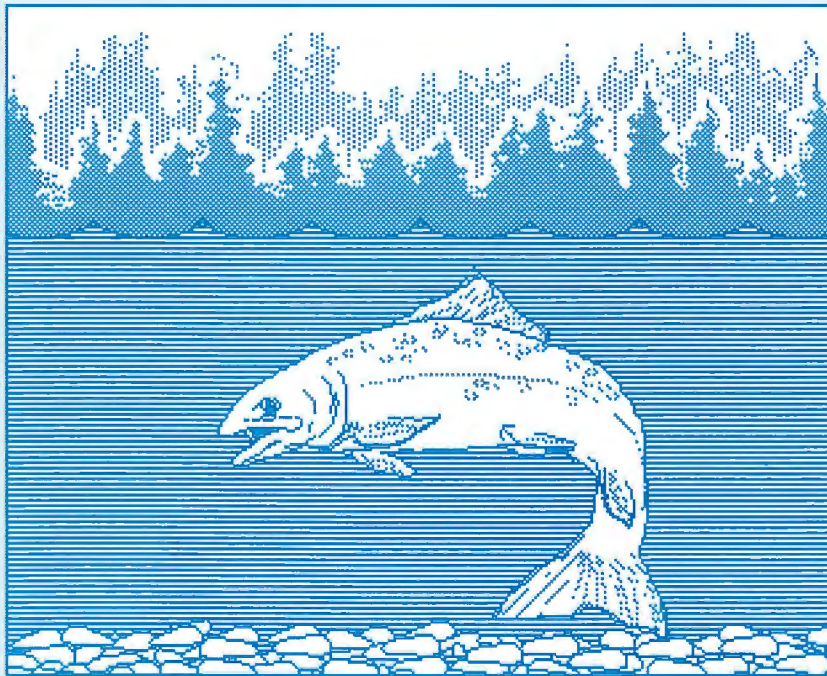


# Fish Habitat Inventory & Information Program

## **STREAM SUMMARY CATALOGUE SUBDISTRICT # 11 PORT HARDY**



Fisheries  
and Oceans



Ministry of Environment

Canada

#### DISCLAIMER

The Stream Information Summary System (SISS) is designed for the input, storage and output of summarized existing stream information. The following points should be noted:

- Detailed stream information can be obtained from the references provided in each stream summary.
- The computerized database and maps are being updated as new information becomes available. Due to the ease of updating the database compared to the maps, some differences between individual stream summaries and maps may be present.
- While every effort has been made to collect and verify all available existing information and provide references, users should be aware that some streams may not be included in the database and that some inaccuracies may be present.
- Some comments included in stream summaries are the opinion of the author(s) referenced and do not necessarily represent the views of the Department of Fisheries and Oceans (DFO) or the B.C. Ministry of Environment (MOE).

Users are encouraged to contact DFO or MOE habitat inventory staff for updated SISS information and to provide new information or corrections to the existing database.

**Fish Habitat**  
**Inventory & Information Program**

**STREAM SUMMARY  
CATALOGUE  
SUBDISTRICT # 11  
PORT HARDY**

South Coast Division  
Fisheries Branch  
Department of Fisheries & Oceans

August 1991

## PREFACE

This catalogue contains a summary of information on fish and fish habitat for 54 streams in DFO Subdistrict 11, Port Hardy. The catalogue is organized as follows:

- 1.0 Map Indices;
- 2.0 User guides;
- 3.0 Stream Summaries;
- 4.0 Bibliography; and
- 5.0 Stream Information Summary maps.

Please note that recent changes in boundaries for Subdistrict 11 are not incorporated into Section 5.0, Stream Information Summary Maps. The new boundaries are shown in Section 1.0, Map Indices, in the DFO Pacific Region Subdistricts and Districts key map. Stream Information Summaries (SIS) and escapement records are arranged by watershed code. Cross indices of watershed codes and stream names are included in section 1.0 of this catalogue. Users are encouraged to contact Department of Fisheries and Oceans (DFO) or B.C. Ministry of Environment (MOE) habitat inventory staff if they have additional fish or fish habitat information or can correct inaccuracies in the existing data.

Users of this catalogue are reminded that SIS data are intended to provide a "brief summary" of stream information. Local DFO and MOE offices should be contacted if more detailed information is required.

## ACKNOWLEDGEMENTS

The Stream Information Summaries and maps were originally prepared by R. DeMarco of SHIP Environmental Consultants Ltd. under a contract managed by B. Tutty, Department of Fisheries and Oceans (DFO), South Coast Division. The index maps included in this catalogue were drafted by XY3 Graphics. Catalogue production was coordinated by B. Mason, Habitat Management Division. The assistance of DFO District 5 and Subdistrict staff and B.C. Ministry of Environment (MOE) Region 1 staff in providing and verifying much of the information is greatly appreciated. Stream Information Summaries were produced by K. Pontus, Habitat Management Division, using the Stream Information Summary System (SISS). Escapement graphics were developed by G. Serbic and data were compiled by G. Hudson, Pacific Biological Station, Nanaimo, using the Salmon Escapement Data System (SEDS).

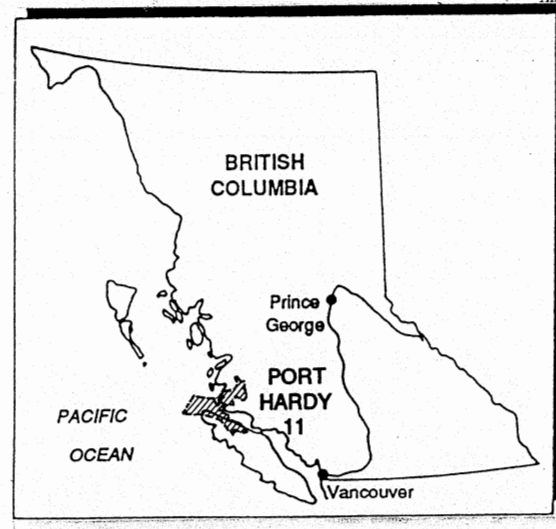
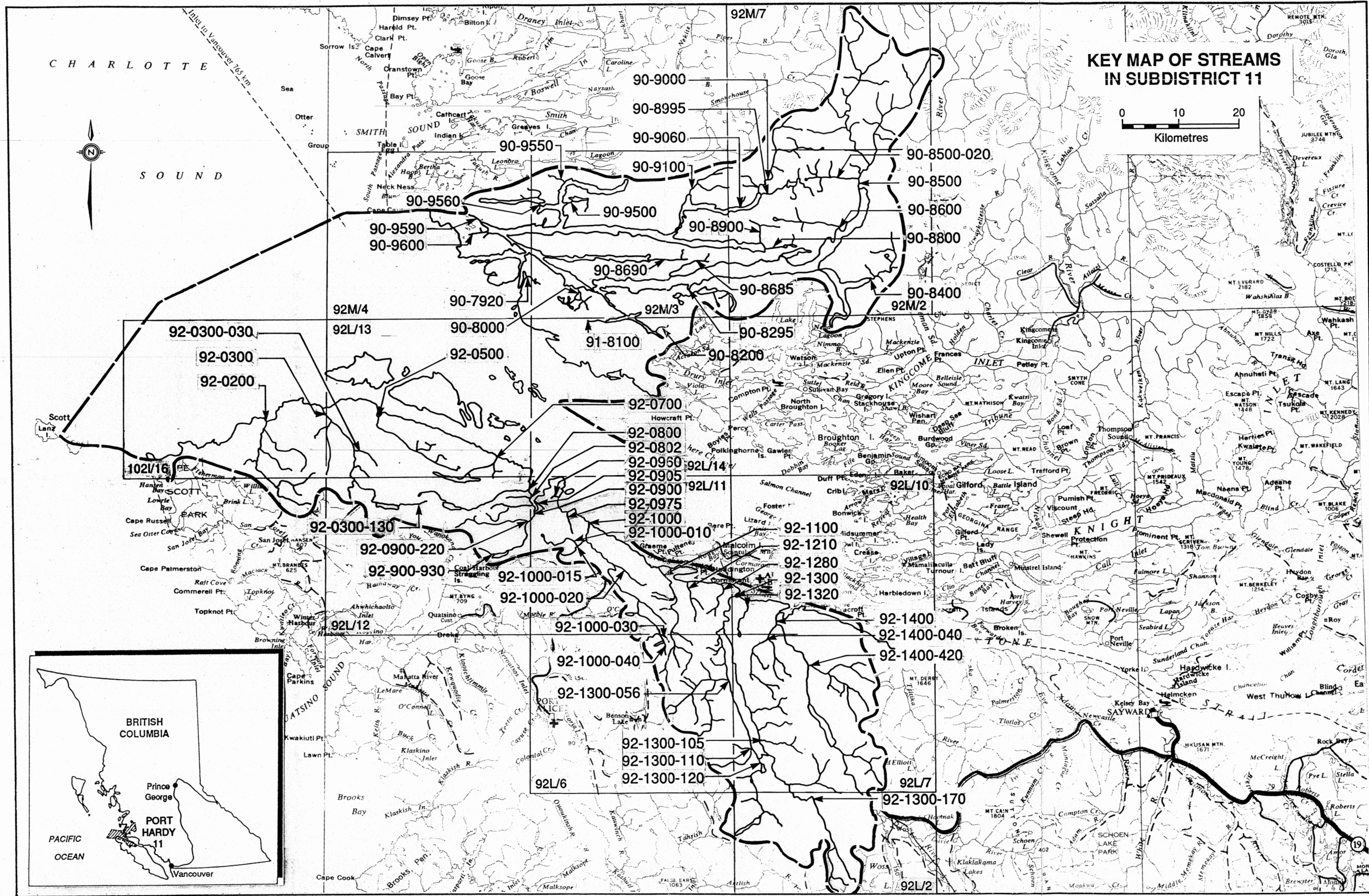
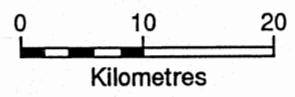
Correct citation for this publication:

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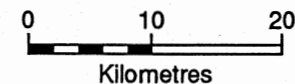
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# KEY MAP OF STREAMS IN SUBDISTRICT 11

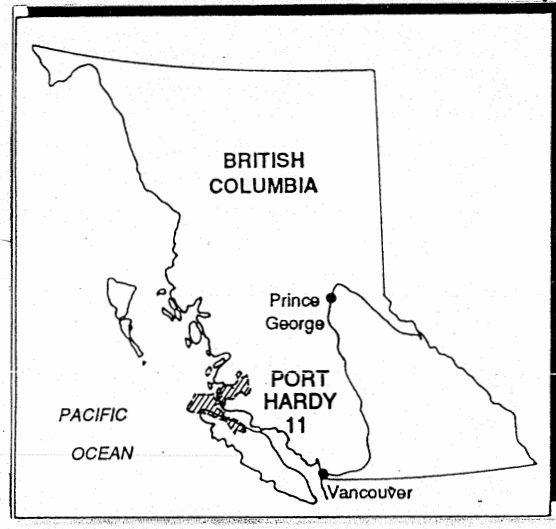
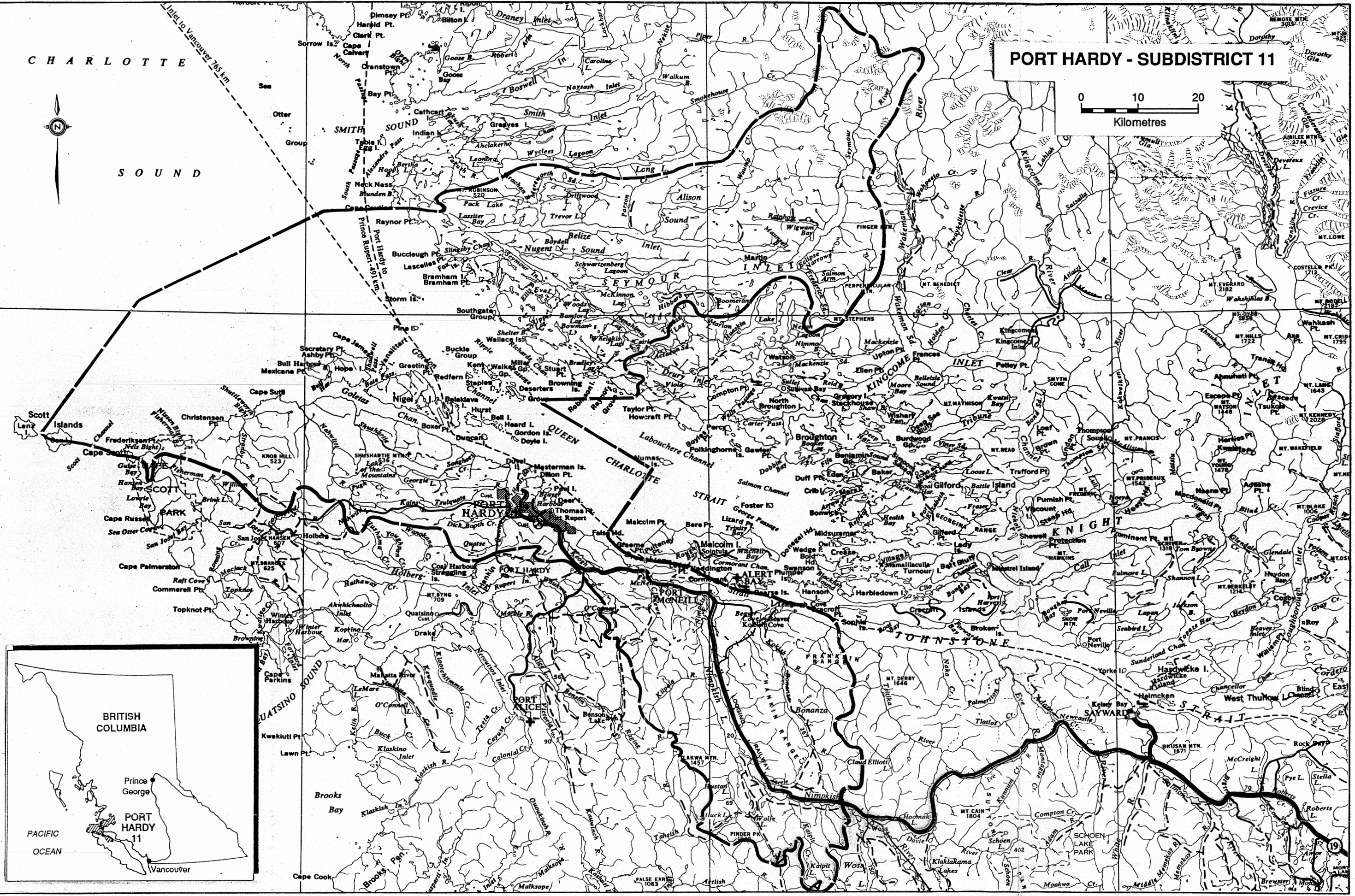


PORT HARDY - SUBDISTRICT 11



CHARLOTTE

SOUND



Listing of Streams NUMERICALLY by Watershed Code - SUBDISTRICT #11

Watershed Code	Gazetted Name	Local Name
90-7920	UNNAMED C	WODEFORD C
90-8000	EVA C	COHOE C
90-8100	UNNAMED C	BAMFORD C
90-8200	UNNAMED C	LEE LAKE C
90-8295	UNNAMED C	WARNER BAY C
90-8400	TAALTZ C	SALMON ARM R SALMON R
90-8500	SEYMOUR R	
90-8500-020	WAWWATL C	WAWATLE BAY C
90-8600	RAINBOW C	
90-8685	UNNAMED C	SCHWARTZENBERG LAGOON C
90-8690	UNNAMED C	NUGENT C
90-8800	WAAMTX C	
90-8900	BELIZE C	
90-8995	UNNAMED C	ALISON R
90-9000	WAUMP C	
90-9060	UNNAMED C	JAP C
90-9100	UNNAMED C	CHIEF NAWLEY C CHIEF NOLLIS C
90-9500	DRIFTWOOD C	VILLAGE BAY C
90-9550	UNNAMED C	QUASHELLA C
90-9560	UNNAMED C	PACK LAKE C
90-9590	UNNAMED C	LASSITER BAY C LASSITER C
90-9600	UNNAMED C	ROWLEY C
92-0200	STRANBY R	CACHE C
92-0300	NAHWITTI R	
92-0300-030	GODKIN C	
92-0300-130	KAINS C	
92-0500	SHUSHARTIE R	
92-0700	SONGHEES C	DEEP C SONGHEES R
92-0800	TSULQUATE R	SILQUODY R
92-0802	UNNAMED C	LITTLE TSULQUATE R
92-0900	QUATSE R	
92-0900-220	DICK BOOTH C	
92-0900-930	BLUEBELL C	
92-0905	UNNAMED C	QUATSESE C
92-0960	UNNAMED C	STORIES BEACH C
92-1000	KEOGH R	
92-1000-010	UNNAMED C	
92-1000-015	UNNAMED C	
92-1000-020	UNNAMED C	MISTY LAKE C
92-1000-030	UNNAMED C	CUB C
92-1000-040	UNNAMED C	O'CONNOR C
92-1100	CLUXEWE R	
92-1210	MILLS C	BEAR C BEAR R
92-1280	HYDE C	
92-1300	NIMPKISH R	

Listing of Streams NUMERICALLY by Watershed Code - SUBDISTRICT #11

<b>Watershed Code</b>	<b>Gazetted Name</b>	<b>Local Name</b>
92-1300-056	KILPALA R	
92-1300-105	KINMAN C	
92-1300-110	TLAKWA C	WILLOW C
92-1300-120	ATLUCK C	
92-1300-170	KAIPIT C	
92-1320	THIEMER C	BROUGHTON C COHO C
92-1400	KOKISH R	
92-1400-040	TSULTON R	
92-1400-420	BONANZA R	

Listing of Streams ALPHABETICALLY by Watershed Code - Subdistrict #11

Watershed Code	Gazetted Name	Local Name
92-1300-120	ATLUCK C	
90-8900	BELIZE C	
92-0900-930	BLUEBELL C	
92-1400-420	BONANZA R	
92-1100	CLUXEWE R	
92-0900-220	DICK BOOTH C	
90-9500	DRIFTWOOD C	VILLAGE BAY C
90-8000	EVA C	COHOE C
92-0300-030	GODKIN C	
92-1280	HYDE C	
92-0300-130	KAINS C	
92-1300-170	KAIPIT C	
92-1000	KEOGH R	
92-1300-056	KILPALA R	
92-1300-105	KINMAN C	
92-1400	KOKISH R	
92-1210	MILLS C	BEAR C BEAR R
92-0300	NAHWITTI R	
92-1300	NIMPKISH R	
92-0900	QUATSE R	
90-8600	RAINBOW C	
90-8500	SEYMOUR R	
92-0500	SHUSHARTIE R	
92-0700	SONGHEES C	DEEP C SONGHEES R
92-0200	STRANBY R	CACHE C
90-8400	TAALTZ C	SALMON ARM R SALMON R
92-1320	THIEMER C	BROUGHTON C COHO C
92-1300-110	TLAKWA C	WILLOW C
92-0800	TSULQUATE R	SILQUODY R
92-1400-040	TSULTON R	
92-1000-010	UNNAMED C	
92-1000-015	UNNAMED C	
90-8995	UNNAMED C	ALISON R
90-8100	UNNAMED C	BAMFORD C
90-9100	UNNAMED C	CHIEF NAWLEY C CHIEF NOLLIS C
92-1000-030	UNNAMED C	CUB C
90-9060	UNNAMED C	JAP C
90-9590	UNNAMED C	LASSITER BAY C LASSITER C
90-8200	UNNAMED C	LEE LAKE C
92-0802	UNNAMED C	LITTLE TSULQUATE R
92-1000-020	UNNAMED C	MISTY LAKE C
90-8690	UNNAMED C	NUGENT C
92-1000-040	UNNAMED C	O'CONNOR C
90-9560	UNNAMED C	PACK LAKE C

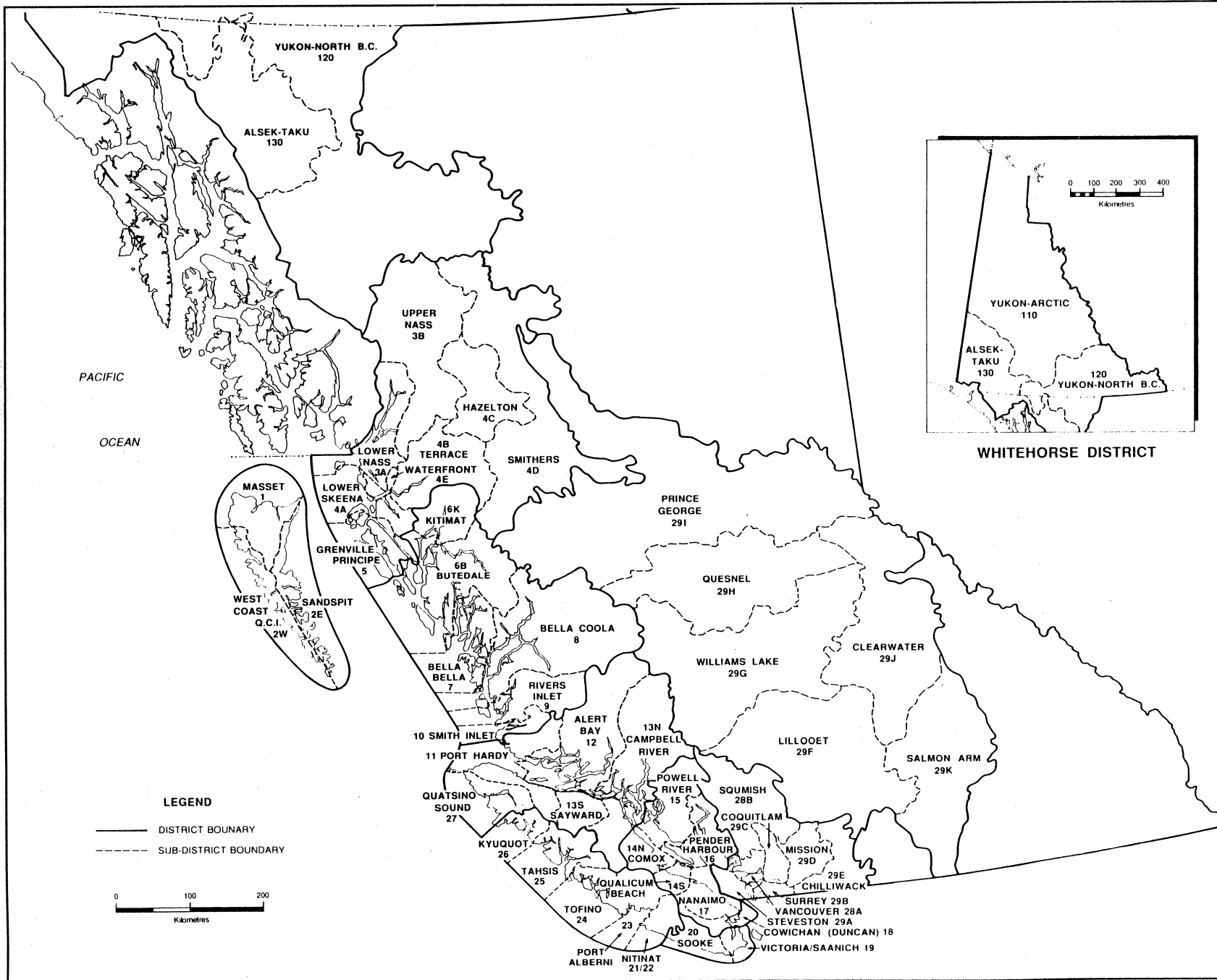
Listing of Streams ALPHABETICALLY by Watershed Code - Subdistrict #11

<b>Watershed Code</b>	<b>Gazetted Name</b>	<b>Local Name</b>
90-9550	UNNAMED C	QUASHELLA C
92-0905	UNNAMED C	QUATSESE C
90-9600	UNNAMED C	ROWLEY C
90-8685	UNNAMED C	SCHWARTZENBERG LAGOON C
92-0960	UNNAMED C	STORIES BEACH C
90-8295	UNNAMED C	WARNER BAY C
90-7920	UNNAMED C	WODEFORD C
90-8800	WAAMTX C	
90-9000	WAUMP C	
90-8500-020	WAWWATL C	WAWATLE BAY C

**DFO PACIFIC REGION - SUBDISTRICTS AND DISTRICTS**

<u>DISTRICT/ Subdistrict</u>	<u>Address</u>
<b><u>DISTRICT #1</u></b>	
	- Kamloops
	1278 Dalhousie Dr., Kamloops, V2C 2E9
Salmon Arm (29K)	Box 1160, Salmon Arm, V0E 2T0
Prince George (29I)	2392 Ospika Blvd., Prince George, V2N 3N5
Clearwater (29J)	Box 610, Clearwater, V0E 1N0
Lillooet (29F)	Box 315, Lillooet, V0K 1V0
Quesnel (29H)	1205 North Highway 97, Quesnel, V2J 2Y3
Williams Lake (29G)	260-D N. Broadway, Williams Lake, V2G 2X9
<b><u>DISTRICT #2</u></b>	
	- New Westminster
	610 Derwent Way, New West.V3M 5P8
Vancouver (28A)	610 Derwent Way, New West.V3M 5P8
Surrey (29B)	610 Derwent Way, New West.V3M 5P8
Coquitlam (29C)	610 Derwent Way, New West.V3M 5P8
Steveston (29A)	12551 No.1 Road, Richmond, V7E 1T7
Squamish (28B)	P.O. Box 2560, Squamish, V0N 3G0
Mission (29D)	Box 3308, Mission, V2V 4J5
Chilliwack (29E)	45742A Yale Rd. West, Chilliwack, V2P 2N4
<b><u>DISTRICT #3</u></b>	
	- Nanaimo
	304-60 Front St., Nanaimo, V9R 5H7
Nanaimo/Ladysmith(17)	304-60 Front St., Nanaimo, V9R 5H7
Qualicum Beach (14S)	Box 1270, Qualicum Beach, V0R 2T0
Comox (14N)	148 Port Augusta St., Comox, V9N 7Z4
Cowichan(Duncan)(18)	Box 241, Duncan, V9L 3X3
Powell River (15)	7255 Duncan St., Powell River, V8A 5M6
Pender Harbour (16)	Box 10, Madeira Park, V0N 2H0
<b><u>DISTRICT #4</u></b>	
	- Port Alberni
	3019 Fourth Ave., Port Alberni, V9Y 2B8
Port Alberni (23)	3019 Fourth Ave., Port Alberni, V9Y 2B8
Nitinat (22)	3019 Fourth Ave., Port Alberni, V9Y 2B8
Kyuquot (26)	Box 549, Tahsis, V0P 1X0
Tahsis (25)	Box 549, Tahsis, V0P 1X0
Tofino (24)	Box 48, Tofino, V0R 2Z0
<b><u>DISTRICT #5</u></b>	
	- Campbell River
	940 Alder St., Campbell River, V9W 2P7
Campbell River (13N)	940 Alder St., Campbell River, V9W 2P7
Sayward (13S)	940 Alder St., Campbell River, V9W 2P7
Port Hardy (11)	Box 10, Port Hardy, V0N 2P0
Alert Bay (12)	Box 9, Alert Bay, V0N 1A0
Quatsino Sound (27)	Box 10, Port Hardy, V0N 2P0

<u>DISTRICT/ Subdistrict</u>	<u>Address</u>
<b><u>DISTRICT #6</u></b>	
	- Victoria
	423-1230 Government St., Victoria, V8W 1Y3
Victoria/Saanich(19)	423-1230 Government St., Victoria, V8W 1Y3
Sooke (20)	Box 460, Sooke, V0S 1N0
<b><u>DISTRICT #7</u></b>	
	- Central Coast
	117-417 2nd Ave. West, Prince Rupert, V8J 1G8
Kitimat (6K)	315-450 Federal Building, Kitimat, V8C 1T6
Butedale (6B)	115-417 2nd Ave. West, Prince Rupert, V8J 1G8
Bella Bella (7)	Box 38, Bella Bella, V0T 1B0
Bella Coola (8)	Box 130, Bella Coola, V0T 1C0
Rivers Inlet (9)	Dawsons Landing P.O., Rivers Inlet, V0N 1M0
Smith Inlet (10)	Dawsons Landing P.O., Rivers Inlet, V0N 1M0
<b><u>DISTRICT #8</u></b>	
	- Prince Rupert
	109-417 2nd Ave. West, Prince Rupert, V8J 1G8
Waterfront	109-417 2nd Ave. West, Prince Rupert, V8J 1G8
Lower Skeena (4A)	109-417 2nd Ave. West, Prince Rupert, V8J 1G8
Grenville-Principe(5)	109-417 2nd Ave. West, Prince Rupert, V8J 1G8
Lower Nass (3A)	109-417 2nd Ave. West, Prince Rupert, V8J 1G8
Upper Nass (3B)	Box 29, Nass Camp, V0J 3J0
Hazelton (4C)	Box 490, New Hazelton, V0J 2J0
Smithers (4D)	Box 578, Smithers, V0J 2N0
Terrace (4B)	4721-B Lazelle Ave., Terrace, V8G 1R6
<b><u>DISTRICT #9</u></b>	
	- Queen Charlotte Islands
	Box 99, Queen Charlotte City, V0T 1S0
West Coast Q.C.I.(2W)	Box 99, Queen Charlotte City, V0T 1S0
Masset (1)	Box 99, Masset, V0T 1M0
Sandspit (2E)	Box 222, Sandspit, V0T 1T0
<b><u>DISTRICT #10</u></b>	
	- Whitehorse
	122 Industrial Rd., Whitehorse, Y.T., Y1A 2T9
Yukon-North B.C.(120)	122 Industrial Rd., Whitehorse, Y.T., Y1A 2T9
Yukon-Arctic (110)	122 Industrial Rd., Whitehorse, Y.T., Y1A 2T9
Alsek-Taku (130)	Box 5341, Haines Junction, Y.T., Y0B 1L0



- DISTRICT #1 — KAMLOOPS**
  - Subdist 29F - Lilloet
  - Subdist 29G - Williams Lake
  - Subdist 29H - Quesnel
  - Subdist 29I - Prince George
  - Subdist 29J - Clearwater
  - Subdist 29K - Salmon Arm
- DISTRICT #2 — NEW WESTMINSTER**
  - Subdist 28A - Vancouver
  - Subdist 28B - Squamish
  - Subdist 29A - Stevenson
  - Subdist 29B - Surrey
  - Subdist 29C - Coquitlam
  - Subdist 29D - Mission
  - Subdist 29E - Chilliwack
- DISTRICT #3 — NANAIMO**
  - Subdist 14S - Qualicum Beach
  - Subdist 14N - Comox
  - Subdist 15 - Powell River
  - Subdist 16 - Pender Harbour
  - Subdist 17 - Nanaimo/Ladysmith
  - Subdist 18 - Duncan (Cowichan)
- DISTRICT #4 — PORT ALBERNI**
  - Subdist 22 - Nitinat
  - Subdist 23 - Port Alberni
  - Subdist 24 - Tofino
  - Subdist 25 - Tahsis
  - Subdist 26 - Kyuquot
- DISTRICT #5 — CAMPBELL RIVER**
  - Subdist 11 - Port Hardy
  - Subdist 12 - Alert Bay
  - Subdist 13N - Campbell River
  - Subdist 13S - Sayward
  - Subdist 27 - Quatsino Sound
- DISTRICT #6 — VICTORIA**
  - Subdist 19 - Victoria/Saanich
  - Subdist 20 - Sooke
- DISTRICT #7 — CENTRAL COAST**
  - Subdist 6K - Kitimat
  - Subdist 6B - Butedale
  - Subdist 7 - Bella Bella
  - Subdist 8 - Bella Coola
  - Subdist 9 - Rivers Inlet
  - Subdist 10 - Smith Inlet
- DISTRICT #8 — PRINCE RUPERT**
  - Subdist 3A - Lower Nass
  - Subdist 3B - Upper Nass
  - Subdist 4A - Lower Skeena
  - Subdist 4B - Terrace
  - Subdist 4C - Hazelton
  - Subdist 4D - Smithers
  - Subdist 4E - Waterfront
  - Subdist 5 - Grenville Prince
- DISTRICT #9 — QUEEN CHARLOTTE ISLANDS**
  - Subdist 1 - Masset
  - Subdist 2W - West Coast Q.C.I.
  - Subdist 2E - Sandspit
- DISTRICT #10 — WHITEHORSE**
  - Subdist 110 - Yukon Arctic
  - Subdist 120 - Yukon South
  - Subdist 130 - Alsek-Taku

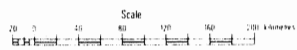


Province of British Columbia

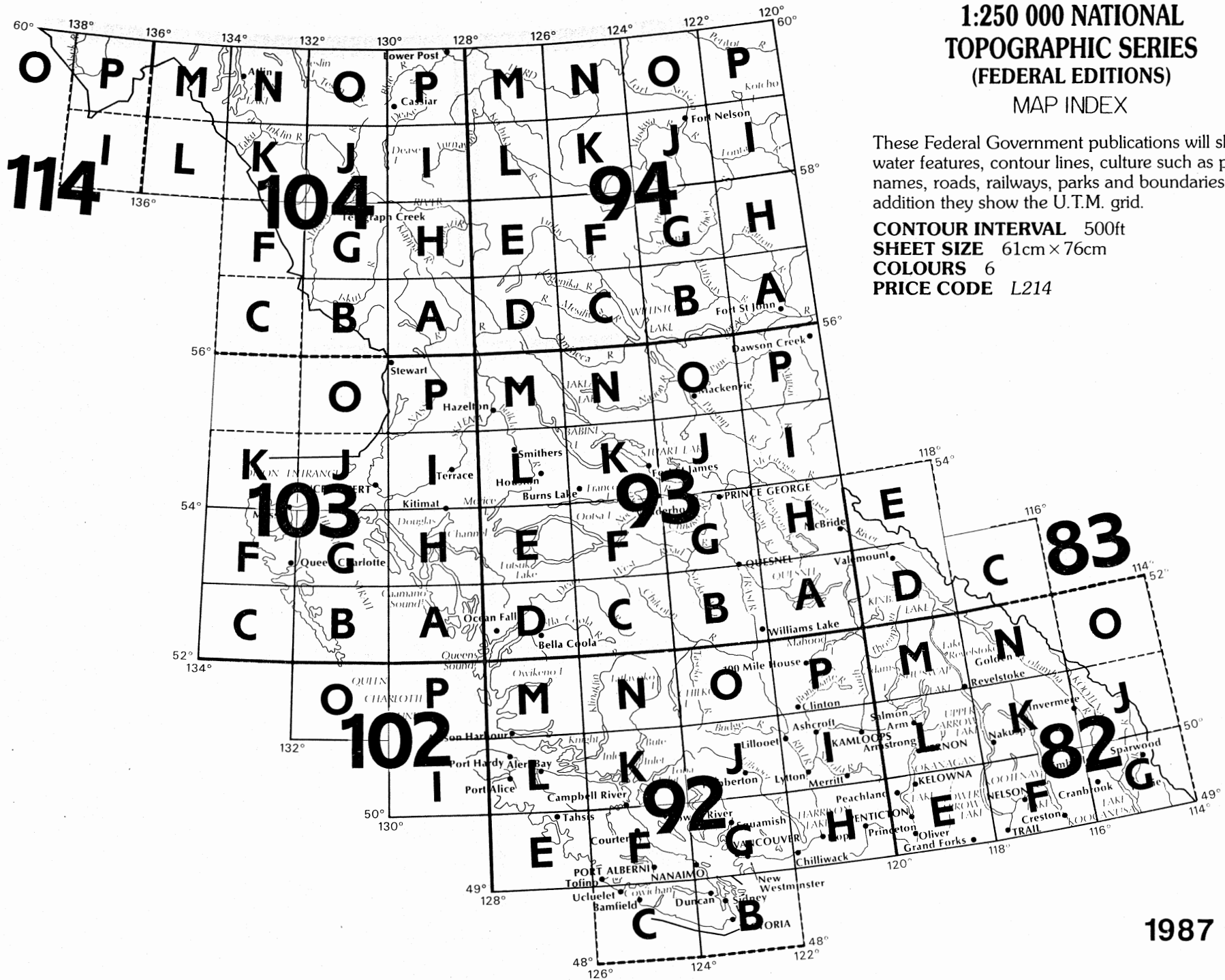
**MINISTRY OF ENVIRONMENT  
REGIONAL BOUNDARIES**

Revised October 1989

- Regional Boundary and Number — 4
- Regional Centre ●
- Sub Regional Centre ○



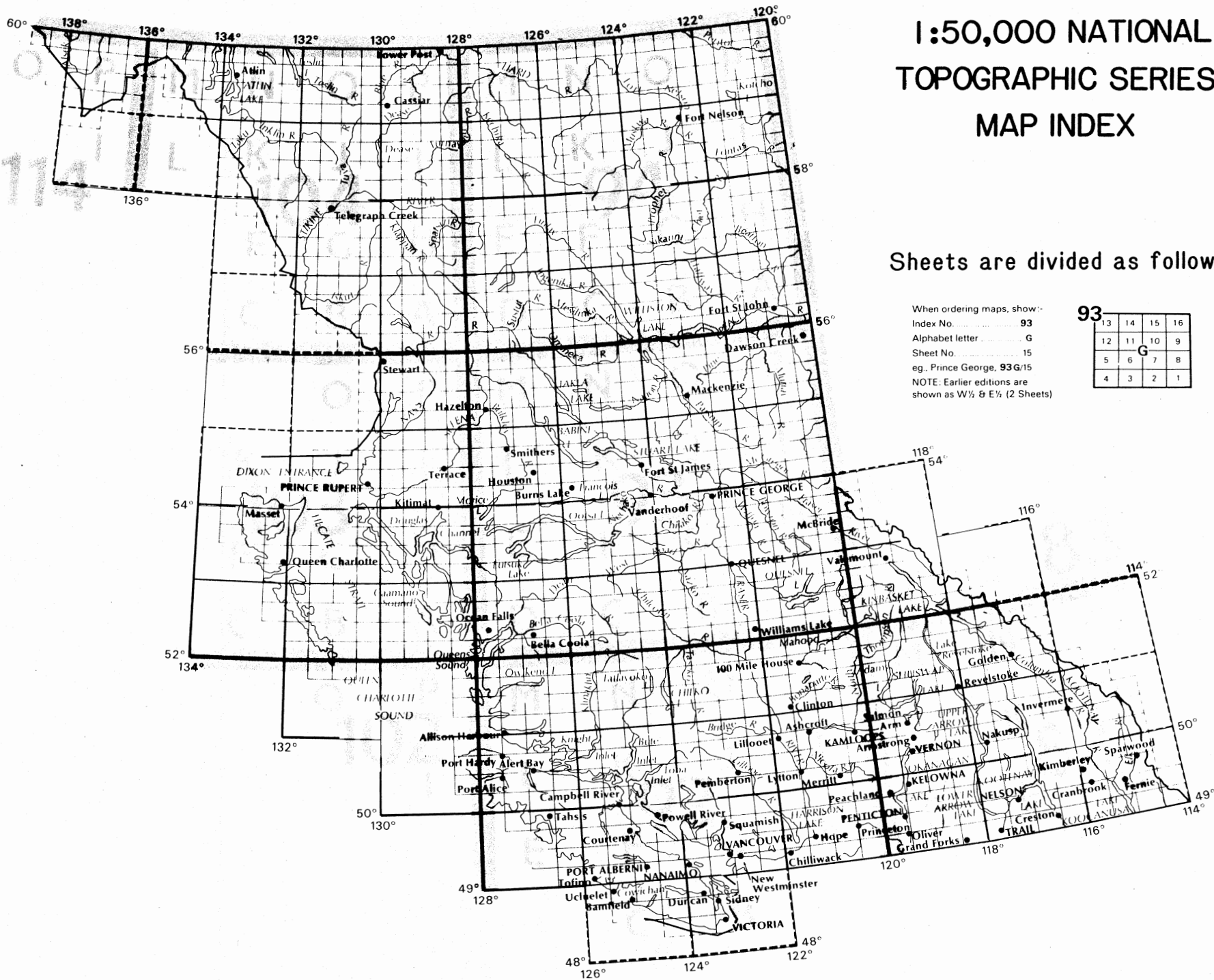
Drawn and Produced by Mapping Section, Survey and Map of British Ministry of Environment, Victoria, British Columbia



**1:250 000 NATIONAL  
TOPOGRAPHIC SERIES  
(FEDERAL EDITIONS)  
MAP INDEX**

These Federal Government publications will show water features, contour lines, culture such as place names, roads, railways, parks and boundaries. In addition they show the U.T.M. grid.

**CONTOUR INTERVAL** 500ft  
**SHEET SIZE** 61cm x 76cm  
**COLOURS** 6  
**PRICE CODE** L214



# 1:50,000 NATIONAL TOPOGRAPHIC SERIES MAP INDEX

Sheets are divided as follows:

When ordering maps, show:  
 Index No. .... 93  
 Alphabet letter ..... G  
 Sheet No. .... 15  
 eg. Prince George, 93G/15  
 NOTE: Earlier editions are shown as W½ & E½ (2 Sheets)

93

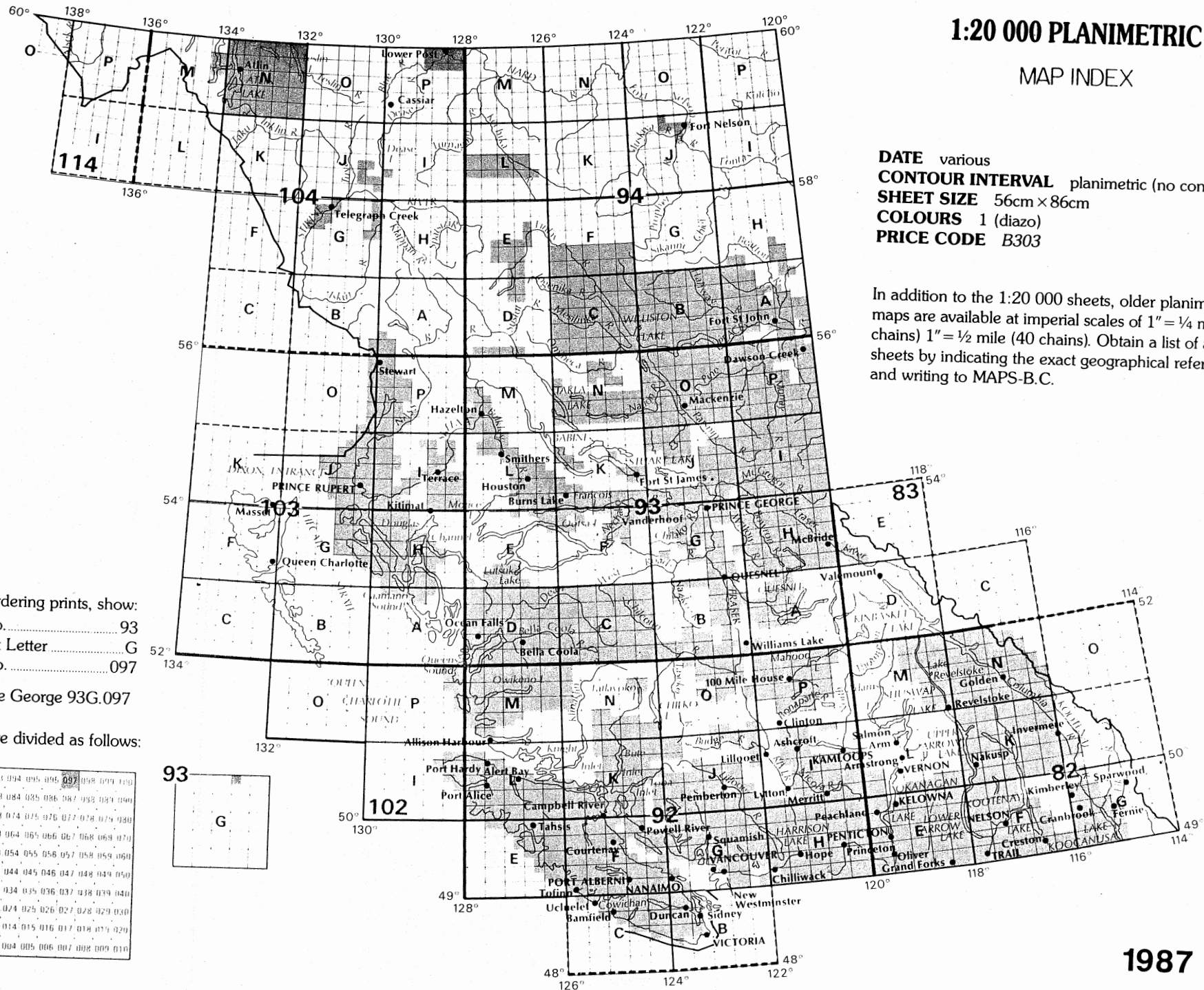
13	14	15	16
12	11	10	9
5	6	7	8
4	3	2	1

# 1:20 000 PLANIMETRIC

## MAP INDEX

DATE various  
 CONTOUR INTERVAL planimetric (no contours)  
 SHEET SIZE 56cm x 86cm  
 COLOURS 1 (dialzo)  
 PRICE CODE B303

In addition to the 1:20 000 sheets, older planimetric maps are available at imperial scales of 1" = 1/4 mile (20 chains) 1" = 1/2 mile (40 chains). Obtain a list of available sheets by indicating the exact geographical reference and writing to MAPS-B.C.



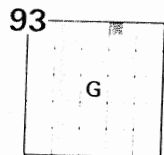
When ordering prints, show:

Index No. .... 93  
 Alphabet Letter .... G  
 Sheet No. .... 097

eg. Prince George 93G.097

Sheets are divided as follows:

091	092	093	094	095	096	097	098	099	100
081	082	083	084	085	086	087	088	089	090
071	072	073	074	075	076	077	078	079	080
061	062	063	064	065	066	067	068	069	070
051	052	053	054	055	056	057	058	059	060
041	042	043	044	045	046	047	048	049	050
031	032	033	034	035	036	037	038	039	040
021	022	023	024	025	026	027	028	029	030
011	012	013	014	015	016	017	018	019	020
001	002	003	004	005	006	007	008	009	010



## 2.0 USER GUIDES

### 2.1 STREAM INFORMATION SUMMARY (SIS)

The Stream Information Summary (SIS) form, designed by the Fish Habitat Inventory & Information Program, has been used by Departmental staff and contractors to compile existing information on a stream by stream basis. A companion computer database, the Stream Information Summary System (SISS), is designed for the input, storage and output of SIS information. The SISS "User's Manual" provides details on coding SIS forms and operation of the computer system. A number of codes are used during data entry to SISS. In all cases the equivalent of the code is printed on the SISS output. Notwithstanding, a complete list of codes is provided in Tables 1 and 2. Most information on the SIS form is linked to a reference number. The source of the information can, therefore, be determined from the reference list at the back of each SIS printout. Although the preparation of Stream Information Summaries has been thorough, the focus has been on collecting key information rather than all information. The phrase "no information available" appears on the SIS printout when no information on that subject is contained in the database. The summaries will be updated using SISS as more information becomes available or as more detailed literature searches are undertaken.

Stream Information Summaries, arranged by watershed code, are included in Section 3.0 of the catalogue. The following describes the content of each section in the SIS form and printout (Fig. 2.1).

#### A. DESCRIPTION

##### A.1 Stream Name:

The official stream name listed in the "Gazetteer of Canada" or the primary alias is displayed here. The primary alias may be used if the gazetted name is unavailable.

##### A.2 Local Name

Any local name(s) are listed.

##### A.3 Watershed Code:

The watershed code is a unique number which identifies a stream and the watershed that it is in. The hierarchical nature of the watershed coding system allows features associated with basins or channels to be aggregated or separated to the desired level of detail. A dictionary of watershed codes is available from the Water Management Branch, Ministry of Environment, Victoria.

##### A.4 Tributaries:

A list of tributaries to the stream is provided. The "code" when added to the stream's watershed code gives the tributary watershed code. Example:

Cowichan River watershed code = 92-4800  
 Koksilah River code = 020  
 Koksilah River watershed code = 92-4800-020

A.5 DFO Division, District, Subdistrict & Statistical Subarea:

The DFO management areas in which the stream mouth is located are listed.

A.6 MOE Region, Management Unit:

The MOE management areas in which the stream mouth is located are listed.

A.7 Topographic (1:50K) Map, BCGS (1:20K) Map:

Codes of the National Topographic Series (NTS) map sheet and the British Columbia Geographic System (BCGS) map sheet that show the stream mouth are listed here.

A.8 U.T.M. Mouth:

The Universal Transverse Mercator (UTM) coordinates of the stream mouth are listed. UTM is a metric grid reference system displayed on most 1:50,000 scale NTS maps,

A.9 Lat./Long. Mouth:

The latitude and longitude (degrees, minutes and seconds) of the stream mouth are listed.

A.10 Mainstream Length:

The total mainstem length is provided in kilometres.

A.11 Watershed Area:

The area of the stream's watershed is given in square kilometers.

A.12 Location:

The general location of the stream is listed.

A.13 Gradient:

Location(s) given as a range of kilometers upstream from the mouth are provided for five gradient classes: 0-0.5%, 0.5-2%, 2-5%, 5-10%, 10+%. Any comments on gradient are also listed in this field.

B. OBSTRUCTIONS TO MIGRATION

This section lists barrier type, the height of the barrier (m) as appropriate, the barrier location in kilometers upstream from mouth, the species that are obstructed and any additional comments.

C. FLOW

This section indicates if there is flow control on the system (Y or N), if there is a Water Survey of Canada (WSC) Flow Gauge (Y or N), the station nos. and any comments on flow (eg. low flows, floods).

**D. DISTRIBUTION SUMMARY**

Species and watershed distribution including spawning, rearing, overwintering, holding, and migration areas are listed.

**E. ESCAPEMENT SUMMARY**

This section lists the species, mean escapement for a specified period of record, maximum recorded escapement for the same period, management target escapement and any comments on escapement.

**F. LIFE HISTORY TIMING**

Life history timing is provided by species for each one-half month period by the following activities: migration, spawning, incubation and rearing. The timing of these activities is indicated by an X and the peak by a P.

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Listed in this section are the type of activity, the species affected by the activity, location of the facility in kilometers upstream of the mouth, comments and period of operation.

**H. LAND USE/WATER USE/WATER QUALITY**

This section lists the type of activity and description of land use; water use or activities affecting water quality.

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

This section may provide comments on fish production potential including habitat potential, constraints to production, opportunities for restoration or enhancement, watershed sensitivity, quality of information to assess the above and the need for inventory data collection.

**J. FISHERY OFFICER NARRATIVE**

This section indicates the date and person who may have prepared a Fishery Officer Narrative on the stream.

**K. SIS COMPLETED BY:**

The name of the person(s) completing, checking or updating the information and date (year/month/day) are listed. "Updated by" indicates that some sections of the Stream Information Summary have been revised. These sections are indicated in the database.



**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

--

**J. FISHERY OFFICER NARRATIVE**

Date Prepared:    /    /	Prepared By:
--------------------------	--------------

**K. SIS COMPLETED BY**

Completed by:	Date:
---------------	-------

TABLE 1. LIST OF CODESStream Name

R River  
 C Creek  
 S Slough  
 B Brook  
 G Gulch

Management Activities

CC Creel Census  
 CF Counting Fence  
 FS Fish Sampling  
 MR Mark Recovery

Barrier Type

BD Beaver Dam  
 C Cascade, Chute  
 CV Culvert  
 D Dam  
 F Falls (type unknown)  
 R Rock  
 X Log Jam

Land Use/Water Use/Water Quality

AG Agriculture  
 DA Dams  
 FO Forestry  
 IP Industrial Processing  
 LD Linear Development  
 MI Mining  
 PR Parks  
 RE Reserves  
 UD Urban Development  
 WQ Water Quality (ie. activities adversely affecting water quality)  
 WW Water Withdrawal.

Enhancement Activities

BX Incubation box  
 CH Spawning channel  
 CO Colonization from existing hatchery  
 EI Estuary improvement  
 FC Flow control  
 FP Multiple fish production strategies  
 FT Lake fertilization  
 FW Fishway  
 HC Combination channel/hatchery  
 HX Multiple combination hatchery, channel, flow control  
 HY Conventional hatchery  
 JH Hatchery, primarily Japanese style technique  
 LJ Log jam removal  
 OR Obstruction removal  
 SC Side channel  
 SI Stream improvement  
 TR Transplant  
 TT Trap/truck over obstruction

TABLE 2. FISH SPECIES CODES

AGB	BROWN TROUT (ANAD)	GR	GRAYLING ARCTIC
AC	ARCTIC CHAR	GSG	GREEN STURGEON
ACT	CUTTHROAT TROUT (ANAD)	HW	HUMPBACKED WHITFISH
ADV	DOLLY VARDEN (ANAD)	IN	INCONNU
ACB	BROOK TROUT (ANAD)	KO	KOKANEE
AF	ALL FISH	L	LAMPREYS (GENERAL)
AL	ARCTIC LAMPREY	LDC	LEOPARD DACE
AO	ALL <u>ONCORHYNCHUS</u>	LKC	LAKE CHUB
AS	ATLANTIC SALMON	LMB	LARGEMOUTH BASS
ASM	ARCTIC SMELT	LNC	LONGNOSE DACE
BB	BURBOT	LSM	LONGFIN SMELT
BCB	BLACK CRAPPIE	LSU	LONGNOSE SUCKER
BH	CATFISH NERAL	LT	LAKE TROUT
BKH	BLACK BULLHEAD	LW	LAKE WHITEFISH
BL	WESTERN BROOK LAMPREY	MSU	NORTHERN MOUNTAIN SUCKER
BMC	BRASSY MINNOW	MW	ROCKY MOUTAIN WHITEFISH
BNH	BROWN BULLHEAD	NP	NORTHERN PIKE
BS	BASS/SUNFISH (GENERAL)	NSC	NORTHERN SQUAWFISH
BSB	BROOK STICKLEBACK	P	PERCH (GENERAL)
BSU	BRIDGELIP SUCKER	PCC	PEAMOUTH CHUB
BW	BROAD WHITEFISH	PDC	NORTHERN PEARL DACE
C	MINNOWS (GENERAL)	PK	PINK SALMON
CA	ARCTIC CISCO	PL	PACIFIC LAMBREY
CAL	ALEUTIAN SCULPIN	PMB	PUMPKINSEED
CAS	PRICKLY SCULPIN	PW	PIGMY WHITEFISH
CBA	MOTTLED SCULPIN	RB	RAINBOW TROUT
CBC	CHUB (GENERAL)	RDC	NORTHERN REDBELLY DACE
CC	SCULPINS (GENERAL)	RL	RIVER LAMPREY
CCG	SLIMY SCULPIN	RSC	REDSIDED SHINER
CCN	SHORTHEAD SCULPIN	RW	ROUND WHITEFISH
CH	CHINOOK SALMON	SA	SALMON (GENERAL)
CL	LAKE HERRING/CISCO/TULIBEE	SB	STICKLEBACKS (GENERAL)
CLA	STAGHORN SCULPIN	SDC	SPECKLED DACE
CM	CHUM SALMON	SFL	STARRY FLOUNDER
CMC	CHISELMOUTH CHUB	SG	STURGEONS (GENERAL)
CO	COHO SALMON	SH	AMERICAN SHAD
CP	CARP	SK	SOCKEYE SALMON
CRH	TORRENT SCULPIN	SM	SMELTS (GENERAL)
CRI	SPOONHEAD SCULPIN	SMB	SMALLMOUTH BASS
CS	LEAST CISCO	ST	STEELHEAD
CSU	LARGESCALE SUCKER	STC	SPOTTAIL SHINER
CT	CUTTHROAT TROUT	SU	SUCKERS (GENERAL)
DC	DACE	TC	TENCH
DV	DOLLY VARDEN	TP	TROUTPERCH
EB	BROOK TROUT	TR	TROUT (GENERAL)
ESC	EMERALD SHINER	TSB	THREESPINE STICKLEBACK
EU	EULACHON	WF	WHITEFISH (GENERAL)
FDC	FINESCALE DACE	WP	WALLEYE
FHC	FLATHEAD CHUB	WSG	WHITE STURGEON
GAM	MOSQUITOFISH	WSU	WHITE SUCKER
GB	BROWN TROUT	YCT	YELLOWSTONE CUTTHROAT
GC	GOLDFISH	YP	YELLOWPERCH
GE	GO		

## 2.2 ESCAPEMENT

The last feature of a Stream Information Summary is the Escapement Profile (Fig. 2.2). Briefly this Escapement profile contains the following:

- Page A: The first page is a tabular summary of annual escapement by species from 1953 to the most current data year.
- Pages B & C: When five or more years of data are available, graphs and tables of species escapement and spawn timing are displayed.
- Page D: Two diagrams portray average watershed escapement by species, and escapement as a percentage of the Department of Fisheries and Oceans management units - Subdistrict / District / Division.

A detailed description of each page follows.

### Escapement Profile: Detailed Description.

#### Page A:

The first page is a tabular summary of annual escapement by species from 1953 to the most current data year.

#### Pages B & C:

Pages B & C contain three rows of panels for the five species of salmon plus steelhead. When data are not available, the panel appears blank. The species are always arrayed from left to right in the following order:

sockeye, coho, pink, chum, chinook, steelhead.

The upper row of six panels contain the annual escapement by species for the past twenty years. The middle row of six panels display spawn timing for the same species and period. The vertical bar indicates the annual start and end of spawning, while the lateral connecting line indicates each year's peak of spawning. The lower row of six panels contain the annual escapement and spawn timing data presented in the upper and middle row of panels.

#### Page D:

This page contains two diagrams:

- The upper pie chart diagram portrays by species the ten year average watershed escapement and proportional species percentage. Pink even and odd year runs have been combined to provide a 10 year mean.
- The lower histogram illustrates the watershed's escapement as a proportion of the Department of Fisheries and Oceans management units (SUB=Subdistrict / DIS=District / DIV=Division).

The escapement information displayed in pages A,B&C,D of the Escapement Profile was compiled from the Salmon Escapement Data System (SEDS) managed by the Department of Fisheries and Oceans Pacific and Biological Station, Nanaimo. The escapement numbers in this system are from the DFO Annual Report of Salmon Streams and Spawning Populations (BC 16) completed by each subdistrict fishery officer/patrolman following annual stream inspections. Wherever possible SEDS data has been checked against Farwell, M.K., et al. (1987) Can. Data Rep. Fish. Aquat. Sci. #601, (Salmon Escapement to Streams Entering Statistical Areas 28 and 29, 1951 to 1985 and Fraser River, Northern B.C. and Yukon Division management biologist's escapement records in order to provide the best escapement numbers available at the time of publishing. The design and layout of the Escapement Profile was cooperatively developed by the SIS Working Group and SEDS managers.

### 2.3 BIBLIOGRAPHY

Section 4.0 contains a bibliography of all references used in preparing the Stream Information Summaries. References are arranged both numerically and alphabetically by author. Each citation contains a **reference number, author, description** including title, date and publisher, location where the reference can be obtained and **keywords** describing the reference.

### 2.4 STREAM INFORMATION SUMMARY MAP

During the preparation of Stream Information Summary (SIS) forms, maps of fish distribution, major spawning areas, obstructions to migration and enhancement facilities were drafted on 1:50,000 National Topographic Series bases. Reduced (11" x 17") black and white copies of 1:50,000 topographic maps are contained in Section 5.0 of this catalogue.

## ESCAPEMENT : EXAMPLE RIVER

WATERSHED-CODE : 93-1000

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	1500	0	750	400	400
1954	0	3500	1500	1500	400	400
1955	0	3500	0	400	200	750
1956	0	7500	1500	200	25	750
1957	0	7500	N/O	750	200	750
1958	0	15000	750	1500	200	750
1959	0	7500	N/O	750	200	750
1960	75	15000	400	1500	1500	400
1961	75	35000	N/O	400	400	750
1962	75	15000	400	1500	400	0
1963	25	7500	0	400	400	750
1964	25	75000	25	1500	1500	0
1965	1500	15000	0	1500	750	0
1966	1500	15000	0	400	1500	0
1967	1500	35000	750	750	400	0
1968	1500	15000	0	3500	750	0
1969	200	15000	0	200	400	400
1970	3500	75000	0	7500	7500	0
1971	25	7500	0	N/O	400	0
1972	1500	15000	0	3500	3500	0
1973	N/O	15000	0	200	3500	N/O
1974	75	7500	75	N/O	750	0
1975	75	1500	N/O	200	200	N/O
1976	75	750	75	N/O	75	0
1977	200	400	0	25	75	0
1978	200	2850	0	25	50	150
1979	0	3500	25	25	400	0
1980	0	3000	200	100	500	0
1981	N/O	3500	75	200	750	0
1982	400	8400	200	225	775	0
1983	400	7500	200	200	775	0
1984	0	9000	200	500	1200	0
1985	N/O	500	N/O	300	150	0
1986	100	16000	100	10500	487	0
1987	N/O	12000	N/O	2000	600	0
1988						
1989						
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

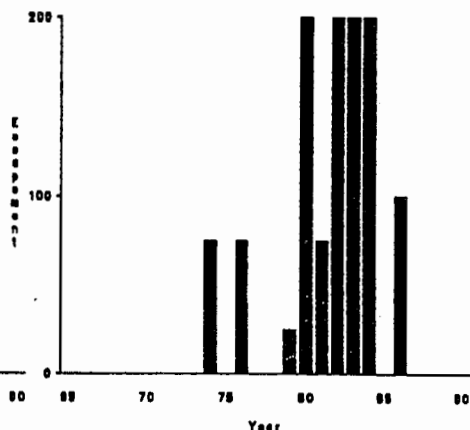
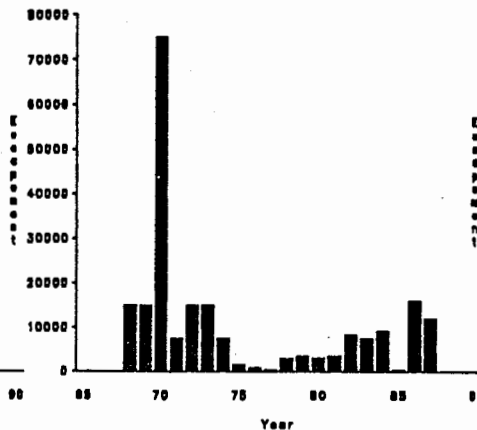
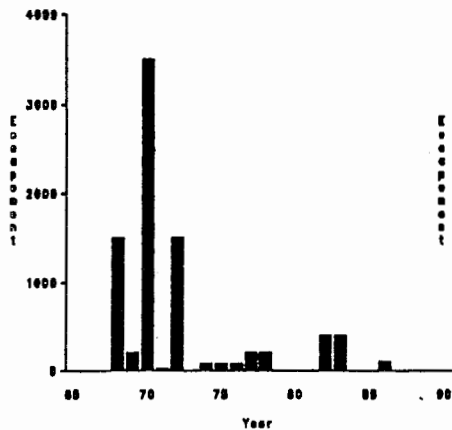
UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

EXAMPLE RIVER (93-1000)  
Escapement & Run Timing

Sockeye (SK)

Coho (CO)

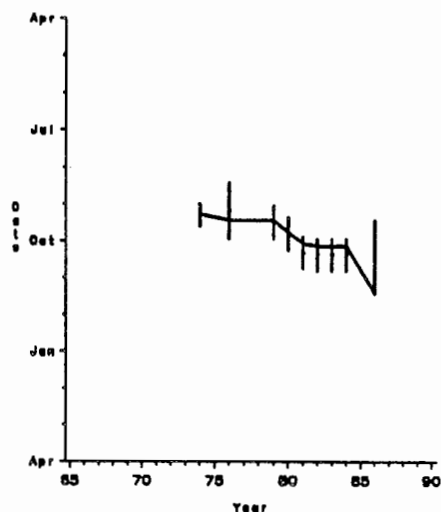
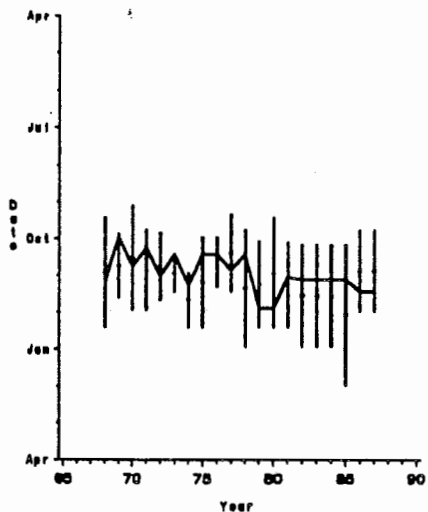
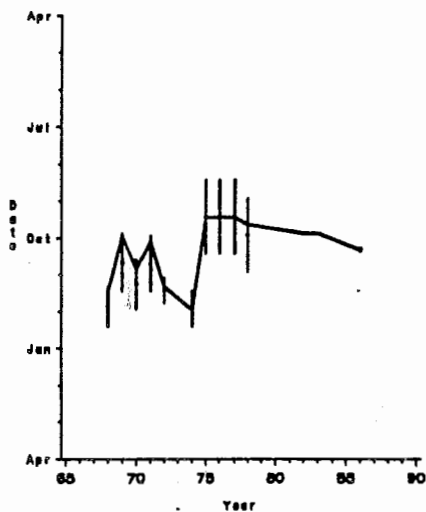
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1966	1,000	12NOV	18NOV	18DEC
1969	350	28SEP	30SEP	15NOV
1970	3,500	29OCT	29OCT	30NOV
1971	23	30SEP	09OCT	18NOV
1972	1,500	04NOV	18NOV	25NOV
1973	0	-	-	-
1974	75	10NOV	01DEC	18DEC
1975	75	15AUG	10SEP	15OCT
1976	75	15AUG	10SEP	15OCT
1977	300	15AUG	10SEP	15OCT
1978	300	30AUG	21SEP	30OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	400	28SEP	29SEP	21SEP
1983	400	28SEP	29SEP	21SEP
1984	0	-	-	-
1985	0	-	-	-
1986	100	19OCT	12OCT	15OCT
1987	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1966	15,000	19SEP	07NOV	18DEC
1969	15,000	28SEP	30SEP	30NOV
1970	75,000	09OCT	25OCT	30NOV
1971	7,000	22SEP	10OCT	20NOV
1972	15,000	27SEP	02NOV	25NOV
1973	15,000	19OCT	10OCT	18NOV
1974	7,500	30OCT	19NOV	18DEC
1975	1,500	01OCT	15OCT	18DEC
1976	750	01OCT	15OCT	18NOV
1977	400	12SEP	29OCT	18NOV
1978	2,000	23OCT	19OCT	31DEC
1979	2,000	04OCT	29NOV	18DEC
1980	2,000	10OCT	29NOV	18DEC
1981	2,000	09OCT	09NOV	18DEC
1982	5,400	07OCT	04NOV	31DEC
1983	7,000	07OCT	04NOV	31DEC
1984	9,000	07OCT	04NOV	31DEC
1985	600	07OCT	04NOV	31AUG
1986	15,000	28SEP	15NOV	01DEC
1987	11,000	28SEP	15NOV	01DEC

Pink				
Year	Escapement	Start	Peak	End
1966	0	-	-	-
1969	0	-	-	-
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	75	01SEP	19SEP	29SEP
1975	0	-	-	-
1976	75	15AUG	10SEP	30SEP
1977	0	-	-	-
1978	0	-	-	-
1979	25	03SEP	18SEP	30SEP
1980	200	13SEP	28SEP	19OCT
1981	75	28SEP	04OCT	25OCT
1982	200	30SEP	09OCT	27OCT
1983	200	30SEP	09OCT	27OCT
1984	200	30SEP	09OCT	27OCT
1985	0	-	-	-
1986	100	15SEP	15NOV	15NOV
1987	0	-	-	-

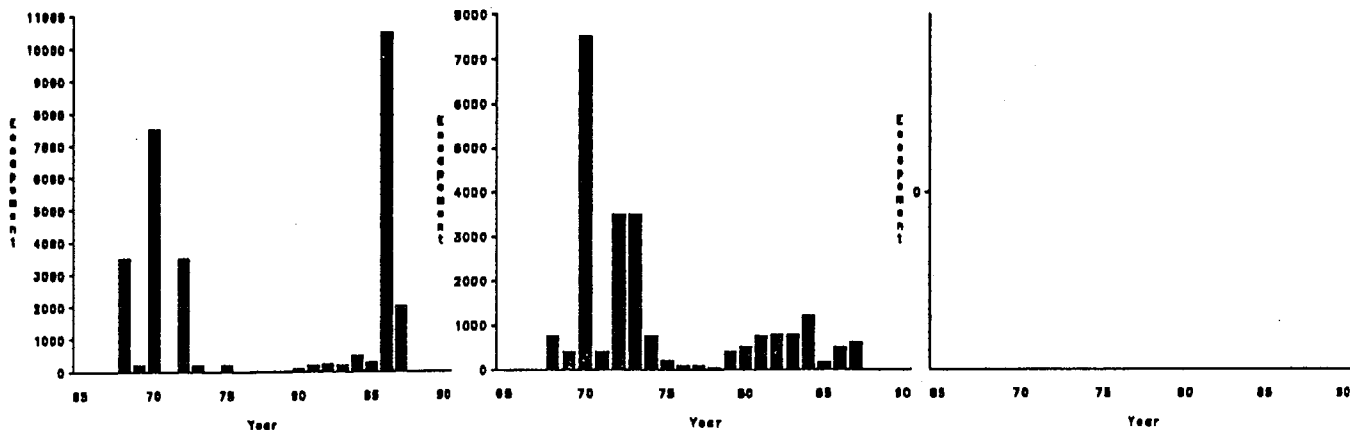
# EXAMPLE RIVER (93-1000)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

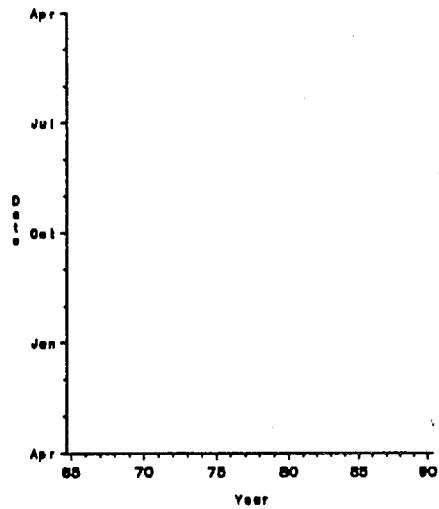
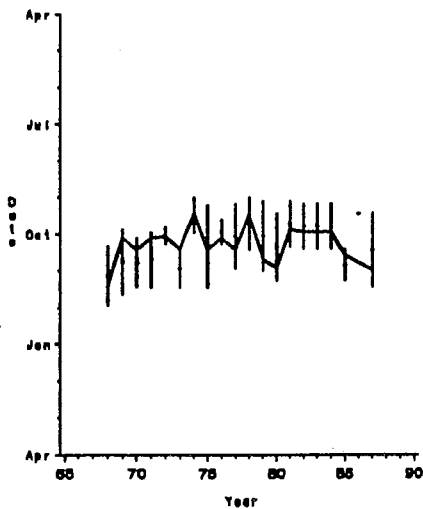
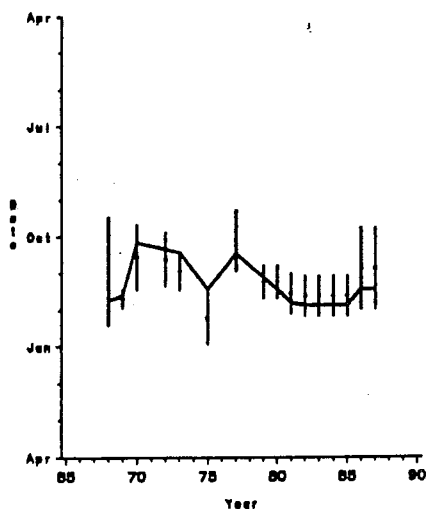
Steelhead (ST)



Chum

Chinook

Steelhead



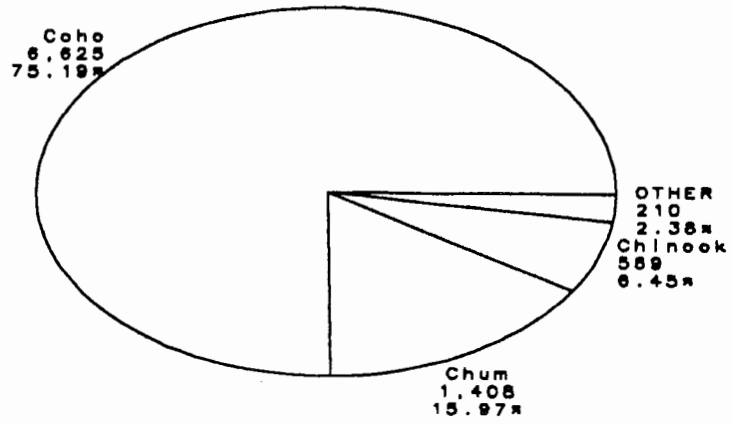
Year	Escapement	Start	Peak	End
1966	3,500	10SEP	14NOV	19DEC
1968	200	12NOV	18NOV	24NOV
1970	7,500	22SEP	07OCT	15NOV
1971	0	-	-	-
1972	3,500	29SEP	-	12NOV
1973	200	19OCT	19OCT	19NOV
1974	0	-	-	-
1975	200	17NOV	18NOV	31DEC
1976	0	-	-	-
1977	23	10SEP	19OCT	26OCT
1978	23	-	-	-
1979	23	29OCT	09NOV	12NOV
1980	100	24OCT	18NOV	12NOV
1981	200	01NOV	20NOV	06DEC
1982	223	04NOV	18NOV	07DEC
1983	200	04NOV	18NOV	07DEC
1984	300	04NOV	20NOV	07DEC
1985	300	04NOV	18NOV	07DEC
1986	10,500	29SEP	18NOV	01DEC
1987	2,500	22SEP	18NOV	01DEC

Year	Escapement	Start	Peak	End
1966	700	19OCT	18NOV	20NOV
1969	400	22SEP	06OCT	21NOV
1970	7,000	09OCT	19OCT	12NOV
1971	400	20SEP	06OCT	12NOV
1972	3,000	25SEP	04OCT	19OCT
1973	3,000	19OCT	19OCT	12NOV
1974	700	01SEP	19SEP	01OCT
1975	200	08SEP	19OCT	12NOV
1976	75	20SEP	06OCT	19OCT
1977	75	07SEP	19OCT	26OCT
1978	90	01SEP	19SEP	19OCT
1979	400	09OCT	23OCT	01NOV
1980	500	18OCT	26OCT	19NOV
1981	750	08OCT	25OCT	12OCT
1982	775	07OCT	26OCT	14OCT
1983	775	07OCT	26OCT	14OCT
1984	1,200	07OCT	26OCT	14OCT
1985	100	19OCT	29OCT	19NOV
1986	457	19SEP	-	-
1987	900	18SEP	01NOV	19NOV

Year	Escapement	Start	Peak	End
1966	-	-	-	-
1968	-	-	-	-
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-

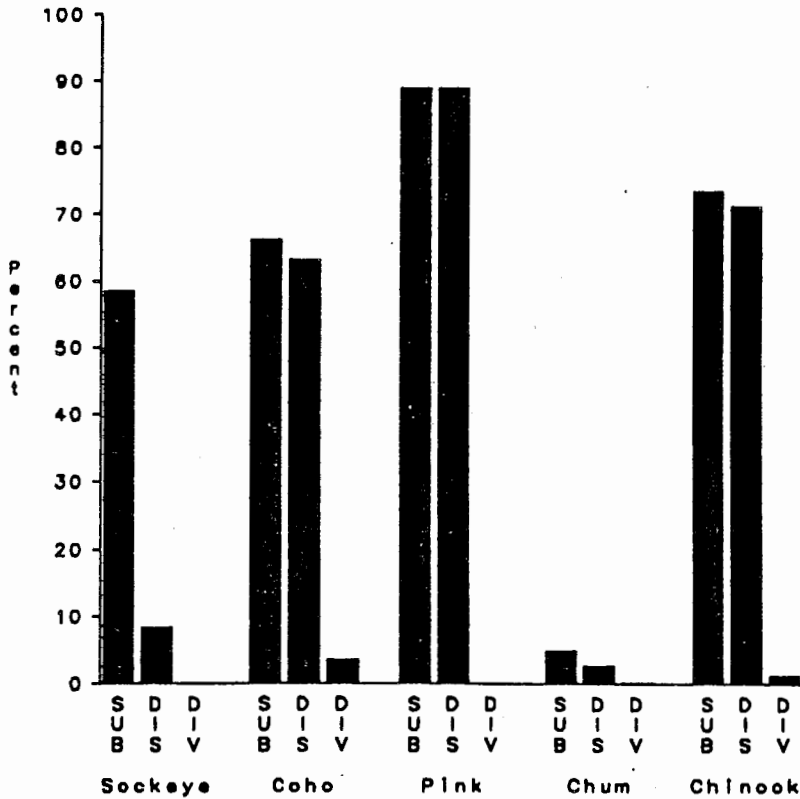
**EXAMPLE RIVER (93-1000)**

10-yr Mean Escapement  
(1978-1987)



**EXAMPLE RIVER : Escapement (1978-1987)**

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



### 3.0 STREAM SUMMARY

This section of the catalogue contains Stream Information Summaries and Escapement Profiles arranged in ascending order of watershed code. An index of watershed codes and stream names is found in Section 1.0.

**A. DESCRIPTION**

Stream Name: <b>UNNAMED CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>WODEFORD CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-7920</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-6</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6055.56575</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' ' ' ' ' '</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>FLOWS N.W. INTO ALISON HARBOUR, S.E. OF BRANHAM IS., RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>NO INFORMATION AVAILABLE</b>				

**C. FLOW**

Flow Control: W.S.C. Station No. 1:	Water Survey of Canada (WSC) Flow Gauge: No. 2:	No. 3:	No. 4:
<b>NO INFORMATION AVAILABLE</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>NO INFORMATION AVAILABLE</b>	

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: <b>PAST HISTORY OF CO AND CM IN 1953-54 UNKNOWN SINCE THEN (REF. 28A-18)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

VERY LITTLE POTENTIAL (REF. 11-3, REF. 11-4)
--

**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by:     GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : WODEFORD CREEK

WATERSHED-CODE : 90-7920

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	75	0	1500	0	UNK
1954	0	25	0	400	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	UNK	0	UNK	0	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>EVA CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>COHOE CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-8000</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-3</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth:
		Lat./Long. Mouth: <b>51 DG. 02' 10'' 127 DG. 20' 31''</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>FLows N.E. INTO SEYMOUR INLET, W. OF WOODS LAG., RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>FAIRLY FLAT, SLIGHT GRADIENT (REF. 11-3)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>			<b>CM CHUM SALMON</b>	<b>PASSABLE AT 1.2 KM (REF. 11-1)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>SUBJECT TO LOW FLOWS AND FLASH FLOODING. (REF. 11-3)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>THROUGHOUT TO LAKE (REF. 11-1, REF. 11-3)</b>
<b>CM CHUM SALMON</b>	<b>LOWER 1.6KM TO FALLS (REF. 11-1, REF. 11-3)</b>
<b>CT CUTTHROAT TROUT</b>	<b>PRESENT (REF. 11-3)</b>
<b>TR TROUT</b>	<b>PRESENT (REF. 11-3)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>		<b>1980 - 1989</b>		<b>20</b>	<b>28A-18</b>		
<b>CM CHUM SALMON</b>	<b>140</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>450</b>	<b>28A-18</b>		
Comments: <b>CO RECORDED 1986(20) ONLY ALTHOUGH GOOD HISTORY IN STREAM (REF. 28A-18)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X	
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FD FORESTRY	PAST LOGGING OVER 20 YEARS AGO (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

A LOG JAM AT 1.2 KM WAS REMOVED (1970). THIS STREAM SHOULD BE CAPABLE OF PRODUCING MORE COHO (1971). (REF. 12B-1)
HAS GOOD POTENTIAL. GOOD NUMBERS IN PAST YEARS, RECENTLY DECLINED. (REF. 11-3, REF. 11-4, REF. 11-5)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : EVA CREEK

WATERSHED-CODE : 90-8000

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	1500	0	750	0	UNK
1954	0	1500	0	1500	0	UNK
1955	0	400	0	400	0	UNK
1956	0	750	0	750	0	UNK
1957	0	400	0	750	0	UNK
1958	0	400	0	750	0	UNK
1959	N/O	N/O	N/O	N/O	N/O	UNK
1960	0	0	0	0	0	UNK
1961	N/O	N/O	N/O	N/O	N/O	UNK
1962	0	UNK	0	UNK	0	UNK
1963	0	200	0	N/O	0	UNK
1964	0	200	0	N/O	0	UNK
1965	0	750	0	N/O	0	UNK
1966	0	75	0	N/O	0	UNK
1967	0	200	0	N/O	0	UNK
1968	0	200	0	N/O	0	UNK
1969	0	75	0	1500	0	UNK
1970	0	400	0	1500	0	UNK
1971	0	400	0	400	0	UNK
1972	0	20	0	N/O	0	UNK
1973	0	N/O	0	25	0	UNK
1974	0	60	0	600	0	UNK
1975	0	85	0	350	0	UNK
1976	0	60	0	600	0	UNK
1977	0	250	0	400	0	UNK
1978	0	500	0	3500	0	UNK
1979	0	N/O	0	200	0	UNK
1980	0	N/O	0	300	0	UNK
1981	0	N/O	0	350	0	UNK
1982	0	UNK	0	75	0	UNK
1983	0	N/O	0	130	0	UNK
1984	0	N/O	0	N/O	0	UNK
1985	0	0	0	40	0	UNK
1986	0	20	UNK	50	UNK	UNK
1987	0	N/O	0	N/O	0	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	N/O	UNK	450	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

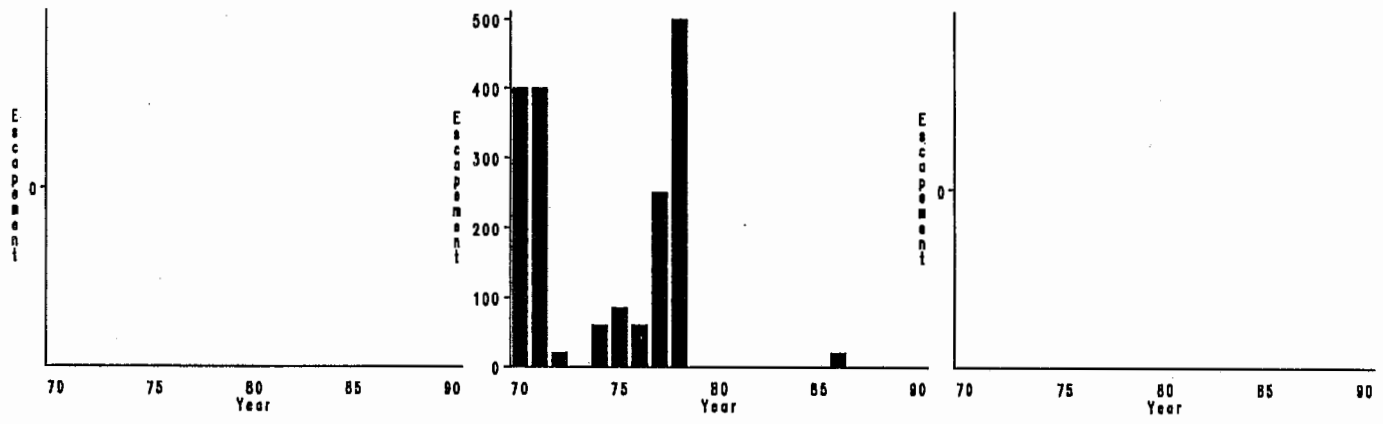
# EVA CREEK (90-8000)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

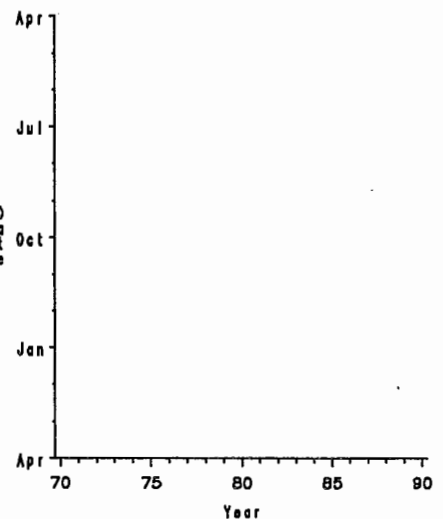
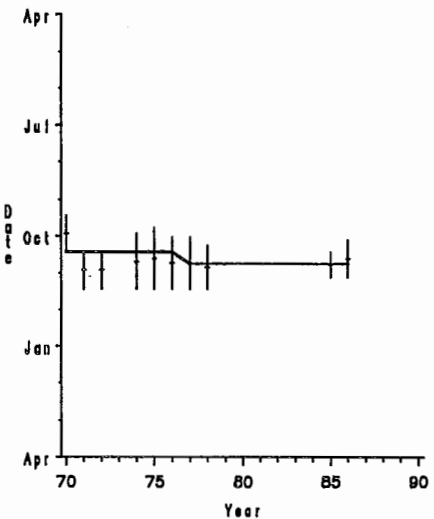
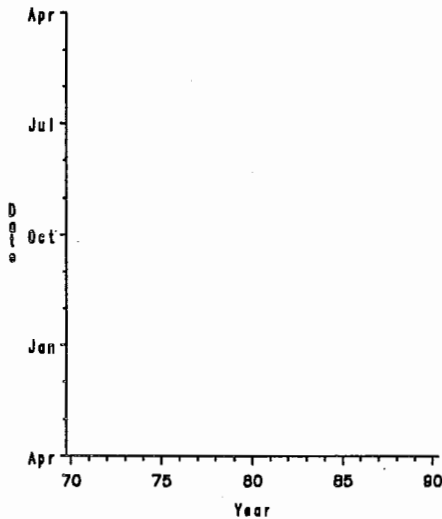
Pink (PK)



Socketeye

Coho

Pink



Socketeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	400	15SEP	15OCT	15OCT
1971	400	15OCT	15OCT	15NOV
1972	20	15OCT	15OCT	15NOV
1973	0	-	-	-
1974	0	30SEP	15OCT	15NOV
1975	0	25SEP	15OCT	15NOV
1976	0	03OCT	15OCT	15NOV
1977	250	03OCT	25OCT	15NOV
1978	500	10OCT	25OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	15OCT	25OCT	05NOV
1986	20	03OCT	25OCT	05NOV
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

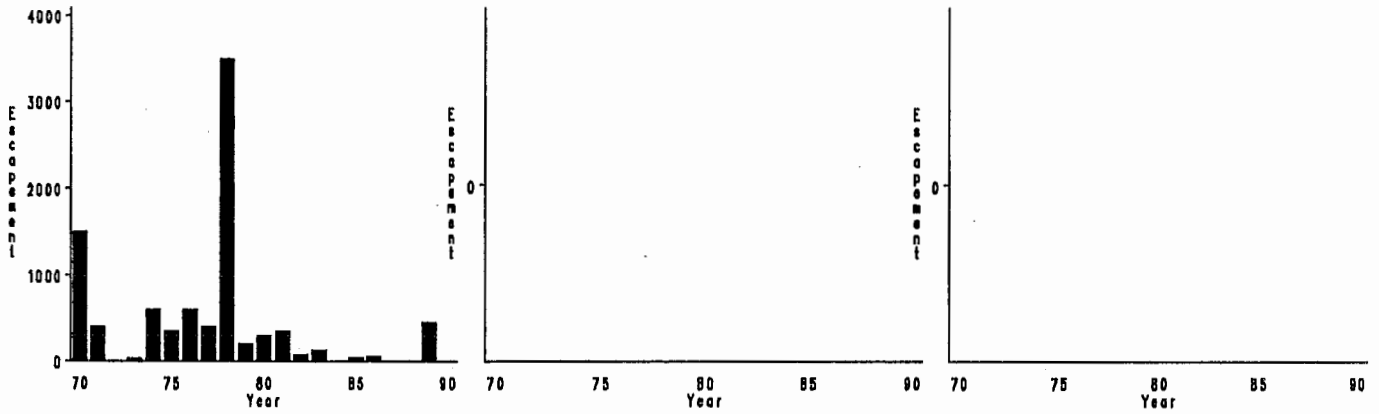
# EVA CREEK (90-8000)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

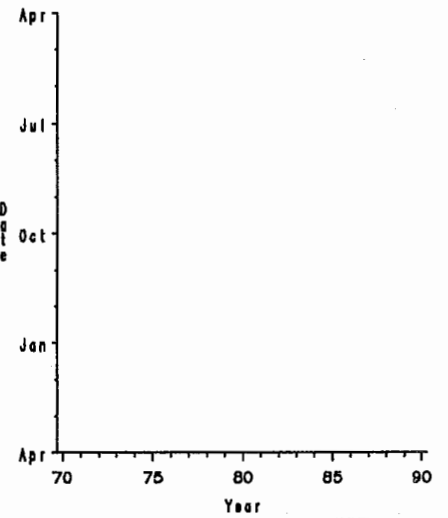
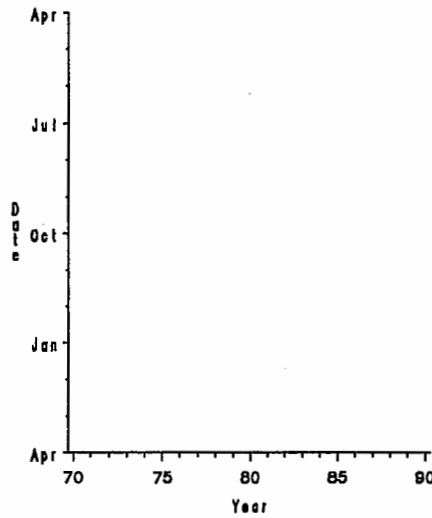
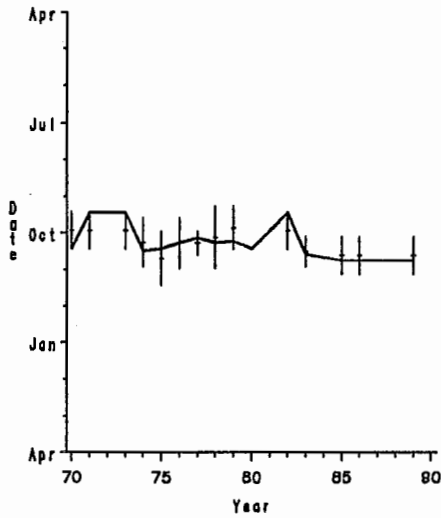
Steelhead (ST)



Chum

Chinook

Steelhead



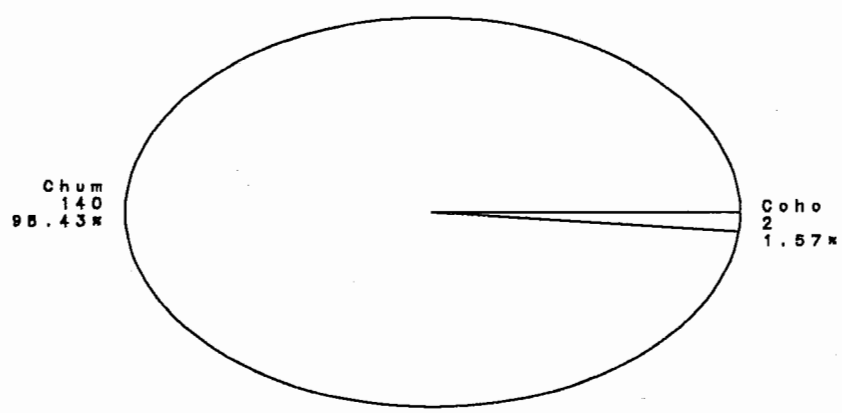
Chum				
Year	Escapement	Start	Peak	End
1970	1,500	15SEP	15OCT	15OCT
1971	400	15SEP	15SEP	15OCT
1972	0	-	-	-
1973	25	15SEP	15SEP	15OCT
1974	600	20SEP	17OCT	30OCT
1975	350	01OCT	15OCT	15NOV
1976	600	20SEP	18OCT	31OCT
1977	400	01OCT	08OCT	20OCT
1978	3,500	10SEP	18OCT	31OCT
1979	200	10SEP	08OCT	15OCT
1980	300	-	15OCT	-
1981	350	-	-	-
1982	75	15SEP	15SEP	15OCT
1983	130	05OCT	20OCT	30OCT
1984	0	-	-	-
1985	40	05OCT	25OCT	05NOV
1986	50	05OCT	25OCT	05NOV
1987	0	-	-	-
1988	0	-	-	-
1989	450	05OCT	25OCT	05NOV

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

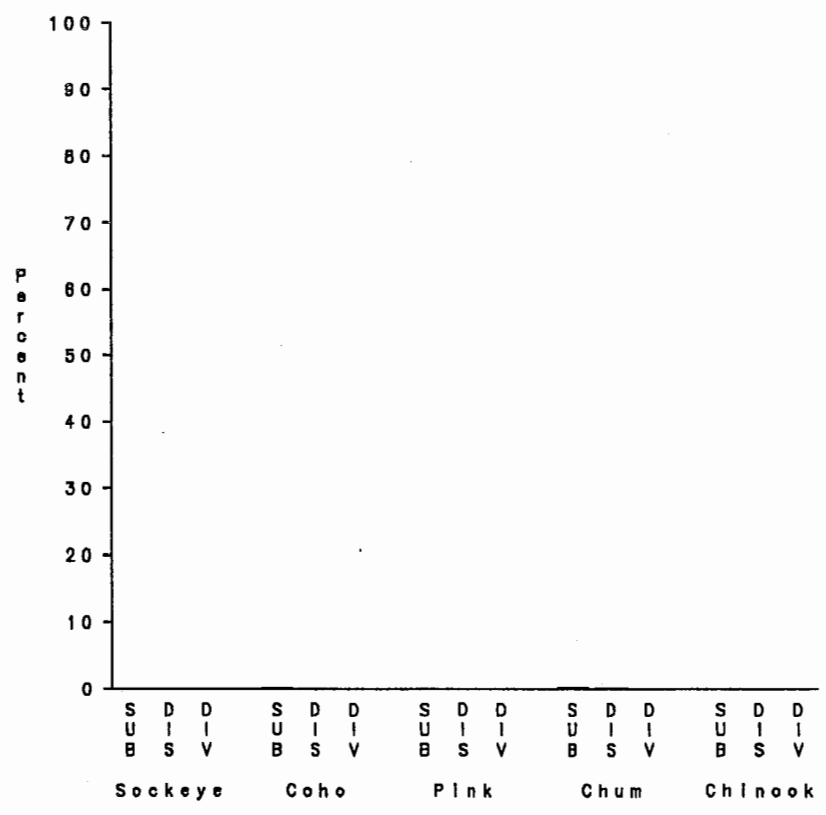
# EVA CREEK (90-8000)

10-yr Mean Escapement  
(1980-1989)



## EVA CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: BAMFORD CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-8100	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-9
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6189.56499
		Lat./Long. Mouth: 50 DG. 59' 29'' 127 DG. 18' 25''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS E. INTO BAMFORD LAG., N. OF BRADLEY LAGOON, RANGE 1, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	FAIRLY FLAT TO LAKE. (REF. 11-3)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				(1975) PASSABLE LOG JAMS THROUGHOUT (REF. 11-1, REF. 11-3)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: VERY LITTLE FLOW, MOSTLY DARK WATER (REF. 11-3)			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CM CHUM SALMON	TO 0.6 KM (REF. 11-3)
TR TROUT	PRESENT THROUGHOUT (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	42	1980 - 1989	28A-18	200	28A-18		
Comments: ESCAPEMENTS FOR BAMFORD, LEE AND WHELAKIS CREEKS ARE COMBINED (REF. 11-1)							
SK RECORDED 1976(50) ONLY    CO AND CM GOOD HISTORY PRE 1978 (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CM CHUM SALMON	Migration Spawning Incubation Rearing									X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

MARSHY AREA (REF. 11-3)
-------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHU	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : BAMFORD CREEK

WATERSHED-CODE : 90-8100

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	0	750	0	UNK
1954	0	400	0	1500	0	UNK
1955	0	25	0	25	0	UNK
1956	0	750	0	400	0	UNK
1957	0	400	0	750	0	UNK
1958	0	25	0	1500	0	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	0	200	0	75	0	UNK
1961	0	75	0	75	0	UNK
1962	0	200	0	25	0	UNK
1963	0	200	0	200	0	UNK
1964	0	200	0	200	0	UNK
1965	0	400	0	25	0	UNK
1966	0	75	0	25	0	UNK
1967	0	N/O	0	400	0	UNK
1968	0	75	0	200	0	UNK
1969	0	N/O	0	N/O	0	UNK
1970	0	25	0	200	0	UNK
1971	0	400	0	750	0	UNK
1972	0	20	0	N/O	0	UNK
1973	0	30	0	150	0	UNK
1974	0	200	0	2200	0	UNK
1975	0	70	0	350	0	UNK
1976	50	90	0	350	0	UNK
1977	0	30	0	125	0	UNK
1978	0	150	0	950	0	UNK
1979	N/O	N/O	0	N/O	0	UNK
1980	0	N/O	0	N/O	0	UNK
1981	0	N/O	0	N/O	0	UNK
1982	0	N/O	0	N/O	0	UNK
1983	0	N/O	0	N/O	0	UNK
1984	0	N/O	0	200	0	UNK
1985	N/O	N/O	N/O	175	N/O	UNK
1986	0	UNK	UNK	5	UNK	UNK
1987	0	N/O	0	N/O	0	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

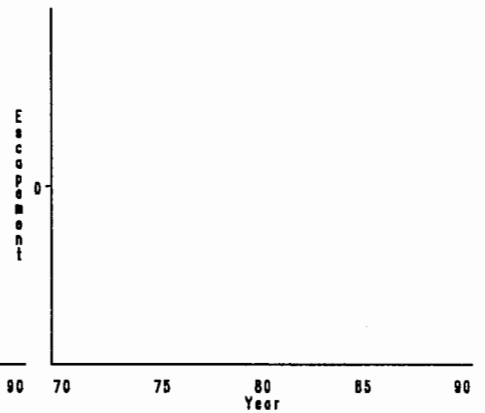
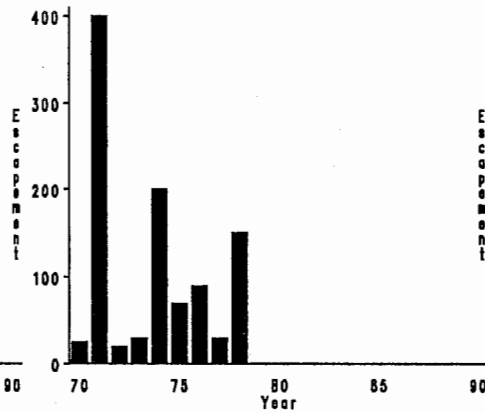
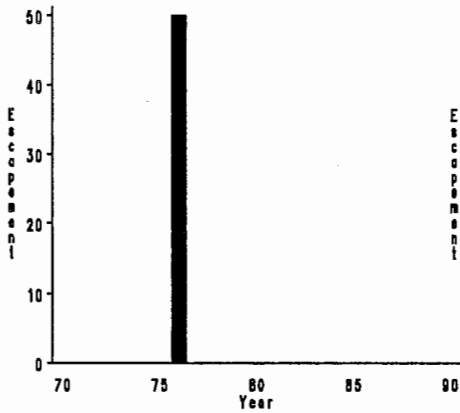
# UNNAMED C (90-8100)

## Escapement & Run Timing

sockeye (SK)

Coho (CO)

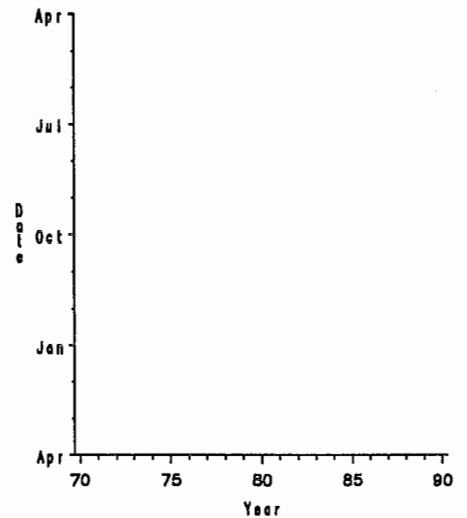
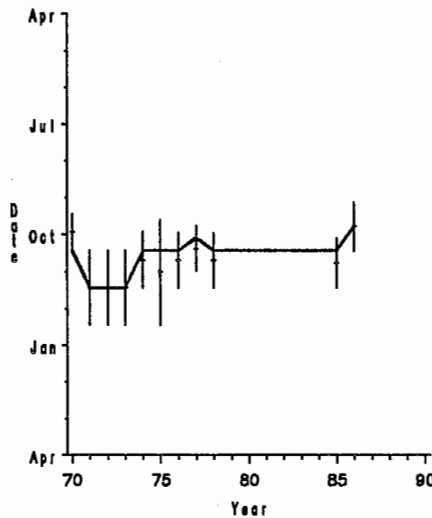
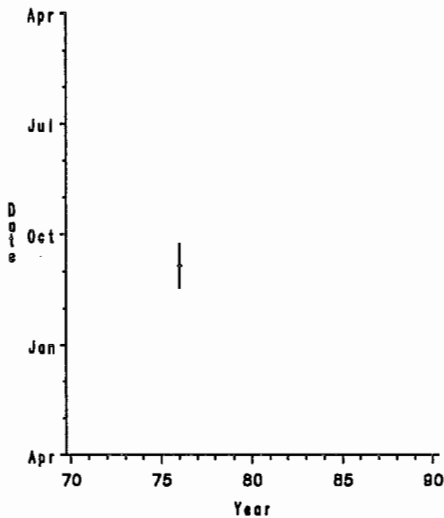
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	50	10OCT	20OCT	15NOV
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	25	19SEP	15OCT	15OCT
1971	400	15OCT	15NOV	15DEC
1972	20	15OCT	15NOV	15DEC
1973	30	15OCT	15NOV	15DEC
1974	200	30SEP	15OCT	15NOV
1975	70	20SEP	15OCT	15DEC
1976	90	01OCT	15OCT	15NOV
1977	30	25SEP	05OCT	01NOV
1978	150	01OCT	15OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	05OCT	15OCT	15NOV
1986	0	05SEP	25SEP	15OCT
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

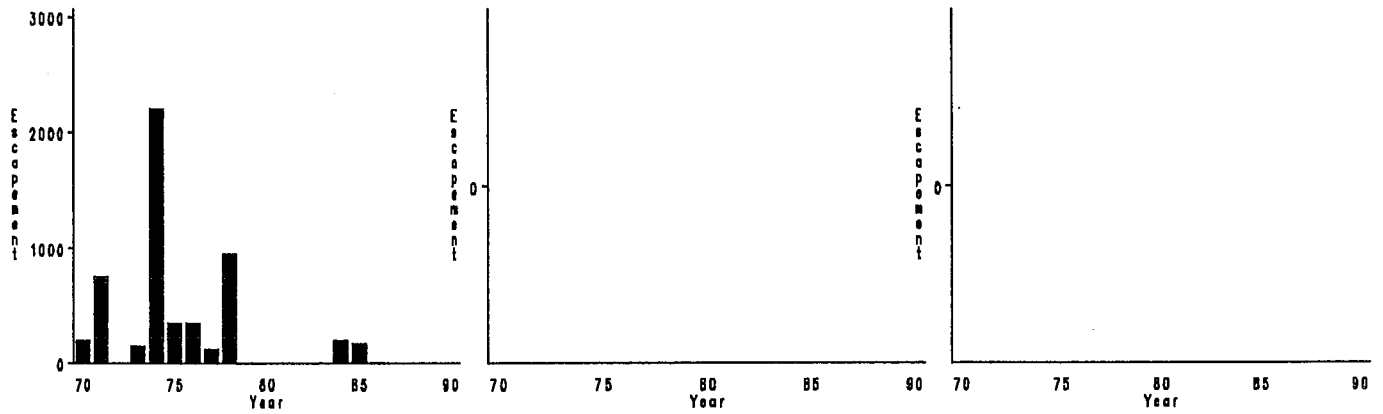
# UNNAMED C (90-8100)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

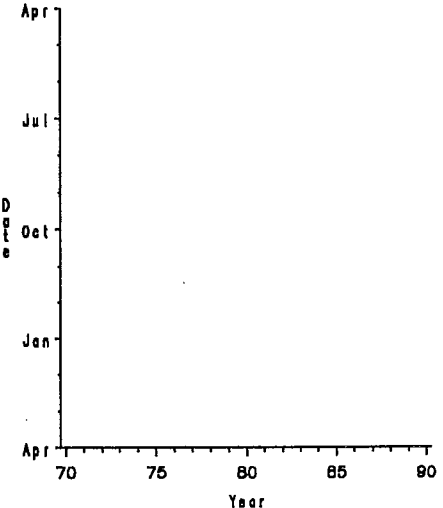
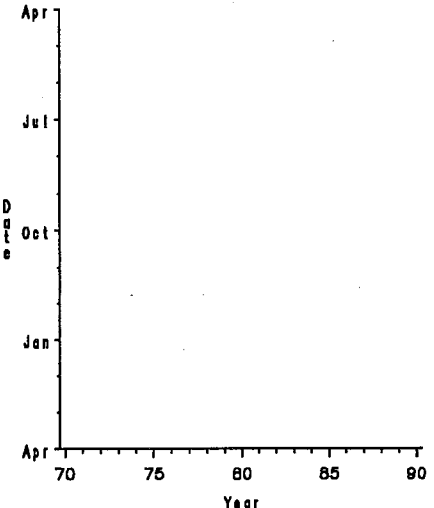
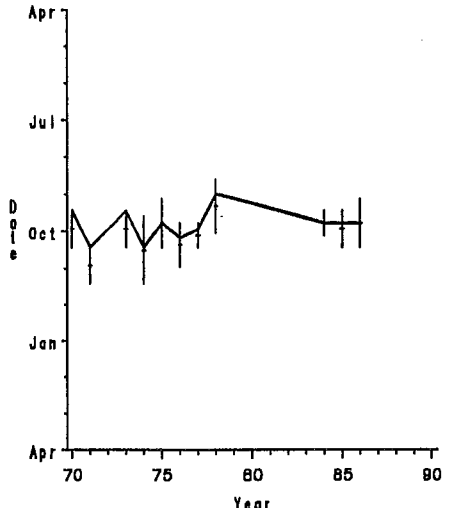
Steelhead (ST)



Chum

Chinook

Steelhead



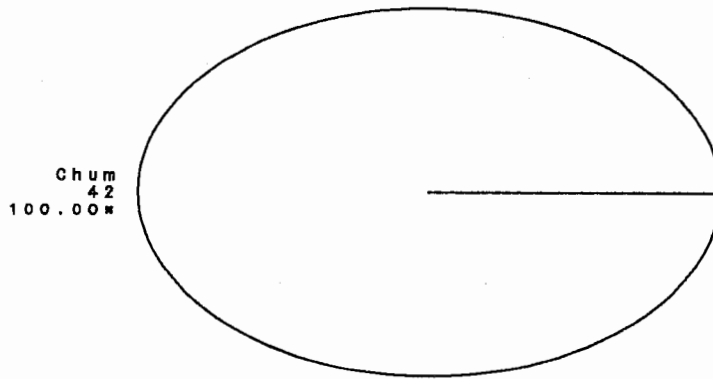
Chum				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15SEP	15OCT
1971	750	15OCT	15OCT	15NOV
1972	0	-	-	-
1973	150	15SEP	15SEP	15OCT
1974	2,200	20SEP	15OCT	15NOV
1975	350	05SEP	25SEP	15OCT
1976	350	25SEP	07OCT	31OCT
1977	125	25SEP	30SEP	15OCT
1978	950	20AUG	01SEP	03OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	200	15SEP	25SEP	05OCT
1985	175	15SEP	25SEP	15OCT
1986	5	05SEP	25SEP	15OCT
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

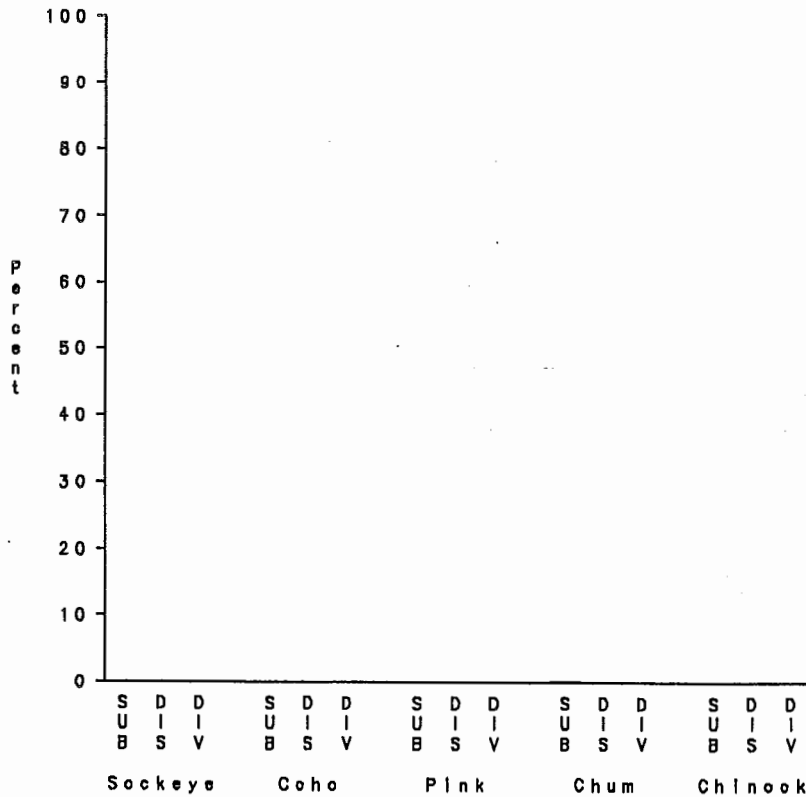
# UNNAMED C (90-8100)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: LEE LAKE CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-8200	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-9
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6277.56483
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS SW INTO NENEHLMAI LAGOON FROM LEE LAKE, RGE. 1, COAST DIST.		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	
NO INFORMATION AVAILABLE					

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
R ROCK		1.0		(REF. 11-3)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
NO INFORMATION AVAILABLE			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	OBSERVED IN LEE LAKE. (REF. 11-3)
TR TROUT	OBSERVED IN LEE LAKE. (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by:     ROSS DE MARCO	Date: 1990/02/16
Checked by:     BRIAN TUTTY	Date: 1989/12/15

**A. DESCRIPTION**

Stream Name: <b>UNNAMED CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>WARNER BAY CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-8295</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-3</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/3</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6341.56548</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: <b>4.0 km</b> Ref. No.: <b>11-1</b>
		Watershed Area: Ref. No.:
Location: <b>FLows N.E. INTO WARNER BAY, S. SIDE OF SEYMOUR INLET, RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>	<b>20.0</b>		<b>AF ALL SPECIES</b>	<b>(REF. 11-1)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
<b>NO INFORMATION AVAILABLE</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>SPAWNING MAINLY ABOVE THE FIRST LAKE. (REF. 11-3)</b>
<b>CM CHUM SALMON</b>	<b>MOSTLY SPAWNING IN THE RIVER UP TO THE FIRST LAKE. (REF. 11-3)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>	<b>28</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>100</b>	<b>28A-18</b>		
<b>CM CHUM SALMON</b>	<b>605</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>1300</b>	<b>28A-18</b>		
<b>Comments: CO GOOD HISTORY PRE 1878 (REF. 28A-18)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X	X X	X X	X
CN CHUM SALMON	Migration Spawning Incubation Rearing									X	X X	X	

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
HY HATCHERY	CO COHO SALMON	0.0	S.E.P. SMALL FACILITY (GEORGE BATES). POSSIBLY PK AND ST MAY ALSO BE AT THIS FACILITY (REF. 11-2, REF. 11-3)	1986/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	LOGGED TO 1987 (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS STREAM HAS GOOD POTENTIAL (REF. 11-3)
MOST CHUM SPAWN IN THE RIVER UP TO THE FIRST LAKE, COHO ABOVE. (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : WARNER BAY CREEK

WATERSHED-CODE : 90-8295

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	0	3500	0	UNK
1954	0	750	0	3500	0	UNK
1955	0	400	0	400	0	UNK
1956	0	400	0	3500	0	UNK
1957	0	400	0	1500	0	UNK
1958	0	400	0	3500	0	UNK
1959	0	400	0	1500	0	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	N/O	N/O	N/O	N/O	N/O	UNK
1962	0	200	0	25	0	UNK
1963	0	400	0	750	0	UNK
1964	0	200	0	1500	0	UNK
1965	0	1500	0	750	0	UNK
1966	0	750	0	750	0	UNK
1967	0	300	0	800	0	UNK
1968	0	75	0	400	0	UNK
1969	0	400	0	1500	0	UNK
1970	0	400	0	1500	0	UNK
1971	0	200	0	750	0	UNK
1972	0	75	0	1500	0	UNK
1973	0	150	0	3000	0	UNK
1974	0	250	0	3500	0	UNK
1975	0	75	0	700	0	UNK
1976	0	80	0	400	0	UNK
1977	0	100	0	1300	0	UNK
1978	0	140	0	1800	0	UNK
1979	0	N/O	0	900	0	UNK
1980	0	N/O	0	800	0	UNK
1981	0	UNK	0	1000	0	UNK
1982	0	UNK	0	800	0	UNK
1983	0	N/O	0	230	0	UNK
1984	0	N/O	0	750	0	UNK
1985	N/O	UNK	N/O	500	N/O	UNK
1986	0	20	UNK	150	UNK	UNK
1987	0	N/O	0	20	0	UNK
1988	0	100	0	1300	0	UNK
1989	UNK	75	UNK	500	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

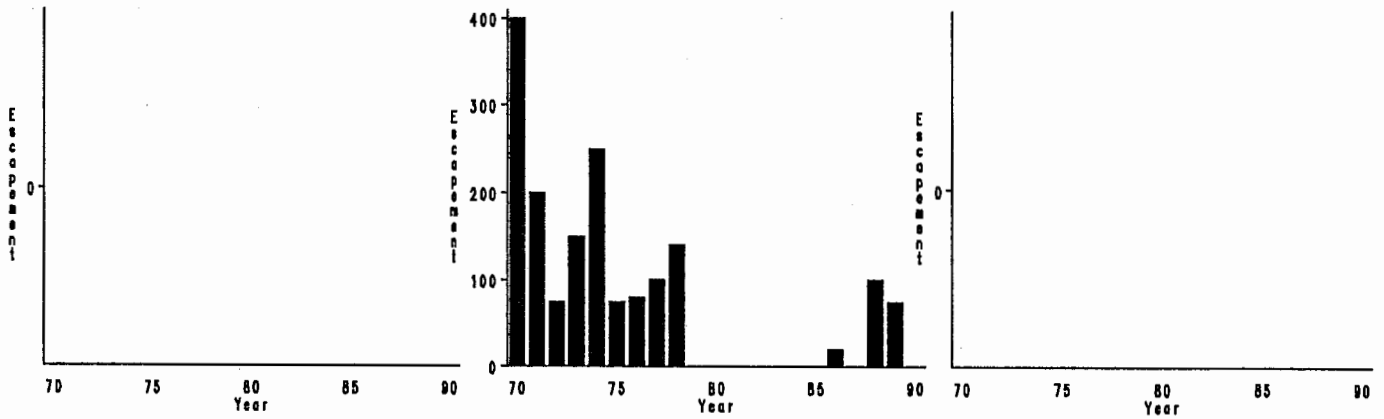
# UNNAMED C (90-8295)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

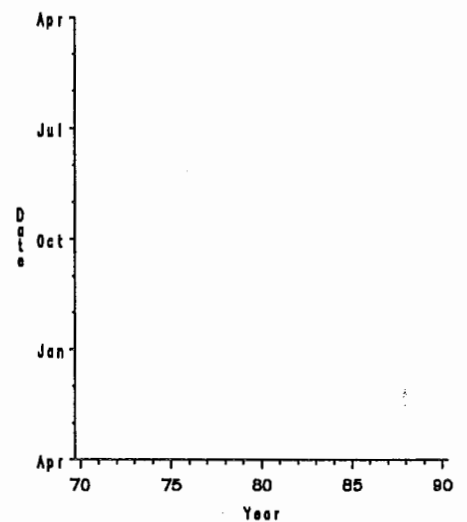
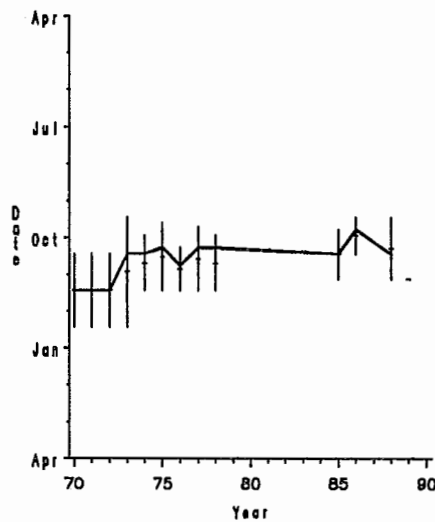
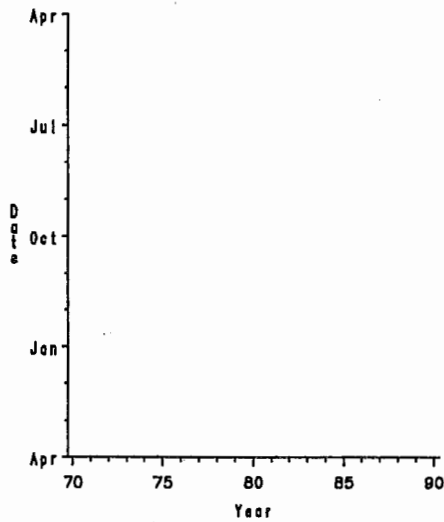
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-
1990	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	400	18OCT	15NOV	15DEC
1971	200	13OCT	15NOV	15DEC
1972	75	15OCT	15NOV	15DEC
1973	150	15SEP	15OCT	15DEC
1974	250	30SEP	15OCT	15NOV
1975	75	20SEP	10OCT	15NOV
1976	80	10OCT	25OCT	15NOV
1977	100	23SEP	10OCT	15NOV
1978	140	30SEP	10OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	23SEP	15OCT	05NOV
1986	20	15SEP	25SEP	15OCT
1987	0	-	-	-
1988	100	18SEP	15OCT	05NOV
1989	75	-	-	05NOV
1990	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-
1990	-	-	-	-

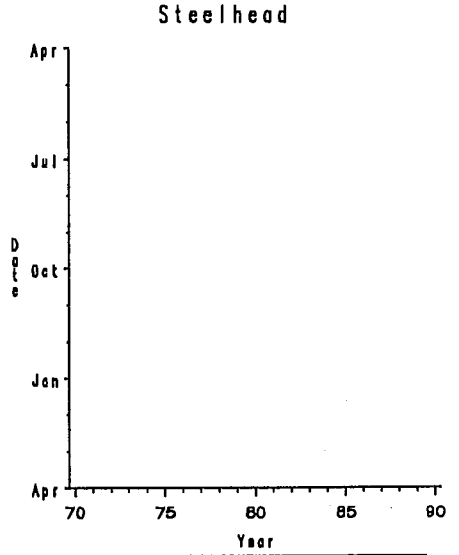
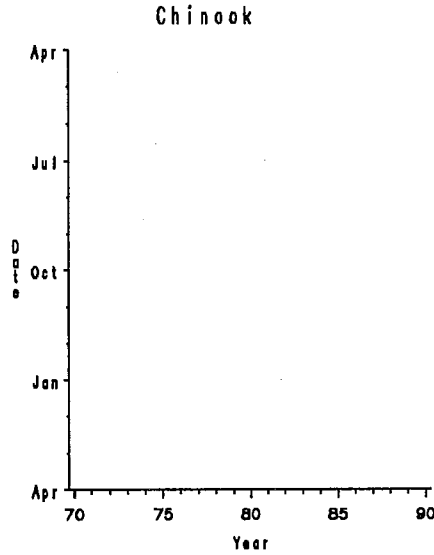
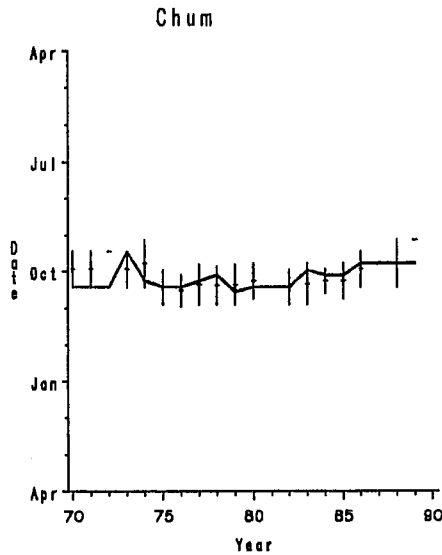
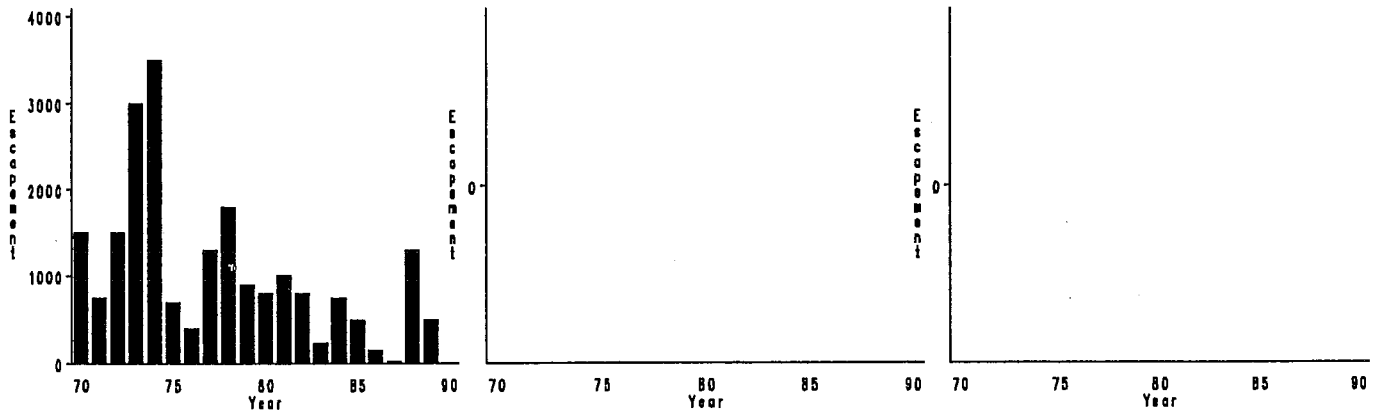
# UNNAMED C (90-8295)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)

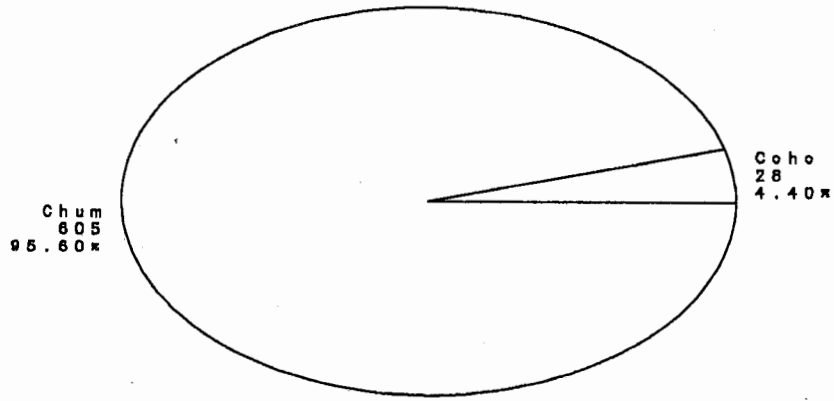


Chum				
Year	Escapement	Start	Peak	End
1970	1,500	15SEP	15OCT	15OCT
1971	750	15SEP	15OCT	15OCT
1972	1,500	15SEP	15OCT	-
1973	3,400	15SEP	15SEP	15OCT
1974	3,500	05SEP	19OCT	19OCT
1975	700	01OCT	19OCT	30OCT
1976	400	05OCT	15OCT	31OCT
1977	1,300	26SEP	19OCT	30OCT
1978	1,400	28SEP	05OCT	30OCT
1979	900	28SEP	19OCT	30OCT
1980	800	25SEP	15OCT	25OCT
1981	1,400	-	-	-
1982	800	01OCT	19OCT	30OCT
1983	230	25SEP	01OCT	30OCT
1984	750	30SEP	05OCT	20OCT
1985	500	25SEP	05OCT	25OCT
1986	150	15SEP	25SEP	15OCT
1987	20	-	-	-
1988	1,300	05SEP	25SEP	15OCT
1989	500	05SEP	25SEP	-

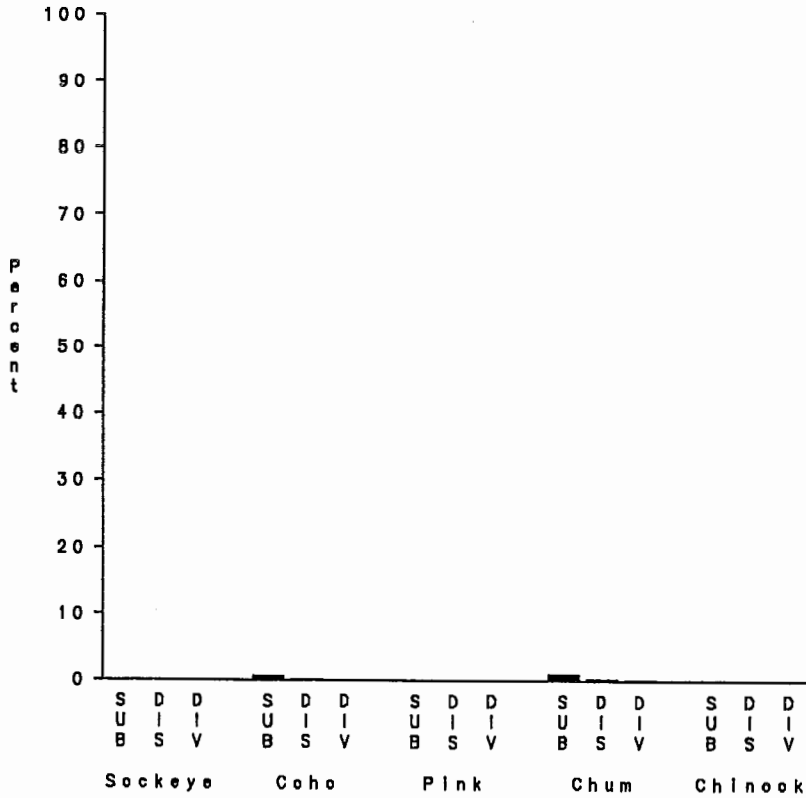
Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

UNNAMED C (90-8295)  
 10-yr Mean Escapement  
 (1980-1989)



UNNAMED C : Escapement (1980-1989)  
 Species Escapement as a Proportion of DFO Management Units  
 (ie Subdistrict, District & Division)





**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X	X X	X X	X
CN CHUM SALMON	Migration Spawning Incubation Rearing									X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING (REF. 11-2, REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS IS A GOOD SYSTEM THAT COULD PRODUCE MORE FISH (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI Date: 1988/09/11  
 Last updated by: MARG ANDERSON Date: 1991/07/03

ESCAPEMENT : TAALTZ CREEK

WATERSHED-CODE : 90-8400

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	3500	0	15000	0	UNK
1954	0	15000	0	15000	0	UNK
1955	0	15000	0	15000	0	UNK
1956	0	7500	0	15000	0	UNK
1957	0	3500	0	15000	0	UNK
1958	0	7500	0	15000	0	UNK
1959	0	1500	0	15000	0	UNK
1960	0	1500	0	3500	0	UNK
1961	0	1500	0	15000	0	UNK
1962	0	3500	0	7500	0	UNK
1963	0	1500	0	7500	0	UNK
1964	0	3500	0	15000	0	UNK
1965	0	3500	0	7500	0	UNK
1966	0	3500	0	15000	0	UNK
1967	0	3500	0	35000	0	UNK
1968	0	1500	0	20000	0	UNK
1969	0	400	0	7500	0	UNK
1970	0	750	0	15000	0	UNK
1971	0	750	0	7500	0	UNK
1972	0	400	0	3000	0	UNK
1973	0	350	0	12000	0	UNK
1974	0	600	0	16000	0	UNK
1975	0	350	0	6000	0	UNK
1976	0	75	0	4200	0	UNK
1977	0	200	0	45000	0	UNK
1978	0	200	0	37000	0	UNK
1979	0	N/O	0	5700	0	UNK
1980	0	400	0	5000	0	UNK
1981	0	UNK	0	12000	0	UNK
1982	0	UNK	0	10000	0	UNK
1983	0	40	0	3050	0	UNK
1984	0	300	N/O	20000	0	UNK
1985	N/O	50	N/O	10000	N/O	UNK
1986	0	UNK	UNK	10000	UNK	UNK
1987	0	500	0	2500	0	UNK
1988	0	500	0	12000	0	UNK
1989	UNK	520	UNK	460	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

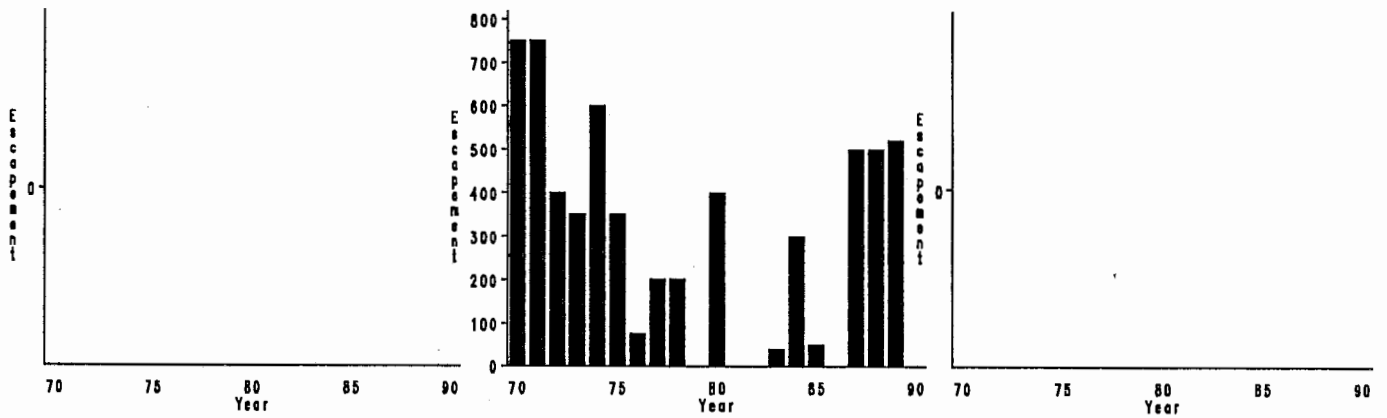
# TAALTZ CREEK (90-8400)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

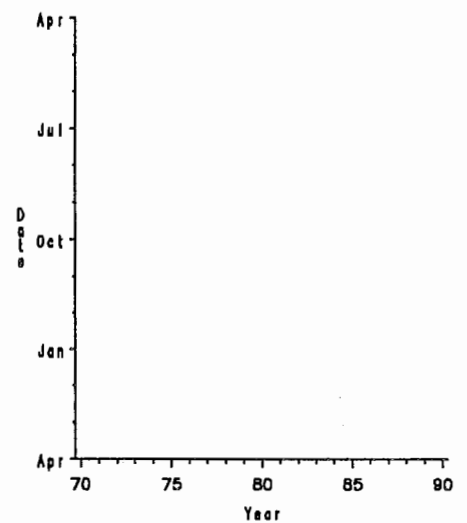
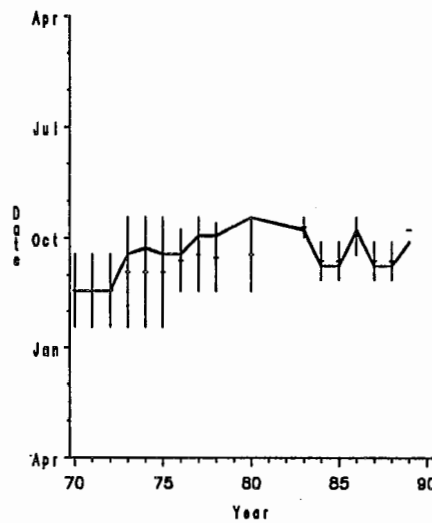
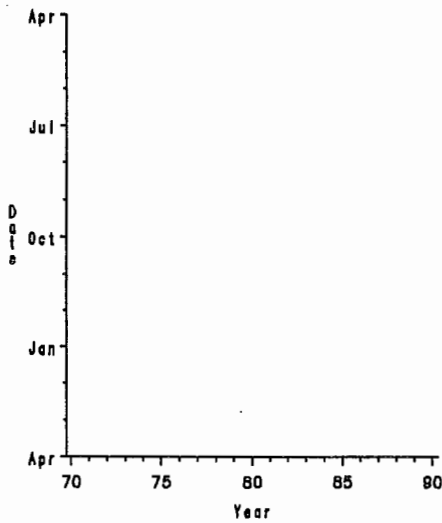
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	750	15OCT	15NOV	15DEC
1971	750	15OCT	15NOV	15DEC
1972	400	15OCT	15NOV	15DEC
1973	350	15SEP	15OCT	15DEC
1974	800	15SEP	15OCT	15DEC
1975	350	15SEP	15OCT	15DEC
1976	75	25SEP	15OCT	15NOV
1977	200	15SEP	30SEP	15NOV
1978	200	20SEP	30SEP	15NOV
1979	0	-	-	-
1980	400	15SEP	15SEP	15NOV
1981	-	-	-	-
1982	-	-	-	-
1983	40	15SEP	25SEP	01OCT
1984	300	05OCT	25OCT	05NOV
1985	50	05OCT	25OCT	05NOV
1986	-	15SEP	25SEP	15OCT
1987	500	05OCT	25OCT	05NOV
1988	500	05OCT	25OCT	05NOV
1989	520	25SEP	05OCT	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

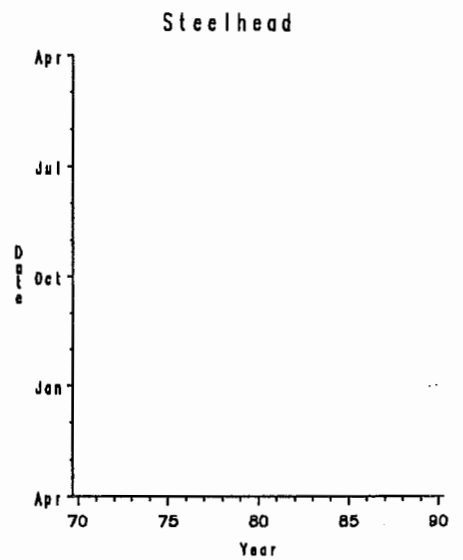
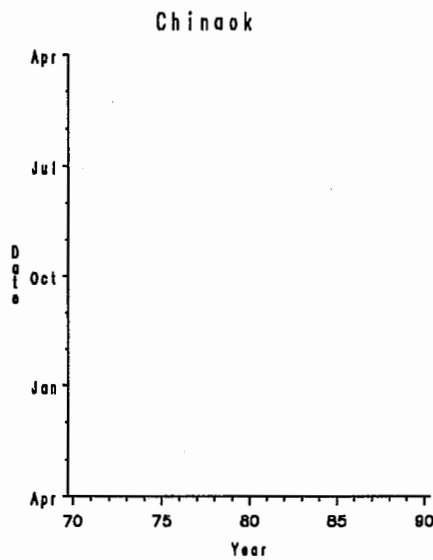
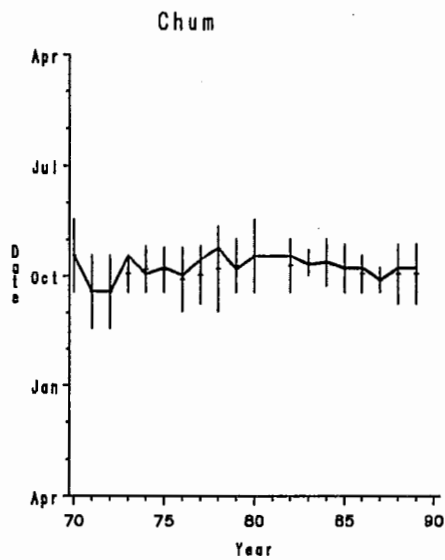
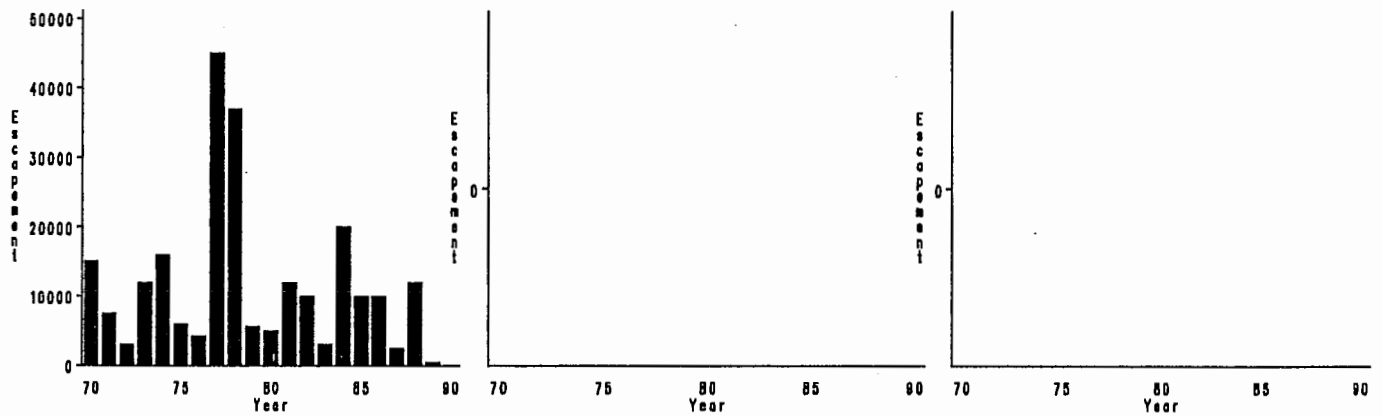
# TAALTZ CREEK (90-8400)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



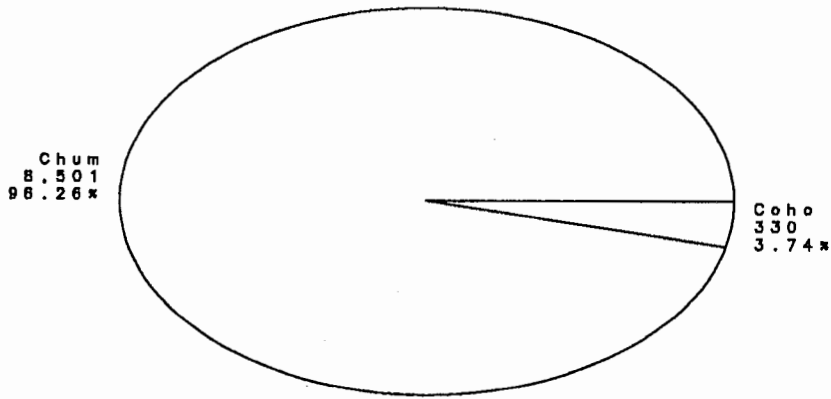
Chum				
Year	Escapement	Start	Peak	End
1970	15,000	15AUG	15SEP	15OCT
1971	7,500	15SEP	15OCT	15NOV
1972	3,000	15SEP	15OCT	15NOV
1973	12,000	15SEP	15SEP	15OCT
1974	18,000	07SEP	30SEP	15OCT
1975	8,000	08SEP	25SEP	15OCT
1976	4,200	08SEP	01OCT	31OCT
1977	45,000	07SEP	18SEP	25OCT
1978	37,000	21AUG	08SEP	31OCT
1979	5,700	01SEP	28SEP	15OCT
1980	5,000	15AUG	15SEP	15OCT
1981	12,000	-	-	-
1982	18,000	01SEP	15SEP	15OCT
1983	3,050	10SEP	22SEP	01OCT
1984	28,000	01SEP	20SEP	16OCT
1985	18,000	05SEP	25SEP	15OCT
1986	18,000	15SEP	25SEP	15OCT
1987	2,500	25SEP	05OCT	15OCT
1988	12,000	05SEP	25SEP	28OCT
1989	400	05SEP	25SEP	23OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

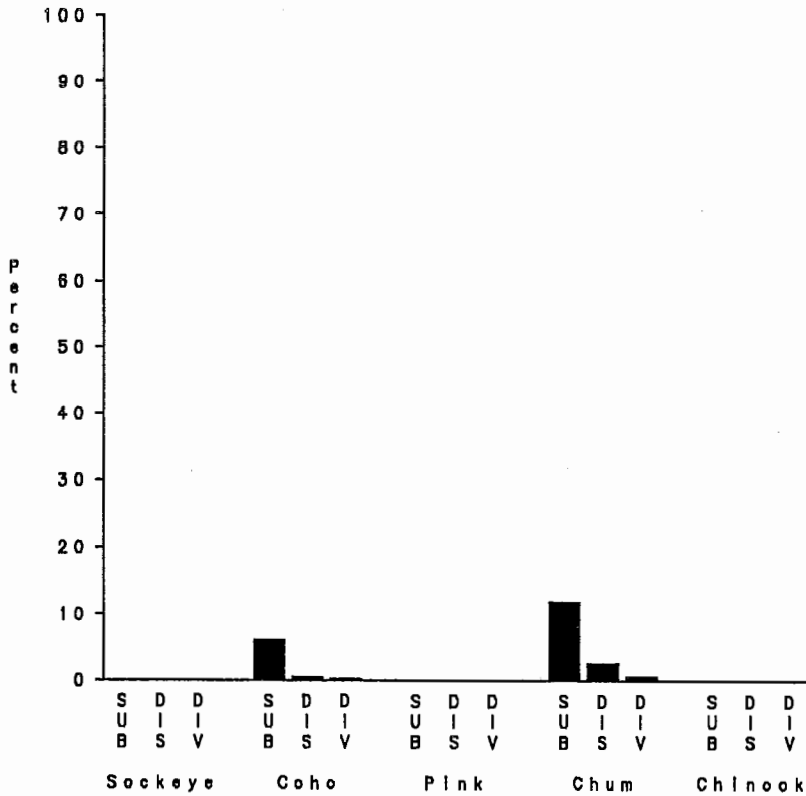
# TAALTZ CREEK (90-8400)

10-yr Mean Escapement  
(1980-1989)



## TAALTZ CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X
CH CHUM SALMON	Migration Spawning Incubation Rearing								X	X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PRESENT HELICOPTER LOGGING (1988) (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

LOTS OF POTENTIAL, RECOMMEND REMOVAL OF LOG JAMS. SLOUGHS FULL OF CHUM BUT BLOCKED BY LOG JAMS. (REF. 11-3)
ESTUARY IS AN EXCELLENT REARING GROUND FOR COHO. (REF. 11-3)
MAJOR SPAWNING AREA IS A SERIES OF TRIBUTARIES ENTERING THE SEYMOUR FROM THE MAWATL RIVER. LOGGING PROPOSED (1983) COULD SERIOUSLY IMPACT THESE SPAWNING BEDS IN TERMS OF WATER QUALITY AND DEBRIS TRANSPORT. (REF. 11-5)
THE UPPER SEYMOUR RIVER AND SAGHALIE CREEK IS NOW INACCESSIBLE, AND WOULD PROVIDE GOOD REARING HABITAT FOR JUVENILE COHO COLONIZATION. (REF. 11-5)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAZI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : SEYMOUR RIVER

WATERSHED-CODE : 90-8500

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	1500	0	750	0	UNK
1954	0	1500	0	7500	0	UNK
1955	0	3500	0	7500	0	UNK
1956	0	1500	0	7500	0	UNK
1957	0	1500	0	1500	0	UNK
1958	0	3500	0	7500	0	UNK
1959	0	1500	0	3500	0	UNK
1960	0	200	0	3500	0	UNK
1961	0	1500	0	3500	0	UNK
1962	0	750	0	3500	0	UNK
1963	0	1500	0	3500	0	UNK
1964	0	3500	0	7500	0	UNK
1965	0	3500	0	3500	0	UNK
1966	0	400	0	750	0	UNK
1967	0	750	0	1500	0	UNK
1968	0	3500	0	3500	0	UNK
1969	0	3500	0	7500	25	UNK
1970	0	3500	0	3500	0	UNK
1971	0	1500	0	3500	0	UNK
1972	0	350	0	700	0	UNK
1973	0	1200	0	6000	0	UNK
1974	0	900	0	6500	0	UNK
1975	0	450	0	4500	0	UNK
1976	0	1400	0	450	0	UNK
1977	0	800	0	14000	0	UNK
1978	0	1400	0	22000	0	UNK
1979	0	320	0	3100	0	UNK
1980	0	200	0	3000	0	UNK
1981	2	4	0	10000	0	UNK
1982	0	UNK	0	15000	0	UNK
1983	0	260	31	3982	0	UNK
1984	0	1000	N/O	6000	0	UNK
1985	0	2000	0	7000	0	UNK
1986	0	1000	0	1000	0	UNK
1987	0	900	0	6500	0	UNK
1988	0	800	N/O	11000	0	UNK
1989	UNK	500	N/O	1500	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

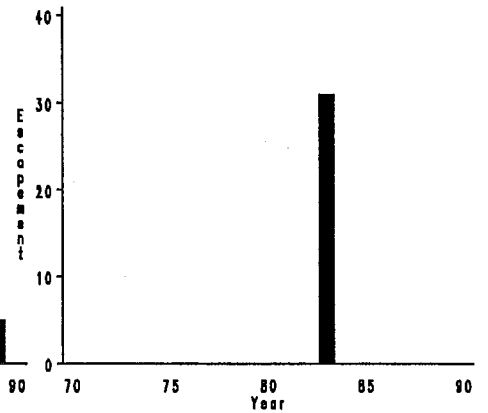
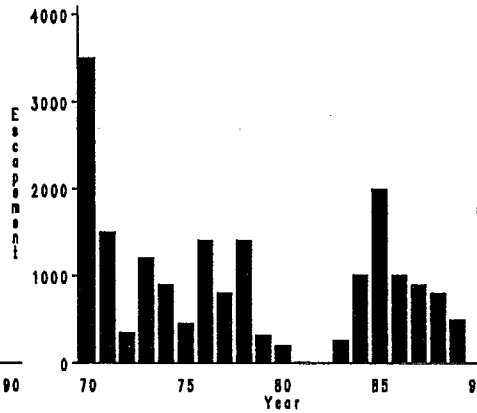
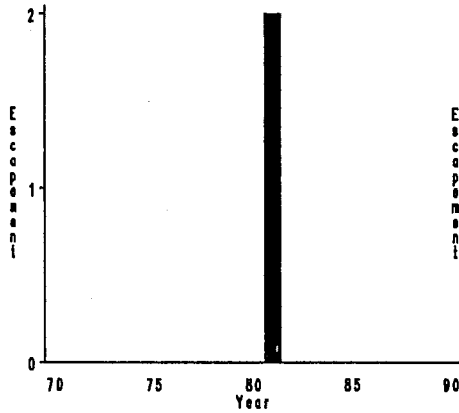
# SEYMOUR RIVER (90-8500)

## Escapement & Run Timing

sockeye (SK)

Coho (CO)

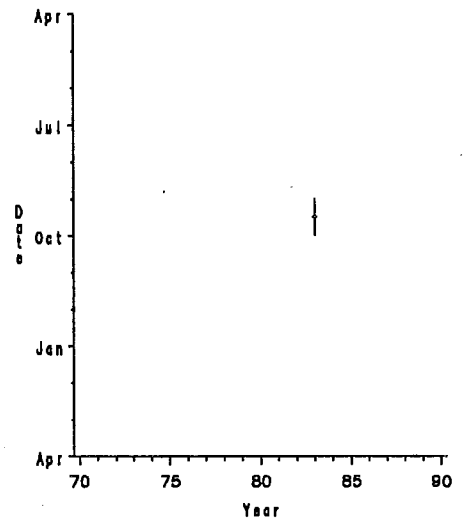
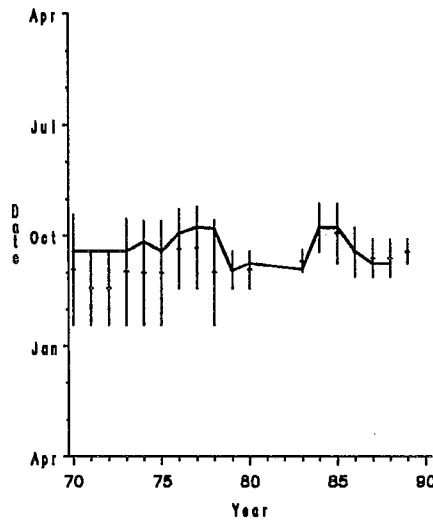
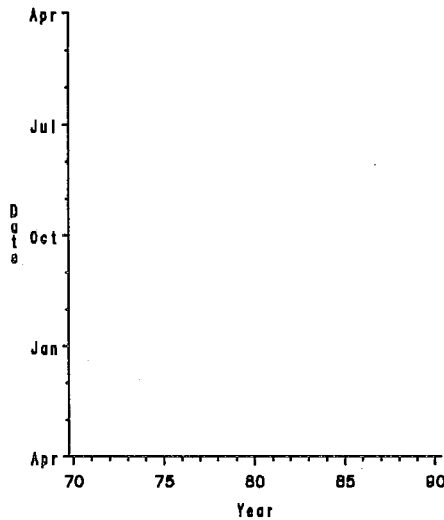
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	2	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	15OCT	15DEC
1971	1,500	13OCT	15OCT	15DEC
1972	350	15OCT	15OCT	15DEC
1973	1,200	10SEP	15OCT	15DEC
1974	800	20SEP	07OCT	15DEC
1975	450	20SEP	15OCT	15DEC
1976	1,400	19SEP	30SEP	15NOV
1977	800	08SEP	25SEP	15NOV
1978	1,400	19SEP	26SEP	15DEC
1979	320	15OCT	31OCT	15NOV
1980	200	15OCT	25OCT	15NOV
1981	4	-	-	-
1982	-	-	-	-
1983	200	14OCT	30OCT	01NOV
1984	1,000	05SEP	25SEP	15OCT
1985	2,000	05SEP	25SEP	25OCT
1986	1,000	25SEP	15OCT	05NOV
1987	800	05OCT	25OCT	05NOV
1988	800	05OCT	25OCT	05NOV
1989	500	05OCT	-	25OCT

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	31	01SEP	15SEP	01OCT
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

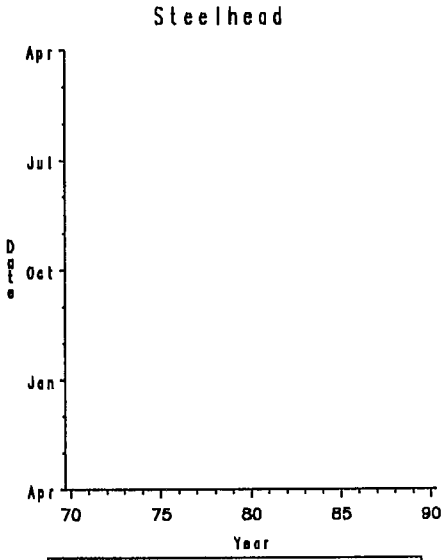
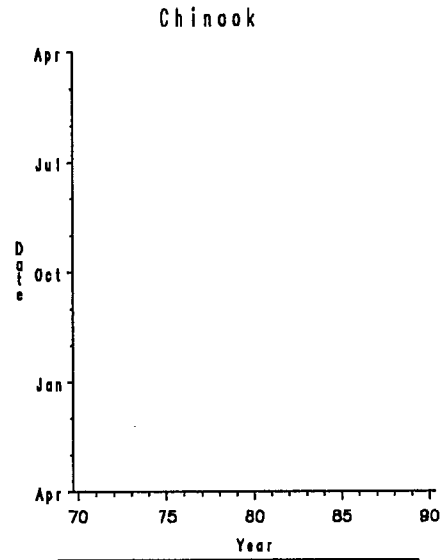
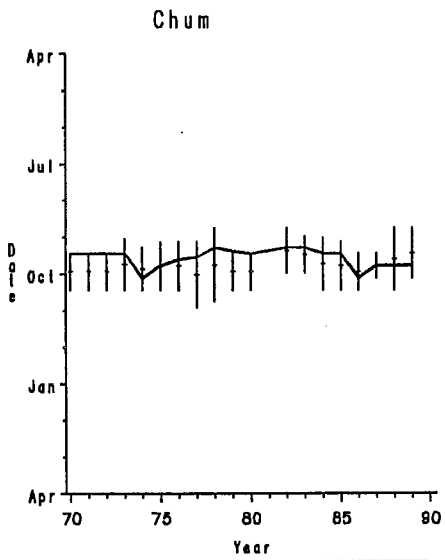
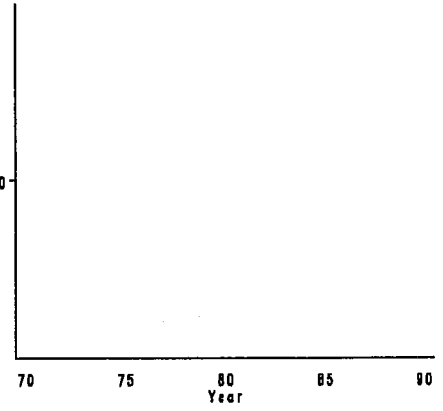
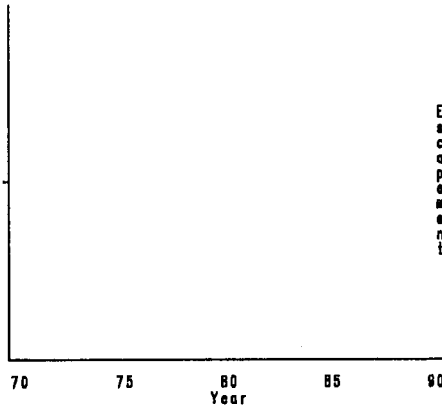
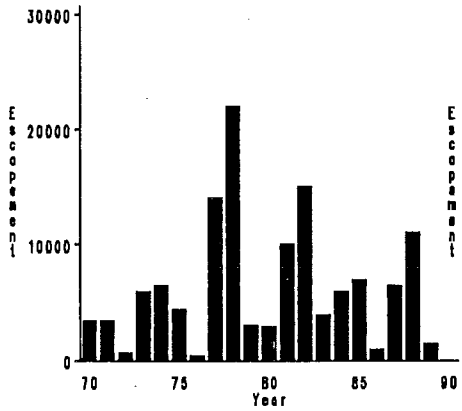
# SEYMOUR RIVER (90-8500)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



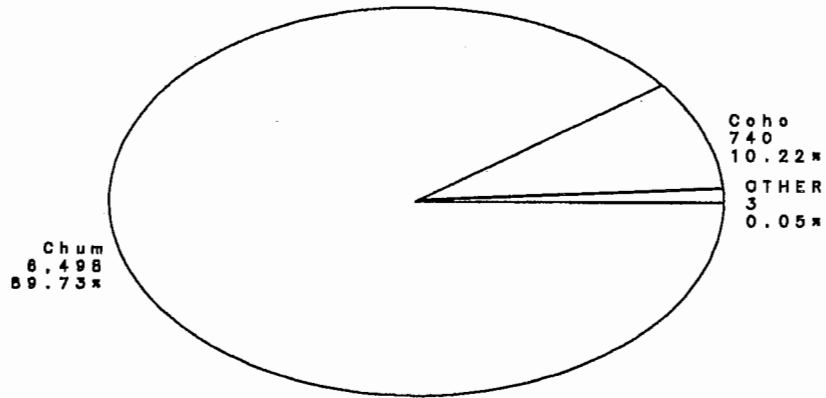
Chum				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	19SEP	19OCT
1971	3,500	15SEP	15SEP	15OCT
1972	700	15SEP	15SEP	15OCT
1973	8,000	03SEP	15SEP	15OCT
1974	6,500	10SEP	05OCT	15OCT
1975	4,500	08SEP	25SEP	19OCT
1976	450	05SEP	20SEP	15OCT
1977	14,000	05SEP	18SEP	30OCT
1978	22,000	25AUG	10SEP	25OCT
1979	3,100	15SEP	13SEP	19OCT
1980	3,000	15SEP	15SEP	15OCT
1981	10,000	-	-	-
1982	15,000	25AUG	10SEP	01OCT
1983	3,982	01SEP	10SEP	01OCT
1984	6,000	02SEP	15SEP	15OCT
1985	7,000	05SEP	15SEP	15OCT
1986	1,000	15SEP	05OCT	15OCT
1987	6,500	15SEP	25SEP	05OCT
1988	11,000	25AUG	25SEP	15OCT
1989	1,500	25AUG	25SEP	09OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

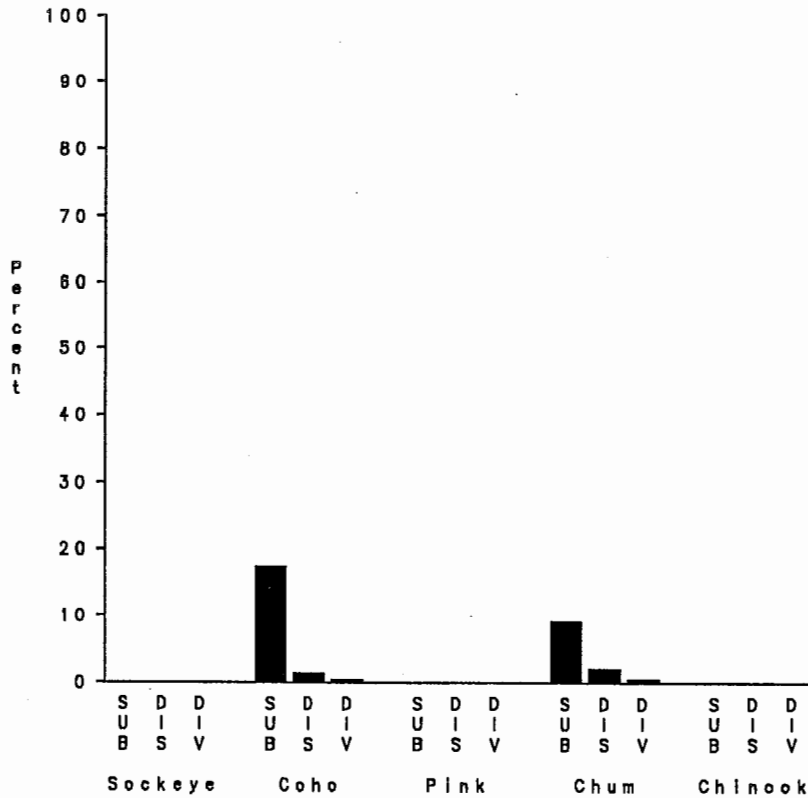
# SEYMOUR RIVER (90-8500)

10-yr Mean Escapement  
(1980-1989)



## SEYMOUR RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(i.e. Subdistrict, District & Division)





**F. LIFE HISTORY TIMING CONTINUED**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING. PLAN FOR HELICOPTER LOGGING IN 1988. (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

LOTS OF GRIZZLY BEARS (REF. 11-3)
LOTS OF COHO POTENTIAL (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : WAWWATL CREEK

WATERSHED-CODE : 90-8500-020

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	0	25	0	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>RAINBOW CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-8600</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-10</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/2</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6596.56670</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>FLows E. INTO WIGWAM BAY, RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>LOW GRADIENT TO THE SECOND BRIDGE WITHIN THE CANYON (REF. 11-3)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>		<b>7.0</b>	<b>AF ALL SPECIES</b>	<b>(REF. 11-1)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>VERY FAST WATER (REF. 11-2, REF. 11-3)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>TO 7.0 KM TO THE FALLS AND TRIBUTARIES. (REF. 11-1, REF. 11-3)</b>
<b>PK PINK SALMON</b>	<b>HISTORICAL PRESENCE (REF. 11-5)</b>
<b>CM CHUM SALMON</b>	<b>PRESENT (REF. 11-1, REF. 11-3)</b>
<b>ST STEELHEAD</b>	<b>TO 7.0 KM (TO THE FALLS) (REF. 11-1)</b>
<b>TR TROUT</b>	<b>PRESENT (REF. 11-3)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>	<b>78</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>300</b>	<b>28A-18</b>		
<b>CM CHUM SALMON</b>	<b>661</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>2500</b>	<b>28A-18</b>		
Comments: <b>CO GOOD HISTORY PRE 1977    PK HAVE SCATTERED HISTORY (REF. 28A-18)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X
PK PINK SALMON	Migration Spawning Incubation Rearing								X	X X	X X		
CH CHUM SALMON	Migration Spawning Incubation Rearing									X X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	AS A RESULT OF PREVIOUS LOGGING, FRESHETS ARE COMMON (1974) (REF. 11-1)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS STREAM IS VERY UNSTABLE AT THE LOWER END (1966) (REF. 11-1)
FIRST BRIDGE SHOULD BE REMOVED (REF. 11-3)
SHOULD BE HIGHER RUNS OF COHO. RECENT DECLINES SINCE 1970 (REF. 11-2)
LARGE SYSTEM ABLE TO HANDLE LARGER NUMBERS OF FISH (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAH	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : RAINBOW CREEK

WATERSHED-CODE : 90-8600

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	0	400	0	UNK
1954	0	200	0	750	0	UNK
1955	0	400	0	3500	0	UNK
1956	0	200	0	400	0	UNK
1957	0	750	0	400	0	UNK
1958	0	1500	0	1500	0	UNK
1959	0	400	0	400	0	UNK
1960	0	25	0	25	0	UNK
1961	0	25	25	200	0	UNK
1962	0	25	0	75	0	UNK
1963	0	400	0	750	0	UNK
1964	0	400	0	750	0	UNK
1965	0	400	0	75	0	UNK
1966	0	750	0	1500	0	UNK
1967	0	300	0	800	0	UNK
1968	0	400	0	400	0	UNK
1969	0	400	25	1500	0	UNK
1970	0	1500	200	3500	0	UNK
1971	0	400	25	200	0	UNK
1972	0	N/O	N/O	700	0	UNK
1973	0	250	0	350	0	UNK
1974	0	175	0	1600	0	UNK
1975	0	40	0	250	0	UNK
1976	0	25	0	65	0	UNK
1977	0	35	0	700	0	UNK
1978	0	N/O	N/O	6000	0	UNK
1979	0	20	0	240	0	UNK
1980	0	N/O	0	N/O	0	UNK
1981	0	0	0	200	0	UNK
1982	0	UNK	0	2500	0	UNK
1983	0	N/O	0	170	0	UNK
1984	0	N/O	0	365	0	UNK
1985	N/O	50	N/O	250	N/O	UNK
1986	0	UNK	UNK	75	UNK	UNK
1987	0	200	0	350	0	UNK
1988	0	300	N/O	2500	0	UNK
1989	UNK	75	N/O	200	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

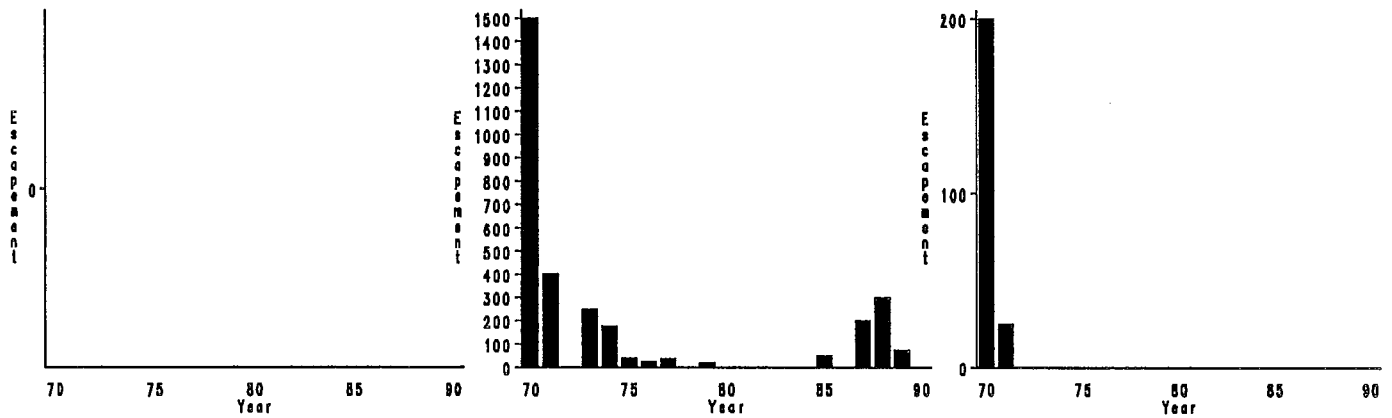
# RAINBOW CREEK (90-8600)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

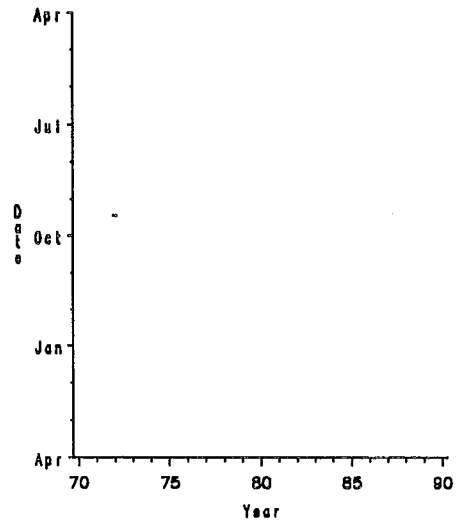
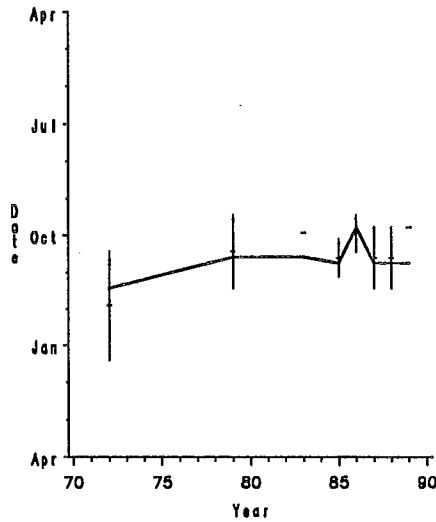
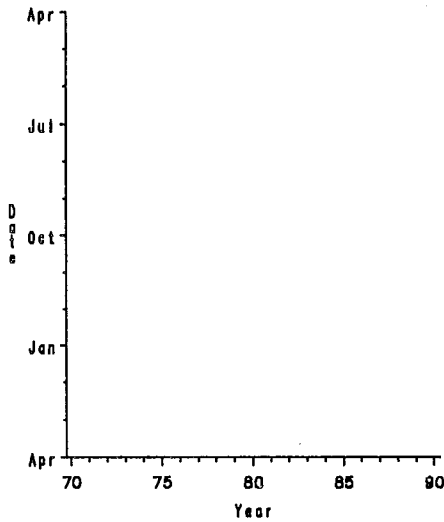
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	1,500	-	-	-
1971	400	-	-	-
1972	0	15OCT	15NOV	14JAN
1973	250	-	-	-
1974	175	-	-	-
1975	40	-	-	-
1976	25	-	-	-
1977	35	-	-	-
1978	0	-	-	-
1979	20	15SEP	20OCT	15NOV
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	30SEP	20OCT	-
1984	0	-	-	-
1985	50	08OCT	25OCT	05NOV
1986	-	15SEP	25SEP	15OCT
1987	200	23SEP	25OCT	15NOV
1988	300	23SEP	25OCT	15NOV
1989	75	25SEP	25OCT	-

Pink				
Year	Escapement	Start	Peak	End
1970	200	-	-	-
1971	25	-	-	-
1972	0	15SEP	15SEP	15SEP
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

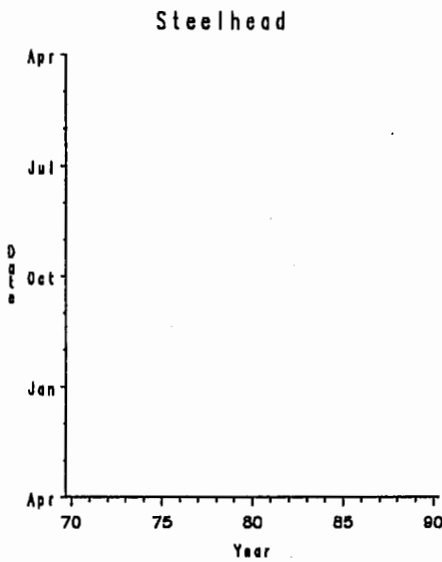
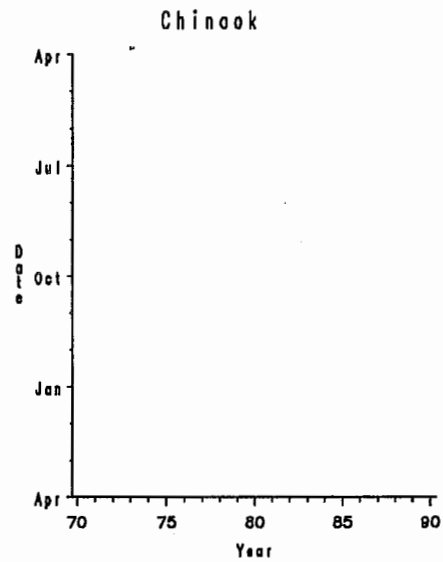
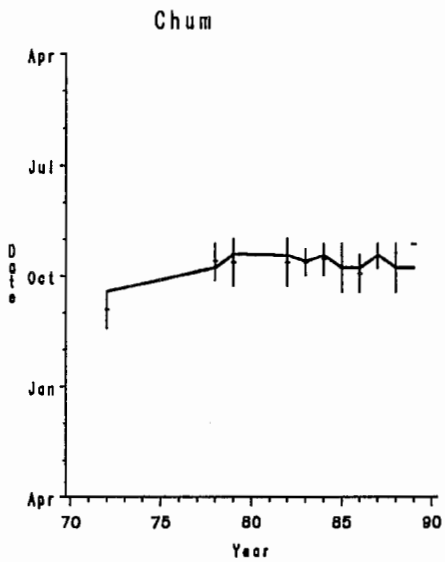
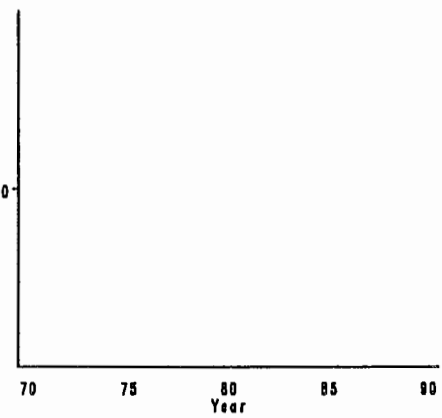
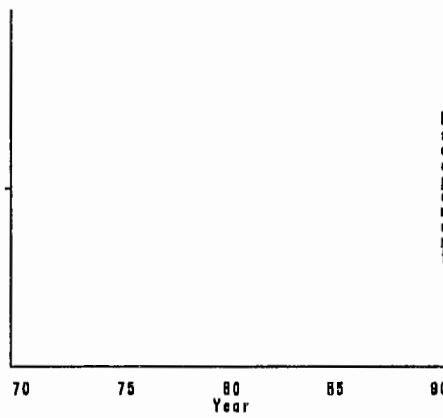
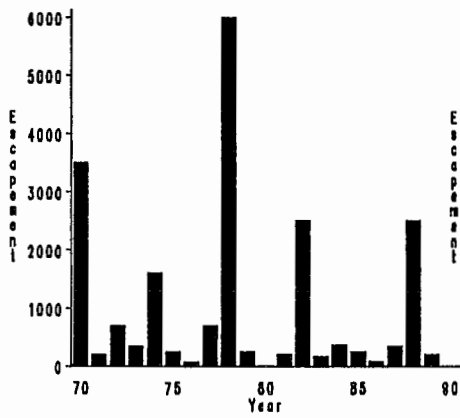
# RAINBOW CREEK (90-8600)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



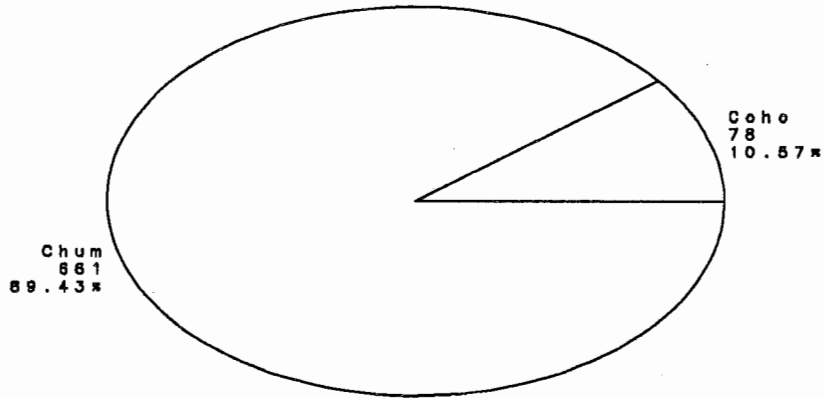
Chum				
Year	Escapement	Start	Peak	End
1970	3,500	-	-	-
1971	200	-	-	-
1972	700	15OCT	15OCT	15NOV
1973	350	-	-	-
1974	1,400	-	-	-
1975	250	-	-	-
1976	85	-	-	-
1977	700	-	-	-
1978	6,000	05SEP	25SEP	05OCT
1979	240	01SEP	14SEP	10OCT
1980	0	-	-	-
1981	200	-	-	-
1982	2,500	01SEP	15SEP	10OCT
1983	170	10SEP	20SEP	01OCT
1984	365	05SEP	15SEP	01OCT
1985	250	05SEP	25SEP	15OCT
1986	75	15SEP	25SEP	15OCT
1987	350	05SEP	15SEP	25SEP
1988	2,500	05SEP	25SEP	10OCT
1989	200	05SEP	25SEP	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

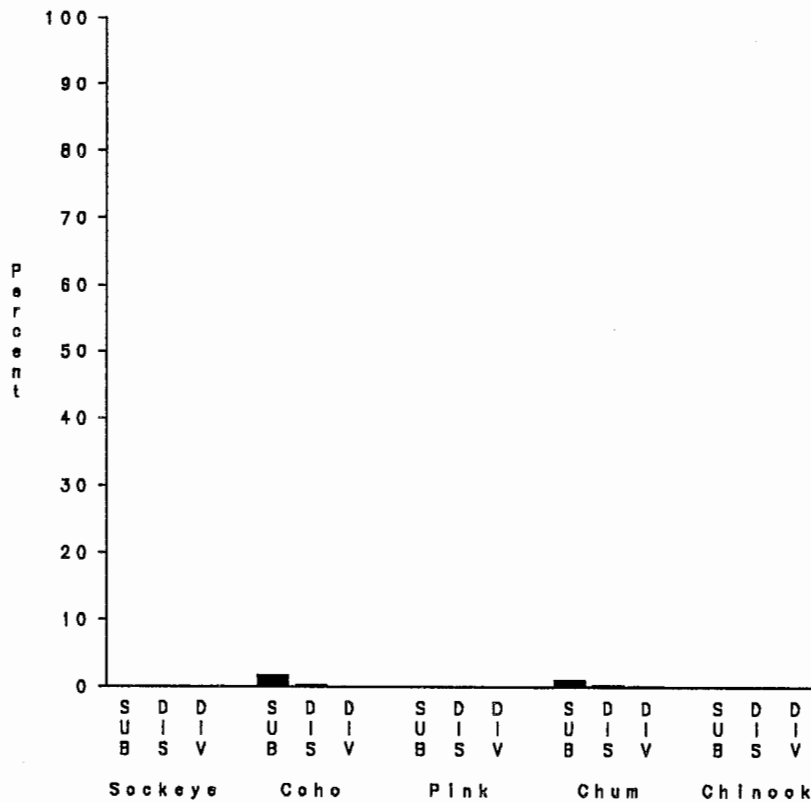
# RAINBOW CREEK (90-8600)

10-yr Mean Escapement  
(1980-1989)



## RAINBOW CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK Local Name: SCHWARTZENBERG LAGOON CREEK Watershed Code: 90-8685	D.F.O. Division: SOUTH COAST District: 5 CAMPBELL RIVER Subdistrict: 11 PORT HARDY Statistical Subarea: 11-8 M.O.E. Region: 1 VANCOUVER ISLAND Management Unit: 13
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Tributaries	Code	Topographic (1:50k) Map: 92M/3 B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6301.56583 Lat./Long. Mouth: 51 DG. 03' 35'' 127 DG. 08' 37'' Mainstem Length: Ref. No.: Watershed Area: Ref. No.:
		Location: FLOWS S.W. INTO SCHWARTZENBERG LAG., N. OF SEYMOUR INLET, RGE. 2, COAST DIST.

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS		3.0	AF ALL SPECIES	(REF. 11-1)

**C. FLOW**

Flow Control: W.S.C. Station No. 1:	Water Survey of Canada (WSC) Flow Gauge: No. 2:	No. 3:	No. 4:
NO INFORMATION AVAILABLE			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	TO 3.0 KM (HISTORICALLY) (REF. 11-1)
CN CHUM SALMON	TO 3.0 KM (HISTORICALLY) (REF. 11-1)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CN CHUM SALMON		1980 - 1989		100	28A-18		
Comments: THERE IS SOME CONFUSION ON ESCAPEMENT RECORDS REGARDING THE ID. OF SCHWARTZENBERG LAGOON C. IN EARLY & RECENT YEARS ESCAPEMENTS ARE GIVEN PROPERLY FOR SCHWARTZENBERG LAGOON C. IN INTERVENING YEARS APPARENTLY ESCAPE. WERE RECORDED FOR MUGENT C IN THIS AREA. (REF. 11-1)							
CN RECORDED FOR 1985(100) ONLY (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FD FORESTRY	LOGGING HAS JUST BEGUN (1988) (REF. 11-2)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

VERY FEW FISH PRESENT, HAS SOME POTENTIAL (REF. 11-2, REF. 11-3, REF. 11-4)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by:	GITA KAPAHI	Date:	1988/09/11
Last updated by:	MARG ANDERSON	Date:	1991/07/03

ESCAPEMENT : SCHWARTZENBERG LAGOON CREEK

WATERSHED-CODE : 90-8685

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	0	UNK	0	UNK	0	UNK
1984	0	N/O	0	N/O	0	UNK
1985	UNK	N/O	UNK	100	UNK	UNK
1986	UNK	N/O	UNK	N/O	UNK	UNK
1987	0	N/O	0	N/O	0	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	N/O	UNK	N/O	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: MUGENT CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-8690	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-8
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6131.56602
		Lat./Long. Mouth: 51 DG. 04' 58" 127 DG. 11' 57"
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS INTO MUGENT SOUND. THIS STREAM IS NOT THE GAZETTED MUGENT C. THAT IS DISPLAYED ON MTS MAPS.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: VERY LOW SUMMER WATER (REF. 11-3)	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CM CHUM SALMON	TO THE HEADWATERS (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CM CHUM SALMON	Migration Spawning Incubation Rearing									X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PRESENT AND PAST LOGGING. NEW LOGGING ROAD EXTENDING 2 KM. FUTURE PLANS FOR LOGGING (1988) (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS IS A VERY MINOR SYSTEM (REF. 11-3, REF. 11-4)
--

**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by:     GITA KAPAH	Date: 1988/09/11
Last updated by: VIOLET KOMORI	Date: 1990/02/19

ESCAPEMENT : NUGENT CREEK

WATERSHED-CODE : 90-8690

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	0	0	0	75	0	UNK
1956	0	0	0	75	0	UNK
1957	0	0	0	75	0	UNK
1958	0	0	0	75	0	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	0	25	0	25	0	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	N/O	0	10	0	UNK
1989	UNK	N/O	UNK	25	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>WAAMTX CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-8800</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-7</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/2</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6465.56631</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: <b>3.2 km</b> Ref. No.: <b>11-1</b>
		Watershed Area: Ref. No.:
Location: <b>FLows W. INTO HEAD OF BELIZE INLET, RGE. 2, COAST DIST. HAS BEEN CONFUSED IN THE PAST WITH NEARBY BELIZE C.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>			<b>AF ALL SPECIES</b>	<b>LOCATION UNCONFIRMED. (REF. 11-3)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
<b>NO INFORMATION AVAILABLE</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>POSSIBLY TO THE LAKE (REF. 11-1, REF. 11-3)</b>
<b>CN CHUM SALMON</b>	<b>PRESENT IN THE LOWER REACHES (REF. 11-1)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>	<b>107</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>750</b>	<b>28A-18</b>		
<b>CN CHUM SALMON</b>	<b>126</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>500</b>	<b>28A-18</b>		

Comments: **THERE IS SOME CONFUSION ON ESCAPEMENT RECORDS RE: THE IDENTIFICATION OF WAAMTX C. IN EARLY & RECENT YEARS ESCAPE. ARE GIVEN PROPERLY FOR WAAMTX C. IN INTERVENING YEARS APPARENTLY ESCAPEMENTS WERE GIVEN FOR BELIZE C. (REF. 11-1)**

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X	X X	X	

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING AND CURRENT A-FRAME LOGGING (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

VERY FEW FISH IN THIS SYSTEM, ALTHOUGH IT HAS THE POTENTIAL FOR MORE (REF. 11-3, REF. 11-4)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by:	GITA KAPAH	Date:	1988/09/11
Last updated by:	KATHY PONTUS	Date:	1990/07/19

ESCAPEMENT : WAAMTX CREEK

WATERSHED-CODE : 90-8800

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	0	3500	0	UNK
1954	0	200	0	1500	0	UNK
1955	0	400	0	750	0	UNK
1956	0	400	0	750	0	UNK
1957	0	400	0	3500	0	UNK
1958	0	400	0	1500	0	UNK
1959	0	400	0	1500	0	UNK
1960	0	25	0	0	0	UNK
1961	0	75	0	N/O	0	UNK
1962	0	UNK	0	25	0	UNK
1963	0	N/O	0	75	0	UNK
1964	0	25	0	25	0	UNK
1965	0	200	0	25	0	UNK
1966	0	200	0	N/O	0	UNK
1967	0	25	0	25	0	UNK
1968	0	N/O	0	75	0	UNK
1969	0	75	0	75	0	UNK
1970	0	200	0	400	0	UNK
1971	0	200	0	750	0	UNK
1972	0	N/O	0	70	0	UNK
1973	0	150	0	600	0	UNK
1974	0	75	0	1500	0	UNK
1975	0	30	0	650	0	UNK
1976	0	N/O	0	35	0	UNK
1977	0	N/O	0	40	0	UNK
1978	0	N/O	0	600	0	UNK
1979	0	N/O	0	1000	0	UNK
1980	0	N/O	0	50	0	UNK
1981	0	N/O	0	N/O	0	UNK
1982	0	UNK	0	200	0	UNK
1983	0	N/O	0	13	0	UNK
1984	0	UNK	0	7	0	UNK
1985	N/O	750	N/O	500	N/O	UNK
1986	0	UNK	UNK	275	UNK	UNK
1987	0	0	0	12	0	UNK
1988	0	N/O	0	150	0	UNK
1989	UNK	N/O	UNK	50	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

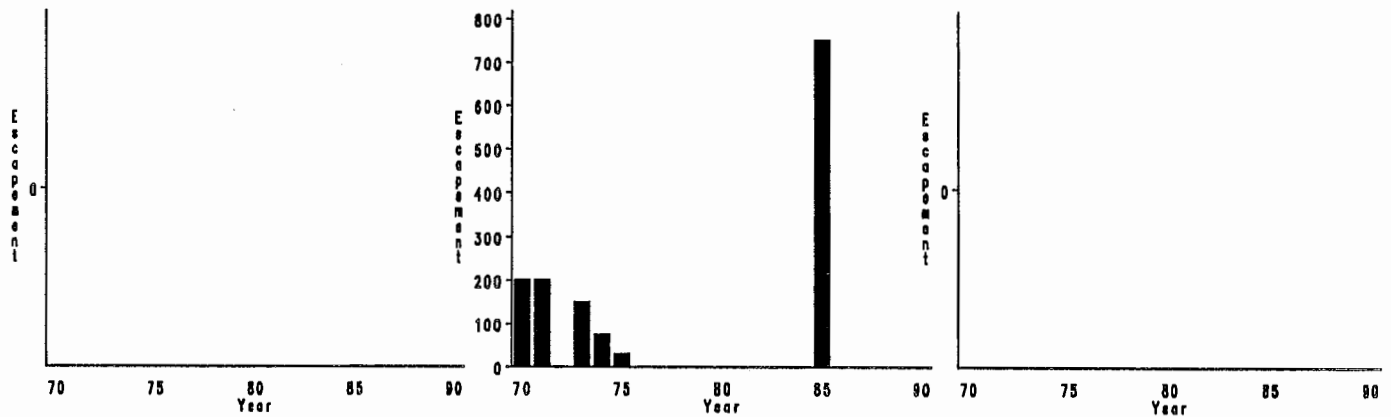
# WAAMTX CREEK (90-8800)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

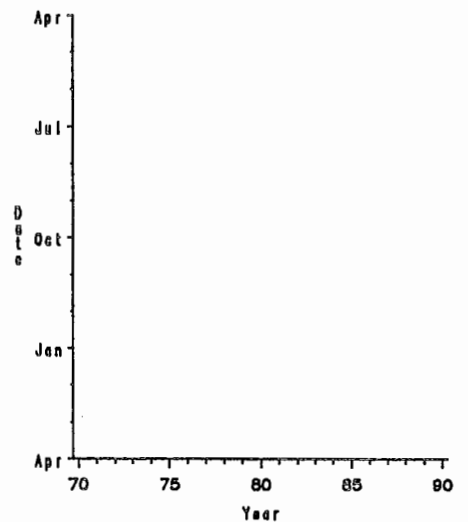
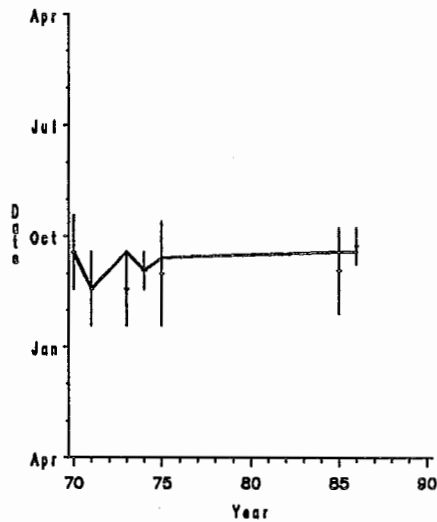
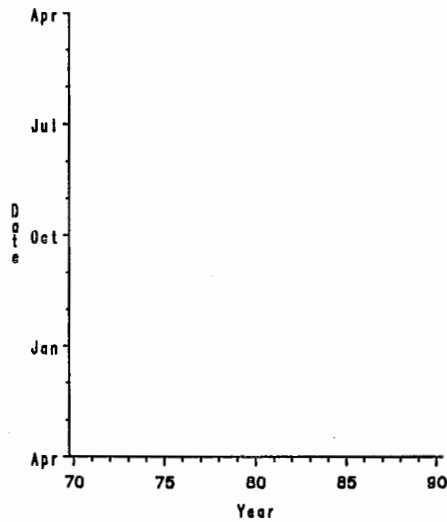
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15OCT	15NOV
1971	200	15OCT	15NOV	15DEC
1972	0	-	-	-
1973	150	15OCT	15OCT	15DEC
1974	75	15OCT	30OCT	15NOV
1975	30	20SEP	20OCT	15DEC
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	-	-	-	-
1985	750	25SEP	15OCT	05DEC
1986	-	25SEP	15OCT	25OCT
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

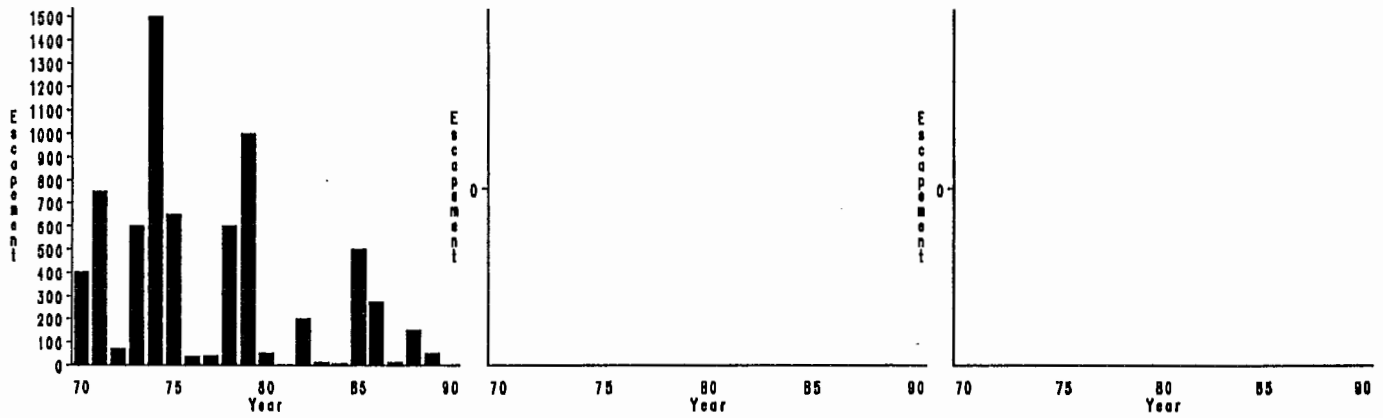
# WAAMTX CREEK (90-8800)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

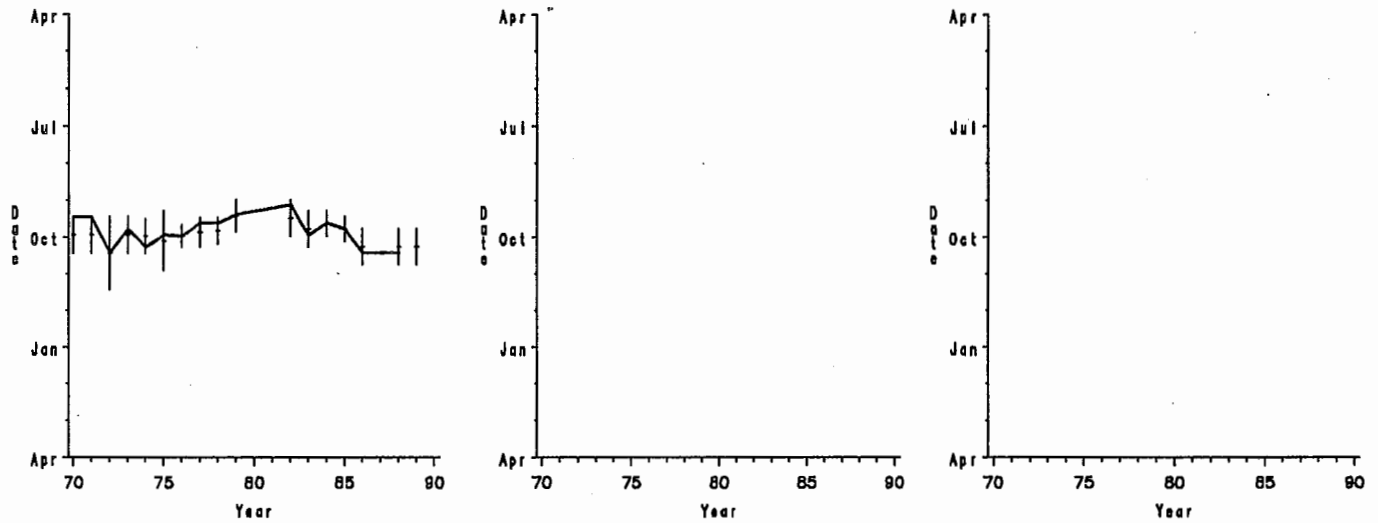
Steelhead (ST)



Chum

Chinook

Steelhead



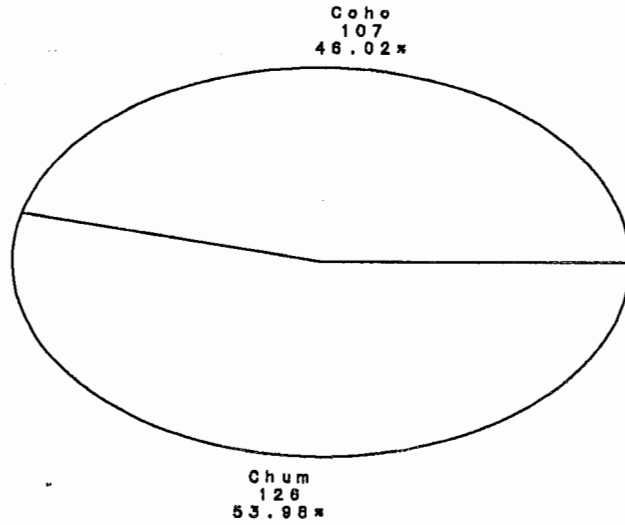
Chum				
Year	Escapement	Start	Peak	End
1970	400	15SEP	15SEP	15OCT
1971	750	15SEP	15SEP	15OCT
1972	70	15SEP	15OCT	15NOV
1973	600	15SEP	25SEP	15OCT
1974	1,500	17SEP	10OCT	15OCT
1975	650	10SEP	30SEP	30OCT
1976	35	22SEP	01OCT	10OCT
1977	40	16SEP	20SEP	10OCT
1978	600	16SEP	20SEP	07OCT
1979	1,600	01SEP	13SEP	27SEP
1980	50	-	-	-
1981	0	-	-	-
1982	200	01SEP	05SEP	01OCT
1983	13	10SEP	30SEP	10OCT
1984	7	10SEP	20SEP	01OCT
1985	500	15SEP	25SEP	05OCT
1986	275	25SEP	15OCT	25OCT
1987	12	-	-	-
1988	150	25SEP	15OCT	25OCT
1989	50	25SEP	-	25OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

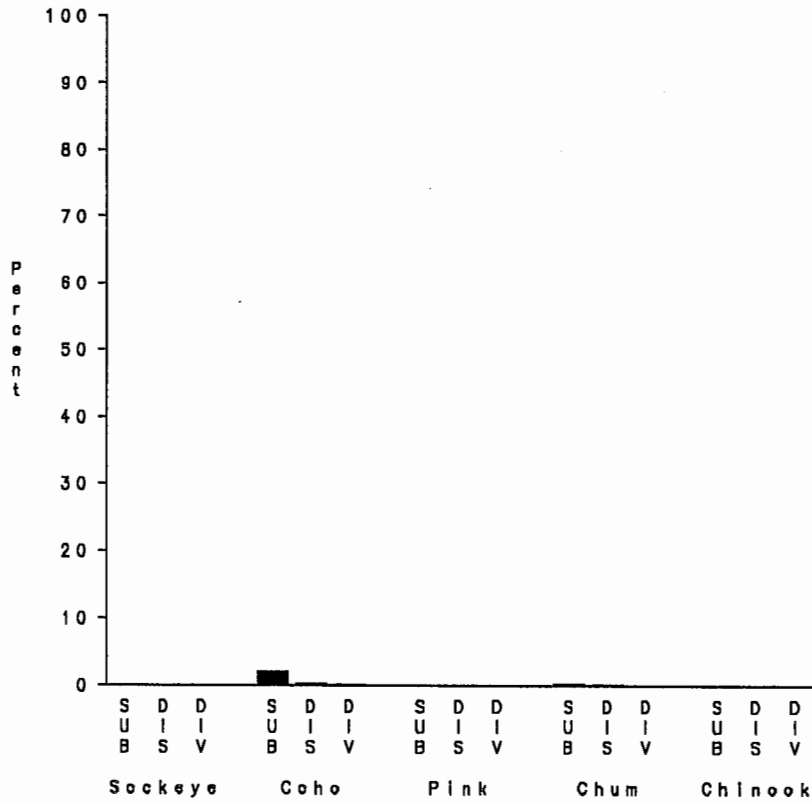
# WAAMTX CREEK (90-8800)

10-yr Mean Escapement  
(1980-1989)



## WAAMTX CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by: <b>ROSS DE MARCO</b>	Date: <b>1990/02/16</b>
Checked by: <b>BRIAN TUTTY</b>	Date: <b>1989/12/15</b>
Last updated by: <b>MARG ANDERSON</b>	Date: <b>1991/07/03</b>

**A. DESCRIPTION**

Stream Name: <b>UNNAMED CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>ALISON RIVER</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-8995</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-6</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/2</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6457.56725</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>FLows W AND S INTO HEAD OF ALISON SOUND, RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>			<b>AF ALL SPECIES</b>	<b>(REF. 11-1)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
<b>NO INFORMATION AVAILABLE</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>PRESENCE NOTED. (REF. 11-4)</b>
<b>CM CHUM SALMON</b>	<b>PRESENCE NOTED. (REF. 11-4)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CM CHUM SALMON</b>	<b>900</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>1500</b>	<b>28A-18</b>		
Comments: <b>CM ESCAPEMENTS RECORDED FOR 1988(1500) AND 1989(300) ONLY (REF. 28A-18)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: ROSS DE MARCO	Date: 1990/02/16
Checked by: BRIAN TUTTY	Date: 1989/12/15
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : ALLISON RIVER

WATERSHED-CODE : 90-8995

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	N/O	0	1500	0	UNK
1989	UNK	N/O	UNK	300	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>WAUMP CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-9000</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-6</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/2</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6453.56725</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>FLWS S.W. INTO HEAD OF ALISON SOUND, RGE. 2, COAST DIST.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>C CASCADE</b>				<b>WHERE THE TRIBUTARIES JOIN, THIS ACTS LIKE A SLUICE GATE BUT IS PASSABLE (REF. 11-3)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
<b>NO INFORMATION AVAILABLE</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>ESTUARY IS A GOOD REARING AREA (REF. 11-4)</b>
<b>CM CHUM SALMON</b>	<b>PRESENT (REF. 11-4)</b>
<b>TR TROUT</b>	<b>PRESENT (REF. 11-4)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>	<b>215</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>500</b>	<b>28A-18</b>		
<b>PK PINK SALMON</b>		<b>1980 - 1989</b>		<b>3</b>	<b>28A-18</b>		
<b>CM CHUM SALMON</b>	<b>4355</b>	<b>1980 - 1989</b>	<b>28A-18</b>	<b>18000</b>	<b>28A-18</b>		
Comments: <b>PRIOR TO 1957, WAUMP C WAS THE ONLY CREEK REPORTED ON. FROM 1957 TO 1976 WAUMP CREEK AND ALISON RIVER ARE REPORTED TOGETHER (REF. 11-1)</b>							

**E. ESCAPEMENT SUMMARY CONTINUED**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK ESCAPEMENT RECORDED FOR 1983(3) ONLY (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X	X X	X	
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAH	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : WAUMP CREEK

WATERSHED-CODE : 90-9000

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	0	3500	0	UNK
1954	0	1500	0	3500	0	UNK
1955	0	25	0	75	0	UNK
1956	0	400	0	750	0	UNK
1957	0	750	0	3500	0	UNK
1958	0	400	0	3500	0	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	0	0	0	75	0	UNK
1961	0	25	0	400	0	UNK
1962	0	400	0	750	0	UNK
1963	0	400	0	750	0	UNK
1964	0	200	0	750	0	UNK
1965	0	0	0	75	0	UNK
1966	0	25	0	750	0	UNK
1967	0	N/O	0	3500	0	UNK
1968	0	75	0	3500	0	UNK
1969	0	75	0	3500	0	UNK
1970	0	750	0	3500	25	UNK
1971	0	200	0	3500	N/O	UNK
1972	0	30	0	5500	0	UNK
1973	0	300	0	11000	N/O	UNK
1974	0	600	0	7000	N/O	UNK
1975	0	175	0	3200	N/O	UNK
1976	0	N/O	0	1100	N/O	UNK
1977	0	150	0	7400	N/O	UNK
1978	0	100	0	12000	N/O	UNK
1979	0	N/O	0	5000	0	UNK
1980	0	N/O	0	250	0	UNK
1981	0	N/O	0	4000	0	UNK
1982	0	500	0	18000	0	UNK
1983	0	2	3	1800	0	UNK
1984	0	300	N/O	1000	0	UNK
1985	N/O	400	N/O	4000	N/O	UNK
1986	0	450	UNK	6000	UNK	UNK
1987	0	150	0	2500	0	UNK
1988	0	50	0	3000	N/O	UNK
1989	UNK	300	UNK	3000	N/O	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

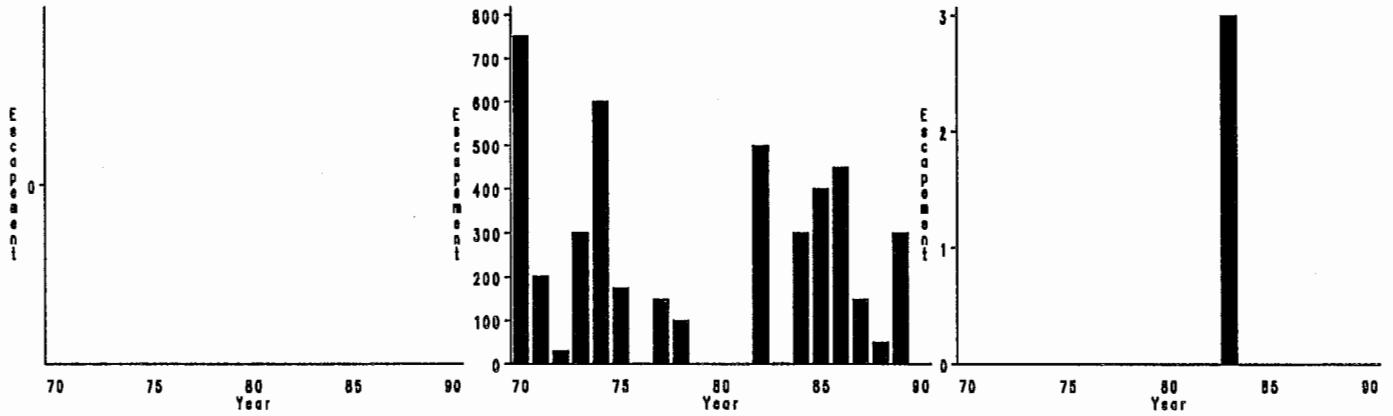
# WAUMP CREEK (90-9000)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

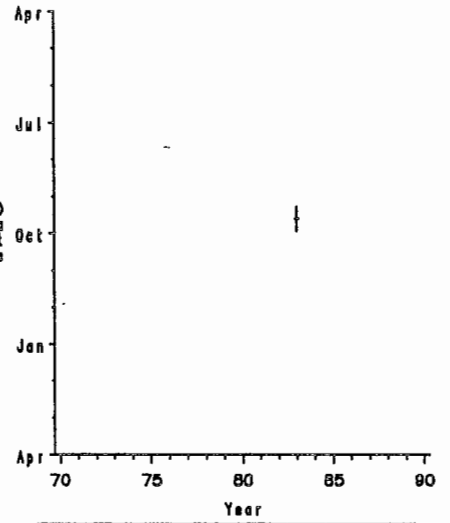
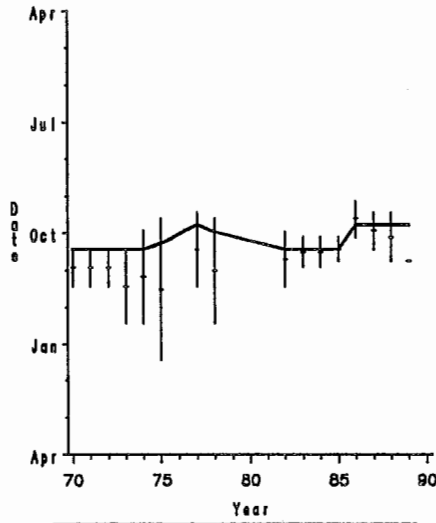
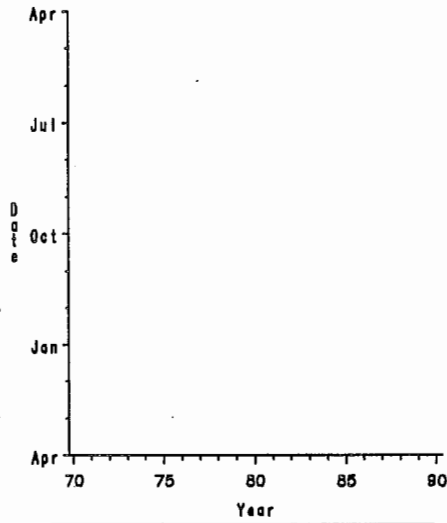
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	750	15OCT	15OCT	15NOV
1971	200	15OCT	15OCT	15NOV
1972	30	15OCT	15OCT	15NOV
1973	300	15OCT	15OCT	15DEC
1974	600	30SEP	15OCT	15DEC
1975	175	20SEP	10OCT	15JAN
1976	0	-	-	-
1977	150	15SEP	25SEP	15NOV
1978	100	20SEP	01OCT	15DEC
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	500	01OCT	15OCT	15NOV
1983	2	05OCT	15OCT	30OCT
1984	300	05OCT	15OCT	30OCT
1985	400	05OCT	15OCT	25OCT
1986	450	05SEP	25SEP	05OCT
1987	150	15SEP	25SEP	15OCT
1988	50	15SEP	25SEP	25OCT
1989	300	-	25SEP	25OCT

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	3	10SEP	10SEP	30SEP
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

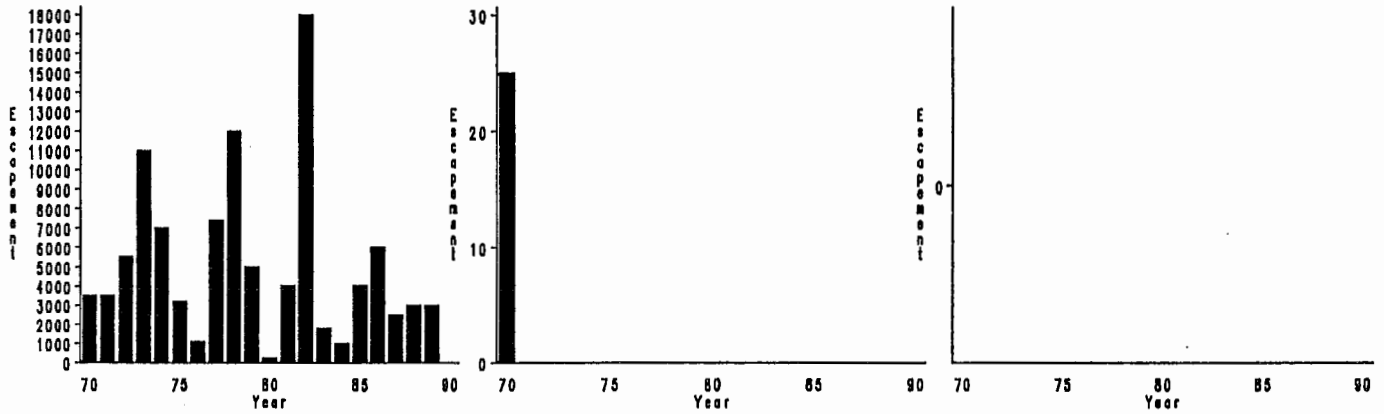
# WAUMP CREEK (90-9000)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

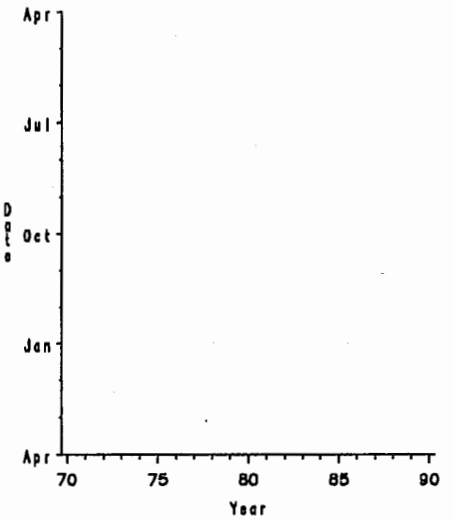
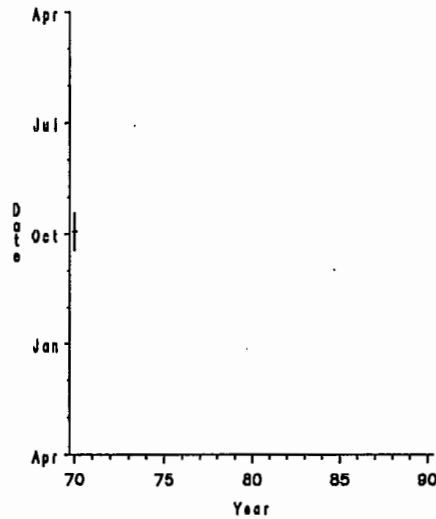
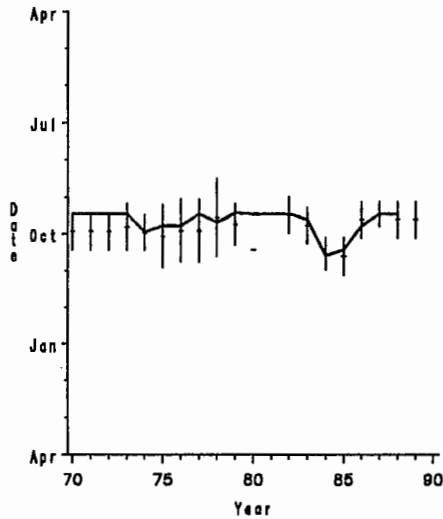
Steelhead (ST)



Chum

Chinook

Steelhead



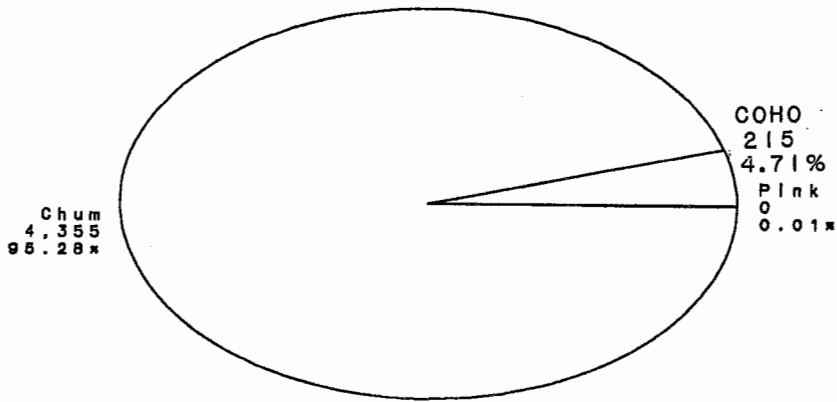
Chum				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	15SEP	15OCT
1971	3,500	15SEP	15SEP	15OCT
1972	5,500	15SEP	15SEP	15OCT
1973	11,000	07SEP	15SEP	15OCT
1974	7,000	18SEP	30SEP	15OCT
1975	3,200	08SEP	25SEP	30OCT
1976	1,100	03SEP	25SEP	25OCT
1977	7,400	03SEP	15SEP	25OCT
1978	12,000	17AUG	22SEP	20OCT
1979	5,000	07SEP	14SEP	11OCT
1980	250	-	15SEP	15OCT
1981	4,000	-	-	-
1982	10,000	01SEP	15SEP	01OCT
1983	1,800	10SEP	20SEP	10OCT
1984	1,000	05OCT	20OCT	01NOV
1985	4,000	05OCT	15OCT	05NOV
1986	8,000	05SEP	25SEP	05OCT
1987	2,500	05SEP	15SEP	25SEP
1988	3,000	05SEP	15SEP	05OCT
1989	3,000	05SEP	-	05OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	23	13SEP	15SEP	15OCT
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

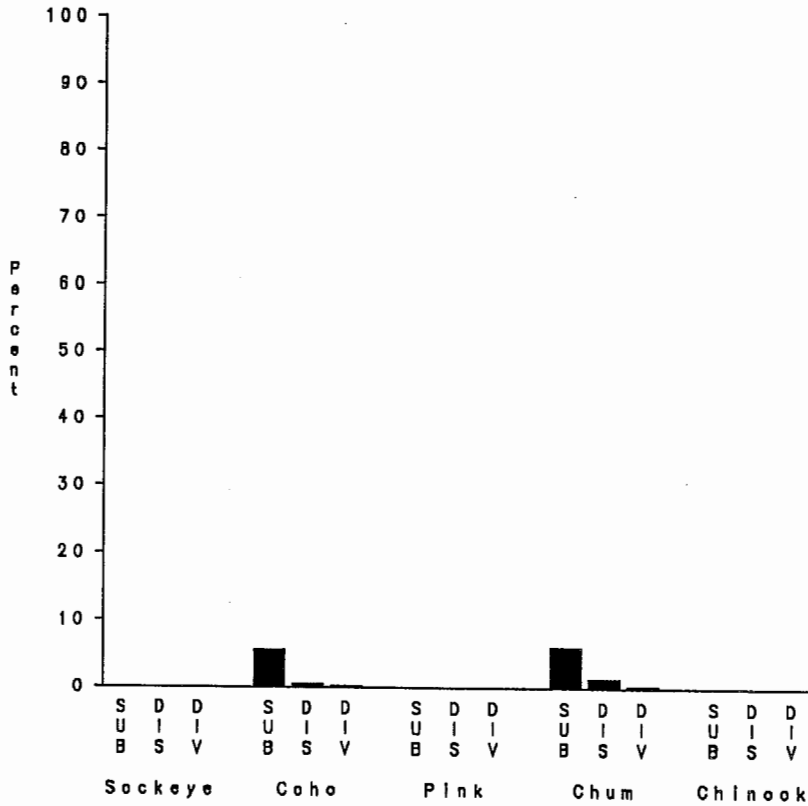
# WAUMP CREEK (90-9000)

10-yr Mean Escapement  
(1980-1989)



## WAUMP CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: JAP CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-9060	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-6
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6383,56705
		Lat./Long. Mouth: 51 DG. 10' 16'' 127 DG. 01' 00''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS W. AND S.W. INTO SUMMERS BAY, N. SIDE OF ALISON SOUND		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	STEEP GRADIENT AT 400M ON NORTH TRIBUTARY. (REF. 11-3)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS		1.6		PASSABLE SERIES OF FALLS (REF. 11-1)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: SUBJECT TO LOW WATER, AND FLASH FLOODING (REF. 11-2, REF. 11-3, REF. 11-4)	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	HISTORICAL PRESENCE (LAST SEEN 1980) (REF. 11-1, REF. 11-5)
CM CHUM SALMON	TO FALLS (REF. 11-1)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	1940	1980 - 1989	28A-18	4500	28A-18		
Comments: LARGE LOSS OF FISH IN 1987 DUE TO LOW WATER (REF. 11-2)							
PAST HISTORY OF CO IN STREAM PRE 1975 (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CM CHUM SALMON	Migration Spawning Incubation Rearing									X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING 25 - 30 YEARS AGO (FROM 1988) (REF. 11-3)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

A VERY GOOD PRODUCER FOR IT'S SIZE (REF. 11-2, REF. 11-3)
GOOD SPAWNING GROUND FOR THE LOW GRADIENT LENGTH OF THE CREEK (REF. 11-3)
IN PAST YEARS THIS APPEARED TO BE AN EXCELLENT CHUM PRODUCER FOR ITS SIZE. OBSTRUCTION COULD BE REMOVED IN THE SUMMER VIA BLASTING (1983) (REF. 11-5)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : JAP CREEK

WATERSHED-CODE : 90-9060

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	0	0	25	0	UNK
1954	0	0	0	1500	0	UNK
1955	0	0	0	25	0	UNK
1956	0	0	0	75	0	UNK
1957	0	0	0	25	0	UNK
1958	0	0	0	3500	0	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	0	0	0	0	0	UNK
1961	N/O	N/O	N/O	N/O	N/O	UNK
1962	0	0	0	400	0	UNK
1963	0	0	0	25	0	UNK
1964	0	25	0	750	0	UNK
1965	0	N/O	0	25	0	UNK
1966	0	0	0	750	0	UNK
1967	0	75	0	3000	0	UNK
1968	0	N/O	0	3500	0	UNK
1969	0	0	0	1500	0	UNK
1970	0	75	0	3500	0	UNK
1971	0	75	0	1500	0	UNK
1972	0	70	0	4500	0	UNK
1973	0	20	0	20000	0	UNK
1974	0	300	0	5000	0	UNK
1975	0	20	0	250	0	UNK
1976	0	N/O	0	325	0	UNK
1977	0	N/O	0	1000	0	UNK
1978	0	N/O	0	5500	0	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	0	N/O	0	50	0	UNK
1981	0	N/O	0	1500	0	UNK
1982	0	UNK	0	3000	0	UNK
1983	0	N/O	0	750	0	UNK
1984	0	N/O	0	1275	0	UNK
1985	N/O	N/O	N/O	3000	N/O	UNK
1986	0	UNK	UNK	4500	UNK	UNK
1987	0	N/O	0	1300	0	UNK
1988	0	N/O	0	4000	0	UNK
1989	UNK	N/O	UNK	25	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

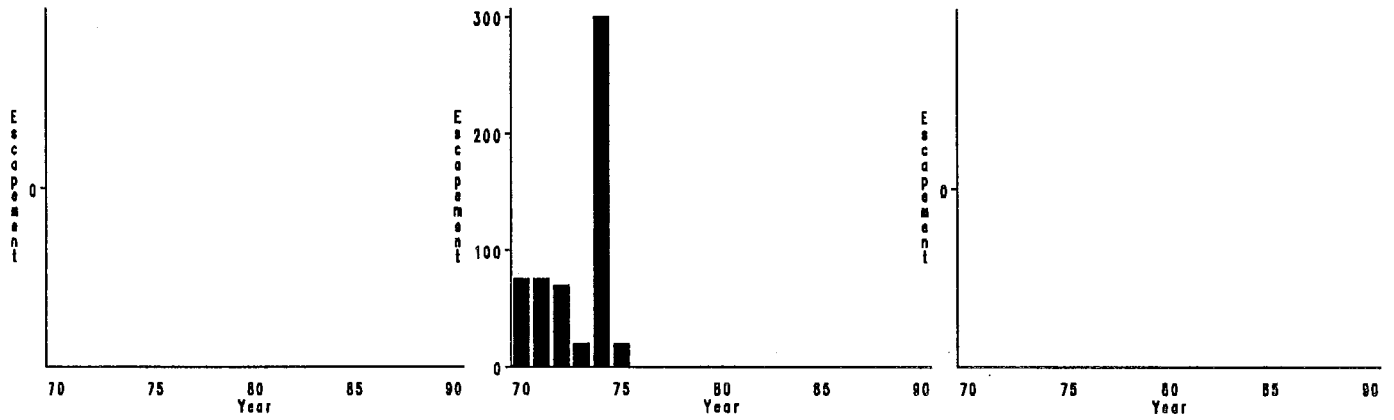
# UNNAMED C (90-9060)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

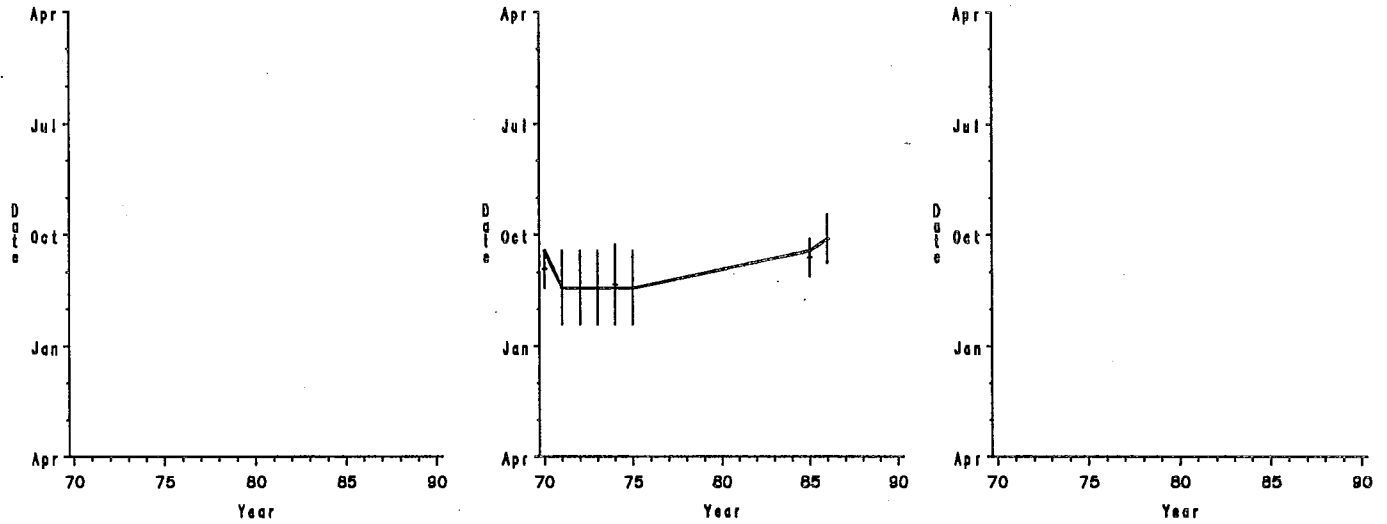
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	75	15OCT	15OCT	15NOV
1971	75	15OCT	15NOV	15DEC
1972	70	15OCT	15NOV	15DEC
1973	20	15OCT	15NOV	15DEC
1974	300	15OCT	15NOV	15DEC
1975	20	15OCT	15NOV	15DEC
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	05OCT	15OCT	05NOV
1986	-	15SEP	05OCT	25OCT
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

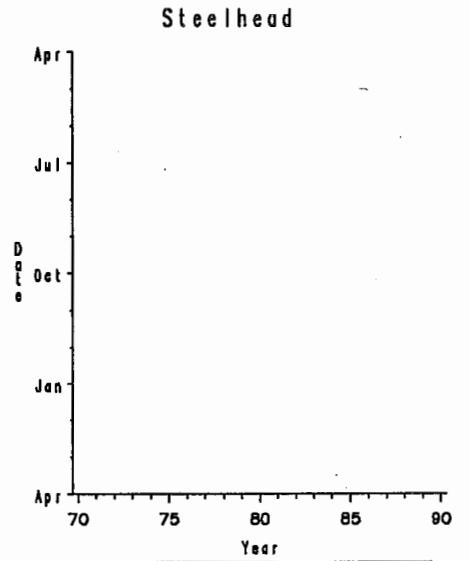
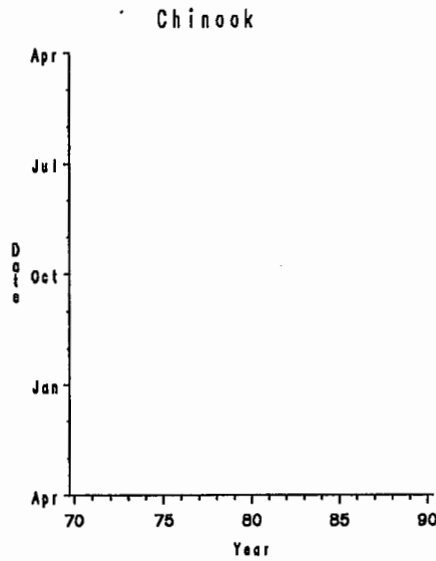
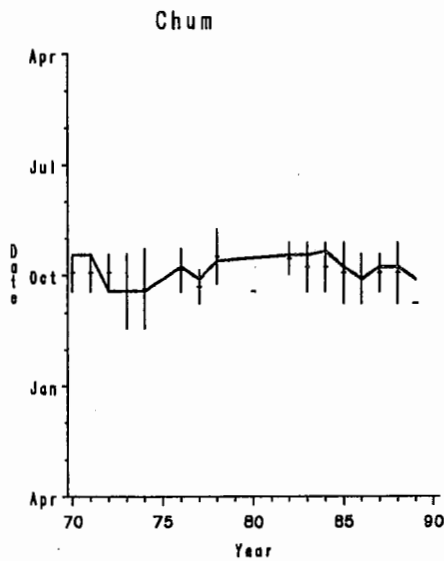
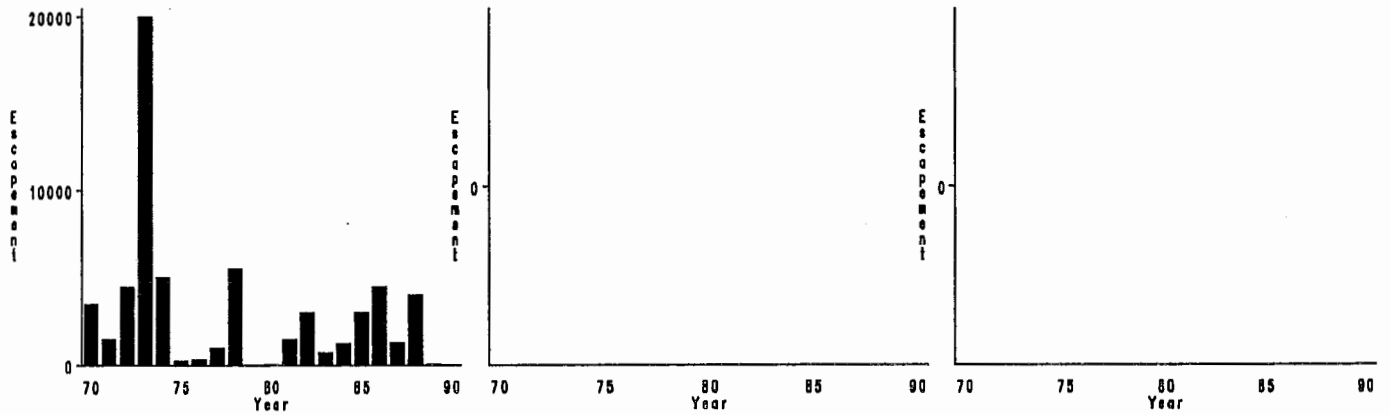
# UNNAMED C (90-9060)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



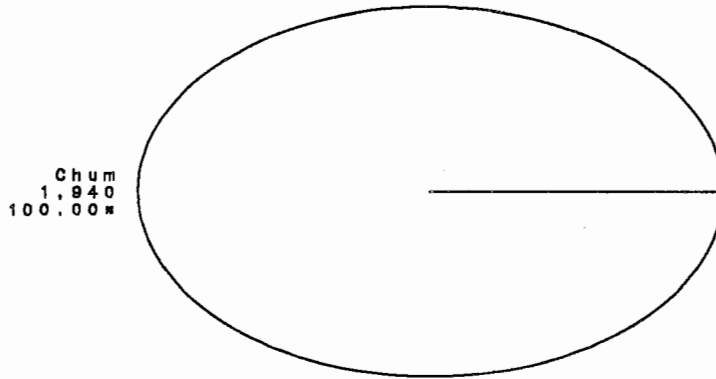
Chum				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	15SEP	15OCT
1971	1,500	15SEP	15SEP	15OCT
1972	4,500	15SEP	15OCT	15OCT
1973	20,000	15SEP	15OCT	15NOV
1974	5,000	10SEP	15OCT	15NOV
1975	250	-	-	-
1976	325	10SEP	25SEP	15OCT
1977	1,000	28SEP	05OCT	25OCT
1978	5,500	25AUG	20SEP	08OCT
1979	-	-	-	-
1980	50	-	-	15OCT
1981	1,500	-	-	-
1982	3,000	05SEP	15SEP	01OCT
1983	750	05SEP	15SEP	15OCT
1984	1,275	05SEP	12SEP	15OCT
1985	3,000	05SEP	25SEP	25OCT
1986	4,500	15SEP	05OCT	25OCT
1987	1,300	15SEP	25SEP	15OCT
1988	4,000	05SEP	25SEP	25OCT
1989	25	-	05OCT	25OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

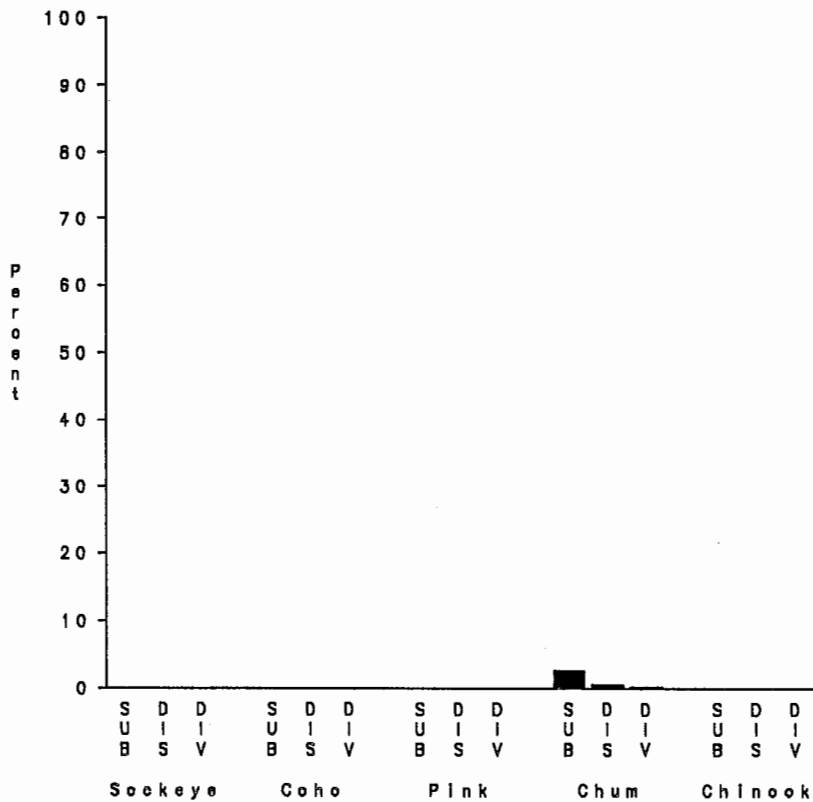
# UNNAMED C (90-9060)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: CHIEF NAWLEY CREEK, CHIEF MOLLIS CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-9100	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-6
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6332.56723
		Lat./Long. Mouth: 51 DG. 11' 14'' 127 DG. 05' 31''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS S.W. INTO CHIEF MOLLIS BAY, N. SIDE OF ALISON SOUND, RGE. 2		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS	20.0	1.2	AF ALL SPECIES	(REF. 11-1)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: SUBJECT TO FLASH FLOODING (REF. 11-3)	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	TO 1.2 KM. LAST SEEN 1984 (REF. 11-1, REF. 11-2)
CM CHUM SALMON	TO 1.2 KM (TO FALLS) (REF. 11-1, REF. 11-3, REF. 11-4)
TR TROUT	THROUGHOUT TO FALLS (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	36	1980 - 1989	28A-18	250	28A-18		
CM CHUM SALMON	61	1980 - 1989	28A-18	300	28A-18		
Comments: CO AND CM HAVE GOOD ESCAPEMENT RECORD PRE 1965 (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CH CHUM SALMON	Migration Spawning Incubation Rearing								X	X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS STREAM HAS GOOD SPawning GRAVEL TO THE FIRST FEW HUNDRED YARDS; LARGE BOULDERS FURTHER UPSTREAM. (REF. 11-2, REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by: GITA KAPANI Date: 1988/09/11  
 Last updated by: MARG ANDERSON Date: 1991/07/03

ESCAPEMENT : CHIEF NOWLEY CREEK

WATERSHED-CODE : 90-9100

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	750	0	750	0	UNK
1954	0	1500	0	1500	0	UNK
1955	0	200	0	75	0	UNK
1956	0	750	0	750	0	UNK
1957	0	750	0	750	0	UNK
1958	0	400	0	1500	0	UNK
1959	0	25	0	200	0	UNK
1960	0	200	0	0	0	UNK
1961	0	200	0	25	0	UNK
1962	0	25	0	25	0	UNK
1963	0	25	0	25	0	UNK
1964	0	200	0	200	0	UNK
1965	0	25	0	N/O	0	UNK
1966	0	N/O	0	25	0	UNK
1967	0	N/O	0	N/O	0	UNK
1968	0	N/O	0	N/O	0	UNK
1969	0	N/O	0	N/O	0	UNK
1970	0	N/O	0	N/O	0	UNK
1971	0	N/O	0	N/O	0	UNK
1972	0	N/O	0	N/O	0	UNK
1973	0	N/O	0	15	0	UNK
1974	0	N/O	0	150	0	UNK
1975	0	20	0	40	0	UNK
1976	0	N/O	0	45	0	UNK
1977	0	N/O	0	N/O	0	UNK
1978	0	50	0	800	0	UNK
1979	0	0	0	5	0	UNK
1980	0	N/O	0	5	0	UNK
1981	0	N/O	0	17	0	UNK
1982	0	10	0	12	0	UNK
1983	0	N/O	0	N/O	0	UNK
1984	0	250	0	200	0	UNK
1985	N/O	25	N/O	300	N/O	UNK
1986	0	UNK	UNK	14	UNK	UNK
1987	0	N/O	0	N/O	0	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

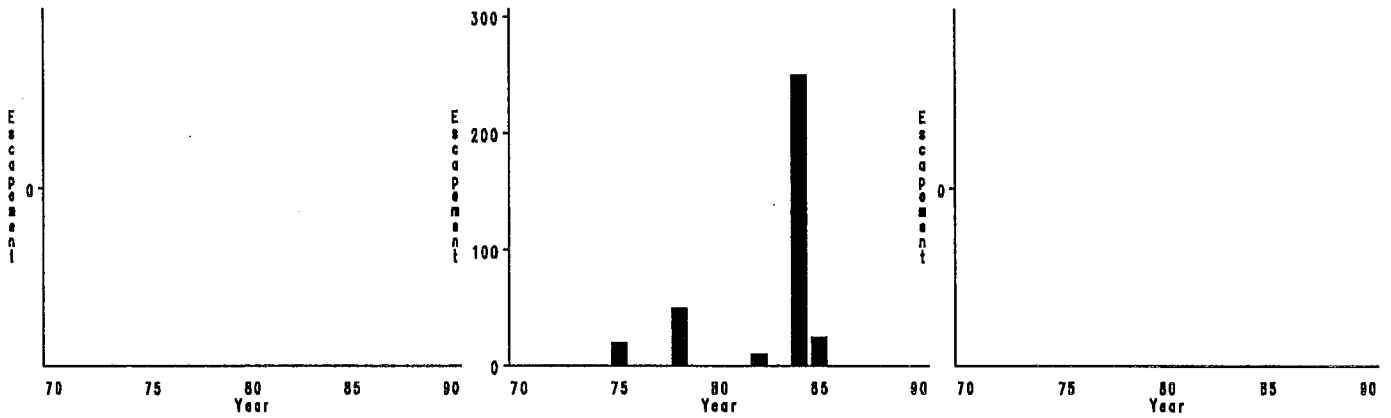
# UNNAMED C (90-9100)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

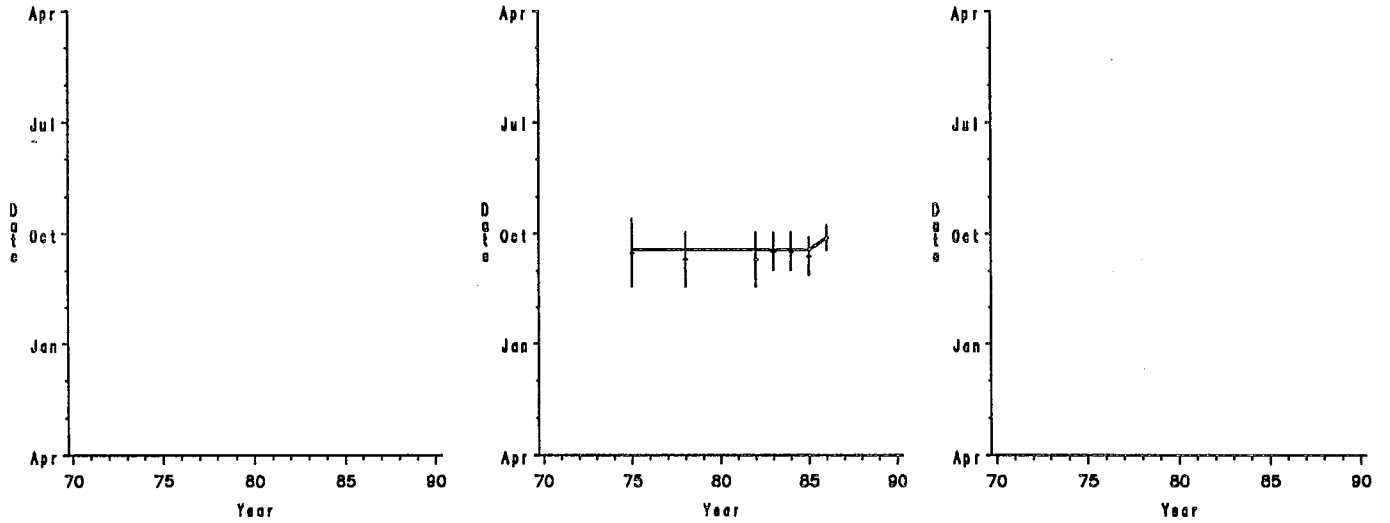
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	20	29SEP	15OCT	15NOV
1976	0	-	-	-
1977	0	-	-	-
1978	50	01OCT	15OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	10	01OCT	15OCT	15NOV
1983	0	01OCT	15OCT	01NOV
1984	250	01OCT	15OCT	01NOV
1985	25	05OCT	15OCT	05NOV
1986	-	25SEP	05OCT	15OCT
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

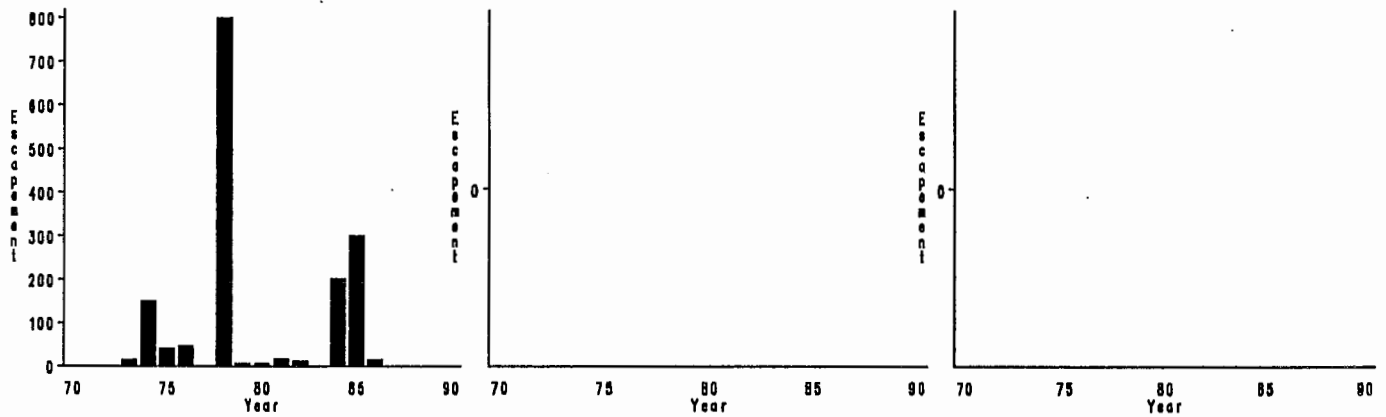
# UNNAMED C (90-9100)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

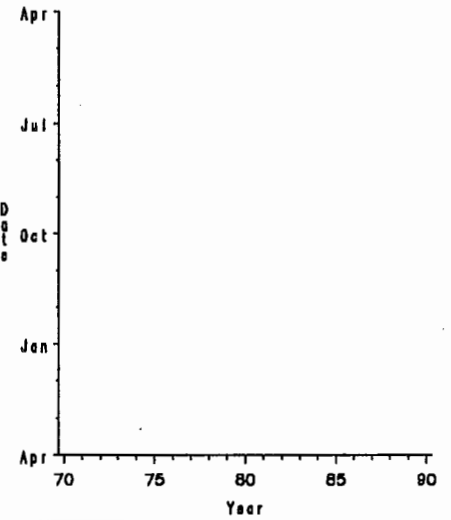
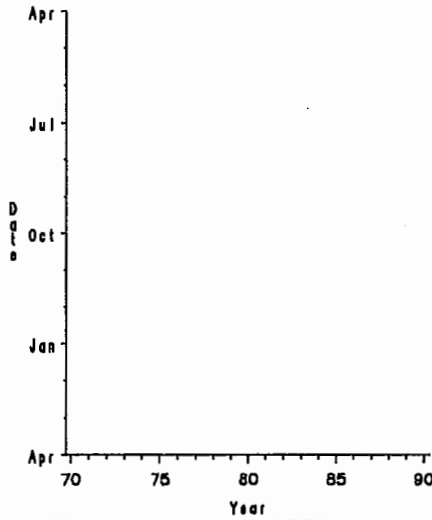
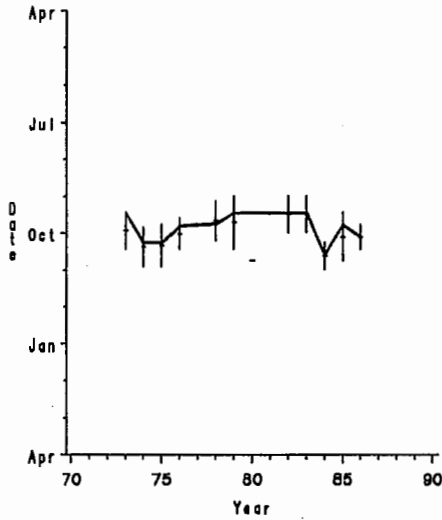
Steelhead (ST)



Chum

Chinook

Steelhead



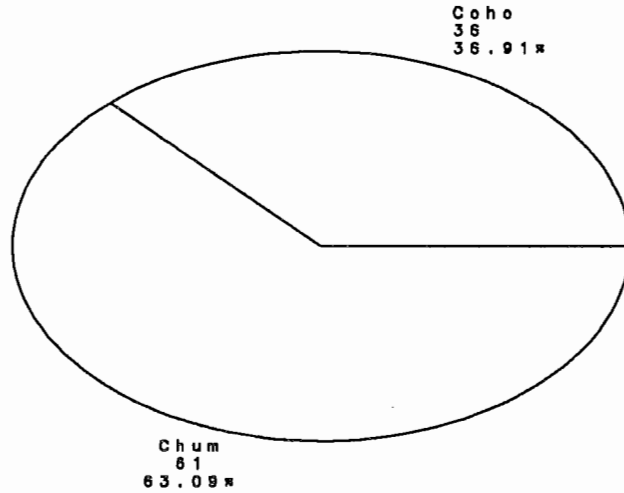
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	15	15SEP	15SEP	15OCT
1974	150	27SEP	10OCT	30OCT
1975	40	25SEP	10OCT	30OCT
1976	45	20SEP	20SEP	15OCT
1977	0	-	-	-
1978	800	05SEP	24SEP	08OCT
1979	5	01SEP	15SEP	15OCT
1980	5	-	-	25OCT
1981	17	-	-	-
1982	12	01SEP	15SEP	01OCT
1983	0	01SEP	15SEP	01OCT
1984	200	10OCT	20OCT	01NOV
1985	300	15SEP	25SEP	25OCT
1986	14	25SEP	05OCT	15OCT
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

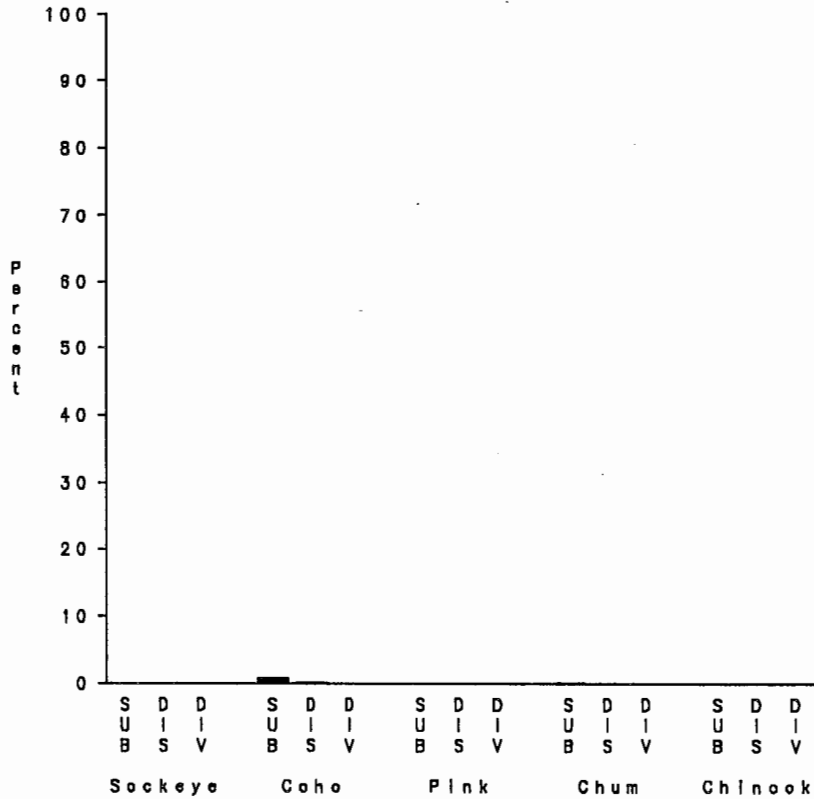
# UNNAMED C (90-9100)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: DRIFTWOOD CREEK	D.F.O. Division: SOUTH COAST
Local Name: VILLAGE BAY CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-9500	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-5
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6115.56701
		Lat./Long. Mouth: 51 DG. 10' 28'' 127 DG. 24' 27''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS W. INTO VILLAGE COVE, RANGE 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	FAIRLY FLAT TO THE LOG JAM, HALF WAY UPSTREAM. (REF. 11-3)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				LOG JAMS THROUGHOUT (REF. 11-1)

**C. FLOW**

Flow Control: W.S.C. Station No. 1:	Water Survey of Canada (WSC) Flow Gauge: No. 2:	No. 3:	No. 4:
NO INFORMATION AVAILABLE			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT TO LAKE (REF. 11-1, REF. 11-3, REF. 11-4)
CM CHUM SALMON	TO THE LOG JAM (REF. 11-1, REF. 11-3)
CT CUTTHROAT TROUT	IN LAKE (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	74	1980 - 1989	28A-18	250	28A-18		
CM CHUM SALMON	2295	1980 - 1989	28A-18	5000	28A-18		
Comments: COHO NUMBERS HAVE DECLINED IN RECENT YEARS (1988) (REF. 11-5)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X
CN CHUM SALMON	Migration Spawning Incubation Rearing									X X X	X X	X X	

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING, 15-20 YEARS AGO. (FROM 1988) (REF. 11-3, REF. 11-4)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

A LOG JAM AT THE OUTLET OF DRIFTWOOD LAKE WAS REMOVED, ALSO A BOULDER 300M FROM THE MOUTH WHICH WAS CAUSING LOG JAMS (1958). LOG JAMS ARE A CONTINUOUS PROBLEM IN THIS STREAM (1966). A LARGE LOG JAM WAS REMOVED IN 1970 FROM THE LAKE OUTLET. LOG DEBRIS ACCUMULATED AT THE LAKE OUTLET AGAIN (1976) (REF. 11-1)
LOG JAM AT THE LAKE OUTLET STILL PRESENT (SEPT. 1988) (REF. 11-3)
ENTRANCE TO CREEK HAS A LOGGING ROAD BRIDGE THAT SHOULD BE REMOVED, IF IT COLLAPSES IT WILL BLOCK THE CREEK. (REF. 11-3, REF. 11-4)
CREEK HAS GOOD SPAWNING AND REARING POTENTIAL FOR COHO. (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : DRIFTWOOD CREEK

WATERSHED-CODE : 90-9500

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	750	0	1500	0	UNK
1954	0	750	0	3500	0	UNK
1955	0	400	0	750	0	UNK
1956	0	750	0	7500	0	UNK
1957	0	400	0	7500	0	UNK
1958	0	25	0	3500	0	UNK
1959	0	75	0	1500	0	UNK
1960	0	0	0	200	0	UNK
1961	0	N/O	0	25	0	UNK
1962	0	200	0	200	0	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	0	200	0	400	0	UNK
1965	0	1500	0	200	0	UNK
1966	0	750	0	7500	0	UNK
1967	0	300	0	8000	0	UNK
1968	0	75	0	3500	0	UNK
1969	0	400	0	7500	0	UNK
1970	0	750	0	7500	0	UNK
1971	0	400	0	1500	0	UNK
1972	0	250	0	2500	0	UNK
1973	0	200	0	7000	0	UNK
1974	0	250	0	5500	0	UNK
1975	0	60	0	1200	0	UNK
1976	0	N/O	3	3000	0	UNK
1977	0	150	0	18000	0	UNK
1978	0	75	0	21000	0	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	0	N/O	0	1500	0	UNK
1981	0	N/O	0	2000	0	UNK
1982	0	UNK	0	5000	0	UNK
1983	0	N/O	0	600	0	UNK
1984	0	250	0	1500	0	UNK
1985	N/O	N/O	N/O	4000	N/O	UNK
1986	0	20	UNK	1500	UNK	UNK
1987	0	0	0	1000	0	UNK
1988	0	250	0	5000	0	UNK
1989	UNK	150	UNK	850	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

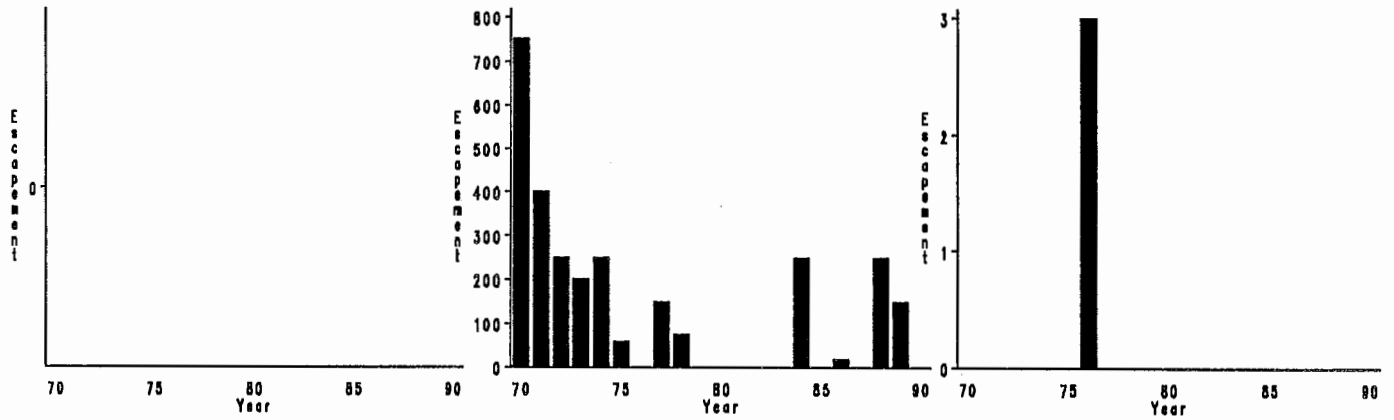
# DRIFTWOOD CREEK (90-9500)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

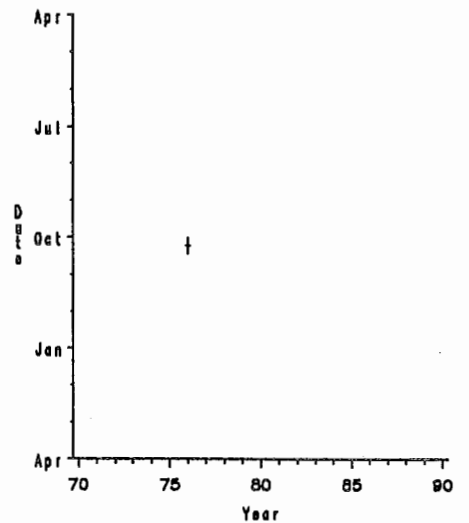
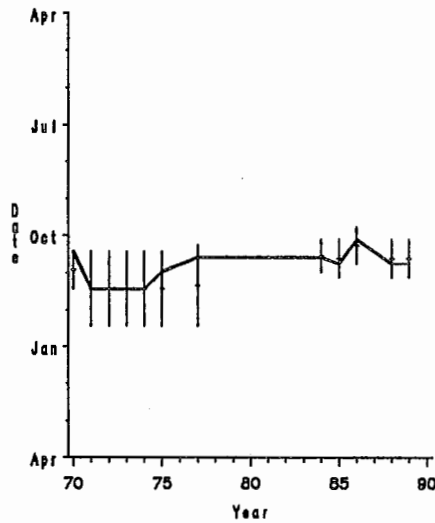
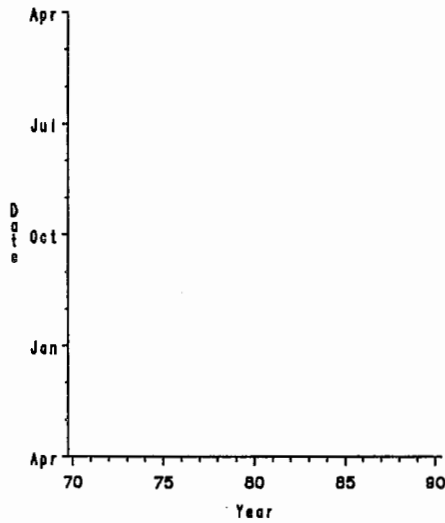
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	750	15OCT	15OCT	15NOV
1971	400	15OCT	15NOV	15DEC
1972	250	15OCT	15NOV	15DEC
1973	200	15OCT	15NOV	15DEC
1974	250	15OCT	15NOV	15DEC
1975	80	15OCT	01NOV	15DEC
1976	0	-	-	-
1977	150	10OCT	10OCT	15DEC
1978	75	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	250	05OCT	10OCT	01NOV
1985	0	05OCT	25OCT	05NOV
1986	20	25SEP	05OCT	25OCT
1987	0	-	-	-
1988	250	05OCT	25OCT	05NOV
1989	150	05OCT	25OCT	05NOV

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	3	03OCT	10OCT	15OCT
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

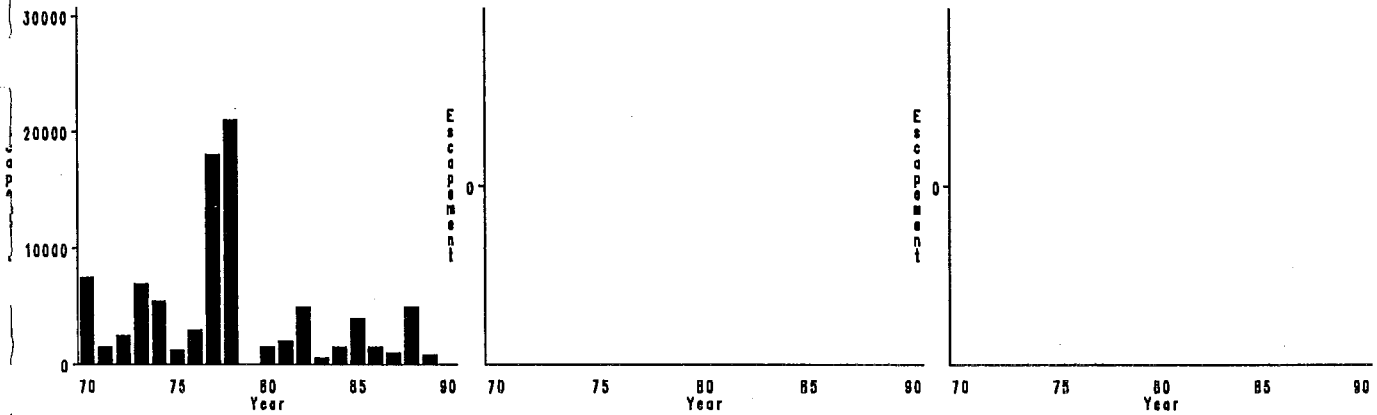
# DRIFTWOOD CREEK (90-9500)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

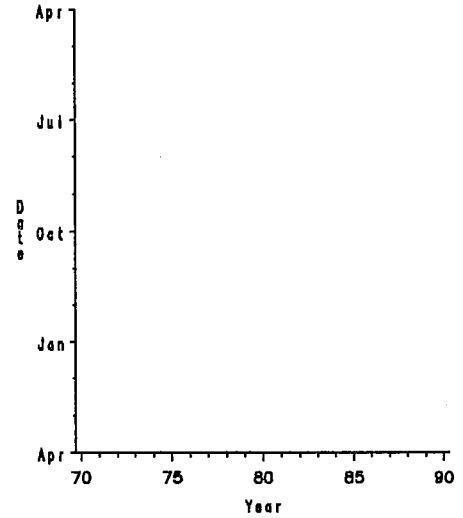
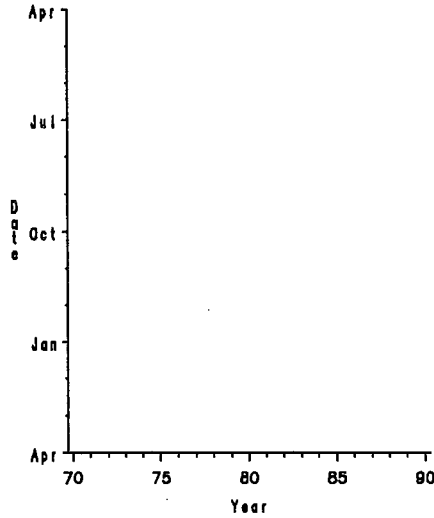
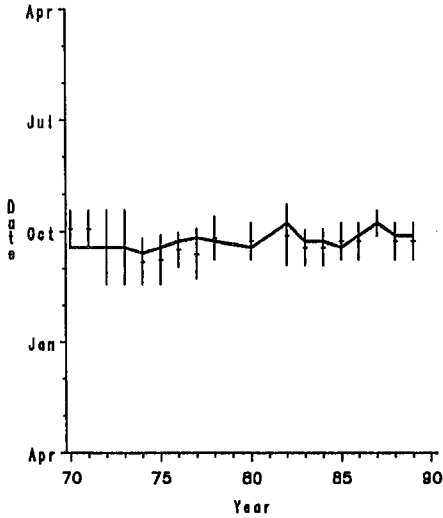
Steelhead (ST)



Chum

Chinook

Steelhead



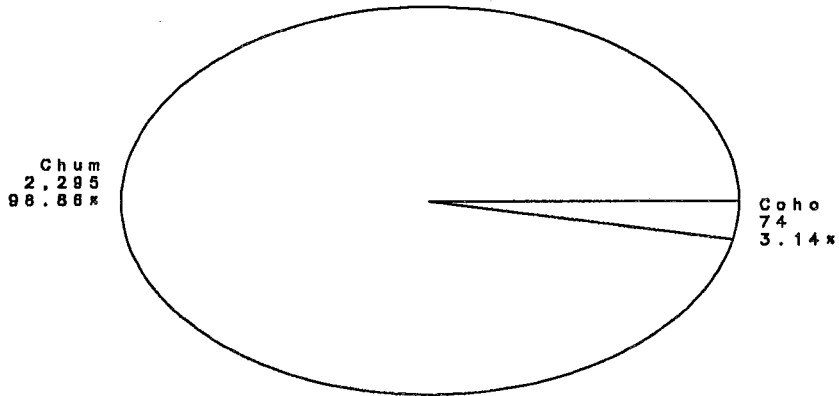
Chum				
Year	Escapement	Start	Peak	End
1970	7,500	15SEP	15OCT	15OCT
1971	1,500	15SEP	15OCT	15OCT
1972	2,500	15SEP	15OCT	15NOV
1973	7,800	15SEP	15OCT	15NOV
1974	5,500	08OCT	28OCT	15NOV
1975	1,200	05OCT	15OCT	15NOV
1976	3,000	03OCT	18OCT	31OCT
1977	18,000	30SEP	07OCT	18NOV
1978	21,000	20SEP	10OCT	25OCT
1979	-	-	-	-
1980	1,500	25SEP	15OCT	25OCT
1981	2,000	-	-	-
1982	5,000	10SEP	25SEP	30OCT
1983	800	01OCT	18OCT	30OCT
1984	1,500	30SEP	18OCT	30OCT
1985	4,000	25SEP	15OCT	25OCT
1986	1,500	25SEP	05OCT	25OCT
1987	1,800	15SEP	25SEP	05OCT
1988	5,000	25SEP	05OCT	25OCT
1989	850	25SEP	05OCT	25OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

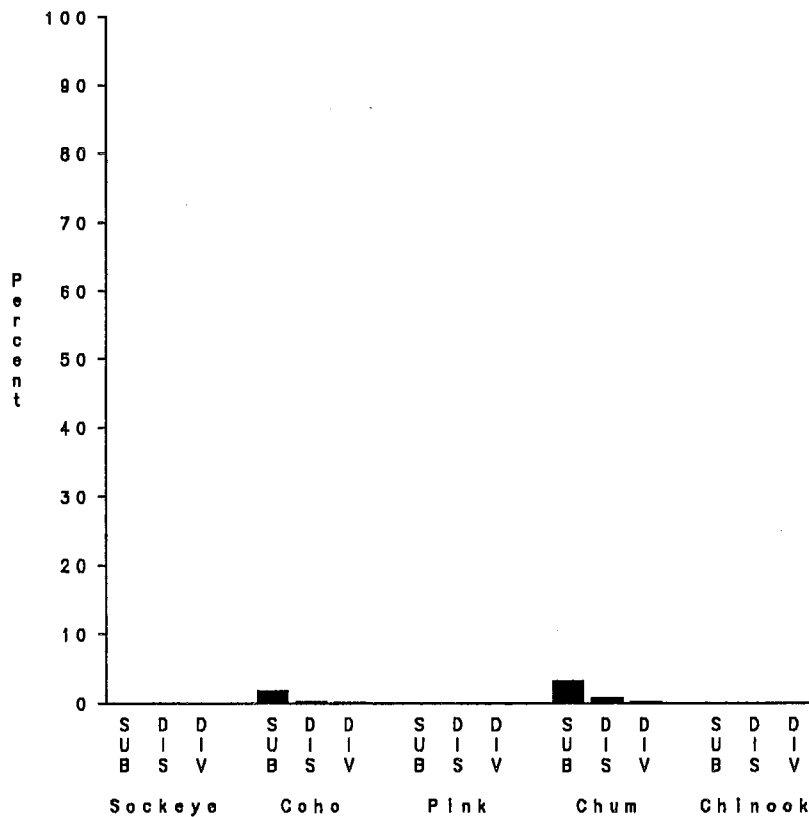
# DRIFTWOOD CREEK (90-9500)

10-yr Mean Escapement  
(1980-1989)



## DRIFTWOOD CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X	
CN CHUM SALMON	Migration Spawning Incubation Rearing								X	X X	X X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	PRESENT LOGGING (INTERFOR) (REF. 11-2)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

CHUM STREAM WITH GOOD POTENTIAL. CAN HANDLE MORE FISH. (REF. 11-2, REF. 11-3, REF. 11-4)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / / Prepared By:

K. SIS COMPLETED BY

Completed by: GITA KAPAHI Date: 1988/09/11  
 Last updated by: MARG ANDERSON Date: 1991/07/03

ESCAPEMENT : QUASHELLA RIVER

WATERSHED-CODE : 90-9550

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	0	750	0	UNK
1954	0	750	0	1500	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	0	N/O	0	200	0	UNK
1957	0	400	0	400	0	UNK
1958	0	25	0	1500	0	UNK
1959	0	25	0	750	0	UNK
1960	0	25	0	200	0	UNK
1961	N/O	N/O	N/O	N/O	N/O	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	0	N/O	0	25	0	UNK
1966	0	25	0	400	0	UNK
1967	0	N/O	0	400	0	UNK
1968	0	0	0	200	0	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	0	750	0	1500	0	UNK
1971	0	400	0	400	0	UNK
1972	0	N/O	0	N/O	0	UNK
1973	0	150	0	400	0	UNK
1974	0	125	0	900	0	UNK
1975	0	N/O	0	10	0	UNK
1976	0	N/O	0	N/O	0	UNK
1977	0	75	0	1900	0	UNK
1978	0	N/O	0	6000	0	UNK
1979	0	N/O	0	3000	0	UNK
1980	0	N/O	0	1000	0	UNK
1981	0	N/O	0	N/O	0	UNK
1982	0	UNK	0	4500	0	UNK
1983	0	30	12	720	0	UNK
1984	0	200	N/O	50	0	UNK
1985	N/O	N/O	N/O	5000	N/O	UNK
1986	0	75	UNK	2000	UNK	UNK
1987	0	10	0	13500	0	UNK
1988	0	N/O	0	3500	0	UNK
1989	UNK	100	N/O	4000	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

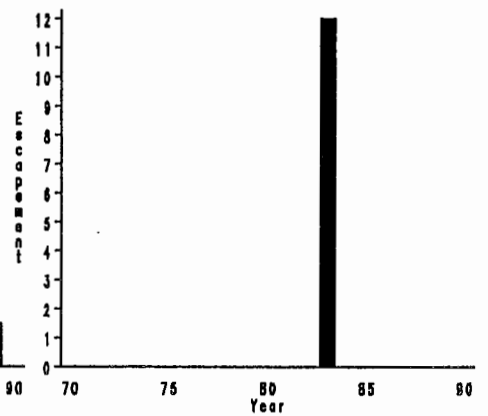
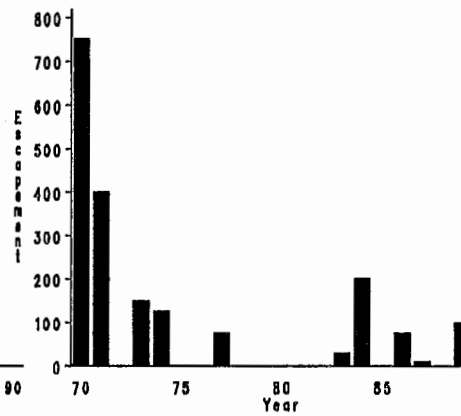
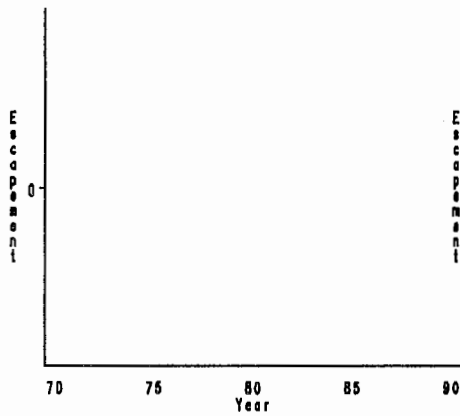
# UNNAMED C (90-9550)

## Escapement & Run Timing

sockeye (SK)

Coho (CO)

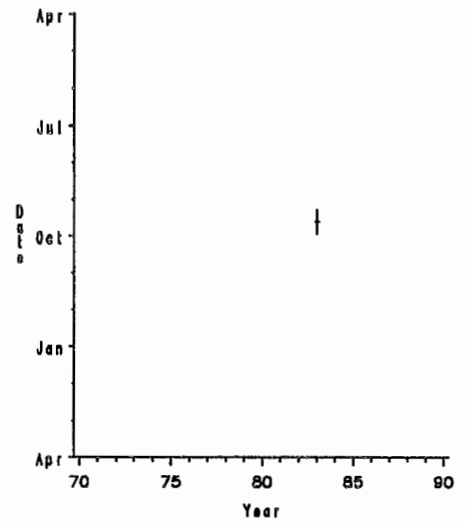
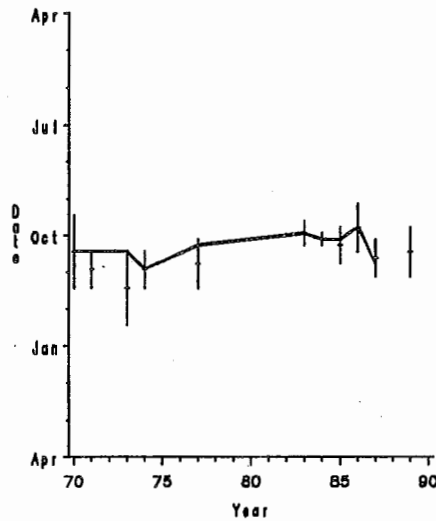
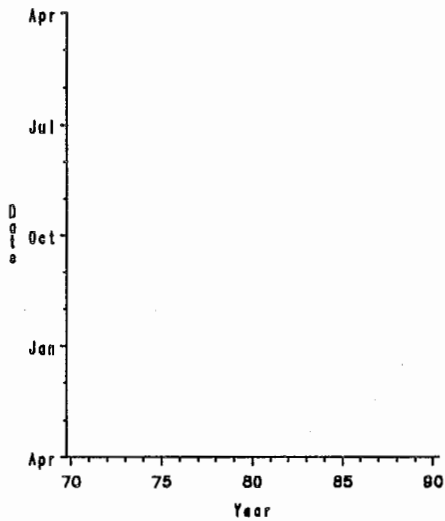
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	750	15SEP	15OCT	15NOV
1971	400	15OCT	15OCT	15NOV
1972	0	-	-	-
1973	150	15OCT	15OCT	15DEC
1974	125	15OCT	30OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	75	05OCT	10OCT	15NOV
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	30	20SEP	30SEP	10OCT
1984	200	30SEP	05OCT	10OCT
1985	0	21SEP	05OCT	25OCT
1986	75	03SEP	25SEP	15OCT
1987	10	05OCT	25OCT	05NOV
1988	0	-	-	-
1989	100	25SEP	-	05NOV

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	12	10SEP	20SEP	30SEP
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

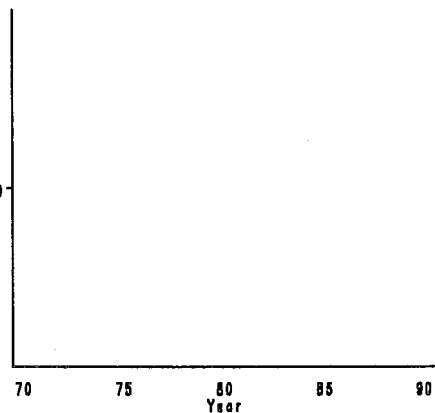
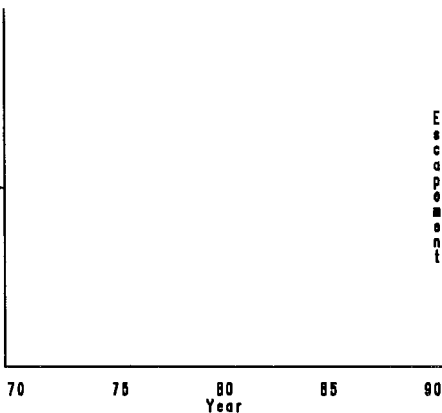
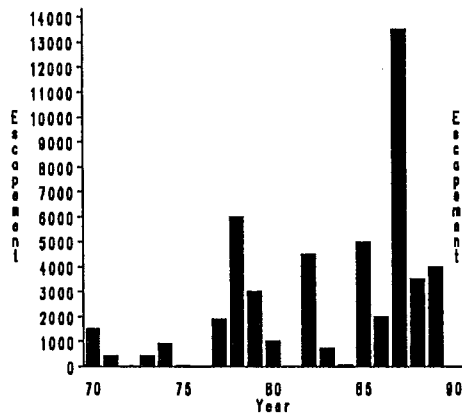
# UNNAMED C (90-9550)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

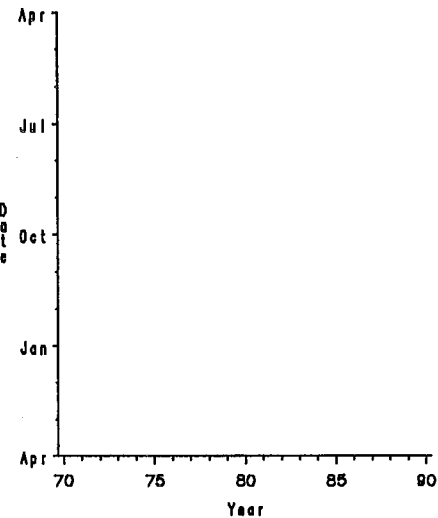
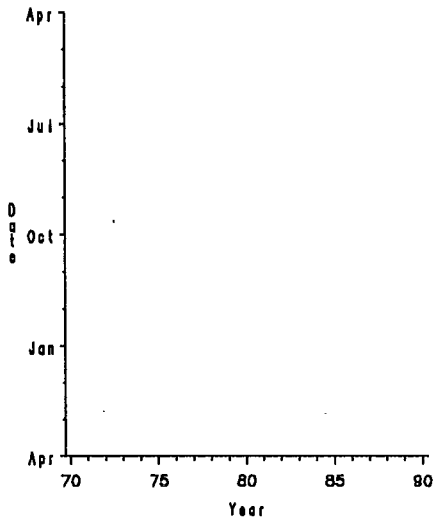
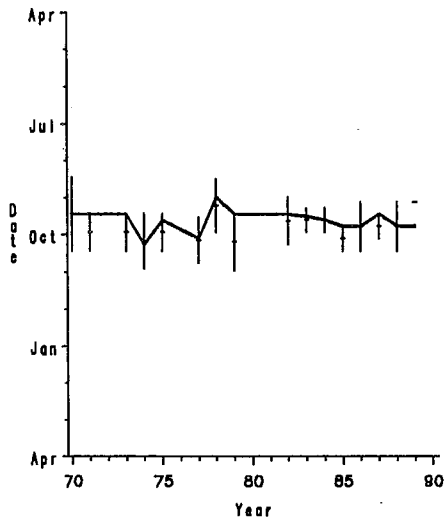
Steelhead (ST)



Chum

Chinook

Steelhead



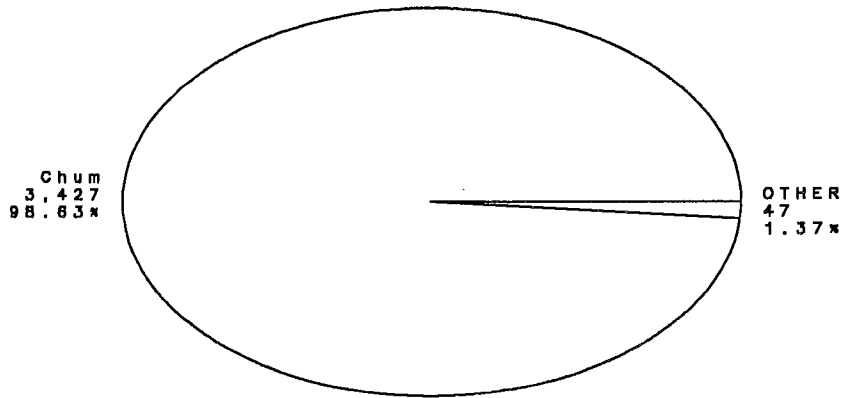
Chum				
Year	Escapement	Start	Peak	End
1970	1,500	15AUG	15SEP	15OCT
1971	400	15SEP	15SEP	15OCT
1972	0	-	-	-
1973	400	15SEP	15SEP	15OCT
1974	900	15SEP	18OCT	30OCT
1975	10	15SEP	20SEP	15OCT
1976	0	-	-	-
1977	1,400	18SEP	05OCT	25OCT
1978	6,400	17AUG	01SEP	30SEP
1979	3,400	15SEP	15SEP	31OCT
1980	1,000	-	-	-
1981	0	-	-	-
1982	4,500	01SEP	15SEP	10OCT
1983	720	10SEP	17SEP	30SEP
1984	50	10SEP	20SEP	30SEP
1985	5,000	25SEP	25SEP	15OCT
1986	2,000	05SEP	25SEP	15OCT
1987	13,500	15SEP	15SEP	05OCT
1988	3,500	05SEP	25SEP	15OCT
1989	4,400	05SEP	25SEP	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

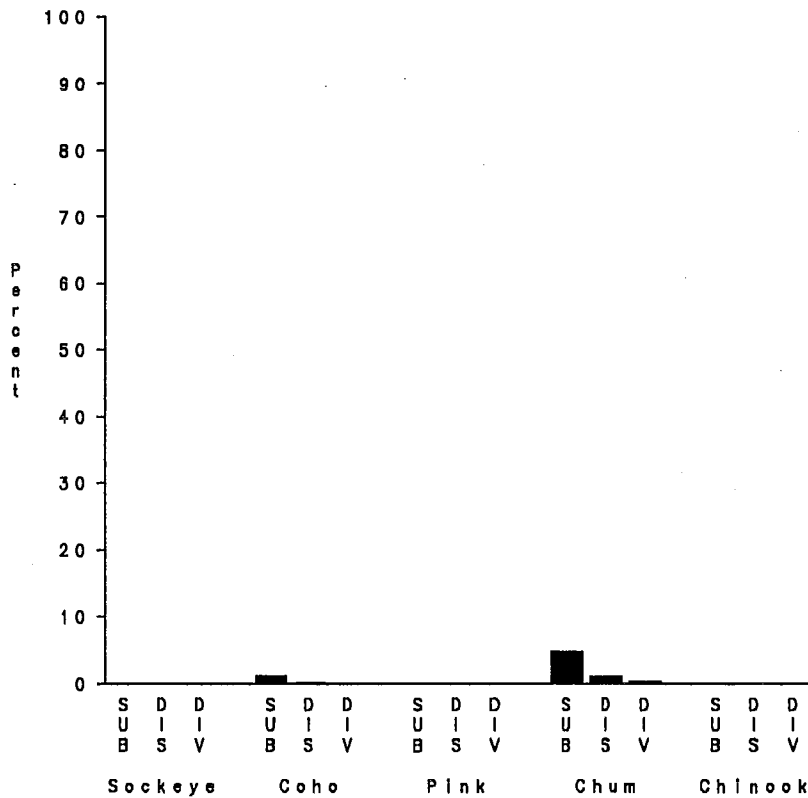
# UNNAMED C (90-9550)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: PACK LAKE CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 90-9560	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 11-9
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92M/3
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6071.56697
		Lat./Long. Mouth: 51 DG. 10' 52'' 127 DG. 28' 36''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLOWS S.E. INTO STRACHAN BAY, N. OF BELIZE INLET, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	100 FEET OF GOOD GRADIENT, THEN THE STREAM BECOMES IMPASSABLE (REF. 11-3)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				THROUGHOUT (REF. 11-3)
C CASCADE		3.2	AF ALL SPECIES	(REF. 11-1)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
NO INFORMATION AVAILABLE	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	SPAWNING GROUND IS JUST AT THE MOUTH OF THE CREEK (REF. 11-3)
CO COHO SALMON	CREEK IS VIRTUALLY IMPASSABLE, THEREFORE THE COHO SPAWN IN FRONT OF CREEK (REF. 11-3)
CN CHUM SALMON	SPAWN IN THE FIRST 100 FEET, ALSO SPAWN AT THE MOUTH (REF. 11-3)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON		1980 - 1989		200	28A-18		
CO COHO SALMON	116	1980 - 1989	28A-18	300	28A-18		
CN CHUM SALMON	143	1980 - 1989	28A-18	350	28A-18		
Comments: SK ESCAPEMENTS FOR 1988(200) ONLY (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing									X	X X	X	

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	PRESENT LOGGING (1988) (REF. 11-3)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

AN IMPOSSIBLE LOG JAM AT 0.8 KM WAS REMOVED (1967) (REF. 11-1)
SYSTEM HAS POTENTIAL, BUT IS PLUGGED WITH LOG JAMS (REF. 11-3, REF. 11-4)
THIS SYSTEM HAS SOME COHO POTENTIAL FOR ITS SIZE (REF. 11-5)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
--------------------	--------------

K. SIS COMPLETED BY

Completed by: GITA KAPAHI	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : PACK LAKE CREEK

WATERSHED-CODE : 90-9560

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	3500	0	3500	0	UNK
1954	0	1500	0	3500	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	0	3500	0	1500	0	UNK
1957	0	1500	0	1500	0	UNK
1958	0	750	0	1500	0	UNK
1959	0	750	0	3500	0	UNK
1960	0	0	0	0	0	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	0	UNK	0	25	0	UNK
1963	0	N/O	0	25	0	UNK
1964	0	75	0	200	0	UNK
1965	0	N/O	0	N/O	0	UNK
1966	0	25	0	N/O	0	UNK
1967	0	N/O	0	N/O	0	UNK
1968	0	N/O	25	N/O	0	UNK
1969	0	200	0	200	0	UNK
1970	0	25	0	N/O	0	UNK
1971	0	25	0	N/O	0	UNK
1972	0	N/O	0	N/O	0	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	0	10	0	N/O	0	UNK
1975	0	N/O	0	N/O	0	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	0	N/O	0	N/O	0	UNK
1978	0	0	0	50	N/O	UNK
1979	0	N/O	0	N/O	0	UNK
1980	0	N/O	0	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	0	150	0	N/O	0	UNK
1983	0	UNK	0	UNK	0	UNK
1984	0	100	0	N/O	0	UNK
1985	N/O	75	N/O	250	N/O	UNK
1986	0	300	UNK	350	UNK	UNK
1987	0	300	0	UNK	0	UNK
1988	200	N/O	0	250	0	UNK
1989	N/O	N/O	UNK	150	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

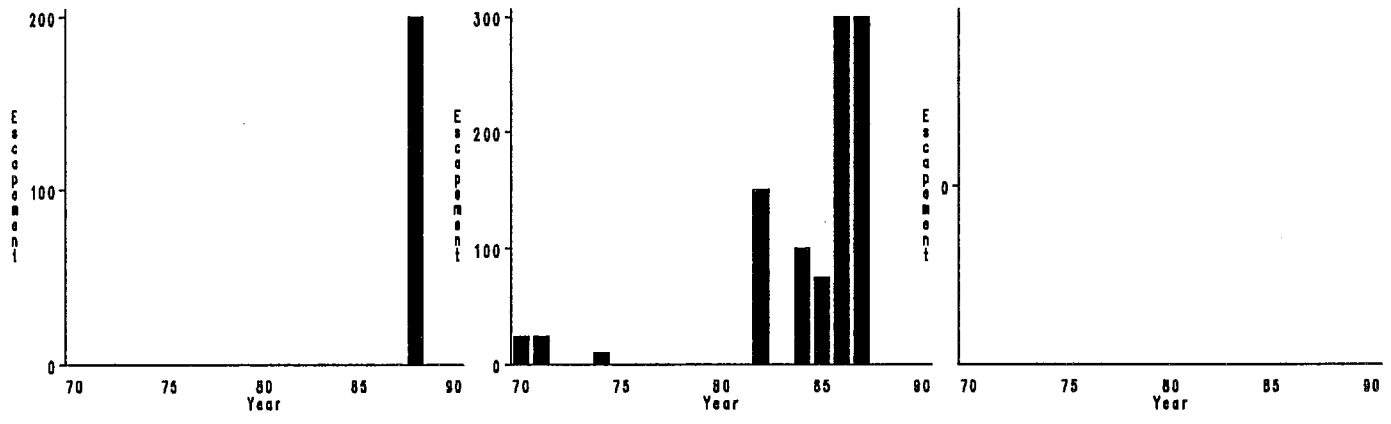
# UNNAMED C (90-9560)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

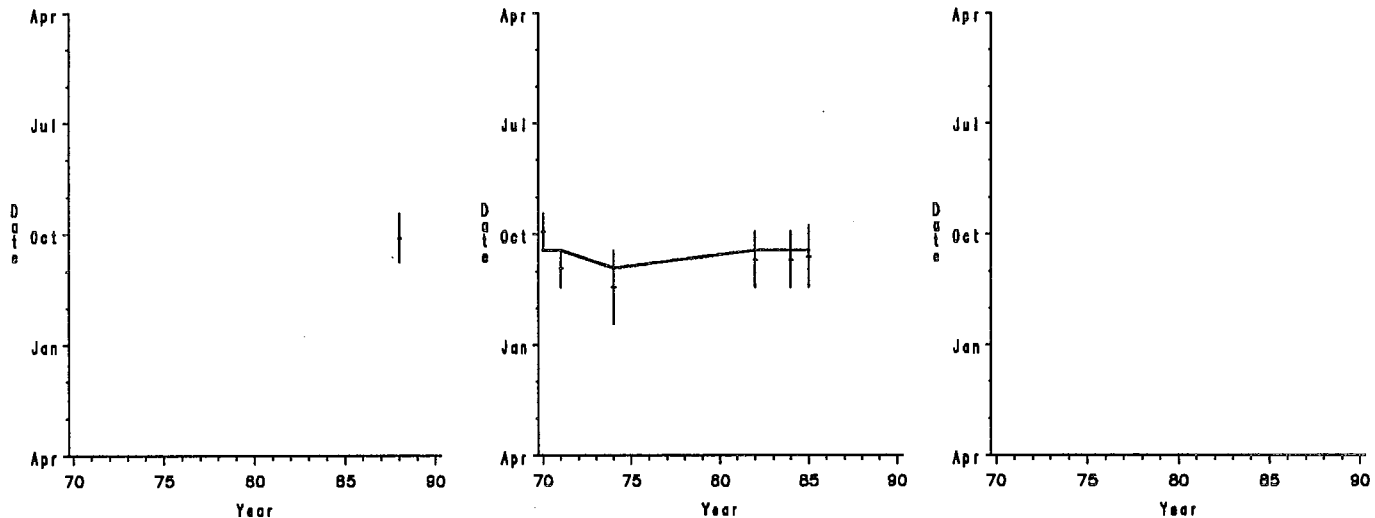
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	-	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	-	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	200	15SEP	05OCT	28OCT
1989	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	25	15SEP	15OCT	15OCT
1971	25	15OCT	15OCT	15NOV
1972	0	-	-	-
1973	-	-	-	-
1974	10	15OCT	30OCT	15DEC
1975	0	-	-	-
1976	-	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	150	30SEP	15OCT	15NOV
1983	-	-	-	-
1984	100	30SEP	15OCT	15NOV
1985	75	25SEP	15OCT	15NOV
1986	300	-	-	-
1987	300	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	-	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	-	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

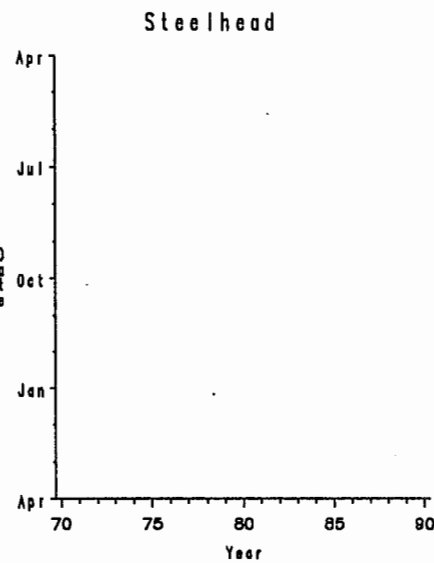
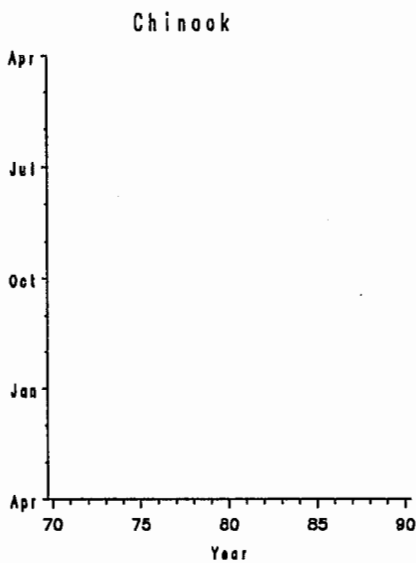
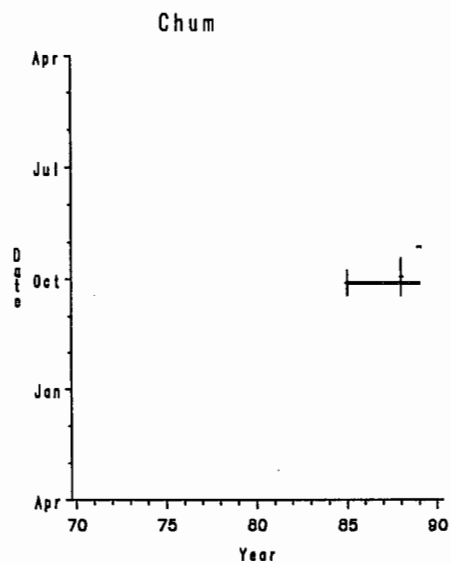
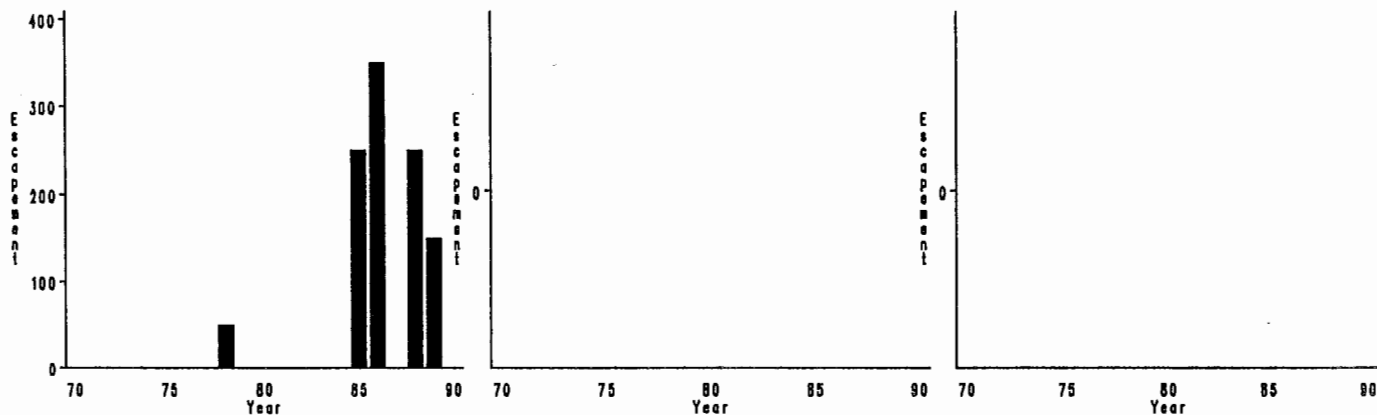
# UNNAMED C (90-9560)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



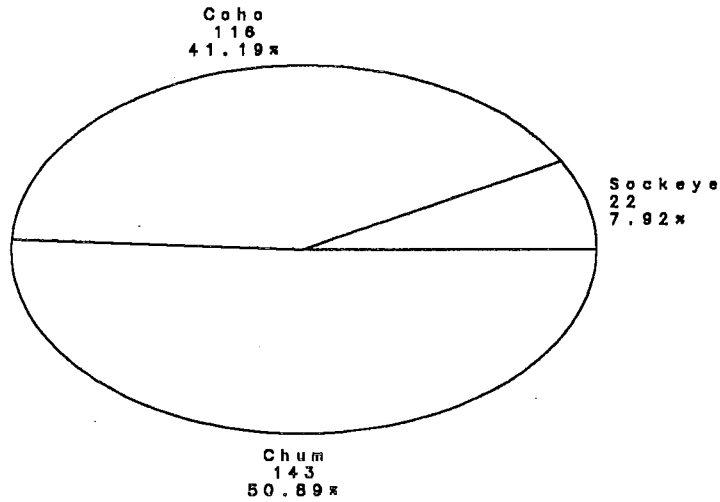
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	50	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	250	25SEP	05OCT	15OCT
1986	350	-	-	-
1987	250	-	-	-
1988	150	15SEP	05OCT	15OCT
1989	150	05SEP	05OCT	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

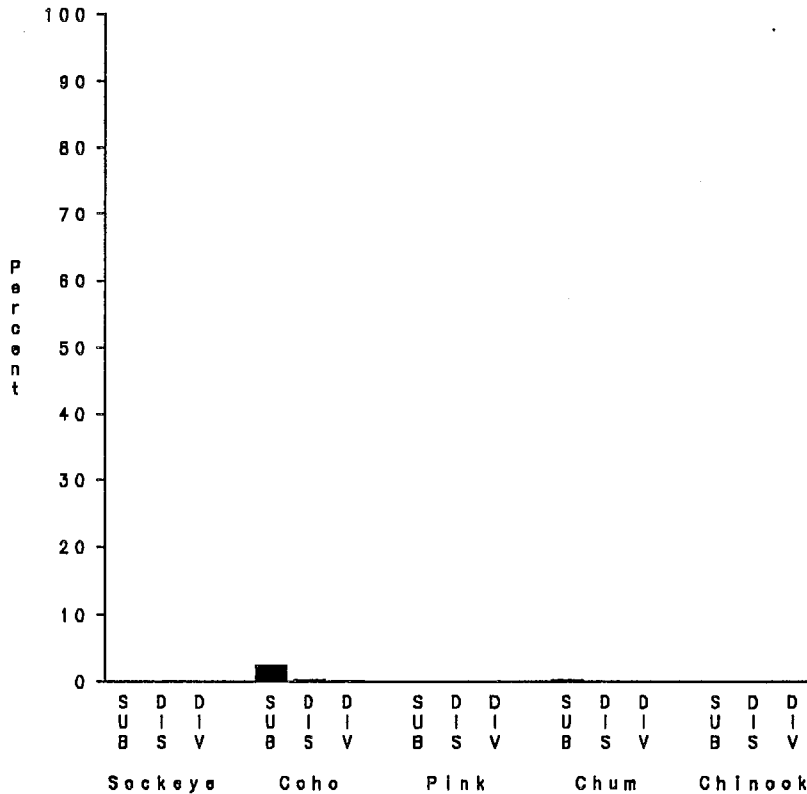
# UNNAMED C (90-9560)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

SMALL LOG JAMS WERE REMOVED (1964) (REF. 11-1)
LOW POTENTIAL (REF. 11-3)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAH	Date: 1988/09/11
Last updated by: MARG ANDERSON	Date: 1991/07/03

ESCAPEMENT : LASSITER AND ROWLEY CREEKS

WATERSHED-CODE : 90-9590

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	0	25	0	UNK
1954	0	25	0	200	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	0	25	0	75	0	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	N/O	N/O	N/O	N/O	N/O	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	0	25	0	25	0	UNK
1965	0	N/O	0	N/O	0	UNK
1966	0	25	0	N/O	0	UNK
1967	0	N/O	0	N/O	0	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	0	N/O	0	N/O	0	UNK
1971	0	75	0	200	0	UNK
1972	0	N/O	0	N/O	0	UNK
1973	0	N/O	0	N/O	0	UNK
1974	0	N/O	0	N/O	0	UNK
1975	0	15	0	N/O	0	UNK
1976	0	N/O	0	N/O	0	UNK
1977	0	40	0	4	0	UNK
1978	0	N/O	0	5	0	UNK
1979	0	N/O	0	N/O	0	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	0	N/O	0	N/O	0	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	0	N/O	0	N/O	0	UNK
1984	0	N/O	0	N/O	0	UNK
1985	N/O	40	N/O	100	N/O	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	UNK	0	UNK	0	UNK
1988	0	N/O	0	N/O	0	UNK
1989	UNK	N/O	UNK	N/O	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

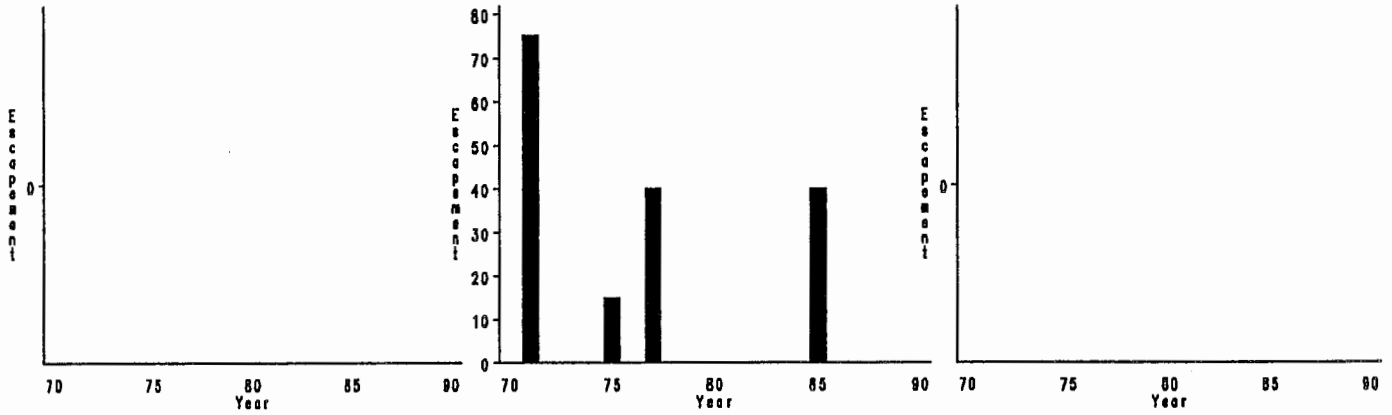
# UNNAMED C (90-9590)

## Escapement & Run Timing

sockeye (SK)

Coho (CO)

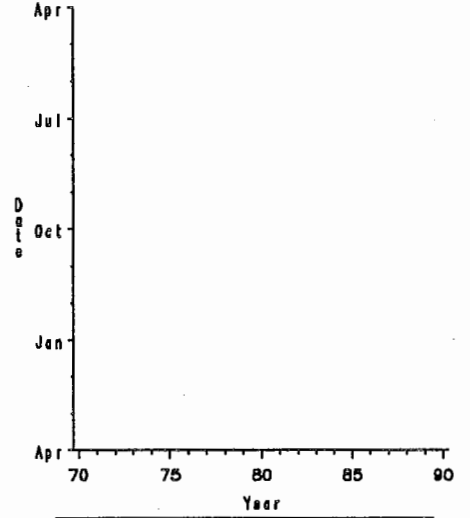
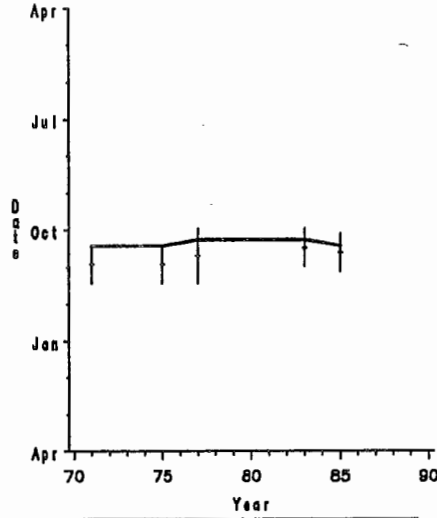
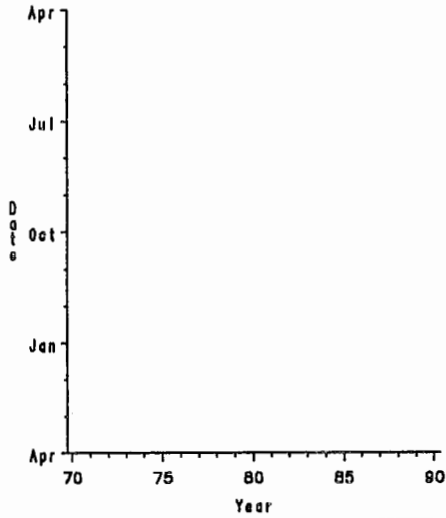
Pink (PK)



sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	75	15OCT	15OCT	15NOV
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	15	13OCT	15OCT	15NOV
1976	40	01OCT	10OCT	15NOV
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	01OCT	10OCT	01NOV
1984	0	-	-	-
1985	40	05OCT	15OCT	05NOV
1986	-	-	-	-
1987	-	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

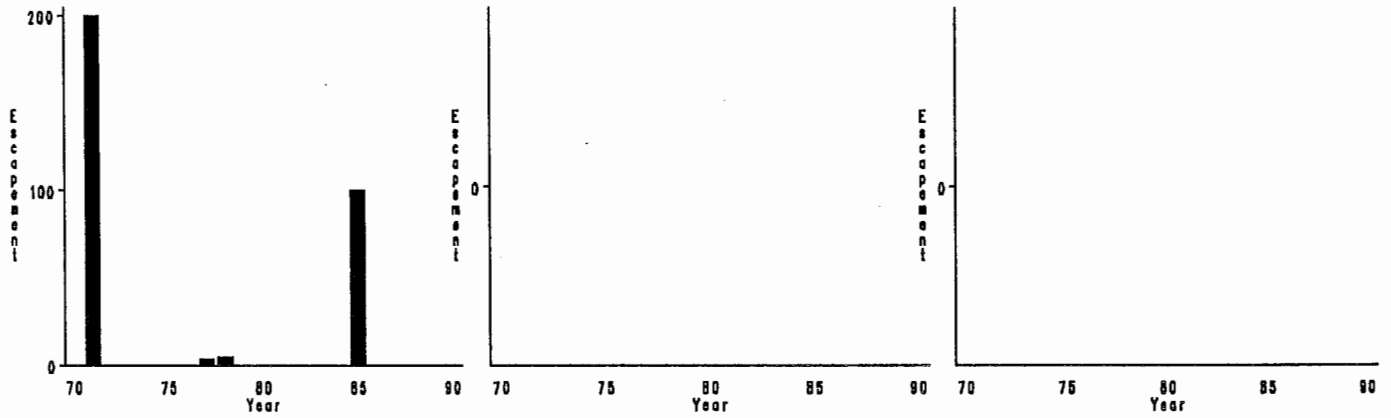
# UNNAMED C (90-9590)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

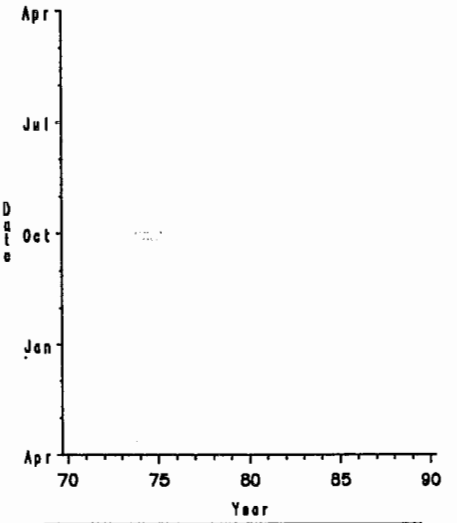
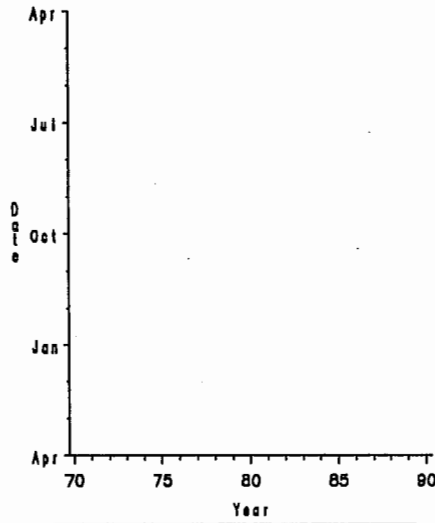
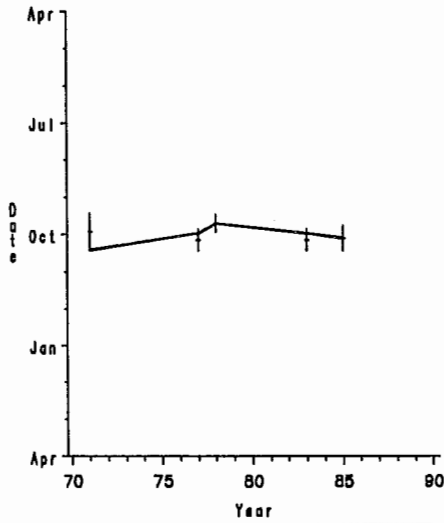
Steelhead (ST)



Chum

Chinook

Steelhead



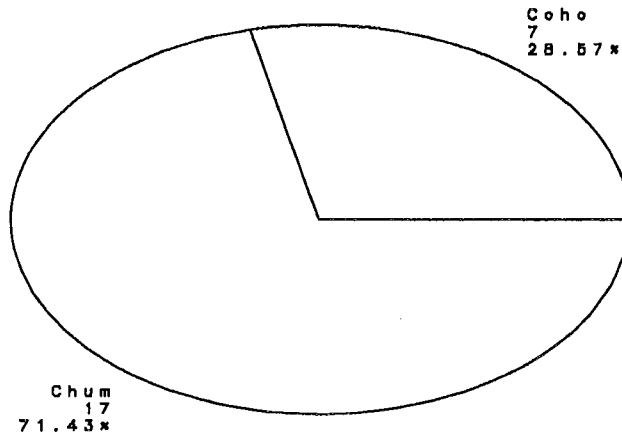
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	200	15SEP	15OCT	15OCT
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	4	28SEP	01OCT	15OCT
1978	5	18SEP	23SEP	30SEP
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	28SEP	01OCT	15OCT
1984	0	-	-	-
1985	100	25SEP	05OCT	15OCT
1986	-	-	-	-
1987	-	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

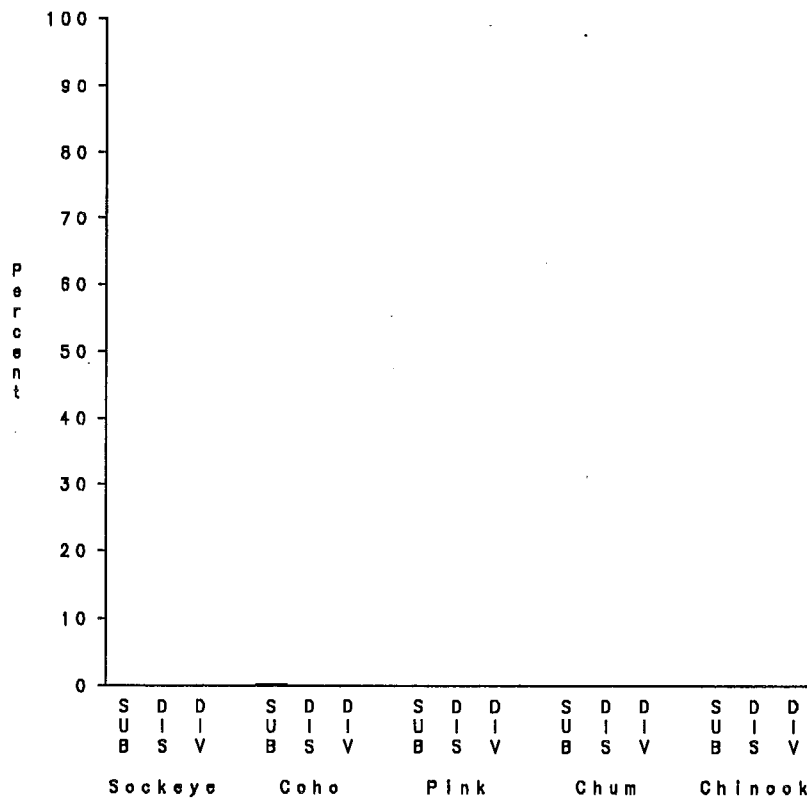
# UNNAMED C (90-9590)

10-yr Mean Escapement  
(1980-1989)



## UNNAMED C : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: <b>UNNAMED CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>ROWLEY CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>90-9600</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>11-4</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92M/4</b> B.C.G.S. (1:20k) Map: U.T.M. Mouth: <b>9.5971.56647</b> Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b> Mainstem Length: <b>Ref. No.:</b> Watershed Area: <b>Ref. No.:</b>
		Location: <b>FLows INTO ROWLEY BAY</b>

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>FAIRLY FLAT (REF. 11-3, REF. 11-4)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>X LOG JAMS</b>				<b>THROUGHOUT (REF. 11-3, REF. 11-4)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: <b>SLOW DARK WATER BECAUSE OF LOG JAMS (REF. 11-3)</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>PRESENT (REF. 11-3, REF. 11-4)</b>
<b>CN CHUM SALMON</b>	<b>PRESENT (REF. 11-3, REF. 11-4)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: <b>ESCAPEMENTS COMBINED WITH LASSITER BAY CREEK (REF. 11-1)</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													



**A. DESCRIPTION**

Stream Name: <b>STRANBY RIVER</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>CACHE CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0200</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12B-14</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>1021/16</b>
		B.C.G.S. (1:20k) Map: <b>9.5601.56320</b>
		U.T.M. Mouth: <b>50 DG. 50' 28'' 128 DG. 08' 30''</b>
		Mainstem Length: <b>23.4 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLows N. INTO SHUTTLEWORTH BIGHT, E. OF CAPE SCOTT.</b>		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	
NO INFORMATION AVAILABLE					

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
NO INFORMATION AVAILABLE			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT (REF. 12B-1)
PK PINK SALMON	THROUGHOUT (REF. 12B-1)
CM CHUM SALMON	LOWER 3.2 KM (REF. 12B-1)
ST STEELHEAD	PRESENCE NOTED. (REF. 12B-20)
TR TROUT	PRESENCE NOTED. (REF. 12B-20)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	-	-	-			200	12B-20
CO COHO SALMON	138	1980 - 1989	28A-18	300	28A-18	2500	12B-20
PK PINK SALMON	2000	1980 - 1988	28A-18	3500	28A-18	75000	12B-20
PK PINK SALMON		1981 - 1989		100	28A-18		

**E. ESCAPEMENT SUMMARY CONTINUED**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CH CHUM SALMON		-				25000	12B-20
ST STEELHEAD	97	1953 - 1962	28A-18	400	28A-18		
Comments: ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)							
CO HAVE GOOD PAST HISTORY PRE 1977 CH HAVE GOOD HISTORY PRE 1957 PK EVEN ESCAPEMENT RECORDED 1980(3500) AND 1988(50) PK ODD ESCAPEMENT RECORDED 1983(100) ONLY (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X	
PK PINK SALMON	Migration Spawning Incubation Rearing									X X	P X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	CO COHO SALMON PK PINK SALMON	0.0	OUTPLANT (REF. 12B-9)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	WESTERN FOREST PRODUCTS ACTIVELY LOGGING IN UPPER WATERSHED. (REF. 12B-12)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS STREAM IS VERY HARD TO GET AT BY FOOT OR BY BOAT, THUS, INFORMATION IS LACKING (1972) (REF. 12B-1)
SHOULD BE APPROACHED BY BOAT AT HIGH OR NEAR HIGH WATER. (REF. 11-4)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/05

ESCAPEMENT : STRANBY RIVER

WATERSHED-CODE : 92-0200

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	0	0	0	0	UNK
1954	0	1500	7500	7500	0	UNK
1955	0	1500	3500	3500	0	UNK
1956	0	1500	7500	3500	0	UNK
1957	0	1500	3500	3500	0	UNK
1958	0	1500	7500	7500	0	UNK
1959	0	UNK	0	0	0	UNK
1960	N/O	400	1500	UNK	N/O	UNK
1961	0	1500	750	200	0	UNK
1962	0	UNK	N/O	N/O	0	UNK
1963	0	N/O	N/O	N/O	0	UNK
1964	0	1500	N/O	N/O	0	UNK
1965	0	3500	N/O	N/O	0	UNK
1966	0	N/O	75000	N/O	0	UNK
1967	0	750	N/O	N/O	0	UNK
1968	0	750	75000	N/O	0	UNK
1969	0	75	200	N/O	0	UNK
1970	200	3500	75000	750	0	UNK
1971	0	1500	25	N/O	0	UNK
1972	0	400	24000	N/O	0	UNK
1973	0	1200	400	0	0	UNK
1974	0	600	3000	N/O	0	UNK
1975	0	UNK	400	UNK	0	UNK
1976	0	700	1500	N/O	0	UNK
1977	0	200	N/O	N/O	0	UNK
1978	0	N/O	N/O	N/O	0	UNK
1979	0	300	0	0	0	UNK
1980	0	300	3500	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	0	UNK	UNK	0	0	UNK
1983	0	N/O	100	N/O	0	UNK
1984	0	UNK	UNK	0	0	UNK
1985	UNK	UNK	N/O	N/O	UNK	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	250	N/O	N/O	0	UNK
1988	N/O	N/O	50	N/O	0	UNK
1989	UNK	UNK	N/O	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

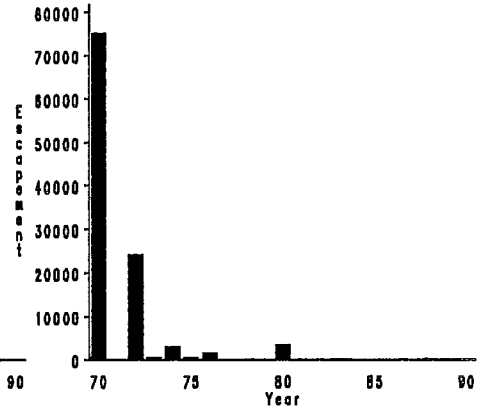
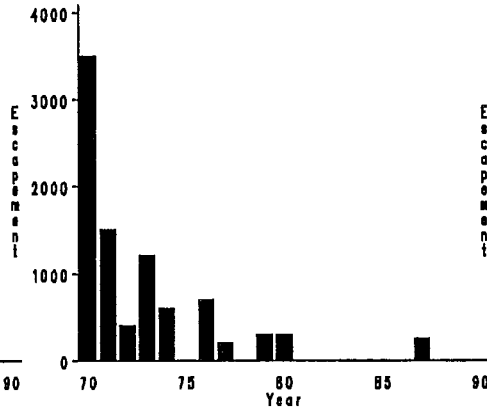
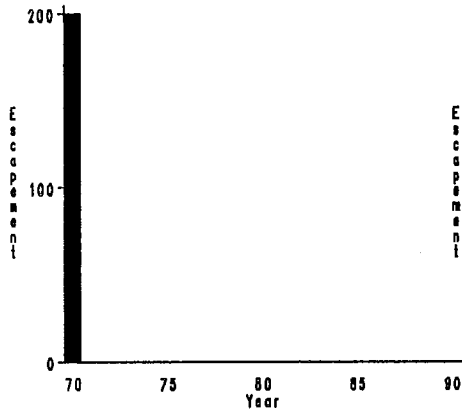
# STRANBY RIVER (92-0200)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

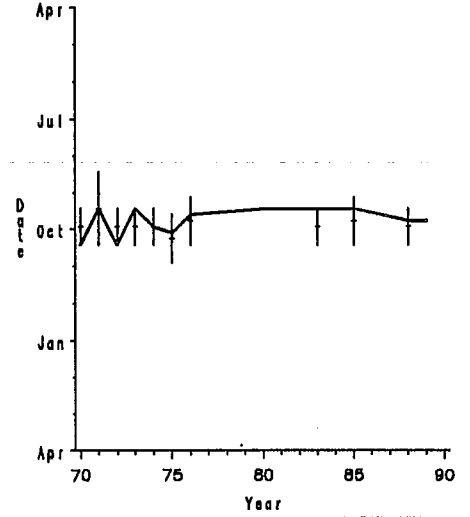
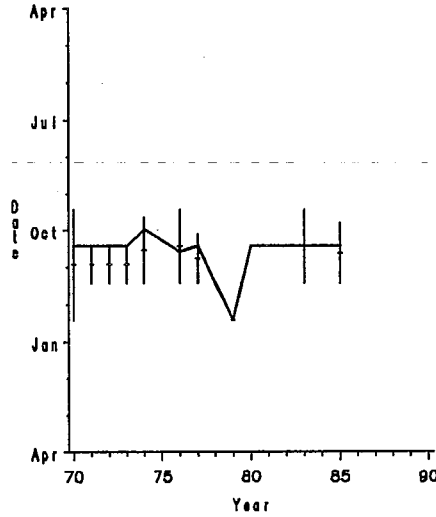
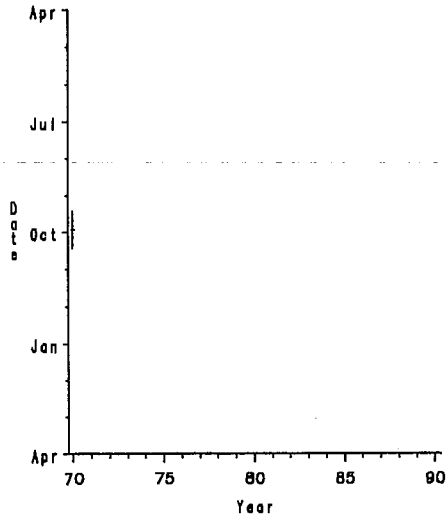
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15SEP	15OCT
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	3,500	19SEP	15OCT	15DEC
1971	1,500	15OCT	15OCT	15NOV
1972	400	15OCT	15OCT	15NOV
1973	1,200	15OCT	15OCT	15NOV
1974	600	21SEP	01OCT	15NOV
1975	-	-	-	-
1976	700	19SEP	30OCT	15NOV
1977	200	05OCT	15OCT	15NOV
1978	0	-	-	-
1979	300	15DEC	15DEC	15DEC
1980	300	-	15OCT	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	15SEP	15OCT	15NOV
1984	-	-	-	-
1985	-	20SEP	15OCT	15NOV
1986	-	-	-	-
1987	250	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	75,000	15SEP	15OCT	15OCT
1971	25	15AUG	15SEP	15OCT
1972	24,000	15SEP	15OCT	15OCT
1973	400	15SEP	15SEP	15OCT
1974	3,000	15SEP	30SEP	15OCT
1975	400	20SEP	05OCT	30OCT
1976	1,500	05SEP	20SEP	15OCT
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	3,500	-	15SEP	-
1981	-	-	-	-
1982	-	-	-	-
1983	100	15SEP	15SEP	15OCT
1984	-	-	-	-
1985	0	05SEP	15SEP	15OCT
1986	-	-	-	-
1987	0	-	-	-
1988	50	15SEP	25SEP	15OCT
1989	0	-	25SEP	-

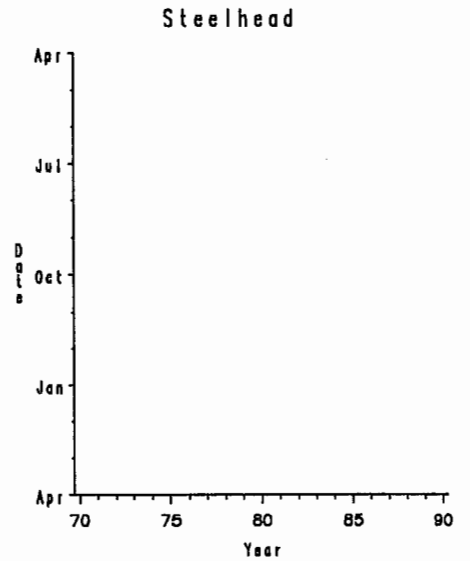
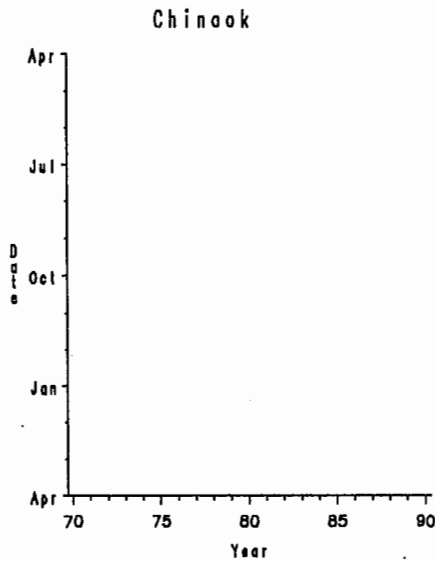
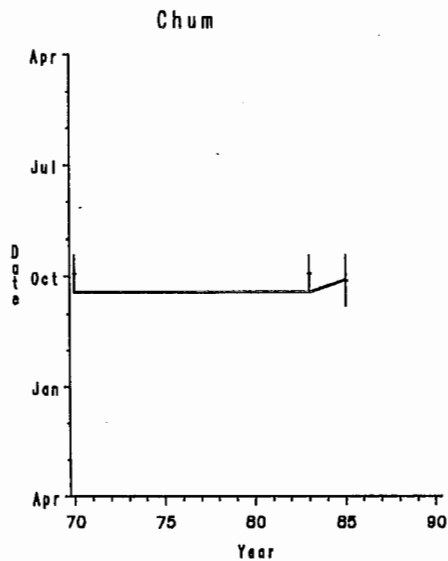
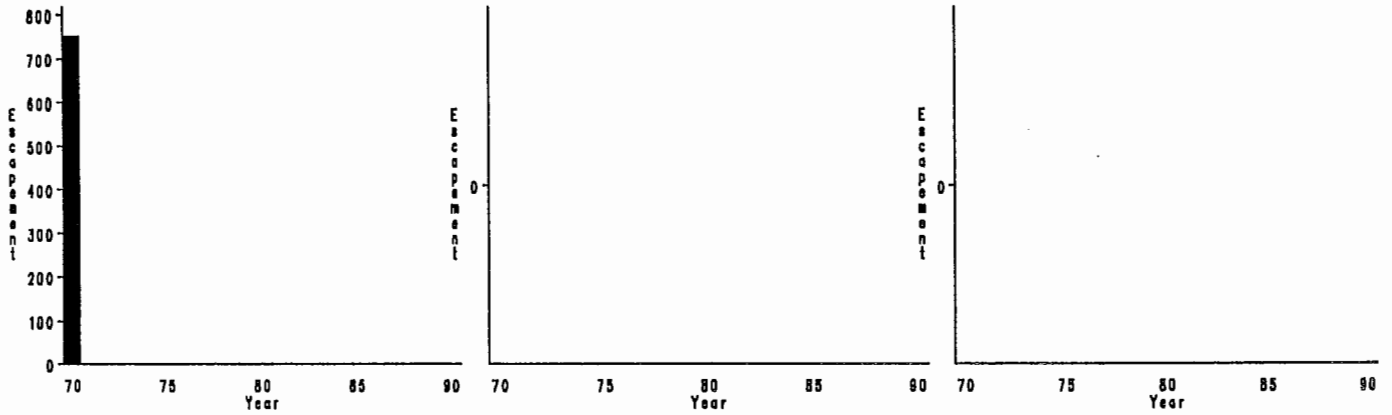
# STRANBY RIVER (92-0200)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



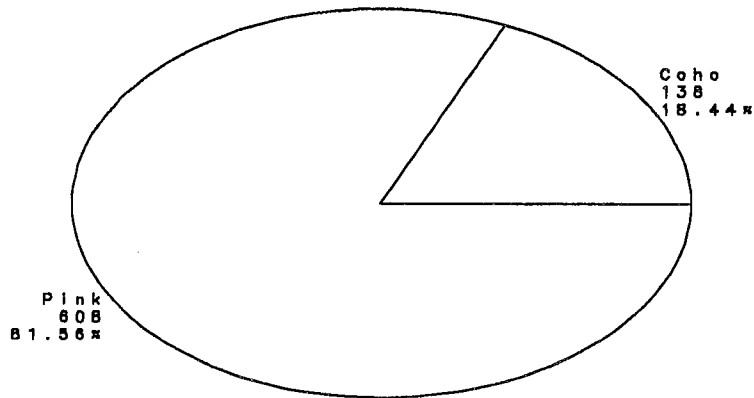
Chum				
Year	Escapement	Start	Peak	End
1970	750	15SEP	15OCT	15OCT
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15SEP	15OCT	15OCT
1984	0	-	-	-
1985	0	15SEP	05OCT	24OCT
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

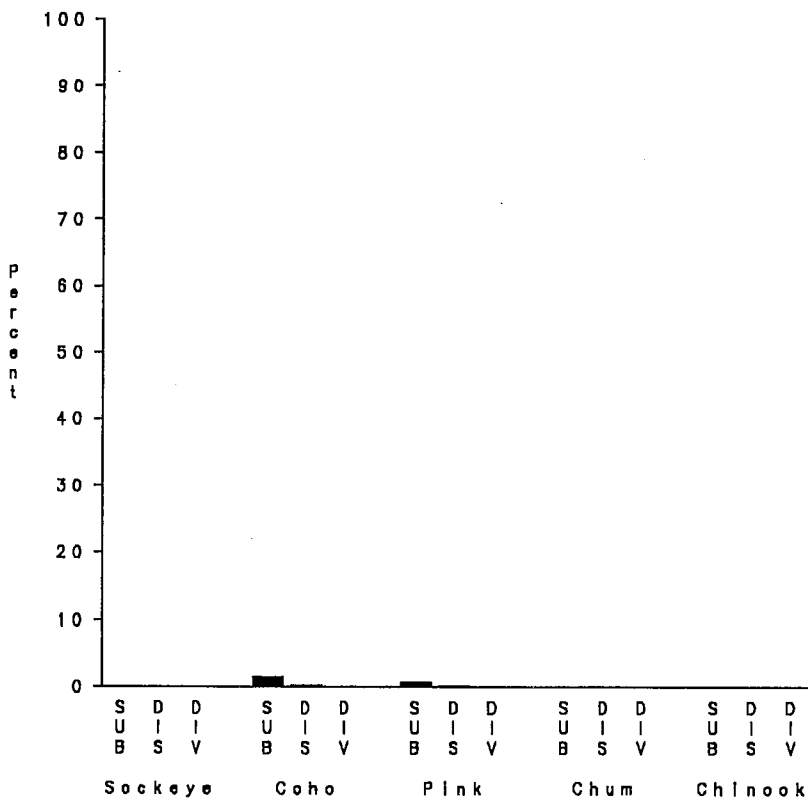
# STRANBY RIVER (92-0200)

10-yr Mean Escapement  
(1980-1989)



## STRANBY RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: <b>NAHWITTI RIVER</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0300</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-15</b>
	M.D.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 1021/16
GODKIN CREEK KAINS CREEK	030	B.C.G.S. (1:20k) Map:
	130	U.T.M. Mouth: 9,5700,56343
		Lat./Long. Mouth: 50 DG. 51' 05'' 128 DG. 00' 00''
		Mainstem Length: 37.6 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS N. INTO GOLETAS CHAN., N. OF HOLBERG.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	GRADIENT LESS THAN 1% (REF. 12B-5)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS				LOCATION UNKNOWN (REF. 12B-5)
X LOG JAMS		8.8		ABOVE THE LAKE. ALL PRESENTLY PASSABLE (1988) (REF. 12B-1, REF. 12B-9)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: 500 - 700 CFS (MODERATE FLOW) MAR. 27/80 (REF. 12B-5)			
RANGE 200 - 300 CFS (JULY 1974) (REF. 12B-5)			
FED BY NAHWITTI LAKE; AREA - 2.5 SQ.KM; PERIMETER - 10.1 KM. (REF. 6N-28)			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
SK SOCKEYE SALMON	OBSERVED SPAWNING AT 34.7 KM. (REF. 12B-1, REF. 12B-20)
CO COHO SALMON	THROUGHOUT TO UPPER REACH. OBSERVED SPAWNING AT 34.7 KM. (REF. 12B-1, REF. 12B-9, REF. 12B-20)
PK PINK SALMON	OBSERVED AT 23.1 KM. (REF. 6N-6, REF. 12B-1, REF. 12B-9)
CM CHUM SALMON	OBSERVED AT 17.2 KM. (REF. 6N-6)
ST STEELHEAD	OBSERVED AT 34.7 KM. (REF. 12B-20)
CT CUTTHROAT TROUT	THROUGHOUT. (REF. 6N-6)
DV DOLLY VARDEN	THROUGHOUT. (REF. 6N-6)
EB BROOK TROUT	OBSERVED IN NAHWITTI LAKE. (REF. 6N-6)
KO KOKANEK	OBSERVED IN NAHWITTI LAKE. (REF. 6N-6)

D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
RB RAINBOW TROUT	THROUGHOUT. (REF. 6M-6)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	2156	1976 - 1985	28A-18	3000	28A-18	10000	12B-20
CO COHO SALMON	132	1980 - 1989	28A-18	4500	28A-18	5000	12B-20
PK PINK SALMON	470	1980 - 1988	28A-18	1000	28A-18	75000	12B-20
PK PINK SALMON	25	1981 - 1989	28A-18	100	28A-18		
CN CHUM SALMON		-				5000	12B-20
ST STEELHEAD	88	1953 - 1963	28A-18	400	28A-18		
Comments: ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)							
CN GOOD PAST HISTORY PRE 1970 (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SK SOCKEYE SALMON	Migration Spawning Incubation Rearing					X X	X X	X X	X X	X P	X X		
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X P	X X
PK PINK SALMON	Migration Spawning Incubation Rearing								X X	X P	X X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
HY HATCHERY	CO COHO SALMON PK PINK SALMON	0.0	COMB. FACILITY. STORAGE ON NAHWITTI (REF. 12B-12)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	AREA LOGGED AROUND NAHWITTI LAKE AND UPPER REACHES OF RIVER. MOUTH WAS LOGGED ABOUT 15 - 20M AND HEAVY SECOND GROWTH (1974) (REF. 12B-5)
FO FORESTRY	WHIKNOCK LOGGED FIREBREAKS ON UPPER SYSTEM IN 1985 (REF. 12B-9)
FO FORESTRY	RICHMOND PLYWOOD CONTINUES TO LOG WATERSHED BELOW NAHWITTI LAKE (REF. 12B-9)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

POACHING IS A PROBLEM ON THIS RIVER (1976) (REF. 12B-1)
EXCELLENT COBBLE/BOULDER SUBSTRATE THROUGHOUT ENTIRE SYSTEM BELOW LAKE; REARING HABITAT IMPRESSIVE. (REF. 12B-5)
SPAWNING POTENTIAL ABOVE LAKE LARGE; UTILIZATION UNKNOWN. (REF. 12B-5)
NO POTENTIAL FOR ENHANCEMENT AT PRESENT. (REF. 12B-5)
HABITAT PROTECTION SHOULD BE FOREMOST PRIORITY, REGULATION/ENFORCEMENT SECOND (REF. 12B-5)
BEST TIME FOR ACCESS TO RIVER IS AT HIGH WATER. (REF. 11-4)
LOTS OF SIDE CHANNELS AND TRIBUTARIES UTILIZED BY FRY. (REF. 12B-20)

J. FISHERY OFFICER NARRATIVE

Date Prepared:     /   /	Prepared By:
--------------------------	--------------

K. SIS COMPLETED BY

Completed by:     GITA KAPAHI	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/15

ESCAPEMENT : NAHWITTI RIVER

WATERSHED-CODE : 92-0300

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	UNK	UNK	0	UNK
1954	1500	1500	7500	1500	0	UNK
1955	1500	1500	UNK	UNK	0	UNK
1956	1500	1500	15000	1500	0	UNK
1957	1500	1500	7500	1500	0	UNK
1958	1500	1500	7500	1500	0	UNK
1959	3500	750	7500	75	0	UNK
1960	1500	1500	7500	400	0	UNK
1961	3500	1500	1500	200	0	UNK
1962	15000	3500	35000	750	0	UNK
1963	3500	400	400	75	0	UNK
1964	1500	3500	7500	400	0	UNK
1965	750	3500	400	200	0	UNK
1966	3500	3500	75000	750	0	UNK
1967	3500	750	0	0	0	UNK
1968	3500	400	62500	N/O	0	UNK
1969	3500	750	400	N/O	0	UNK
1970	3500	7500	110000	750	0	UNK
1971	3500	200	200	N/O	0	UNK
1972	3500	400	22000	N/O	0	UNK
1973	3000	1400	N/O	N/O	0	UNK
1974	4000	2000	11000	N/O	0	UNK
1975	2300	150	80	15	0	UNK
1976	2400	800	175	N/O	0	UNK
1977	1400	65	N/O	N/O	0	UNK
1978	1600	225	400	0	0	UNK
1979	3000	0	0	0	0	UNK
1980	2500	N/O	UNK	0	0	UNK
1981	1150	N/O	N/O	N/O	0	UNK
1982	1000	UNK	UNK	0	0	UNK
1983	250	UNK	N/O	N/O	0	UNK
1984	UNK	UNK	6	UNK	0	UNK
1985	2100	100	25	N/O	N/O	UNK
1986	4500	UNK	400	UNK	UNK	UNK
1987	3000	25	0	0	0	UNK
1988	2500	500	1000	N/O	0	UNK
1989	2400	169	100	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

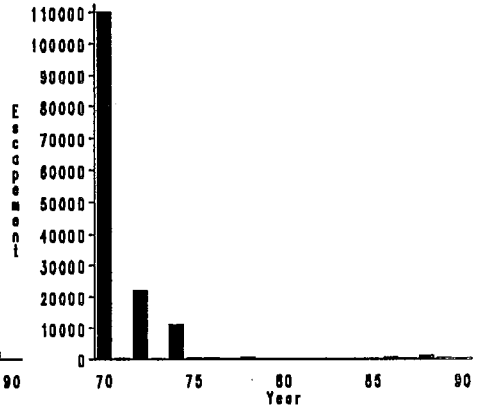
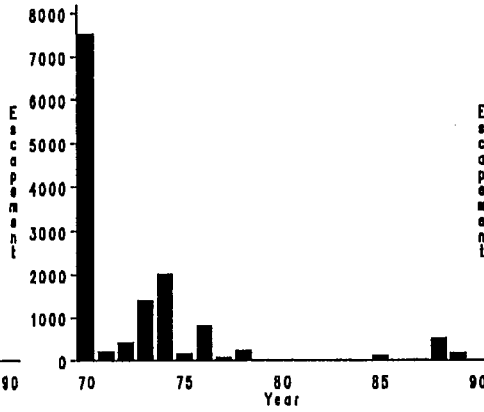
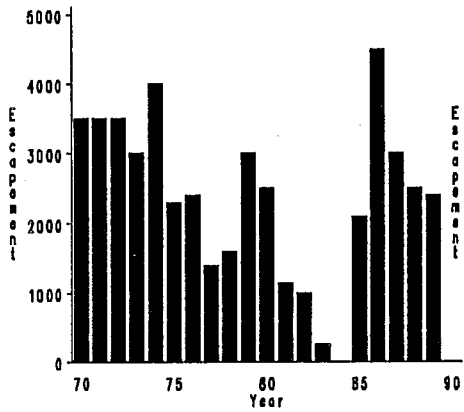
# NAHWITTI RIVER (92-0300)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

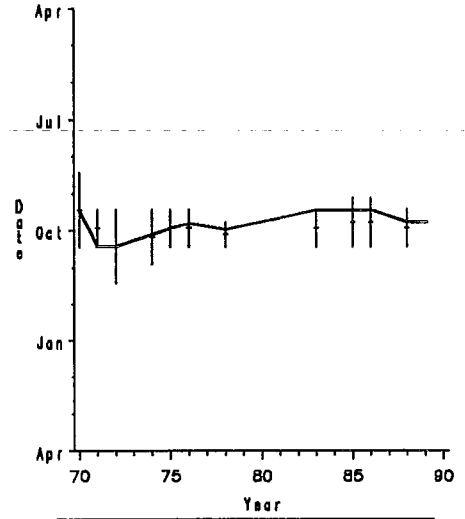
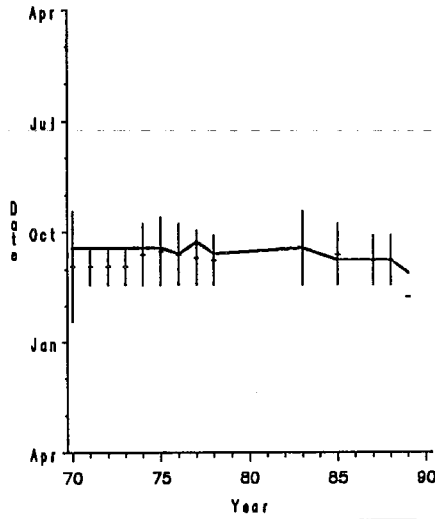
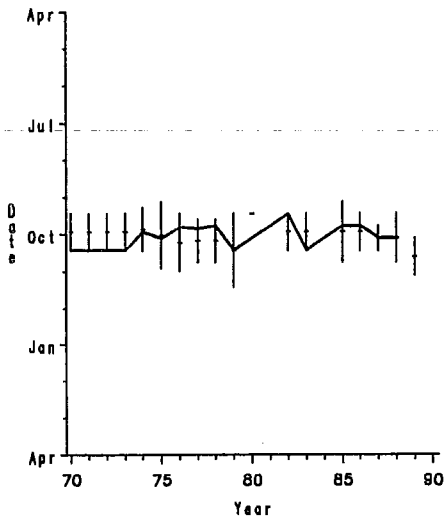
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	15OCT	15OCT
1971	3,500	15SEP	15OCT	15OCT
1972	3,500	15SEP	15OCT	15OCT
1973	3,000	15SEP	15OCT	15OCT
1974	4,000	10SEP	30SEP	15OCT
1975	2,300	05SEP	05OCT	30OCT
1976	1,400	15SEP	20SEP	01NOV
1977	1,400	20SEP	27SEP	25OCT
1978	1,400	20SEP	25SEP	25OCT
1979	3,400	15SEP	15OCT	15NOV
1980	2,500	15SEP	11JUL	-
1981	1,150	-	-	-
1982	1,000	15SEP	15SEP	15OCT
1983	250	15SEP	15OCT	15OCT
1984	-	-	-	-
1985	2,100	05SEP	25SEP	25OCT
1986	4,500	15SEP	25SEP	15OCT
1987	3,000	25SEP	05OCT	15OCT
1988	2,500	15SEP	05OCT	25OCT
1989	2,400	05OCT	-	05NOV

Coho				
Year	Escapement	Start	Peak	End
1970	7,500	15SEP	15OCT	15DEC
1971	200	15OCT	15OCT	15NOV
1972	400	15OCT	15OCT	15NOV
1973	1,400	15OCT	15OCT	15NOV
1974	2,000	25SEP	15OCT	15NOV
1975	150	20SEP	15OCT	15NOV
1976	800	25SEP	20OCT	15NOV
1977	65	01OCT	10OCT	15NOV
1978	225	05OCT	20OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	-	15SEP	15OCT	15NOV
1984	-	-	-	-
1985	100	25SEP	25OCT	15NOV
1986	-	-	-	-
1987	25	05OCT	25OCT	15NOV
1988	500	05OCT	25OCT	15NOV
1989	160	-	05NOV	25NOV

Pink				
Year	Escapement	Start	Peak	End
1970	110,000	15AUG	15SEP	15OCT
1971	200	15SEP	15OCT	15OCT
1972	22,000	15SEP	15OCT	15NOV
1973	0	-	-	-
1974	11,000	15SEP	05OCT	30OCT
1975	80	15SEP	30SEP	15OCT
1976	175	15SEP	20SEP	15OCT
1977	0	-	-	-
1978	400	25SEP	01OCT	15OCT
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	15SEP	15SEP	15OCT
1984	5	-	-	-
1985	25	05SEP	15SEP	15OCT
1986	400	05SEP	15SEP	15OCT
1987	0	-	-	-
1988	1,000	15SEP	25SEP	15OCT
1989	100	25SEP	25SEP	-

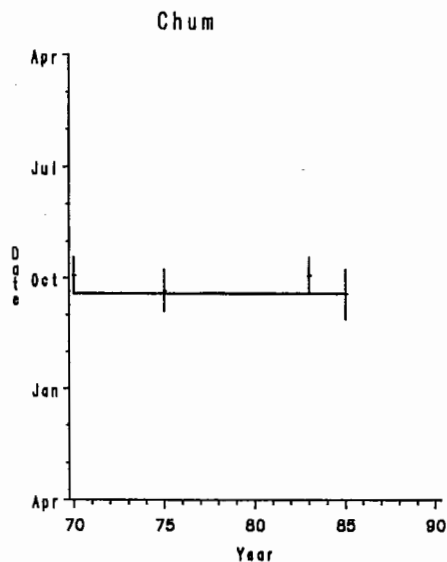
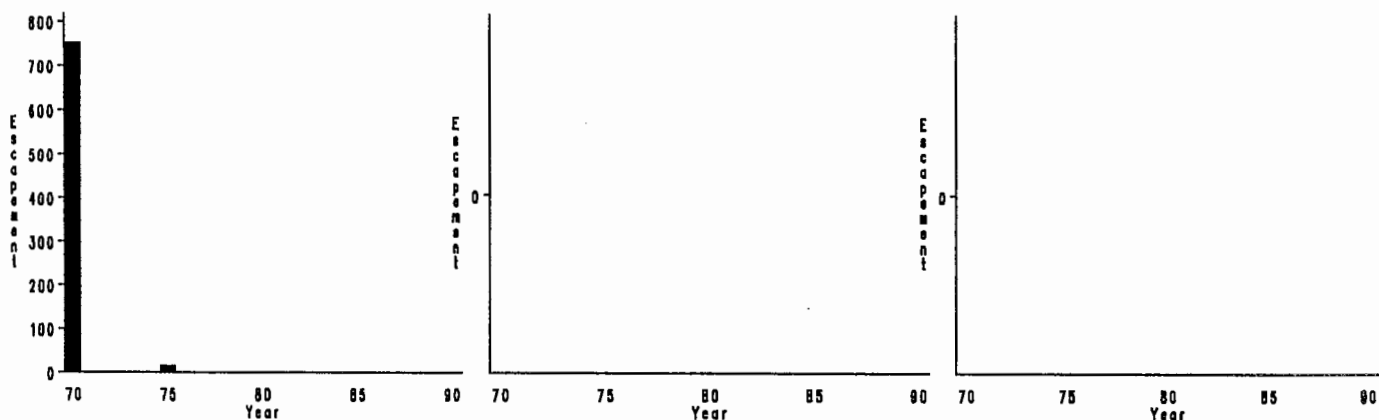
# NAHWITTI RIVER (92-0300)

## Escapement & Run Timing

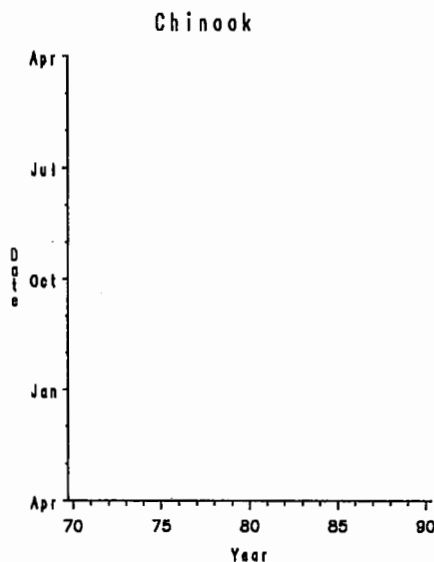
Chum (CM)

Chinook (CH)

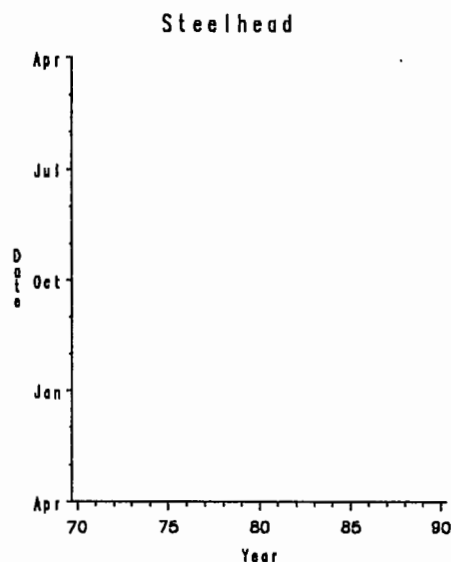
Steelhead (ST)



Chum				
Year	Escapement	Start	Peak	End
1970	750	15SEP	15OCT	15OCT
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	15	25SEP	15OCT	30OCT
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15SEP	15OCT	15OCT
1984	-	-	-	-
1985	0	25SEP	15OCT	05NOV
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

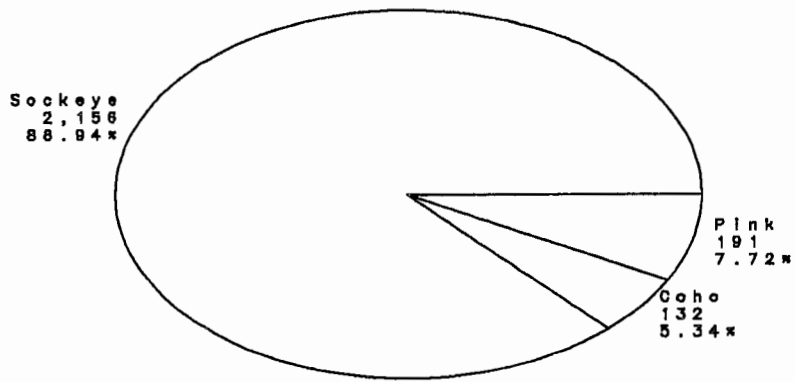


Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

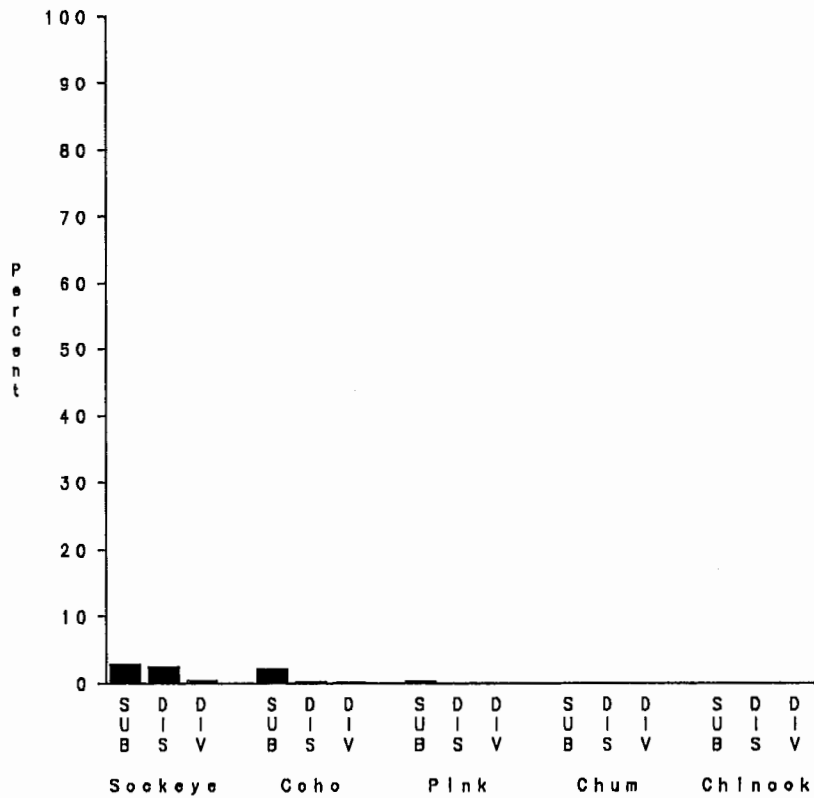


Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

NAHWITTI RIVER (92-0300)  
 10-yr Mean Escapement  
 (1980-1989)



NAHWITTI RIVER : Escapement (1980-1989)  
 Species Escapement as a Proportion of DFO Management Units  
 (ie Subdistrict, District & Division)



A. DESCRIPTION

Stream Name: <b>GODKIN CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0300-030</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12B-15</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 92L/13
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.5760.56274</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: <b>5.5 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLOWS NW AND SW INTO MAHWITTI R.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>NO INFORMATION AVAILABLE</b>				

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
<b>NO INFORMATION AVAILABLE</b>			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
<b>PK PINK SALMON</b>	<b>OBSERVED SPAWNING AT 0.8 KM. (REF. 12B-20)</b>

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by:	ROSS DE MARCO	Date:	1990/06/15
Checked by:	BRIAN TUTTY	Date:	1990/04/30
Last updated by:	MARG ANDERSON	Date:	1991/07/05

**A. DESCRIPTION**

Stream Name: <b>KAINS CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: 92-0300-130	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-15</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/12</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.5879.56163</b>
		Lat./Long. Mouth: <b>50 DG. 41' 45'' 127 DG. 45' 30''</b>
		Mainstem Length: <b>5.2 km</b> Ref. No.: <b>6M-28</b>
		Watershed Area: Ref. No.:
Location: <b>TRIBUTARY TO MAHWITTI</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>NO INFORMATION AVAILABLE</b>				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>SUSCEPTIBLE TO LOW FLOWS (REF. 12B-9)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>OBSERVED SPAWNING IN LOWER REACHES. (REF. 12B-9)</b>
<b>CT CUTTHROAT TROUT</b>	<b>OBSERVED AT 3.2 KM. (REF. 6M-6, REF. 12B-9)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by: <b>GITA KAPAHI</b>	Date: <b>1988/07/03</b>
Last updated by: <b>MARG ANDERSON</b>	Date: <b>1991/07/05</b>

**A. DESCRIPTION**

Stream Name: SHUSHARTIE RIVER	D.F.O. Division: SOUTH COAST
Local Name:	District: 5 CAMPBELL RIVER
Watershed Code: 92-0500	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12-15
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/13
		B.C.G.S. (1:20k) Map: 081
		U.T.M. Mouth: 9.5797.56331
		Lat./Long. Mouth: 50 DG. 50' 49" 127 DG. 52' 13"
		Mainstem Length: 19.1 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS W. INTO SHUSHARTIE BAY, E. OF NAHMITTI R.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				PASSABLE LOG JAMS THROUGHOUT(1976) (REF. 12B-1)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: DURING VERY LOW WATER THIS STREAM DRIES FOR 200 YDS AT 1.6KM (1953) (REF. 12B-1)	
150 CFS (MODERATE FLOW) MAR. 27/1980 (REF. 12B-5)	
LOW WATER PROBLEMS, BUT GOOD ACCESS. (REF. 12B-12)	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
SK SOCKEYE SALMON	TO SHUSHARTIE LAKE. HISTORICAL REFERENCE. NOT SEEN SINCE 1971. (REF. 12B-1, REF. 12B-9)
CO COHO SALMON	THROUGHOUT, OBSERVED AT 14.4 KM. (REF. 12B-1, REF. 12B-20)
PK PINK SALMON	LOWER REACHES TO LAKE. (REF. 12B-1, REF. 12B-9)
CM CHUM SALMON	LOWER REACHES (REF. 12B-1)
ST STEELHEAD	PRESENCE NOTED. (REF. 12B-5)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON		1980 - 1989				500	12B-20
CO COHO SALMON	29	1980 - 1989	28A-18	100	28A-18	2500	12B-20

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK PINK SALMON	700	1980 - 1988	28A-18	3000	28A-18	200000	12B-20
PK PINK SALMON	88	1981 - 1989	28A-18	200	28A-18		
CM CHUM SALMON		1980 - 1989				1000	12B-20
Comments: INSPECTIONS SINCE 1975 HAVE BEEN NON REPRESENTATIVE DUE TO ACCESS PROBLEMS AND STAFF SHORTAGES THAT RECENT ENUMERATIONS ARE SKETCHY. MANY TIMES WHEN INSPECTED NO FISH WERE OBSERVED, THEREFORE 10 YR. AVE. IS NOT REPRESENTATIVE. HISTORICAL AVE. DONE 1965-75 (REF. 12B-9)							
SOCKEYE ONLY OBSERVED IN 1970 - 1971. (REF. 12B-9)							
STREAM IS FISHED OUT. LACK OF PATROL. (REF. 12B-12)							
CO GOOD HISTORY PRE 1972 PRESENT ESCAPEMENT RECORDED 1985(100) AND 1989(100) CM PAST HISTORY GOOD PRE 1974 (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SK SOCKEYE SALMON	Migration Spawning Incubation Rearing					X X	X X	X X	X X	X X	X		
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X
PK PINK SALMON	Migration Spawning Incubation Rearing									X X X	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing										X X X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
TR TRANSPLANT	PK PINK SALMON	0.0	PROPOSED FOR 1983 (REF. 12B-12)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	RICHMOND PLYWOOD ACCESSING UPPER WATERSHED IN 1988. (REF. 12B-9)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

THIS IS A SMALL UNLOGGED STREAM. UNSTABLE SOILS WITH EXTENSIVE SLUMPS AND SLIDES IN SOME REACHES BELOW SHUSHARTIE LAKE. (REF. 12B-5)
EXCELLENT REARING HABITAT NEAR URSIE CREEK CONFLUENCE. EXTENSIVE BRAIDING IN FIRST MILE ABOVE ESTUARY. (REF. 12B-5)
NO ENHANCEMENT POTENTIAL. (REF. 12B-5)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS CONTINUED

SHUSHARTIE RIVER TO BE ACCESSED VIA RICH PLY FOREST INDUSTRIES LTD. IN 1988 WHICH WILL ASSIST IN LOCAL STAFF BEING ABLE TO BETTER EMUMERATE SYSTEM. (REF. 12B-9)

LOTS OF SIDE CHANNELS, UTILIZED BY CO FRY. (REF. 12B-20)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /

Prepared By:

K. SIS COMPLETED BY

Completed by: GITA KAPAHI  
Last updated by: MARG ANDERSON

Date: 1988/06/23  
Date: 1991/07/05

ESCAPEMENT : SHUSHARTIE RIVER

WATERSHED-CODE : 92-0500

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	25	750	0	0	UNK
1954	0	1500	7500	1500	0	UNK
1955	0	7500	750	200	0	UNK
1956	N/O	750	35000	750	0	UNK
1957	N/O	1500	1500	750	0	UNK
1958	1500	3500	35000	1500	0	UNK
1959	1500	750	750	75	0	UNK
1960	1500	400	750	400	0	UNK
1961	750	750	1500	200	0	UNK
1962	N/O	400	3500	750	0	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	3500	3500	15000	400	0	UNK
1965	N/O	3500	7500	400	0	UNK
1966	N/O	750	15000	400	0	UNK
1967	N/O	200	75	N/O	0	UNK
1968	N/O	200	7500	N/O	0	UNK
1969	N/O	25	0	200	0	UNK
1970	400	400	3500	200	0	UNK
1971	200	200	200	25	0	UNK
1972	N/O	20	400	N/O	0	UNK
1973	N/O	N/O	N/O	N/O	0	UNK
1974	N/O	80	250	40	0	UNK
1975	N/O	N/O	N/O	N/O	0	UNK
1976	N/O	N/O	60	N/O	0	UNK
1977	N/O	N/O	N/O	N/O	0	UNK
1978	N/O	N/O	N/O	N/O	0	UNK
1979	N/O	N/O	N/O	N/O	0	UNK
1980	N/O	N/O	3000	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	0	UNK	200	0	0	UNK
1983	N/O	N/O	100	N/O	0	UNK
1984	N/O	N/O	N/O	N/O	0	UNK
1985	N/O	100	N/O	N/O	N/O	UNK
1986	0	UNK	200	UNK	UNK	UNK
1987	0	0	50	0	0	UNK
1988	N/O	N/O	100	N/O	0	UNK
1989	UNK	100	200	N/O	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

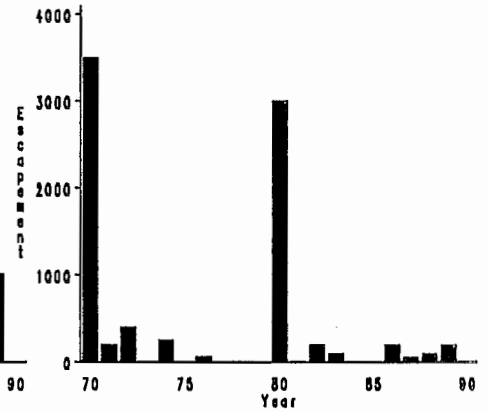
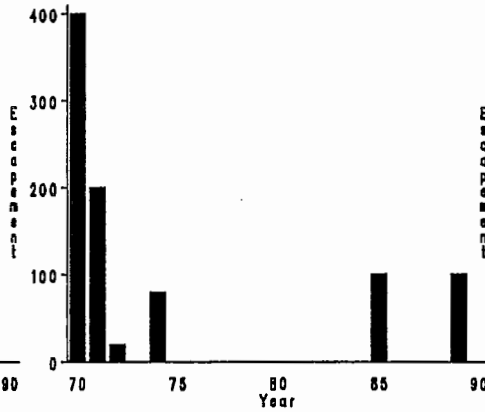
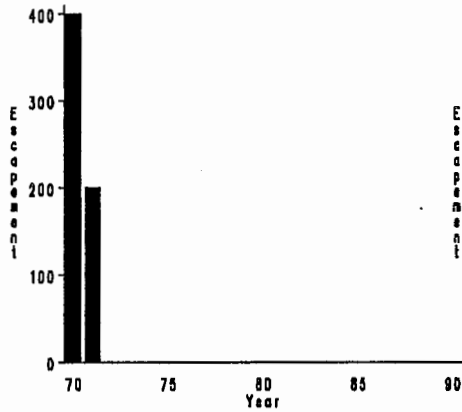
# SHUSHARTIE RIVER (92-0500)

## Escapement & Run Timing

sockeye (SK)

Coho (CO)

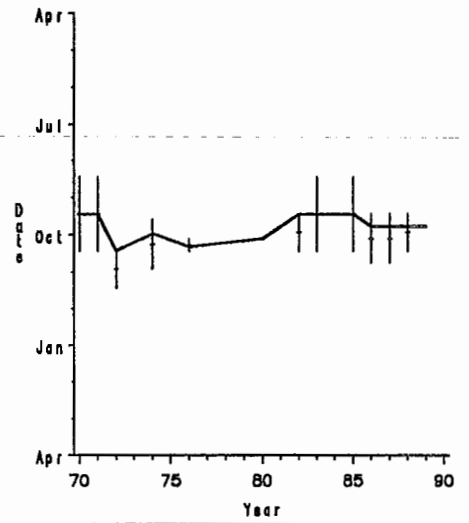
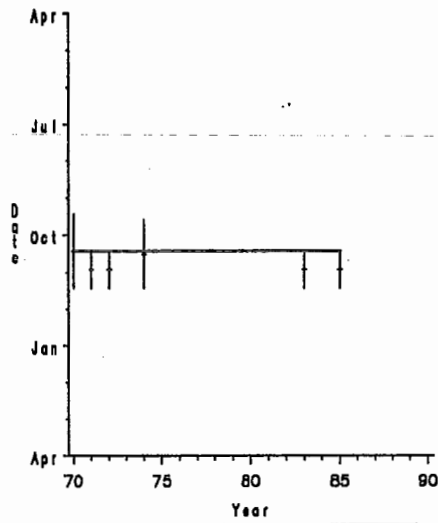
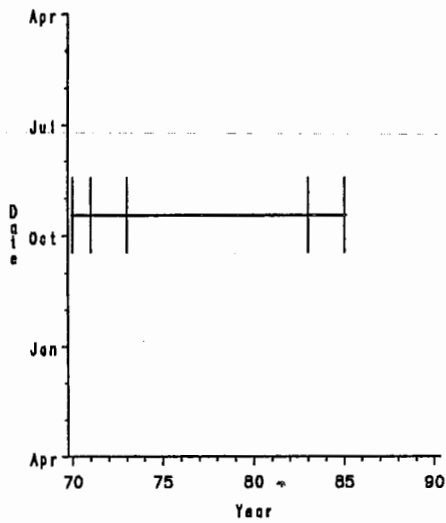
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	400	15AUG	15SEP	15OCT
1971	200	15AUG	15SEP	15OCT
1972	0	-	-	-
1973	0	15AUG	15SEP	15OCT
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	15AUG	15SEP	15OCT
1984	0	-	-	-
1985	0	15AUG	15SEP	15OCT
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	400	15SEP	15OCT	15NOV
1971	200	15OCT	15OCT	15NOV
1972	20	15OCT	15OCT	15NOV
1973	0	-	-	-
1974	80	20SEP	15OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	15OCT	15OCT	15NOV
1984	0	-	-	-
1985	100	15OCT	15OCT	15NOV
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	100	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	3,500	15AUG	15SEP	15OCT
1971	200	15AUG	15SEP	15OCT
1972	400	15OCT	15OCT	15NOV
1973	0	-	-	-
1974	250	20SEP	01OCT	30OCT
1975	0	-	-	-
1976	80	08OCT	12OCT	15OCT
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	3,000	-	05OCT	-
1981	-	-	-	-
1982	200	15SEP	15SEP	15OCT
1983	100	15AUG	15SEP	15OCT
1984	0	-	-	-
1985	0	15AUG	15SEP	15OCT
1986	200	15SEP	25SEP	25OCT
1987	50	15SEP	25SEP	25OCT
1988	100	15SEP	25SEP	15OCT
1989	200	-	25SEP	-

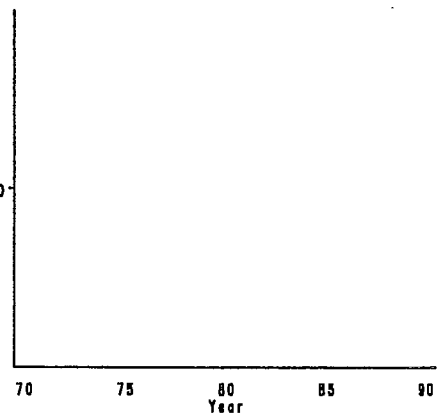
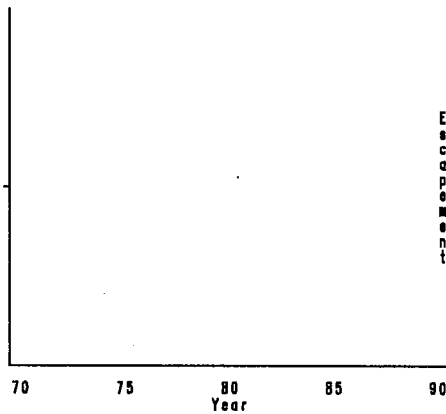
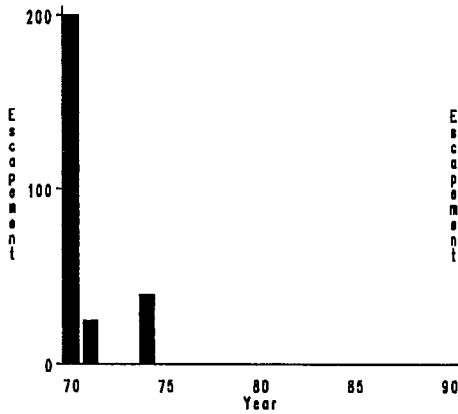
# SHUSHARTIE RIVER (92-0500)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

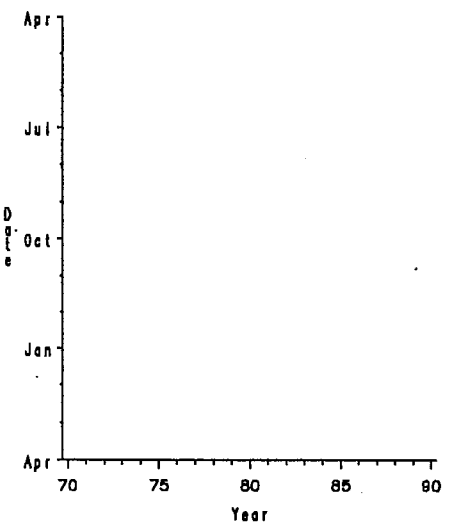
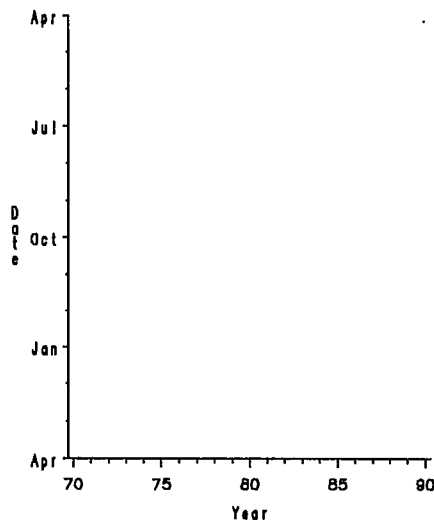
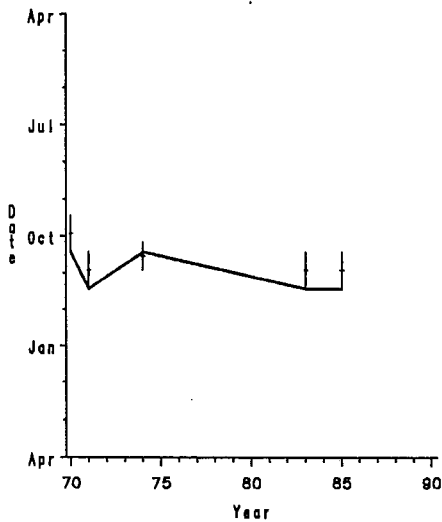
Steelhead (ST)



Chum

Chinook

Steelhead



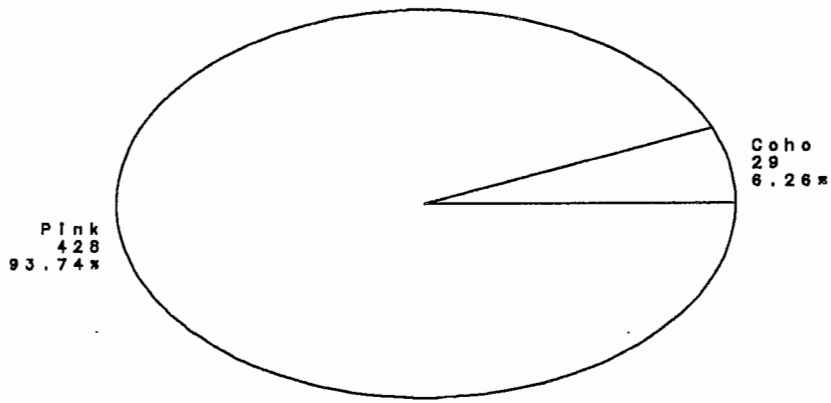
Chum				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15OCT	15OCT
1971	25	15OCT	15NOV	15NOV
1972	0	-	-	-
1973	0	-	-	-
1974	40	07OCT	15OCT	30OCT
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15OCT	15NOV	15NOV
1984	0	-	-	-
1985	0	15OCT	15NOV	15NOV
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

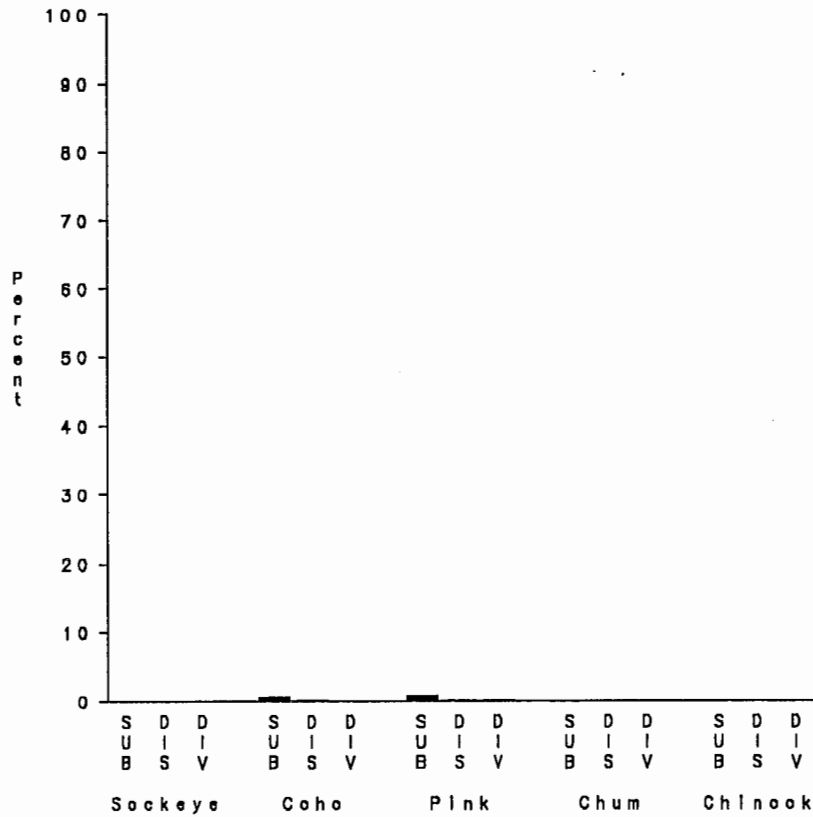
# SHUSHARTIE RIVER (92-0500)

10-yr Mean Escapement  
(1980-1989)



## SHUSHARTIE RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: <b>SONGHEES CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>DEEP CREEK, SONGHEES RIVER</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0700</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/13</b>
		B.C.G.S. (1:20k) Map: <b>073</b>
		U.T.M. Mouth: <b>9.6005.56266</b>
		Lat./Long. Mouth: <b>50 06. 47' 02'' 127 06. 34' 32''</b>
		Mainstem Length: <b>23.0 km</b> Ref. No.: <b>6M-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLOWS N.E. INTO GOLETAS CHAN., FROM GEORGIE LAKE.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>C CASCADE</b>		<b>3.2</b>	<b>CO COHO SALMON</b>	<b>(REF. 12B-1)</b>

**C. FLOW**

Flow Control: W.S.C. Station No. 1:	Water Survey of Canada (WSC) Flow Gauge: No. 2:	No. 3:	No. 4:
Comments: <b>VERY PRONE TO SUMMER DRYING. DRIED IN 1987, NO FISH OBSERVED. (REF. 12B-9)</b>			
<b>FED BY GEORGIE LAKE: AREA - 4.9 SQ.KM; PERIMETER - 20.1 KM. LAKE OF THE MOUNTAINS: AREA - 1.8 SQ.KM; PERIMETER - 10.2 KM. (REF. 6M-28)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>TO CASCADE AT 3.2 KM. (REF. 12B-1)</b>
<b>PK PINK SALMON</b>	<b>LOWER REACHES (REF. 12B-1)</b>
<b>CM CHUM SALMON</b>	<b>LOWER REACHES (REF. 12B-1)</b>
<b>CH CHINOOK SALMON</b>	<b>HISTORICAL PRESENCE. (REF. 12B-20)</b>
<b>CT CUTTHROAT TROUT</b>	<b>OBSERVED IN LAKES. (REF. 14-5)</b>
<b>DV DOLLY VARDEN</b>	<b>OBSERVED IN LAKES. (REF. 14-5)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>		<b>1980 - 1989</b>				<b>250</b>	<b>12B-20</b>

**E. ESCAPEMENT SUMMARY CONTINUED**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK PINK SALMON	28	1980 - 1988	28A-18	300	28A-18	5000	12B-20
PK PINK SALMON		1981 - 1989		100			
CM CHUM SALMON		1980 - 1989				500	12B-20
ST STEELHEAD	136	1954 - 1963	28A-18	200	28A-18		

Comments: DUE TO LACK OF OBSERVATIONS IN PAST 10 YEARS, MEAN TAKEN USING YEARS 1965 - 78 INCLUSIVE FOR HISTORICAL REFERENCE. CHUM ONLY OBSERVED IN 1970 (25 PCS). SYSTEM HAS SHOWN DECLINE IN ESCAPEMENT SINCE 1978 WITH LITTLE OR NO FISH OBSERVED. (REF. 12B-9)

ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)

CO PAST HISTORY PRE 1974 CM PAST HISTORY PRE 1964 (REF. 28A-18)

PK EVEN ESCAPEMENT FOR 1982(300) ONLY PK ODD ESCAPEMENT FOR 1983(100) AND 1985(10) ONLY (REF. 28A-18)

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO CCHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X	
PK PINK SALMON	Migration Spawning Incubation Rearing									X X X	X X		

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	GEORGIE LAKE ACCESSED BY RICHMOND PLYWOOD LOGGING LTD. IN 1986. PRESENTLY LOGGING ON SOUTH SIDE OF LAKE (1988) (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS SYSTEM IS PRONE TO VARIED FLUCTUATIONS IN WATER LEVELS AND IN FACT DRIED AT MOUTH IN 1987. (REF. 12B-9)
LIMITED SPawning AREA. HAS POTENTIAL AND COULD BE ENHANCED; FISH NOT SEEN FOR SOME TIME. (REF. 12B-20)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by:	GITA KAPAHI	Date:	1988/06/23
Last updated by:	MARG ANDERSON	Date:	1991/07/05

ESCAPEMENT : SONGHEES CREEK

WATERSHED-CODE : 92-0700

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	400	UNK	0	UNK
1954	0	200	750	0	0	UNK
1955	0	200	200	UNK	0	UNK
1956	0	400	750	0	0	UNK
1957	0	400	750	400	0	UNK
1958	0	400	1500	1500	0	UNK
1959	0	75	200	200	0	UNK
1960	0	75	400	200	0	UNK
1961	0	75	200	200	0	UNK
1962	0	200	3500	25	0	UNK
1963	0	75	75	N/O	0	UNK
1964	0	N/O	3500	200	0	UNK
1965	0	25	75	N/O	0	UNK
1966	0	75	1500	N/O	0	UNK
1967	0	N/O	N/O	N/O	0	UNK
1968	0	N/O	3500	N/O	0	UNK
1969	0	N/O	25	N/O	0	UNK
1970	0	200	200	25	0	UNK
1971	0	25	N/O	N/O	0	UNK
1972	0	40	1800	N/O	0	UNK
1973	0	50	40	0	0	UNK
1974	0	50	3000	N/O	0	UNK
1975	0	N/O	N/O	N/O	0	UNK
1976	0	N/O	3500	N/O	0	UNK
1977	0	N/O	N/O	N/O	0	UNK
1978	0	20	2300	N/O	0	UNK
1979	0	N/O	N/O	N/O	0	UNK
1980	0	N/O	N/O	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	0	UNK	300	0	0	UNK
1983	0	N/O	100	0	0	UNK
1984	0	N/O	N/O	N/O	0	UNK
1985	UNK	N/O	10	UNK	UNK	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	N/O	N/O	N/O	0	UNK
1988	0	UNK	UNK	UNK	0	UNK
1989	N/O	N/O	N/O	N/O	N/O	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

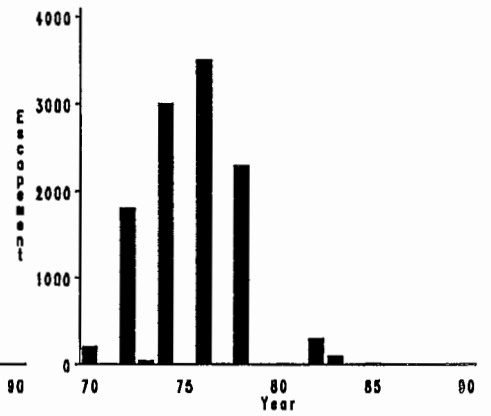
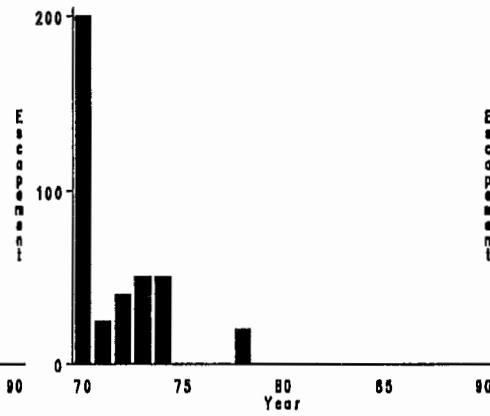
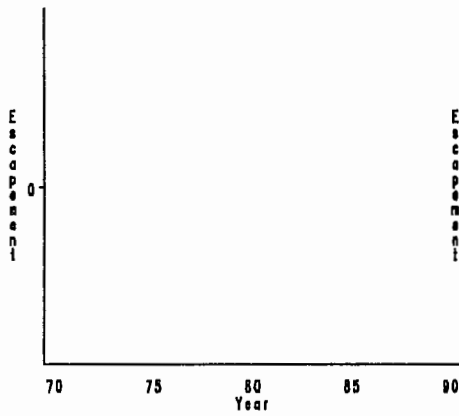
# SONGHEES CREEK (92-0700)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

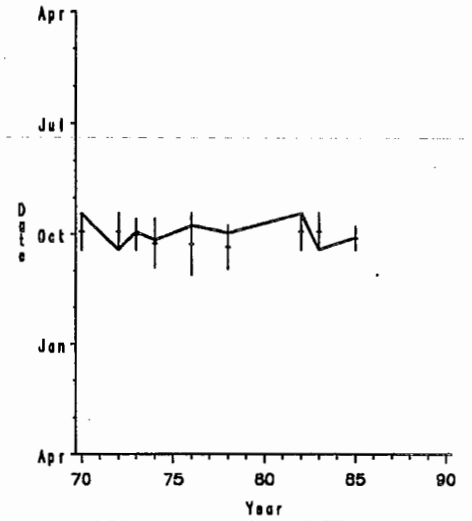
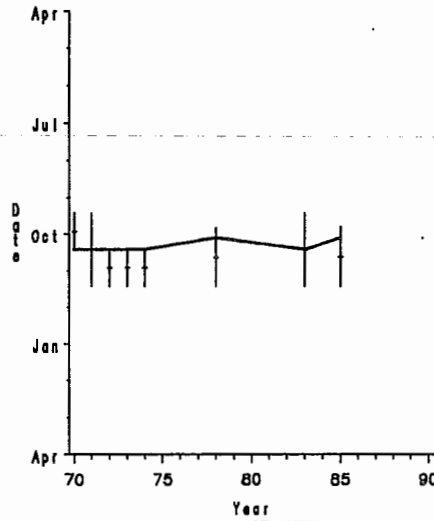
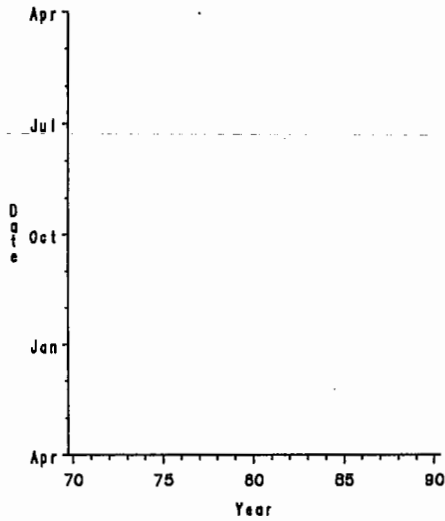
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15OCT	15OCT
1971	25	15SEP	15OCT	15NOV
1972	40	15OCT	15OCT	15NOV
1973	50	15OCT	15OCT	15NOV
1974	50	15OCT	15OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	20	27SEP	05OCT	15NOV
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15SEP	15OCT	15NOV
1984	0	-	-	-
1985	0	20SEP	05OCT	15NOV
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15SEP	15OCT
1971	0	-	-	-
1972	1,800	15SEP	15OCT	15OCT
1973	40	20SEP	30SEP	15OCT
1974	3,000	20SEP	07OCT	30OCT
1975	0	-	-	-
1976	3,500	15SEP	25SEP	05NOV
1977	0	-	-	-
1978	2,300	25SEP	01OCT	31OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	300	15SEP	15SEP	15OCT
1983	100	15SEP	15OCT	15OCT
1984	0	-	-	-
1985	10	20SEP	05OCT	15OCT
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

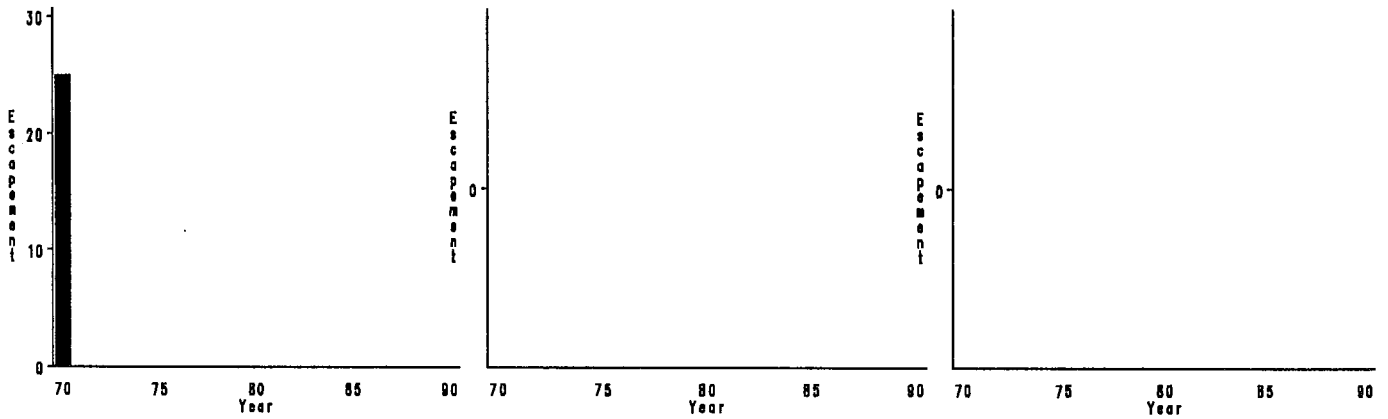
# SONGHEES CREEK (92-0700)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

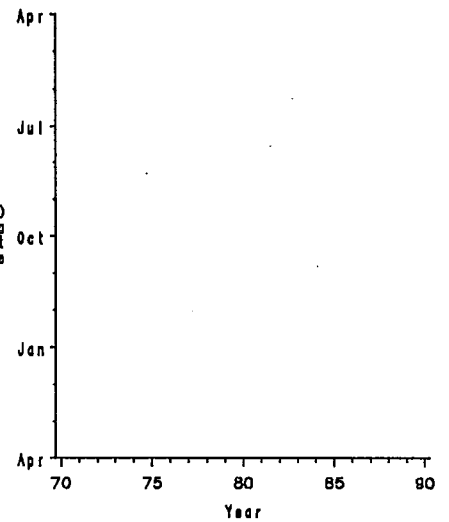
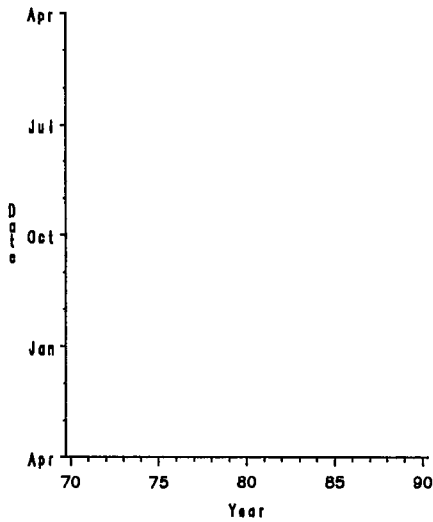
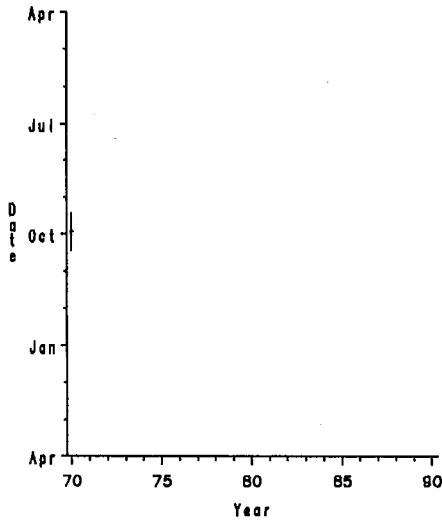
Steelhead (ST)



Chum

Chinook

Steelhead



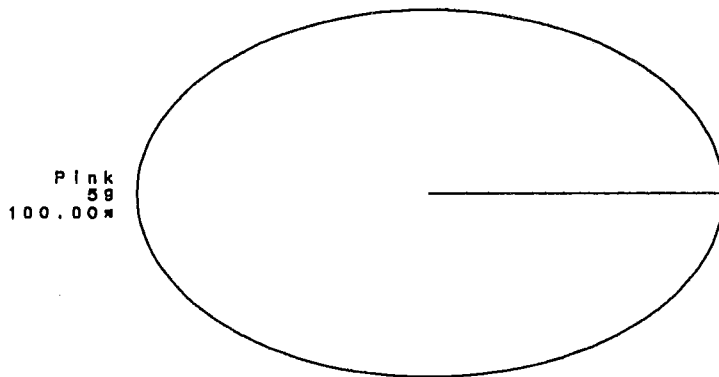
Chum				
Year	Escapement	Start	Peak	End
1970	25	15SEP	15OCT	15OCT
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	-	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

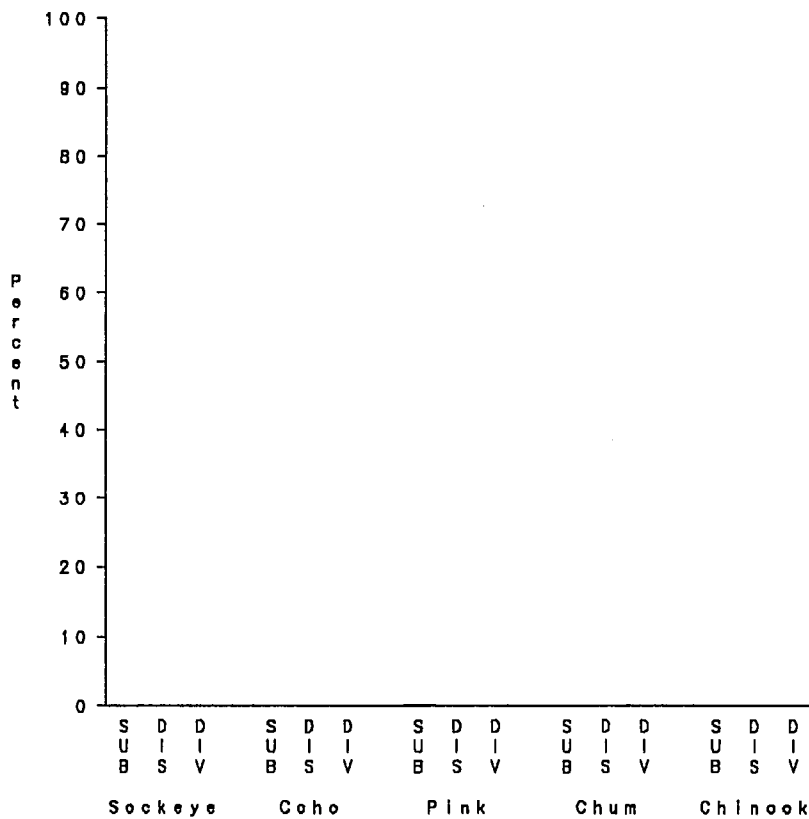
# SONGHEES CREEK (92-0700)

10-yr Mean Escapement  
(1980-1989)



## SONGHEES CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: <b>TSULQUATE RIVER</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>SILQUODY RIVER</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0800</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/11</b>
		B.C.G.S. (1:20k) Map: <b>073</b>
		U.T.M. Mouth: <b>9.6063,56208</b>
		Lat./Long. Mouth: <b>50 DG. 44' 09'' 127 DG. 29' 42''</b>
		Mainstem Length: <b>18.2 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLows E. INTO HARDY BAY, N. OF PORT HARDY.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>	<b>8.0</b>			<b>HISTORICAL BARRIER TO MIGRATION. (REF. 18-19, REF. 12B-20)</b>
<b>D DAM</b>		<b>1.0</b>	<b>AF ALL SPECIES</b>	<b>A SMALL WEIR WAS CONSTRUCTED BY THE VILLAGE OF PORT HARDY FOR THEIR WATER SUPPLY. THIS WEIR WAS PROVIDED WITH A FISHWAY WHICH IS CURRENTLY IMPASSABLE (1990). (REF. 18-19, REF. 12B-9, REF. 12B-20)</b>
<b>D DAM</b>	<b>2.0</b>	<b>14.0</b>		<b>A STORAGE DAM ON KAINS LAKE WAS BUILT TO STORE 1000 ACRE FT OF WATER. (REF. 18-19)</b>

**C. FLOW**

Flow Control: <b>Y</b>	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: <b>LESS THAN 10 CFS. FLASHY. (REF. 12B-12)</b>	
<b>FED BY KAINS LAKE: AREA - 2.2 SQ.KM; PERIMETER - 10.2 KM. (REF. 6N-28)</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>TO NEW WEIR AT 1.0 KM. (REF. 12B-9, REF. 12B-20)</b>
<b>PK PINK SALMON</b>	<b>TO NEW WEIR AT 1.0 KM. (REF. 12B-9, REF. 12B-20)</b>
<b>CM CHUM SALMON</b>	<b>MOSTLY IN THE LOWER REACH. (REF. 12B-9, REF. 12B-20)</b>
<b>CT CUTTHROAT TROUT</b>	<b>OBSERVED IN KAINS LAKE. (REF. 14-5)</b>
<b>DV DOLLY VARDEN</b>	<b>OBSERVED IN KAINS LAKE. (REF. 14-5)</b>

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON		1980 - 1989		10	28A-18	500	12B-20
PK PINK SALMON	1655	1980 - 1988	28A-18	4500	28A-18	35000	12B-20
PK PINK SALMON	174	1981 - 1989	28A-18	400	28A-18		
CM CHUM SALMON	56	1980 - 1989	28A-18	500	28A-18	5000	12B-20
ST STEELHEAD	72	1953 - 1962	28A-18	200	28A-18		
Comments: ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)							
CO GOOD HISTORY PRE 1976 PRESENT ESCAPEMENT 1987(10) ONLY CM GOOD HISTORY PRE 1976 PRESENT ESCAPEMENT 1986(500) AND 1985(5) (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	P X	
PK PINK SALMON	Migration Spawning Incubation Rearing								X	X P	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing										X X P		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	ST STEELHEAD		SURPLUS FRY FROM QUATSE HATCHERY. (REF. 13-10)	/
FC FLOW CONTROL	AF ALL SPECIES	14.0	FISHERIES RELEASE FLOWS ARE BEING STUDIED (1989). (REF. 18-19)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
WW WATER WITHDRAWAL	PORT HARDY WATER SUPPLY (REF. 12B-12)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

PT. HARDY TOWNSHIP IS GOING AHEAD WITH PLANS TO CONSTRUCT ANOTHER DAM AT THE HEADWATERS FOR ADDITIONAL WATER STORAGE (1974) (REF. 12B-1)
THIS RIVER IS SUBJECT TO INDIAN FOOD FISHING (1968) (REF. 12B-1)
NO INDIAN FOOD FISHING CURRENTLY TAKES PLACE ON CREEK, HOWEVER RIVER HAS BEEN SUSCEPTIBLE TO JIGGING AND NETTING BY LOCALS ON AN ANNUAL BASIS. (1988 INFORMATION) (REF. 12B-9)
INCUBATION POTENTIAL NOT KNOWN. 2.5KM OF POOR SUBSTRATE. (REF. 12B-12)



ESCAPEMENT : TSULQUATE RIVER

WATERSHED-CODE : 92-0800

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	1500	3500	1500	0	UNK
1954	0	1500	3500	400	0	UNK
1955	0	1500	75	400	0	UNK
1956	0	400	1500	400	0	UNK
1957	0	25	3500	750	0	UNK
1958	0	1500	7500	3500	0	UNK
1959	0	75	750	75	0	UNK
1960	0	75	400	200	0	UNK
1961	0	200	750	400	0	UNK
1962	0	200	400	400	0	UNK
1963	0	75	200	75	0	UNK
1964	0	400	3500	750	0	UNK
1965	0	75	75	25	0	UNK
1966	0	400	15000	75	0	UNK
1967	0	25	N/O	25	0	UNK
1968	0	400	15000	3500	0	UNK
1969	0	400	200	400	0	UNK
1970	0	400	35000	200	0	UNK
1971	0	400	400	25	0	UNK
1972	0	60	4500	550	0	UNK
1973	0	150	7000	425	0	UNK
1974	0	75	11000	500	0	UNK
1975	0	70	2300	30	0	UNK
1976	0	60	37000	30	0	UNK
1977	0	N/O	30	N/O	0	UNK
1978	0	N/O	28000	10	0	UNK
1979	0	10	16	N/O	0	UNK
1980	0	N/O	4500	N/O	0	UNK
1981	0	0	400	0	0	UNK
1982	0	UNK	200	0	0	UNK
1983	0	N/O	12	N/O	0	UNK
1984	0	N/O	1000	N/O	0	UNK
1985	N/O	UNK	100	UNK	N/O	UNK
1986	0	UNK	1500	500	UNK	UNK
1987	0	10	60	5	0	UNK
1988	0	UNK	1075	N/O	0	UNK
1989	UNK	N/O	300	N/O	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

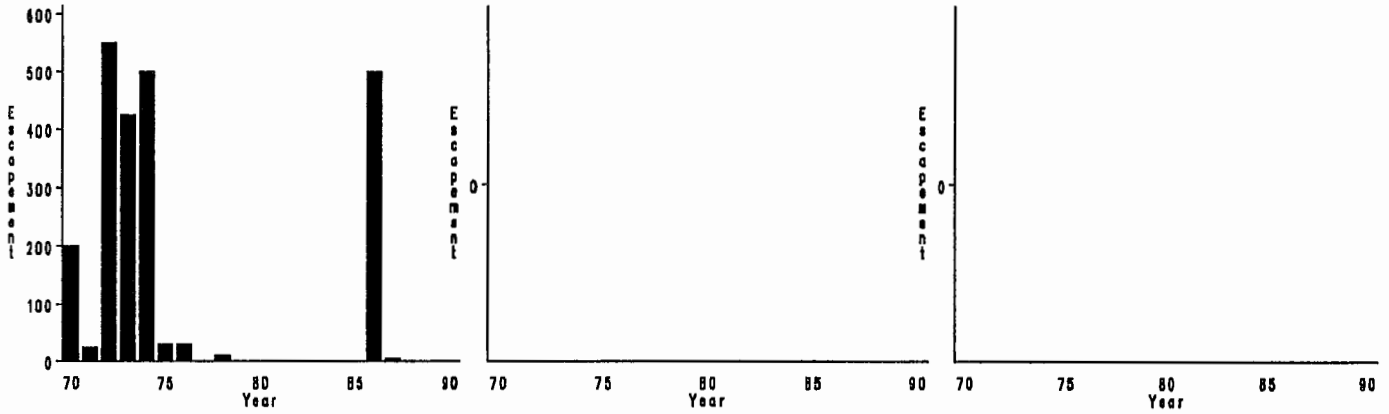
# TSULQUATE RIVER (92-0800)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

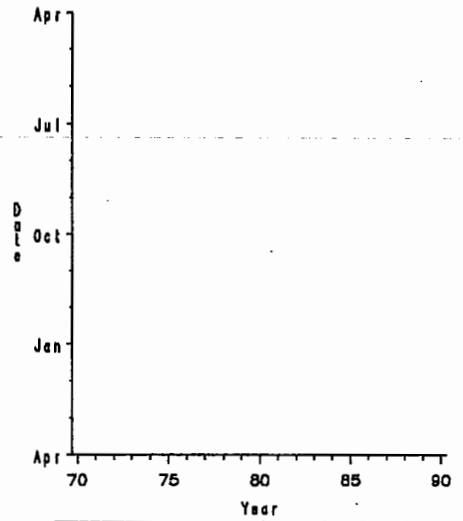
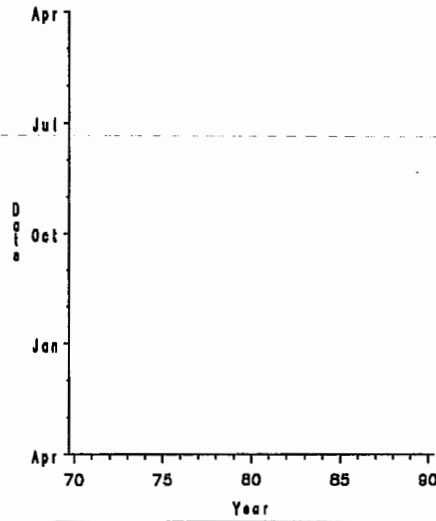
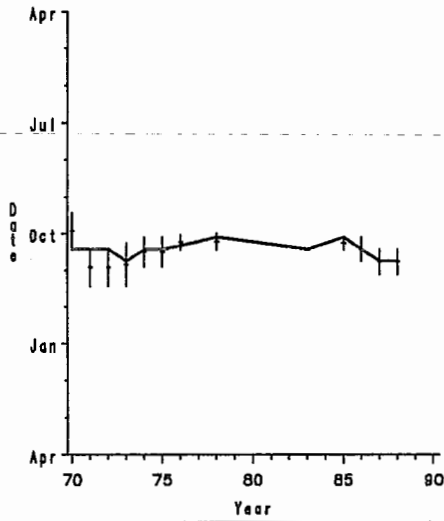
Steelhead (ST)



Chum

Chinook

Steelhead



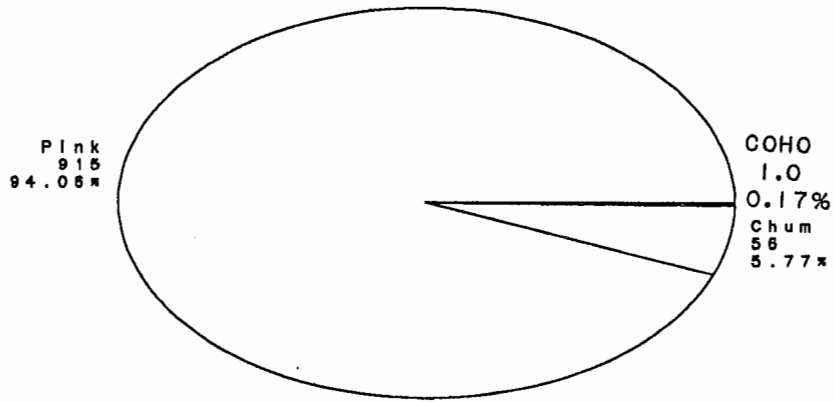
Chum				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15OCT	13OCT
1971	25	15OCT	15OCT	15NOV
1972	550	15OCT	15OCT	15NOV
1973	425	10OCT	25OCT	15NOV
1974	500	08OCT	15OCT	30OCT
1975	30	05OCT	15OCT	30OCT
1976	30	03OCT	12OCT	15OCT
1977	0	-	-	-
1978	10	02OCT	05OCT	15OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15OCT	15OCT	15OCT
1984	0	-	-	-
1985	-	05OCT	05OCT	15OCT
1986	500	05OCT	15OCT	25OCT
1987	5	15OCT	25OCT	05NOV
1988	0	15OCT	25OCT	05NOV
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

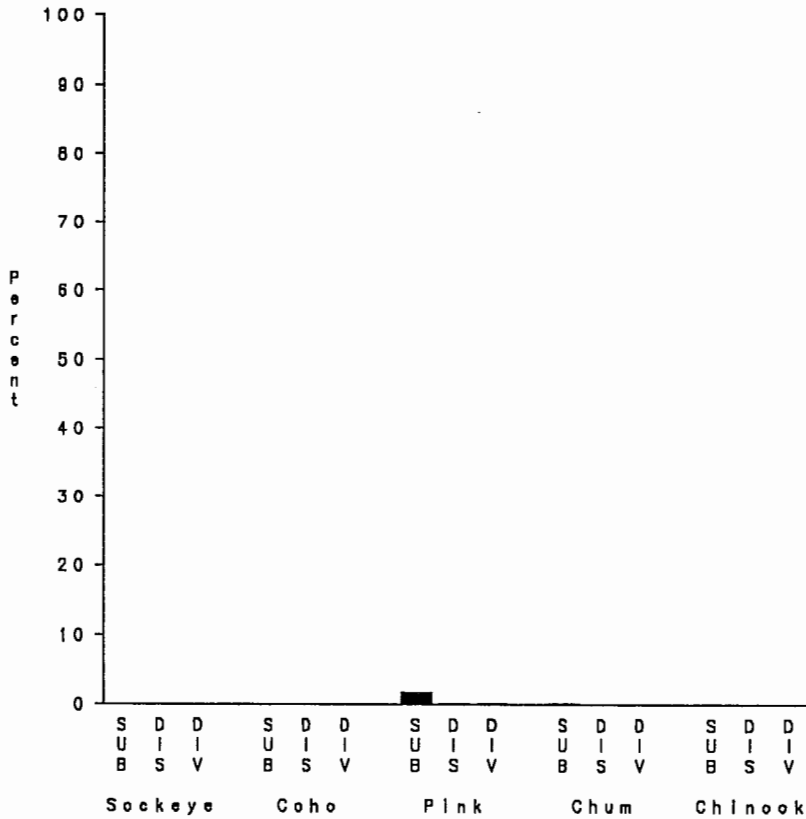
# TSULQUATE RIVER (92-0800)

10-yr Mean Escapement  
(1980-1989)



## TSULQUATE RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
TR TRANSPLANT	CO COHO SALMON ST STEELHEAD		OUTPLANTED FROM QUATSE HATCHERY. (REF. 12B-20)	/
FW FISHWAY	CO COHO SALMON ST STEELHEAD	0.5	SEP PROJECT. (REF. 12B-20)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: ROSS DE MARCO	Date: 1990/06/18
Checked by: BRIAN TUTTY	Date: 1990/04/30
Last updated by: MARG ANDERSON	Date: 1991/07/05

**A. DESCRIPTION**

Stream Name: QUATSE RIVER	D.F.O. Division: SOUTH COAST
Local Name:	District: 5 CAMPBELL RIVER
Watershed Code: 92-0900	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12-16
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/11
DICK BOOTH CREEK	220	B.C.G.S. (1:20k) Map: 063
BLUEBELL CREEK	930	U.T.M. Mouth: 9.6073.56172
		Lat./Long. Mouth: 50 DG. 41' 56'' 127 DG. 28' 36''
		Mainstem Length: 19.0 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS N. INTO HARDY BAY, S. OF PORT HARDY.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		3.0		VELOCITY BARRIER. (REF. 12B-20)
D DAM		11.9		AT LAKE FOR FLOW CONTROL, NOT AN ACCESS PROBLEM. (REF. 12B-9)
F FALLS	6.0	17.7		AT 3 KM ABOVE QUATSE LAKE. (REF. 12B-9)

**C. FLOW**

Flow Control: Y	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: EXTENSIVE LOGGING OPERATIONS AROUND QUATSE LAKE APPEARS TO BE AFFECTING THE LEVEL OF THE LAKE WHICH REACHED AN ALL TIME LOW FOR A SHORT PERIOD, 1949. LOCAL REPORTS INDICATE THE HIGHEST AND LOWEST WATER LEVELS IN HISTORY FOR THIS WATERSHED (1950) (REF. 12B-1)			
DAM IS FOR WATER RELEASE. (REF. 12B-9)			
FED BY QUATSE LAKE: AREA - 1.5 SQ.KM; PERIMETER - 8.7 KM. (REF. 6N-28)			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
SK SOCKEYE SALMON	OBSERVED SPAWNING ABOVE QUATSE LAKE. (REF. 12B-20)
CO COHO SALMON	OBSERVED SPAWNING ABOVE QUATSE LAKE, AND PRESENT IN TRIBUTARIES. (REF. 12B-20)
PK PINK SALMON	SPAWNING BELOW 10.0 KM. (REF. 12B-20)
CM CHUM SALMON	SPAWNING BELOW FIRST FISHWAY AT 3.0 KM. (REF. 12B-20)
ST STEELHEAD	OBSERVED SPAWNING ABOVE QUATSE LAKE. (REF. 12B-20)
CT CUTTHROAT TROUT	OBSERVED IN QUATSE LAKE. (REF. 14-5, REF. 12B-20)
DV DOLLY VARDEN	OBSERVED IN QUATSE LAKE. (REF. 14-5)

D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
KO KOKANEK	OBSERVED IN QUATSE LAKE. (REF. 14-5)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	330	1980 - 1989	28A-18	750	28A-18	5000	12B-20
CO COHO SALMON	284	1980 - 1989	28A-18	800	28A-18	5000	12B-20
PK PINK SALMON	14200	1980 - 1988	28A-18	35000	28A-18	100000	12B-20
PK PINK SALMON	600	1981 - 1989	28A-18	2000	28A-18		
CM CHUM SALMON	161	1980 - 1989	28A-18	400	28A-18	10000	12B-20
CH CHINOOK SALMON		1980 - 1989		2	28A-18		
ST STEELHEAD	685	1956 - 1965	28A-18	1500	28A-18		
Comments: ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)							
CH RECORDED ESCAPEMENT FOR 1983(2) ONLY (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SK SOCKEYE SALMON	Migration Spawning Incubation Rearing					X X	X X	X X	X X	X X	X		
CO COHO SALMON	Migration Spawning Incubation Rearing									X X X	X X	X	
PK PINK SALMON	Migration Spawning Incubation Rearing									X	X X	X X	
CM CHUM SALMON	Migration Spawning Incubation Rearing										X X	X X	

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	CH CHINOOK SALMON		QUINSAM R STOCK BEING RELEASED IN THE SYSTEM. (REF. 12B-20)	1990/
SI STREAM IMPROVEM'T		0.0	ESTUARY UPGRADING PROPOSED AND OBSTRUCTION REMOVAL (REF. 12B-12)	1983/
HY HATCHERY	ACT ANAD CUTTHROAT CM CHUM SALMON CO COHO SALMON PK PINK SALMON ST STEELHEAD	1.0	NORTHERN VANCOUVER ISLAND SALMON ENHANCEMENT ASSOCIATION (NVISEA) ESTABLISHED A HATCHERY IN 1983 TO AUGMENT LOCAL CREEKS (PRIVATE FACILITY) (REF. 13-10, REF. 12B-9)	1983/1983

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED CONTINUED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
FW FISHWAY		3.0	TO PROVIDE ACCESS PAST VELOCITY BARRIER AT 3 KM. (REF. 12B-20)	/
FW FISHWAY		11.9	AT LAKE OUTLET DAM. (REF. 12B-20)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
WQ WATER QUALITY	ESTABLISHMENT OF INFILTRATION GALLERY IN RIVER BY HATCHERY RESULTED IN SILTATION ON LOWER REACH THOUGH NO MAJOR DAMAGE TO THE RESOURCE WAS NOTED. (1984) (REF. 12B-9)
FO FORESTRY	EXTENSIVE LOGGING IN PAST HISTORY (REF. 12B-1)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

A FISH LADDER WAS CONSTRUCTED AT THE 6.4KM POINT TO ALLEVIATE TROUBLESOME FALLS (1960) (REF. 12B-1)
THE 9.6 KM FALLS WERE IMPROVED AND PINKS READILY ASCENDED IN QUANTITY FOR THE FIRST TIME (1962) (REF. 12B-1)
RECOMMEND REMOVAL OF OBSTRUCTION (1976 BY FISHERY OFFICER) (REF. 12B-12)
OPEN UP ESTUARY WITH CULVERT, BREACH LOGGING ROAD. QUATSE LAKE STORAGE - INVESTIGATE FLOODING/LOW FLOW PROBLEMS. (REF. 12B-12)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/06/23
Last updated by: KATHY PONTUS	Date: 1991/07/17

ESCAPEMENT : QUATSE RIVER

WATERSHED-CODE : 92-0900

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	750	7500	1500	7500	0	UNK
1954	1500	7500	7500	15000	0	UNK
1955	3500	3500	400	7500	0	UNK
1956	1500	7500	35000	3500	0	UNK
1957	750	1500	400	15000	0	UNK
1958	3500	3500	35000	15000	0	UNK
1959	75	1500	3500	7500	0	UNK
1960	750	750	7500	7500	0	UNK
1961	400	7500	750	15000	0	UNK
1962	7500	7500	75000	1500	0	UNK
1963	3500	1500	750	1500	0	UNK
1964	3500	7500	35000	7500	0	UNK
1965	1500	3500	3500	7500	0	UNK
1966	3500	3500	150000	1500	0	UNK
1967	200	1500	25	400	0	UNK
1968	200	7500	125000	7500	0	UNK
1969	1500	750	25	750	0	UNK
1970	400	3500	75000	750	0	UNK
1971	750	750	1500	75	0	UNK
1972	700	400	16000	2500	0	UNK
1973	1600	1500	1000	600	0	UNK
1974	1200	300	66000	400	0	UNK
1975	700	100	300	80	0	UNK
1976	3600	1200	74000	50	0	UNK
1977	1200	50	N/O	15	0	UNK
1978	1500	450	36000	65	0	UNK
1979	262	0	0	0	0	UNK
1980	250	0	10000	0	0	UNK
1981	750	N/O	N/O	N/O	0	UNK
1982	200	UNK	500	0	0	UNK
1983	500	400	100	200	2	UNK
1984	300	500	13500	325	0	UNK
1985	500	500	150	300	N/O	UNK
1986	0	800	35000	400	UNK	UNK
1987	500	100	2000	75	0	UNK
1988	200	100	12000	200	0	UNK
1989	100	154	750	112	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

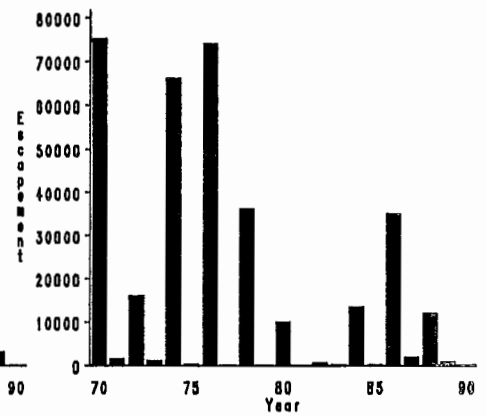
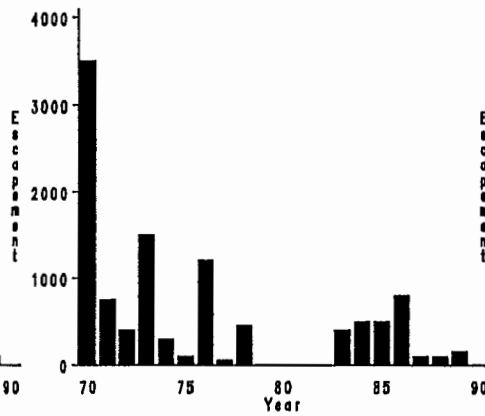
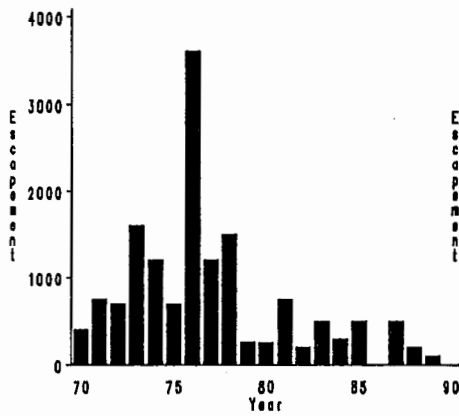
# QUATSE RIVER (92-0900)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

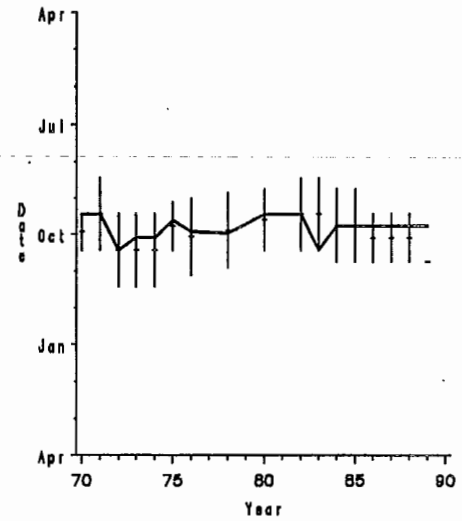
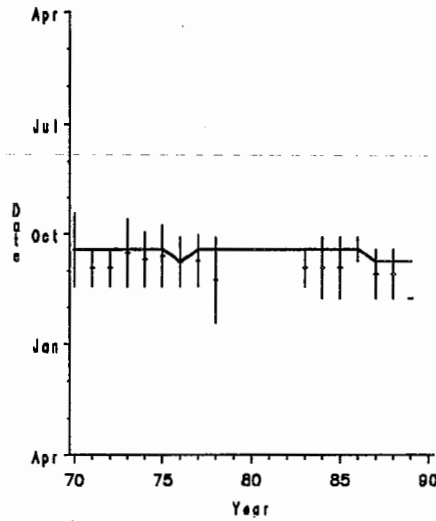
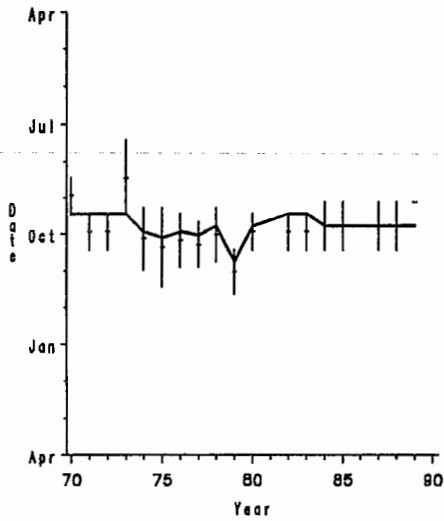
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	400	15AUG	15SEP	15SEP
1971	750	15SEP	15SEP	15OCT
1972	700	15SEP	15SEP	15OCT
1973	1,800	15JUL	15SEP	15SEP
1974	1,200	10SEP	30SEP	01NOV
1975	700	10SEP	05OCT	15NOV
1976	3,800	15SEP	30SEP	30OCT
1977	1,200	22SEP	03OCT	30OCT
1978	1,500	10SEP	25SEP	25OCT
1979	282	15OCT	25OCT	21NOV
1980	250	15SEP	25SEP	15OCT
1981	750	-	-	-
1982	200	15SEP	15SEP	15OCT
1983	500	15SEP	15SEP	15OCT
1984	300	05SEP	25SEP	15OCT
1985	500	05SEP	25SEP	15OCT
1986	0	-	-	-
1987	500	05SEP	25SEP	15OCT
1988	200	05SEP	25SEP	15OCT
1989	100	05SEP	25SEP	-

Coho				
Year	Escapement	Start	Peak	End
1970	3,500	15SEP	15OCT	15NOV
1971	750	15OCT	15OCT	15NOV
1972	400	15OCT	15OCT	15NOV
1973	1,500	20SEP	15OCT	15NOV
1974	300	01OCT	15OCT	15NOV
1975	100	25SEP	15OCT	15NOV
1976	1,200	05OCT	25OCT	15NOV
1977	50	03OCT	15OCT	15NOV
1978	450	05OCT	15OCT	15DEC
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	400	15OCT	15OCT	15NOV
1984	500	05OCT	15OCT	25NOV
1985	500	05OCT	15OCT	25NOV
1986	800	05OCT	15OCT	25OCT
1987	100	15OCT	25OCT	25NOV
1988	100	15OCT	25OCT	25NOV
1989	154	-	25OCT	25NOV

Pink				
Year	Escapement	Start	Peak	End
1970	75,000	15SEP	15SEP	15OCT
1971	1,500	15AUG	15SEP	15OCT
1972	14,000	15SEP	15OCT	15NOV
1973	1,000	15SEP	05OCT	15NOV
1974	66,000	15SEP	05OCT	15NOV
1975	300	05SEP	20SEP	15OCT
1976	74,000	02SEP	30SEP	05NOV
1977	0	-	-	-
1978	36,000	28AUG	01OCT	30OCT
1979	0	-	-	-
1980	10,000	25AUG	15SEP	15OCT
1981	0	-	-	-
1982	500	15AUG	15SEP	15OCT
1983	100	15AUG	15OCT	15OCT
1984	13,500	25AUG	25SEP	25OCT
1985	150	25AUG	25SEP	25OCT
1986	35,000	15SEP	25SEP	25OCT
1987	2,000	15SEP	25SEP	25OCT
1988	12,000	15SEP	25SEP	25OCT
1989	750	-	25SEP	25OCT

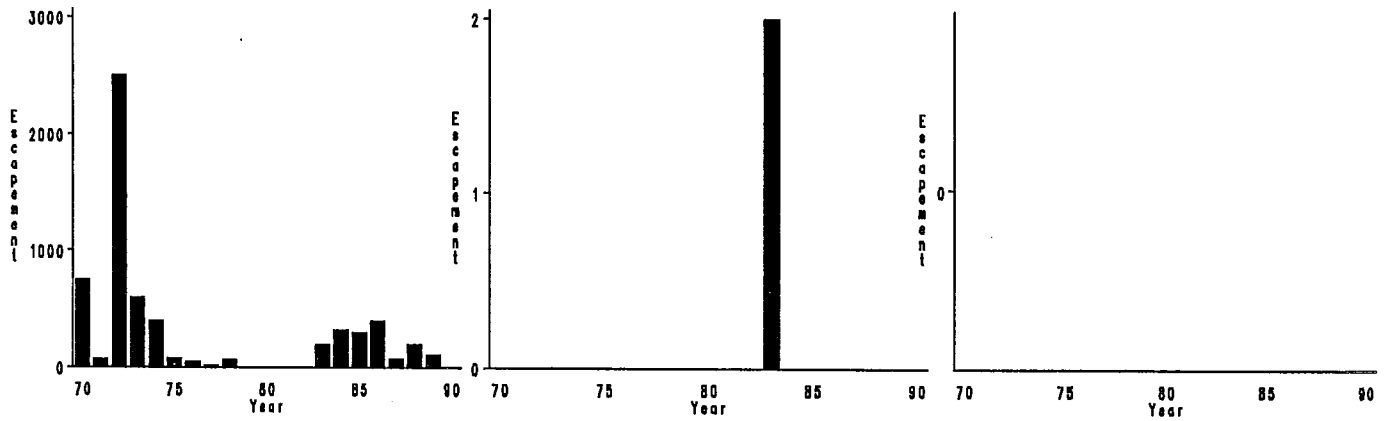
# QUATSE RIVER (92-0900)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

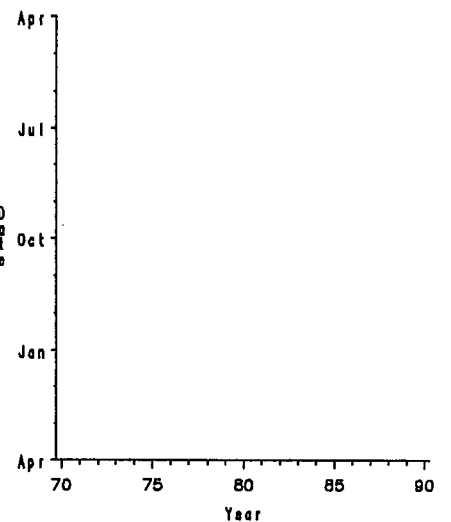
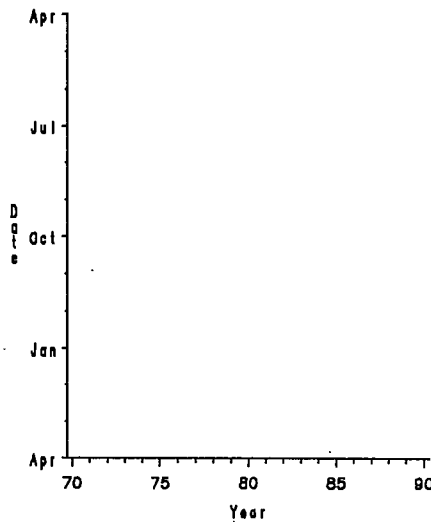
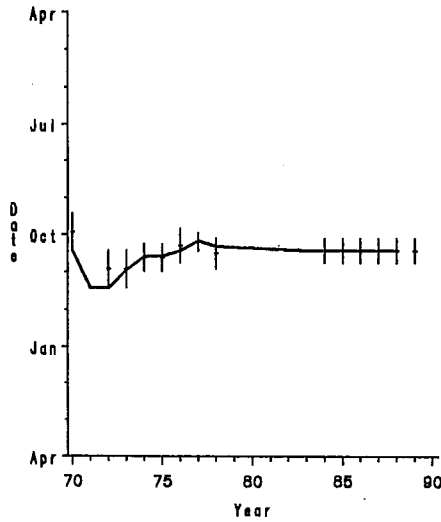
Steelhead (ST)



Chum

Chinook

Steelhead



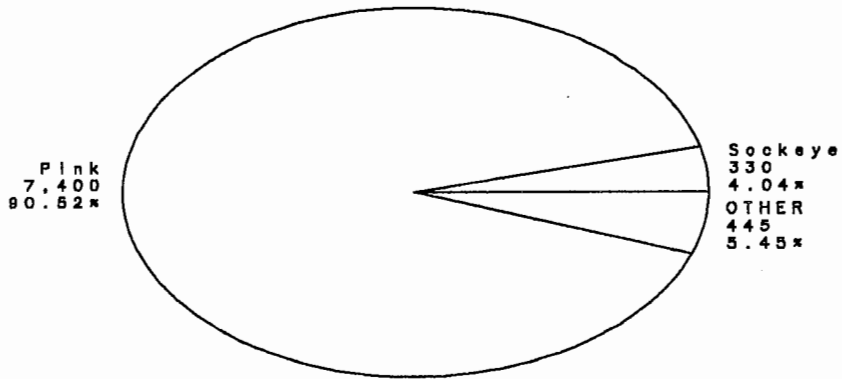
Year	Escapement	Start	Peak	End
1970	750	15SEP	15OCT	15OCT
1971	75	15NOV	15NOV	15NOV
1972	2,500	15OCT	15NOV	15NOV
1973	600	15OCT	31OCT	15NOV
1974	400	10OCT	20OCT	01NOV
1975	80	10OCT	20OCT	01NOV
1976	50	27SEP	15OCT	25OCT
1977	15	01OCT	07OCT	15OCT
1978	65	05OCT	12OCT	30OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	200	15OCT	15OCT	15OCT
1984	325	05OCT	15OCT	25OCT
1985	300	05OCT	15OCT	25OCT
1986	400	05OCT	15OCT	25OCT
1987	75	05OCT	15OCT	25OCT
1988	200	05OCT	15OCT	25OCT
1989	112	05OCT	-	15OCT

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	1	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
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1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

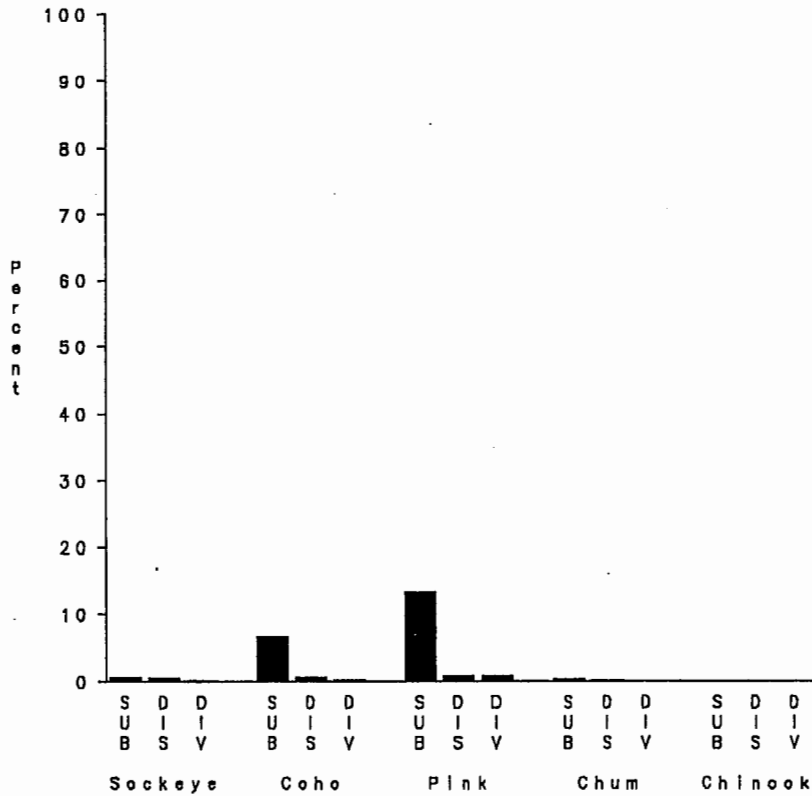
# QUATSE RIVER (92-0900)

10-yr Mean Escapement  
(1980-1989)



## QUATSE RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: <b>DICK BOOTH CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0900-220</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/11</b>
		B.C.G.S. (1:20k) Map: <b>063</b>
		U.T.M. Mouth: <b>9.6062.56153</b>
		Lat./Long. Mouth: <b>50 DG. 40' 58'' 127 DG. 29' 37''</b>
		Mainstem Length: <b>15.6 km</b> Ref. No.: <b>6M-28</b>
		Watershed Area: Ref. No.:
Location: <b>TRIBUTARY TO QUATSE RIVER.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>MOSTLY COBBLES AND BOULDERS. LIMITS SPANNING CAPACITY. (REF. 12B-9)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS	2.0	2.0		(REF. 12B-5)
F FALLS	5.0	2.5	CO COHO SALMON	ST CAN PASS (REF. 12B-9)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>SUSCEPTIBLE TO VARYING FLUCTUATIONS IN FLOW. FLOODING HAS AFFECTED EGG SURVIVAL. (REF. 12B-9)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	TO 5M FALLS (REF. 12B-9)
CT CUTTHROAT TROUT	OBSERVED ABOVE THE FALLS. (REF. 12B-5)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	CO COHO SALMON		HEADWATER STOCKING OF FRY FROM QUATSE HATCHERY. (REF. 12B-20)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	PAST LOGGING (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by:	GITA KAPAHI	Date:	1988/07/03
Last updated by:	MARG ANDERSON	Date:	1991/07/05

**A. DESCRIPTION**

Stream Name: <b>BLUEBELL CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-0900-930</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/12</b>
		B.C.G.S. (1:20k) Map: <b>062</b>
		U.T.M. Mouth:
		Lat./Long. Mouth: <b>50 DG. 38' 30'' 127 DG. 36' 58''</b>
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: <b>TRIBUTARY TO QUATSE RIVER.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>	<b>3.0</b>	<b>0.0</b>	<b>AF ALL SPECIES</b>	<b>(REF. 128-9)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
<b>NO INFORMATION AVAILABLE</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>NO INFORMATION AVAILABLE</b>	

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	ACTIVE LOGGING BY WESTERN FOREST PRODUCTS PAST AND CURRENT (1988) (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by:     GITA KAPAH	Date: 1988/07/03
Last updated by: MARG ANDERSON	Date: 1991/07/05

**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name: QUATSESE CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 92-0905	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12B-16
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/11
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6082.56173
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' ' '
		Mainstem Length: 6.2 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS NW INTO HEAD OF HARDY BAY.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
NO INFORMATION AVAILABLE	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT THE SYSTEM. (REF. 12B-20)
PK PINK SALMON	PRESENCE NOTED. (REF. 12B-20)
CT CUTTHROAT TROUT	OBSERVED AT HIGHWAY CROSSINGS. (REF. 12B-20)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON		-				1000	12B-20
PK PINK SALMON		-				10000	12B-20
CM CHUM SALMON		-				500	12B-20

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

NO INFORMATION AVAILABLE
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J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
--------------------	--------------

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1990/06/18
Checked by:	BRIAN TUTTY	Date:	1990/04/30
Last updated by:	MARG ANDERSON	Date:	1991/07/05



G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

NO INFORMATION AVAILABLE
--------------------------

J. FISHERY OFFICER NARRATIVE

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1990/06/18
Checked by:	BRIAN TUTTY	Date:	1990/04/30
Last updated by:	MARG ANDERSON	Date:	1991/07/05

**A. DESCRIPTION**

Stream Name: <b>KEOGH RIVER</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1000</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 92L/11
UNNAMED CREEK	010	B.C.G.S. (1:20k) Map: 064
UNNAMED CREEK	015	U.T.M. Mouth: 9.6168,56152
UNNAMED CREEK	020	Lat./Long. Mouth: 50 DG. 40' 50'' 127 DG. 20' 38''
UNNAMED CREEK	030	Mainstem Length: 35.2 km Ref. No.: 6N-28
UNNAMED CREEK	040	Watershed Area: 129.0 km <sup>2</sup> Ref. No.: 12B-7
Location: FLOWS N. INTO QUEEN CHARLOTTE STR., S.E. OF BEAVER HR.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				LOG JAMS THROUGHOUT (REF. 12B-1)
D DAM	1.0	32.8		AT KEOGH LAKE OUTLET. (REF. 13-10)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: MAX FLOW 8000 CFS (1975 ESTIM), LOW 3CFS (1978); NORMAL DISCHARGE RANGE 40 - 60 CFS. (REF. 12B-5)			
FED BY SEVERAL SMALL TRIBUTARY LAKES, AND BY KEOGH LAKE: AREA - 0.8 SQ.KM; PERIMETER - 5.4 KM. (REF. 6N-28)			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT TO LAKE, AND IN TRIBUTARIES. (REF. 6N-6, REF. 12B-1, REF. 12B-9)
PK PINK SALMON	SPAWNING MAINLY BETWEEN 4.3 KM AND 14.4 KM. (REF. 12B-1, REF. 12B-9)
CM CHUM SALMON	OBSERVED AT 11.3 KM. (REF. 6N-6, REF. 12B-2)
ST STEELHEAD	THROUGHOUT TO LAKE (REF. 6N-6, REF. 12B-5, REF. 12B-9)
CT CUTTHROAT TROUT	OBSERVED IN LAKES. (REF. 14-5, REF. 6N-6)
DV DOLLY VARDEN	OBSERVED IN LAKES. (REF. 14-5, REF. 6N-6)
KO KOKANEE	IN KEOGH LAKE. (REF. 14-5)
RB RAINBOW TROUT	OBSERVED IN LAKES. (REF. 14-5, REF. 6N-6)
TR TROUT	UNIDENTIFIED TROUT SPECIES OBSERVED IN A TRIBUTARY. (REF. 12B-9)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	667	1980 - 1989	28A-18	1000	28A-18	7500	12B-20
PK PINK SALMON	48000	1980 - 1988	28A-18	100000	28A-18	100000	12B-20
PK PINK SALMON	9736	1981 - 1989	28A-18	32650	28A-18		
CM CHUM SALMON	75	1980 - 1989	28A-18	500	28A-18	15000	12B-20
CH CHINOOK SALMON		1980 - 1989				100	12B-20
ST STEELHEAD	1033	1954 - 1965	28A-18	1500	28A-18		
Comments: 33921 PINK, 993 COHO, 196 CHUM (MAY 1986) VIA COUNTING FENCE (REF. 12B-6)							
ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE. (REF. 28A-18)							
CH RECORDED 1967(25) ONLY CM HAS GOOD HISTORY IN STREAM PRE1974 (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X	X X	P X	
PK PINK SALMON	Migration Spawning Incubation Rearing								X	X P	X		
CM CHUM SALMON	Migration Spawning Incubation Rearing									P	X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
MR MARK RECOVERY	CO COHO SALMON		RESULTS OF CO SMOLT PRODUCTION AND MIGRATION TIMING STUDIES AVAILABLE. (REF. 13-24)	1977/1978
OR BARRIER REMOVAL		0.0	BEAVER DAMS MUST BE REMOVED EACH YEAR (REF. 12B-1)	1963/
TR TRANSPLANT	CO COHO SALMON PK PINK SALMON	0.0	NORTHERN VANCOUVER ISLAND SALMON ENHANCEMENT ASSOCIATION OBTAINS BROOD STOCK COLLECTION FOR STREAM AUGMENTATION. ALSO, NET PEN REARING IN O'CONNOR LAKE. (REF. 12B-9, REF. 12B-20)	1983/
CF COUNTING FENCE	CO COHO SALMON ST STEELHEAD	0.2	OPERATED BY DFO/MOE. (REF. 12B-20)	/
FC FLOW CONTROL		32.8	DAM AT KEOGH LAKE OUTLET BUILT BY MOE FOR FLOW CONTROL. (REF. 13-10)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	THERE HAS BEEN EXTENSIVE LOGGING IN FORMER YEARS (1960) (REF. 12B-1)
FO FORESTRY	ABOUT 35% OF THE WATERSHED HAS BEEN LOGGED WITHIN THE LAST 30 YEARS (REF. 12B-7)
WQ WATER QUALITY	RE-OCCURRING SEDIMENTATION PROBLEM IN 2KM OF THE 5KM REACH OF STREAM DOWNSTREAM OF KEOGH LAKE. (REF. 12B-7)
FO FORESTRY	LOGGING ONGOING ON MAINSTEM KEOGH RIVER VIA WESTERN FOREST PRODUCTS (REF. 12B-9)
WQ WATER QUALITY	D.O.T. HAS PLAN TO RIPRAP AND REDIVERT LOWER REACH TO ALLEVIATE EROSION (1987) SUBJECT TO DEPARTMENTAL CONDITIONS. (REF. 12B-9)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

THE RIVER SUBSTRATE IS PRIMARILY A GRAVEL AND COBBLE MATRIX (REF. 12B-7)
THIS RIVER IS PREDOMINANTLY GRAVEL. THE COVER IS CONIFEROUS AND THE BANKS ARE RELATIVELY UNSTABLE. FALLEN LOGS ARE A COMMON OCCURRENCE THE ENTIRE LENGTH OF THE STREAM. THE POOL/RIFFLE RATIO IS 30/70. THERE WERE COHO FRY PRESENT THE TOTAL LENGTH OF THE STREAM. (REF. 12B-5)
ADULT PINK SPawning HAS OCCURRED TO KEOGH LAKE IN RECENT YEARS. (1986) (REF. 12B-9)
COMMERCIAL FISHERY IMPACTED ON ESCAPEMENTS TO THIS SYSTEM IN 1987 PROVIDING A RECORD LOW ESCAPEMENT, ACCORDINGLY BOUNDARY IN FRONT OF CREEK TO BE EXTENDED SEAWARD DURING PEAK MIGRATION PERIOD (AUG. 5 TO SEPT. 1) (REF. 12B-9)
VERY DARK COLORED WATER IN THIS SYSTEM, HARD TO ENUMERATE ESCAPEMENT (REF. 12B-9)
THIS WATERSHED IS THE PROVINCIAL FISHERIES BRANCH EXPERIMENTAL SYSTEM. EXTENSIVE RESEARCH PAPERS AND DETAILED IMMIGRATION/ENIGRATION STUDIES HAVE BEEN COMPILED. CONTACT A. TAUZ FOR INFORMATION (REF. 18-19)
DATA ON ANADROMOUS DV POPULATION IN THIS SYSTEM IS AVAILABLE. (REF. 13-25)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
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K. SIS COMPLETED BY

Completed by: GITA KAPahi	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/05

## ESCAPEMENT : KEOGH RIVER

WATERSHED-CODE : 92-1000

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	3500	7500	750	0	UNK
1954	0	7500	35000	15000	0	UNK
1955	0	7500	7500	3500	0	UNK
1956	0	35000	100000	3500	0	UNK
1957	0	3500	35000	3500	0	UNK
1958	0	7500	75000	3500	0	UNK
1959	0	750	35000	200	0	UNK
1960	0	3500	35000	3500	0	UNK
1961	0	7500	15000	3500	0	UNK
1962	0	7500	75000	750	0	UNK
1963	0	3500	7500	200	0	UNK
1964	0	7500	35000	3500	0	UNK
1965	0	7500	15000	1500	0	UNK
1966	0	7500	100000	750	0	UNK
1967	0	1500	3500	750	25	UNK
1968	0	7500	150000	3500	0	UNK
1969	0	750	1500	3500	0	UNK
1970	0	7500	125000	1500	0	UNK
1971	0	3500	3500	200	0	UNK
1972	0	1700	50000	1500	0	UNK
1973	0	2200	7000	700	0	UNK
1974	0	300	55000	400	0	UNK
1975	0	150	2500	30	0	UNK
1976	7	2000	72000	8	0	UNK
1977	N/O	600	2100	20	0	UNK
1978	N/O	300	48000	N/O	0	UNK
1979	0	20	200	0	0	UNK
1980	0	500	35000	0	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	N/O	UNK	30000	N/O	0	UNK
1983	0	UNK	15000	UNK	0	UNK
1984	0	1000	25000	UNK	0	UNK
1985	N/O	1000	32650	500	N/O	UNK
1986	0	UNK	100000	25	UNK	UNK
1987	0	200	700	0	0	UNK
1988	N/O	1000	50000	N/O	N/O	UNK
1989	N/O	300	330	N/O	N/O	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

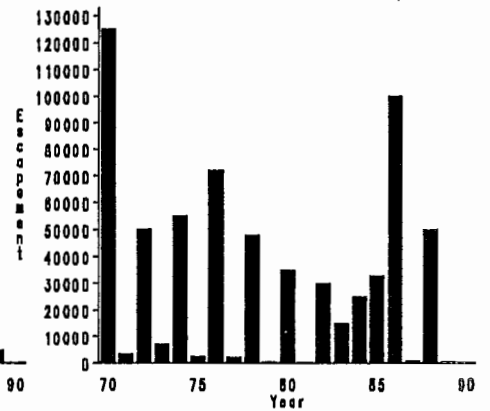
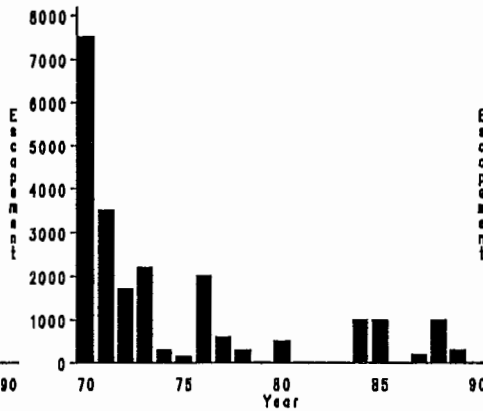
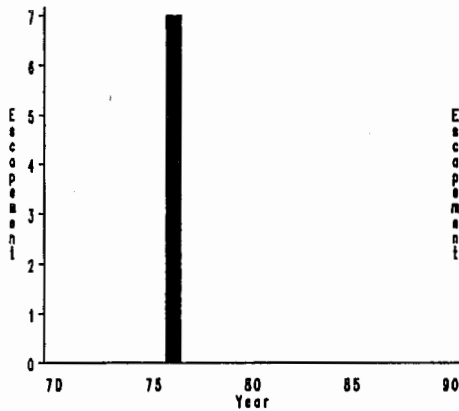
# KEOGH RIVER (92-1000)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

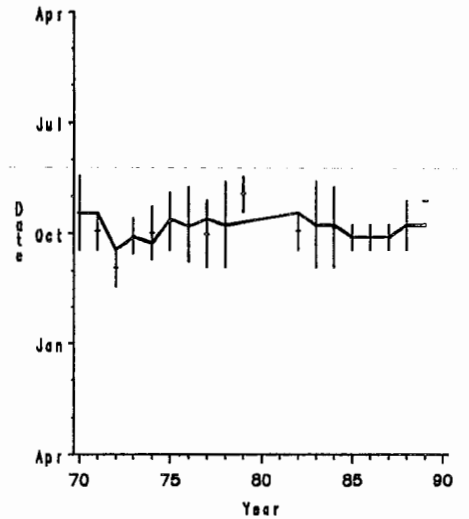
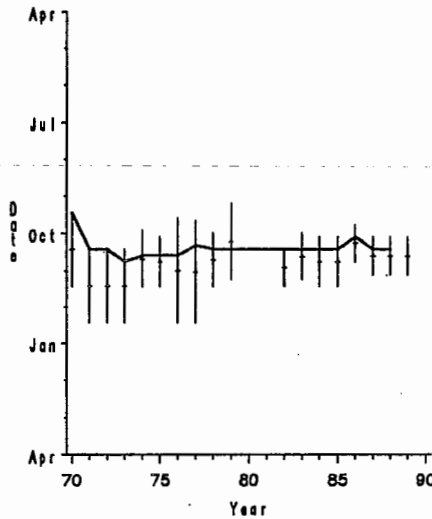
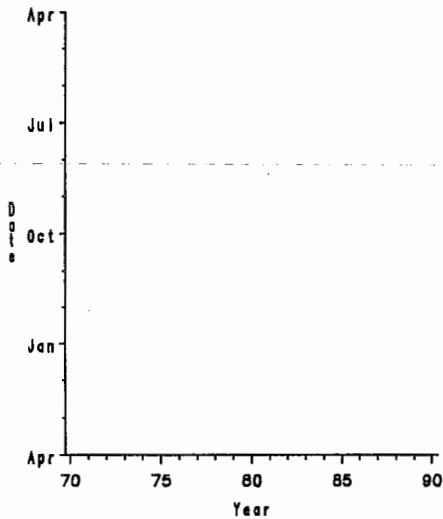
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	7	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	7,500	19SEP	15SEP	15NOV
1971	3,500	15OCT	15OCT	15DEC
1972	1,700	15OCT	15OCT	15DEC
1973	2,200	15OCT	25OCT	15DEC
1974	300	30SEP	30OCT	15NOV
1975	150	05OCT	20OCT	15NOV
1976	2,000	20SEP	20OCT	15DEC
1977	600	22SEP	12OCT	15DEC
1978	300	02OCT	15OCT	15NOV
1979	20	08SEP	-	09NOV
1980	500	-	15OCT	-
1981	-	-	-	-
1982	-	13OCT	15OCT	15NOV
1983	-	02OCT	15OCT	09NOV
1984	1,000	05OCT	15OCT	15NOV
1985	1,000	05OCT	15OCT	15NOV
1986	-	25SEP	05OCT	25OCT
1987	200	05OCT	15OCT	05NOV
1988	1,000	05OCT	15OCT	05NOV
1989	300	03OCT	-	05NOV

Pink				
Year	Escapement	Start	Peak	End
1970	125,000	15AUG	15SEP	15OCT
1971	3,500	15SEP	15SEP	15OCT
1972	50,000	15OCT	15OCT	15NOV
1973	7,000	20SEP	05OCT	18OCT
1974	55,000	10SEP	10OCT	23OCT
1975	2,500	30AUG	20SEP	15OCT
1976	72,000	25AUG	20SEP	25OCT
1977	2,100	05SEP	20SEP	30OCT
1978	48,000	20AUG	25SEP	30OCT
1979	200	16AUG	-	14SEP
1980	35,000	-	-	-
1981	-	-	-	-
1982	30,000	15SEP	15SEP	15OCT
1983	15,000	20AUG	25SEP	30OCT
1984	25,000	25AUG	25SEP	30OCT
1985	32,650	25SEP	05OCT	15OCT
1986	100,000	25SEP	05OCT	15OCT
1987	700	25SEP	05OCT	15OCT
1988	50,000	05SEP	25SEP	15OCT
1989	330	05SEP	25SEP	-

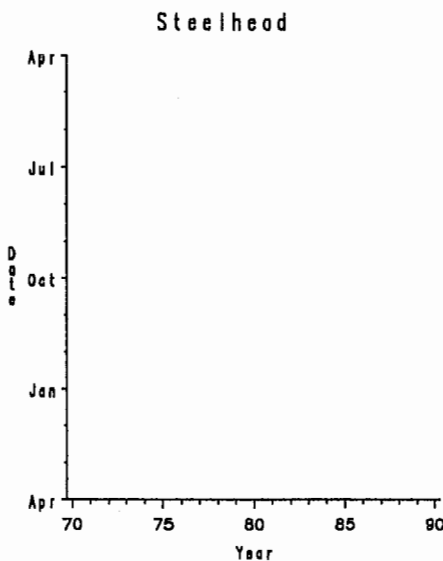
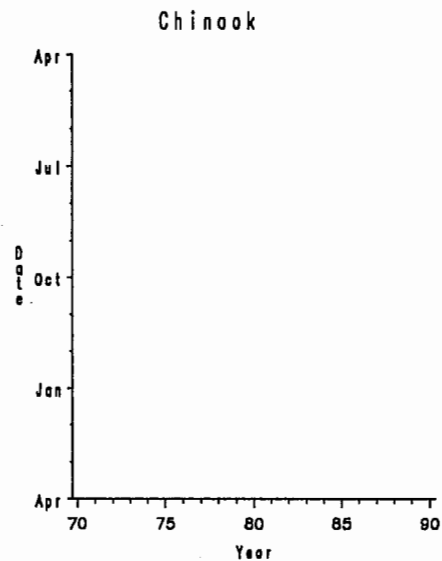
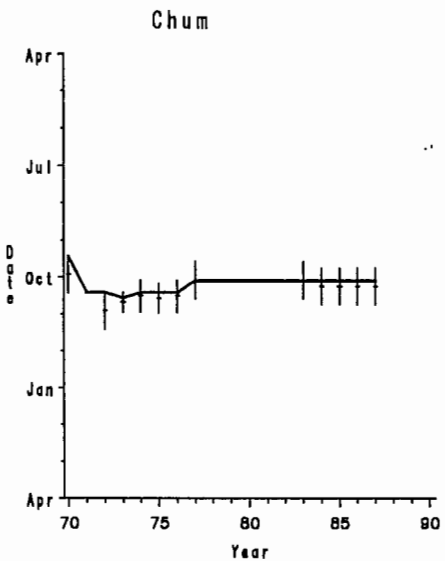
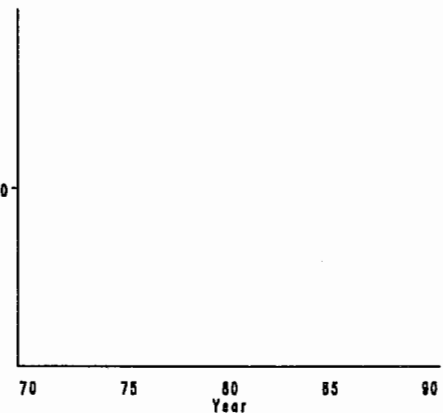
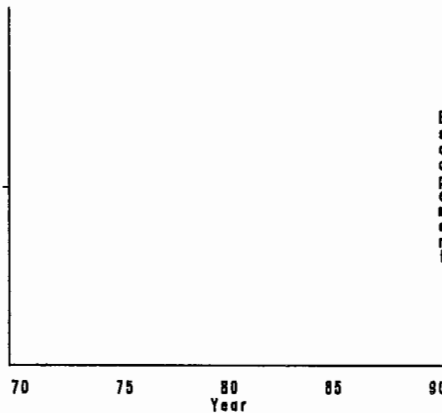
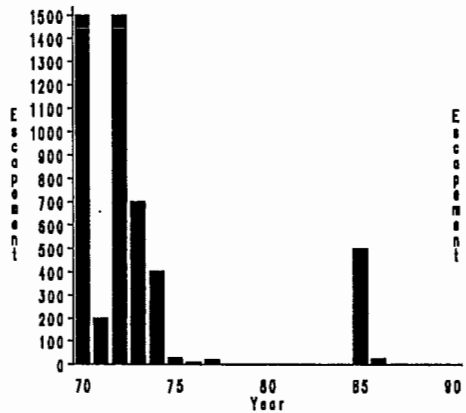
# KEOGH RIVER (92-1000)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



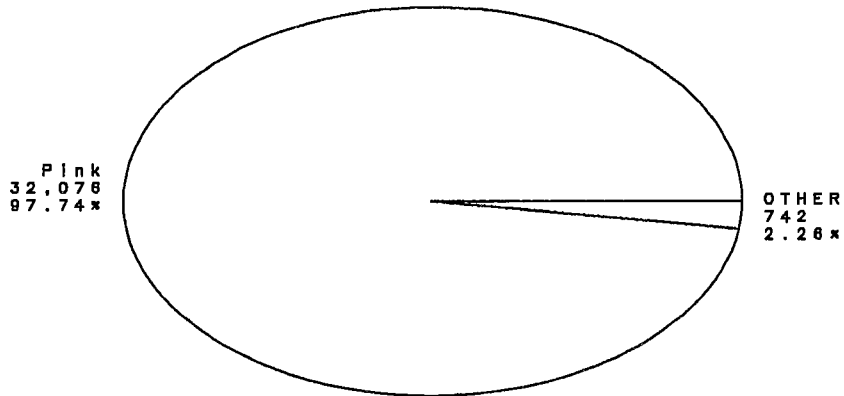
Chum				
Year	Escapement	Start	Peak	End
1970	1,500	15SEP	15SEP	15OCT
1971	200	15OCT	15OCT	15NOV
1972	1,500	15OCT	15OCT	15NOV
1973	700	15OCT	20OCT	31OCT
1974	400	05OCT	15OCT	31OCT
1975	30	08OCT	15OCT	01NOV
1976	8	05OCT	15OCT	31OCT
1977	20	20SEP	05OCT	20OCT
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	-	20SEP	05OCT	20OCT
1984	-	25SEP	05OCT	25OCT
1985	500	25SEP	05OCT	25OCT
1986	25	25SEP	05OCT	25OCT
1987	0	25SEP	05OCT	25OCT
1988	0	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

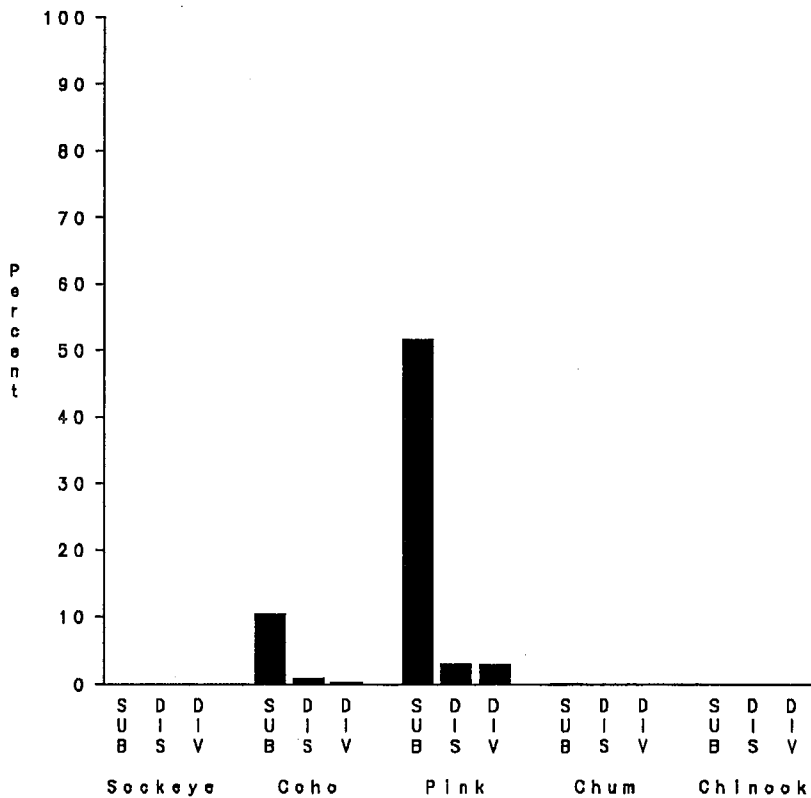
# KEOGH RIVER (92-1000)

10-yr Mean Escapement  
(1980-1989)



## KEOGH RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name:	District: 5 CAMPBELL RIVER
Watershed Code: 92-1000-010	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12-16
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/11
		B.C.G.S. (1:20k) Map: 064
		U.T.M. Mouth: 9,6166,56148
		Lat./Long. Mouth: 50 DG. 40' 39'' 127 DG. 20' 45''
		Mainstem Length: 1.5 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: NEAR COUNTING FENCE BY MOUTH OF KEOGH RIVER.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
NO INFORMATION AVAILABLE			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT. (REF. 12B-9)
PK PINK SALMON	PRESENCE NOTED. (REF. 12B-5)
TR TROUT	PRESENT (REF. 12B-9)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by: <b>GITA KAPAHI</b>	Date: <b>1988/07/03</b>
Last updated by: <b>MARG ANDERSON</b>	Date: <b>1991/07/05</b>

**A. DESCRIPTION**

Stream Name: UNNAMED CREEK	D.F.O. Division: SOUTH COAST
Local Name:	District: 5 CAMPBELL RIVER
Watershed Code: 92-1000-015	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12B-16
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/11
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6166.56119
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 11.9 km Ref. No.: 6N-2B
		Watershed Area: Ref. No.:
Location: FLOWS NE INTO KEOGH R.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
NO INFORMATION AVAILABLE	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	OBSERVED AT ROAD CROSSING, AT 0.8 KM. (REF. 6N-6, REF. 12B-20)
ST STEELHEAD	PRESENCE NOTED. (REF. 12B-20)
CT CUTTHROAT TROUT	OBSERVED AT ROAD CROSSING, AT 0.8 KM. (REF. 6N-6)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

NO INFORMATION AVAILABLE
--------------------------

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
--------------------	--------------

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1990/06/18
Checked by:	BRIAN TUTTY	Date:	1990/04/30
Last updated by:	MARG ANDERSON	Date:	1991/07/05

**A. DESCRIPTION**

Stream Name: <b>UNNAMED CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name: <b>MISTY LAKE CREEK</b>	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1000-020</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-16</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>13</b>

Tributaries	Code	Topographic (1:50k) Map: 92L/11
		B.C.G.S. (1:20k) Map: 064
		U.T.M. Mouth: 9.6207.56085
		Lat./Long. Mouth: 50 DG. 37' 22'' 127 DG. 17' 22''
		Mainstem Length: 8.1 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS FROM MISTY LAKE INTO THE KEOGH RIVER		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	RELATIVELY FLAT CREEK (REF. 12B-9)

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NO INFORMATION AVAILABLE				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: LAKE FED. (REF. 6N-2B)			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	THROUGHOUT. OBSERVED SPawning FOR 400 M ABOVE MISTY LAKE. OVERWINTERING IN THE LAKE. (REF. 14-5, REF. 6N-6, REF. 12B-9)
PK PINK SALMON	OBSERVED AT OUTLET OF MISTY LAKE. (REF. 12B-9)
ST STEELHEAD	OBSERVED AT OUTLET OF MISTY LAKE. (REF. 12B-9)
CT CUTTHROAT TROUT	OBSERVED IN MISTY LAKE. (REF. 14-5)
DV DOLLY VARDEEN	OBSERVED IN MISTY LAKE. (REF. 14-5)
RB RAINBOW TROUT	OBSERVED IN MISTY LAKE. (REF. 14-5)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
FS FISH SAMPLING		0.0	DOWNSTREAM FRY SAMPLING MISTY LAKE AND LONG LAKE (J. IRVINE) (REF. 128-9)	1985/1986

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAH	Date: 1988/07/03
Last updated by: MARG ANDERSON	Date: 1991/07/05



**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
--------------------------

**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by:     ROSS DE MARCO	Date: 1990/06/18
Checked by:     BRIAN TUTTY	Date: 1990/04/30
Last updated by: MARG ANDERSON	Date: 1991/07/05



**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
HY HATCHERY		0.0	SEP FACILITY. NET PEN REARING FOR QUATSE HATCHERY. (REF. 13-10, REF. 12B-9)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	BADLY DAMAGED BY PAST LOGGING.(1969) (REF. 12B-5)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHU	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/05



E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	274	1980 - 1989	28A-18	500	28A-18	2500	12B-20
PK PINK SALMON	31000	1980 - 1988	28A-18	80000	28A-18	100000	12B-20
PK PINK SALMON	1129	1981 - 1989	28A-18	3500	28A-18		
CN CHUM SALMON	92	1980 - 1989	28A-18	50	28A-18	5000	12B-20

Comments: STREAM PRONE TO EXTREMES OF SEASONAL HIGHS AND LOWS. PK EGGS FROZE DURING WINTER DUE TO UNSEASONALLY LOW LEVELS IN 1985. (REF. 12B-9)

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	P X	
PK PINK SALMON	Migration Spawning Incubation Rearing								X X	X P	X		
CN CHUM SALMON	Migration Spawning Incubation Rearing									X X	X P	X X	

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	ST STEELHEAD		7,000 SMOLTS/YEAR FROM QUATSE HATCHERY. (REF. 13-10)	/
TR TRANSPLANT	CH CHINOOK SALMON CO COHO SALMON PK PINK SALMON	0.0	BROOD STOCK COLLECTION BY NORTHERN VANCOUVER ISLAND SALMON ENHANCEMENT ASSOCIATION FOR QUATSE RIVER HATCHERY THROUGHOUT LOWER REACH. (REF. 12B-9)	1983/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	PAST LOGGING (1953, 1957) AT 6.8KM (REF. 12B-1)
WQ WATER QUALITY	A MUNICIPAL GARBAGE DUMP WAS LOCATED AT THE RIVER EDGE IN 1973. DURING HEAVY FLOODING THE DUMP WASHED INTO THE RIVER SPREADING DEBRIS THROUGHOUT THE LOWER 3.2 - 4.8KM (1975-76) (REF. 12B-1)
FO FORESTRY	PREVIOUSLY LOGGED. AT PRESENT (1974) SECOND GROWTH IMMATURE TIMBER BORDERING STREAM. (REF. 12B-5)
FO FORESTRY	M & B CURRENTLY LOGGING UPPER WATERSHED (1985 -PRESENT) (REF. 12B-9)
WQ WATER QUALITY	PLANNED HATCHERY PROPOSED FOR COHO AND CHINOOK 1988. (REF. 12B-9)
WQ WATER QUALITY	DEBRIS JAM REMOVED ADJACENT TO GRAVEL PIT (PROPOSED 1988) RE: EROSION CONTROL (REF. 12B-9)



ESCAPEMENT : CLUXEWE RIVER

WATERSHED-CODE : 92-1100

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	1500	7500	3500	0	UNK
1954	0	3500	7500	3500	0	UNK
1955	0	3500	3500	1500	0	UNK
1956	0	3500	7500	1500	0	UNK
1957	0	3500	30000	3500	0	UNK
1958	0	1500	7500	1500	0	UNK
1959	0	1500	3000	1500	0	UNK
1960	0	400	3500	1500	0	UNK
1961	0	400	3500	750	0	UNK
1962	0	750	15000	1500	0	UNK
1963	0	400	200	200	0	UNK
1964	0	1500	35000	1500	0	UNK
1965	0	400	3500	200	0	UNK
1966	0	3500	75000	200	0	UNK
1967	0	1500	3500	750	0	UNK
1968	0	3500	15000	1500	0	UNK
1969	0	400	750	200	0	UNK
1970	0	1500	35000	200	0	UNK
1971	0	750	400	200	0	UNK
1972	0	600	6000	100	0	UNK
1973	0	800	1800	425	0	UNK
1974	0	1400	32000	400	0	UNK
1975	0	70	2100	40	0	UNK
1976	0	450	49000	60	0	UNK
1977	0	60	45	20	0	UNK
1978	0	250	45000	75	0	UNK
1979	0	0	100	0	0	UNK
1980	0	250	80000	0	0	UNK
1981	0	0	20	0	0	UNK
1982	0	UNK	10000	N/O	0	UNK
1983	0	500	500	50	0	UNK
1984	0	500	15000	50	0	UNK
1985	0	350	3500	50	0	UNK
1986	0	400	35000	UNK	UNK	UNK
1987	0	200	1000	500	0	UNK
1988	0	250	15000	50	0	UNK
1989	UNK	17	625	130	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

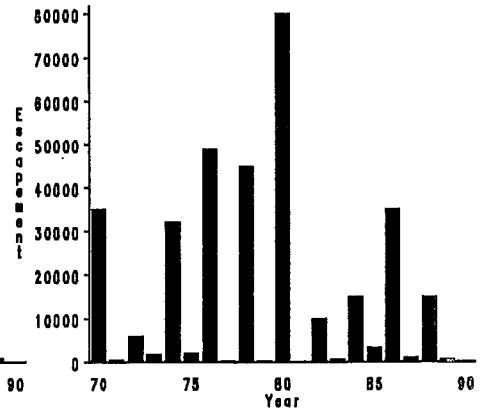
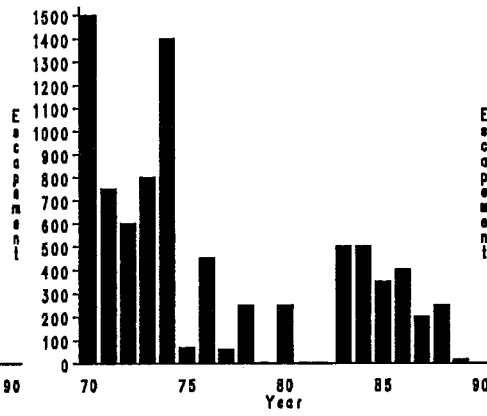
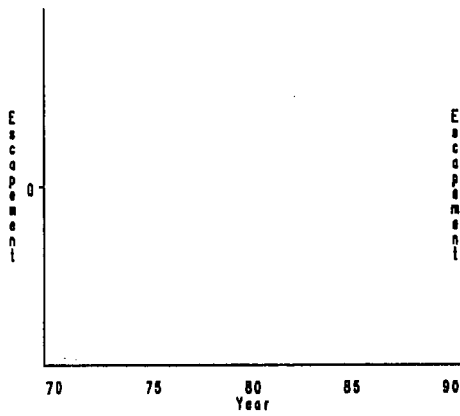
# CLUXEWE RIVER (92-1100)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

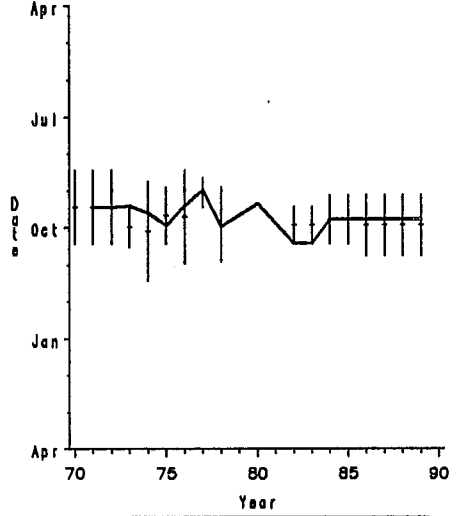
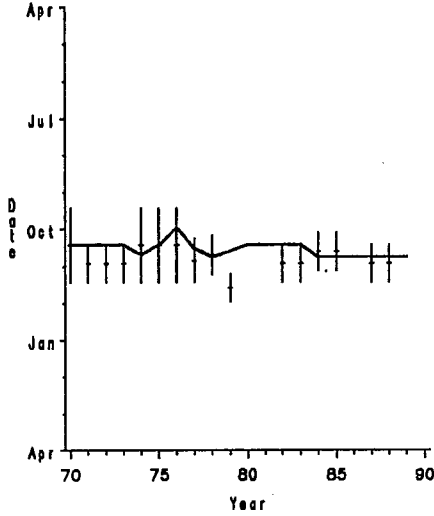
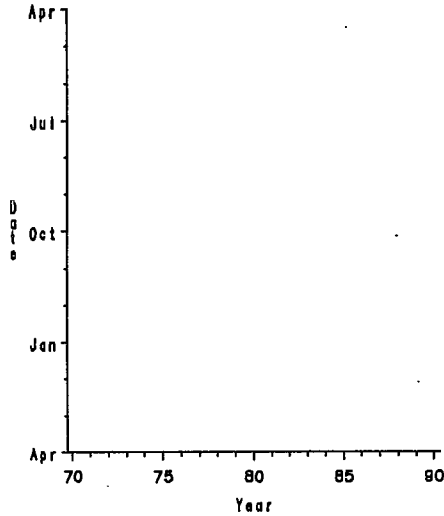
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	1,500	15SEP	15OCT	15NOV
1971	750	15OCT	15OCT	15NOV
1972	600	15OCT	15OCT	15NOV
1973	800	15OCT	15OCT	15NOV
1974	1,400	15SEP	25OCT	15NOV
1975	70	15SEP	15OCT	15NOV
1976	450	15SEP	01OCT	15NOV
1977	60	10OCT	10OCT	15NOV
1978	250	08OCT	25OCT	08NOV
1979	0	08NOV	-	01DEC
1980	250	-	15OCT	-
1981	0	-	-	-
1982	-	15OCT	15OCT	15NOV
1983	500	15OCT	15OCT	15NOV
1984	500	05OCT	25OCT	05NOV
1985	350	05OCT	25OCT	05NOV
1986	400	-	-	-
1987	200	15OCT	25OCT	15NOV
1988	250	15OCT	25OCT	15NOV
1989	17	-	25OCT	-

Pink				
Year	Escapement	Start	Peak	End
1970	35,000	15AUG	-	15OCT
1971	400	15AUG	15SEP	15OCT
1972	6,000	15AUG	15SEP	15OCT
1973	1,800	15SEP	14SEP	18OCT
1974	32,000	25AUG	28SEP	15NOV
1975	2,100	30AUG	30SEP	15OCT
1976	40,000	15AUG	14SEP	31OCT
1977	45	22AUG	01SEP	15SEP
1978	45,000	29AUG	01OCT	30OCT
1979	100	-	-	-
1980	80,000	-	12SEP	-
1981	20	-	-	-
1982	10,000	15SEP	15OCT	15OCT
1983	500	15SEP	15OCT	15OCT
1984	15,000	05SEP	25SEP	15OCT
1985	3,500	05SEP	25SEP	15OCT
1986	35,000	05SEP	25SEP	25OCT
1987	1,000	05SEP	25SEP	25OCT
1988	15,000	05SEP	25SEP	25OCT
1989	825	05SEP	25SEP	25OCT

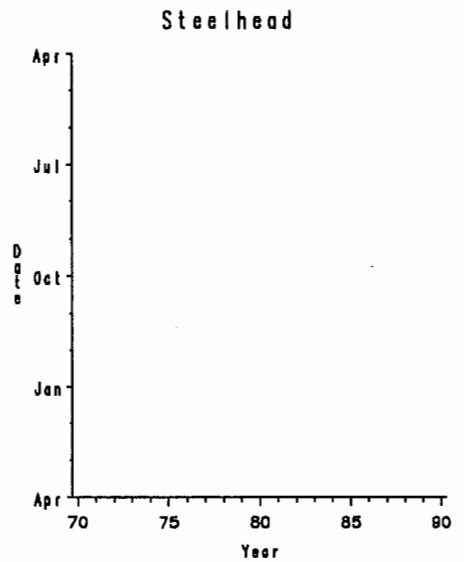
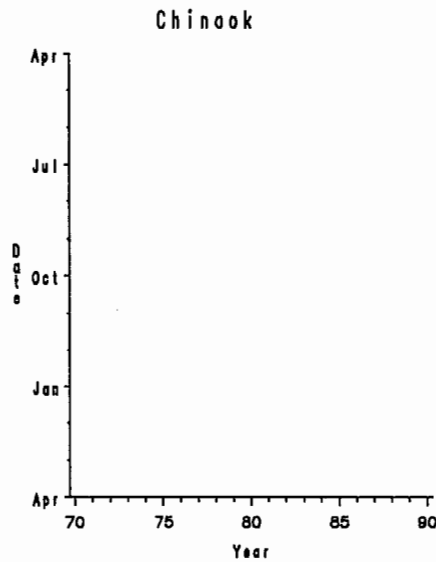
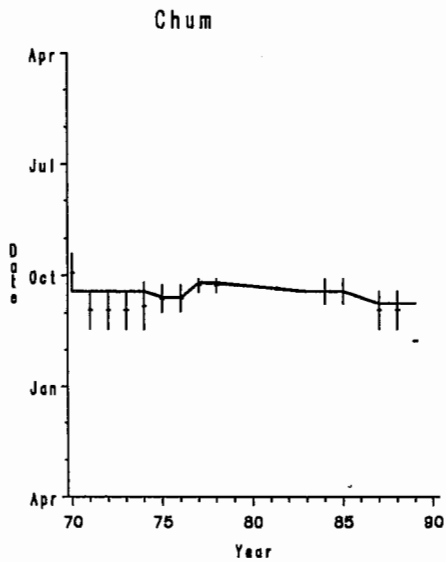
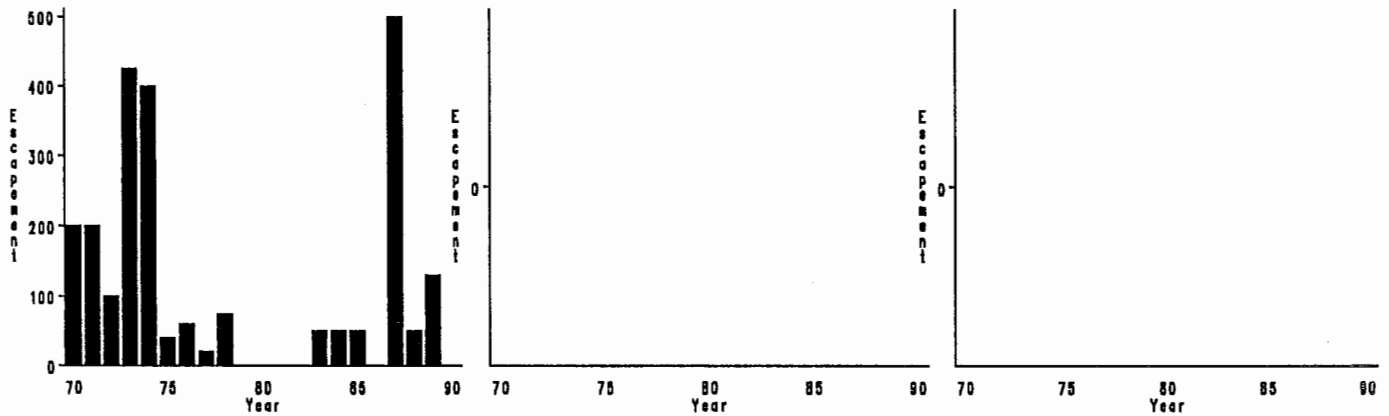
# CLUXEWE RIVER (92-1100)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



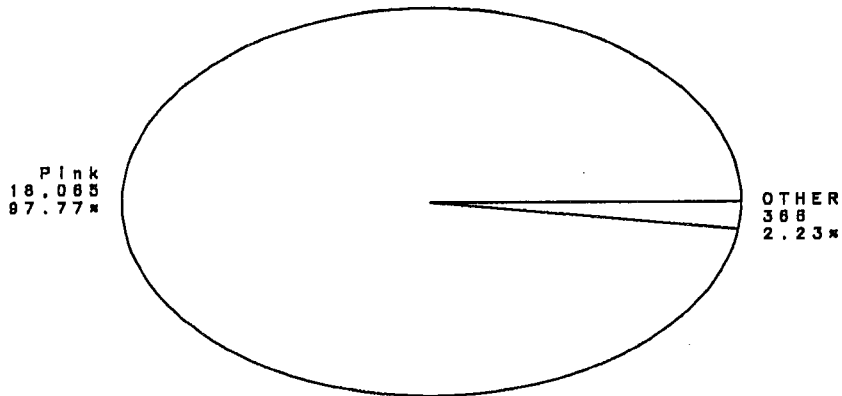
Chum				
Year	Escapement	Start	Peak	End
1970	200	15SEP	15OCT	15OCT
1971	200	15OCT	15OCT	15NOV
1972	100	15OCT	15OCT	15NOV
1973	425	15OCT	15OCT	15NOV
1974	400	08OCT	15OCT	15NOV
1975	40	10OCT	20OCT	01NOV
1976	80	10OCT	20OCT	31OCT
1977	20	05OCT	08OCT	15OCT
1978	75	05OCT	08OCT	15OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	50	15OCT	15OCT	15OCT
1984	50	05OCT	15OCT	25OCT
1985	50	05OCT	15OCT	25OCT
1986	-	-	-	-
1987	500	15OCT	25OCT	15NOV
1988	50	15OCT	25OCT	15NOV
1989	130	-	25OCT	25NOV

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

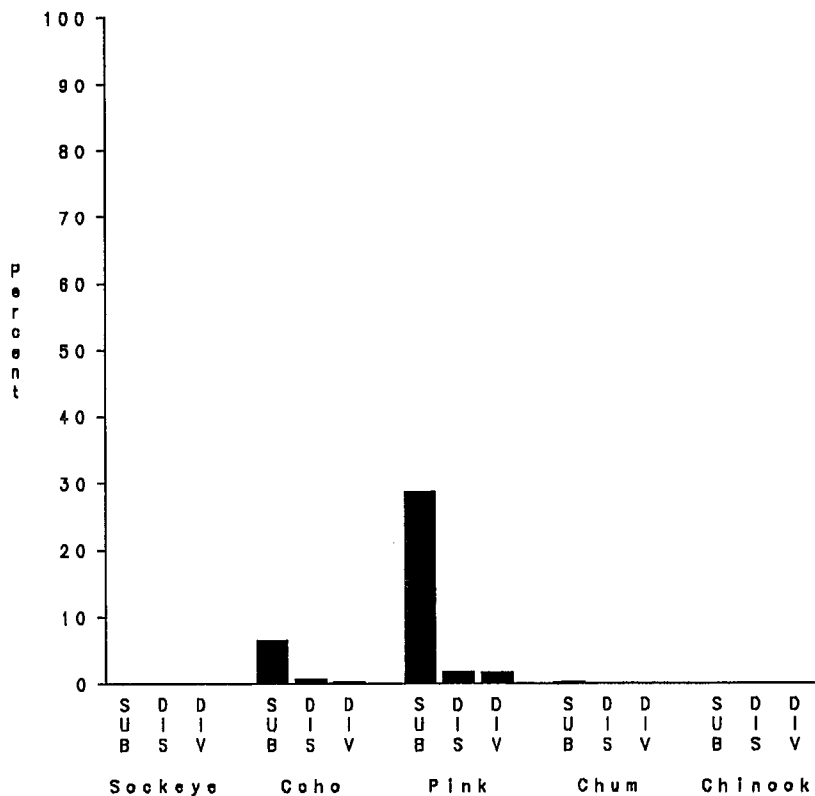
# CLUXEWE RIVER (92-1100)

10-yr Mean Escapement  
(1980-1989)



## CLUXEWE RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)



**A. DESCRIPTION**

Stream Name: MILLS CREEK	D.F.O. Division: SOUTH COAST
Local Name: BEAR CREEK, BEAR RIVER	District: 5 CAMPBELL RIVER
Watershed Code: 92-1210	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12-19
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 13

Tributaries	Code	Topographic (1:50k) Map: 92L/11
		B.C.G.S. (1:20k) Map: 055
		U.T.M. Mouth: 9.6330.56056
		Lat./Long. Mouth: 50 DG. 35' 17" 127 DG. 10' 44"
		Mainstem Length: 12.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS N. INTO PORT MCNEILL, W. OF PORT MCNEILL.		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	
NO INFORMATION AVAILABLE					

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
X LOG JAMS				PASSABLE LOG JAMS THROUGHOUT, BROACHED AS REQUIRED.(1975) (REF. 12B-1)

**C. FLOW**

Flow Control: Y	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: THIS STREAM WENT DRY IN SUMMER (1988) AND ALL COHO FRY APPEARED TO HAVE DIED. (REF. 12B-1)	
FLOW ENHANCEMENT PROPOSED, 1983 (REF. 12B-12)	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	OBSERVED TO FIRST LAKE. (REF. 12B-1, REF. 12B-9)
PK PINK SALMON	OBSERVED IN LOWER END AT 3.0 KM. (REF. 12B-20)
CM CHUM SALMON	OBSERVED IN LOWER END AT 3.0 KM. (REF. 12B-20)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	50	1980 - 1989	28A-18	350	28A-18	1500	12B-20
PK PINK SALMON	138	1980 - 1989	28A-18	350	28A-18	10000	12B-20
CM CHUM SALMON	163	1980 - 1989	28A-18	1000	28A-18	1500	12B-20
Comments: PK ESCAPEMENT RECORDED FOR 1986(200) AND 1988(350) ONLY (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	P X	X
PK PINK SALMON	Migration Spawning Incubation Rearing									X P X	X X	X	
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X	P X	X	

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
BX INCUBATION BOX	CM CHUM SALMON CO COHO SALMON PK PINK SALMON	0.6	OPERATED BY THE BEAR CREEK ENHANCEMENT GROUP. (REF. 12B-20)	1987/
FW FISHWAY		3.8	AT HIGHWAY CROSSING (REF. 12B-9)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FD FORESTRY	THE STREAM APPEARS TO BE RETURNING TO A MORE STABLE CONDITION AFTER PAST LOGGING OPERATIONS. (1954) (REF. 12B-1)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

A DOMESTIC WATER STORAGE DAM (FISHWAY FACILITIES PROVIDED) WAS CONSTRUCTED ON THIS STREAM IN 1957 (REF. 12B-1)
TWO PERMANENT CONCRETE DAMS WERE CONSTRUCTED BELOW ROAD CULVERTS TO PROVIDE SLOWER AND MORE CONSTANT WATER LEVELS. (1972) (REF. 12B-1)
THE PORT MCNEILL WATER SUPPLY DAM WAS REPLACED BY A WELL. THE OLD DAM HAS BEEN OPENED UP BUT NOT REMOVED. (1967) (REF. 12B-1)
THIS IS A HIGHLY PRODUCTIVE SYSTEM WHICH COULD STAND ENHANCEMENT - SOME PLANS UNDERWAY TO AUGMENT SYSTEM VIA QUATSE HATCHERY ADMINISTERED BY NORTHERN VANCOUVER ISLAND SALMONID ENHANCEMENT ASSOCIATION. (REF. 12B-9)
FLOW ENHANCEMENT REQUIRED. CHECK OLD DAM. NOT MUCH POTENTIAL. (REF. 12B-12)
EXCELLENT CO SPAWNING AND REARING HABITAT. (REF. 14-5)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
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K. SIS COMPLETED BY

Completed by: GITA KAPAHI	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/15

ESCAPEMENT : MILLS CREEK

WATERSHED-CODE : 92-1210

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	750	0	400	0	UNK
1954	0	1500	0	3500	0	UNK
1955	0	1500	75	400	0	UNK
1956	0	750	750	400	0	UNK
1957	0	1500	400	200	0	UNK
1958	0	1500	1500	400	0	UNK
1959	0	75	25	25	0	UNK
1960	0	400	0	400	0	UNK
1961	0	1500	400	200	0	UNK
1962	0	750	3500	N/O	0	UNK
1963	0	75	75	N/O	0	UNK
1964	0	1500	3500	750	0	UNK
1965	0	750	400	75	0	UNK
1966	0	3500	7500	75	0	UNK
1967	0	3500	750	25	0	UNK
1968	0	75	15000	75	0	UNK
1969	0	25	N/O	25	0	UNK
1970	0	400	750	N/O	0	UNK
1971	0	200	N/O	N/O	0	UNK
1972	0	70	400	30	0	UNK
1973	0	50	N/O	100	0	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	0	200	150	N/O	0	UNK
1976	0	500	1800	25	0	UNK
1977	0	200	75	N/O	0	UNK
1978	0	N/O	400	N/O	0	UNK
1979	0	15	N/O	0	0	UNK
1980	0	0	N/O	N/O	0	UNK
1981	0	N/O	N/O	N/O	0	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	0	UNK	UNK	UNK	0	UNK
1984	0	N/O	N/O	N/O	0	UNK
1985	N/O	N/O	N/O	20	N/O	UNK
1986	0	25	200	250	UNK	UNK
1987	0	N/O	N/O	35	0	UNK
1988	0	350	350	1000	0	UNK
1989	UNK	25	N/O	N/O	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

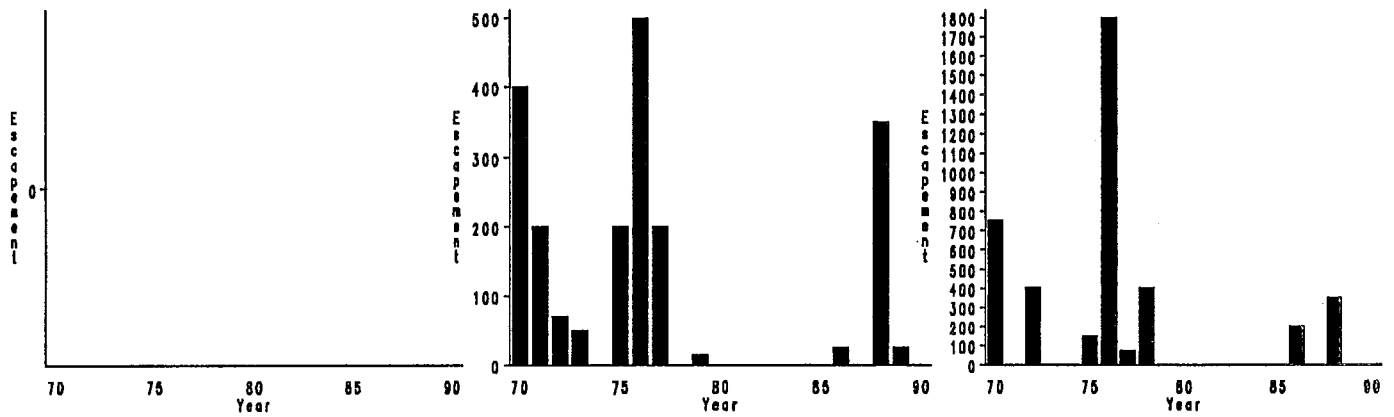
# MILLS CREEK (92-1210)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

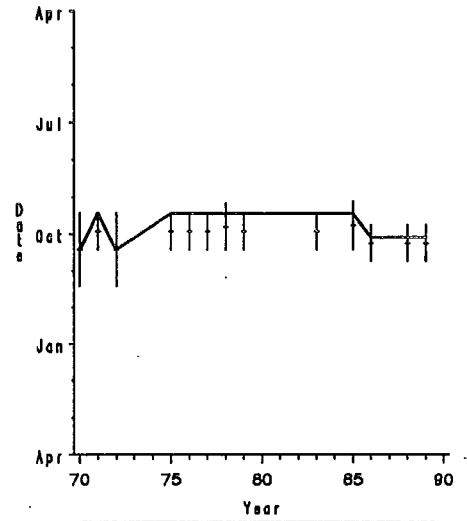
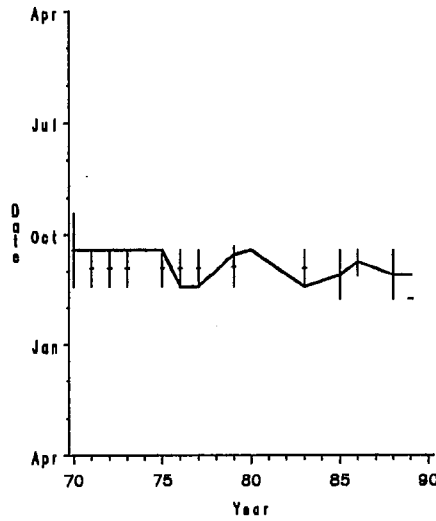
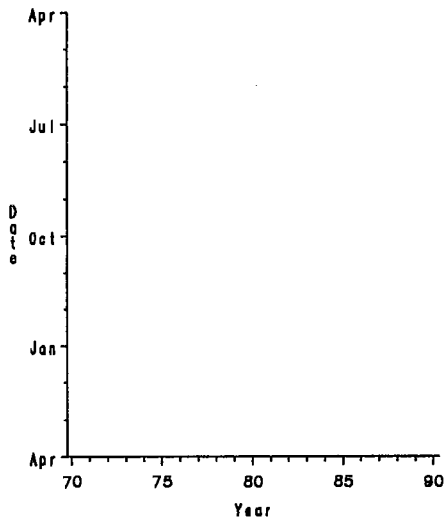
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	-	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	400	13SEP	15OCT	15NOV
1971	200	15OCT	15OCT	15NOV
1972	70	13OCT	15OCT	15NOV
1973	50	15OCT	15OCT	15NOV
1974	-	-	-	-
1975	200	13OCT	15OCT	15NOV
1976	500	15OCT	15NOV	15NOV
1977	200	15OCT	15NOV	15NOV
1978	0	-	-	-
1979	15	12OCT	19OCT	15NOV
1980	0	-	15OCT	-
1981	0	-	-	-
1982	-	-	-	-
1983	-	13OCT	15NOV	15NOV
1984	0	-	-	-
1985	0	15OCT	05NOV	25NOV
1986	25	15OCT	25OCT	05NOV
1987	0	-	-	-
1988	350	13OCT	05NOV	25NOV
1989	25	-	05NOV	25NOV

Pink				
Year	Escapement	Start	Peak	End
1970	750	15SEP	15OCT	15NOV
1971	0	15SEP	15SEP	15OCT
1972	400	15SEP	15OCT	15NOV
1973	0	-	-	-
1974	-	-	-	-
1975	150	15SEP	15SEP	15OCT
1976	1,800	15SEP	15SEP	15OCT
1977	75	15SEP	15SEP	15OCT
1978	400	07SEP	15SEP	15OCT
1979	0	15SEP	15SEP	15OCT
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	-	15SEP	15SEP	15OCT
1984	0	-	-	-
1985	0	05SEP	15SEP	15OCT
1986	200	25SEP	05OCT	25OCT
1987	0	-	-	-
1988	350	25SEP	05OCT	25OCT
1989	0	25SEP	05OCT	25OCT

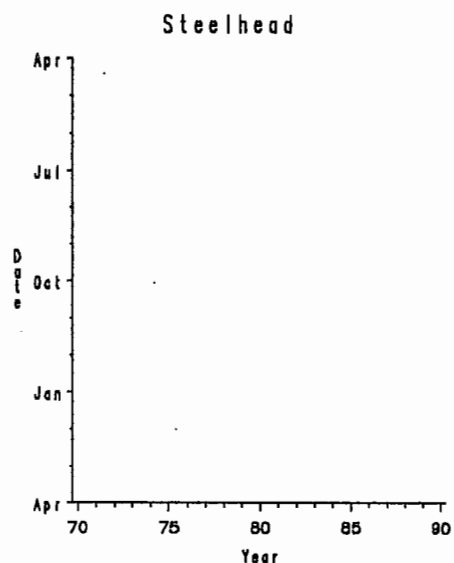
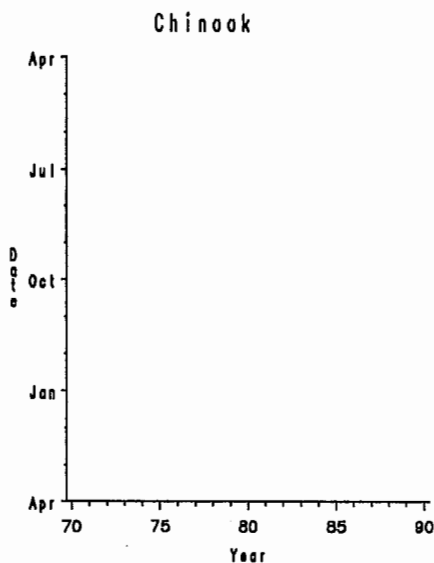
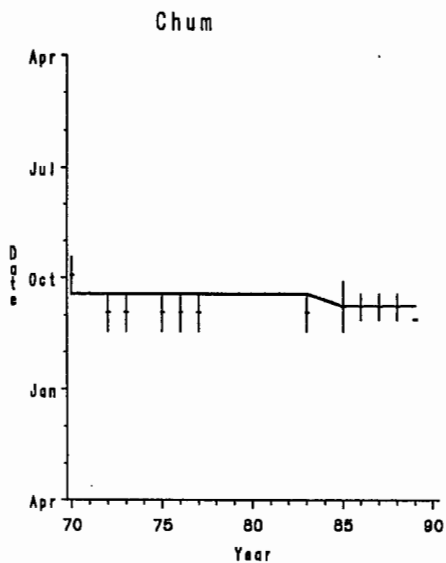
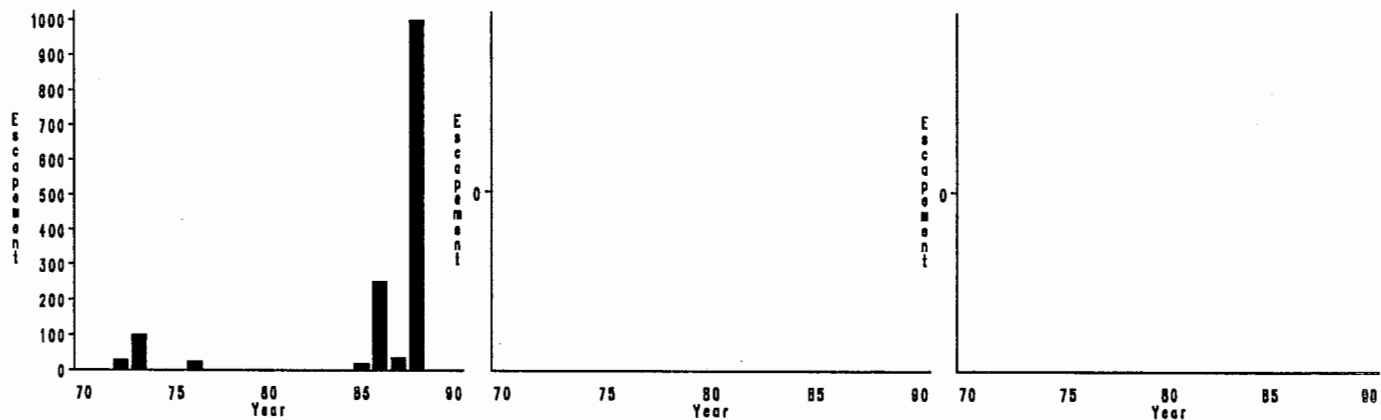
# MILLS CREEK (92-1210)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



Chum				
Year	Escapement	Start	Peak	End
1970	0	15SEP	15OCT	15OCT
1971	0	15OCT	15OCT	15OCT
1972	30	15OCT	15OCT	15NOV
1973	100	15OCT	15OCT	15NOV
1974	-	-	-	-
1975	0	15OCT	15OCT	15NOV
1976	25	15OCT	15OCT	15NOV
1977	0	15OCT	15OCT	15NOV
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	-	15OCT	15OCT	15NOV
1984	0	-	-	-
1985	20	05OCT	25OCT	15NOV
1986	250	15OCT	25OCT	05NOV
1987	35	15OCT	25OCT	05NOV
1988	1,000	15OCT	25OCT	05NOV
1989	0	-	25OCT	05NOV

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	-	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-



**A. DESCRIPTION**

Stream Name: <b>HYDE CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1280</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-19</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>11</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/11</b>
		B.C.G.S. (1:20k) Map: <b>055</b>
		U.T.M. Mouth: <b>9.6404.56052</b>
		Lat./Long. Mouth: <b>50 DG. 34' 58'' 127 DG. 01' 10''</b>
		Mainstem Length: <b>8.4 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLows N. INTO BROUGHTON STR., E. OF PORT McNEIL.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>BD BEAVER DAM</b>				<b>BREACHED AS REQUIRED (1975) (REF. 12B-1)</b>
<b>CV CULVERT</b>		<b>2.5</b>		<b>(REF. 12B-1)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
Comments: <b>SUBJECT TO FLASH FLOODING (REF. 12B-1)</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>CO COHO SALMON</b>	<b>OBSERVED AT 3.0 KM. (REF. 12B-9)</b>
<b>PK PINK SALMON</b>	<b>OBSERVED AT 0.9 KM. (REF. 12B-9)</b>
<b>CM CHUM SALMON</b>	<b>OBSERVED AT 0.9 KM. (REF. 12B-9)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>CO COHO SALMON</b>		<b>1980 - 1989</b>				<b>500</b>	<b>12B-20</b>
<b>PK PINK SALMON</b>	<b>187</b>	<b>1980 - 1988</b>	<b>28A-1B</b>	<b>300</b>	<b>28A-1B</b>	<b>5000</b>	<b>12B-20</b>
<b>CM CHUM SALMON</b>		<b>1980 - 1989</b>				<b>1000</b>	<b>12B-20</b>
Comments: <b>10 YEAR AVERAGE, NOT INDICATIVE DUE TO INSUFFICIENT INSPECTIONS FROM 1976 TO 1985. 1966 TO 1977 SHOWN FOR HISTORIC RELEVANCE. (REF. 12B-9)</b>							

**E. ESCAPEMENT SUMMARY CONTINUED**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK ESCAPEMENTS RECORDED FOR 1980(260) AND 1988(300) (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing										X X	X P	X
PK PINK SALMON	Migration Spawning Incubation Rearing								X	X P	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing									X	P X	X X	

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
FW FISHWAY		2.5	INSTALLED BY DEPT. OF HIGHWAYS TO ALLEVIATE A PROBLEM CULVERT. (REF. 12B-1)	1968/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	LOGGING DEBRIS IS WASHED INTO THE STREAM EACH YEAR DUE TO EXTREMELY HIGH WATER LEVELS (1963) (REF. 12B-1)
WQ WATER QUALITY	ROAD ACCESS AND BRIDGE REPLACED WHICH CAUSED SOME SILTATION IN 1988 ABOVE HWY CULVERT BY OKEEFEMOKE LAND DEVELOPMENT COMPANY. (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

GOOD SMALL PRODUCER AS IS. STREAM ADOPTION CANDIDATE. NO ADDITIONAL POTENTIAL. (REF. 12B-12)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / / Prepared By:

**K. SIS COMPLETED BY**

Completed by: GITA KAPAH  
 Last updated by: MARG ANDERSON  
 Date: 1988/06/23  
 Date: 1991/07/05

ESCAPEMENT : HYDE CREEK

WATERSHED-CODE : 92-1280

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	0	7	75	20	0	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	400	3500	25	UNK	UNK
1967	UNK	200	200	25	UNK	UNK
1968	UNK	25	750	N/O	UNK	UNK
1969	UNK	N/O	N/O	N/O	UNK	UNK
1970	UNK	N/O	400	N/O	UNK	UNK
1971	UNK	75	25	UNK	UNK	UNK
1972	UNK	400	75	UNK	UNK	UNK
1973	UNK	300	UNK	200	UNK	UNK
1974	UNK	400	100	200	UNK	UNK
1975	UNK	50	UNK	50	UNK	UNK
1976	UNK	200	75	75	UNK	UNK
1977	0	75	200	75	0	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	UNK	UNK	260	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	0	UNK	UNK	UNK	0	UNK
1984	0	N/O	N/O	N/O	0	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	N/O	N/O	N/O	0	UNK
1988	0	N/O	300	N/O	0	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

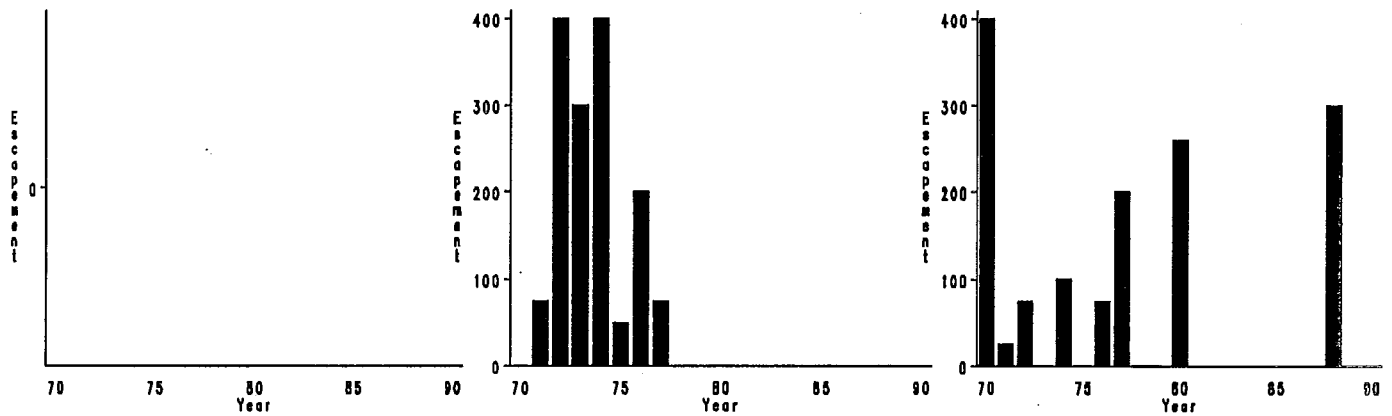
# HYDE CREEK (92-1280)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

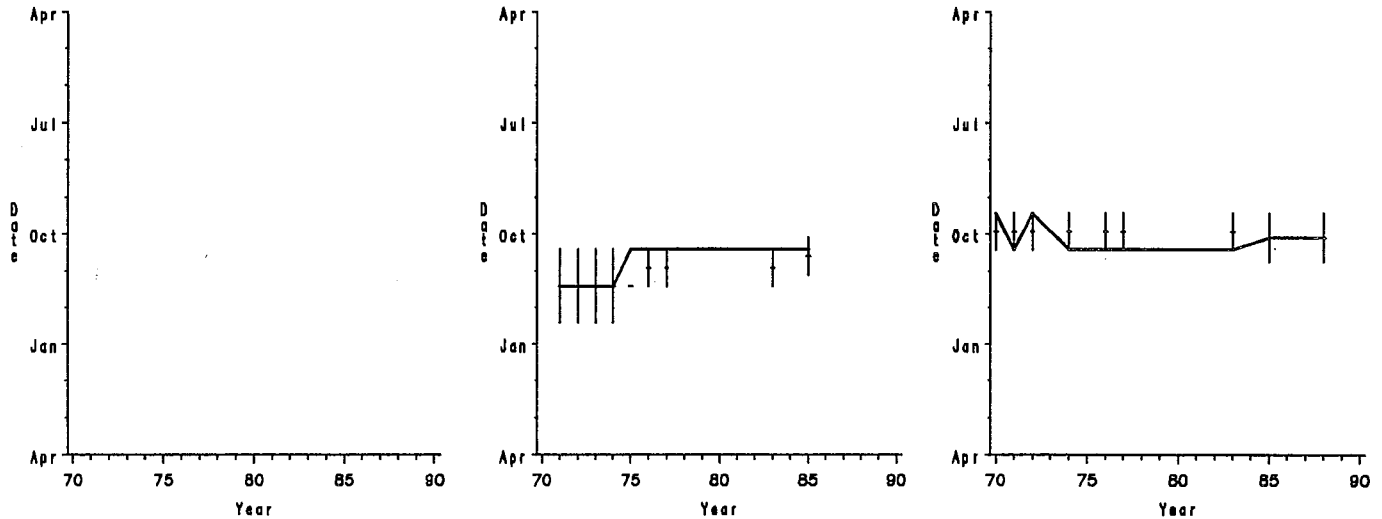
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	0	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	75	15OCT	15NOV	15DEC
1972	400	15OCT	15NOV	15DEC
1973	300	15OCT	15NOV	15DEC
1974	400	15OCT	15NOV	15DEC
1975	50	-	15OCT	15NOV
1976	200	15OCT	15OCT	15NOV
1977	75	15OCT	15OCT	15NOV
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	15OCT	15OCT	15NOV
1984	0	-	-	-
1985	-	05OCT	15OCT	05NOV
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	400	15SEP	15SEP	15OCT
1971	25	15SEP	15OCT	15OCT
1972	75	15SEP	15SEP	15OCT
1973	-	-	-	-
1974	100	15SEP	15OCT	15OCT
1975	-	15OCT	-	-
1976	75	15SEP	15OCT	15OCT
1977	200	15SEP	15OCT	15OCT
1978	-	-	-	-
1979	-	-	-	-
1980	200	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	15SEP	15OCT	15OCT
1984	0	-	-	-
1985	-	15SEP	05OCT	25OCT
1986	-	-	-	-
1987	0	-	-	-
1988	300	15SEP	05OCT	25OCT
1989	-	-	-	-

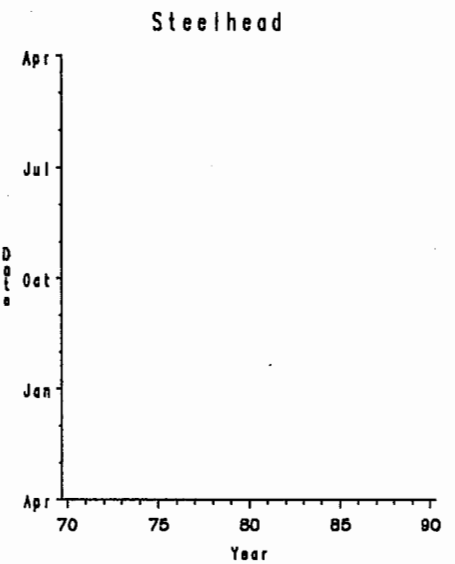
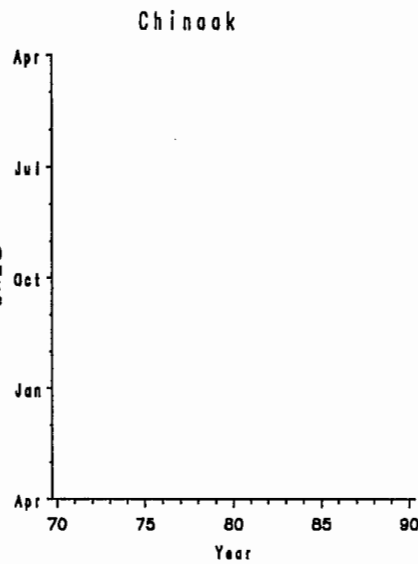
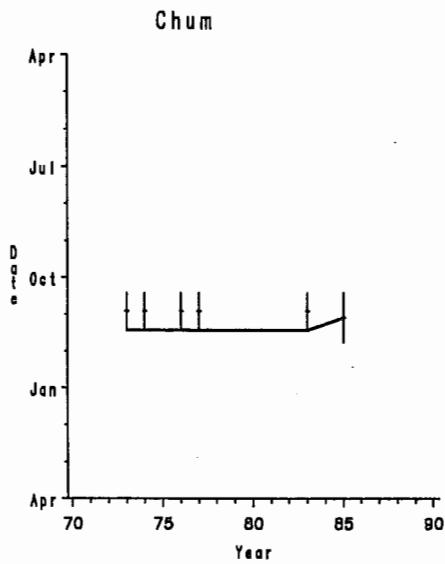
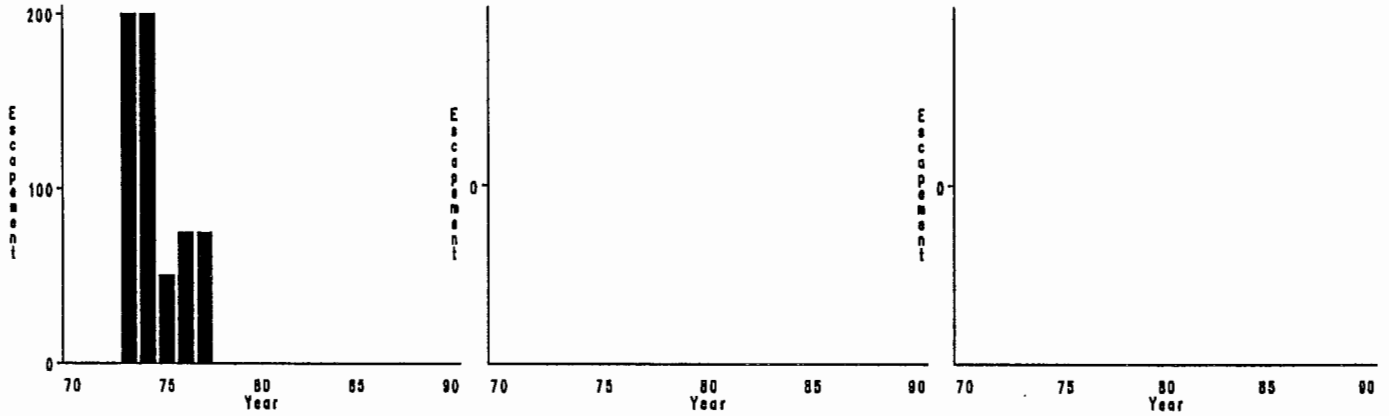
# HYDE CREEK (92-1280)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



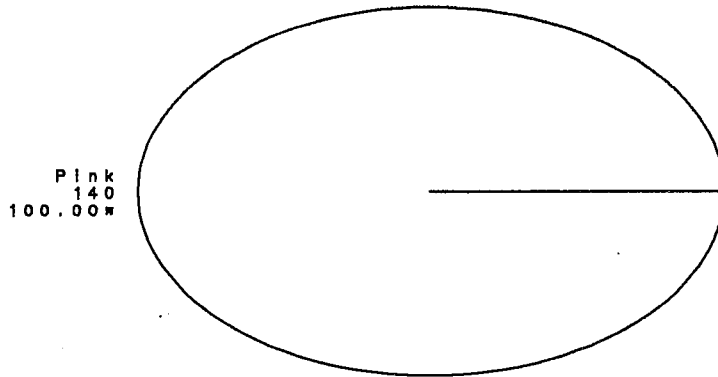
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	200	15OCT	15NOV	15NOV
1974	200	15OCT	15NOV	15NOV
1975	50	15NOV	-	15NOV
1976	75	15OCT	15NOV	15NOV
1977	75	15OCT	15NOV	15NOV
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	15OCT	15NOV	15NOV
1984	0	-	-	-
1985	-	15OCT	05NOV	25NOV
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	15NOV	-
1976	-	-	-	-
1977	0	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

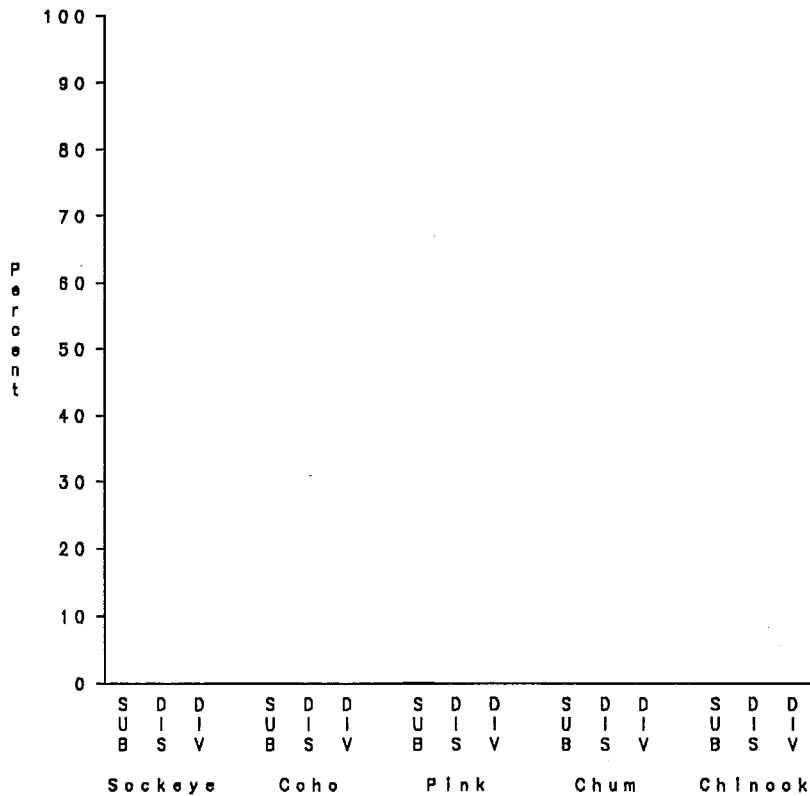
# HYDE CREEK (92-1280)

10-yr Mean Escapement  
(1980-1989)



## HYDE CREEK : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	67150	1980 - 1989	28A-18	180000	28A-18	250000	12B-9
CO COHO SALMON	1714	1980 - 1989	28A-18	3000	28A-18	20000	12B-20
PK PINK SALMON	3425	1980 - 1988	28A-18	7500	28A-18	50000	12B-20
PK PINK SALMON	1050	1981 - 1989	28A-18	2000	28A-18		
CM CHUM SALMON	42365	1980 - 1989	28A-18	100000	28A-18	100000	12B-20
CH CHINOOK SALMON	1825	1980 - 1989	28A-18	3850	28A-18	15000	12B-20
ST STEELHEAD	1800	1953 - 1962	28A-18	7500	28A-18		
Comments: SK REQUIRE PROTECTION FROM JIGGING AT MOSS CAMP (1966) (REF. 12B-1)							
A 50% LOSS OCCURRED TO SK DUE TO A GILL FUNGUS (1973). LOSSES ALSO OCCURRED IN 1988. (REF. 12B-1)							
SOCKEYE CONTINUE TO BE FOCUS OF INCREASED ENFORCEMENT DUE TO JIGGING AND NETTING (REF. 12B-9)							
ESCAPEMENT FOR STEELHEAD SHOWN FOR HISTORICAL RELEVANCE . (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SK SOCKEYE SALMON	Migration Spawning Incubation Rearing					X	X X	X X	X X	X, X	P X	X	
CO COHO SALMON	Migration Spawning Incubation Rearing								X X	X X	X X	X P	
PK PINK SALMON	Migration Spawning Incubation Rearing							X X	X X	P X			
CM CHUM SALMON	Migration Spawning Incubation Rearing											X X X	P X
CH CHINOOK SALMON	Migration Spawning Incubation Rearing								X X	X X	X X	X X	

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
FW FISHWAY			BLASTED BY CANFOR TO HELP MIGRATION DURING HIGH FLOWS AT MOSS. (REF. 12B-20)	/
HY HATCHERY	CO COHO SALMON ST STEELHEAD		LOCATED AT MOSS. P.I.P. HATCHERY. (REF. 13-10)	/
EN ENHANCEMENT ACTS	AF ALL SPECIES	0.0	NIMPKISH GUARDIAN PROGRAM AND NIMPKISH TECHNICAL WORKING GROUP ESTABLISHED TO ASSIST IN THE MANAGEMENT AND ENFORCEMENT OF THIS LARGE WATERSHED. (REF. 12B-9)	1983/

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED CONTINUED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
HY HATCHERY	CM CHUM SALMON CO COHO SALMON SK SOCKEYE SALMON	0.0	NIMPKISH INDIAN BAND HAS ESTABLISHED 2 HATCHERIES TO AUGMENT ALL SALMON SPECIES WITH EXCEPTION OF PK AT CHESLEKEES CAMPSITE AND AT WILLOW CREEK (REF. 12B-9)	1983/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
MI MINING	NIMPKISH IRON MINES, LOCATED 9.6KM S.E. OF NIMPKISH LAKE, WAS IN OPERATION FROM 1960 - 1963. THE OPEN PIT MINING INCLUDED PROCESSING AT THE SITE AND THE REMAINING PILE OF WASTE MATERIAL SITUATED ON THE BANK POSES A POSSIBLE SLIDE THREAT. (REF. 12B-1)
MI MINING	UNDER CERTAIN SATURATED CONDITIONS, THIS WASTE PILE COULD SLOUGH INTO THE RIVER (1974) (REF. 12B-1)
FO FORESTRY	CANFOR CONTINUES TO LOG IN WATERSHED ON AN ONGOING BASIS (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THE OBSTRUCTION AT KARMTSEN FALLS SITUATED 32KM ABOVE NIMPKISH LAKE WAS ALLEVIATED BY BLASTING A FISHWAY AROUND THE FALLS. THE ROCK FISHWAY NOW PERMITS SALMON TO MIGRATE TO THE SCHOEN AND KLAKLAKAMA LAKE SYSTEMS. (1953) (REF. 12B-1)
THE WORKS CONDUCTED ON THE FALLS HAVE NOT SOLVED THE ACCESS PROBLEMS FOR SOCKEYE. A SUBMISSION TO GET SEP ENGINEERS TO "BLOW" THE FALLS WAS INITIATED IN 1987. (REF. 12B-9)
RECORD RETURN OF SOCKEYE IN 1987 COUPLED WITH LAKE FERTILIZATION WILL INEVITABLY SEE TARGET LEVELS BEING EXCEEDED BY 1992. THEREFORE A COUNTING FENCE SHOULD BE ESTABLISHED TO ENSURE ACCURATE ENUMERATION. (REF. 12B-9)

**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAH	Date: 1988/06/23
Last updated by: KATHY PONTUS	Date: 1991/07/17

ESCAPEMENT : NIMPKISH RIVER

WATERSHED-CODE : 92-1300

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	100000	15000	3500	75000	15000	UNK
1954	75000	7500	3500	35000	15000	UNK
1955	75000	15000	1500	75000	15000	UNK
1956	75000	15000	3500	35000	7500	UNK
1957	130000	11000	1500	30000	35000	UNK
1958	75000	7500	3500	35000	7500	UNK
1959	75000	7500	3500	15000	7500	UNK
1960	75000	7500	3500	35000	7500	UNK
1961	75000	15000	3500	35000	7500	UNK
1962	100000	35000	3500	15000	15000	UNK
1963	150000	35000	1500	15000	7500	UNK
1964	100000	15000	3500	15000	7500	UNK
1965	30000	35000	400	15000	3500	UNK
1966	120000	15000	7500	35000	1500	UNK
1967	100000	3500	400	15000	1500	UNK
1968	35000	7500	15000	55000	7500	UNK
1969	100000	1500	400	7500	400	UNK
1970	50000	30000	4000	18000	6000	UNK
1971	75000	15000	4000	7500	900	UNK
1972	60000	7500	12000	20000	6500	UNK
1973	100000	15000	N/O	25000	10000	UNK
1974	150000	8000	12000	5000	5000	UNK
1975	40000	2000	600	8000	1100	UNK
1976	35000	7500	400	6000	3500	UNK
1977	15000	1500	75	15000	750	UNK
1978	8500	2500	1700	16500	1300	UNK
1979	20000	500	0	6000	500	UNK
1980	24000	500	7500	14000	300	UNK
1981	60000	2500	UNK	10000	700	UNK
1982	60000	UNK	1500	55000	700	UNK
1983	70000	1000	100	7500	1500	UNK
1984	50500	3000	UNK	38000	3000	UNK
1985	40000	UNK	UNK	70000	3000	UNK
1986	40000	UNK	200	90000	700	UNK
1987	125000	2000	UNK	15000	3000	UNK
1988	180000	1000	4500	100000	1500	UNK
1989	22000	2000	2000	24150	3850	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

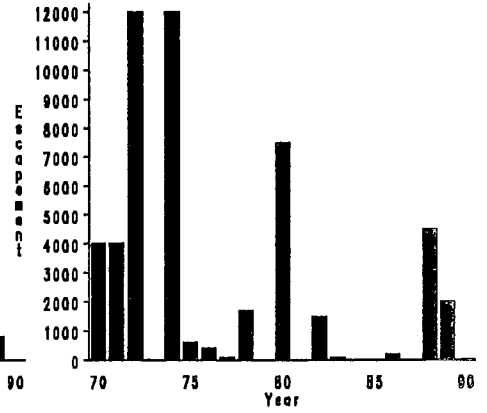
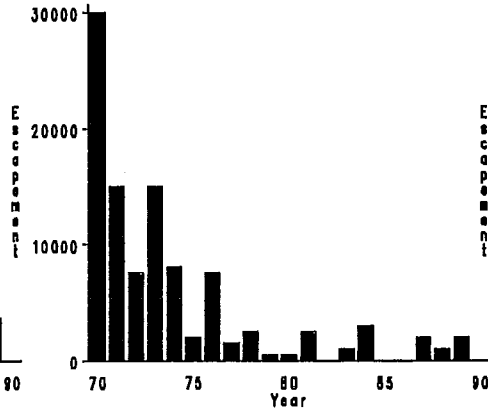
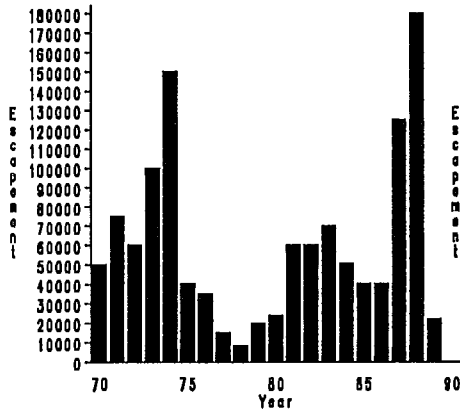
# NIMPKISH RIVER (92-1300)

## Escapement & Run Timing

Sockeye (SK)

Coho (CO)

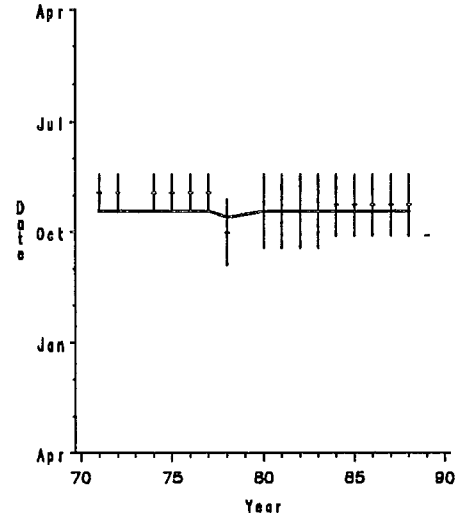
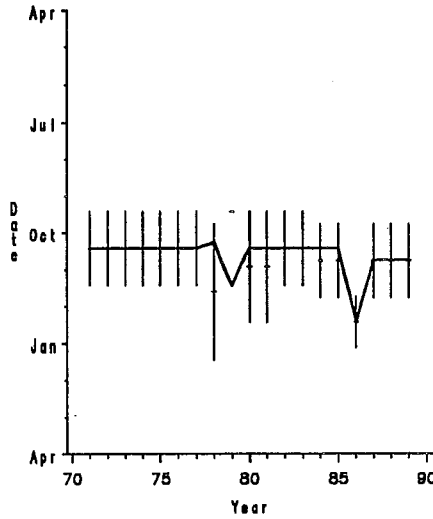
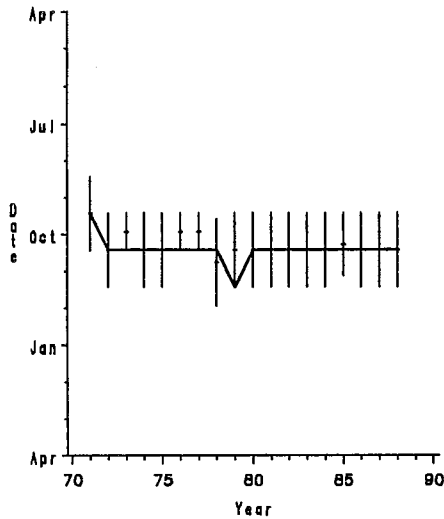
Pink (PK)



Sockeye

Coho

Pink



Sockeye					
Year	Escapement	Start	Peak	End	
1970	50,000	-	-	-	
1971	75,000	15AUG	15SEP	15OCT	
1972	80,000	15SEP	15OCT	15NOV	
1973	100,000	15SEP	15OCT	15OCT	
1974	150,000	15SEP	15OCT	15NOV	
1975	40,000	15SEP	15OCT	15NOV	
1976	35,000	15SEP	15OCT	15OCT	
1977	15,000	15SEP	15OCT	15OCT	
1978	6,500	20SEP	15OCT	30NOV	
1979	20,000	15SEP	15NOV	15NOV	
1980	24,000	15SEP	15OCT	15NOV	
1981	60,000	15SEP	15OCT	15NOV	
1982	60,000	15SEP	15OCT	15NOV	
1983	70,000	15SEP	15OCT	15NOV	
1984	50,500	15SEP	15OCT	15NOV	
1985	40,000	15SEP	15OCT	05NOV	
1986	40,000	15SEP	15OCT	15NOV	
1987	125,000	15SEP	15OCT	15NOV	
1988	180,000	15SEP	15OCT	15NOV	
1989	22,000	-	-	-	

Coho					
Year	Escapement	Start	Peak	End	
1970	30,000	-	-	-	
1971	15,000	15SEP	15OCT	15NOV	
1972	7,500	15SEP	15OCT	15NOV	
1973	15,000	15SEP	15OCT	15NOV	
1974	8,000	15SEP	15OCT	15NOV	
1975	2,000	15SEP	15OCT	15NOV	
1976	7,500	15SEP	15OCT	15NOV	
1977	1,500	15SEP	15OCT	15NOV	
1978	2,500	25SEP	15OCT	15JAN	
1979	500	15SEP	15NOV	-	
1980	500	15SEP	15OCT	15DEC	
1981	2,500	15SEP	15OCT	15DEC	
1982	-	15SEP	15OCT	15NOV	
1983	1,000	15SEP	15OCT	15NOV	
1984	3,000	25SEP	15OCT	25NOV	
1985	-	25SEP	15OCT	25NOV	
1986	-	25NOV	15OCT	05JAN	
1987	2,000	25SEP	25OCT	25NOV	
1988	1,000	25SEP	25OCT	25NOV	
1989	2,000	25SEP	15OCT	25NOV	

Pink					
Year	Escapement	Start	Peak	End	
1970	4,000	-	-	-	
1971	4,000	15AUG	15SEP	15SEP	
1972	12,000	15AUG	15SEP	15SEP	
1973	0	-	-	-	
1974	12,000	15AUG	15SEP	15SEP	
1975	800	15AUG	15SEP	15SEP	
1976	400	15AUG	15SEP	15SEP	
1977	75	15AUG	15SEP	15SEP	
1978	1,700	05SEP	20SEP	30OCT	
1979	0	-	-	-	
1980	7,500	15AUG	15SEP	15OCT	
1981	-	15AUG	15SEP	15OCT	
1982	1,500	15AUG	15SEP	15OCT	
1983	100	15AUG	15SEP	15OCT	
1984	-	15AUG	15SEP	05OCT	
1985	-	15AUG	15SEP	05OCT	
1986	200	15AUG	15SEP	05OCT	
1987	-	15AUG	15SEP	05OCT	
1988	4,500	15AUG	15SEP	05OCT	
1989	2,000	-	-	05OCT	

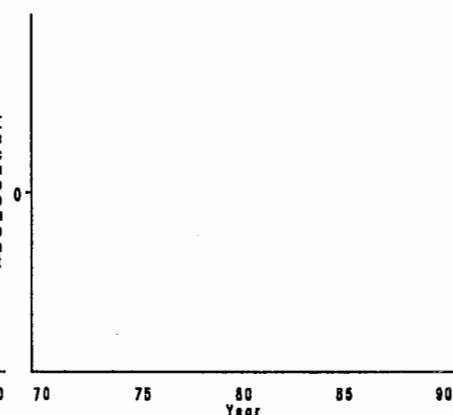
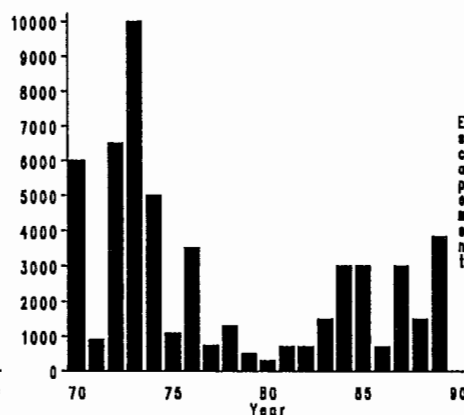
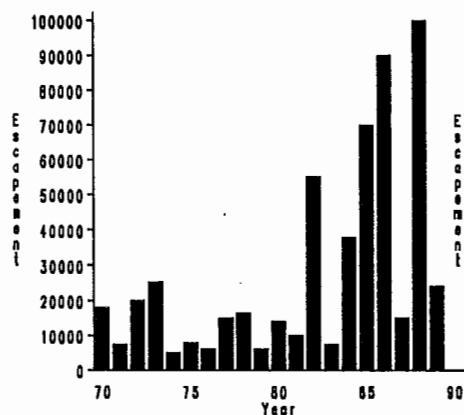
# NIMPKISH RIVER (92-1300)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

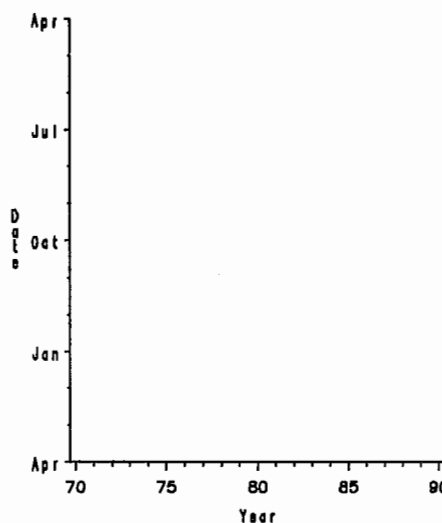
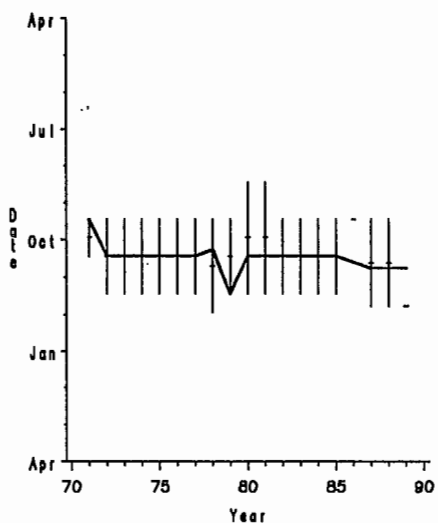
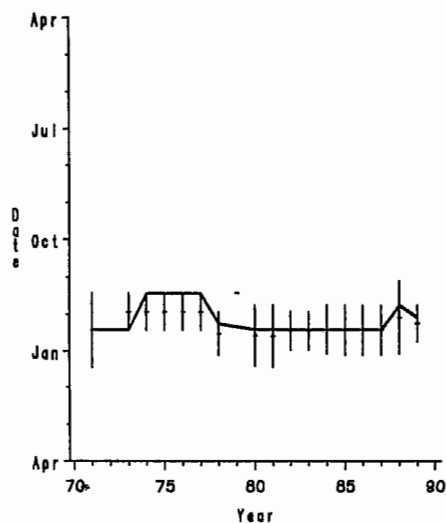
Steelhead (ST)



Chum

Chinook

Steelhead



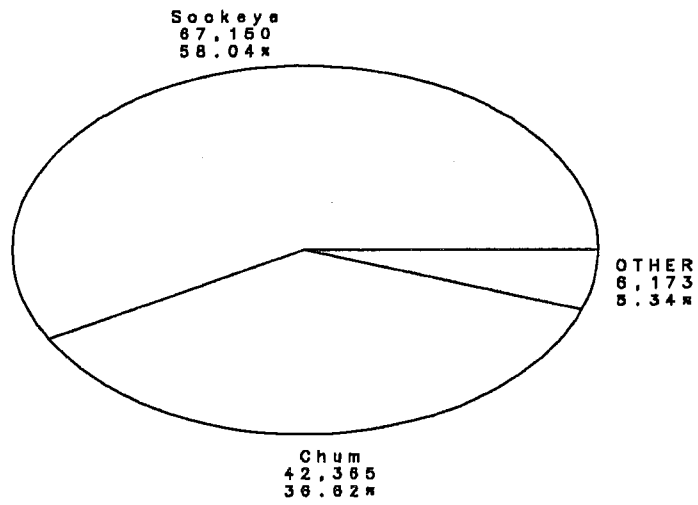
Chum				
Year	Escapement	Start	Peak	End
1970	18,000	-	-	-
1971	7,500	15NOV	15DEC	15JAN
1972	28,000	-	-	28APR
1973	25,000	15NOV	15DEC	15DEC
1974	5,000	15NOV	15NOV	15DEC
1975	8,000	15NOV	15NOV	15DEC
1976	8,000	15NOV	15NOV	15DEC
1977	15,000	15NOV	15NOV	15DEC
1978	18,500	01DEC	10DEC	05JAN
1979	1,000	15NOV	-	-
1980	14,000	25NOV	15DEC	14JAN
1981	18,000	25NOV	15DEC	15JAN
1982	55,000	30NOV	15DEC	01JAN
1983	7,500	30NOV	15DEC	01JAN
1984	38,000	25NOV	15DEC	04JAN
1985	78,000	25NOV	15DEC	05JAN
1986	98,000	25NOV	15DEC	05JAN
1987	15,000	25NOV	15DEC	05JAN
1988	108,000	05NOV	25NOV	04JAN
1989	24,150	25NOV	05DEC	25DEC

Chinook				
Year	Escapement	Start	Peak	End
1970	8,000	-	-	-
1971	900	15SEP	15SEP	15OCT
1972	8,500	15SEP	15OCT	15NOV
1973	10,000	15SEP	15OCT	15NOV
1974	5,000	15SEP	15OCT	15NOV
1975	1,100	15SEP	15OCT	15NOV
1976	3,500	15SEP	15OCT	15NOV
1977	750	15SEP	15OCT	15NOV
1978	1,300	15SEP	15OCT	30NOV
1979	500	15SEP	15NOV	15NOV
1980	300	15AUG	15OCT	15NOV
1981	700	15AUG	15OCT	15NOV
1982	700	15SEP	15OCT	15NOV
1983	1,500	15SEP	15OCT	15NOV
1984	3,000	15SEP	15OCT	15NOV
1985	3,000	15SEP	15OCT	15NOV
1986	700	15SEP	-	-
1987	3,000	15SEP	25OCT	25NOV
1988	1,500	15SEP	25OCT	25NOV
1989	3,850	-	25OCT	25NOV

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

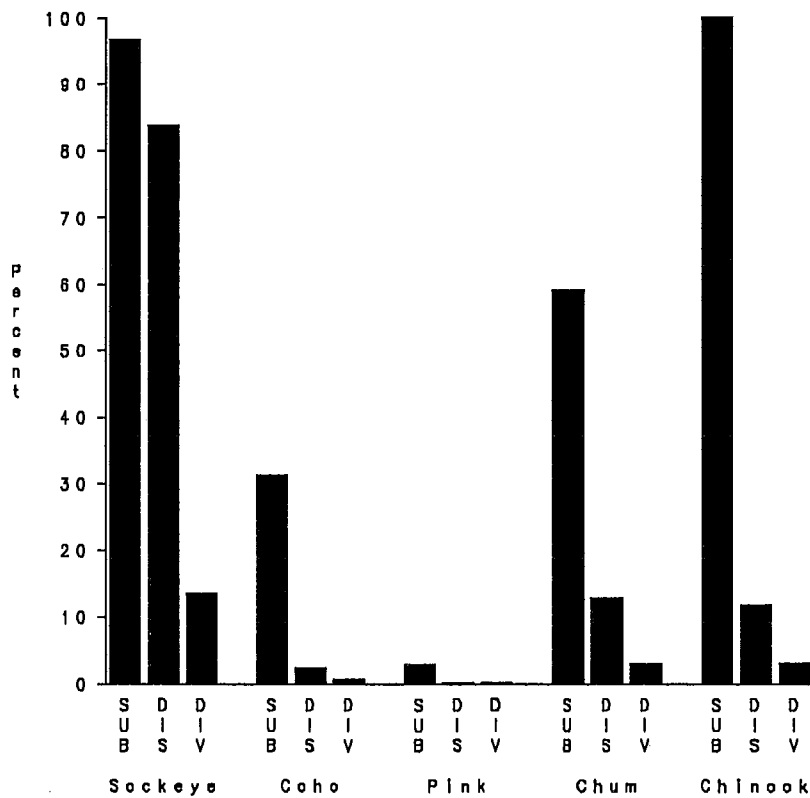
# NIMPKISH RIVER (92-1300)

10-yr Mean Escapement  
(1980-1989)



## NIMPKISH RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(i.e. Subdistrict, District & Division)





**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
----------------------------	--------------

**K. SIS COMPLETED BY**

Completed by:     ROSS DE MARCO	Date: 1990/06/18
Checked by:     BRIAN TUTTY	Date: 1990/04/30
Last updated by:     MARG ANDERSON	Date: 1991/07/05

ESCAPEMENT : KILPALA RIVER

WATERSHED-CODE : 92-1300-056

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	0	300	0	0	0	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	UNK	UNK	UNK	UNK	UNK	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>KINMAN CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1300-105</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12B-19</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>11</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/7</b>
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: <b>9.6470.55788</b>
		Lat./Long. Mouth: <b>DG. ' ' DG. ' '</b>
		Mainstem Length: <b>9.4 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLOWS W INTO NIMPKISH LAKE, N OF NIMPKISH.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	
<b>NO INFORMATION AVAILABLE</b>	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>		<b>2.0</b>	<b>AF ALL SPECIES</b>	<b>(REF. 12B-20)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2:                      No. 3:                      No. 4:
<b>NO INFORMATION AVAILABLE</b>	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>SK SOCKEYE SALMON</b>	<b>OBSERVED AT 0.5 KM. (REF. 12B-20)</b>
<b>CO COHO SALMON</b>	<b>SPAWNING TO FALLS AT 2.0 KM. (REF. 12B-20)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>NO INFORMATION AVAILABLE</b>													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: ROSS DE MARCO	Date: 1990/06/18
Checked by: BRIAN TUTTY	Date: 1990/04/30
Last updated by: MARG ANDERSON	Date: 1991/07/05

**A. DESCRIPTION**

Stream Name: TLAKWA CREEK	D.F.O. Division: SOUTH COAST
Local Name: WILLOW CREEK	District: 5 CAMPBELL RIVER
Watershed Code: 92-1300-110	Subdistrict: 11 PORT HARDY
	Statistical Subarea: 12-19
	M.O.E. Region: 1 VANCOUVER ISLAND
	Management Unit: 11

Tributaries	Code	Topographic (1:50k) Map: 92L/7
		B.C.G.S. (1:20k) Map: 026
		U.T.M. Mouth: 9.6459.55772
		Lat./Long. Mouth: 50 DG. 19' 48'' 126 DG. 57' 02''
		Mainstem Length: 15.8 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS N AND E INTO NIMPKISH LAKE, W OF NIMPKISH.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	
NO INFORMATION AVAILABLE	

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS	10.0	1.6	AF ALL SPECIES	(REF. 12B-9)

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
NO INFORMATION AVAILABLE	

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
SK SOCKEYE SALMON	OBSERVED AT 0.8 KM. (REF. 12B-9)
CO COHO SALMON	OBSERVED AT 0.8 KM. (REF. 12B-9)
CH CHINOOK SALMON	OBSERVED SPAWNING AT 0.8 KM. (REF. 12B-20)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
NO INFORMATION AVAILABLE							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													



**A. DESCRIPTION**

Stream Name: <b>ATLUCK CREEK</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1300-120</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-19</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>11</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/7</b>
		B.C.G.S. (1:20k) Map: <b>026</b>
		U.T.M. Mouth: <b>9.6470.55756</b>
		Lat./Long. Mouth: <b>50 DG. 17' 49'' 126 DG. 55' 52''</b>
		Mainstem Length: <b>26.3 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLOWS NW INTO S END OF NIMPKISH LAKE.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>GRADUAL GRADIENT (REF. 12B-9)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>F FALLS</b>		<b>4.0</b>		<b>(REF. 12B-5)</b>

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>LAKE FED. AMUTZ LAKE: AREA - 0.9 SQ.KM; PERIMETER - 5.0 KM. HUSTAN LAKE: AREA - 1.8 SQ.KM; PERIMETER - 9.2 KM. ATLUCK LAKE: AREA - 2.8 SQ.KM; PERIMETER - 15.4 KM. (REF. 6N-28)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
<b>SK SOCKEYE SALMON</b>	<b>OBSERVED SPAWNING UPSTREAM OF AMUTZ LAKE. (REF. 12B-9)</b>
<b>CO COHO SALMON</b>	<b>OBSERVED TO ATLUCK LAKE, AND IN TRIBUTARIES OF AMUTZ LAKE. (REF. 14-5, REF. 12B-9, REF. 12B-20)</b>
<b>CH CHINOOK SALMON</b>	<b>TO LAKE (REF. 12B-9)</b>
<b>CT CUTTHROAT TROUT</b>	<b>OBSERVED IN DIANE LAKE. (REF. 14-5)</b>
<b>DV DOLLY VARDEN</b>	<b>OBSERVED IN HUSTAN LAKE. (REF. 14-5)</b>
<b>KO KOKANEE</b>	<b>OBSERVED IN ATLUCK AND DIANE LAKES. (REF. 14-5)</b>
<b>RB RAINBOW TROUT</b>	<b>OBSERVED IN ATLUCK AND HUSTAN LAKES. (REF. 14-5)</b>

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							





**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared:     /     /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by:     ROSS DE MARCO	Date: 1990/06/18
Checked by:     BRIAN TUTTY	Date: 1990/04/30
Last updated by: MARG ANDERSON	Date: 1991/07/05



**E. ESCAPEMENT SUMMARY CONTINUED**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: NO SPAWNING SALMON RECORDED SINCE 1974. (REF. 28A-18)							
CO HAS SCATTERED PAST HISTORY PRESENT ESCAPEMENT FOR 1989(100) ONLY (REF. 28A-18)							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CO COHO SALMON	Migration Spawning Incubation Rearing									X X	X X	X X	X

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
HY HATCHERY	CH CHINOOK SALMON CO COHO SALMON		PRIVATE HATCHERY, LOCATED AT HIGHWAY CROSSING. (REF. 12B-9, REF. 12B-20)	/

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
NO INFORMATION AVAILABLE	

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

THIS STREAM IS GENERALLY IN GOOD CONDITION. (1971) (REF. 12B-1)
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
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**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/05

ESCAPEMENT : THIEMER CREEK

WATERSHED-CODE : 92-1320

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	3500	0	0	0	UNK
1954	0	1500	0	0	0	UNK
1955	0	3500	0	0	0	UNK
1956	0	3500	0	0	0	UNK
1957	0	1500	0	0	0	UNK
1958	0	1500	0	0	0	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	0	75	0	0	0	UNK
1961	0	1500	0	0	0	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	0	400	0	0	0	UNK
1964	0	400	75	0	0	UNK
1965	0	200	0	0	0	UNK
1966	0	200	25	0	0	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	0	25	N/O	0	0	UNK
1969	UNK	N/O	N/O	UNK	UNK	UNK
1970	0	25	0	0	0	UNK
1971	0	200	0	0	0	UNK
1972	0	200	0	0	0	UNK
1973	0	200	0	0	0	UNK
1974	0	200	0	0	0	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	UNK	UNK	UNK	UNK	UNK	UNK
1980	0	N/O	N/O	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	N/O	N/O	N/O	0	UNK
1989	UNK	100	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE



D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
CT CUTTHROAT TROUT	OBSERVED IN BONANZA LAKE. (REF. 14-5, REF. 12B-8)
DV DOLLY VARDEM	OBSERVED IN IDA LAKE. (REF. 14-5, REF. 12B-8)
KD KOKANEE	OBSERVED IN BONANZA AND IDA LAKES. (REF. 14-5)
RB RAINBOW TROUT	OBSERVED IN BONANZA AND IDA LAKES. (REF. 14-5)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON		1980 - 1989		30	28A-18	250	12B-20
CO COHO SALMON		1980 - 1989		200	28A-18	5000	12B-20
PK PINK SALMON	413	1980 - 1989	28A-18	1500	28A-18	10000	12B-20
PK PINK SALMON	100	1981 - 1989	28A-18	300	28A-18		
CM CHUM SALMON		1980 - 1989		12	28A-18	2500	12B-20
CH CHINOOK SALMON		1980 - 1989				400	12B-20
ST STEELHEAD	178	1970 - 1983	12B-8	562	12B-8		
Comments: DUE TO INFREQUENT INSPECTIONS DURING PERIOD 1977-1987, 1965-1975 USED TO SHOW HISTORIC ESCAPEMENTS. (REF. 12B-9)							
SK ESCAPEMENT 1986(30) ONLY CO ESCAPEMENT 1987(200) ONLY CM ESCAPEMENT 1986(12) ONLY (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CO COLONIZATION	ST STEELHEAD		FRY STOCKING PROGRAM IN PROGRESS (1990). (REF. 13-10)	/
HY HATCHERY	CH CHINOOK SALMON CO COHO SALMON	1.5	IBEC OPERATES AN AQUACULTURE FACILITY OUT OF THE SAME LOCATION FOR ATLANTIC SALMON, COHO AND CHINOOK. NET PEN REARING. (REF. 12B-9)	1984/
HY HATCHERY	CH CHINOOK SALMON	1.5	PORT MCNEILL CHINOOK CLUB VIA P.I.P. AND SEP INCUBATES UP TO 50,000 CHINOOK EGGS TO REBUILD HISTORICAL RUN, INITIATED IN 1985. ONGOING IN 1988. (REF. 12B-9)	1985/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING HAS TAKEN PLACE AND IS STILL TAKING PLACE IN AND AROUND SOME OF THE CREEKS UP NEAR THE HEADWATERS OF THE KOKISH (REF. 12B-5)
FO FORESTRY	PRESENTLY BEING LOGGED BY CROWN FOREST INDUSTRIES TFL #47 (1988) (REF. 12B-9)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

AN ALLUVIAL RIVER WITH STEEP STABLE BANKS FLOWING THROUGH SECOND GROWTH TIMBER. (REF. 12B-5)
SUBSTRATE GENERALLY BOULDERY AND STREAM MEANDERING. MOUTH AREA QUITE FLAT: BORDERED BY MATURE TIMBER. STREAM TERMINATING IN AN EXTENSIVE ESTUARY. UPPER REACHES DIFFERS FROM MOUTH IN THAT RIVER IS QUITE NARROW AND DEEP WHEREAS MOUTH IS QUITE BROAD AND SHALLOW. UPPER REACHES CHARACTERISTIC WITH HIGH STEEP BANKS. (REF. 12B-5)
9.6KM UPSTREAM ON EAST MAIN, IT APPEARS THAT A LOGGING COMPANY HAS USED GRAVEL FROM STREAM BED FOR THEIR ROADS. AT THIS POINT THE RIVER MEANDERS SEVERELY, CUTBANKS ADD SILT TO MAINSTREAM. (REF. 12B-5)
GOOD REARING AND SPawning (REF. 12B-5)
RECOMMEND REMOVAL OF LOG JAMS NEAR HEADWATER AND POSSIBLY RIP-RAP BANKS WHERE GRAVEL HAS BEEN REMOVED (9.6KM ON EAST MAIN) (REF. 12B-5)
IBEC HATCHERY ESTABLISHED IN 1985 TO REAR ATLANTIC SALMON, FACILITY USED BY PORT MCNEILL CHINOOK CLUB TO ENHANCE KOKISH RIVER UTILIZING NIMPKISH RIVER BROOD STOCK. (REF. 12B-9)
ESTUARY RESTORATION PROJECT UNDERTAKEN EARLY 1980'S TO PROVIDE ADDITIONAL FRESHWATER TO LOG HOLDING AREAS PREVIOUSLY BLOCKED BY PERIMETER DYKES (SEE J. LAMB, DFO NANAIMO HABITAT) (REF. 18-19)

J. FISHERY OFFICER NARRATIVE

Date Prepared:        /    /	Prepared By:
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K. SIS COMPLETED BY

Completed by:        GITA KAPAHI	Date: 1988/06/23
Last updated by:    MARG ANDERSON	Date: 1991/07/05
Last checked by:    G. KAPAHI	Date: 1989/05/02

ESCAPEMENT : KOKISH RIVER

WATERSHED-CODE : 92-1400

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	7500	1500	1500	0	UNK
1954	0	7500	3500	3500	0	UNK
1955	0	15000	400	750	0	UNK
1956	0	7500	7500	1500	0	UNK
1957	0	3500	750	1500	0	UNK
1958	0	7500	3500	3500	0	UNK
1959	0	3500	1500	1500	0	UNK
1960	0	400	400	400	0	UNK
1961	0	7500	1500	1500	0	UNK
1962	0	1500	750	400	0	UNK
1963	0	750	400	750	400	UNK
1964	0	1500	3500	75	75	UNK
1965	0	1500	400	200	400	UNK
1966	0	1500	7500	75	200	UNK
1967	0	1500	400	200	200	UNK
1968	0	3500	7500	75	25	UNK
1969	0	N/O	N/O	25	N/O	UNK
1970	0	750	1500	75	N/O	UNK
1971	0	25	25	N/O	75	UNK
1972	0	750	400	75	75	UNK
1973	0	800	300	500	25	UNK
1974	0	300	300	300	0	UNK
1975	0	75	200	100	0	UNK
1976	0	400	0	200	N/O	UNK
1977	0	400	0	75	0	UNK
1978	0	N/O	N/O	N/O	0	UNK
1979	0	1000	700	0	0	UNK
1980	0	N/O	N/O	N/O	0	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	0	N/O	N/O	N/O	0	UNK
1984	0	N/O	N/O	N/O	0	UNK
1985	N/O	N/O	N/O	N/O	N/O	UNK
1986	30	UNK	1500	12	UNK	UNK
1987	N/O	200	300	N/O	0	UNK
1988	N/O	N/O	150	N/O	N/O	UNK
1989	N/O	N/O	100	N/O	N/O	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

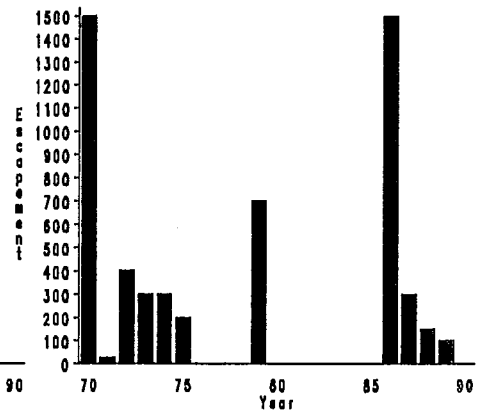
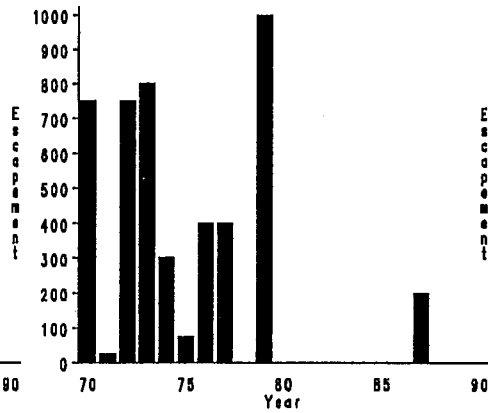
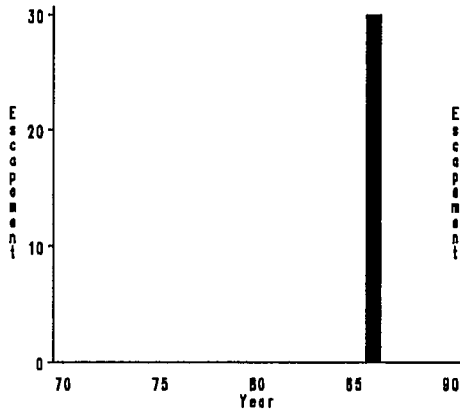
# KOKISH RIVER (92-1400)

## Escapement & Run Timing

Socketeye (SK)

Coho (CO)

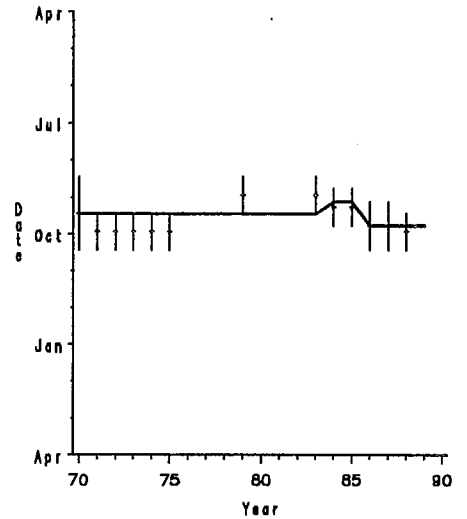
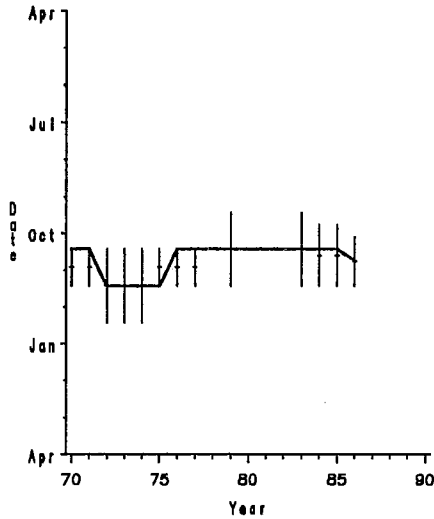
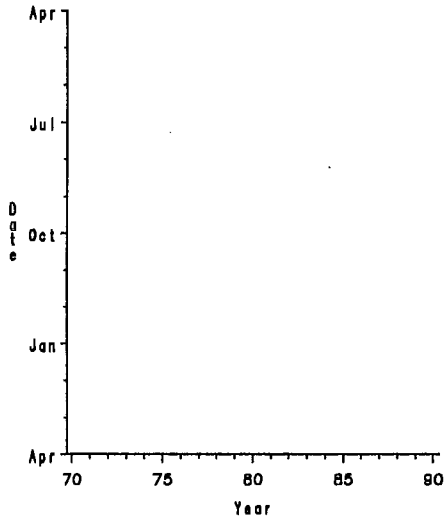
Pink (PK)



Socketeye

Coho

Pink



Socketeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	30	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	750	19OCT	19OCT	15NOV
1971	25	15OCT	15OCT	15NOV
1972	750	15OCT	15NOV	15DEC
1973	800	15OCT	15NOV	15DEC
1974	300	15OCT	15NOV	15DEC
1975	75	15OCT	15NOV	15NOV
1976	400	15OCT	15OCT	15NOV
1977	400	15OCT	15OCT	15NOV
1978	0	-	-	-
1979	1,000	15SEP	15OCT	15NOV
1980	0	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	15SEP	15OCT	15NOV
1984	0	25SEP	15OCT	15NOV
1985	0	25SEP	15OCT	15NOV
1986	-	05OCT	25OCT	15NOV
1987	200	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	1,500	15AUG	15SEP	15OCT
1971	25	15SEP	15SEP	15OCT
1972	400	15SEP	15SEP	15OCT
1973	300	15SEP	15SEP	15OCT
1974	300	15SEP	15SEP	15OCT
1975	200	15SEP	15SEP	15OCT
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	700	15AUG	15SEP	15SEP
1980	0	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	0	15AUG	15SEP	15SEP
1984	0	25AUG	05SEP	25SEP
1985	0	25AUG	05SEP	25SEP
1986	1,500	05SEP	25SEP	15OCT
1987	300	05SEP	25SEP	15OCT
1988	150	15SEP	25SEP	15OCT
1989	100	-	25SEP	-

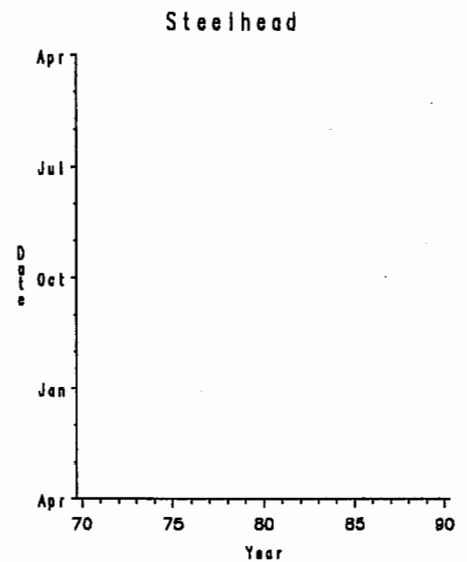
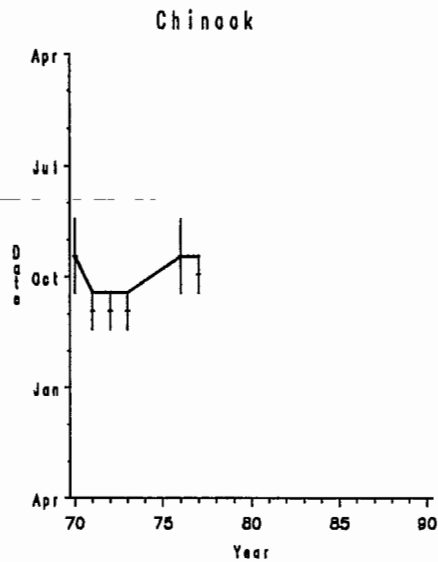
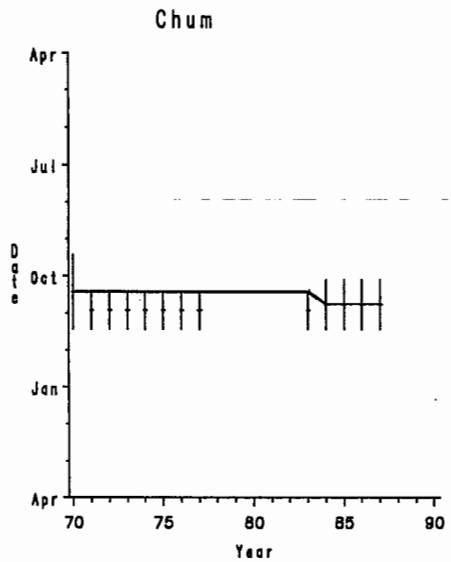
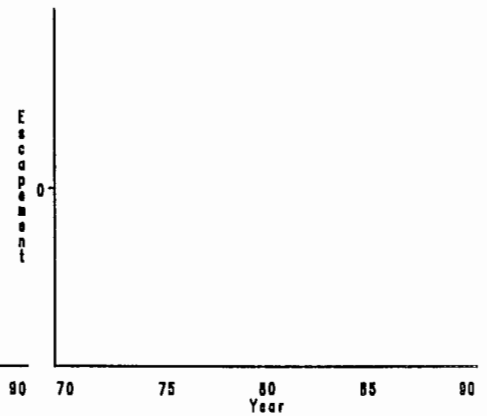
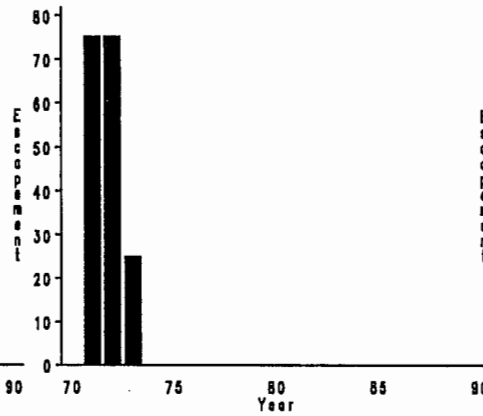
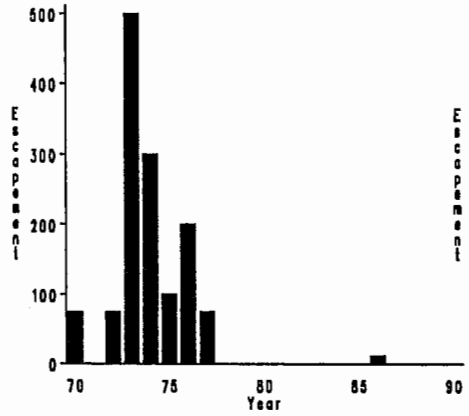
# KOKISH RIVER (92-1400)

## Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



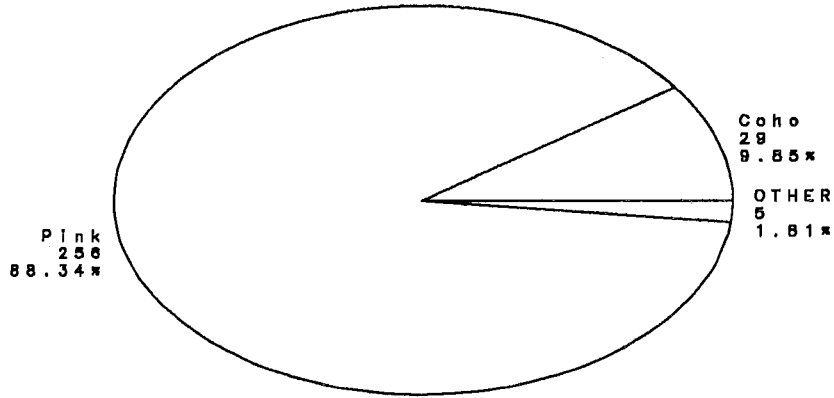
Chum				
Year	Escapement	Start	Peak	End
1970	75	15SEP	15OCT	15NOV
1971	0	15OCT	15OCT	15NOV
1972	75	15OCT	15OCT	15NOV
1973	500	15OCT	15OCT	15NOV
1974	300	15OCT	15OCT	15NOV
1975	100	15OCT	15OCT	15NOV
1976	200	15OCT	15OCT	15NOV
1977	75	15OCT	15OCT	15NOV
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	15OCT	15OCT	15NOV
1984	0	05OCT	25OCT	15NOV
1985	0	05OCT	25OCT	15NOV
1986	12	05OCT	25OCT	15NOV
1987	0	05OCT	25OCT	15NOV
1988	0	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	15AUG	15SEP	15OCT
1971	75	15OCT	15OCT	15NOV
1972	75	15OCT	15OCT	15NOV
1973	25	15OCT	15OCT	15NOV
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	15AUG	15SEP	15OCT
1978	0	15SEP	15SEP	15OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-
1990	0	-	-	-

Steelhead				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-
1990	-	-	-	-

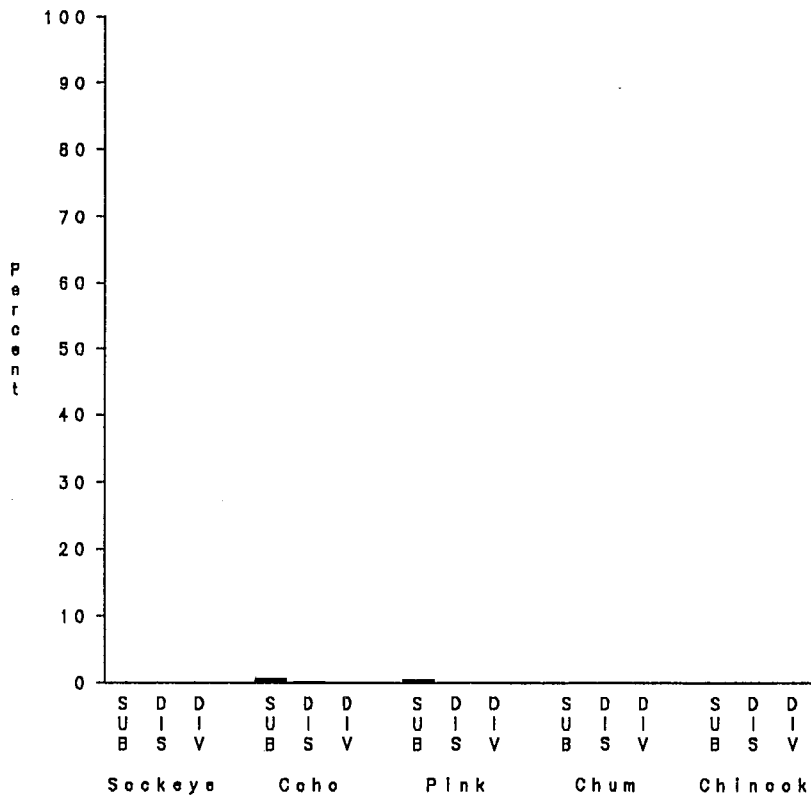
# KOKISH RIVER (92-1400)

10-yr Mean Escapement  
(1980-1989)



## KOKISH RIVER : Escapement (1980-1989)

Species Escapement as a Proportion of DFO Management Units  
(ie Subdistrict, District & Division)





G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING IN UPPER REACHES BY CROWN FOREST 1940'S TO PRESENT (1988) (REF. 12B-9)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

APPEARS TO BE AN EXCELLENT SPAWNING STREAM WITH GOOD GRAVEL TO 9.6KM (REF. 12B-1)
---

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /	Prepared By:
--------------------	--------------

K. SIS COMPLETED BY

Completed by: GITA KAPAH	Date: 1988/06/23
Last updated by: MARG ANDERSON	Date: 1991/07/05

ESCAPEMENT : TSULTON RIVER

WATERSHED-CODE : 92-1400-040

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	UNK	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	UNK	UNK	UNK	UNK	UNK	UNK
1962	UNK	UNK	UNK	UNK	UNK	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	UNK	UNK	UNK	UNK	UNK	UNK
1967	UNK	UNK	UNK	UNK	UNK	UNK
1968	UNK	UNK	UNK	UNK	UNK	UNK
1969	UNK	UNK	UNK	UNK	UNK	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	UNK	UNK	UNK	UNK	UNK	UNK
1973	UNK	UNK	UNK	UNK	UNK	UNK
1974	UNK	UNK	UNK	UNK	UNK	UNK
1975	UNK	UNK	UNK	UNK	UNK	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	0	0	UNK	0	0	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	UNK	UNK	UNK	UNK	UNK
1982	UNK	UNK	UNK	UNK	UNK	UNK
1983	UNK	UNK	UNK	UNK	UNK	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	UNK	UNK	UNK	UNK	UNK	UNK
1989	UNK	UNK	UNK	UNK	UNK	UNK
1990						
1991						
1992						
1993						
1994						
1995						

N/O = STREAM INSPECTED, NO FISH OBSERVED

UNK = STREAM NOT INSPECTED OR NOT INSPECTED FOR SPECIES INDICATED OR SPECIES PRESENT BUT NO ESTIMATE MADE

**A. DESCRIPTION**

Stream Name: <b>BONANZA RIVER</b>	D.F.O. Division: <b>SOUTH COAST</b>
Local Name:	District: <b>5 CAMPBELL RIVER</b>
Watershed Code: <b>92-1400-420</b>	Subdistrict: <b>11 PORT HARDY</b>
	Statistical Subarea: <b>12-4</b>
	M.O.E. Region: <b>1 VANCOUVER ISLAND</b>
	Management Unit: <b>11</b>

Tributaries	Code	Topographic (1:50k) Map: <b>92L/7</b>
		B.C.G.S. (1:20k) Map: <b>046</b>
		U.T.M. Mouth: <b>9.6552.55918</b>
		Lat./Long. Mouth: <b>50 DG. 27' 41'' 126 DG. 48' 35''</b>
		Mainstem Length: <b>28.4 km</b> Ref. No.: <b>6N-28</b>
		Watershed Area: Ref. No.:
Location: <b>FLows N. FROM BONANZA LAKE INTO KOKISH R.</b>		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5%    .5 - 2%    2 - 5%    5 - 10%    >10%	<b>GRADIENT PROBLEMS (REF. 12B-9)</b>

**B. OBSTRUCTIONS TO MIGRATION**

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
<b>NO INFORMATION AVAILABLE</b>				

**C. FLOW**

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: <b>SUSCEPTIBLE TO SEVERE FLUCTUATIONS IN FLOW (REF. 12B-9)</b>			
<b>LAKE FED. BONANZA LAKE: AREA - 9.0 SQ.KM; PERIMETER - 20.2 KM. IDA LAKE: AREA - 1.0 SQ.KM; PERIMETER - 8.1 KM. (REF. 6N-28)</b>			

**D. DISTRIBUTION SUMMARY**

Species	Watershed Distribution
CO COHO SALMON	OBSERVED AT 18.7 KM AND IN TRIBUTARY ABOVE BONANZA LAKE. (REF. 12B-9)
ST STEELHEAD	OBSERVED IN BONANZA LAKE. (REF. 13-10)
CT CUTTHROAT TROUT	OBSERVED IN BONANZA AND IDA LAKES. (REF. 14-5)
DV DOLLY VARDEN	OBSERVED IN IDA LAKE. (REF. 14-5)
KO KOKANEE	OBSERVED IN BONANZA AND IDA LAKES. (REF. 14-5, REF. 12B-9)
RB RAINBOW TROUT	OBSERVED IN BONANZA AND IDA LAKES. (REF. 14-5)

**E. ESCAPEMENT SUMMARY**

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
<b>NO INFORMATION AVAILABLE</b>							

**F. LIFE HISTORY TIMING**

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NO INFORMATION AVAILABLE													

**G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED**

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
NO INFORMATION AVAILABLE				

**H. LAND USE/WATER USE/WATER QUALITY**

Activity	Description/Location
FO FORESTRY	ACTIVE LOGGING BY CROWN FORESTS (ONGOING FOR 1960'S TO PRESENT, 1988) (REF. 12B-9)

**I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS**

NO INFORMATION AVAILABLE
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**J. FISHERY OFFICER NARRATIVE**

Date Prepared: / /	Prepared By:
--------------------	--------------

**K. SIS COMPLETED BY**

Completed by: GITA KAPAHI	Date: 1988/07/03
Last updated by: MARG ANDERSON	Date: 1991/07/05

# NUMERIC BIBLIOGRAPHY

REFERENCE LIST  
1991/07/19

Page: 1

-----  
REFERENCE NO: 11- 1

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AUTHOR:  
DESCRIPTION: PRELIMINARY CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 11.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 2

-----  
AUTHOR: GUERET, DALE  
DESCRIPTION: PERSONAL INFORMATION, SEPT. 1988. FISHERY OFFICER PORT HARDY 1987 - PRESENT.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON HS HABITAT SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 3

-----  
AUTHOR: ALEXANDER, RON  
DESCRIPTION: FISHERIES PATROLMAN, AREA 11. 1983 - PRESENT. PERSONAL INFORMATION.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 4

-----  
AUTHOR: SCOTT, CAPT. MURDOCH  
DESCRIPTION: CAPTAIN OF THE FISHERIES VESSEL SEAL ROCK (1976 - PRESENT)  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 5

-----  
AUTHOR: VARIOUS  
DESCRIPTION: ESCAPEMENT LOG BOOK AND OTHER DATA. (BLACK BOOK, 1965 - PRESENT, 1988) FOUND IN DALE GUERET'S OFFICE.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 13- 10

-----  
AUTHOR: WIGHTMAN, CRAIG  
DESCRIPTION: B.C. MINISTRY OF ENVIRONMENT & PARKS, FISH & WILDLIFE BRANCH NANAIMO B.C.; SENIOR FISHERIES BIOLOGIST - PERSONAL COMMUNICATION.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT LU LAND USE  
M MIGRATION PY PHYSICAL HABITAT S SPAWNING  
WU WATER USE

REFERENCE NO: 13- 24

-----  
AUTHOR: DE HRUSSOCZY-WIRTH, V.C.  
DESCRIPTION: CODED - WIRE TAGGING OF WILD COHO JUVENILES FROM THE KEOGH RIVER SYSTEM, 1977 AND 1978. MARCH, 1979. FISHERIES & MARINE SERVICE MANAGEMENT REPORT NO. 1506. FISHERIES AND ENVIRONMENT CANADA. 24 PP + APPS.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: CO COHO EN ENHANCEMENT M MIGRATION  
PS POPULATION SAMPLING

REFERENCE NO: 13- 25

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AUTHOR: SMITH, H.A.; SLANEY, P.A.  
DESCRIPTION: AGE, GROWTH, SURVIVAL AND HABITAT OF ANADROMOUS DOLLY VARDEN (SALVELINUS MALMA) IN THE KEOGH RIVER, BRITISH COLUMBIA. 1980. B.C.M.O.E. FISHERIES MANAGEMENT REPORT NO 76. 50 PP.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: DV DOLLY VARDEN CHWR M MIGRATION PS POPULATION SAMPLING

REFERENCE NO: 14- 5

-----  
AUTHOR: VARIOUS AUTHORS  
DESCRIPTION: B.C. MINISTRY OF ENVIRONMENT & PARKS, FISH & WILDLIFE BRANCH, NANAIMO, B.C. - STREAM AND LAKE FILES CONTAINING VARIOUS FIELD SURVEY FORMS, REPORTS AND FISH DISTRIBUTION/HABITAT MAPS.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT LU LAND USE  
M MIGRATION MO MORPHOLOGY OB OBSTRUCTIONS  
PY PHYSICAL HABITAT R REARING S SPAWNING  
WQ WATER QUALITY WU WATER USE

-----  
REFERENCE NO: 18- 19  
-----

AUTHOR: TUTTY, B.D. MARCH 2, 1983.  
DESCRIPTION: HABITAT BIOLOGIST, HABITAT MANAGEMENT DIVISION, D.F.O. NANAIMO. PERSONAL COMMUNICATION.  
LOCATION: G DFO - SOUTH COAST DIVISION - NANAIMO  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT

REFERENCE NO: 6N- 6  
-----

AUTHOR: RESOURCE ANALYSIS BRANCH  
DESCRIPTION: AQUATIC BIOPHYSICAL MAPS. 1:50,000 SCALE. M.O.E. RESOURCE ANALYSIS BRANCH. THEMATIC MAPS DISPLAYING FISH HABITAT AND DISTRIBUTION INFORMATION, BASED ON FIELD AND DATA SURVEYS, AND DISPLAYED ON A REACH BASIS.  
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA  
KEYWORDS: AF ALL SPECIES FS FISH SAMPLING HS HABITAT SAMPLING  
PY PHYSICAL HABITAT

REFERENCE NO: 6N- 28  
-----

AUTHOR: S.H.I.P. ENVIRONMENTAL CONSULTANTS LTD.  
DESCRIPTION: HARDING, E.A.; DE MARCO R.. AIR PHOTO ANALYSIS, TOPOGRAPHIC MAP DIGITIZING, AND GENERAL COMMENTS.  
LOCATION: NA NOT APPLICABLE  
KEYWORDS: MO MORPHOLOGY OB OBSTRUCTIONS PY PHYSICAL HABITAT

REFERENCE NO: 12B- 1  
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AUTHOR: MARSHALL, D.E.; R.F. BROWN ET AL  
DESCRIPTION: PRELIMINARY CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 12. PAC/D-77-2  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 12B- 2  
-----

AUTHOR: FRASER, F.J.; D.T. LIGHTLY & D.D. BAILEY  
DESCRIPTION: AN INVENTORY OF EAST COAST VANCOUVER ISLAND STREAMS IMPORTANT TO CHUM SALMON. DOE, FMS PAC. REG. PAC/T-74-21  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: CM CHUM PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 12B- 5  
-----

AUTHOR: VARIOUS  
DESCRIPTION: GEORGE REID'S STREAM FILES. LISTED ALPHABETICALLY, MOEP OFFICE, NANAIMO.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT

REFERENCE NO: 12B- 6  
-----

AUTHOR: JOHNSTON, N.T.; J.R. IRVINE & C.J. PERRIN  
DESCRIPTION: CATCH, SIZE, AND TAGGING DATA FOR ADULT SALMONID RUNS INTO THE KEOGH RIVER, B.C. 1985. CATCH DATA REPORT OF FISHERIES AND AQ. SCI. NO. 592. MAY 1986.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AO ALL SALMON PS POPULATION SAMPLING S SPAWNING

REFERENCE NO: 12B- 7  
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AUTHOR: JOHNSTON, N.T.; J.R. IRVINE AND C.J. PERRIN  
DESCRIPTION: A COMPARATIVE EVALUATION OF FENCE COUNT, MARK - RECAPTURE AND BENDIX SONAR ESTIMATES OF SALMON ESCAPEMENTS IN THE KEOGH RIVER. A VARIABLE - FLOW COASTAL B.C. STREAM. MAY 1986. CDM. TECH. REPORT NO.1453.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AO ALL SALMON PS POPULATION SAMPLING S SPAWNING

REFERENCE NO: 12B- 8  
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AUTHOR: WAYNE, N.N.  
DESCRIPTION: KOKISH RIVER ESTUARY REHABILITATION AND ENHANCEMENT OPTIONS: A DISCUSSION PAPER. S.H.I.P. PROJECT, H. PAISH & ASSOC. FEB. 1984.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT

REFERENCE NO: 12B- 9  
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AUTHOR: REKDAL, D.W.  
DESCRIPTION: PERSONAL NOTES AND INFORMATION, MARCH 1988.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PS POPULATION SAMPLING PY PHYSICAL HABITAT  
S SPAWNING

-----  
REFERENCE NO: 12B- 11

AUTHOR: NELSON, H. (PROJECT MANAGER)  
DESCRIPTION: NIMPKISH ENHANCEMENT AND RESTORATION PROJECT SALMONID ENHANCEMENT PROGRAM ANNUAL REPORT. (APRIL 1, 1984 - MAR. 31, 1985). CONTRACT # 08SB FP501-2250, 11 VOLS.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON EN ENHANCEMENT  
FS FISH SAMPLING PS POPULATION SAMPLING

REFERENCE NO: 12B- 12

AUTHOR: LILL, A.; A. TAUTZ ET AL  
DESCRIPTION: OPPORTUNITIES FOR SALMONID ENHANCEMENT PROJECTS IN BRITISH COLUMBIA AND THE YUKON. A PRELIMINARY REPORT BY THE ENHANCEMENT OPPORTUNITIES SUBCOMMITTEE TO THE SALMONID ENHANCEMENT PHASE 11 PLANNING COMMITTEE. SEPT. 1983.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT

REFERENCE NO: 12B- 13

AUTHOR: WATER RESOURCES BRANCH  
DESCRIPTION: HISTORICAL STREAMFLOW SUMMARY BRITISH COLUMBIA TO 1979. INLAND WATERS DIRECTORATE.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: FL FLOW

REFERENCE NO: 12B- 20

AUTHOR: GUERET, DALE; WILCOX, KELLY  
DESCRIPTION: FISHERY OFFICER, PORT HARDY B.C. & HATCHERY MANAGER, QUATSE HATCHERY - PERSONAL COMMUNICATIONS.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT LU LAND USE  
M MIGRATION MO MORPHOLOGY PY PHYSICAL HABITAT  
R REARING S SPAWNING WJ WATER USE

REFERENCE NO: 28A- 18

AUTHOR: DFO.  
DESCRIPTION: SALMON ESCAPEMENT DATA SYSTEM (SEDS); PACIFIC BIOLOGICAL STATION; NANAIMO.  
LOCATION: J DFO - PACIFIC BIOLOGICAL STATION - NANAIMO  
KEYWORDS: CH CHINOOK CM CHUM CO COHO  
PK PINK S SPAWNING SK SOCKEYE

# ALPHABETIC BIBLIOGRAPHY

REFERENCE LIST  
1991/07/12

Page: 1

-----  
REFERENCE NO: 11- 1  
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AUTHOR:  
DESCRIPTION: PRELIMINARY CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 11.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 3  
-----

AUTHOR: ALEXANDER, RON  
DESCRIPTION: FISHERIES PATROLMAN, AREA 11. 1983 - PRESENT. PERSONAL INFORMATION.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AD ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 13- 24  
-----

AUTHOR: DE HRUSSOCZY-WIRTH, V.C.  
DESCRIPTION: CODED - WIRE TAGGING OF WILD COHO JUVENILES FROM THE KEOGH RIVER SYSTEM, 1977 AND 1978. MARCH, 1979. FISHERIES & MARINE SERVICE MANAGEMENT REPORT NO. 1506. FISHERIES AND ENVIRONMENT CANADA. 24 PP + APPS.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: CO COHO EM ENHANCEMENT M MIGRATION  
PS POPULATION SAMPLING

REFERENCE NO: 28A- 18  
-----

AUTHOR: DFO.  
DESCRIPTION: SALMON ESCAPEMENT DATA SYSTEM (SEDS); PACIFIC BIOLOGICAL STATION; NANAIMO.  
LOCATION: J DFO - PACIFIC BIOLOGICAL STATION - NANAIMO  
KEYWORDS: CH CHINOOK CM CHUM CO COHO  
PK PINK S SPAWNING SK SOCKEYE

REFERENCE NO: 12B- 2  
-----

AUTHOR: FRASER, F.J.; D.T. LIGHTLY & D.D. BAILEY  
DESCRIPTION: AN INVENTORY OF EAST COAST VANCOUVER ISLAND STREAMS IMPORTANT TO CHUM SALMON. DOE, FMS PAC. REG. PAC/T-74-21  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: CM CHUM PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 11- 2  
-----

AUTHOR: GUERET, DALE  
DESCRIPTION: PERSONAL INFORMATION, SEPT. 1988. FISHERY OFFICER PORT HARDY 1987 - PRESENT.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AD ALL SALMON HS HABITAT SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 12B- 20  
-----

AUTHOR: GUERET, DALE; WILCOX, KELLY  
DESCRIPTION: FISHERY OFFICER, PORT HARDY B.C. & HATCHERY MANAGER, QUATSE HATCHERY - PERSONAL COMMUNICATIONS.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EM ENHANCEMENT LU LAND USE  
M MIGRATION MO MORPHOLOGY PY PHYSICAL HABITAT  
R REARING S SPAWNING WJ WATER USE

REFERENCE NO: 12B- 7  
-----

AUTHOR: JOHNSTON, M.T.; J.R. IRVINE AND C.J. PERRIN  
DESCRIPTION: A COMPARATIVE EVALUATION OF FENCE COUNT, MARK - RECAPTURE AND BENDIX SONAR ESTIMATES OF SALMON ESCAPEMENTS IN THE KEOGH RIVER. A VARIABLE - FLOW COASTAL B.C. STREAM. MAY 1986. CON. TECH. REPORT NO.1453.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AD ALL SALMON PS POPULATION SAMPLING S SPAWNING

REFERENCE NO: 12B- 6  
-----

AUTHOR: JOHNSTON, M.T., J.R. IRVINE & C.J. PERRIN  
DESCRIPTION: CATCH, SIZE, AND TAGGING DATA FOR ADULT SALMONID RUNS INTO THE KEOGH RIVER, B.C. 1985. CATCH DATA REPORT OF FISHERIES AND AQ. SCI. NO. 592. MAY 1986.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AD ALL SALMON PS POPULATION SAMPLING S SPAWNING

-----  
REFERENCE NO: 12B- 12

AUTHOR: LILL, A.; A. TAUTZ ET AL  
DESCRIPTION: OPPORTUNITIES FOR SALMONID ENHANCEMENT PROJECTS IN BRITISH COLUMBIA AND THE YUKON. A PRELIMINARY REPORT BY THE ENHANCEMENT OPPORTUNITIES SUBCOMMITTEE TO THE SALMONID ENHANCEMENT PHASE 11 PLANNING COMMITTEE. SEPT. 1983.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT

REFERENCE NO: 12B- 1

AUTHOR: MARSHALL, D.E.; R.F. BROWN ET AL  
DESCRIPTION: PRELIMINARY CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 12. PAC/D-77-2  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 12B- 11

AUTHOR: NELSON, H. (PROJECT MANAGER)  
DESCRIPTION: NIMPKISH ENHANCEMENT AND RESTORATION PROJECT SALMONID ENHANCEMENT PROGRAM ANNUAL REPORT. (APRIL 1, 1984 - MAR. 31, 1985). CONTRACT # 08SB FP501-2250. 11 VOLS.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AD ALL SALMON EN ENHANCEMENT  
FS FISH SAMPLING PS POPULATION SAMPLING

REFERENCE NO: 12B- 9

AUTHOR: REKDAL, D.W.  
DESCRIPTION: PERSONAL NOTES AND INFORMATION, MARCH 1988.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES PS POPULATION SAMPLING PY PHYSICAL HABITAT  
S SPAWNING

REFERENCE NO: 6N- 6

AUTHOR: RESOURCE ANALYSIS BRANCH  
DESCRIPTION: AQUATIC BIOPHYSICAL MAPS. 1:50,000 SCALE. M.O.E. RESOURCE ANALYSIS BRANCH. THEMATIC MAPS DISPLAYING FISH HABITAT AND DISTRIBUTION INFORMATION, BASED ON FIELD AND DATA SURVEYS, AND DISPLAYED ON A REACH BASIS.  
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA  
KEYWORDS: AF ALL SPECIES FS FISH SAMPLING HS HABITAT SAMPLING  
PY PHYSICAL HABITAT

REFERENCE NO: 6N- 2B

AUTHOR: S.H.I.P. ENVIRONMENTAL CONSULTANTS LTD.  
DESCRIPTION: HARDING, E.A.; DE MARCO R.. AIR PHOTO ANALYSIS, TOPOGRAPHIC MAP DIGITIZING, AND GENERAL COMMENTS.  
LOCATION: NA NOT APPLICABLE  
KEYWORDS: MO MORPHOLOGY OB OBSTRUCTIONS PY PHYSICAL HABITAT

REFERENCE NO: 11- 4

AUTHOR: SCOTT, CAPT. MURDOCH  
DESCRIPTION: CAPTAIN OF THE FISHERIES VESSEL SEAL ROCK (1976 - PRESENT)  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AD ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 13- 25

AUTHOR: SMITH, H.A.; SLANEY, P.A.  
DESCRIPTION: AGE, GROWTH, SURVIVAL AND HABITAT OF ANADROMOUS DOLLY VARDEN (SALVELINUS MALMA) IN THE KEOGH RIVER, BRITISH COLUMBIA. 1980. B.C.M.O.E. FISHERIES MANAGEMENT REPORT NO 76. 50 PP.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: DV DOLLY VARDEN CHAR M MIGRATION PS POPULATION SAMPLING

REFERENCE NO: 18- 19

AUTHOR: TUTTY, B.D. MARCH 2, 1983.  
DESCRIPTION: HABITAT BIOLOGIST, HABITAT MANAGEMENT DIVISION, D.F.O. NANAIMO. PERSONAL COMMUNICATION.  
LOCATION: G DFO - SOUTH COAST DIVISION - NANAIMO  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT

-----  
REFERENCE NO: 11- 5

AUTHOR: VARIOUS  
DESCRIPTION: ESCAPEMENT LOG BOOK AND OTHER DATA. (BLACK BOOK, 1965 - PRESENT, 1988) FOUND IN DALE GUERET'S OFFICE.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES AO ALL SALMON FS FISH SAMPLING  
PY PHYSICAL HABITAT S SPAWNING

REFERENCE NO: 12B- 5

AUTHOR: VARIOUS  
DESCRIPTION: GEORGE REID'S STREAM FILES. LISTED ALPHABETICALLY, MOEP OFFICE, NANAIMO.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES PY PHYSICAL HABITAT

REFERENCE NO: 14- 5

AUTHOR: VARIOUS AUTHORS  
DESCRIPTION: B.C. MINISTRY OF ENVIRONMENT & PARKS, FISH & WILDLIFE BRANCH, NANAIMO, B.C. - STREAM AND LAKE FILES CONTAINING VARIOUS FIELD SURVEY FORMS, REPORTS AND FISH DISTRIBUTION/HABITAT MAPS.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT LU LAND USE  
M MIGRATION MO MORPHOLOGY OB OBSTRUCTIONS  
PY PHYSICAL HABITAT R REARING S SPAWNING  
WQ WATER QUALITY WU WATER USE

REFERENCE NO: 12B- 13

AUTHOR: WATER RESOURCES BRANCH  
DESCRIPTION: HISTORICAL STREAMFLOW SUMMARY BRITISH COLUMBIA TO 1979. INLAND WATERS DIRECTORATE.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: FL FLOW

REFERENCE NO: 12B- 8

AUTHOR: WAYNE, M.M.  
DESCRIPTION: KOKISH RIVER ESTUARY REHABILITATION AND ENHANCEMENT OPTIONS: A DISCUSSION PAPER. S.H.I.P. PROJECT, H. PAISH & ASSOC. FEB. 1984.  
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT

REFERENCE NO: 13- 10

AUTHOR: WIGHTMAN, CRAIG  
DESCRIPTION: B.C. MINISTRY OF ENVIRONMENT & PARKS, FISH & WILDLIFE BRANCH NANAIMO B.C.; SENIOR FISHERIES BIOLOGIST - PERSONAL COMMUNICATION.  
LOCATION: O MOE - REGION 1 - NANAIMO  
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT LU LAND USE  
M MIGRATION PY PHYSICAL HABITAT S SPAWNING  
WU WATER USE

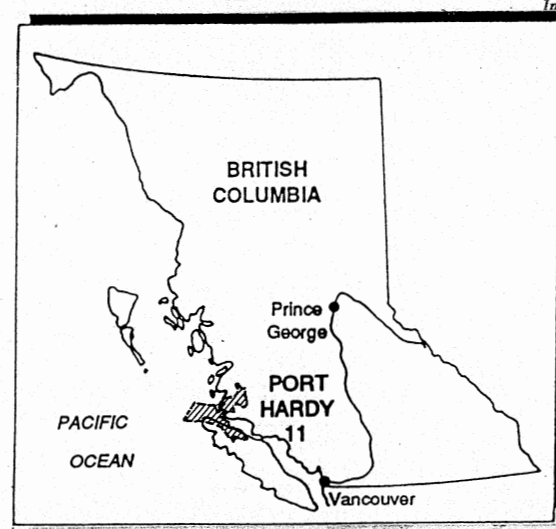
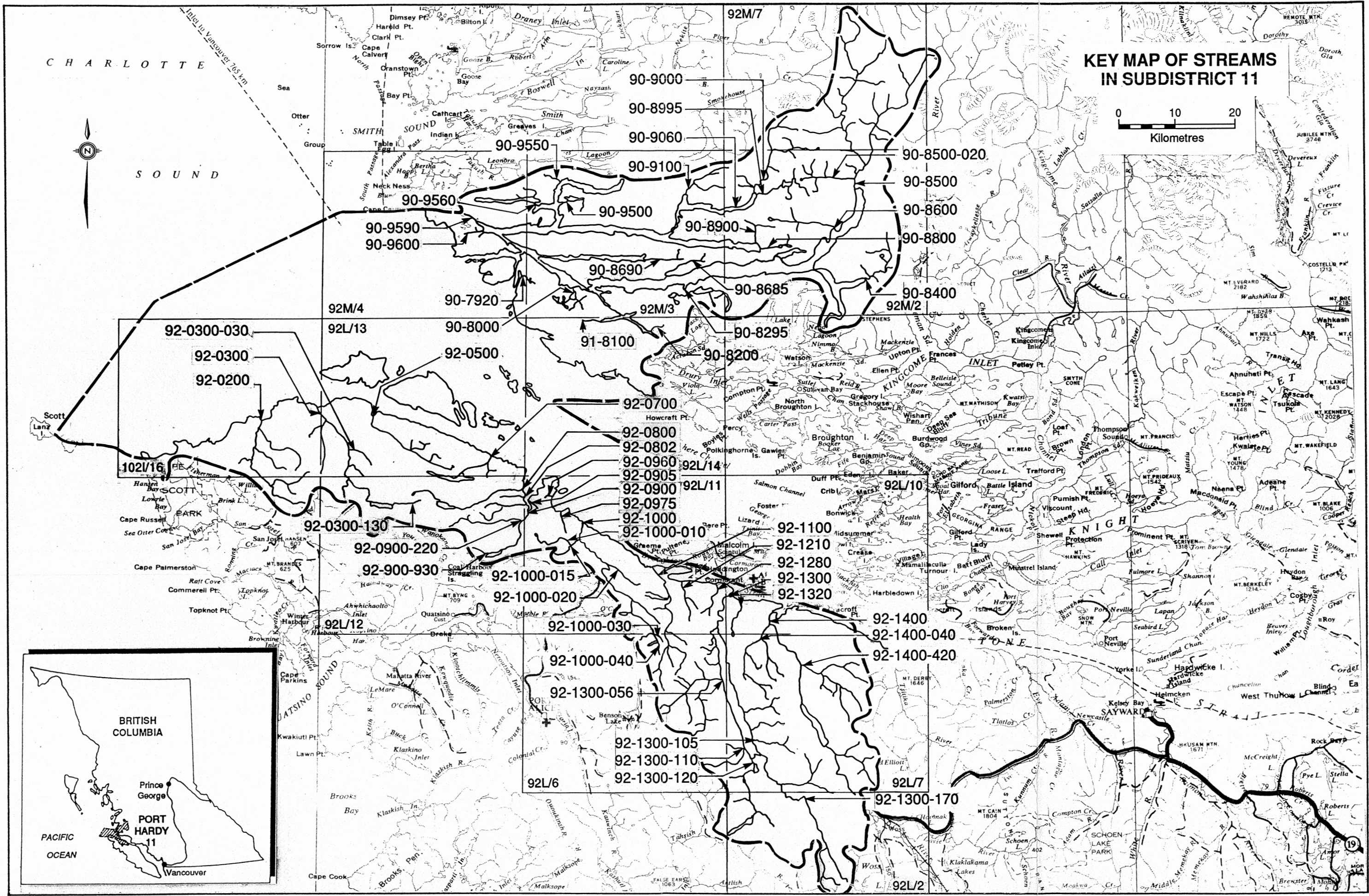
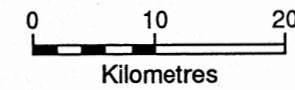
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MAPS

This section contains the following Stream Summary Maps:

92L/2	WOSS LAKE
92L/6	ALICE LAKE
92L/7	NIMPKISH
92L/10	ALERT BAY
92L/11	PORT McNEILL
92L/12	QUATSINO
92L/13	SHUSHARTIE
92L/14	BRADLEY LAGOON
92M/2	SEYMOUR INLET
92M/3	BELIZE INLET
92M/4	CAPE CAUTION
92M/7	MOUNT PHILLEY
102I/16	CAPE SCOTT

# KEY MAP OF STREAMS IN SUBDISTRICT 11



CHARLOTTE  
SOUND

92-0300-030  
92-0300  
92-0200

90-9000  
90-8995  
90-9060

90-8500-020  
90-8500  
90-8600  
90-8800

90-7920  
90-8000  
90-8295

91-8100  
90-8200

90-8400

102L/16

92-0700  
92-0800  
92-0802  
92-0960  
92-0905  
92-0900  
92-0975  
92-1000  
92-1000-010

92-1100  
92-1210  
92-1280  
92-1300  
92-1320

92-0300-130  
92-0900-220

92-1000-015  
92-1000-020

92-1400  
92-1400-040  
92-1400-420

92-900-930

92-1000-040  
92-1300-056

92-1300-105  
92-1300-110  
92-1300-120

92-1300-170

92L/12

92L/6

92L/7

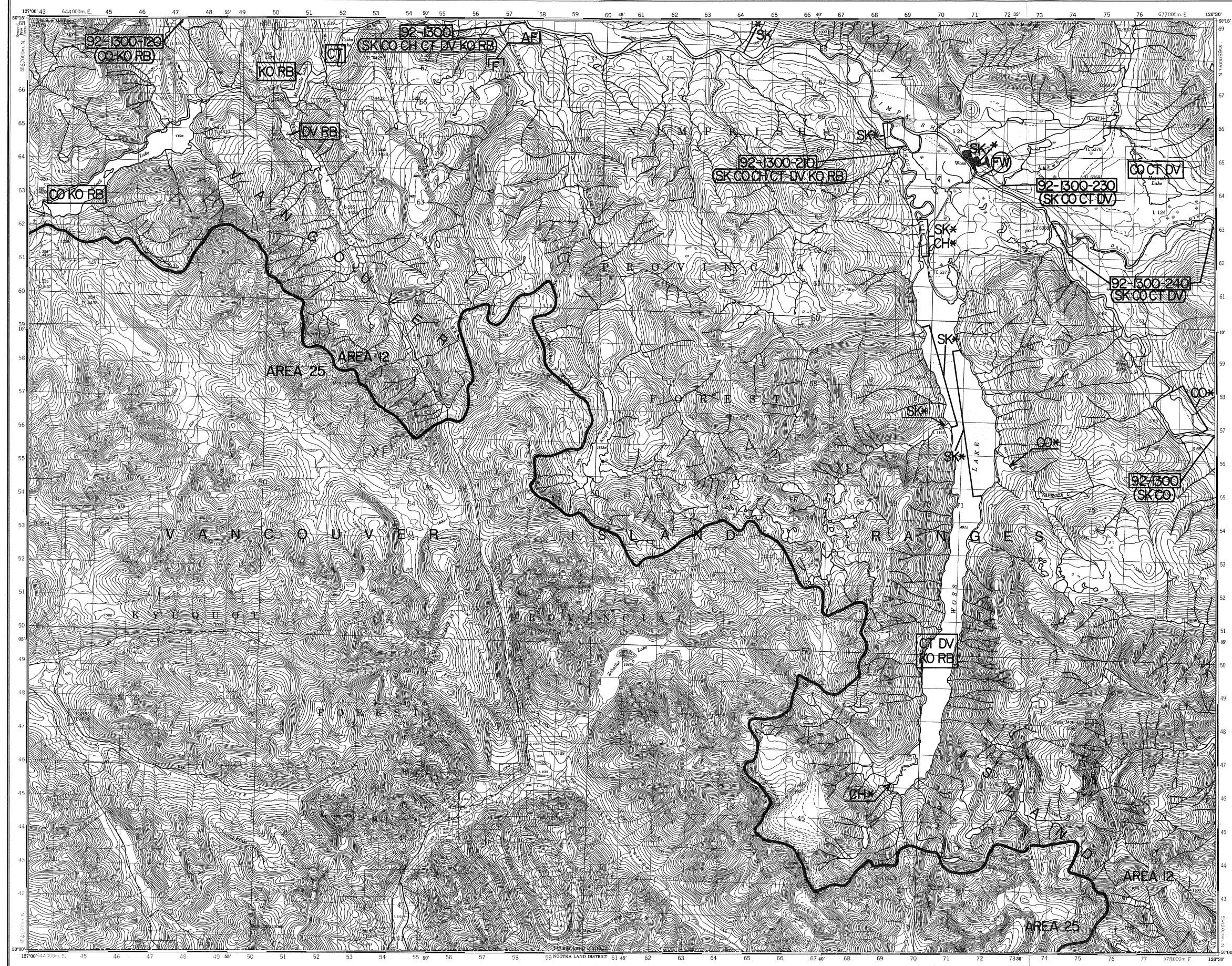
92L/2

92M/4

92M/3

92M/2

92M/7



Military users, refer to this map as: Série A 721 Série MAP 52 L/2 Carte Référence de cette carte: ÉDITION 4 MCE ÉDITION

**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM  
STREAM INFORMATION SUMMARY  
(SUBDISTRICT I2)**

**91-2900 Watershed Code and Species Summary**  
CO CM ST

**SPECIES INFORMATION**

SK CO PK CM CH species present  
 CO ST lower limit of distribution  
 CO ST upper limit of distribution  
 PK \* specific site of spawning

SK \* major spawning zone  
 CO \*  
 CM \* upper limit of spawning

**OBSTRUCTIONS**  
(measurements included where known)

log jam (persistent)  
 D = dam  
 F = falls  
 R = rock falls  
 CV = culvert  
 BD = beaver dam

2C100 cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT / MANAGEMENT ACTIVITIES**

HY = hatchery  
 FW = fishway  
 SC = side channel  
 CH = spawning channel  
 BX = incubation box  
 HC = hatchery/spawning channel

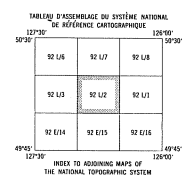
WSCOFBOOS Water Survey of Canada Gauging Station  
 300 CO tributary watershed code

**SPECIES ABBREVIATION LIST**

SK - Sockeye	BS - Bass (general)
CO - Coho	CT - Cuffthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
CH - Chinook	LT - Lake Trout
ST - Steelhead	LW - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
	TR - Trout

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

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MARCH 1990  
by  
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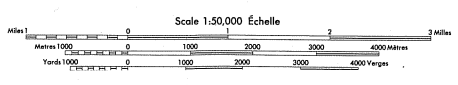


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**WOSS LAKE  
BRITISH COLUMBIA**



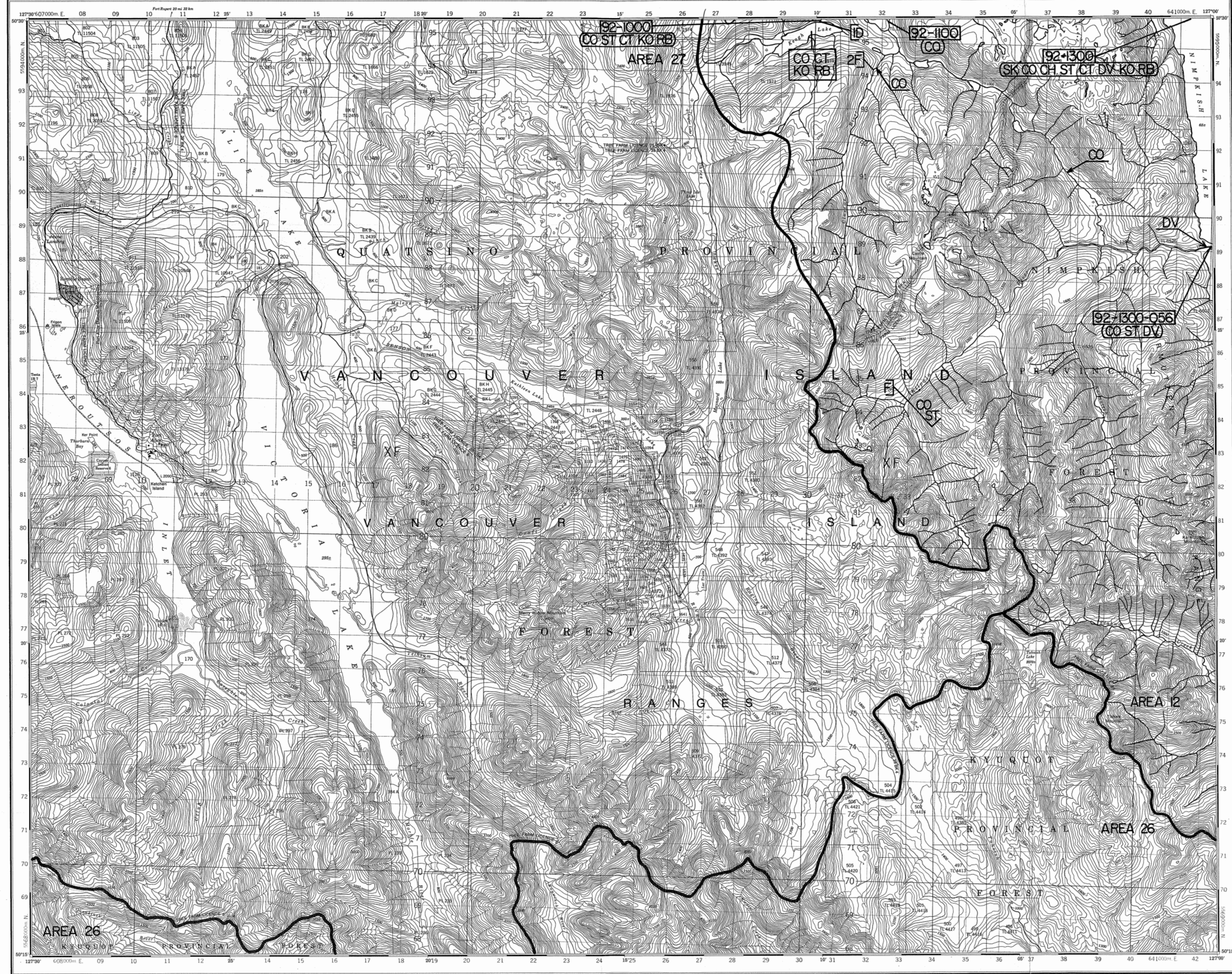
Scale: par la DIRECTION DES LEVES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Révisé à jour après les photographies aériennes CARTOGRAPHIÉES, MINISTÈRE DES TERRES, DES FORÊTS ET DES RESSOURCES HYDRAULIQUES DE LA COLUMBIE-BRITANNIQUE. Vérification des courbes en 1974. Remaniement par 1974.

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WOSS LAKE  
92 L/2  
EDITION 4

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385-9786



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 Références de cette carte pour usage militaire: **EDITION 3 MCE EDITION**

**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM**  
**STREAM INFORMATION SUMMARY (SUBDISTRICT 12)**

**91-2900 Watershed Code and Species Summary**  
**CO CM ST**

**SPECIES INFORMATION**

**SK CO PK CM CH** species present

**CO ST** lower limit of distribution

**CO ST** upper limit of distribution

**PK \*** specific site of spawning

**SK \*** major spawning zone

**CO** upper limit of spawning

**CM \*** upper limit of spawning

**OBSTRUCTIONS** (measurements included where known)

**log jam (persistent)**

**D = dam**

**F = falls**

**R = rock falls**

**CV = culvert**

**BD = beaver dam**

**2C100** cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT/MANAGEMENT ACTIVITIES**

**HY** hatchery

**FW** fishway

**SC** side channel

**CH** spawning channel

**BX** incubation box

**HC** hatchery/spawning channel

**WSC06F003** Water Survey of Canada Gauging Station

**300 CO** tributary watershed code

- SPECIES ABBREVIATION LIST**
- SK - Sockeye
  - CO - Coho
  - PK - Pink
  - CM - Chum
  - CH - Chinook
  - ST - Steelhead
  - AF - All fish
  - AO - All salmon
  - BS - Bass (general)
  - CT - Cutthroat
  - DV - Dolly Varden
  - KO - Kokanee
  - LT - Lake Trout
  - LW - Lake whitefish
  - MW - Mountain whitefish
  - RB - Rainbow
  - TR - Trout

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

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 by  
 SHIP Environmental Consultants Ltd.

TABLEAU D'ADRESSAGE DU SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE

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92L/4	92L/5	92L/6

INDEX TO ADDRESSING MAPS OF THE NATIONAL TOPOGRAPHIC SYSTEM

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Rough: **Rough**  
 hard surface, all weather: **hard surface**  
 loose or stabilized surface, all weather: **loose or stabilized surface**  
 loose surface, dry weather and wet weather: **loose surface**  
 cart track: **cart track**  
 track, coal line or portage: **track**

**ALICE LAKE**  
 RUPERT LAND DISTRICT  
 BRITISH COLUMBIA



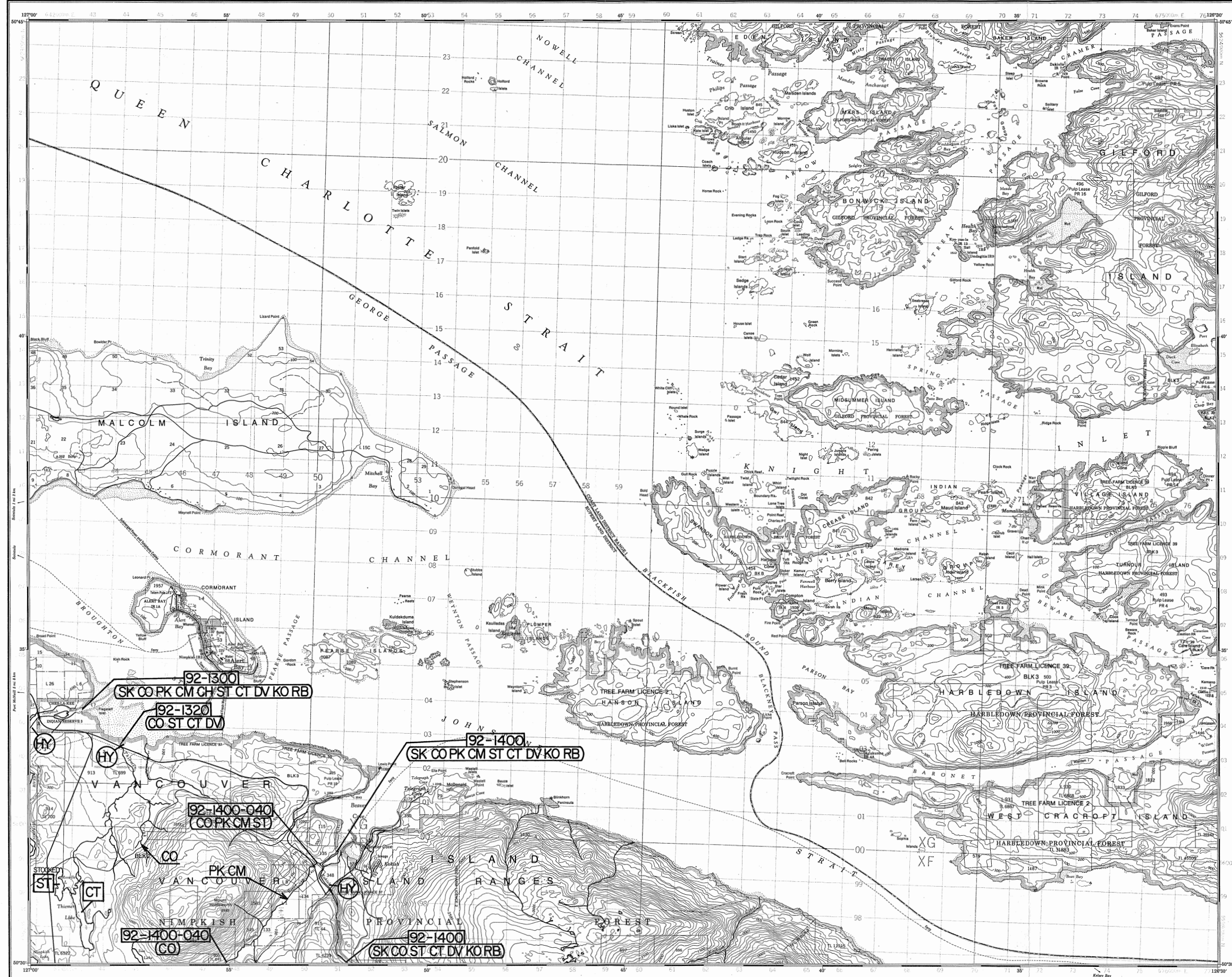
CONTOUR INTERVAL: 100 FEET  
 Échelle des courbes de niveau: 30 mètres

Échelle par la DIRECTION DES LÈVES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Basé sur une carte de topographie, échelle 1:50,000, de 1972, fournie par le Service des Levés et de la Cartographie, Ministère des Terres, des Forêts et des Ressources, Colombie-Britannique. Informations actuelles au 1974. Copies peuvent être obtenues au Bureau des Cartes du Canada, Ministère de l'Énergie, des Mines et des Ressources, Ottawa, ou chez votre marchand de cartes. © Canada 1975, tous droits réservés.

ALICE LAKE  
 92L/6  
 EDITION 3

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**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY (SUBDISTRICT 12)**

**91-2900 Watershed Code and Species Summary**

**SPECIES INFORMATION**

SK CO PK CM CH species present  
 CO ST lower limit of distribution  
 CO ST upper limit of distribution  
 PK\* specific site of spawning

SK\* major spawning zone  
 CO CO  
 CM\* upper limit of spawning

**OBSTRUCTIONS**  
 (measurements included where known)

log jam (persistent)  
 D = dam  
 F = falls  
 R = rock falls  
 CV = culvert  
 BD = beaver dam

2C100 cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT/MANAGEMENT ACTIVITIES**

HY hatchery  
 FW fishway  
 SC side channel  
 CH spawning channel  
 BX incubation box  
 HC hatchery/spawning channel

WSC06B003 Water Survey of Canada Gauging Station

300 CO tributary watershed code

**SPECIES ABBREVIATION LIST**

SK - Sockeye	BS - Bass (general)
CO - Coho	CT - Cutthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
CH - Chinook	LW - Lake Trout
ST - Steelhead	LT - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
	TR - Trout

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

COMPILED AND DRAFTED MARCH 1990 by SHIP Environmental Consultants Ltd.

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**ALERT BAY BRITISH COLUMBIA**

Scale 1:50,000 Échelle

Bar scales in meters and feet.

Édition de la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Basé sur des LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DES TERRES, DES FORÊTS ET DES RESSOURCES HYDRIQUES DE LA COLONIE BRITANNIQUE. Modification des données en 1974. Remerciements à son égard.

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TABLEAU D'ADRESSAGE DU SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE

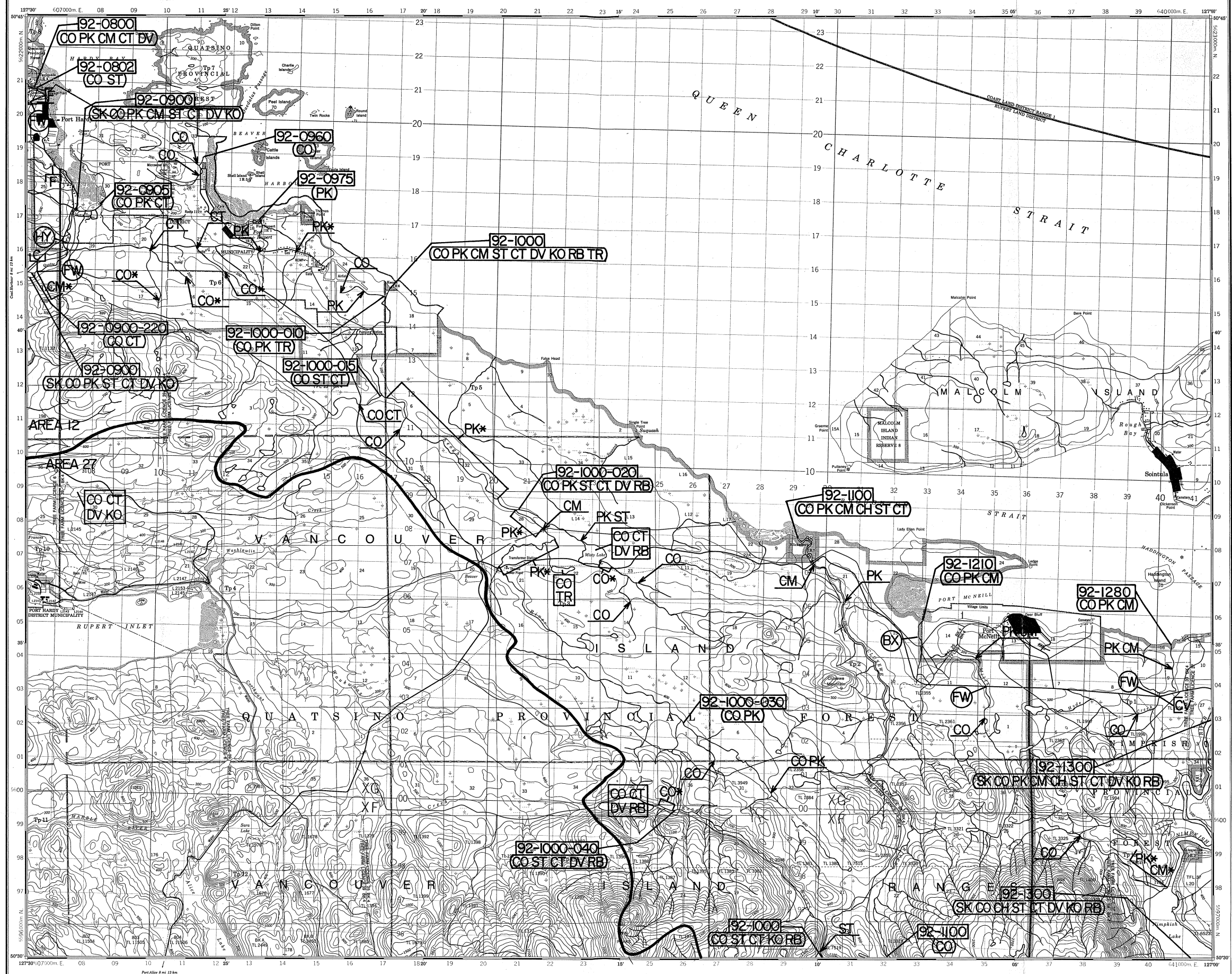
127°00' 127°30' 128°00'

50°00' 50°30' 51°00'

NECES TO ADDRESSE MAPS OF THE NATIONAL TOPOGRAPHIC SYSTEM

Alert Bay 92 L/10 ÉDITION 2

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 Références de cette carte: **EDITION 3 CARTE**  
 pour usage militaire: **EDITION 3 CARTE**

**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM**  
**STREAM INFORMATION SUMMARY (SUBDISTRICT 12)**

**91-2900 Watershed Code and Species Summary**  
**CO CM ST**

**SPECIES INFORMATION**

**SK CO PK CM CH** species present  
**CO ST** lower limit of distribution  
**CO ST** upper limit of distribution  
**PK\*** specific site of spawning

**SK\*** major spawning zone  
**CO\***  
**CM\*** upper limit of spawning

**OBSTRUCTIONS** (measurements included where known)

**log jam (persistent)**  
**D** = dam  
**F** = falls  
**R** = rock falls  
**CV** = culvert  
**BD** = beaver dam

**2C100** cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT / MANAGEMENT ACTIVITIES**

**HY** = hatchery  
**FW** = fishway  
**SC** = side channel  
**CH** = spawning channel  
**BX** = incubation box  
**HC** = hatchery/spawning channel

**W5008FB003** Water Survey of Canada Gauging Station  
**300**  
**CO** tributary watershed code

**SPECIES ABBREVIATION LIST**

SK - Sockeye	BS - Bass (general)
CO - Coho	CT - Cutthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
CH - Chinook	LT - Lake Trout
ST - Steelhead	LW - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
	TR - Trout

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

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 by  
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**TABLEAU D'ADRESSAGE DU SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE**

92L11	92L14	92L15
92L12	92L13	92L10
92L18	92L16	92L17

**INDEX TO ADDRESSING MAPS OF THE NATIONAL TOPOGRAPHIC SYSTEM**

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**Roads:**  
 hard surface, all weather: route pavée, toute saison  
 hard surface, all weather: route pavée, toute saison  
 loose or stabilized surface, all weather: gravel/aggloméré, toute saison  
 loose surface, dry weather and unsaturated: gravel/aggloméré, toute saison  
 cart track: sentier, sentier au portage

**FOUR COMPLETE REFERENCES SEE REVERSE SIDE**



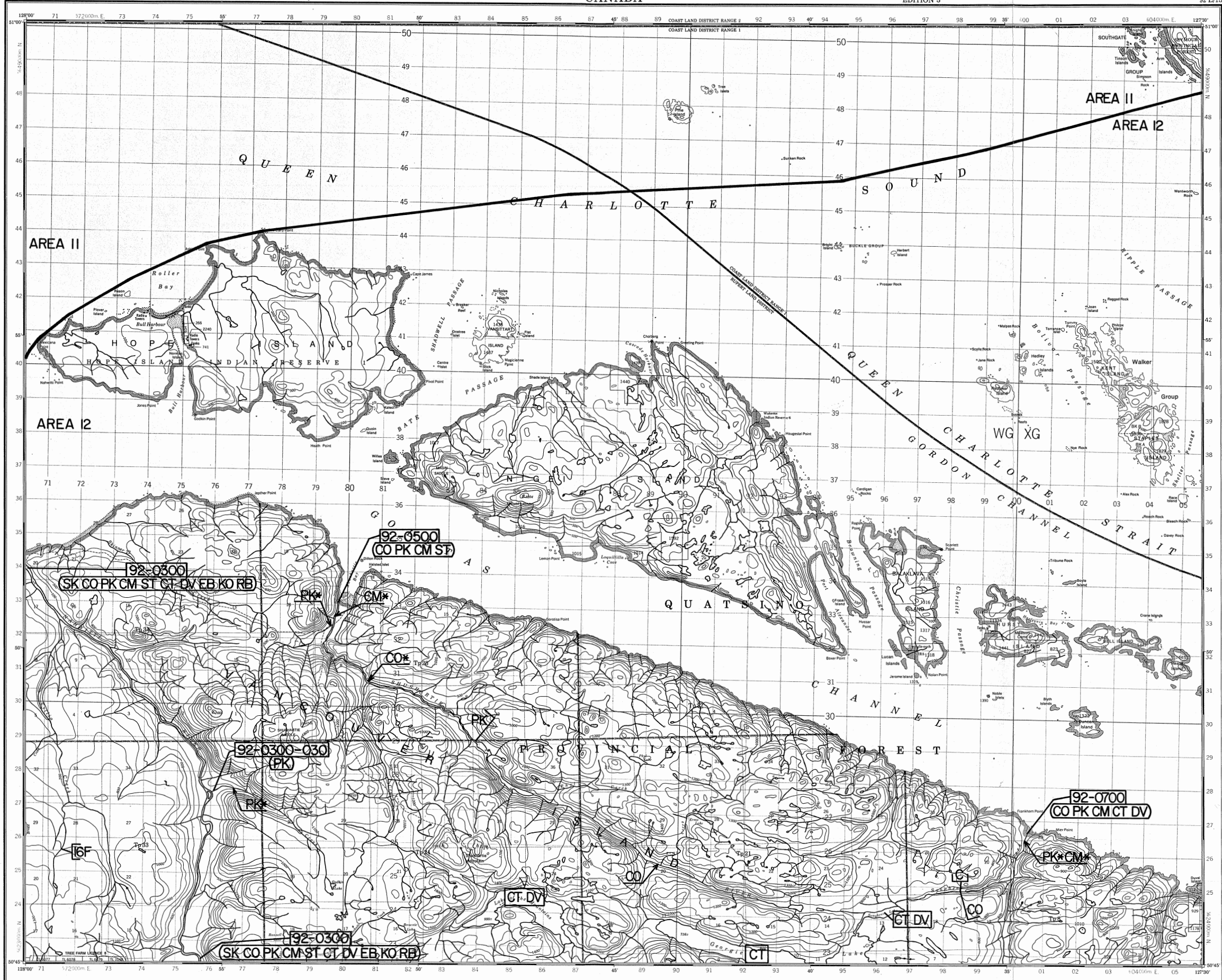
**PORT MCNEILL BRITISH COLUMBIA**

**CONTOUR INTERVAL: 100 FEET**  
 Contours in Feet above Mean Sea Level  
 North American Datum 1927  
 Transverse Mercator Projection

**ÉQUIVALENCE DES COURBES 100 PIEDS**  
 Équivalents en pieds au-dessus du niveau moyen de la mer  
 Système de référence géodésique nord-américain, 1927  
 Projection transversale de Mercator

Établi par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Basé sur l'information fournie par le BRANCH DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DES FORÊTS ET DES RESSOURCES HYDRAULIQUES DE LA C.O.M.B. DES RÉGIONS. Vérification des contours en 1974. Remarque: 1 pouce = 2,54 centimètres.  
 Carte établie sur les cartes de la Direction des Levés et des Ressources, Ottawa, en 1974.  
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**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY (SUBDISTRICT 12)**

**91-2900 Watershed Code and CO CM ST**  
Species Summary

**SPECIES INFORMATION**

- SK CO PK CM CH species present
- CO ST lower limit of distribution
- CO ST upper limit of distribution
- PK \* specific site of spawning
- SK \* major spawning zone
- CO major spawning zone
- CM \* upper limit of spawning

**OBSTRUCTIONS (measurements included where known)**

- log jam (persistent)
- D = dam
- F = falls
- R = rock falls
- CY = culvert
- BD = beaver dam
- 2C100 cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT/MANAGEMENT ACTIVITIES**

- HY = hatchery
- FW = fishway
- SC = side channel
- CH = spawning channel
- BX = incubation box
- HC = hatchery/spawning channel

WSCOFB003 Water Survey of Canada Gauging Station

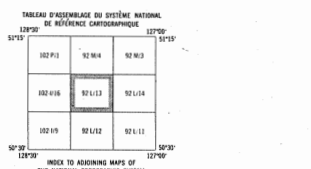
300 CO tributary watershed code

**SPECIES ABBREVIATION LIST**

SK - Sockeye	BS - Bass (general)
CO - Coho	CT - Cutthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
CH - Chinook	LT - Lake Trout
ST - Steelhead	LW - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
	TR - Trout

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

COMPILED AND DRAFTED  
MARCH 1990  
by  
SHIP Environmental Consultants Ltd.



Produced by the SURVEY AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND TECHNICAL SURVEYS, CANADA. In 1977, approved by the SURVEY AND MAPPING BRANCH, DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES, BRITISH COLUMBIA. Substrate 1974. Information current as of 1974.

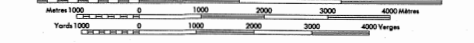
Carte peut être obtenue chez le Canada Map Office, Department of Energy, Mines and Technical Surveys, Ottawa, ou par votre agent de cartes.

Roads: paved or stabilized surface, all weather; gravel aggregate, both sides; loose surface, dry weather and unsealed streets; cart track; trail, cut line or path; sand; pebble or path.

Routes: gravel aggregate, both sides; gravel, single use or rails, four cross; 4th class; sand; pebble or path.

**SHUSHARTIE BRITISH COLUMBIA**

Scale 1:50,000 Échelle

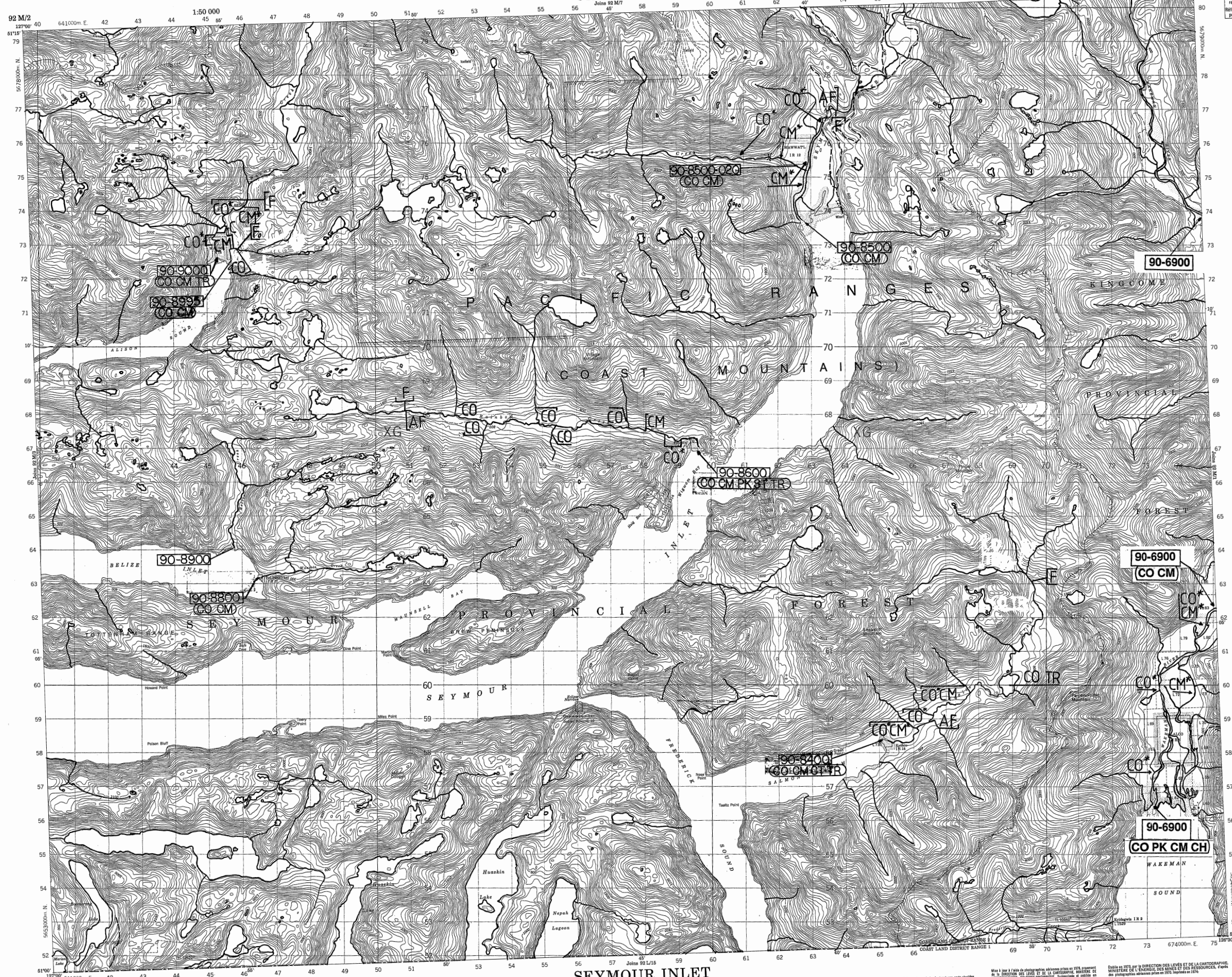


CONTOUR INTERVAL 100 FEET  
Élévation in Feet above Mean Sea Level  
North American Datum 1927  
Projection: Mercator Projection

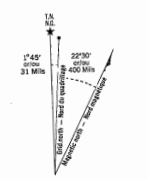
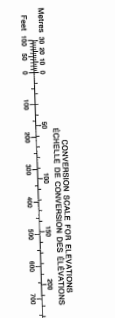
CONTOUR INTERVAL 100 METERS  
Élévation en mètres au-dessus du niveau moyen de la mer  
Système de référence géodésique nord-américain, 1927  
Projection: Transverse de Mercator

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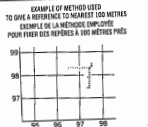
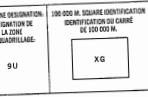


Military users, refer to this map as: Références de cette carte pour usage militaire. SERIES A 721 SÉRIE MAP 92 M/2 CARTE EDITION 2 ÉDITION



Les diagrammes de la déviation magnétique indiquent l'angle à ajouter ou à soustraire au déclin magnétique pour obtenir le déclin vrai.

ONE THOUSAND METRE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 9 QUADRILLAGE DE MILLE MÈTRES TRANSVERSE UNIVERSEL DE MERCATOR

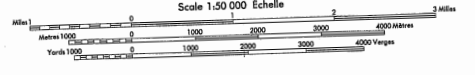


REFERENCE POINT CHURCH - EGLISE. ROAD NUMBER ON GRID LINE. CONTOUR LINE. ESTIMATE HEIGHT OF A SPOT FROM THIS LINE.

FEBRUARY 1988

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Roads: paved or stabilized surface, all weather; gravel, gravel-surfaced, or crushed stone; dirt/gravel; track; rail track; sand or gravel; sand or gravel; sand or gravel.



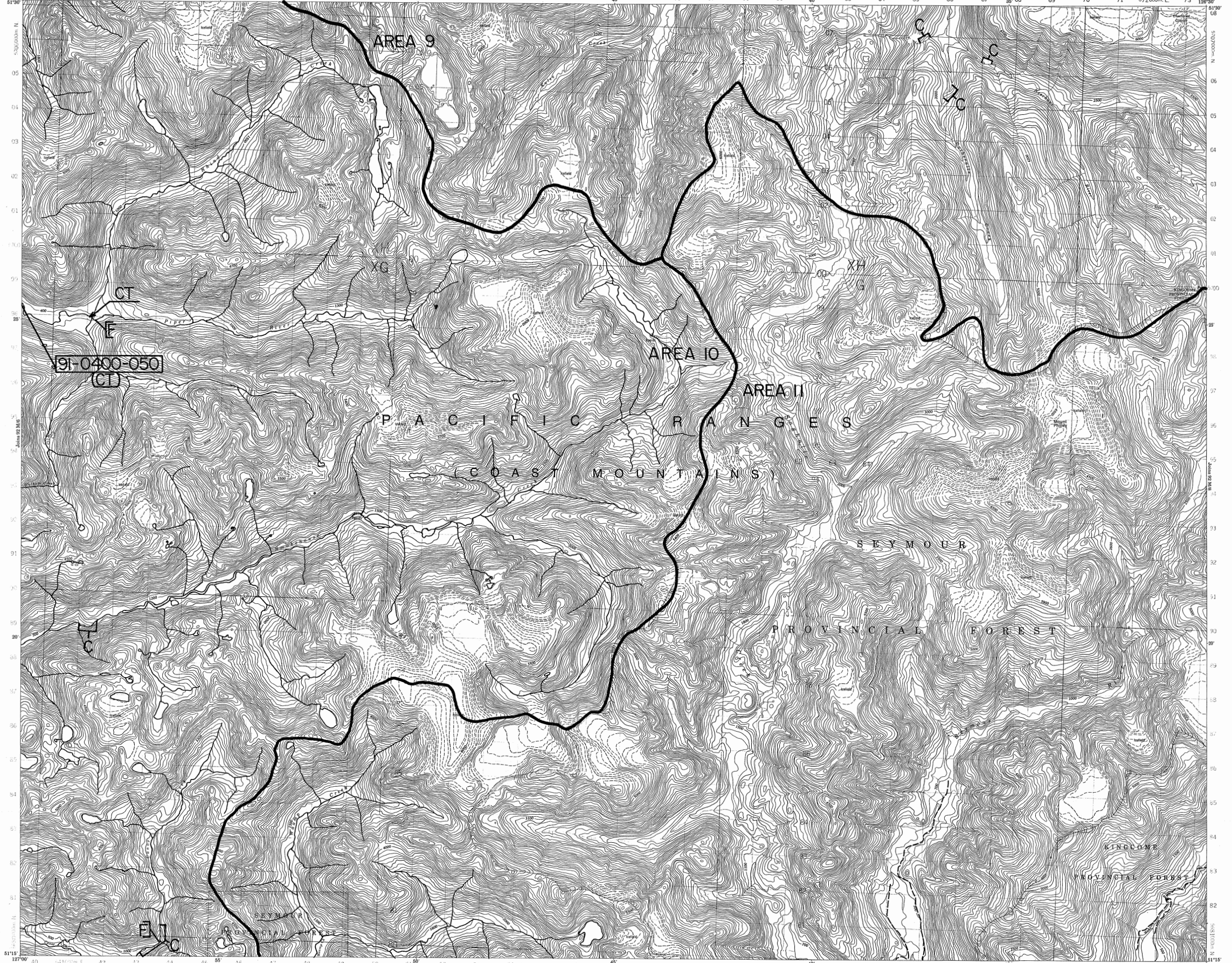
This Provincial Map is equivalent to a standard map of Canada. It is a derivative of the National Topographic Series.

Cette carte provinciale équivaut à une carte standard du Canada. Elle est une dérivée de la Série topographique nationale.

Échelle au 1:50 000. Cette carte est une dérivée de la Série topographique nationale. Elle est équivalente à une carte standard du Canada.







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**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY**

91-2900 Watershed Code and Species Summary  
CO CM ST

**SPECIES INFORMATION**

- SK CO PK CM CH species present
- CO ST lower limit of distribution
- CO ST upper limit of distribution
- PK \* specific site of spawning
- SK \* major spawning zone
- CO \* upper limit of spawning
- CM \* upper limit of spawning

**OBSTRUCTIONS** (measurements included where known)

- log jam (persistent)
- D = dam
- F = falls (3m high)
- CV = culvert
- BD = beaver dam
- 2C100 cascade, chute or canyon (height = 2m, length = 100m)

**ENHANCEMENT/MANAGEMENT ACTIVITIES**

- HY = hatchery
- FW = fishway
- SC = side channel
- CH = spawning channel
- W5C08FBO03 Water Survey of Canada Gauging Station
- 300 CO tributary watershed code

**SPECIES ABBREVIATION LIST**

SK - Sockeye	BS - Bass (general)
CO - Coho	CT - Cutthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
CH - Chinook	LT - Lake trout
ST - Steelhead	LW - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RS - Rainbow
EU - Eulachon	TR - Trout (general)

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

MAR. 89

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Revised from aerial photographs taken in 1978, processed by the National Cartographic System. Some names on this map are not yet official. Corrections or additions are invited to the Survey and Mapping Branch.

Scale: 1:50 000

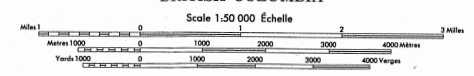
CONTOUR INTERVAL: 100 FEET

Vertical datum: Mean Sea Level

Horizontal datum: North American Datum 1987

Projection: Transverse Mercator

**MOUNT PHILLEY**  
COAST LAND DISTRICT RANGE 2  
BRITISH COLUMBIA



This Provisional Map is equivalent to a standard map in accuracy of content.

Cette carte provisoire équivaut à une carte régulière en ce qui concerne la précision de son contenu.

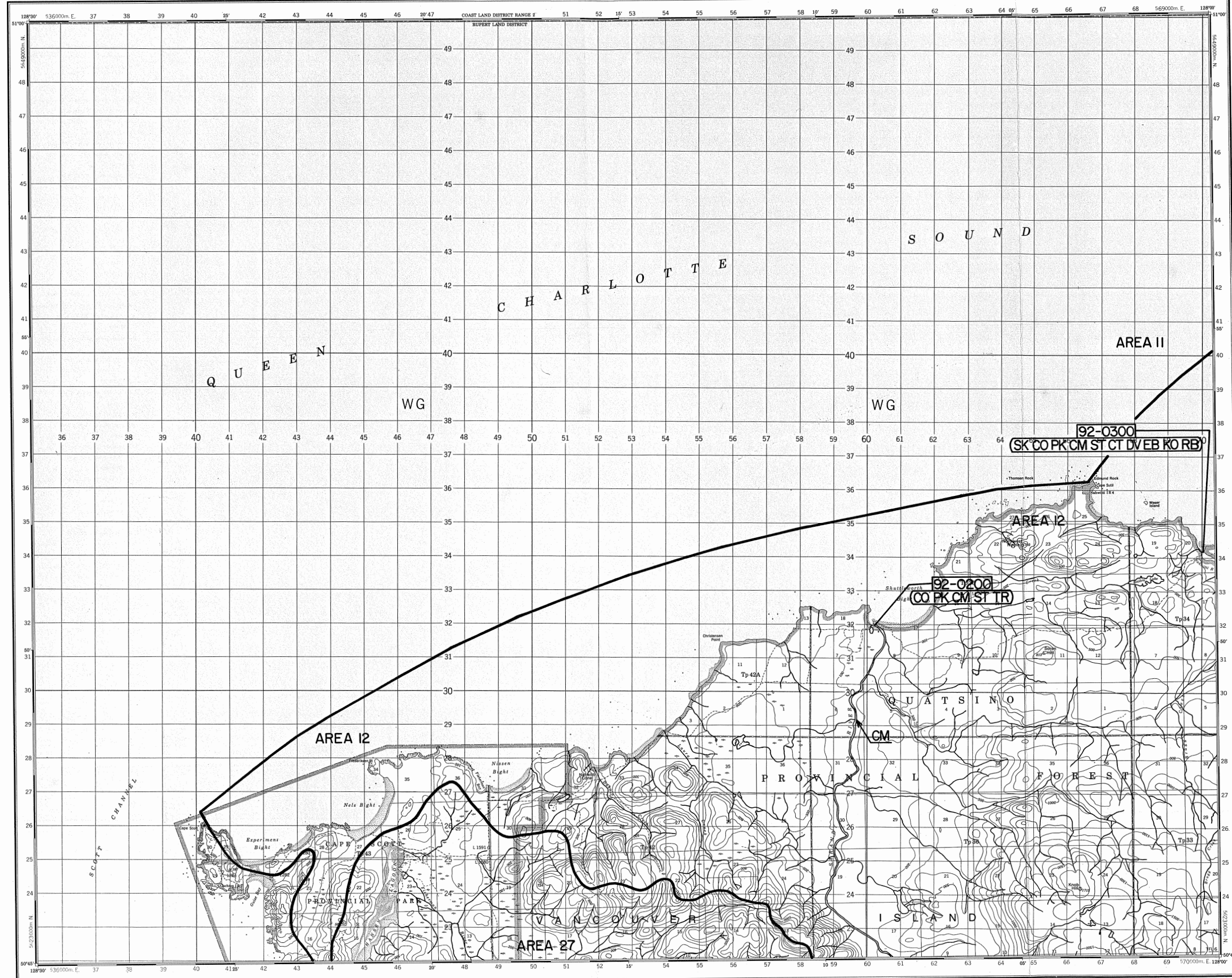
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**DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY (SUBDISTRICT 12)**

**91-2900 Watershed Code and Species Summary**

**SPECIES INFORMATION**

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- CO ST lower limit of distribution
- CO ST upper limit of distribution
- PK\* specific site of spawning
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Water Survey of Canada Gauging Station

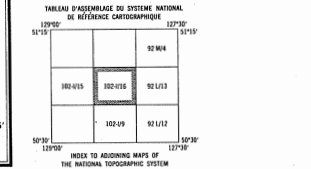
tributary watershed code

**SPECIES ABBREVIATION LIST**

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ST - Steelhead	LW - Lake whitefish
AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
	TR - Trout

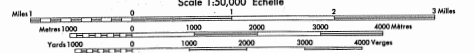
This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

COMPILED AND DRAFTED MARCH 1990 by SHIP Environmental Consultants Ltd.



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**CAPE SCOTT BRITISH COLUMBIA**



CONTOUR INTERVAL 100 FEET (Elevations in Feet above Mean Sea Level) North American Datum 1927

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