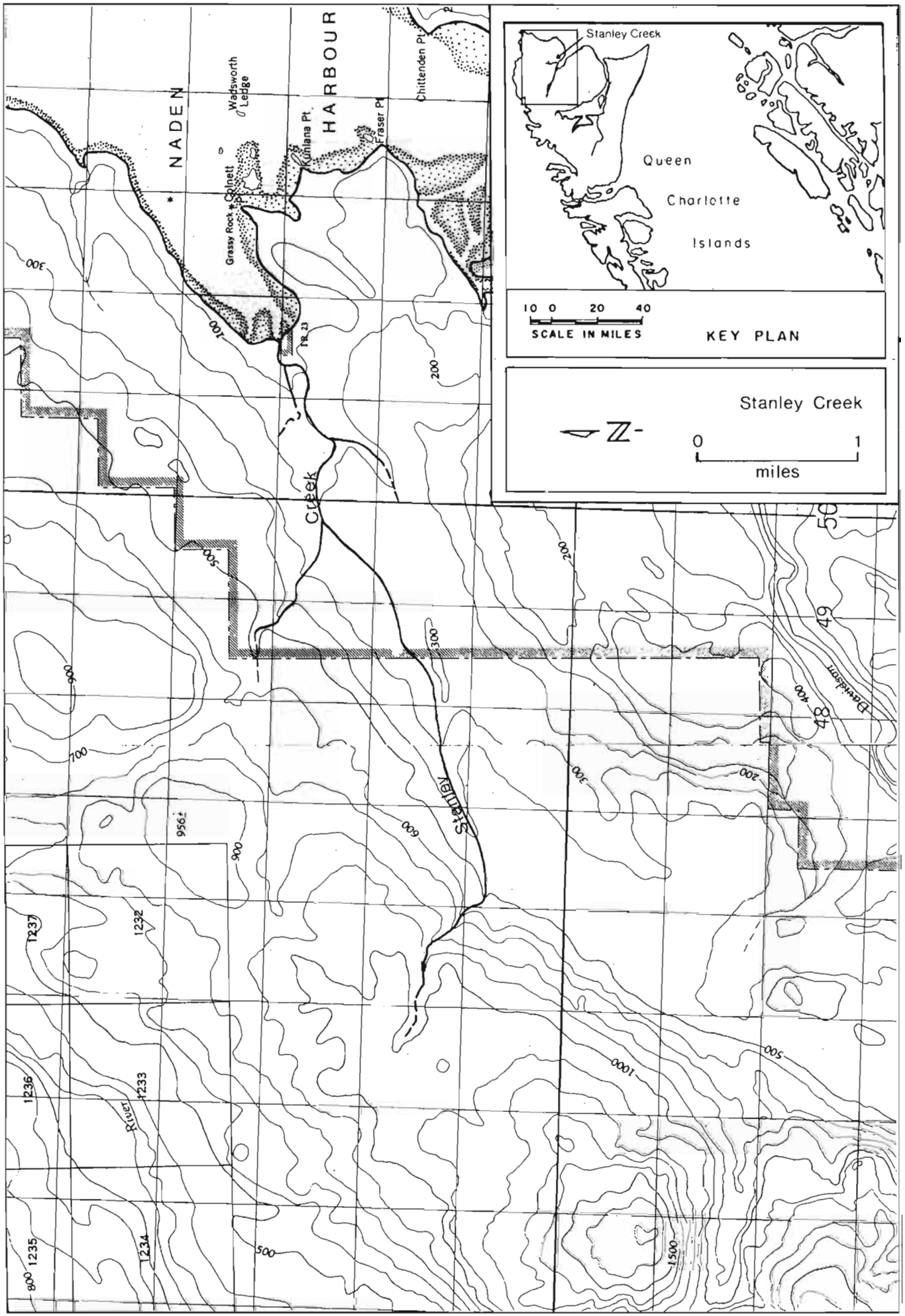
ESCAPEMENT RECORD FOR SANGAN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56		NO	RECORDS PRIOR TO 1958			
57						
58			750		3500	
59			3500		3500	
60			1500		1500	
61			3500		1500	
62			3500		3500	
63			N/O		N/O	
64			3500		3500	
65			3500		3500	
66			200		750	
67			400			
68			200		400	
69			200			
70			3500		750	
71			600			
72			3000		N/O	
73			2000	1000		
74			2000	800	700	
75			1500	500	500	
76			1500	200	800	
77			1000	200	200	
78			2000	200	1000	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			E. SEP	OCT	AUG	
START			OCT	L. OCT	L. AUG	
PEAK			OCT	E. NOV	E. SEP	
END			NOV	L. NOV	L. SEP	

REMARKS


Stanley Creek
Queen
Charlotte
Islands
10 0 20 40
SCALE IN MILES
KEY PLAN
Stanley Creek
0 1
miles
NADEN
HARBOUR
Wadsworth Ledge
Grassy Rock
Colnett Pt.
Kunlana Pt.
Fraser Pt.
Chittenden Pt.
TR 23
Creek
Stanley
River
Beachcomb
956
1232
1233
1234
1235
1236
1237
1500
1000
900
800
700
600
500
400
300
200
100
49
48

NAME OF STREAM STANLEY CREEK

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows E. into Naden Harbour, Queen Charlotte Dist.

POSITION 53 132 NW

LENGTH 3.6 MI. WIDTH 27 FT. DRAINAGE 9.6 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	throughout

WETTED AREA 57,000 SQ. YD. SPAWNING AREA _____ SQ. YD.

DISCHARGE _____ CFS MAX _____ MIN _____

TEMPERATURE (40° F, Sept. 25/70)

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	- throughout
CHUM	- in estuary and to 1 mile
PINK (ODD YEAR)	
PINK (EVEN YEAR)	- to 1 mile
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS:

- This stream drains a muskeg area and, therefore, the water is dark (tea-colour).
- The small spawning area is approximately 1 mile in length.
- This is the only stream of the N. Queen Charlotte Islands which has a "summer" run of chums. The chums of this stream can be distinguished from the chums of the other streams in the area by their large size.
- No logging has occurred in this watershed to date.

(Sample discharge: 50 cfs, Sept. 25/70)

ESCAPEMENT RECORD FOR STANLEY CREEK

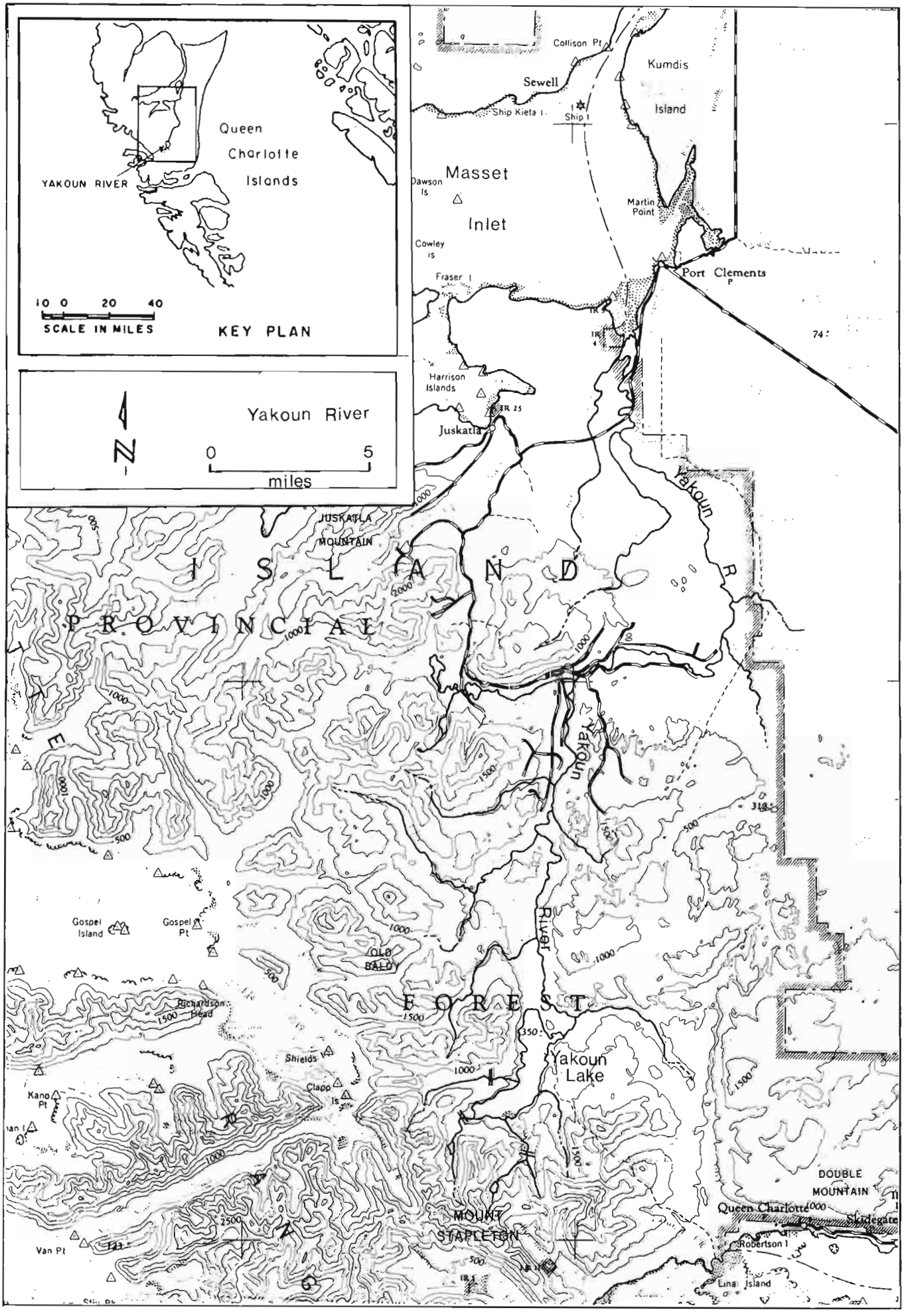
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			200		3500	
49				NO RECORD		
50				NO RECORD		
51				200		
52				200	400	
53				400		
54				NO RECORD		
55				N/O		
56				NO RECORD		
57				200		
58				200		
59				N/O		
60				200		
61				25		
62				75		
63				N/O		
64				1500		
65				1500		
66				200		
67				75		
68				N/O		
69				N/O		
70			75	3000		
71			75	2500		
72			300	2000		
73			1000	2000		
74			5000	4000	2500	
75			1000	500	100	
76			5000	3000		
77			2000	3000		
78			1000	1000	800	
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE			AUG	* AUG		
START			E. OCT	AUG		
PEAK			NOV	M. SEP		
END			NOV	L. SEP		

REMARKS

* In 1974 there was also a late run of chum. ARRIVE - SEP; START - L. SEP; PEAK - M. OCT; END - M. NOV


Queen
Charlotte
Islands
YAKOUN RIVER
10 0 20 40
SCALE IN MILES
KEY PLAN
Yakoun River
N
0 5
miles
Collison Pt
Kumdis
Island
Sewell
Ship Kieta I.
Ship I
Masset
Inlet
Dawson Is
Martin Point
Cowley Is
Fraser I
Port Clements
Harrison Islands
IR 25
Juskatla
JUSKATLA MOUNTAIN
ISLAND
PROVINCIAL
FOREST
Yakoun R
Yakoun River
Yakoun Lake
Gospel Island
Gospel Pt
OLD BALDY
Richardson Head
Shields I
Clapp Is
Kano Pt
Van Pt
MOUNT STAPLETON
DOUBLE MOUNTAIN
Queen Charlotte
Skidegate
Robertson I
Lina Island

NAME OF STREAM YAKOUN RIVER

CONSERVATION DISTRICT 9 STATISTICAL AREA 1 (Queen Charlotte Islands)

LOCATION OF MOUTH Flows N. into Yakoun Bay, Masset Inlet, Queen Charlotte Dist.

POSITION 53 132 NE

LENGTH 37.0 MI. WIDTH 80 FT. DRAINAGE 201.6 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 19% FINE 19%

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0.0 - 32.2 miles
2.5 - 5.0	33.8 - 37.0 (lake outlet)
5.0 - 7.5	
7.5 - 10.0	
> 10.0	32.2 - 33.8 miles

WETTED AREA 1,700,000 SQ. YD. SPAWNING AREA 650,000 SQ. YD.

DISCHARGE 1110.6 CFS MAX 21600 cfs (Nov. 28/63) MIN 16.2 cfs (Sept. 28/65)

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT

There are numerous passable log jams (some of which are almost 1 mile long) throughout the system. They may present access problems at some flows. A log jam at 14 miles presents some access difficulty.

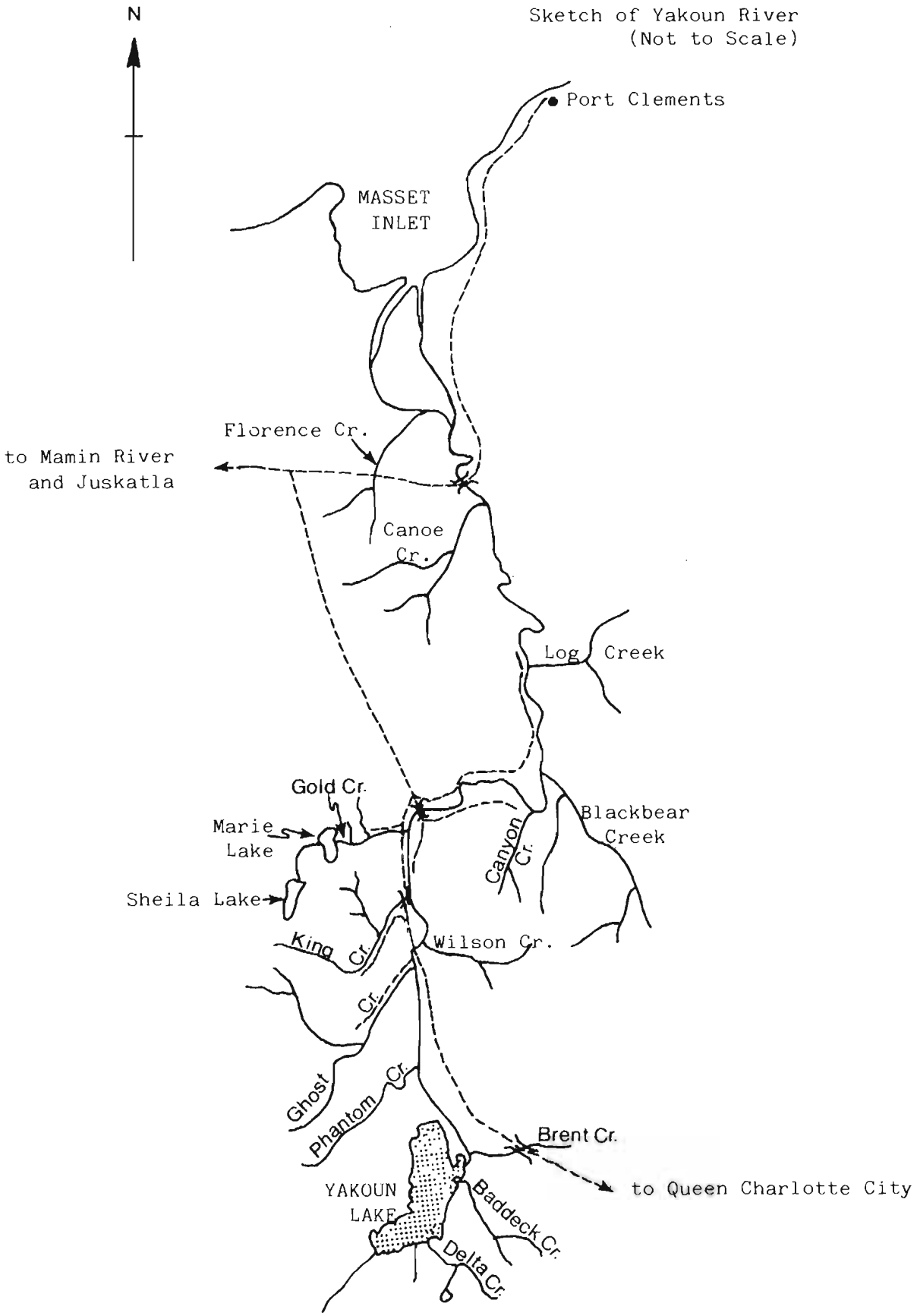
SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	- to Yakoun Lake and in lake feeder streams
CHINOOK	- upper reaches
COHO	- throughout
CHUM	
PINK (ODD YEAR)	- to mile 20
PINK (EVEN YEAR)	- to mile 20
STEELHEAD	- upper reaches

POTENTIAL OF INACCESSIBLE PORTION OF STREAM

GENERAL REMARKS:

- The Yakoun River system is the largest watershed of the Queen Charlotte Islands and is the main spawning area for the Masset Inlet pink run. This river accounts for at least half of the total Q.C.I. pink salmon production.
- There is no appreciable fall over the length of the river, as Yakoun Lake is 320 feet above sea level and the distance from the lake to the mouth of the river is about 37 miles.
- The tide affects the river for about 3 miles.
- The water is dark, tea-coloured.


N
Sketch of Yakoun River
(Not to Scale)
Port Clements
MASSET
INLET
Florence Cr.
to Mamin River
and Juskatla
Canoe
Cr.
Log Creek
Gold Cr.
Marie
Lake
Sheila Lake
Canyon Cr.
Blackbear
Creek
King Cr.
Wilson Cr.
Cr.
Ghost
Phantom Cr.
Brent Cr.
to Queen Charlotte City
YAKOUN
LAKE
Baddeck Cr.
Delta Cr.

GENERAL REMARKS (cont.) - Yakoun River

- From Yakoun Lake to Blackbear Cr., the river runs slowly through a flat, muskeg region. From Kink Cr. to Canyon Cr. the river is mainly riffles and pools. The river between Canyon Cr. and the estuary has deep pools with some riffle area.
- The spawning beds begin approximately 6 miles from the mouth. They are composed of fine gravel and contain very few large rocks. No spawning occurs over a rocky 1 mile stretch between Phantom and Ghost Creeks.
- There is an Indian food fishery for sockeye on this stream.
- Most of the river (except 10 miles) is accessible by logging road.
- Yakoun River - accessible tributaries:
    1. Florence Creek - pinks
    2. Canoe Creek - coho
    3. Log Creek - coho
    4. Blackbear Creek - coho
    5. Canyon Creek - coho
    6. Gold Creek - pinks, coho, sockeye (Marie Lake and tributaries)
    7. King Creek - pinks
    8. Wilson Creek - pinks
    9. Ghost Creek - average width = 15 ft.; pinks
    10. Phantom Creek - pinks, sockeye
    11. Brent Creek - coho

- Yakoun Lake
    - area = 3.2 sq. miles
    - accessible tributaries:
        1. Baddick Creek - sockeye, coho
        2. Delta Creek - impassable falls at 2.0 miles
            - sockeye, coho
        3. Unnamed tributary 0.5 miles west of Delta Creek
            - impassable falls at 1.0 mile
            - sockeye, coho
        4. Unnamed tributary, southwest end of lake
            - impassable falls at 1.0 mile
            - sockeye, coho
        5. Sandstone Creek - average width = 15 ft.
            - impassable 15 foot falls at 0.75 miles

- 1964. Logging operations have been carried out along the entire length of the river.
- 1970. A pink salmon counting fence was set up but was washed out during the peak of migration.
- 1971. Angling pressure increased by 100%. The river was closed to anglers for one month (October) in an effort to help conserve the river's spring salmon population.
- 1976 & 1977. Log jams at 14 miles are increasing in size and it is becoming more difficult for the salmon to bypass them.

References:

Allen, B. 1979. 1978 Yakoun biological studies. Memo. Dept. of Fisheries and Oceans. 5903-85-Y15 Vol. 1.

Walker, C. E. 1970. Enumeration of pink salmon fry in the Yakoun River in 1965. Tech. Rpt. 1970-8, Dept. of Fisheries and Forestry. 17 pp.

ESCAPEMENT RECORD FOR YAKOUN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	3500	1500	7500			
48	3500	750	15000		3250000	4000
49						
50			7500		100000+	
51	7500		35000			
52	3500	1500	7500		100000+	
53						
54					100000+	
55						
56		750	3500		100000+	
57	750	1500		1500	3500	
58	3500				175000	
59	7500	3500	3500		7500	
60	7500	750	3500	400	35000	
61	3500	3500	3500		7500	
62	15000	1500	7500		35000	
63	7500		3500		7500	
64	15000	7500	15000		300000	
65	7500	15000	15000	25	15000	15000
66	3500	7500			800000	15000
67	7500	1500	7500			3500
68	15000	1500	3500		750000	3500
69	15000	1500	1500			7500
70	25000	800	12000		250000	6000
71	6000	500	10000		1000	7500
72	5000	1000	6000		63000	
73	12000	900	9000		1000	7000
74	15000	1000	12000		75000	3000
75	9500	1500	5000		500	2000
76	8000	700	7000		150000	2500
77	3000	800	8000		600	2000
78	12000	600	10000		150000	1500
79						
80						
81						
82						
83						
84						
85						

TIMING:

ARRIVE	L. APR	E. MAY	M. AUG		AUG	
START	AUG	AUG	E. OCT		L. AUG	
PEAK	SEP	SEP	L. OCT		M. SEP	
END	L. SEP	M. OCT	DEC		M. SEP	

REMARKS

METRIC EQUIVALENTS

Length

centimeter	=	0.3937	in.
meter	=	3.28	ft.
meter	=	1.094	yd.
kilometer	=	0.621	mi.
inch	=	2.54	cm.
foot	=	0.3048	m.
yard	=	0.9144	m.
mile	=	1.61	km.

Area

sq. cm.	=	0.1550	sq. in.
sq. m.	=	10.76	sq. ft.
sq. m.	=	1.196	sq. yd.
sq. km.	=	0.386	sq. mi.
sq. in.	=	6.45	sq. cm.
sq. ft.	=	0.0929	sq. m.
sq. yd.	=	0.836	sq. m.
sq. mi.	=	2.59	sq. km.
acre	=	0.405	hectare
hectare	=	2.47	acres
acre	=	43560	sq. ft.

Volume

cu. cm.	=	0.061	cu. m.
cu. m.	=	35.315	cu. ft.
cu. m.	=	1.308	cu. yd.
cu. in.	=	16.38	cu. cm.
cu. ft.	=	0.028	cu. m.
cu. yd.	=	0.7645	cu. m.

Capacity

liter	=	0.0353	cu. ft.
liter	=	0.2199	gal. (Br.)
liter	=	61.023	cu. in.
cu. in.	=	0.0164	l.
cu. ft.	=	28.32	l.
gallon(Br.)	=	4.5459	l.

Weight

gram	=	15.432	grains
gram	=	0.0353	oz.
kilogram	=	2.2046	lbs.
kilogram	=	0.0011	ton (sht)
metric ton	=	1.1025	ton (sht)
grain	=	0.0648	grams

ounce	=	28.35	grams
pound	=	0.454	kg.
ton (sht)	=	907.18	kg.
ton (sht)	=	0.907	met. ton
ton (sht)	=	2000	lbs.

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

WATER QUANTITIES AND FLOW MEASUREMENTS

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	=	approximately 2 acre-feet per day
1 second foot	=	86,400 cubic feet per day
1 million gallons per day	=	1.86 cfs
1 acre-foot	=	43,560 cubic feet or 271,379 gal.
1 cubic foot of water	=	6.23 gal. and weighs 62.4 lbs.
1 cubic meter per second	=	35.31 cubic feet per sec. (cfs)
1 meter per second	=	3.28 feet per second
1233.5 cubic meters	=	1 acre-foot