

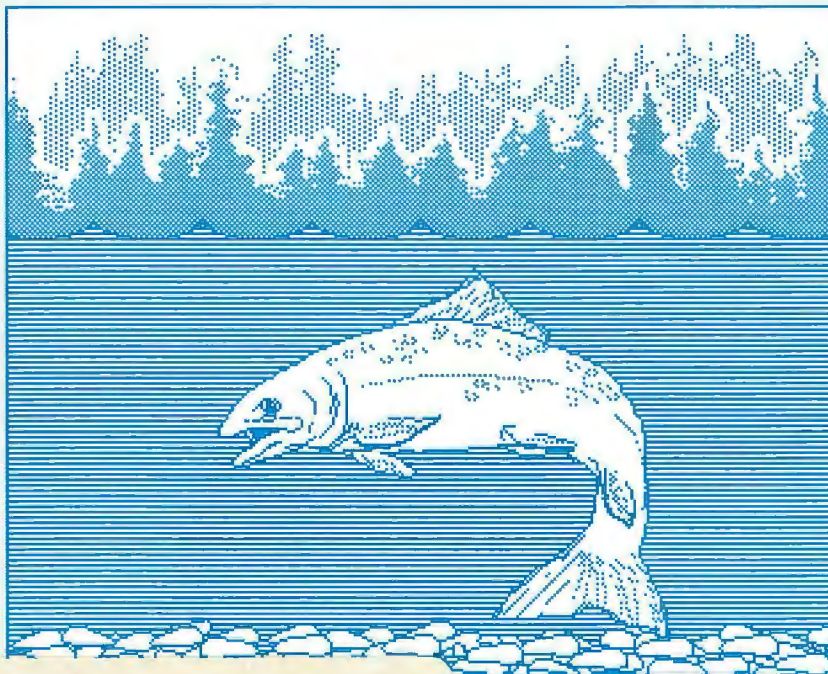
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Fish Habitat Inventory & Information Program

STREAM SUMMARY
CATALOGUE
SUBDISTRICTS # 9
RIVERS INLET
&
10 SMITH INLET



SH349
A9
no.9/10

c#1

SHIP Environmental Consultant
Stream summary catalogue. Subd
istricts 9, Rivers Inlet and
10, Smith Inlet.

Canada

Fish Habitat Inventory & Information Program

STREAM SUMMARY
CATALOGUE
SUBDISTRICTS # 9
RIVERS INLET
&
10 SMITH INLET

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North Coast Division
Fisheries Branch
Department of Fisheries & Oceans

February 1992

PREFACE

This catalogue contains a summary of information on fish and fish habitat for 90 streams in DFO Subdistrict 9, Rivers Inlet, and 18 streams for Subdistrict 10, Smith Inlet. 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.

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 is intended to provide a "brief summary" of stream information. If more detailed information is required, please refer to the references or contact local DFO and MOE offices.

ACKNOWLEDGEMENTS

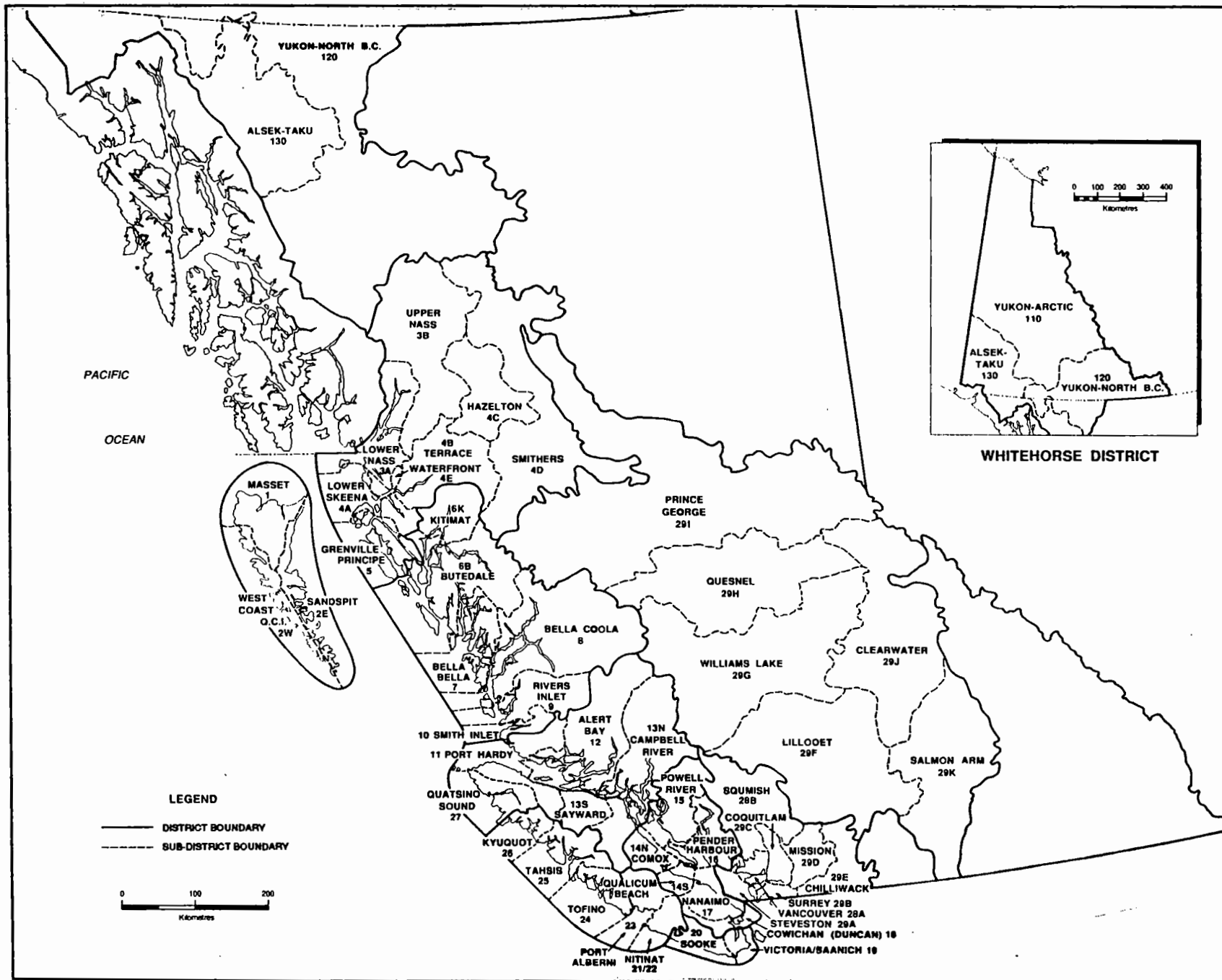
The Stream Information Summaries and maps were originally prepared in 1989 by R. DeMarco of SHIP Environmental Consultants Ltd. under a contract managed by T. Pendray, Department of Fisheries and Oceans (DFO), North Coast Division. The SIS data for subdistricts 9 and 10 are jointly managed and updated by DFO, North Coast Division and B.C. Ministry of Environment (MOE)(LP), Region 5. The maps included in this catalogue were prepared and drafted by SHIP Environmental consultants. Catalogue production was coordinated by B. Mason, Habitat Management Division. The assistance of DFO District 7 and Subdistrict staff and B.C. Ministry of Environment (MOE) Region 5 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:

Fish Habitat Inventory and Information Program. 1991. Stream Summary Catalogue. Subdistrict 9, Rivers Inlet, and Subdistrict 10, Smith Inlet. Department of Fisheries and Oceans, Vancouver, B.C.

TABLE OF CONTENTS

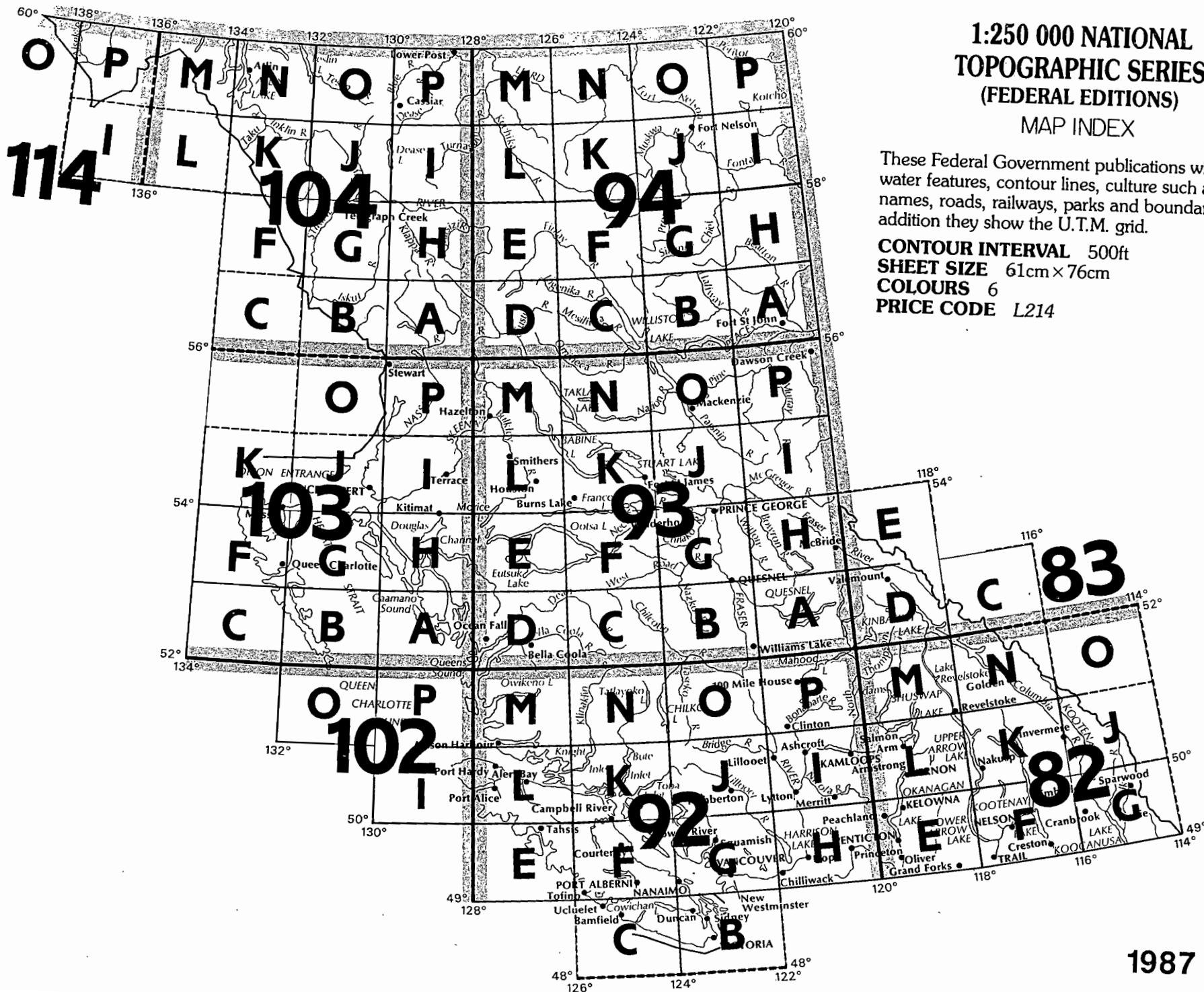
- Acknowledgements
- Preface
- Table of Contents
- 1.0 Map Indices
 - Key maps of streams in subdistrict
 - Watershed Code Listing of Stream Names
 - Alphabetic Listing of Stream Names & Watershed Codes
 - DFO Subdistrict Map
 - MOEP Region Map
 - 1:250,000 National Topographic Series Map Index
 - 1:50,000 National Topographic Series Map Index
 - 1:20,000 Planimetric Map Index
- 2.0 User Guides
 - 2.1 Stream Information Summary
 - 2.2 Escapement
 - 2.3 Bibliography
 - 2.4 Stream Information Summary Map
- 3.0 Stream Summary
 - Stream Information Summary (by Watershed Code)
 - Escapement
- 4.0 Bibliography
- 5.0 Maps



- DISTRICT #1 — KAMLOOPS**
 - Subdist 29F - Lillooet
 - 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-Northern B.C.
 - Subdist 130 - Alsek - Taku

DFO PACIFIC REGION SUBDISTRICTS AND DISTRICTS





**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.

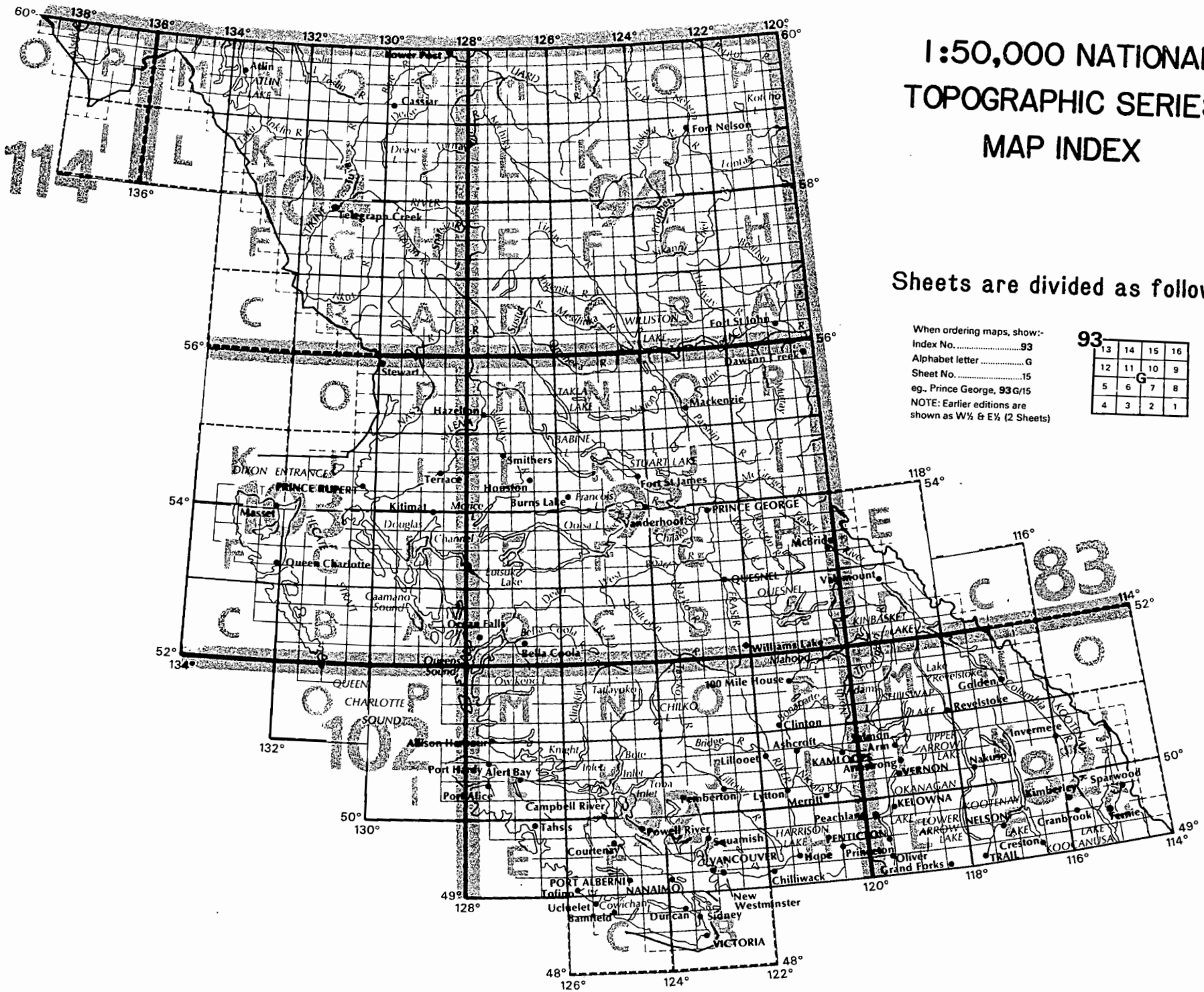
CONTOUR INTERVAL 500ft
SHEET SIZE 61cm x 76cm
COLOURS 6
PRICE CODE L214

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, 93 G/15
 NOTE: Earlier editions are
 shown as W½ & E½ (2 Sheets)

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

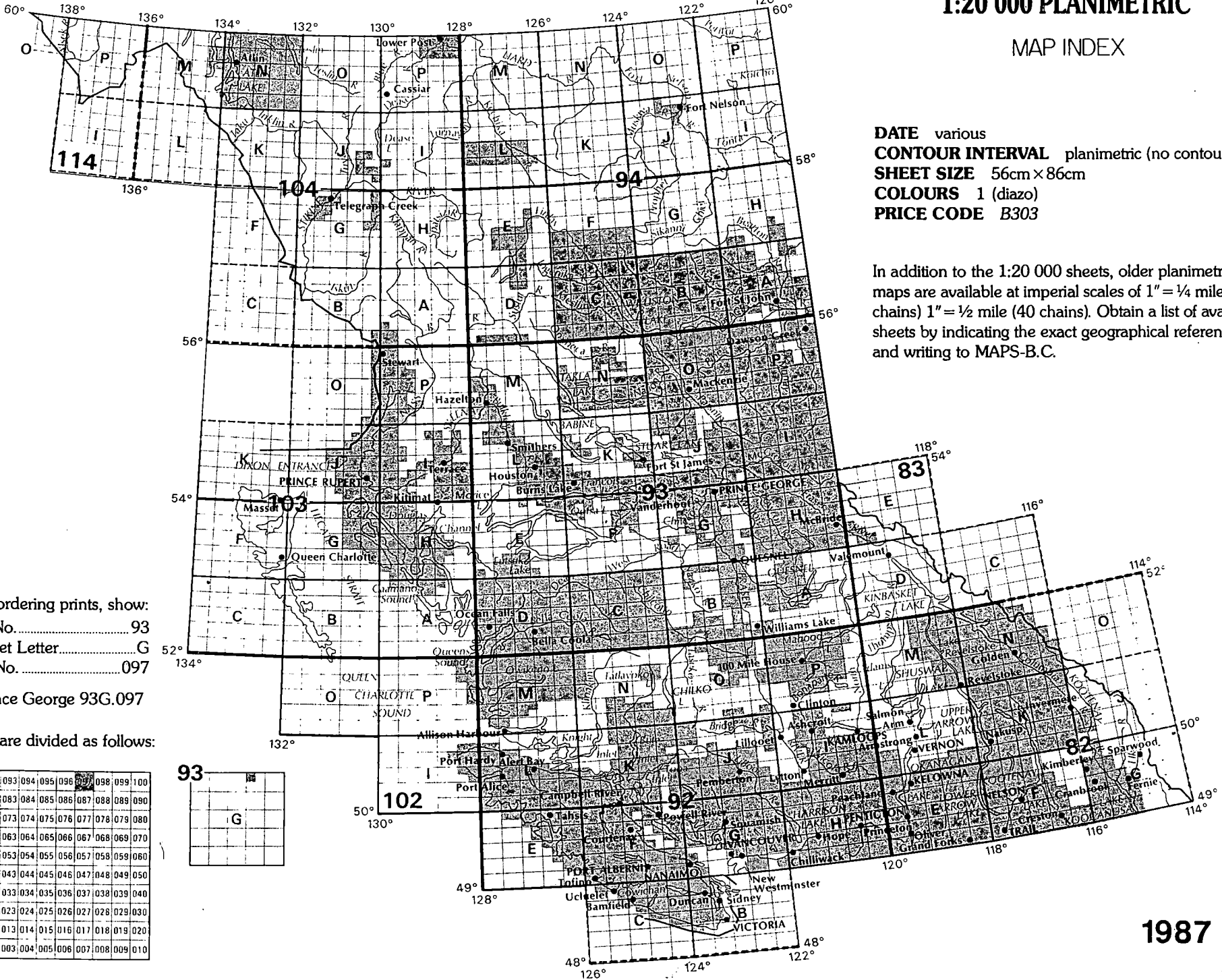


1:20 000 PLANIMETRIC

MAP INDEX

DATE various
CONTOUR INTERVAL planimetric (no contours)
SHEET SIZE 56cm x 86cm
COLOURS 1 (diaz)
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.

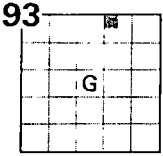


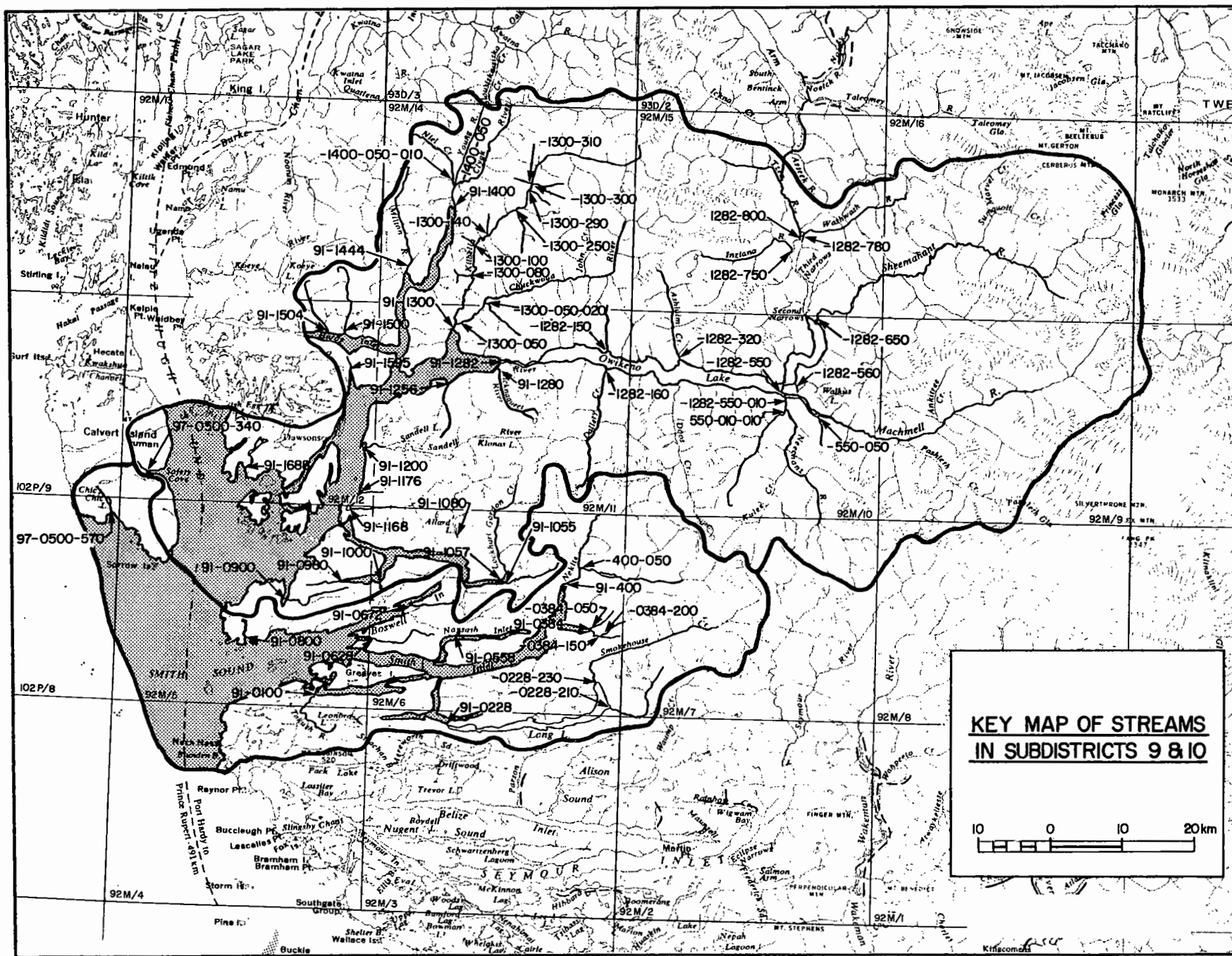
When ordering prints, show:
 Index No. 93
 Alphabet Letter G
 Sheet No. 097

eg. Prince George 93G.097

Sheets are divided as follows:

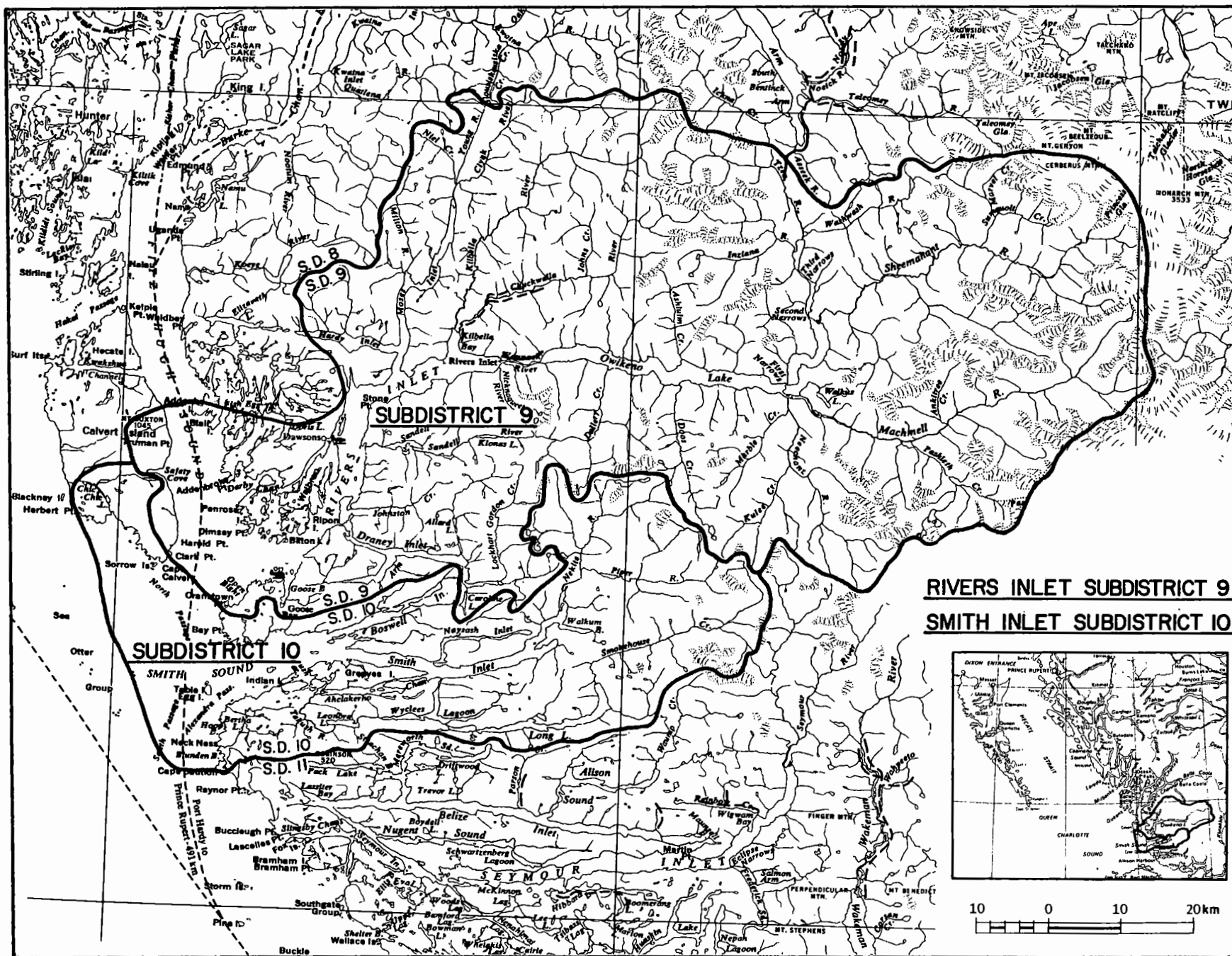
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081	082	083	084	085	086	087	088	089	090
071	072	073	074	075	076	077	078	079	080
061	062	063	064	065	066	067	068	069	070
051	052	053	054	055	056	057	058	059	060
041	042	043	044	045	046	047	048	049	050
031	032	033	034	035	036	037	038	039	040
021	022	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





**KEY MAP OF STREAMS
IN SUBDISTRICTS 9 & 10**

10 0 10 20 km



Listing of Streams NUMERICALLY by Watershed Code - SUBDISTRICT #9

Watershed Code	Gazetted Name	Local Name
91-0900	HOGAN C	GOOSE BAY C
91-0980	UNNAMED C	
91-1000	UNNAMED C	ROBERT ARM C WEST ARM C
91-1055	DRANEY C	
91-1057	LOCKHART GORDON C	
91-1080	ALLARD C	NORTH ARM C
91-1168	JOHNSTON C	HOLE-IN-THE-WALL C
91-1176	NEWICHY C	WADHAMS C
91-1200	SANDELL R	TZEEISKAY C
91-1256	SHOTBOLT C	
91-1280	NICKNAQUEET R	SAWMILL C
91-1282	WANNOCK R	
91-1282-150	AMBACK C	QUAP R
91-1282-160	DALLERY C	DALLAC C
91-1282-320	ASHLULM C	ASKLUM C
91-1282-550	MACHMELL R	MARKWELL R
91-1282-550-010	NEECHANZ R	NOOKINS R
91-1282-550-010-010	MARBLE C	
91-1282-550-050	UNNAMED C	CLEAR C
91-1282-560	GENESEE C	
91-1282-650	SHEEMAHANT R	
91-1282-750	INZIANA R	INDIAN R
91-1282-780	WASHWASH R	WAUKWASH R
91-1282-800	TZEO R	CHEO R
91-1300	KILBELLA R	
91-1300-050	CHUCKWALLA R	
91-1300-050-020	MACKS C	
91-1300-050-200	JOHNS C	
91-1300-080	UNNAMED C	
91-1300-100	UNNAMED C	
91-1300-140	UNNAMED C	
91-1300-250	KRANTZ C	
91-1300-290	UNNAMED C	
91-1300-300	UNNAMED C	
91-1300-310	UNNAMED C	
91-1400	CLYAK R	
91-1400-050	YOUNG R	
91-1400-050-010	NIEL C	
91-1444	MILTON R	JIMMY ASH R
91-1500	MACNAIR C	
91-1504	DORIS C	
91-1595	UNNAMED C	BRUNSWICK C SANDELL BAY C
91-1688	UNNAMED C	BEAVER C COHOE C
91-1900-300	UNNAMED C	FISH EGG C
97-0500-340	OATSOALIS C	

Listing of Streams ALPHABETICALLY by Watershed Code - Subdistrict # 9

Watershed Code	Gazetted Name	Local Name
91-1080	ALLARD C	NORTH ARM C
91-1282-150	AMBACK C	QUAP R
91-1282-320	ASHLULM C	ASKLUM C
91-1300-050	CHUCKWALLA R	
91-1400	CLYAK R	
91-1282-160	DALLERY C	DALLAC C
91-1504	DORIS C	
91-1055	DRANEY C	
91-1282-560	GENESEE C	
91-0900	HOGAN C	GOOSE BAY C
91-1282-750	INZIANA R	INDIAN R
91-1300-050-200	JOHNS C	
91-1168	JOHNSTON C	HOLE-IN-THE-WALL C
91-1300	KILBELLA R	
91-1300-250	KRANTZ C	
91-1057	LOCKHART GORDON C	
91-1282-550	MACHMELL R	MARKWELL R
91-1300-050-020	MACKS C	
91-1500	MACNAIR C	
91-1282-550-010-010	MARBLE C	
91-1444	MILTON R	JIMMY ASH R
91-1282-550-010	NEECHANZ R	NOOKINS R
91-1176	NEWICHY C	WADHAMS C
91-1280	NICKNAQUEET R	SAWMILL C
91-1400-050-010	NIEL C	
97-0500-340	OATSOALIS C	
91-1200	SANDELL R	TZEEISKAY C
91-1282-650	SHEEMAHANT R	
91-1256	SHOTBOLT C	
91-1282-800	TZEO RCHEO R	
91-0980	UNNAMED C	
91-1300-080	UNNAMED C	
91-1300-100	UNNAMED C	
91-1300-140	UNNAMED C	
91-1300-290	UNNAMED C	
91-1300-300	UNNAMED C	
91-1300-310	UNNAMED C	
91-1688	UNNAMED C	BEAVER C
		COHOE C
91-1595	UNNAMED C	BRUNSWICK C
		SANDELL BAY C
91-1282-550-050	UNNAMED C	CLEAR C
91-1900-300	UNNAMED C	FISH EGG C
91-1000	UNNAMED C	ROBERT ARM C
		WEST ARM C
91-1282	WANNOCK R	
91-1282-780	WASHWASH R	WAUKWASH R
91-1400-050	YOUNG R	

Listing of Streams NUMERICALLY by Watershed Code - SUBDISTRICT #10

Watershed Code	Gazetted Name	Local Name
91-0100	TAKUSH R	
91-0228	UNNAMED C	DOCEE R GOAT R
91-0228-210	CANOE C	DELEBAH R
91-0228-230	SMOKEHOUSE C	GELUCK C
91-0248	UNNAMED	
91-0384	WALKUM C	
91-0384-050	UNNAMED C	
91-0384-150	UNNAMED C	
91-0384-200	UNNAMED C	
91-0400	NEKITE R	
91-0400-050	PIPER R	
91-0400-100	BARER C	
91-0558	NAYSASH C	BOULDER C
91-0628	MARGARET C	
91-0672	UNNAMED C	BOSWELL C COHO C
91-0775	UNNAMED C	DSULISH C
91-0800	HAGEN C	MILBROOK COVE C
97-0500-570	UNNAMED C	CHIC CHIC C

Listing of Streams ALPHABETICALLY by Watershed Code - Subdistrict # 10

Watershed Code	Gazetted Name	Local Name
91-0400-100	BARER C	
91-0228-210	CANOE C	DELEBAH R
91-0800	HAGEN C	MILBROOK COVE C
91-0628	MARGARET C	
91-0558	NAYSASH C	BOULDER C
91-0400	NEKITE R	
91-0400-050	PIPER R	
91-0228-230	SMOKEHOUSE C	GELUCK C
91-0100	TAKUSH R	
91-0248	UNNAMED C	
91-0384-050	UNNAMED C	
91-0384-150	UNNAMED C	
91-0384-200	UNNAMED C	
91-0672	UNNAMED C	BOSWELL C
97-0500-570	UNNAMED C	CHIC CHIC C
91-0228	UNNAMED C	DOCEE R
		GOAT R
91-0775	UNNAMED C	DSULISH C
91-0384	WALKUM C	

DFO PACIFIC REGION - SUBDISTRICTS AND DISTRICTS

**DISTRICT/
Subdistrict**

Address

DISTRICT #1

- Kamloops
 1278 Dalhousie Dr., Kamloops, V2C 2E9
 Salmon Arm (29K) Box 1160, Salmon Arm, VOE 2T0
 Prince George (29I) 2392 Ospika Blvd., Prince George, V2N 3N5
 Clearwater (29J) Box 610, Clearwater, VOE 1N0
 Lillooet (29F) Box 315, Lillooet, V0K 1V0
 Quesnel (29B) 1205 North Highway 97, Quesnel, V2J 2Y3
 Williams Lake (29G) 260-D N. Broadway, Williams Lake, V2G 2X9

DISTRICT #2

- New Westminster
 301-80 6th St., New Westminster, V3L 5B3
 Vancouver (28A) 301-80 6th St., New Westminster, V3L 5B3
 Surrey (29B) 301-80 6th St., New Westminster, V3L 5B3
 Coquitlam (29C) 301-80 6th St., New Westminster, V3L 5B3
 Steveston (29A) 12551 No. 1 Road, Richmond, V7E 1T7
 Squamish (28B) Box 85, Squamish, V0N 3G0
 Mission (29D) Box 3308, Mission, V2V 4J5
 Chilliwack (29E) 45742A Yale Rd. West, Chilliwack, V2P 2N4

DISTRICT #3

- Nanaimo
 305-60 Front St., Nanaimo, V9R 5H7
 Nanaimo/Ladysmith(17) 305-60 Front St., Nanaimo, V9R 5H7
 Qualicum Beach (14S) Box 1270, Qualicum Beach, V0R 2T0
 Comox (14N) 148 Port Augusta St., Comox, V9N 7Z4
 Duncan (Cowichan)(18) Box 241, Duncan, V9L 3X3
 Powell River (15) 7255 Duncan St., Powell River, V8A 5M6

DISTRICT #4

- 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

DISTRICT #5

- Campbell River
 940 Alder St., Campbell River, V9W 2P8
 Campbell River (13A) 940 Alder St., Campbell River, V9W 2P8
 Sayward (13B) 940 Alder St., Campbell River, V9W 2P8
 Port Hardy (12B) Box 10, Port Hardy, V0N 2P0
 Alert Bay (12A) Box 9, Alert Bay, V0N 1A0
 Seymour Inlet (11) Box 10, Port Hardy, V0N 2P0
 Quatsino Sound (27) Box 10, Port Hardy, V0N 2P0

**DISTRICT/
Subdistrict**

Address

DISTRICT #6

- 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

DISTRICT #7

- Central Coast
 117-417 2nd Ave. West, Prince Rupert, V8J 1G8
 Kitimat (6N) 315-450 Federal Building, Kitimat, V8C 1T6
 Butedale (6S) 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

DISTRICT #8

- 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
 Granville-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 Laselle Ave., Terrace, V8G 1R6

DISTRICT #9

- 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

DISTRICT #10

- 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

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 mainstream 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

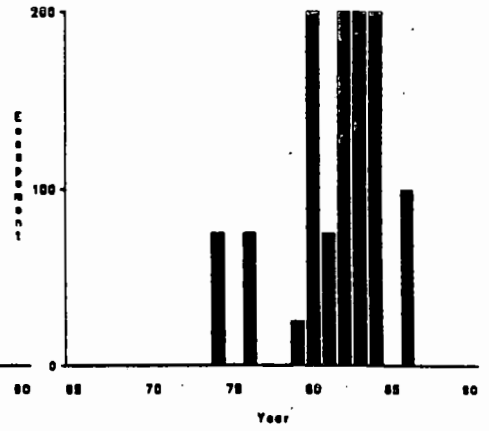
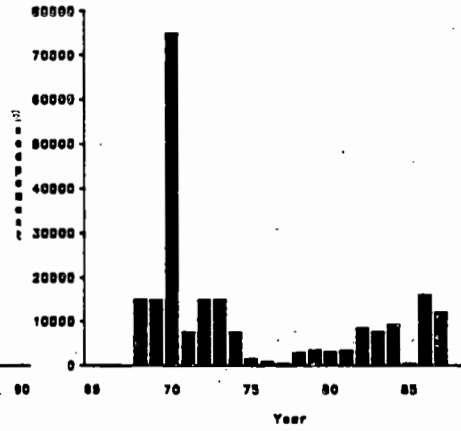
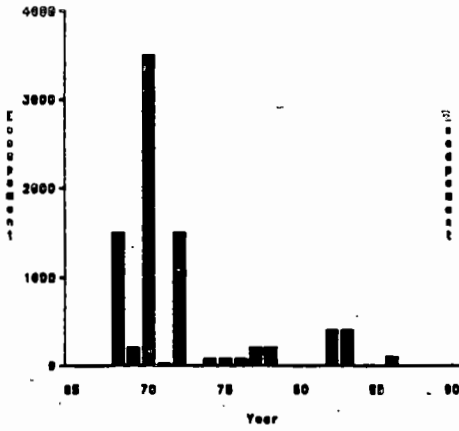
EXAMPLE RIVER (93-1000)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

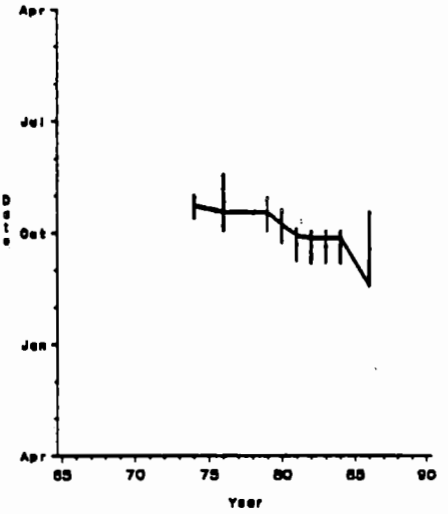
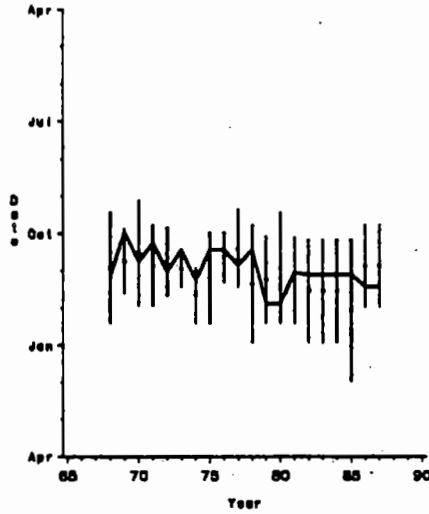
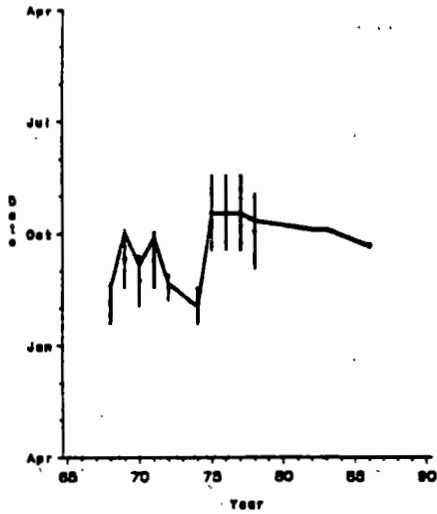
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1968	1,500	12NOV	10NOV	15DEC
1969	200	22SEP	30SEP	16NOV
1970	3,500	30OCT	15OCT	30NOV
1971	33	30SEP	08OCT	10NOV
1972	1,500	04NOV	12NOV	25NOV
1973	0	-	-	-
1974	75	10NOV	01DEC	10DEC
1975	75	16AUG	10SEP	15OCT
1976	75	15AUG	10SEP	15OCT
1977	200	15AUG	10SEP	15OCT
1978	200	30AUG	21SEP	30OCT
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	400	25SEP	20OCT	20OCT
1983	400	25SEP	20OCT	20OCT
1984	0	-	-	-
1985	0	-	-	-
1986	100	10OCT	12OCT	13OCT
1987	0	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1968	15,000	10SEP	07NOV	10DEC
1969	15,000	20SEP	20SEP	20NOV
1970	75,000	08OCT	25OCT	30NOV
1971	7,300	22SEP	10OCT	30NOV
1972	15,000	27SEP	02NOV	2NOV
1973	15,000	10OCT	10OCT	10NOV
1974	7,300	30OCT	10NOV	10DEC
1975	1,500	01OCT	10OCT	10DEC
1976	750	01OCT	10OCT	11NOV
1977	400	12SEP	20OCT	10NOV
1978	2,000	25OCT	10OCT	21OCT
1979	3,000	04OCT	20NOV	10DEC
1980	3,000	10OCT	20NOV	10DEC
1981	3,000	08OCT	03NOV	10DEC
1982	5,400	07OCT	04NOV	21DEC
1983	7,300	07OCT	04NOV	21DEC
1984	8,300	07OCT	04NOV	21DEC
1985	0	07OCT	09NOV	21AUG
1986	15,000	25SEP	16NOV	01DEC
1987	12,000	20SEP	16NOV	01DEC

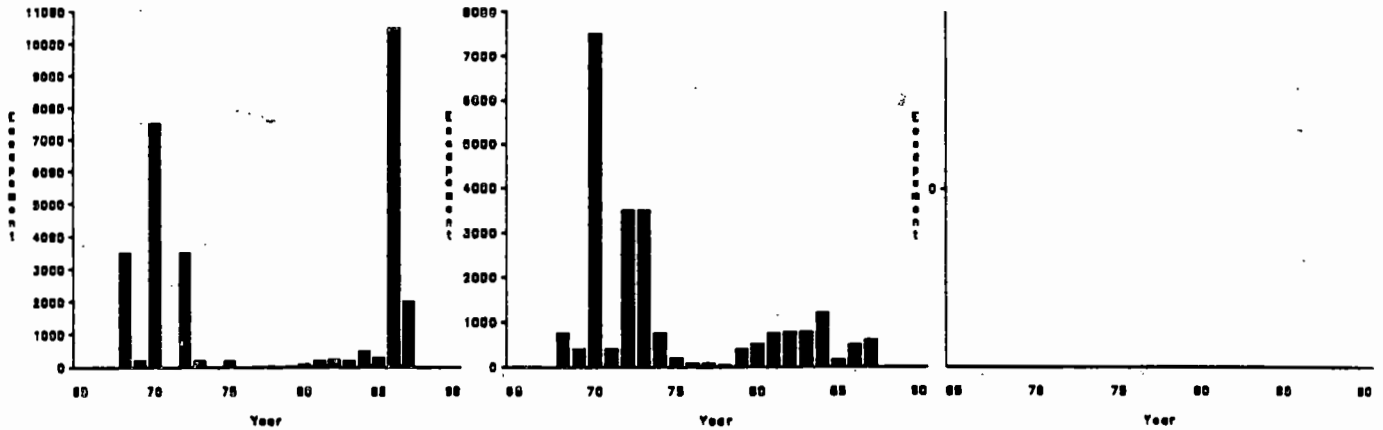
Pink				
Year	Escapement	Start	Peak	End
1968	0	-	-	-
1969	0	-	-	-
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	75	01SEP	10SEP	20SEP
1975	0	-	-	-
1976	75	10AUG	15SEP	30SEP
1977	0	-	-	-
1978	0	-	-	-
1979	20	03SEP	10SEP	30SEP
1980	200	13SEP	18SEP	10OCT
1981	75	20SEP	04OCT	25OCT
1982	200	30SEP	08OCT	27OCT
1983	200	30SEP	08OCT	27OCT
1984	200	30SEP	08OCT	27OCT
1985	0	-	-	-
1986	100	15SEP	16NOV	15NOV
1987	0	-	-	-

EXAMPLE RIVER (93-1000)
Escapement & Run Timing

Chum (CM)

Chinook (CH)

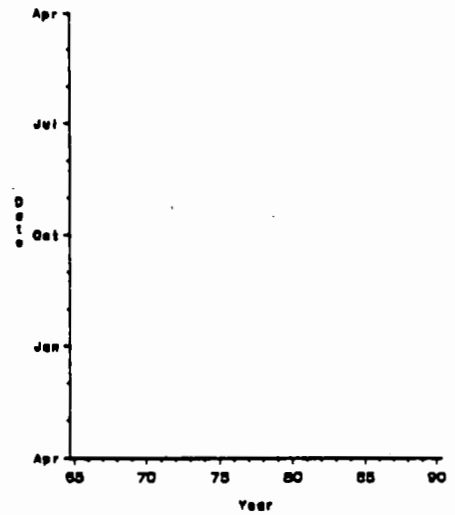
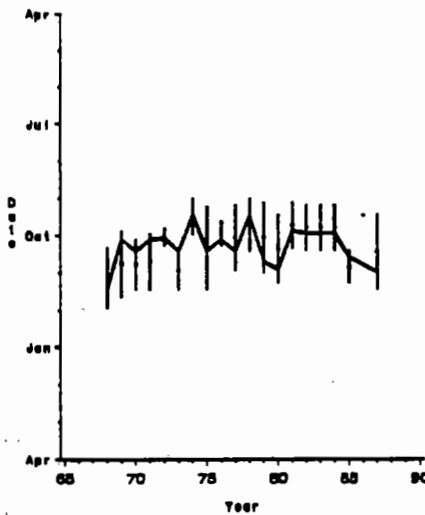
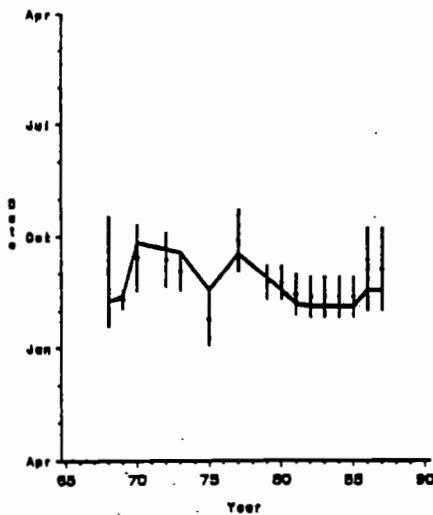
Steelhead (ST)



Chum

Chinook

Steelhead



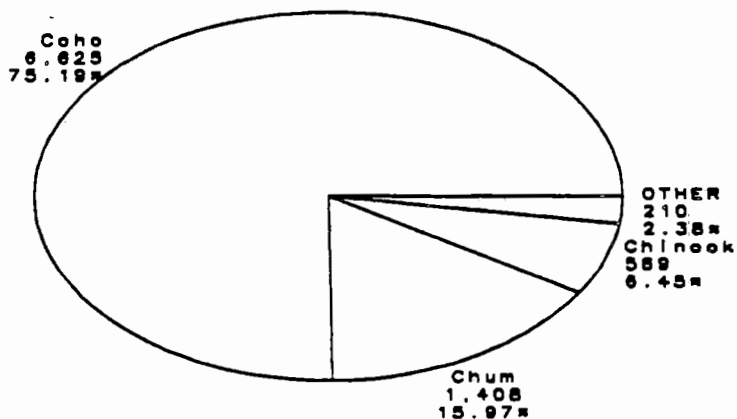
Year	Escapement	Start	Peak	End
1966	3,500	18SEP	24NOV	18DEC
1969	300	18NOV	28NOV	30NOV
1970	7,500	22SEP	07OCT	18NOV
1971	0	-	-	-
1972	3,500	20SEP	-	12NOV
1973	300	18NOV	18NOV	18NOV
1974	0	-	-	-
1975	200	17NOV	18NOV	31DEC
1976	0	-	-	-
1977	25	19SEP	18OCT	30OCT
1978	25	-	-	-
1979	25	26OCT	08NOV	22NOV
1980	100	26OCT	18NOV	23NOV
1981	200	02NOV	28NOV	04DEC
1982	225	04NOV	28NOV	07DEC
1983	200	04NOV	28NOV	07DEC
1984	500	04NOV	28NOV	07DEC
1985	200	04NOV	28NOV	07DEC
1988	10,500	22SEP	18NOV	01DEC
1989	2,500	22SEP	18NOV	01DEC

Year	Escapement	Start	Peak	End
1969	700	12OCT	14NOV	24NOV
1970	400	28OCT	05NOV	21NOV
1971	7,500	08OCT	19OCT	18NOV
1972	400	20OCT	09NOV	18NOV
1973	3,500	25OCT	04NOV	19NOV
1974	3,000	18OCT	18NOV	18NOV
1975	750	01OCT	18NOV	01NOV
1976	200	08OCT	18NOV	18NOV
1977	75	28OCT	04NOV	19NOV
1978	75	07OCT	18NOV	20NOV
1979	90	01OCT	18NOV	18NOV
1980	400	08OCT	22NOV	01NOV
1981	500	18OCT	30NOV	18NOV
1982	750	08OCT	22NOV	18NOV
1983	775	07OCT	20NOV	14NOV
1984	775	07OCT	20NOV	14NOV
1985	1,200	07OCT	20NOV	14NOV
1988	100	18OCT	28NOV	18NOV
1989	427	18OCT	-	-
1989	800	12OCT	01NOV	18NOV

Year	Escapement	Start	Peak	End
1966	-	-	-	-
1969	-	-	-	-
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-
1989	-	-	-	-

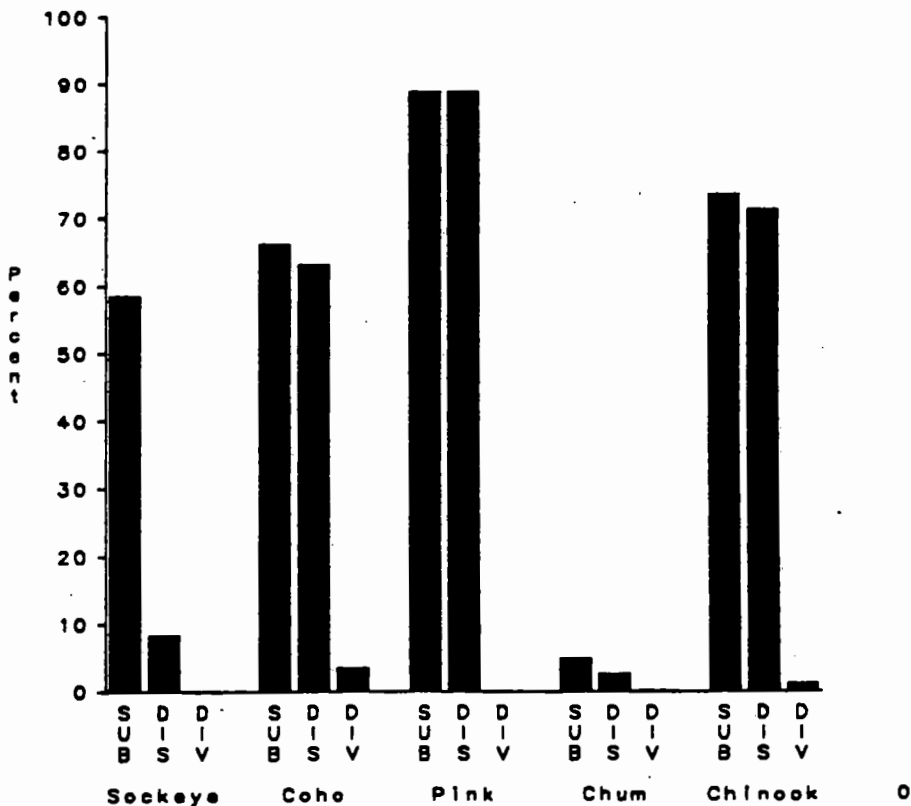
EXAMPLE RIVER (93-1000)

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.

SUBDISTRICT # 9
RIVERS INLET

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	LOG DUMP PROPOSED FOR GOOSE BAY - REJECTED BY DFO AT FIRST SUBMISSION. (REF. 9-36)
W/ WATER WITHDRAWAL	WATER SUPPLY FOR GOOSE BAY LODGE. (REF. 9-36)

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: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : HOGAN CREEK

WATERSHED-CODE : 91-0900

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	0	0	0	3	0	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	0	0	0	300	0	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	N/O	UNK	N/O	N/O	N/O	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	0	0	0	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

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 ROAD UNDER CONSTRUCTION. (REF. 9-36)

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:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name: ROBERT ARM CREEK, WEST ARM CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1000	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-10
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6062.56955
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 5.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NW INTO ROBERT ARM, THROUGH A SMALL LAKE, DRANEY 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
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. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	PRESENCE NOTED NEAR MOUTH. (REF. 9-4, REF. 9-36)
CT CUTTHROAT TROUT	PRESENT IN LAKE. (REF. 29G-43)

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

SPANNING GROUNDS EXTEND 100M UPSTREAM FROM MOUTH. (REF. 9-4)
RARELY INSPECTED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : WEST ARM CREEK

WATERSHED-CODE : 91-1000

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	0	75	25	0	0	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	0	N/O	N/O	N/O	0	UNK
1958	0	N/O	0	N/O	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	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	N/O	UNK	N/O	UNK	N/O	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: DRANEY CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1055	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-10
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6222.56963
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 10.0 km
		Watershed Area: Ref. No.: 6N-28
Location: FLOWS SW INTO THE HEAD OF DRANEY 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
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: FED BY SMALL LAKES. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	FEW PRESENT OCCASIONALLY. (REF. 9-4, REF. 9-36)
CO COHO SALMON	PRESENCE NOTED IN GOOD NUMBERS; DISTRIBUTION UNKNOWN. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING IN LOWER 1.1 KM. (REF. 9-36, REF. 9-42)
CM CHUM SALMON	SPAWNING IN LOWER 1.1 KM. (REF. 9-36, REF. 9-42)
CT CUTTHROAT TROUT	PRESENCE NOTED. (REF. 9-36)
DV DOLLY VARDEN	PRESENCE NOTED. (REF. 9-36)

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		1	28A-18		
CO COHO SALMON	25	1980 - 1989	28A-18	100	28A-18	300	9-42

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	2813	1980 - 1988	28A-18	8000	28A-18	5000	9-42
PK PINK SALMON	1220	1981 - 1989	28A-18	2100	28A-18	5000	9-42
CM CHUM SALMON	5688	1980 - 1989	28A-18	15000	28A-18	10000	9-42

Comments: PRIOR TO 1978, ESCAPEMENT NUMBERS WERE INCLUDED IN THE LOCKHART GORDON C FILE. (REF. 9-4)

SK ESCAPEMENT FOR 1985(1) 1986(1) (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	P X	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X	P X	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing							X	X X X	X X	P 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

SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER, CAUSING EXTENSIVE SCOURING OF THE CHANNEL. (REF. 9-4)
CHANNEL MOVEMENT AT LOWER END, DUE TO HIGH FLOWS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : DRANEY CREEK

WATERSHED-CODE : 91-1055

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	0	100	800	1800	0	UNK
1979	25	50	300	4000	0	UNK
1980	0	100	8000	6000	0	UNK
1981	0	50	1700	1900	0	UNK
1982	0	50	1600	15000	0	UNK
1983	0	50	2100	3700	0	UNK
1984	N/O	50	900	3500	N/O	UNK
1985	1	N/O	1600	3300	N/O	UNK
1986	1	UNK	750	6300	UNK	UNK
1987	0	N/O	550	7000	0	UNK
1988	N/O	25	250	10000	0	UNK
1989	UNK	2	150	175	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

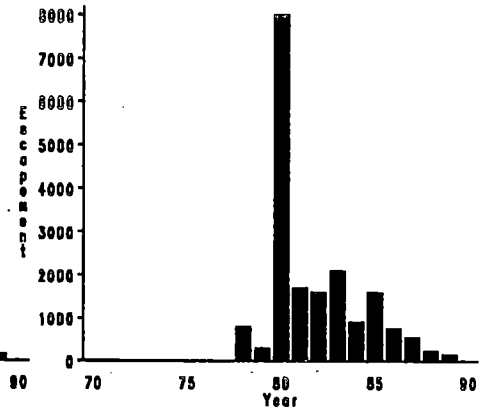
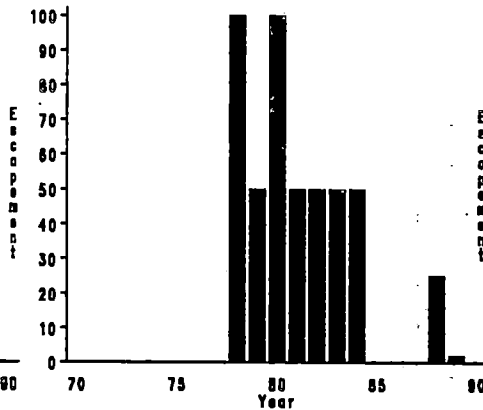
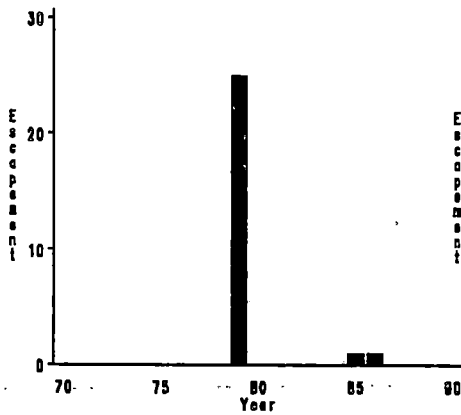
DRANEY CREEK (91-1055)

Escapement & Run Timing

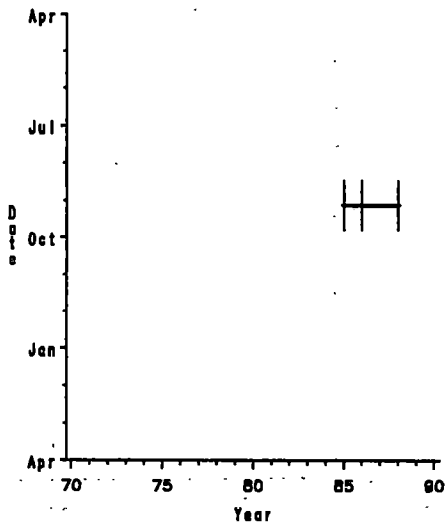
Sockeye (SK)

Coho (CO)

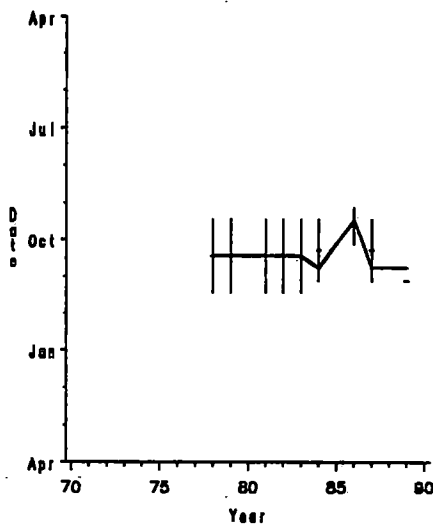
Pink (PK)



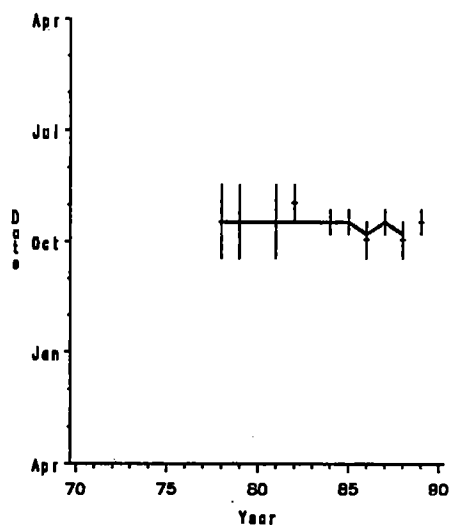
Sockeye



Coho



Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	0	-	-	-
1979	25	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	1	15AUG	05SEP	25SEP
1986	1	15AUG	05SEP	25SEP
1987	0	-	-	-
1988	0	15AUG	05SEP	25SEP
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	100	15SEP	15OCT	15NOV
1979	50	15SEP	15OCT	15NOV
1980	100	-	-	-
1981	50	15SEP	15OCT	15NOV
1982	50	15SEP	15OCT	15NOV
1983	50	15SEP	15OCT	15NOV
1984	50	15SEP	15OCT	05NOV
1985	0	-	-	-
1986	-	05SEP	15SEP	05OCT
1987	0	15SEP	25OCT	05NOV
1988	25	-	-	-
1989	1	-	25OCT	05NOV

Pink				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	800	15AUG	15SEP	15OCT
1979	300	15AUG	15SEP	15OCT
1980	8,000	-	-	-
1981	1,700	15AUG	15SEP	15OCT
1982	1,600	15AUG	15SEP	15OCT
1983	2,100	15SEP	15SEP	15SEP
1984	800	05SEP	15SEP	25SEP
1985	1,600	05SEP	15SEP	25SEP
1986	750	15SEP	25SEP	15OCT
1987	550	05SEP	15SEP	25SEP
1988	250	15SEP	25SEP	15OCT
1989	150	05SEP	-	25SEP

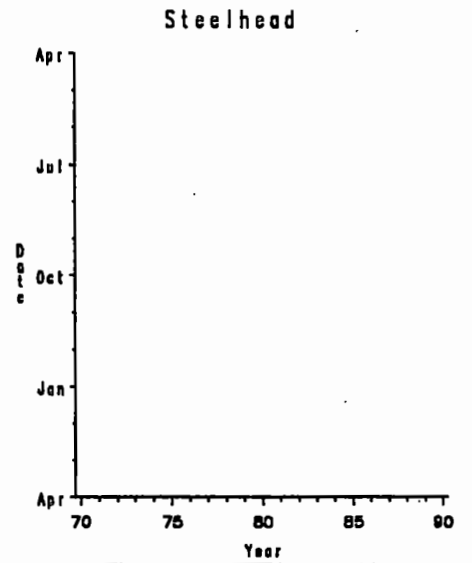
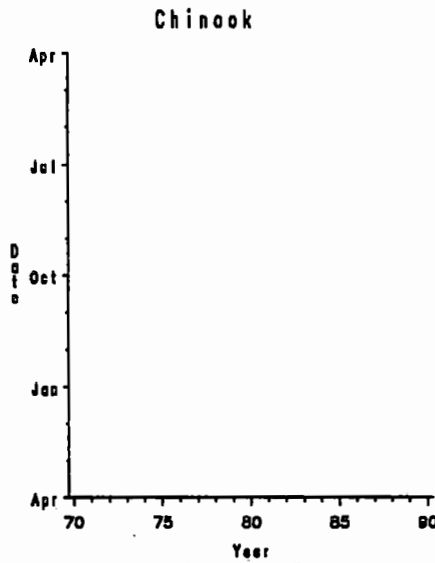
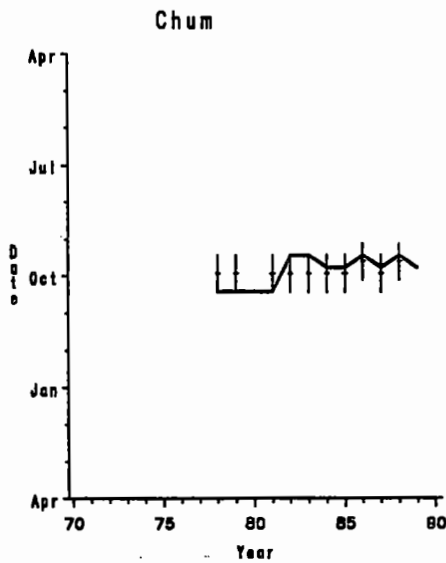
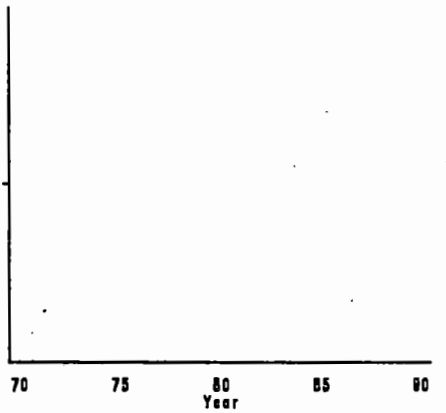
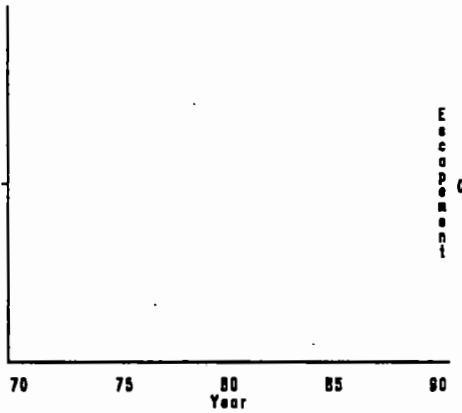
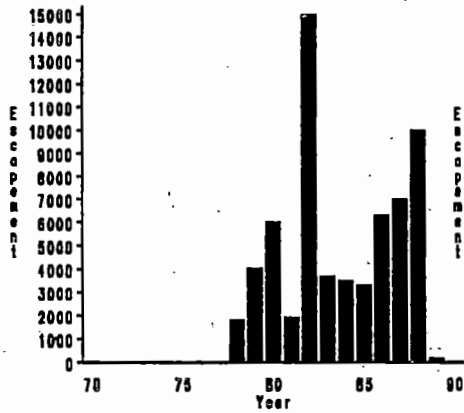
DRANEY CREEK (91-1055)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



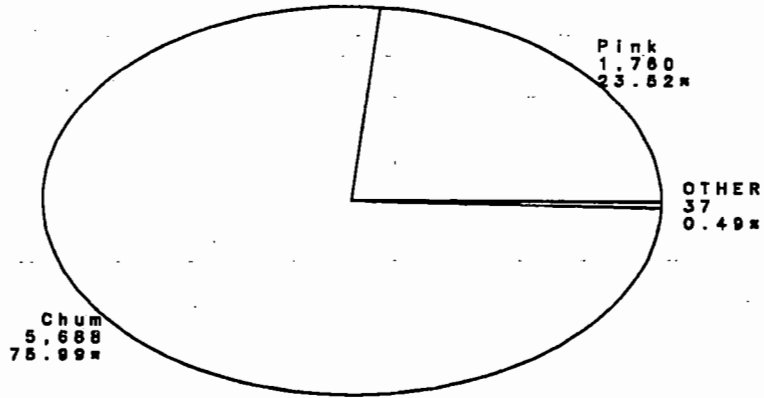
Chum				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	1,800	15SEP	15OCT	15OCT
1979	4,000	15SEP	15OCT	15OCT
1980	6,000	-	-	-
1981	1,800	15SEP	15OCT	15OCT
1982	15,000	15SEP	15SEP	15OCT
1983	3,700	15SEP	15SEP	15OCT
1984	3,500	15SEP	25SEP	15OCT
1985	3,300	15SEP	25SEP	15OCT
1986	6,300	05SEP	15SEP	05OCT
1987	7,000	15SEP	25SEP	15OCT
1988	10,000	05SEP	15SEP	05OCT
1989	175	-	25SEP	-

Chinook				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	-	-	-	-
1977	-	-	-	-
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	-	-	-	-
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1986	-	-	-	-
1987	-	-	-	-
1988	-	-	-	-
1989	-	-	-	-

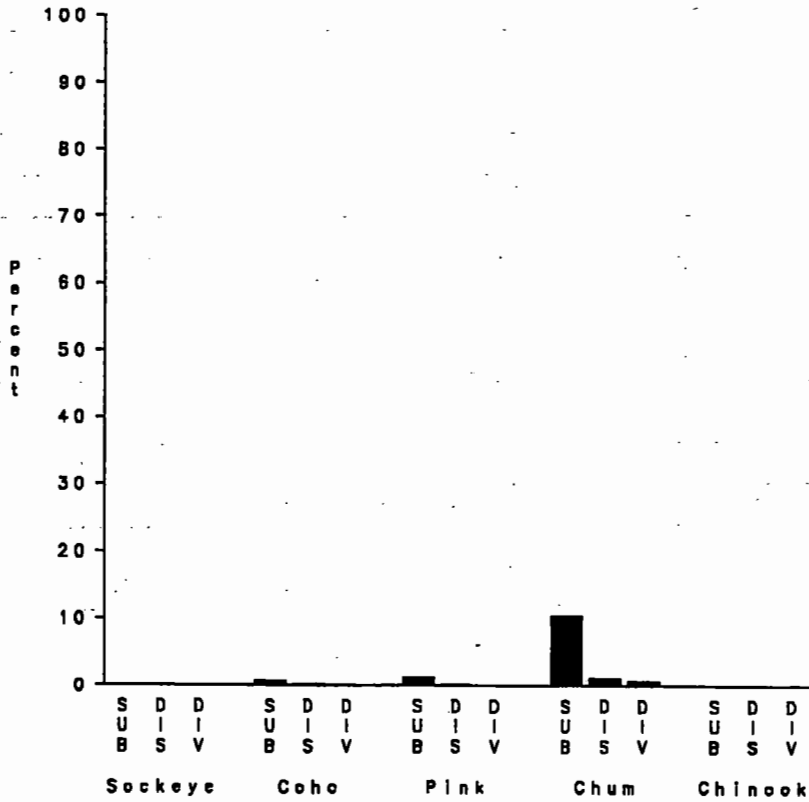
DRANEY CREEK (91-1055)

10-yr Mean Escapement
(1980-1989)



DRANEY CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: LOCKHART GORDON CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1057	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-10
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map: 9.6219.56965
		U.T.M. Mouth: DG. ' ' DG. ' '
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 22.2 km Ref. No.: 6M-28
		Watershed Area: Ref. No.:
Location: FLWS S AND SW INTO HEAD OF DRANEY 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	10.0	2.0	CM CHUM SALMON CO COHO SALMON PK PINK SALMON ST STEELHEAD	IMPASSABLE TO ALL SPECIES. (REF. 9-4)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY SMALL LAKES. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED SPAWNING AT 1.9 KM. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING TO FALLS AT 2.0 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING TO FALLS AT 2.0 KM. (REF. 9-4, REF. 9-36)
ST STEELHEAD	OBSERVED SPAWNING AT 1.9 KM. (REF. 9-36)
CT CUTTHROAT TROUT	PRESENCE NOTED. (REF. 9-36)

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		4	28A-18		
CO COHO SALMON	183	1980 - 1989	28A-18	500	28A-18	1000	9-42

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	1870	1980 - 1988	28A-18	4000	28A-18	6000	9-42
PK PINK SALMON	3390	1981 - 1989	28A-18	5000	28A-18	6000	9-42
CM CHUM SALMON	5420	1980 - 1989	28A-18	12000	28A-18	10000	9-42
Comments: SK ESCAPEMENT FOR 1983(1) 1984(1) 1985(4) (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	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing								X X	X X	P X		
CM CHUM SALMON	Migration Spawning Incubation Rearing								X P	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

EXTENSIVE SILTING HAS RESULTED FROM FALL FLOODS. (REF. 9-4)
HABITAT DESCRIPTION AVAILABLE. (REF. 9-30)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DEMARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : LOCKHART GORDON CREEK

WATERSHED-CODE : 91-1057

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	0	750	0	UNK
1954	0	0	0	5000	0	UNK
1955	0	25	0	400	0	UNK
1956	0	50	0	1500	0	UNK
1957	0	N/O	0	3500	0	UNK
1958	0	N/O	0	1500	0	UNK
1959	0	0	0	750	0	UNK
1960	0	0	0	3500	0	UNK
1961	0	200	0	3500	0	UNK
1962	0	1500	200	7500	0	UNK
1963	0	1500	0	15000	0	UNK
1964	0	200	75	15000	0	UNK
1965	0	N/O	N/O	75	0	UNK
1966	0	N/O	N/O	75	0	UNK
1967	0	N/O	N/O	400	0	UNK
1968	0	N/O	N/O	15000	0	UNK
1969	0	400	N/O	750	0	UNK
1970	0	400	N/O	15000	0	UNK
1971	0	80	25	2500	0	UNK
1972	0	400	400	3000	0	UNK
1973	0	500	175	8000	0	UNK
1974	0	400	750	2500	0	UNK
1975	0	N/O	N/O	3000	0	UNK
1976	0	200	1000	4000	0	UNK
1977	0	150	1000	4000	0	UNK
1978	0	300	15000	3000	0	UNK
1979	0	N/O	1500	1000	0	UNK
1980	0	200	4000	6000	0	UNK
1981	0	75	2200	2500	0	UNK
1982	0	200	1900	6000	0	UNK
1983	1	200	6500	2600	0	UNK
1984	1	500	750	5000	N/O	UNK
1985	4	100	5000	5000	N/O	UNK
1986	0	100	1900	6600	UNK	UNK
1987	0	250	2700	8000	0	UNK
1988	0	200	800	12000	0	UNK
1989	UNK	4	550	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

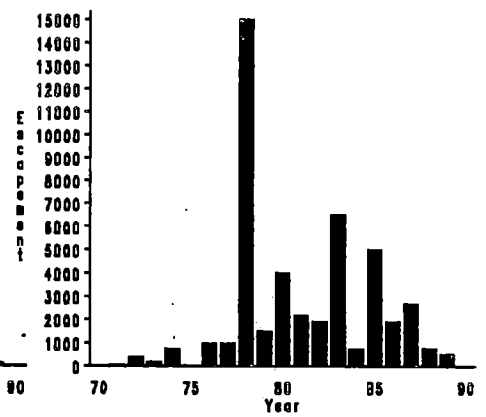
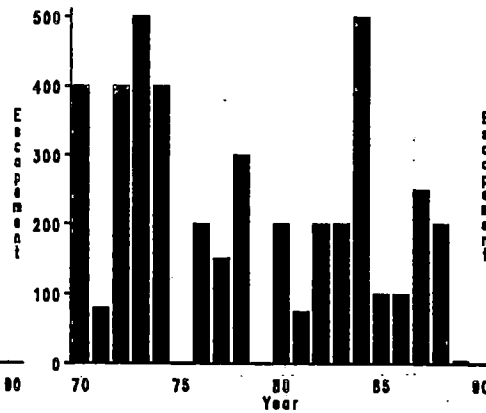
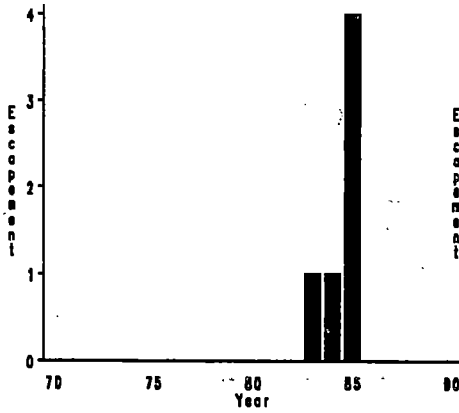
LOCKHART GORDON CREEK (91-1057)

Escapement & Run Timing

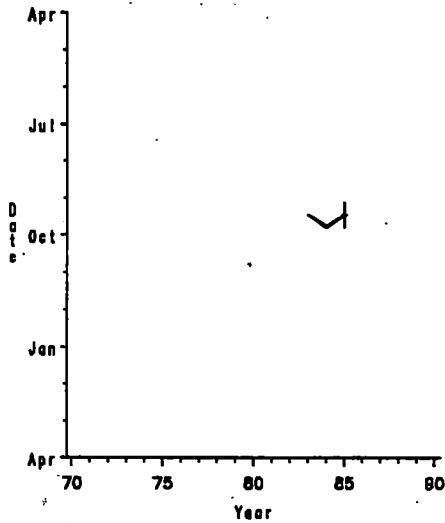
Socketeye (SK)

Coho (CO)

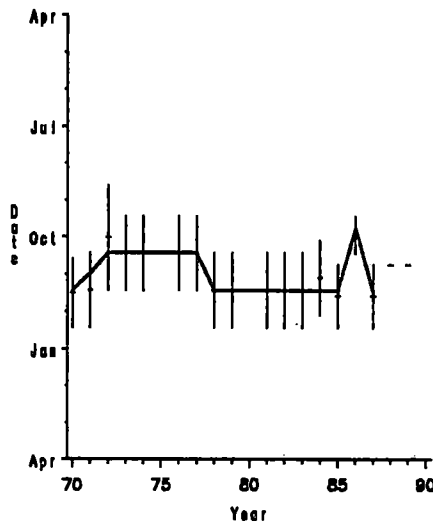
Pink (PK)



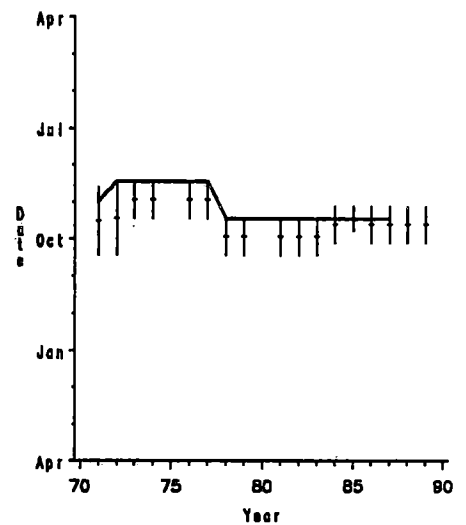
Sockeye



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	1	-	15SEP	-
1984	1	-	25SEP	-
1985	4	05SEP	15SEP	25SEP
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	400	20OCT	15NOV	15DEC
1971	80	15OCT	01NOV	15DEC
1972	400	20AUG	15OCT	15NOV
1973	500	15SEP	15OCT	15NOV
1974	400	15SEP	15OCT	15NOV
1975	0	-	-	-
1976	200	15SEP	15OCT	15NOV
1977	150	15SEP	15OCT	15NOV
1978	300	15OCT	15NOV	15DEC
1979	0	15OCT	15NOV	15DEC
1980	200	-	-	-
1981	75	15OCT	15NOV	15DEC
1982	200	15OCT	15NOV	15DEC
1983	200	15OCT	15NOV	15DEC
1984	500	05OCT	15NOV	05DEC
1985	100	25OCT	15NOV	15DEC
1986	100	15SEP	25SEP	15OCT
1987	250	25OCT	15NOV	15DEC
1988	200	25OCT	-	-
1989	4	25OCT	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	25	20AUG	01SEP	15OCT
1972	400	15AUG	15AUG	15OCT
1973	175	15AUG	15AUG	15SEP
1974	750	15AUG	15AUG	15SEP
1975	0	-	-	-
1976	1,000	15AUG	15AUG	15SEP
1977	1,000	15AUG	15AUG	15SEP
1978	15,000	15SEP	15SEP	15OCT
1979	1,500	15SEP	15SEP	15OCT
1980	4,000	-	-	-
1981	2,200	15SEP	15SEP	15OCT
1982	1,800	15SEP	15SEP	15OCT
1983	6,500	15SEP	15SEP	15OCT
1984	750	05SEP	15SEP	05OCT
1985	5,000	05SEP	15SEP	25SEP
1986	1,800	05SEP	15SEP	15OCT
1987	2,700	05SEP	15SEP	05OCT
1988	800	05SEP	-	05OCT
1989	550	05SEP	-	05OCT

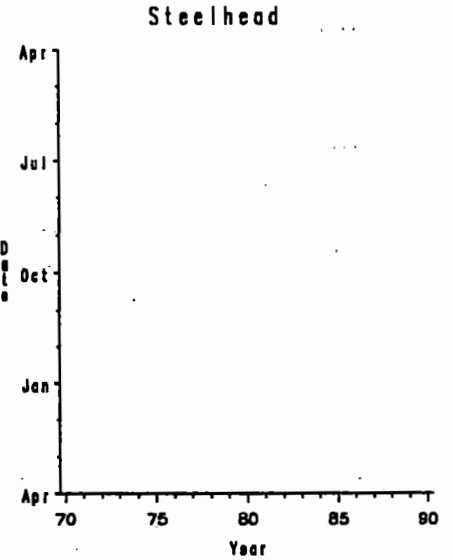
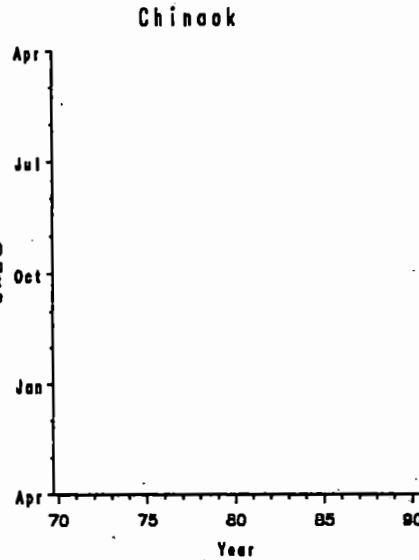
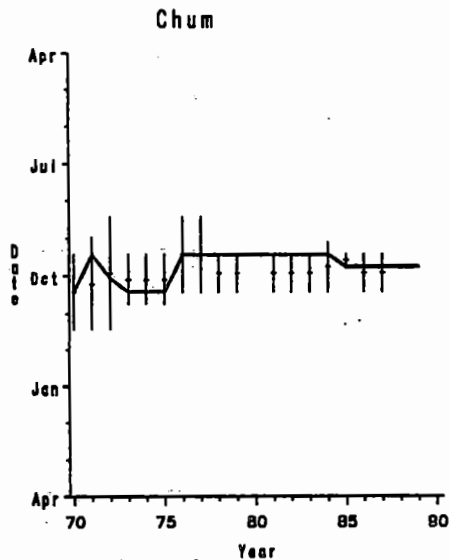
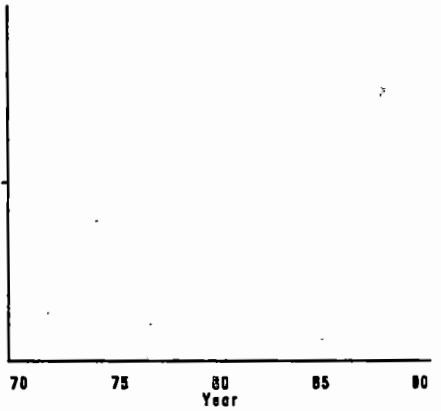
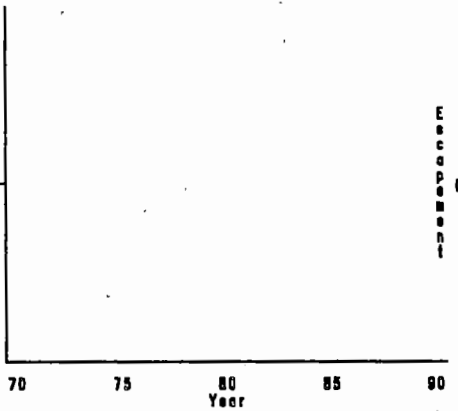
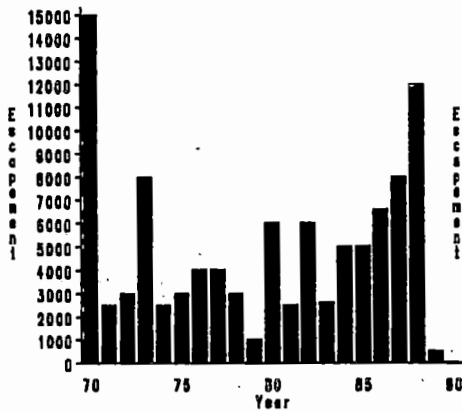
LOCKHART GORDON CREEK (91-1057)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



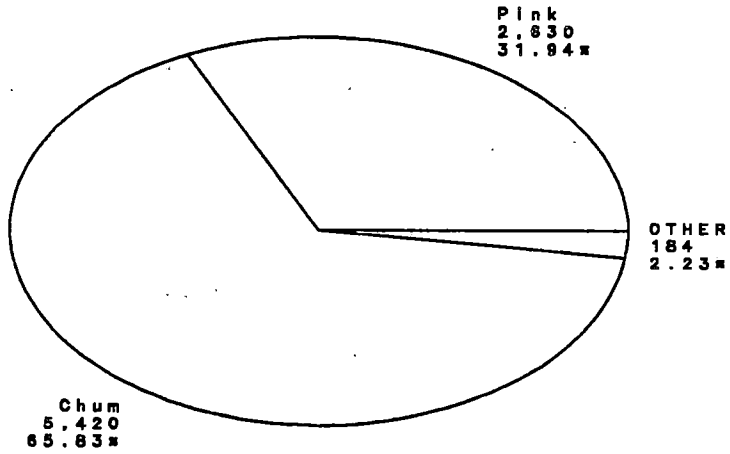
Chum				
Year	Escapement	Start	Peak	End
1970	15,000	15SEP	15OCT	18NOV
1971	2,500	01SEP	15SEP	15NOV
1972	3,000	15AUG	04OCT	15NOV
1973	0,000	15SEP	15OCT	25OCT
1974	2,500	15SEP	15OCT	25OCT
1975	3,000	15SEP	15OCT	25OCT
1976	4,000	15AUG	15SEP	15OCT
1977	4,000	15AUG	15SEP	15OCT
1978	3,000	15SEP	15SEP	15OCT
1979	1,000	15SEP	15SEP	15OCT
1980	0,000	-	-	-
1981	2,500	15SEP	15SEP	15OCT
1982	0,000	15SEP	15SEP	15OCT
1983	2,000	15SEP	15SEP	15OCT
1984	5,000	05SEP	15SEP	15OCT
1985	5,000	15SEP	25SEP	25SEP
1986	0,000	15SEP	25SEP	15OCT
1987	0,000	15SEP	25SEP	15OCT
1988	12,000	-	25SEP	-
1989	500	-	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	-	-	-	-

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	-	-	-	-

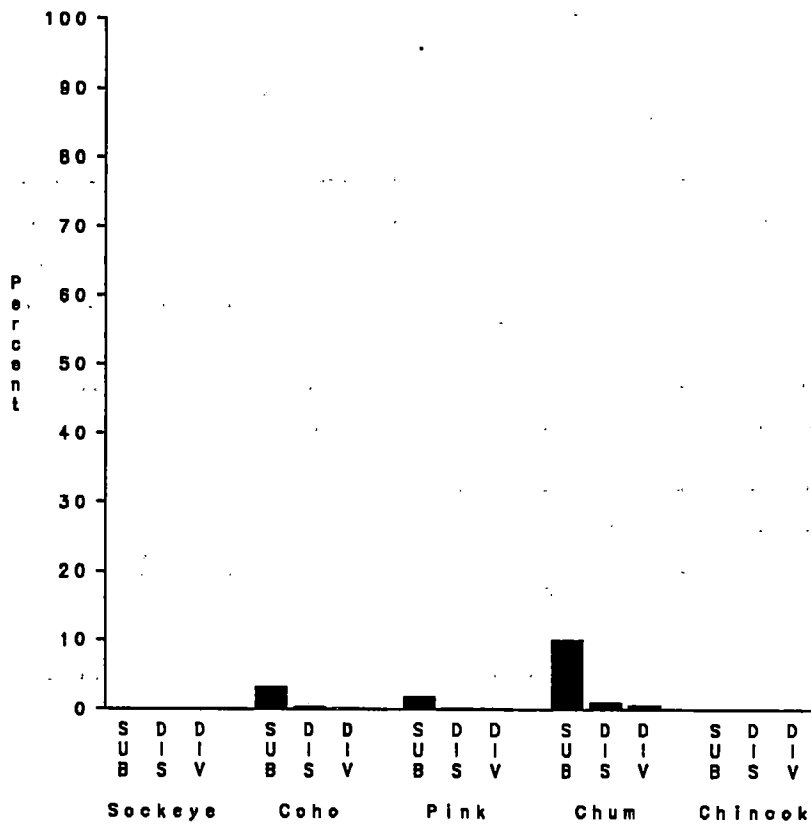
LOCKHART GORDON CREEK (91-1057)

10-yr Mean Escapement
(1980-1989)



LOCKHART GORDON CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: ALLARD CREEK	D.F.O. Division: NORTH COAST
Local Name: NORTH ARM CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1080	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-10
	M.O.E. Region: 5 CARI800
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6 B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6164.57026 Lat./Long. Mouth: DG. ' ' DG. ' ' Mainstem Length: 14.2 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
		Location: FLOWS SE INTO HEAD OF ALLARD BAY, DRAWEY 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
C CASCADE		0.5	CM CHUM SALMON CO COHO SALMON PK PINK SALMON ST STEELHEAD	BARRIER IS A LARGE BOULDER AREA AT THE LAKE OUTLET WHICH DEWATERS UNDER ALL BUT VERY HIGH FLOWS. PROBABLY IMPASSABLE TO ALL SPECIES. (REF. 10-40, REF. 4A-159)

C. FLOW

Flow Control: W.S.C. Station No. 1:	Water Survey of Canada (WSC) Flow Gauge: No. 2:	No. 3:	No. 4:
Comments: FED BY ALLARD LAKE, AND TRIBUTARY LAKES. ALLARD LAKE AREA: 0.6 SQ.KM.; PERIMETER: 5.5 KM. (REF. 6N-28, REF. 29F-65)			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	SPAWNING TO CASCADE AT 0.5 KM. (REF. 9-4, REF. 10-40)
PK PINK SALMON	SPAWNING TO CASCADE AT 0.5 KM. (REF. 9-4, REF. 10-40)
CM CHUM SALMON	SPAWNING TO CASCADE AT 0.5 KM. (REF. 9-4, REF. 10-40)
ST STEELHEAD	PRESENCE NOTED. (REF. 9-4)
CT CUTTHROAT TROUT	OBSERVED IN ALLARD LAKE AND IN CREEK ABOVE LAKE. (REF. 9-36, REF. 4A-159)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	45	1980 - 1989	28A-18	400	28A-18	500	9-42
PK PINK SALMON	189	1980 - 1988	28A-18	300	28A-18	200	9-42
PK PINK SALMON	643	1981 - 1989	28A-18	2400	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	510	1980 - 1989	28A-18	1500	28A-18	1500	9-42
Comments: CD ESCAPEMENTS FOR 1988(7) 1980(400) (REF. 28A-18)							

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CD COHO SALMON	Migration Spawning Incubation Rearing									X	X X	P X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing								X	P X	X X		
CM CHUM SALMON	Migration Spawning Incubation Rearing								X	X 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FD FORESTRY	LOGGING CONSIDERED FOR THE AREA, THEN DROPPED. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

EXCELLENT SPAWNING AREAS PRESENT ABOVE ALLARD LAKE. ABNORMALLY HIGH FLOWS DURING SPAWNING PERIOD, PROLONGED LOW WINTER FLOWS. ROCKY STREAMBED WITH LIMITED SPAWNING AREA. (REF. 9-4)
HABITAT DESCRIPTION AVAILABLE. THE 1/4 MILE SECTION OF CREEK BETWEEN THE BAY AND THE LAKE APPEARED TO BE OF GOOD REARING/HOLDING HABITAT, BUT POOR FOR SPAWNING. (REF. 9-25)
ONLY CUTTHROAT PRESENT IN ALLARD CREEK ABOVE THE LAKE DURING FISH SAMPLING IN AUG. 1990. SEVERAL RECENT (IE. WINTER 1989) SLIDES IN UPPER WATERSHED. (REF. 4A-159)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last updated by: MARG ANDERSON	Date: 1992/01/23
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : ALLARD CREEK

WATERSHED-CODE : 91-1080

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	0	200	0	UNK
1954	0	100	0	300	0	UNK
1955	0	0	0	75	0	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	0	75	0	750	0	UNK
1958	0	75	0	400	0	UNK
1959	0	0	0	75	0	UNK
1960	0	0	0	N/O	0	UNK
1961	0	0	0	N/O	0	UNK
1962	0	400	0	750	0	UNK
1963	0	750	0	1500	0	UNK
1964	0	400	0	750	0	UNK
1965	0	N/O	0	N/O	0	UNK
1966	0	N/O	0	N/O	0	UNK
1967	0	N/O	0	N/O	0	UNK
1968	0	75	0	750	0	UNK
1969	0	N/O	0	75	0	UNK
1970	0	75	0	25	0	UNK
1971	0	N/O	0	N/O	0	UNK
1972	0	UNK	N/O	25	0	UNK
1973	0	N/O	N/O	25	0	UNK
1974	0	N/O	N/O	75	0	UNK
1975	0	20	N/O	N/O	0	UNK
1976	0	N/O	200	50	0	UNK
1977	0	0	50	700	0	UNK
1978	0	N/O	N/O	150	0	UNK
1979	0	N/O	50	500	0	UNK
1980	0	400	300	1500	0	UNK
1981	0	N/O	25	200	0	UNK
1982	0	N/O	150	225	0	UNK
1983	0	N/O	250	150	N/O	UNK
1984	N/O	N/O	10	130	N/O	UNK
1985	N/O	N/O	2400	1000	N/O	UNK
1986	0	UNK	450	850	UNK	UNK
1987	0	N/O	400	500	0	UNK
1988	0	7	36	369	0	UNK
1989	UNK	N/O	140	180	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

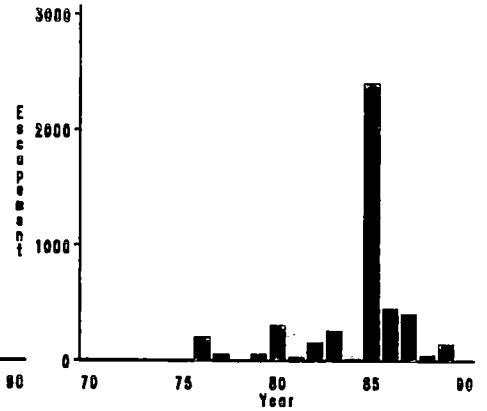
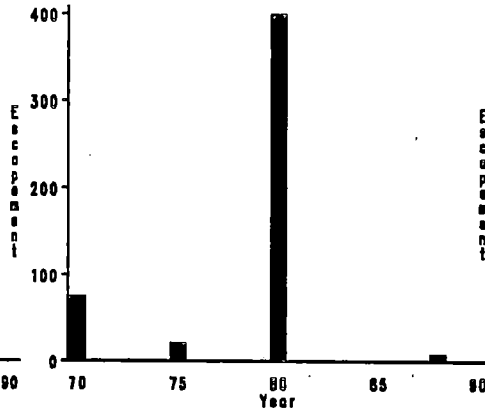
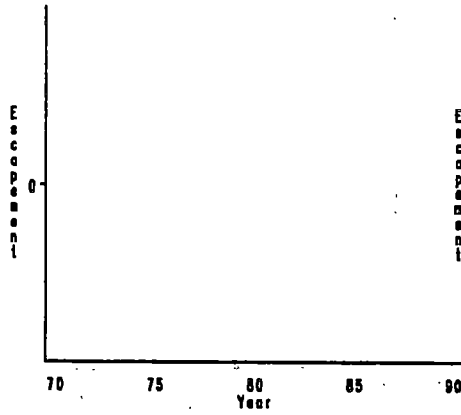
ALLARD CREEK (91-1080)

Escapement & Run Timing

Socketye (SK)

Coho (CO)

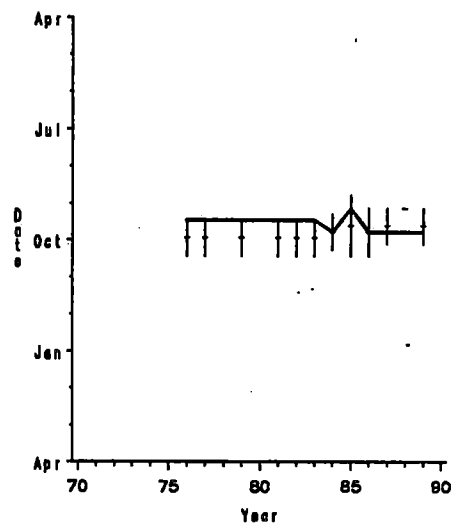
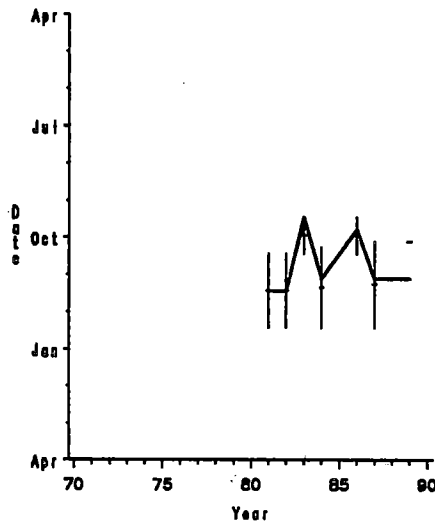
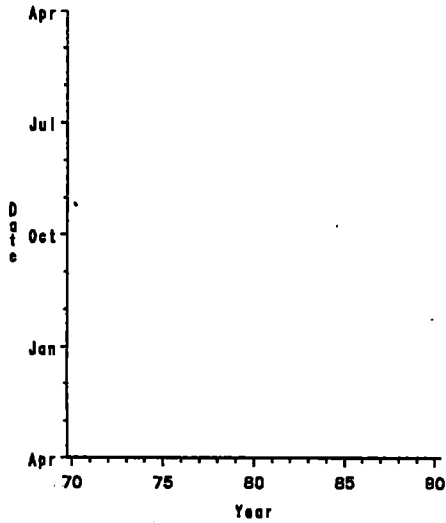
Pink (PK)



Socketye

Coho

Pink



Socketye				
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	75	-	-	-
1971	0	-	-	-
1972	-	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	20	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	400	-	-	-
1981	0	19OCT	19NOV	19DEC
1982	0	19OCT	19NOV	19DEC
1983	0	19SEP	19SEP	19OCT
1984	0	19OCT	05NOV	19OCT
1985	0	-	-	-
1986	-	19SEP	25SEP	19OCT
1987	0	05OCT	05NOV	19DEC
1988	7	-	-	-
1989	0	09OCT	09NOV	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	200	19SEP	19SEP	19OCT
1977	50	19SEP	19SEP	19OCT
1978	0	-	-	-
1979	50	19SEP	19SEP	19OCT
1980	300	-	-	-
1981	25	19SEP	19SEP	19OCT
1982	150	19SEP	19SEP	19OCT
1983	250	19SEP	19SEP	19OCT
1984	10	10SEP	25SEP	10OCT
1985	2,400	25AUG	05SEP	19OCT
1986	450	05SEP	25SEP	19OCT
1987	400	05SEP	25SEP	05OCT
1988	30	05SEP	25SEP	-
1989	140	05SEP	25SEP	05OCT

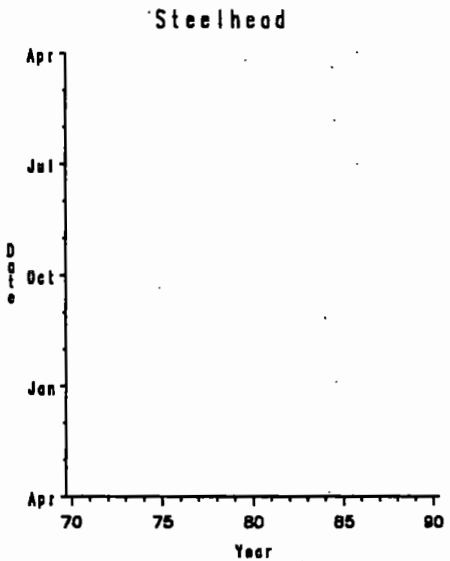
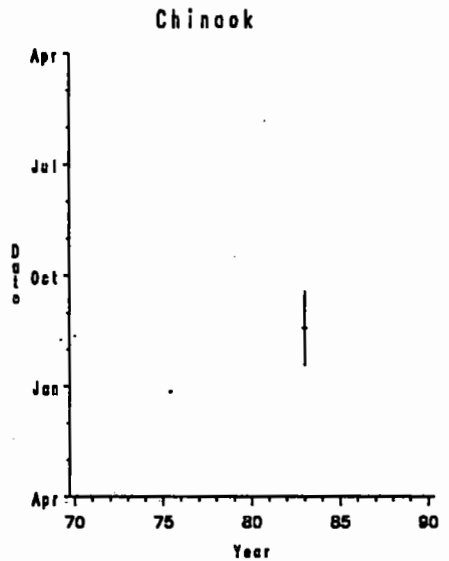
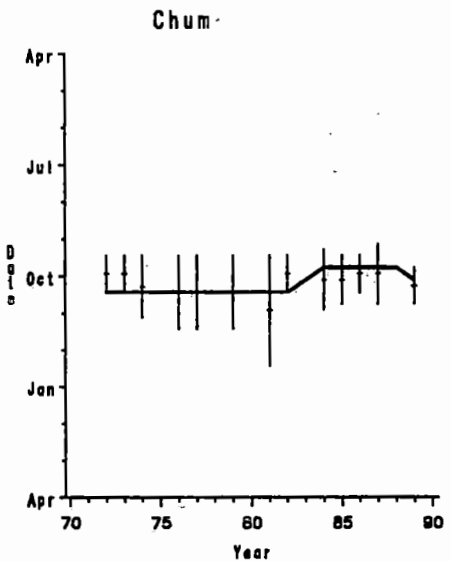
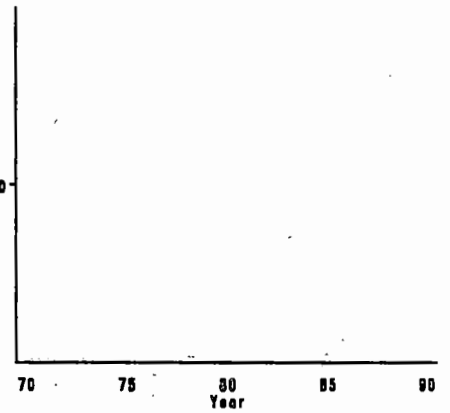
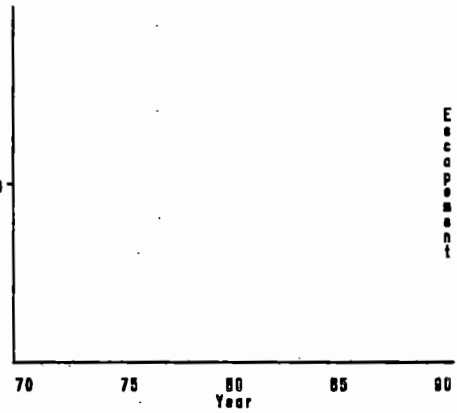
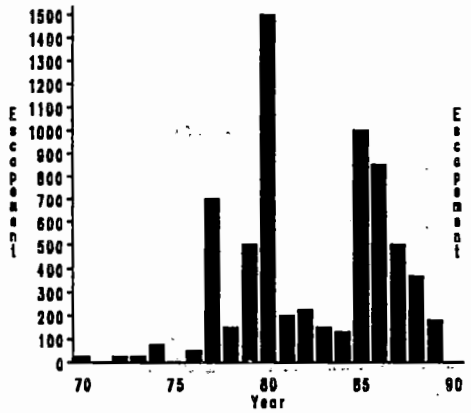
ALLARD CREEK (91-1080)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



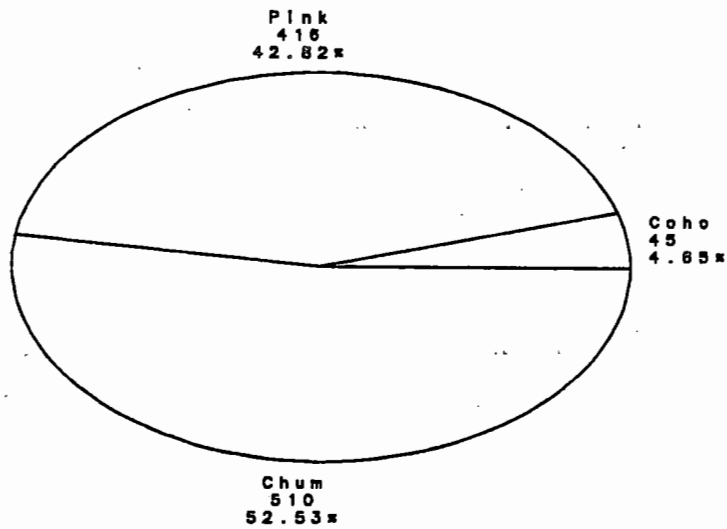
Chum				
Year	Escapement	Start	Peak	End
1970	25	-	-	-
1971	0	-	-	-
1972	25	15SEP	15OCT	15OCT
1973	25	15SEP	15OCT	15OCT
1974	75	15SEP	15OCT	03NOV
1975	0	-	-	-
1976	50	15SEP	13OCT	15NOV
1977	700	15SEP	15OCT	15NOV
1978	150	-	-	-
1979	500	15SEP	13OCT	15NOV
1980	1,500	-	-	-
1981	200	15SEP	13OCT	19DEC
1982	225	15SEP	15OCT	15OCT
1983	150	-	-	-
1984	130	10SEP	25SEP	30OCT
1985	1,000	15SEP	25SEP	25OCT
1986	850	15SEP	25SEP	19OCT
1987	500	05SEP	25SEP	25OCT
1988	360	-	25SEP	-
1989	180	25SEP	03OCT	29OCT

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	15OCT	15NOV	19DEC
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	-	-	-	-

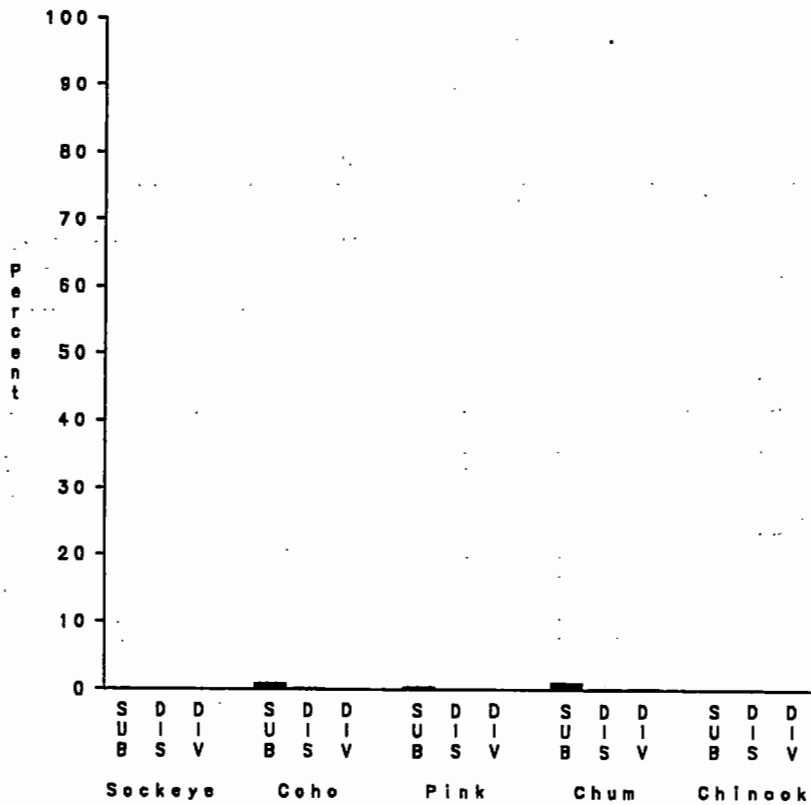
ALLARD CREEK (91-1080)

10-yr Mean Escapement
(1980-1988)



ALLARD CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: JOHNSTON CREEK	D.F.O. Division: NORTH COAST
Local Name: HOLE-IN-THE-WALL CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1168	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-3
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/5 B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6015.57054 Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' Mainstem Length: 16.8 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
		Location: FLOWS W INTO JOHNSTON BAY, RIVERS INLET, RGE.2, COAST DIST.

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	GRADIENT INCREASES AT ABOUT 9 KM. - SOME RAPIDS AND SMALL FALLS EXIST ABOVE THIS POINT. (REF. 4A-159)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE	2.0	9.0		FIRST OF A SERIES OF SCATTERED SMALL RAPIDS AND CHUTES. THIS IS PROBABLY THE USUAL UPPER LIMIT FOR PINKS AND CHUMS. (REF. 4A-159)

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 SPAWNING AT 12.2 KM. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING MAINLY AT 3.1 KM TO 9.1 KM, AND OBSERVED SPAWNING AT 12.2 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING MAINLY AT 3.1 KM TO 9.1 KM. (REF. 9-4, REF. 9-36)
DV DOLLY VARDEN	PRESENCE NOTED. (REF. 9-36)

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		5	28A-18		
CO COHO SALMON	702	1980 - 1989	28A-18	2000	28A-18	8000	9-42
PK PINK SALMON	58600	1980 - 1988	28A-18	83000	28A-18	90000	9-42
PK PINK SALMON	49600	1981 - 1989	28A-18	140000	28A-18		

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	68	1980 - 1989.	28A-18	275	28A-18	500	9-42
Comments: SK ESCAPEMENT FOR 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	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X X	P 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	LOGGING IS PLANNED WITHIN THE NEXT 5 YEARS (1990). (REF. 9-46)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

IN 1973 THE RIVERS INLET BOUNDARY WAS ADJUSTED TO PROTECT THE PK RUM. (REF. 9-4)
HABITAT DESCRIPTION AVAILABLE. (REF. 9-29)
EXCELLENT REARING HABITAT IN SWAMPY AREA. ONE OF THE BEST CO PRODUCERS IN THE INLET. (REF. 9-36)
SEVERAL SLIDES OCCURRED IN THE WATERSHED IN WINTER 1989 - CAUSING LARGE AMOUNTS OF DEBRIS TO ENTER THE CREEK IN SEVERAL AREAS. JUVENILE COHO WERE NOT FOUND ABOVE THE LOWEST SLIDE AREA (APPROX. 10 KM.) DURING SAMPLING IN AUG. 1990. (REF. 4A-159)

J. FISHERY OFFICER NARRATIVE

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

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : JOHNSTON CREEK

WATERSHED-CODE : 91-1168

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	3500	7500	0	0	UNK
1954	0	100	5000	0	0	UNK
1955	0	200	3500	0	0	UNK
1956	0	0	35000	0	0	UNK
1957	0	75	3500	0	0	UNK
1958	0	1500	3500	1500	0	UNK
1959	0	200	400	0	0	UNK
1960	0	75	75	N/O	0	UNK
1961	0	7500	3500	0	0	UNK
1962	0	400	15000	0	0	UNK
1963	0	400	1500	0	0	UNK
1964	0	3500	7500	0	0	UNK
1965	0	75	200	25	0	UNK
1966	0	400	15000	N/O	0	UNK
1967	0	400	25	0	0	UNK
1968	0	200	35000	N/O	0	UNK
1969	0	200	400	N/O	0	UNK
1970	0	UNK	3500	0	0	UNK
1971	0	400	25000	0	0	UNK
1972	0	750	35000	N/O	0	UNK
1973	0	750	3500	N/O	0	UNK
1974	0	750	12500	0	0	UNK
1975	2	N/O	60000	0	0	UNK
1976	0	1500	85000	0	0	UNK
1977	0	400	40000	0	0	UNK
1978	0	800	40000	0	0	UNK
1979	0	1000	25000	0	0	UNK
1980	0	500	25000	0	0	UNK
1981	0	750	30000	N/O	0	UNK
1982	0	1000	70000	150	0	UNK
1983	0	2000	70000	2	0	UNK
1984	N/O	1000	45000	25	N/O	UNK
1985	5	60	140000	25	N/O	UNK
1986	0	500	83000	275	UNK	UNK
1987	0	200	1000	150	0	UNK
1988	0	1000	70000	50	0	UNK
1989	UNK	10	7000	5	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

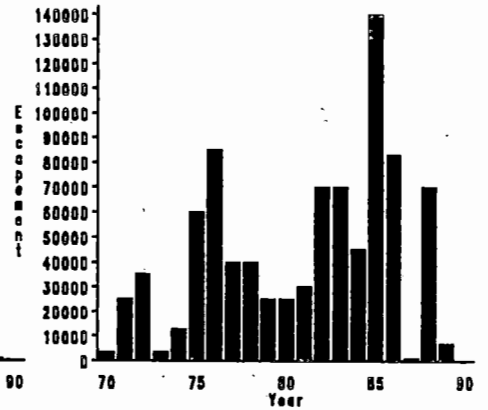
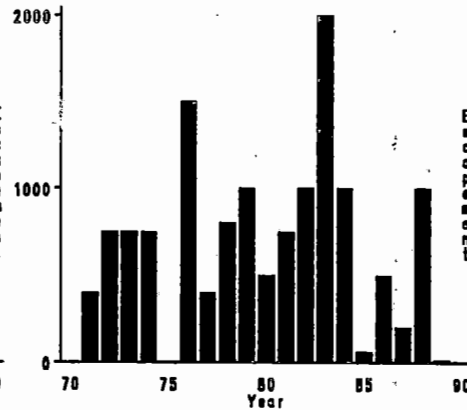
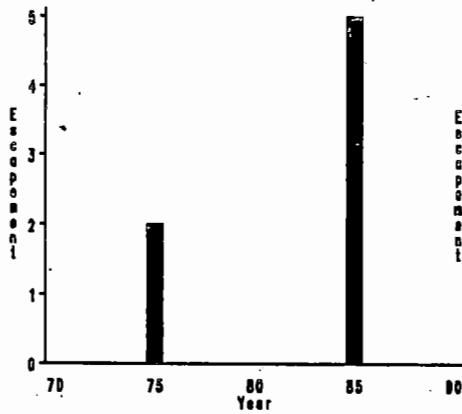
JOHNSTON CREEK (91-1168)

Escapement & Run Timing

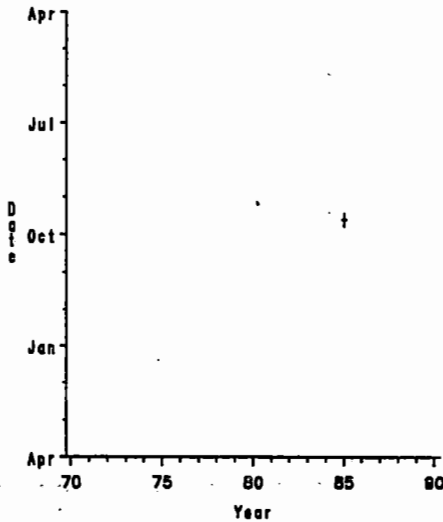
Sockeye (SK)

Coho (CO)

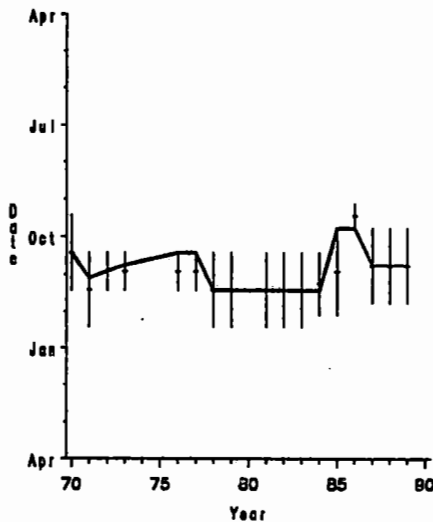
Pink (PK)



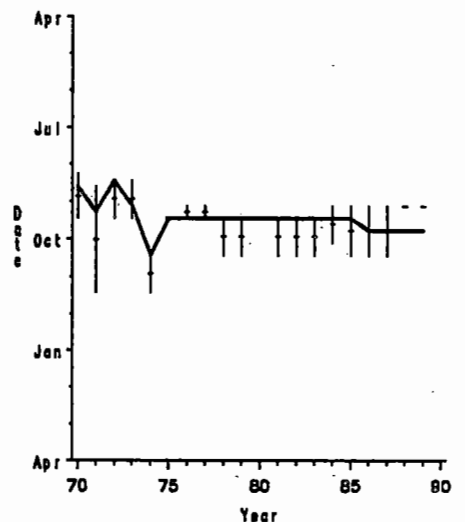
Sockeye



Coho



Pink



Sockeye

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	2	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	5	15SEP	25SEP	25SEP
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho

Year	Escapement	Start	Peak	End
1970	-	18SEP	15OCT	15NOV
1971	400	15OCT	05NOV	15DEC
1972	750	15OCT	30OCT	15NOV
1973	750	15OCT	25OCT	15NOV
1974	750	-	-	-
1975	0	-	-	-
1976	1,500	15OCT	15OCT	15NOV
1977	400	15OCT	15OCT	15NOV
1978	800	15OCT	15NOV	15DEC
1979	1,000	15OCT	15NOV	15DEC
1980	500	-	-	-
1981	750	15OCT	15NOV	15DEC
1982	1,000	15OCT	15NOV	15DEC
1983	2,000	15OCT	15NOV	15DEC
1984	1,000	15OCT	15NOV	05DEC
1985	80	25SEP	25SEP	05DEC
1986	500	05SEP	25SEP	25SEP
1987	200	25SEP	25OCT	25NOV
1988	1,000	25SEP	25OCT	25NOV
1989	10	25SEP	25OCT	25NOV

Pink

Year	Escapement	Start	Peak	End
1970	3,500	10AUG	20AUG	15SEP
1971	25,000	20AUG	10SEP	15NOV
1972	35,000	15AUG	15AUG	15SEP
1973	3,500	15AUG	05SEP	15SEP
1974	12,500	15OCT	15OCT	15NOV
1975	80,000	15SEP	15SEP	15SEP
1976	85,000	05SEP	15SEP	15SEP
1977	40,000	05SEP	15SEP	15SEP
1978	40,000	15SEP	15SEP	15OCT
1979	25,000	15SEP	15SEP	15OCT
1980	25,000	-	-	-
1981	30,000	15SEP	15SEP	15OCT
1982	70,000	15SEP	15SEP	15OCT
1983	70,000	15SEP	15SEP	15OCT
1984	45,000	05SEP	15SEP	05OCT
1985	140,000	05SEP	15SEP	15OCT
1986	83,000	05SEP	25SEP	15OCT
1987	1,000	05SEP	25SEP	15OCT
1988	70,000	05SEP	25SEP	-
1989	7,000	05SEP	25SEP	-

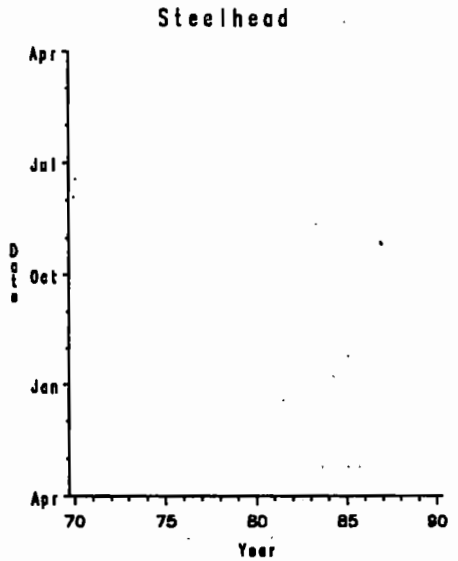
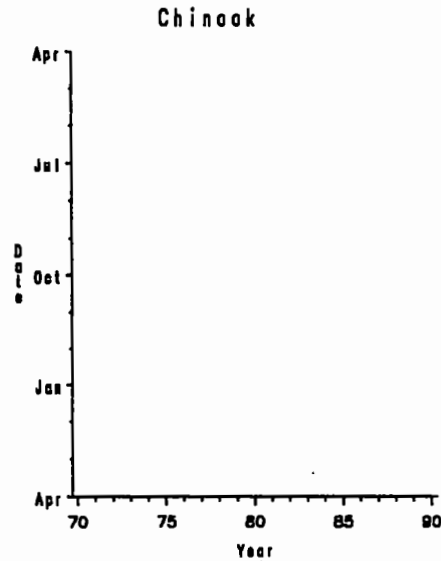
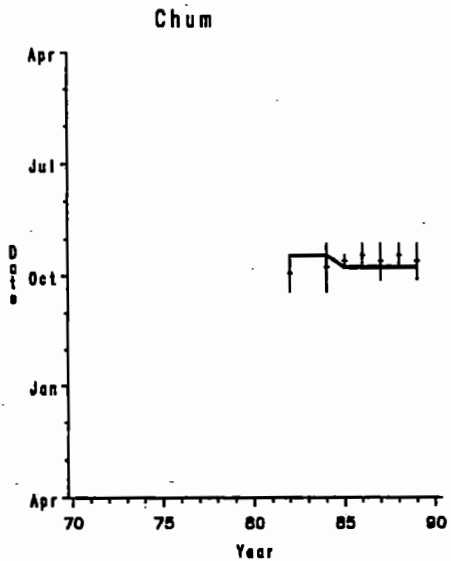
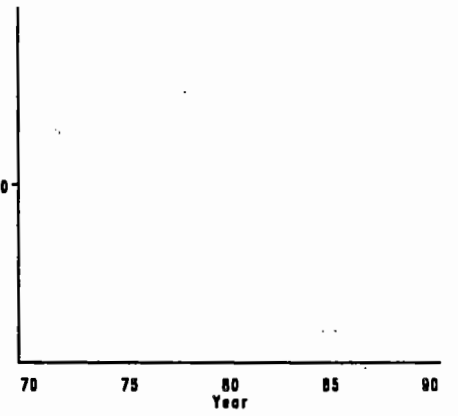
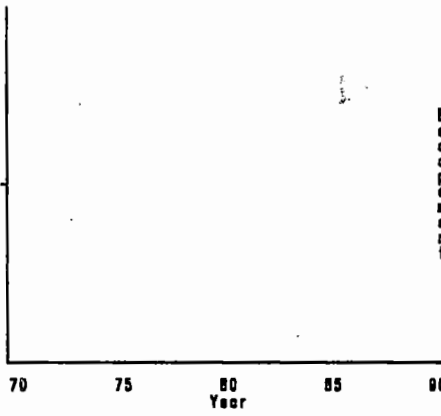
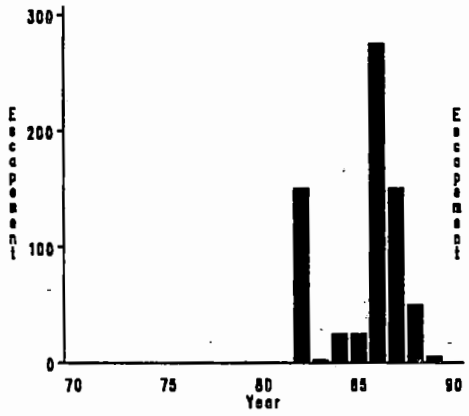
JOHNSTON CREEK (91-1168)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



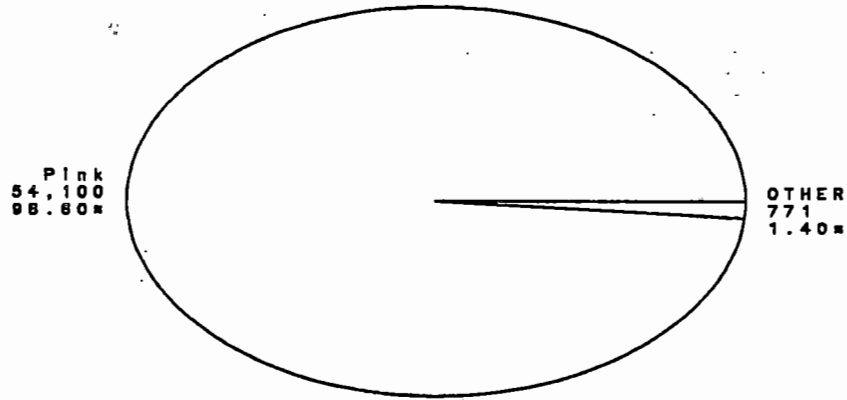
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	150	15SEP	15SEP	15OCT
1983	2	15SEP	15SEP	15SEP
1984	25	05SEP	15SEP	15OCT
1985	25	15SEP	25SEP	25SEP
1986	275	05SEP	25SEP	25SEP
1987	150	05SEP	25SEP	05OCT
1988	50	05SEP	25SEP	25SEP
1989	5	05SEP	25SEP	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	-	-	-	-

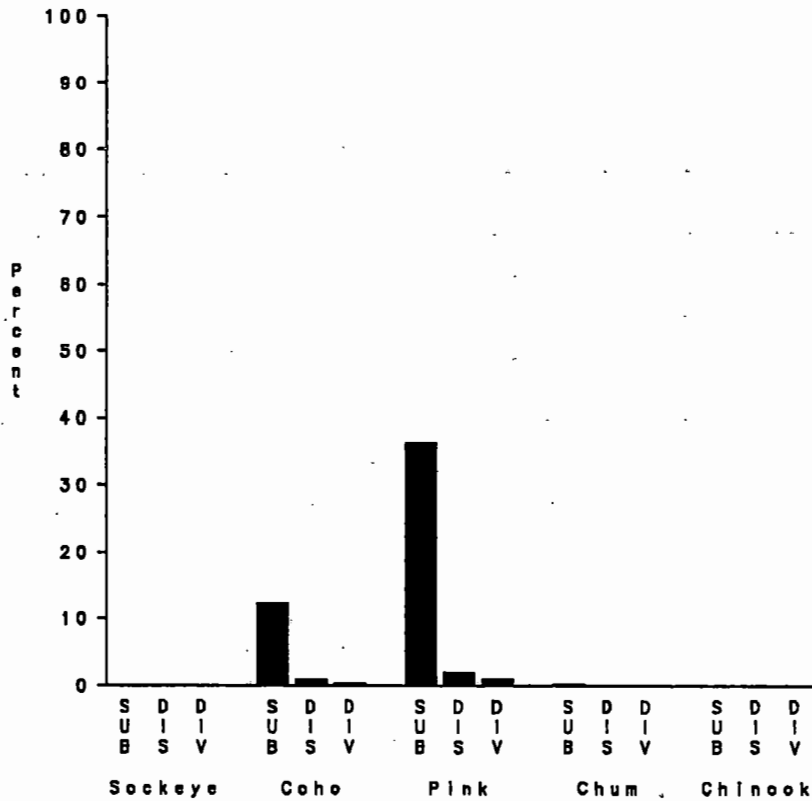
JOHNSTON CREEK (91-1168)

10-yr Mean Escapement
(1980-1989)



JOHNSTON CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: NEWICHY CREEK	D.F.O. Division: NORTH COAST
Local Name: WADHAMS CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1176	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-3
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6027.57076
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: 1.8 km Ref. No.: 6M-28
		Watershed Area: Ref. No.:
Location: FLows W INTO ENTRANCE TO JOHNSTON BAY, RIVERS 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
NO INFORMATION AVAILABLE				

C. FLOW

Flow Control: Water Survey of Canada (WSC) Flow Gauge: Y	No. 2:	No. 3:	No. 4:
W.S.C. Station No. 1: 08FA004			
Comments: FED BY A SMALL LAKE. (REF. 29F-65)			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
PK PINK SALMON	PRESENCE NOTED IN LOWER 0.5 KM. (REF. 9-4, REF. 9-36)

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
FO FORESTRY	LOGGING ACTIVITIES MAY TAKE PLACE IN THE FUTURE. A LOG DUMP IN JOHNSTON BAY AND DRY LAND SORT AT WADHAMS HAVE BEEN PROPOSED. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

RARELY INSPECTED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : NEWICHY CREEK

WATERSHED-CODE : 91-1176

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	0	0	1000	0	0	UNK
1957	0	0	N/O	0	0	UNK
1958	0	0	200	0	0	UNK
1959	0	0	N/O	0	0	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	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: SANDELL RIVER	D.F.O. Division: NORTH COAST
Local Name: TZEEISKAY CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1200	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-3
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6029.57139
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: 25.5 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows SW INTO RIVERS INLET, E OF DAWSONS LANDING, 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		0.3	PK PINK SALMON	IMPASSABLE TO ALL SPECIES. (REF. 9-36)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge: Y
W.S.C. Station No. 1: 08FA001	No. 2: No. 3: No. 4:
Comments: FED BY SEVERAL LARGE LAKES. SANDELL LAKE AREA: 3.6 SQ.KM; PERIMETER: 18.0 KM. MCLEAN LAKE AREA: 0.7 SQ.KM; PERIMETER: 5.3 KM. KLONAS LAKE AREA: 0.8 SQ.KM; PERIMETER: 6.4 KM. (REF. 6N-28, REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
PK PINK SALMON	PRESENCE NOTED TO FALLS AT 0.3 KM. (REF. 9-4, REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK PINK SALMON	2000	1980 - 1988	28A-18	3000	28A-18		
Comments: UP TO 3500 PK RECORDED IN THE 1960'S. (REF. 9-4)							
PK ESCAPEMENT FOR 1986(1000) 1988(3000) 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	CO COHO SALMON	0.0	HEADWATER REARING FOR CO FRY PROPOSED FOR LAKE AREA (AS OF 1989). (REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
WW WATER WITHDRAWAL	WATER SUPPLY FOR SPORT FISHING RESORT GOOD HOPE LODGE. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

VERY LIMITED SPAWNING AREA BELOW FALLS. (REF. 9-4)
RARELY INSPECTED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : TSEEISKAY RIVER

WATERSHED-CODE : 91-1200

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	0	0	3500	0	0	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	0	0	3500	0	0	UNK
1967	0	0	N/O	0	0	UNK
1968	0	0	3500	0	0	UNK
1969	0	0	N/O	0	0	UNK
1970	0	0	N/O	0	0	UNK
1971	0	N/O	N/O	0	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	0	0	3500	0	0	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	UNK	UNK	UNK	UNK	UNK	UNK
1979	0	0	N/O	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	N/O	N/O	N/O	N/O	N/O	UNK
1986	0	UNK	1000	UNK	UNK	UNK
1987	0	0	N/O	0	0	UNK
1988	0	0	3000	0	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

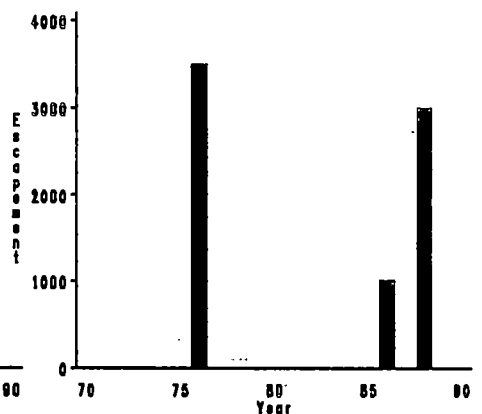
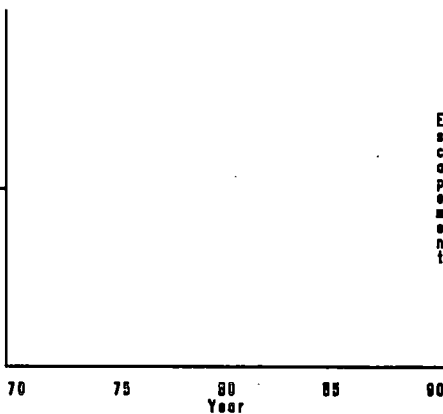
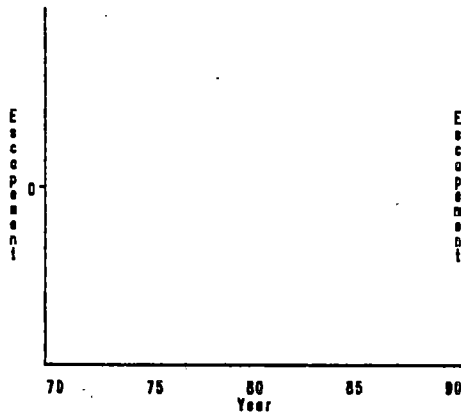
TSEEISKAY RIVER (91-1200)

Escapement & Run Timing

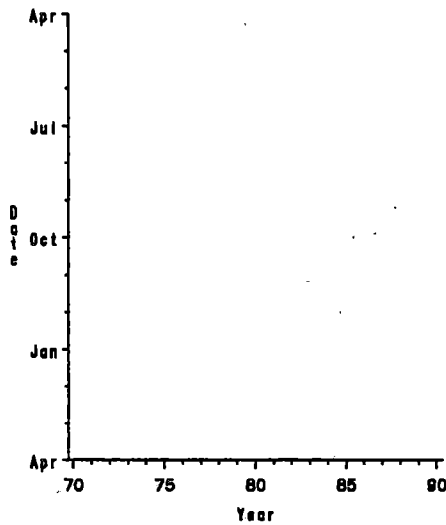
sockeye (SK)

Coho (CO)

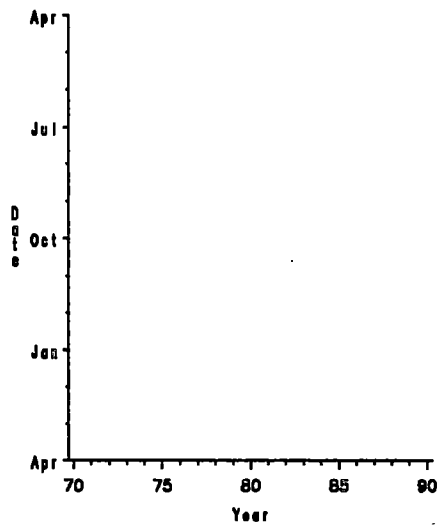
Pink (PK)



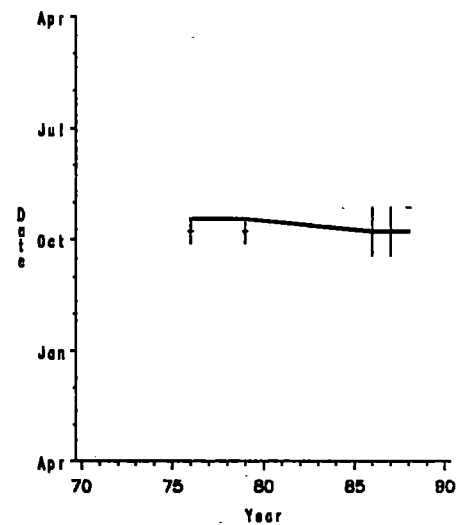
Sockeye



Coho



Pink



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

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

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

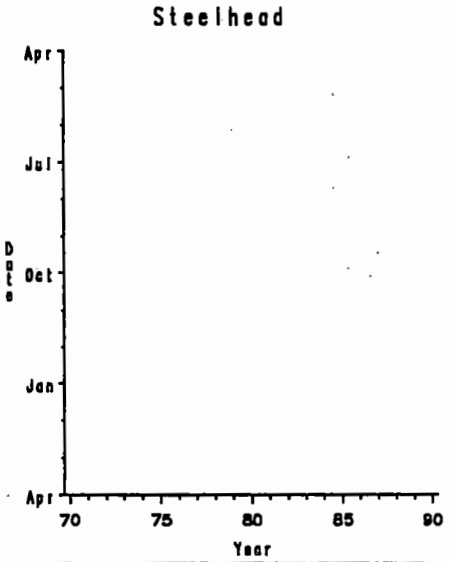
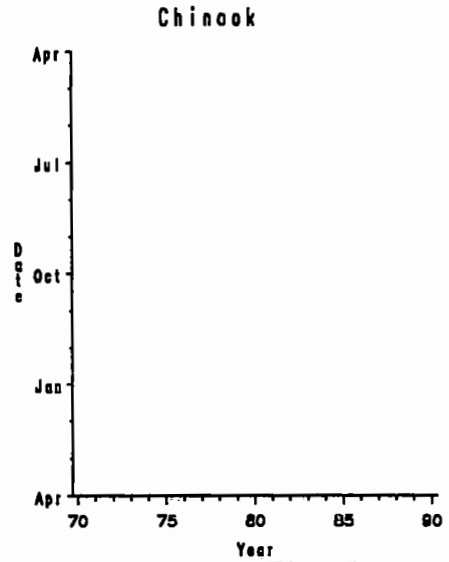
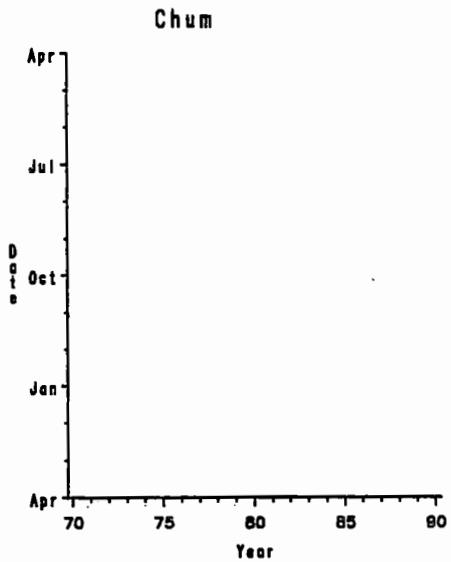
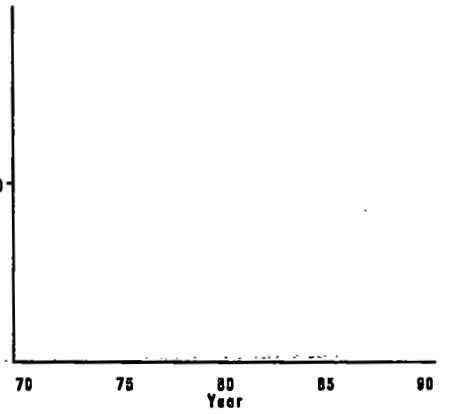
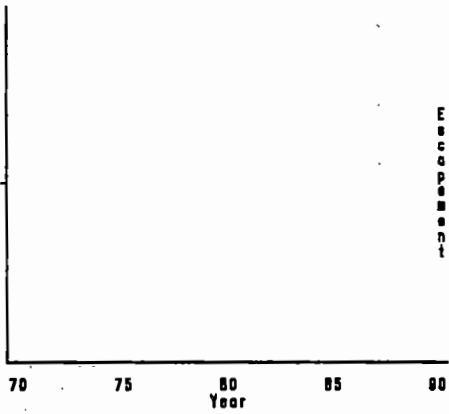
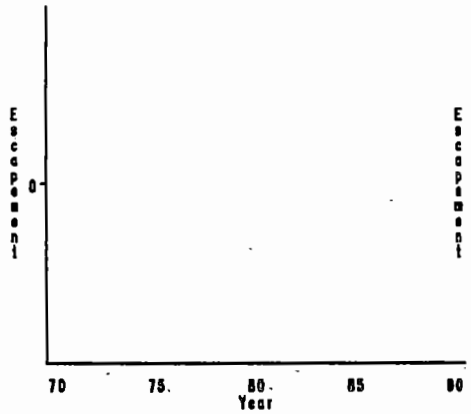
TSEEISKAY RIVER (91-1200)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



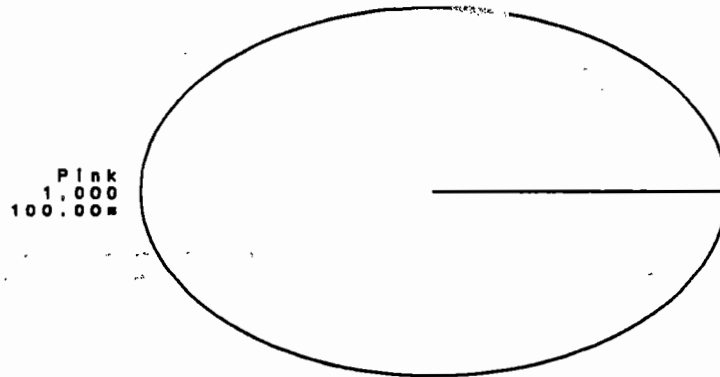
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	0	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	-	-	-	-
1982	-	-	-	-
1983	-	-	-	-
1984	-	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

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

TSEEISKAY RIVER (91-1200)

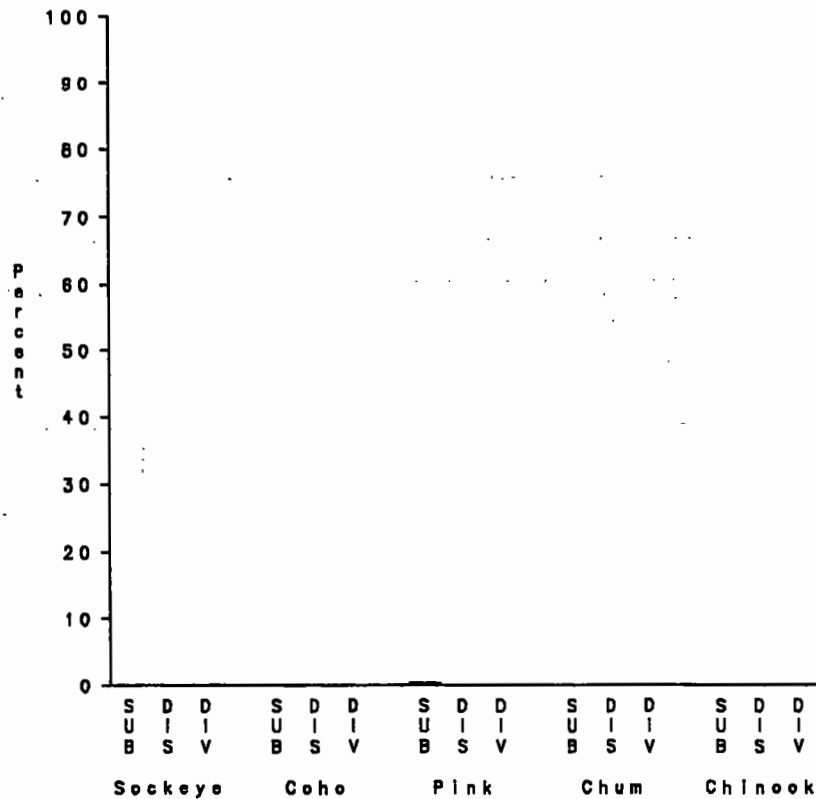
10-yr Mean Escapement
(1980-1989)



Pink
1,000
100.00%

TSEEISKAY RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: SHOTBOLT CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1256	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6139, 57235
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 7.3 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NE INTO RIVERS INLET AT SHOTBOLT 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
F FALLS		1.3		(REF. 6N-28)

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
NO INFORMATION AVAILABLE	

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
BX RECREATION BOX	CH CHINOOK SALMON CO COHO SALMON	0.0	HATCHERY LOCATED NEAR MOUTH, FUNDED BY RIVERS INLET/HAKAI PASS CHARTER ASSOCIATION AND SUPPORTED BY SEP/CEDP. INCUBATION OF CH AND CO FROM KILBELLA/CHUCKWALLA SYSTEM. (REF. 9-36, REF. 296-43)	/

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: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: HICKNAQUEET RIVER	D.F.O. Division: NORTH COAST
Local Name: SAMMILL CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1280	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11 B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6203.57256 Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' Mainstem Length: 11.4 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
		Location: FLows NW INTO HEAD OF RIVERS 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		0.9	CM CHUM SALMON CO COHO SALMON PK PINK SALMON	IMPASSABLE TO ALL SPECIES. (REF. 9-4, REF. 296-43)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY TWO LAKES. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	SPAWNING MAINLY FROM 0.4 KM TO FALLS AT 0.9 KM. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING MAINLY FROM 0.4 KM TO FALLS AT 0.9 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING MAINLY FROM 0.4 KM TO FALLS AT 0.9 KM. (REF. 9-4, REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	2	1980 - 1989	28A-18	10	28A-18	100	9-42
PK PINK SALMON	3240	1980 - 1988	28A-18	7500	28A-18	7500	9-42
PK PINK SALMON	1750	1981 - 1989	28A-18	3000	28A-18		
CM CHUM SALMON	21	1980 - 1989	28A-18	150	28A-18	400	9-42

Comments: **CO ESCAPEMENTS FOR 1984(10) 1987(10) (REF. 28A-18)**

F. LIFE HISTORY TIMING

Species	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CD COHO SALMON	Migration Spawning Incubation Rearing									X	P X	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X P	X X			
CM CHUM SALMON	Migration Spawning Incubation Rearing								X	X X 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
LD LINEAR DEVELOPMENT	A LOGGING ROAD BRIDGE WAS CONSTRUCTED IMMEDIATELY BELOW THE FALLS, IN 1979. (REF. 9-4)
FO FORESTRY	ACTIVELY LOGGED IN THE PAST. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

REMOVAL OF A LOG JAM RESULTED IN RECHANNELIZATION AND LOSS OF 200 SPAWNING PK IN 1979. (REF. 9-4)
DISCUSSION ON HYDRO POWER DEVELOPMENT PROPOSAL AVAILABLE. (REF. 9-10)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : NICKNAQUEET RIVER

WATERSHED-CODE : 91-1280

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	0	3500	0	0	UNK
1954	0	0	300	0	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	0	0	1500	400	0	UNK
1957	0	0	200	0	0	UNK
1958	0	0	200	75	0	UNK
1959	0	0	200	75	0	UNK
1960	0	0	25	75	0	UNK
1961	0	0	25	25	0	UNK
1962	0	0	25	25	0	UNK
1963	0	0	75	75	0	UNK
1964	0	25	75	25	0	UNK
1965	0	N/O	N/O	N/O	0	UNK
1966	0	N/O	75	N/O	0	UNK
1967	0	0	25	0	0	UNK
1968	0	N/O	25	75	0	UNK
1969	0	0	N/O	75	0	UNK
1970	0	N/O	200	25	0	UNK
1971	0	N/O	40	N/O	0	UNK
1972	0	N/O	400	200	0	UNK
1973	0	25	N/O	200	0	UNK
1974	0	25	750	400	0	UNK
1975	0	N/O	200	N/O	0	UNK
1976	0	N/O	N/O	0	0	UNK
1977	0	0	100	0	0	UNK
1978	0	N/O	6000	0	0	UNK
1979	0	0	550	0	0	UNK
1980	0	0	7500	0	0	UNK
1981	0	N/O	750	0	0	UNK
1982	0	0	850	25	0	UNK
1983	0	0	1500	0	0	UNK
1984	N/O	10	2650	N/O	N/O	UNK
1985	N/O	N/O	2500	N/O	N/O	UNK
1986	0	UNK	2700	UNK	UNK	UNK
1987	0	10	1000	150	0	UNK
1988	0	N/O	2500	13	0	UNK
1989	UNK	0	3000	4	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

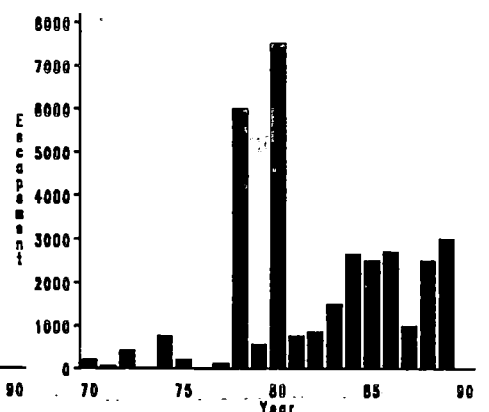
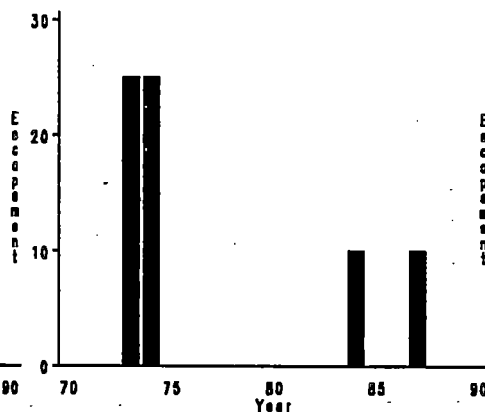
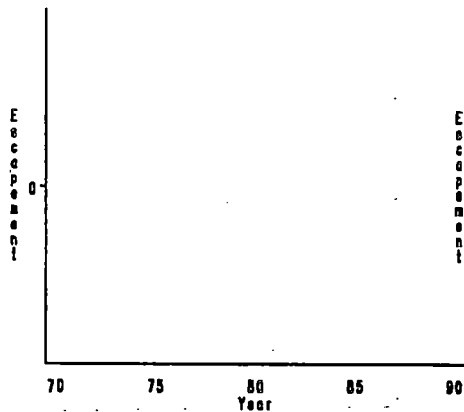
NICKNAQUEET RIVER (91-1280)

Escapement & Run Timing

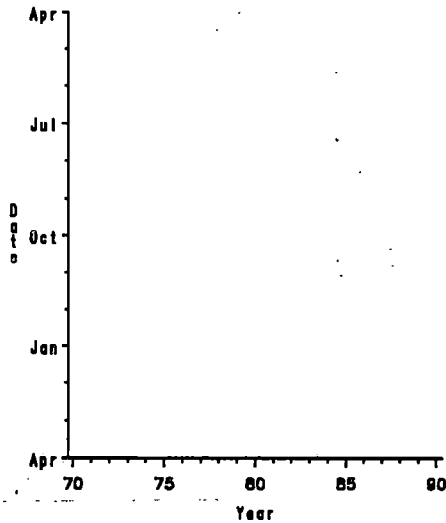
Sockeye (SK)

Coho (CO)

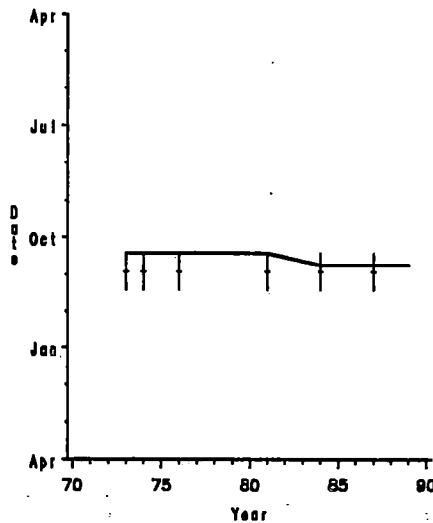
Pink (PK)



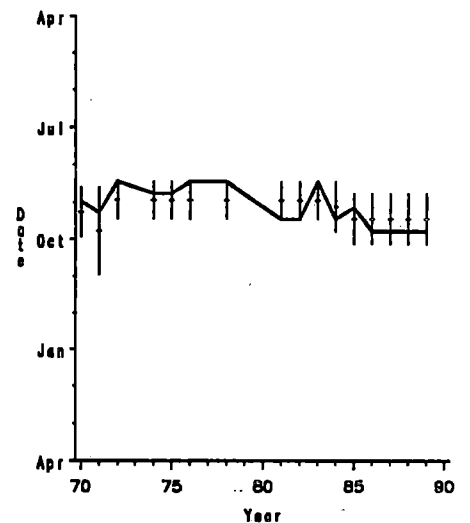
Sockeye



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	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	25	15OCT	15OCT	15NOV
1974	25	13OCT	15OCT	15NOV
1975	0	-	-	-
1976	0	15OCT	15OCT	15NOV
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	15OCT	15OCT	15NOV
1982	0	-	-	-
1983	0	-	-	-
1984	10	15OCT	25OCT	15NOV
1985	0	-	-	-
1986	-	-	-	-
1987	10	15OCT	25OCT	15NOV
1988	0	-	-	-
1989	0	-	25OCT	-

Pink				
Year	Escapement	Start	Peak	End
1970	200	20AUG	31AUG	30SEP
1971	40	20AUG	10SEP	31OCT
1972	400	15AUG	15AUG	15SEP
1973	0	-	-	-
1974	750	15AUG	25AUG	15SEP
1975	200	15AUG	25AUG	15SEP
1976	0	15AUG	15AUG	15SEP
1977	100	-	-	-
1978	6,000	15AUG	15AUG	15SEP
1979	550	-	-	-
1980	7,500	-	-	-
1981	750	15AUG	15SEP	15SEP
1982	850	15AUG	15SEP	15SEP
1983	1,500	15AUG	15AUG	15SEP
1984	2,850	15AUG	15AUG	25SEP
1985	2,500	25AUG	05SEP	05OCT
1986	2,700	25AUG	25SEP	05OCT
1987	1,000	25AUG	25SEP	05OCT
1988	2,500	25AUG	25SEP	05OCT
1989	3,000	25AUG	25SEP	05OCT

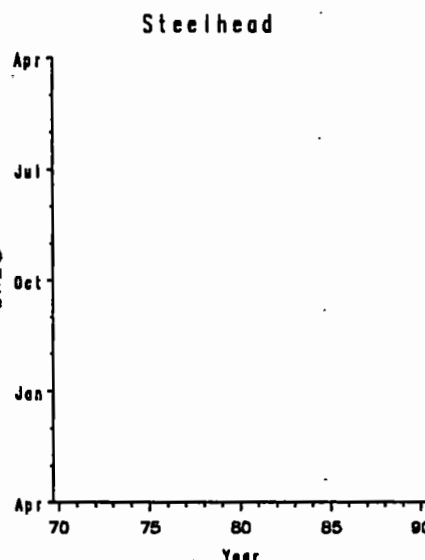
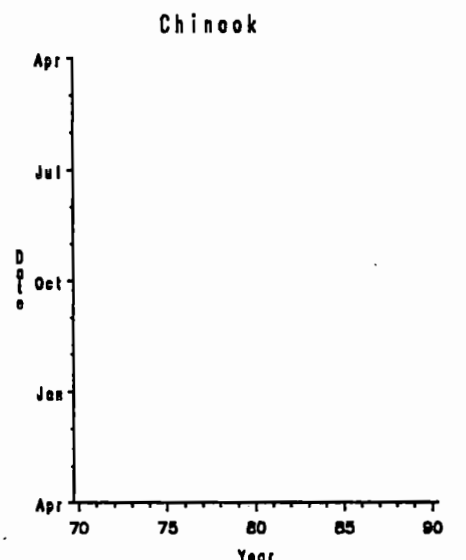
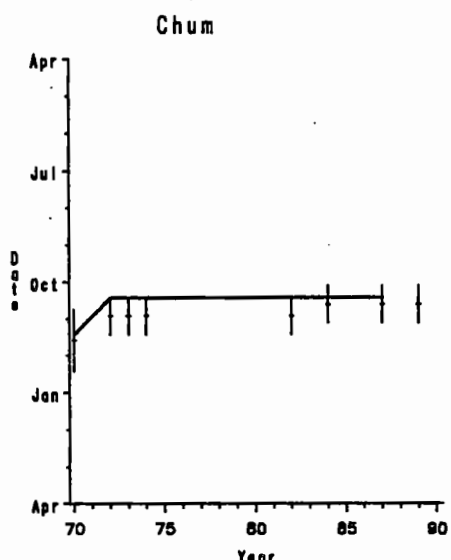
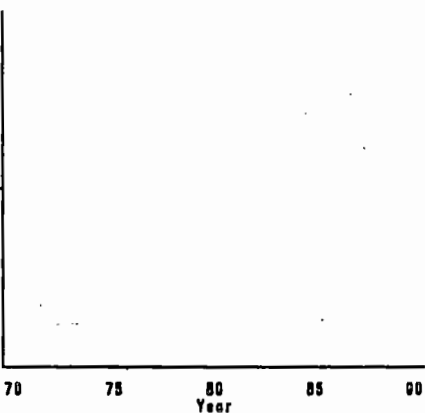
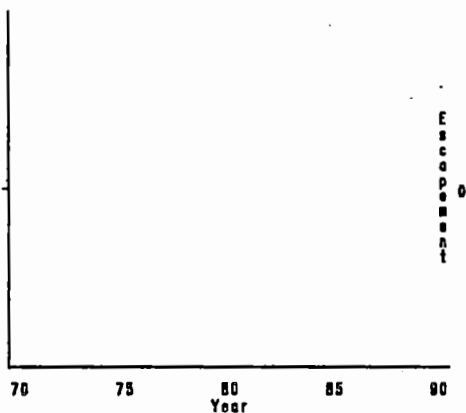
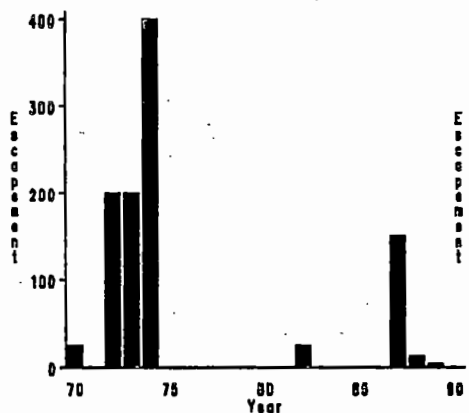
NICKNAQUEET RIVER (91-1280)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



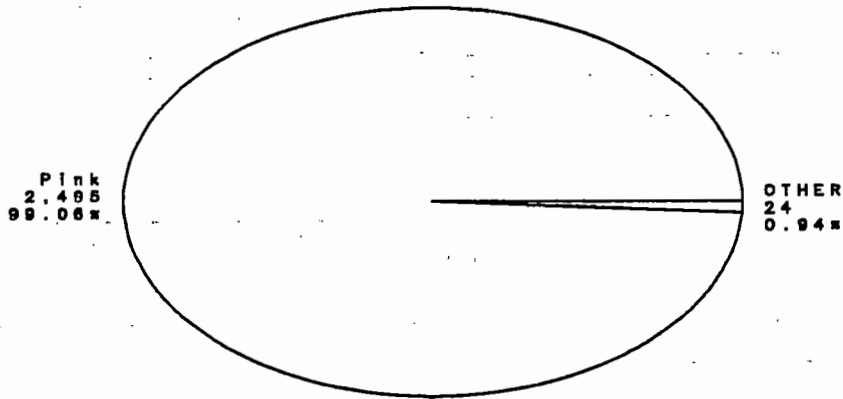
Chum				
Year	Escapement	Start	Peak	End
1970	25	25OCT	15NOV	15DEC
1971	0	-	-	-
1972	200	15OCT	15OCT	15NOV
1973	200	15OCT	15OCT	15NOV
1974	400	15OCT	15OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	25	15OCT	15OCT	15NOV
1983	0	-	-	-
1984	0	05OCT	15OCT	05NOV
1985	0	-	-	-
1986	0	-	-	-
1987	150	05OCT	15OCT	05NOV
1988	13	-	-	-
1989	4	05OCT	-	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	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	-	-	-	-

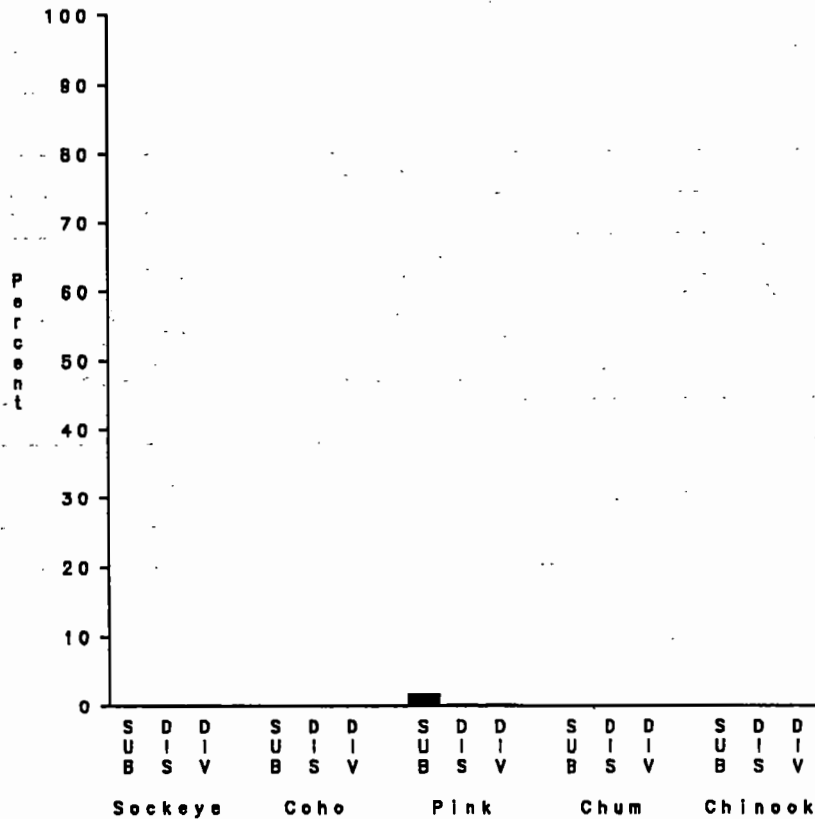
NICKNAQUEET RIVER (91-1280)

10-yr Mean Escapement
(1980-1989)



NICKNAQUEET RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: WANNOCK RIVER	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1282	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
AMBACK CREEK	150	B.C.G.S. (1:20k) Map: 9.6208.57265
DALLERY CREEK	160	U.T.M. Mouth: DG. ' ' DG. ' ' ' '
ASHLUM CREEK	320	Lat./Long. Mouth: 67.1 km Ref. No.: 6N-28
MACHMELL RIVER	550	Mainstem Length: 67.1 km Ref. No.:
GENESEE CREEK	560	Watershed Area:
SHEEMAHANT RIVER	650	Location: FLows W INTO HEAD OF RIVERS INLET, RGE.2, COAST DIST.
INZIANA RIVER	750	
WASHMASH RIVER	780	
IZEO RIVER	800	

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
NB NO BARRIER				NONE EXISTS. (REF. 4A-159)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge: Y
W.S.C. Station No. 1: 08FA005	No. 2: No. 3: No. 4:
Comments: FED BY OWIKENO LAKE. AREA: 93.9 SQ.KM; PERIMETER: 150.1 KM. (REF. 6N-28, REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	SPAWNING MAINLY AT 3.3 KM TO 6.5 KM, AND IN OWIKENO LAKE AND TRIBUTARIES. (REF. 9-4, REF. 9-36)
CO COHO SALMON	IN OWIKENO LAKE TRIBUTARIES. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING MAINLY AT 1.7 KM TO 3.3 KM, AND IN TRIBUTARIES. (REF. 9-4, REF. 9-36)
CN CHUM SALMON	SPAWNING MAINLY AT 1.7 KM TO 3.3 KM, AND IN TRIBUTARIES. (REF. 9-4, REF. 9-36)
CH CHINOOK SALMON	SPAWNING MAINLY AT 2.4 KM TO 4.0 KM, AND IN TRIBUTARIES. (REF. 9-4, REF. 9-36, REF. 29G-43)
ST STEELHEAD	IN TRIBUTARIES. (REF. 9-4)
CT CUTTHROAT TROUT	THROUGHOUT SYSTEM. (REF. 9-36)
DV DOLLY VARDEN	THROUGHOUT SYSTEM. (REF. 9-36)
EU EULACHON	SPAWNING MAINLY AT 1.8 KM TO 2.5 KM. (REF. 9-36, REF. 9-38)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	110833	1980 - 1987	9-36	200000	28A-18	200000	9-42
CO COHO SALMON	1500	1980 - 1989	28A-18	2000	28A-18	5000	9-42
PK PINK SALMON	375	1980 - 1988	28A-18	750	28A-18	5000	9-42
PK PINK SALMON	583	1981 - 1989	28A-18	1000	28A-18		
CM CHUM SALMON	12611	1980 - 1989	28A-18	25000	28A-18	40000	9-42
CH CHINOOK SALMON	2339	1980 - 1989	28A-18	4500	9-36	10000	9-42
Comments: 91-1282 (WANNOCK R) HAS BEEN DIVIDED INTO TWO PARTS: 91-1282-000-000-000-991 (WANNOCK R.) AND 91-1282-000-000-000-992 (OWIKENO LAKE) THE ESCAPEMENT TABLE REFLECTS ONLY TOTAL FROM WANNOCK RIVER (REF. 28A-18)							
OWIKENO LAKE ESCAPEMENTS ARE AS FOLLOWS: SK= MEAN(9718) MAX(25000) CO= MAX 1989(500) 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	P X	X X	X X
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X X	X X	P	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	P X	X X			
CM CHUM SALMON	Migration Spawning Incubation Rearing									X X	X P	X X	
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X	X P	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
BX INCUBATION BOX	CH CHINOOK SALMON	0.0	EGG TAKE FROM NET TRAPS AT SPRING POOL AREA. FUNDED BY OSEP AND SMOOTLE HATCHERY. (REF. 9-36)	1982/
JP JUVENILE PLANT	CH CHINOOK SALMON SK SOCKEYE SALMON	0.0	INFORMATION ON FRY AND SMOLT RELEASES AVAILABLE. (REF. 9-41)	1983/
HY HATCHERY	CH CHINOOK SALMON CM CHUM SALMON	0.0	UNDER DEVELOPMENT - AT OWIKENO VILLAGE. (REF. 9-36)	1982/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOG DUMP AND SORTING SITE IN ESTUARY. LOGGING IN THE WATERSHED. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SPORT FISHING PRESSURE AND CH ESCAPEMENT TO THE SPawning GROUNDS ARE CLOSELY CORRELATED. OVERFISHING IS DEPLETING THE RUN. (1979)OWIKENO LAKE LEVELS ARE EXTREMELY VARIABLE IN OCTOBER AND NOVEMBER. WATER LEVELS FLUCTUATE AS MUCH AS 7 M DURING A GIVEN YEAR. OWIKENO LAKE IS HEAVILY SILTED, WITH GLACIAL RUN-OFF. (REF. 9-4)
RESULTS OF JUVENILE SK STUDIES IN OWIKENO LAKE AVAILABLE. (REF. 9-5, REF. 9-6)
RESULTS OF ZOOPLANKTON STUDIES RELATING TO JUVENILE SK POPULATIONS IN OWIKENO LAKE AVAILABLE. (REF. 9-7)
DISCUSSION ON POTENTIAL PROBLEMS CAUSED BY LOGGING DEVELOPMENT IN THE OWIKENO LAKE AREA AVAILABLE. (REF. 9-8)
DATA ON RIVERS INLET SPawning AREAS TO 1968 AVAILABLE. (REF. 9-9)
DISCUSSION ON HYDRO POWER DEVELOPMENT PROPOSAL AVAILABLE. (REF. 9-10)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTIONS OF TRIBUTARIES AVAILABLE. (REF. 9-16)
LAKE SURVEY DATA FOR OWIKENO LAKE AVAILABLE. (REF. 9-18)
LOGGING DEVELOPMENT IN PHINNEY CREEK DRAINAGE COULD HAVE IMPACTS ON SECOND NARROWS SPawning AREAS. (REF. 9-36)
DISCUSSION ON ANTICIPATED LAND/WATER USE CONFLICTS WITH OWEKEENO LAKE RESERVE PLANS, AVAILABLE. (REF. 9-38)
DISCUSSION ON SK POPULATION AND COMMERCIAL FISHERY OF RIVERS INLET AVAILABLE. (REF. 9-39)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last updated by:	MARG ANDERSON	Date:	1992/01/23
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : WANNOCK RIVER

WATERSHED-CODE : 91-1282-000-000-000-000-991

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	75000	3500	1500	35000	1500	UNK
1954	UNK	75	UNK	UNK	UNK	UNK
1955	3500	3500	400	750	1500	UNK
1956	0	0	0	15000	3500	UNK
1957	35000	UNK	400	15000	1500	UNK
1958	750	N/O	1500	15000	1500	UNK
1959	75000	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	N/O	UNK	7500	UNK
1961	35000	750	0	3500	750	UNK
1962	100000	1500	0	3500	3500	UNK
1963	200000	1500	0	15000	7500	UNK
1964	75000	UNK	0	35000	7500	UNK
1965	75000	UNK	UNK	UNK	3500	UNK
1966	35000	UNK	UNK	3500	1500	UNK
1967	125000	UNK	UNK	7500	1500	UNK
1968	75000	UNK	UNK	15000	750	UNK
1969	100000	UNK	N/O	7500	750	UNK
1970	35000	400	200	7500	1500	UNK
1971	60000	1200	70	1800	1500	UNK
1972	80000	UNK	1500	8000	600	UNK
1973	87500	500	90	9000	1000	UNK
1974	62500	900	3500	35000	5500	UNK
1975	87500	N/O	N/O	8000	3000	UNK
1976	87500	500	1500	1500	1500	UNK
1977	45000	2500	500	2000	1400	UNK
1978	20000	1000	1000	30000	2000	UNK
1979	35000	500	500	10000	2000	UNK
1980	27500	2000	750	1500	2000	UNK
1981	150000	2000	1000	4000	3000	UNK
1982	150000	500	250	25000	750	UNK
1983	200000	1500	750	15000	1750	UNK
1984	45000	UNK	500	15000	750	UNK
1985	20000	UNK	N/O	5000	1300	UNK
1986	UNK	UNK	UNK	UNK	UNK	UNK
1987	200000	UNK	UNK	25000	4500	UNK
1988	80000	UNK	N/O	15000	4000	UNK
1989	125000	UNK	UNK	8000	3000	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

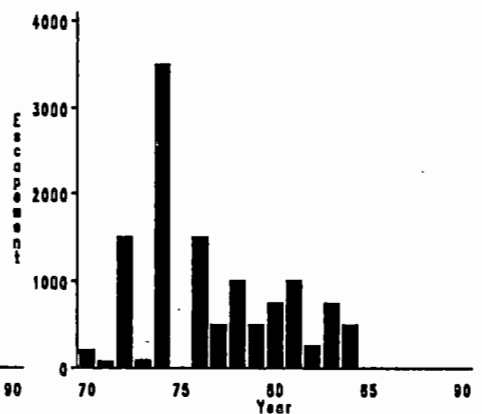
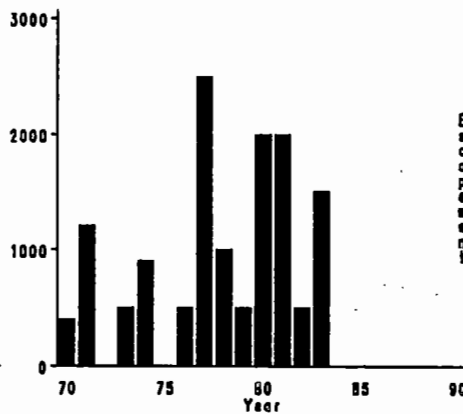
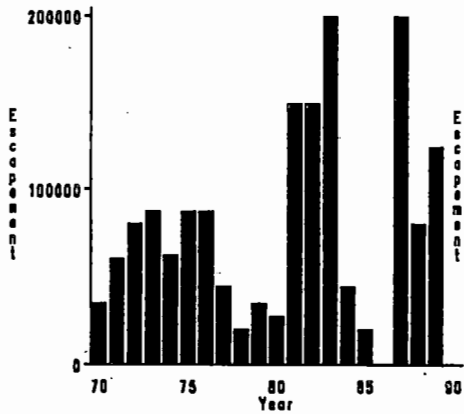
WANNOCK RIVER (91-1282-000-000-000-000-991)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

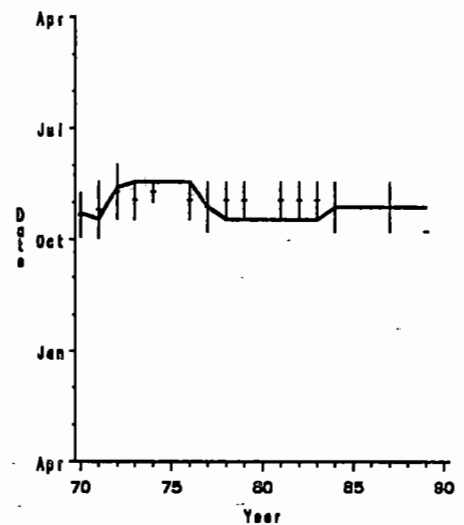
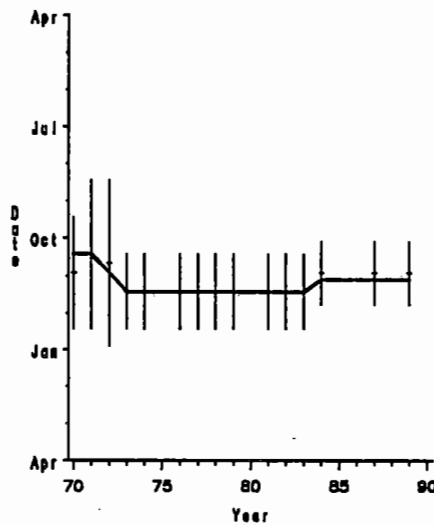
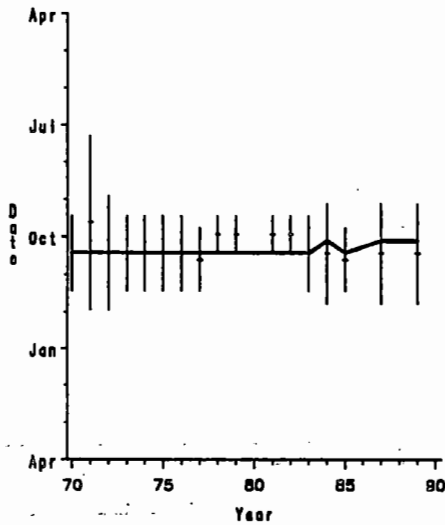
Pink (PK)



Sockeye

Coho

Pink



Year	Escapement	Start	Peak	End
1970	35,000	15SEP	15OCT	15NOV
1971	68,000	11JUL	15OCT	30NOV
1972	88,000	30AUG	15OCT	30NOV
1973	87,500	15SEP	15OCT	15NOV
1974	82,500	15SEP	15OCT	15NOV
1975	87,500	15SEP	15OCT	15NOV
1976	87,500	15SEP	15OCT	15NOV
1977	45,000	25SEP	15OCT	15NOV
1978	28,000	15SEP	15OCT	15OCT
1979	35,000	15SEP	15OCT	15OCT
1980	27,500	-	-	-
1981	150,000	13SEP	15OCT	15OCT
1982	150,000	15SEP	15OCT	15OCT
1983	200,000	15SEP	15OCT	15NOV
1984	45,000	05SEP	05OCT	25NOV
1985	28,000	25SEP	15OCT	15NOV
1986	-	-	-	-
1987	200,000	05SEP	05OCT	25NOV
1988	80,000	-	-	-
1989	125,000	05SEP	05OCT	25NOV

Year	Escapement	Start	Peak	End
1970	400	19SEP	15OCT	15DEC
1971	1,200	18AUG	15OCT	15DEC
1972	-	18AUG	30OCT	30DEC
1973	500	15OCT	15NOV	15DEC
1974	800	15OCT	15NOV	15DEC
1975	0	-	-	-
1976	500	15OCT	15NOV	15DEC
1977	2,500	15OCT	15NOV	15DEC
1978	1,000	15OCT	15NOV	15DEC
1979	500	15OCT	15NOV	15DEC
1980	2,000	-	-	-
1981	2,000	13OCT	15NOV	15DEC
1982	900	13OCT	15NOV	15DEC
1983	1,500	13OCT	15NOV	15DEC
1984	-	03OCT	05NOV	25NOV
1985	-	-	-	-
1986	-	-	-	-
1987	-	05OCT	05NOV	25NOV
1988	-	-	-	-
1989	-	03OCT	05NOV	25NOV

Year	Escapement	Start	Peak	End
1970	200	25AUG	10SEP	30SEP
1971	70	15AUG	15SEP	01OCT
1972	1,500	01AUG	20AUG	15SEP
1973	80	15AUG	15AUG	15SEP
1974	3,500	15AUG	15AUG	01SEP
1975	0	-	-	-
1976	1,500	15AUG	15AUG	15SEP
1977	500	15AUG	05SEP	25SEP
1978	1,000	15AUG	15SEP	15SEP
1979	500	15AUG	15SEP	15SEP
1980	750	-	-	-
1981	1,000	15AUG	15SEP	15SEP
1982	250	15AUG	15SEP	15SEP
1983	750	15AUG	15SEP	15SEP
1984	500	15AUG	05SEP	25SEP
1985	0	-	-	-
1986	-	-	-	-
1987	-	15AUG	05SEP	25SEP
1988	0	-	-	-
1989	-	-	05SEP	25SEP

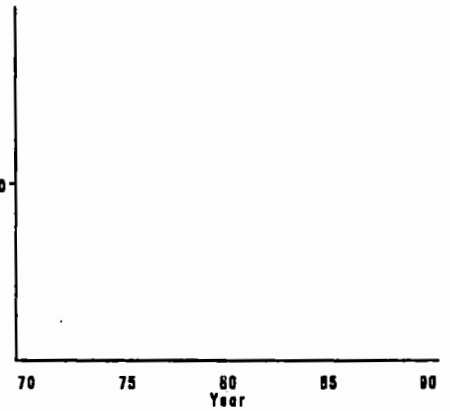
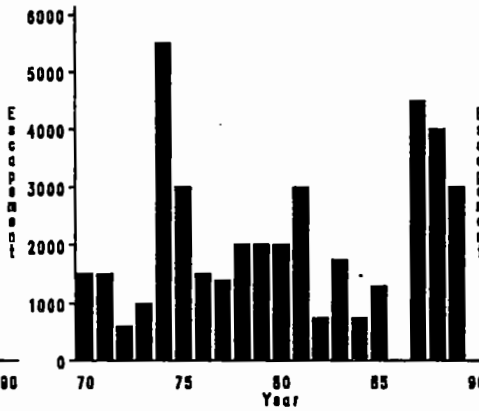
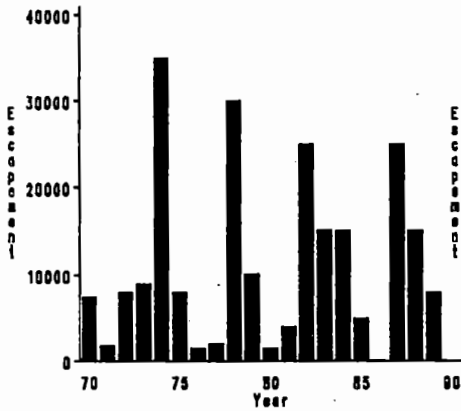
WANNOCK RIVER (91-1282-000-000-000-000-991)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

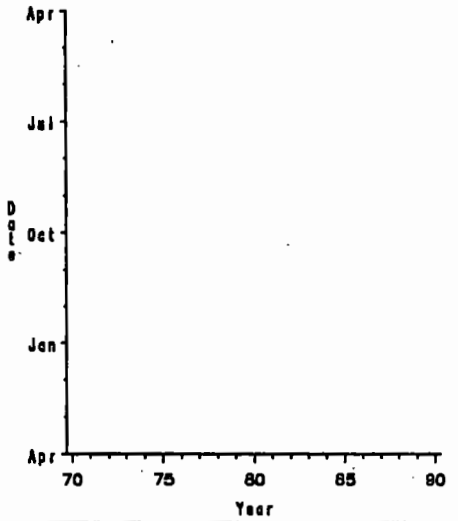
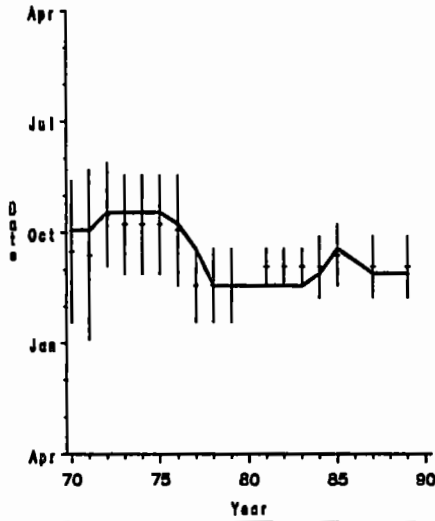
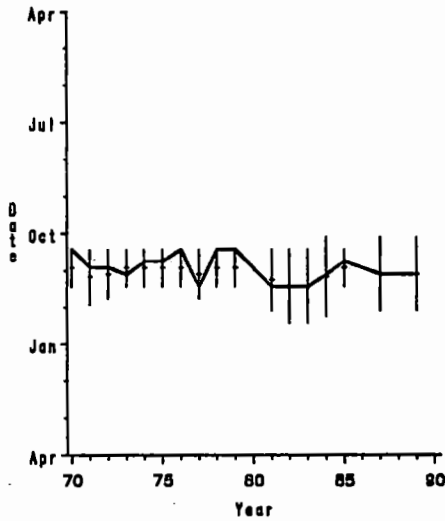
Steelhead (ST)



Chum

Chinook

Steelhead

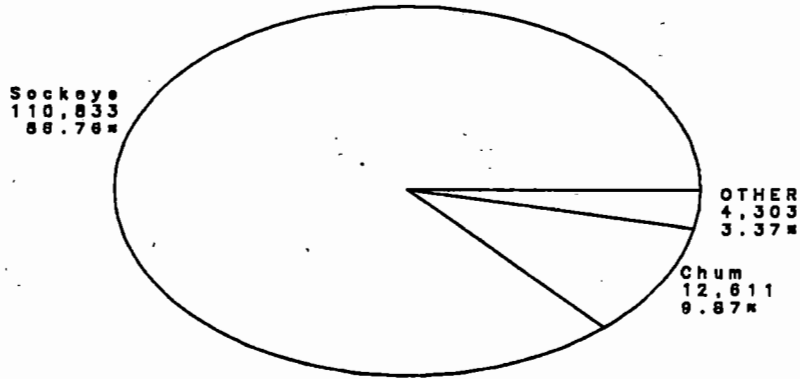


Chum				
Year	Escapement	Start	Peak	End
1970	7,500	19OCT	19OCT	19NOV
1971	1,000	15OCT	30OCT	30NOV
1972	0,000	15OCT	30OCT	25NOV
1973	0,000	15OCT	05NOV	15NOV
1974	35,000	15OCT	25OCT	19NOV
1975	0,000	15OCT	25OCT	15NOV
1976	1,500	15OCT	15OCT	15NOV
1977	2,000	15OCT	15NOV	25NOV
1978	30,000	15OCT	15OCT	15NOV
1979	10,000	15OCT	15OCT	15NOV
1980	1,500	-	-	-
1981	4,000	15OCT	15NOV	05DEC
1982	25,000	15OCT	15NOV	15DEC
1983	15,000	15OCT	15NOV	15DEC
1984	15,000	05OCT	05NOV	10DEC
1985	5,000	15OCT	25OCT	15NOV
1986	-	-	-	-
1987	25,000	05OCT	05NOV	05DEC
1988	15,000	-	-	-
1989	0,000	03OCT	05NOV	05DEC

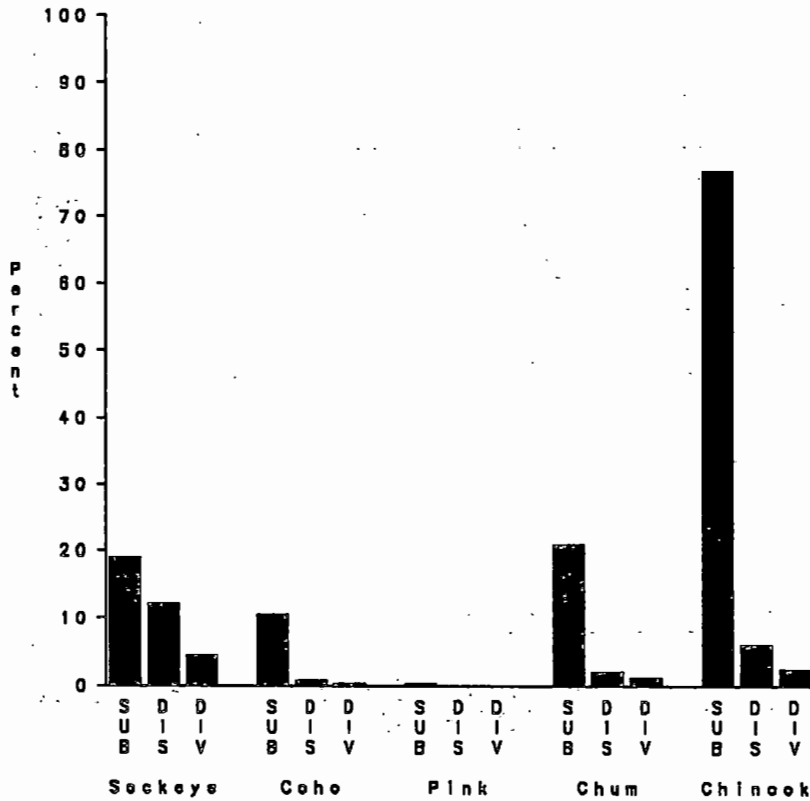
Chinook				
Year	Escapement	Start	Peak	End
1970	1,500	20AUG	30SEP	15DEC
1971	1,500	11AUG	30SEP	30DEC
1972	000	05AUG	15SEP	30OCT
1973	1,000	15AUG	15SEP	05NOV
1974	3,500	15AUG	15SEP	05NOV
1975	3,000	15AUG	15SEP	05NOV
1976	1,500	15AUG	25SEP	15NOV
1977	1,400	15OCT	15OCT	15DEC
1978	2,000	15OCT	15NOV	15DEC
1979	2,000	15OCT	15NOV	15DEC
1980	2,000	-	-	-
1981	3,000	15OCT	15NOV	15NOV
1982	750	15OCT	15NOV	15NOV
1983	1,750	15OCT	15NOV	15NOV
1984	750	03OCT	05NOV	25NOV
1985	1,300	25SEP	15OCT	15NOV
1986	-	-	-	-
1987	4,500	03OCT	05NOV	25NOV
1988	4,000	-	-	-
1989	3,000	03OCT	05NOV	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	-	-	-	-

WANNOCK RIVER (91-1282-000-000-000-000-991)
 10-yr Mean Escapement
 (1980-1989)



WANNOCK RIVER : Escapement (1980-1989)
 Species Escapement as a Proportion of DFO Management Units
 (1e Subdistrict, District & Division)



ESCAPEMENT : OWIKENO LAKE

WATERSHED-CODE : 91-1282-000-000-000-992

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	75000	0	0	0	0	UNK
1959	3500	UNK	UNK	UNK	UNK	UNK
1960	UNK	UNK	UNK	UNK	UNK	UNK
1961	200	0	0	0	0	UNK
1962	1500	0	0	0	0	UNK
1963	1500	UNK	UNK	UNK	UNK	UNK
1964	15000	UNK	UNK	UNK	UNK	UNK
1965	UNK	UNK	UNK	UNK	UNK	UNK
1966	3500	UNK	UNK	UNK	UNK	UNK
1967	15000	UNK	UNK	UNK	UNK	UNK
1968	35000	0	0	0	0	UNK
1969	3500	0	0	0	0	UNK
1970	UNK	UNK	UNK	UNK	UNK	UNK
1971	UNK	UNK	UNK	UNK	UNK	UNK
1972	5000	UNK	UNK	UNK	UNK	UNK
1973	10000	0	0	0	0	UNK
1974	8000	0	0	0	0	UNK
1975	102500	0	0	0	0	UNK
1976	20000	0	0	0	0	UNK
1977	10000	300	0	0	0	UNK
1978	5000	0	0	0	0	UNK
1979	7500	UNK	UNK	UNK	UNK	UNK
1980	25000	0	0	0	0	UNK
1981	10000	0	0	0	0	UNK
1982	15000	UNK	UNK	UNK	UNK	UNK
1983	10000	0	0	0	0	UNK
1984	1100	N/O	N/O	N/O	N/O	UNK
1985	20000	N/O	N/O	N/O	N/O	UNK
1986	2500	UNK	UNK	UNK	UNK	UNK
1987	2500	0	0	0	0	UNK
1988	5000	0	0	0	0	UNK
1989	6075	500	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

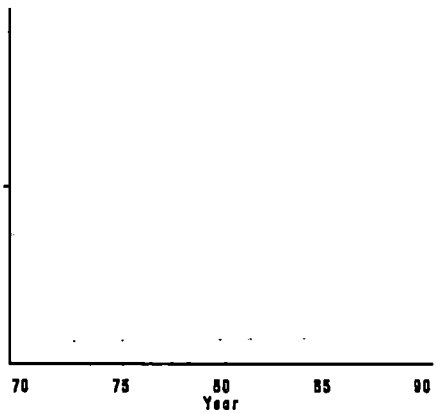
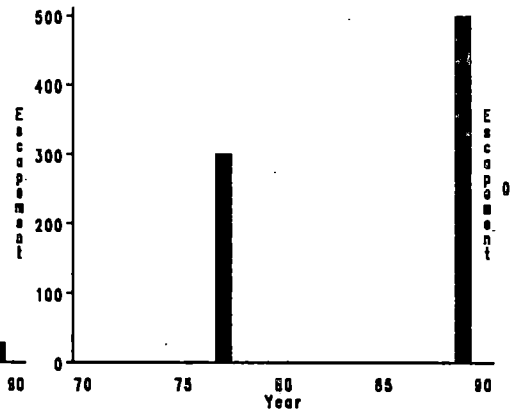
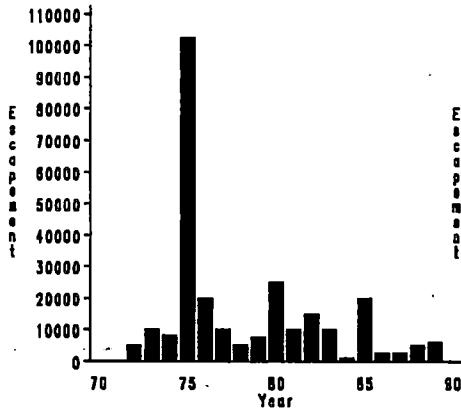
OWIKENO LAKE (91-1282-000-000-000-000-992)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

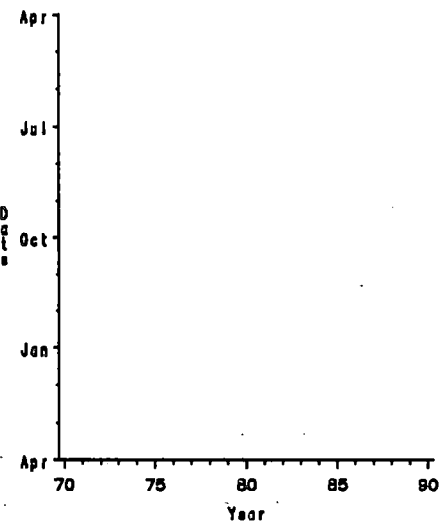
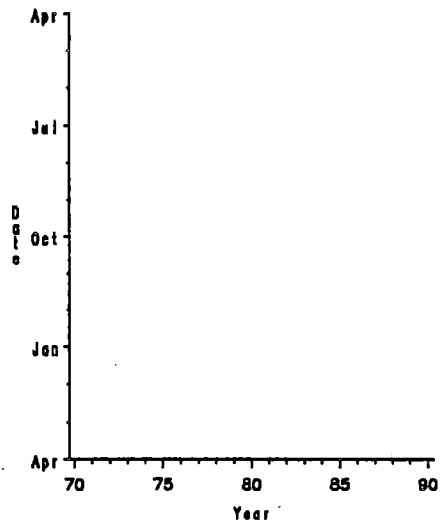
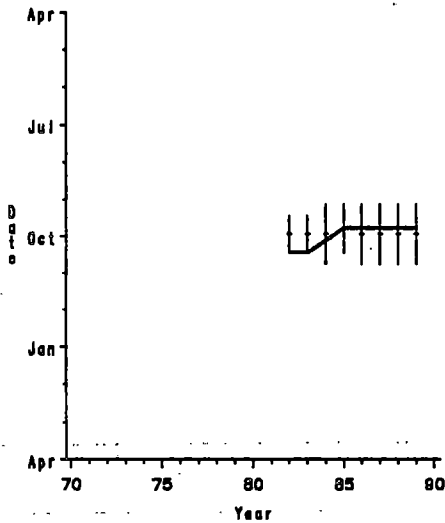
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	5,000	-	-	-
1973	18,000	-	-	-
1974	8,000	-	-	-
1975	102,300	-	-	-
1976	20,000	-	-	-
1977	18,000	-	-	-
1978	5,000	-	-	-
1979	7,500	-	-	-
1980	25,000	-	-	-
1981	18,000	-	-	-
1982	15,000	15SEP	15OCT	15OCT
1983	18,000	15SEP	15OCT	15OCT
1984	1,100	05SEP	05OCT	25OCT
1985	20,000	05SEP	25SEP	15OCT
1986	2,500	05SEP	25SEP	25OCT
1987	2,500	05SEP	25SEP	25OCT
1988	3,000	05SEP	25SEP	28OCT
1989	8,075	05SEP	25SEP	25OCT
1990	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	300	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	-	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	500	-	-	-
1990	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	0	-	-	-
1974	0	-	-	-
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	-	-	-	-
1990	-	-	-	-

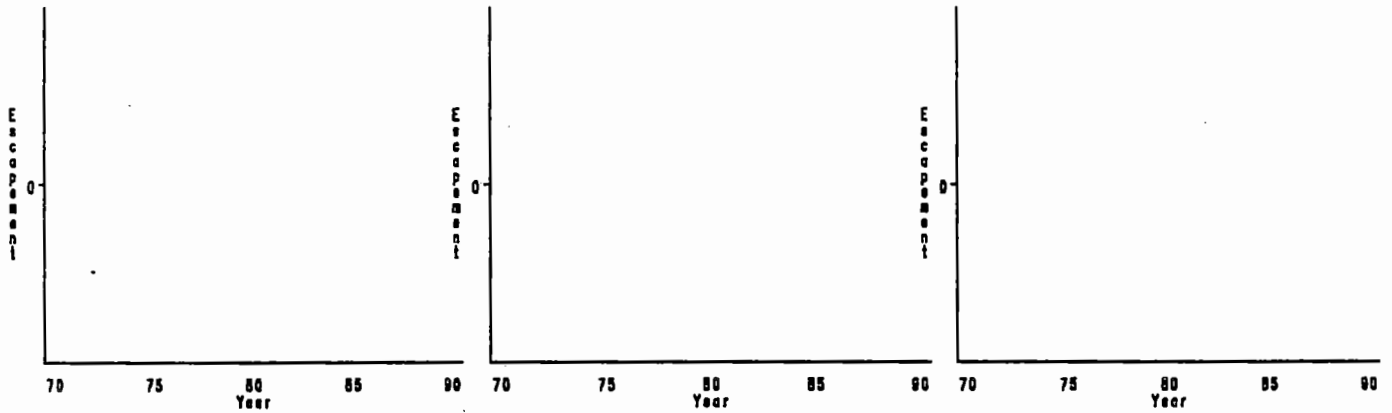
LOWIKENO LAKE (91-1282-000-000-000-000-992)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

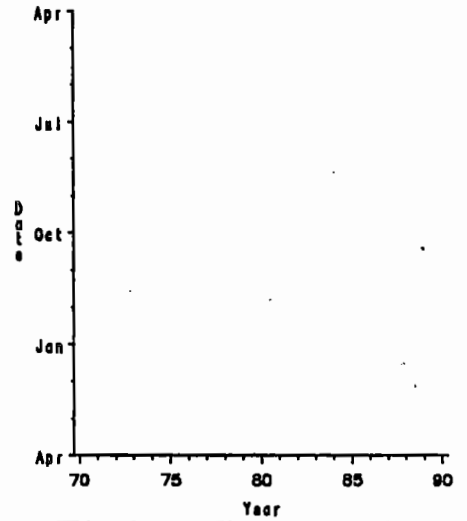
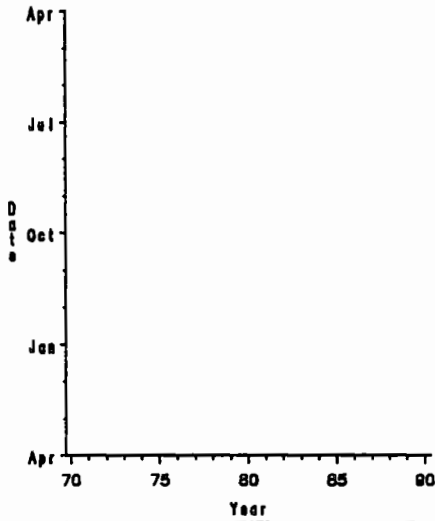
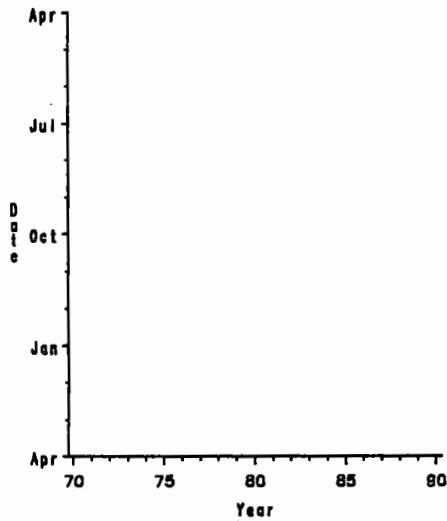
Steelhead (ST)



Chum

Chinook

Steelhead



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

Chinook				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	-	-	-	-
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: AMBACK CREEK	D.F.O. Division: NORTH COAST
Local Name: QUAP RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-1282-150	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
		B.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6353.57290
		Lat./Long. Mouth: DG.
		Mainstem Length: 5.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS S INTO OWIKENO LAKE, RGE.2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	1.8% GRADIENT FOR LOWER 4.5 KM. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
NB NO BARRIER				ACCESSIBLE TO AT LEAST 4.5 KM. (REF. 9-16)

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 SPAWNING AT 3.7 KM. - PROBABLY PRESENT TO 4.5 KM. (REF. 9-16, REF. 9-36)
CO COHO SALMON	JUVENILES OBSERVED AT 2.4 KM. - PROBABLY PRESENT TO 4.5 KM. (REF. 9-4, REF. 9-16)
PK PINK SALMON	FEW PRESENT, OBSERVED AT 2.4 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CM CHUM SALMON	FEW PRESENT, OBSERVED AT 2.4 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CH CHINOOK SALMON	JUVENILES OBSERVED AT 2.4 KM. - PROBABLY PRESENT TO 4.5 KM. (REF. 9-16)
ST STEELHEAD	PRESENCE NOTED. (REF. 9-4)
CT CUTTHROAT TROUT	OBSERVED AT 2.4 KM. (REF. 9-16)
OV DOLLY VARDEN	OBSERVED AT 2.4 KM. (REF. 9-16)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	62450	1980 - 1989	28A-18	180000	9-42	100000	9-42

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	92	1983 - 1989	28A-18	750	28A-18	3500	9-42
PK PINK SALMON	628	1980 - 1988	28A-18	2500	28A-18	1000	9-42
PK PINK SALMON	130	1981 - 1989	28A-18	300	28A-18		
CH CHUM SALMON	49	1980 - 1989	28A-18	400	28A-18	100	9-42
CH CHINOOK SALMON		1980 - 1989		50	28A-18	50	9-36
Comments: CH ESCAPEMENTS FOR 1980(50) ONLY. COHO RARELY ENUMERATED. (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	P X	X	
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X X	X X	P X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X	P X			
CH CHUM SALMON	Migration Spawning Incubation Rearing								X	X 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
CF COUNTING FENCE	SK SOCKEYE SALMON	0.0	PROPOSED BY SEP. (REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
RE RESERVES	UNDER APPLICATION AS ECOLOGICAL RESERVE STATUS. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. HIGH FISHERIES VALUE. GOOD SPAWNING THROUGHOUT LOWER 4.5 KM AND GOOD REARING IN MULTI-CHANNEL AREAS. (REF. 9-16)
ONE OF THE BEST PRODUCERS OF SK. VERY STABLE SYSTEM. HEAVY BEAR PREDATION. FISHERIES CABIN AT MOUTH. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : AMBACK CREEK

WATERSHED-CODE : 91-1282-150

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	35000	0	0	0	0	UNK
1954	7500	0	0	0	0	UNK
1955	7500	0	0	0	0	UNK
1956	15000	0	0	0	0	UNK
1957	35000	0	0	0	0	UNK
1958	35000	0	0	0	0	UNK
1959	75000	0	0	0	0	UNK
1960	15000	0	0	0	0	UNK
1961	15000	UNK	UNK	0	0	UNK
1962	75000	0	0	0	0	UNK
1963	75000	25	75	25	0	UNK
1964	75000	UNK	N/O	N/O	0	UNK
1965	3500	0	25	0	0	UNK
1966	15000	75	75	0	0	UNK
1967	3500	0	25	0	0	UNK
1968	35000	N/O	25	0	0	UNK
1969	15000	200	N/O	0	0	UNK
1970	15000	25	200	0	0	UNK
1971	55000	150	15	0	0	UNK
1972	37500	UNK	1000	0	0	UNK
1973	62500	75	UNK	0	0	UNK
1974	100000	3500	7500	UNK	0	UNK
1975	55000	N/O	N/O	N/O	0	UNK
1976	65000	N/O	2000	N/O	0	UNK
1977	33500	N/O	50	0	0	UNK
1978	25000	0	1500	0	0	UNK
1979	45000	100	N/O	25	0	UNK
1980	75000	0	2500	400	50	UNK
1981	180000	0	N/O	25	N/O	UNK
1982	90000	0	0	5	0	UNK
1983	50000	25	50	4	N/O	UNK
1984	25500	750	10	2	N/O	UNK
1985	52000	50	300	N/O	N/O	UNK
1986	45000	UNK	UNK	UNK	UNK	UNK
1987	17000	N/O	300	2	N/O	UNK
1988	40000	0	0	0	0	UNK
1989	50000	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

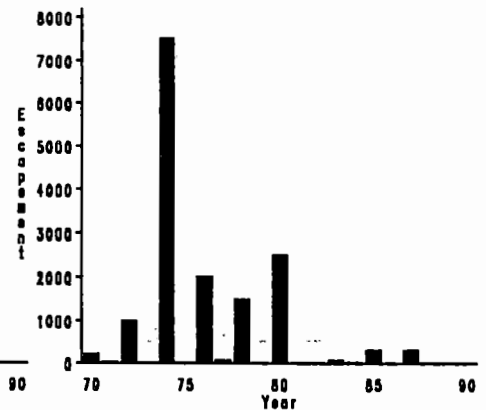
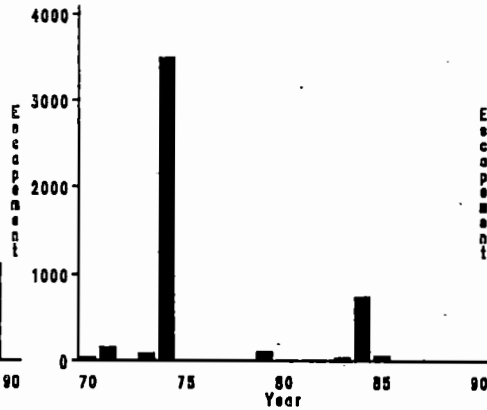
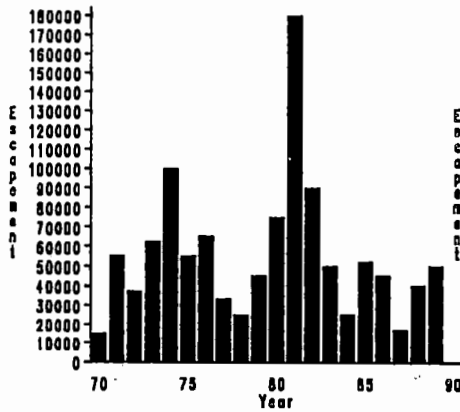
AMBACK CREEK (91-1282-150)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

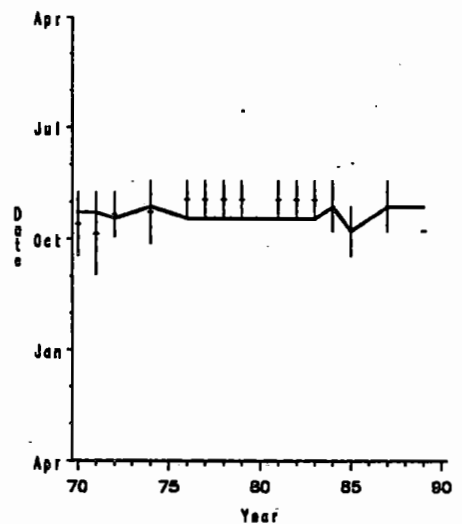
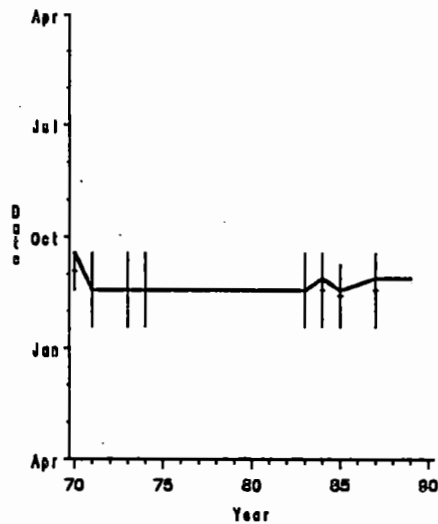
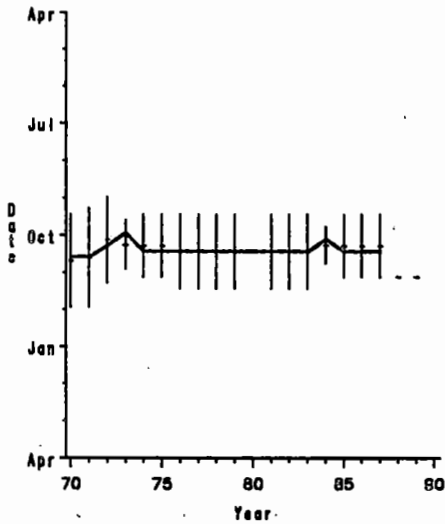
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	15,600	15SEP	20OCT	30NOV
1971	55,800	10SEP	20OCT	30NOV
1972	37,500	01SEP	10OCT	10NOV
1973	82,500	20SEP	30SEP	30OCT
1974	108,000	19SEP	15OCT	05NOV
1975	55,000	15SEP	15OCT	05NOV
1976	85,000	15SEP	15OCT	15NOV
1977	33,500	15SEP	15OCT	15NOV
1978	25,000	15SEP	15OCT	15NOV
1979	45,000	15SEP	15OCT	15NOV
1980	75,000	-	-	-
1981	180,000	15SEP	15OCT	15NOV
1982	98,000	19SEP	19OCT	19NOV
1983	58,000	15SEP	15OCT	15NOV
1984	25,500	25SEP	05OCT	25OCT
1985	52,000	15SEP	15OCT	05NOV
1986	45,000	15SEP	15OCT	05NOV
1987	17,000	15SEP	15OCT	05NOV
1988	48,000	-	-	05NOV
1989	58,000	-	-	05NOV

Coho				
Year	Escapement	Start	Peak	End
1970	25	15OCT	15OCT	15NOV
1971	150	15OCT	15NOV	15DEC
1972	-	-	-	-
1973	75	15OCT	15NOV	15DEC
1974	3,500	15OCT	15NOV	15DEC
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	100	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	25	15OCT	15NOV	15DEC
1984	750	15OCT	05NOV	15DEC
1985	50	25OCT	15NOV	15DEC
1986	-	-	-	-
1987	0	15OCT	05NOV	15DEC
1988	0	-	-	-
1989	0	-	05NOV	-

Pink				
Year	Escapement	Start	Peak	End
1970	200	25AUG	10SEP	15OCT
1971	15	25AUG	10SEP	31OCT
1972	1,000	25AUG	15SEP	30SEP
1973	-	-	-	-
1974	7,500	15AUG	05SEP	05OCT
1975	0	-	-	-
1976	2,000	15AUG	15SEP	15SEP
1977	50	15AUG	15SEP	15SEP
1978	1,500	15AUG	15SEP	15SEP
1979	0	15AUG	15SEP	15SEP
1980	2,500	-	-	-
1981	0	15AUG	15SEP	15SEP
1982	0	15AUG	15SEP	15SEP
1983	50	15AUG	15SEP	15SEP
1984	10	15AUG	05SEP	25SEP
1985	300	05SEP	25SEP	15OCT
1986	-	-	-	-
1987	300	15AUG	05SEP	25SEP
1988	0	-	-	-
1989	0	-	05SEP	25SEP

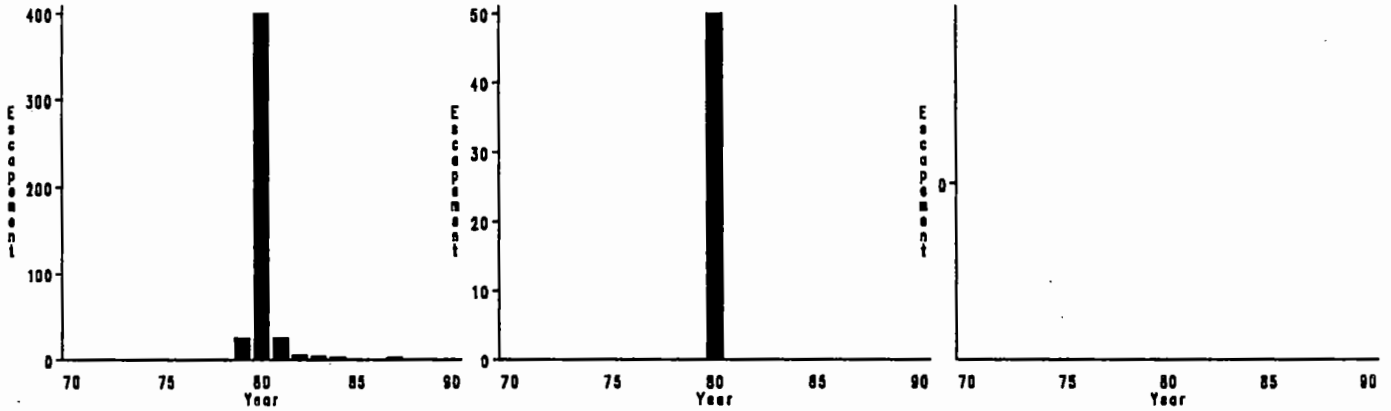
AMBACK CREEK (91-1282-150)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

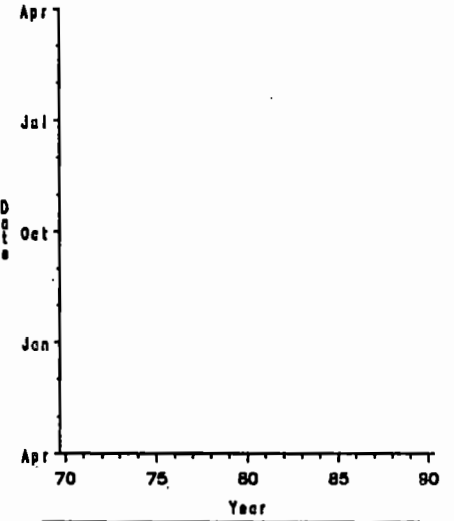
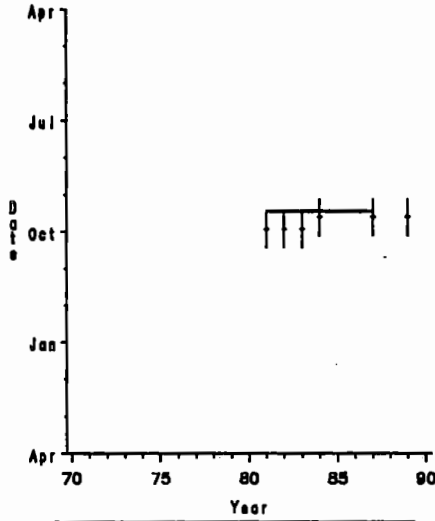
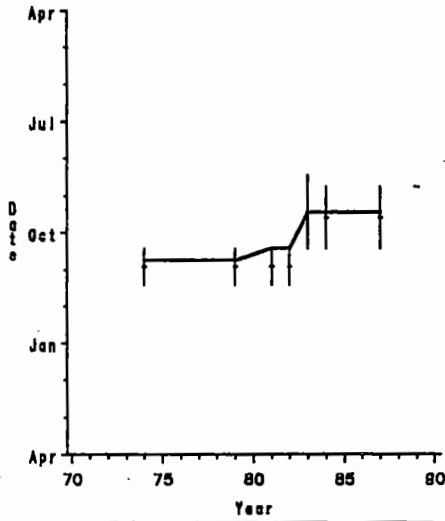
Steelhead (ST)



Chum

Chinook

Steelhead



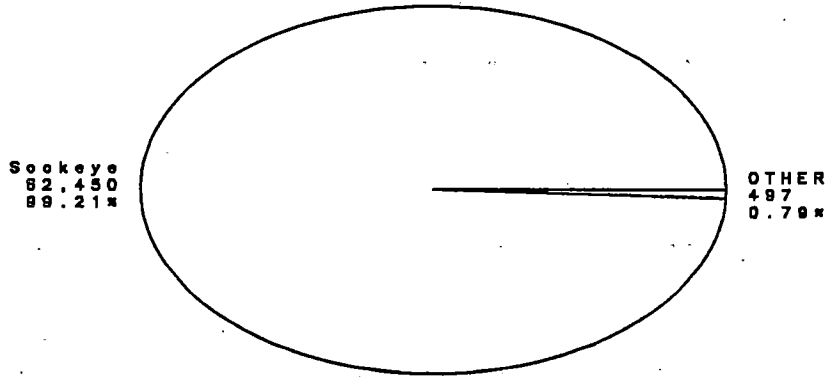
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	-	15OCT	25OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	25	15OCT	25OCT	15NOV
1980	400	-	-	-
1981	25	15OCT	15OCT	15NOV
1982	5	15OCT	15OCT	15NOV
1983	4	15AUG	15SEP	15OCT
1984	2	25AUG	15SEP	15OCT
1985	0	-	-	-
1986	-	-	-	-
1987	2	25AUG	15SEP	15OCT
1988	0	-	-	-
1989	0	25AUG	-	-

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	50	-	-	-
1981	0	15SEP	15SEP	15OCT
1982	0	13SEP	15SEP	15OCT
1983	0	15SEP	15SEP	15OCT
1984	0	05SEP	15SEP	05OCT
1985	0	-	-	-
1986	-	-	-	-
1987	0	05SEP	15SEP	05OCT
1988	0	-	-	-
1989	0	05SEP	-	05OCT

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	-	-	-	-

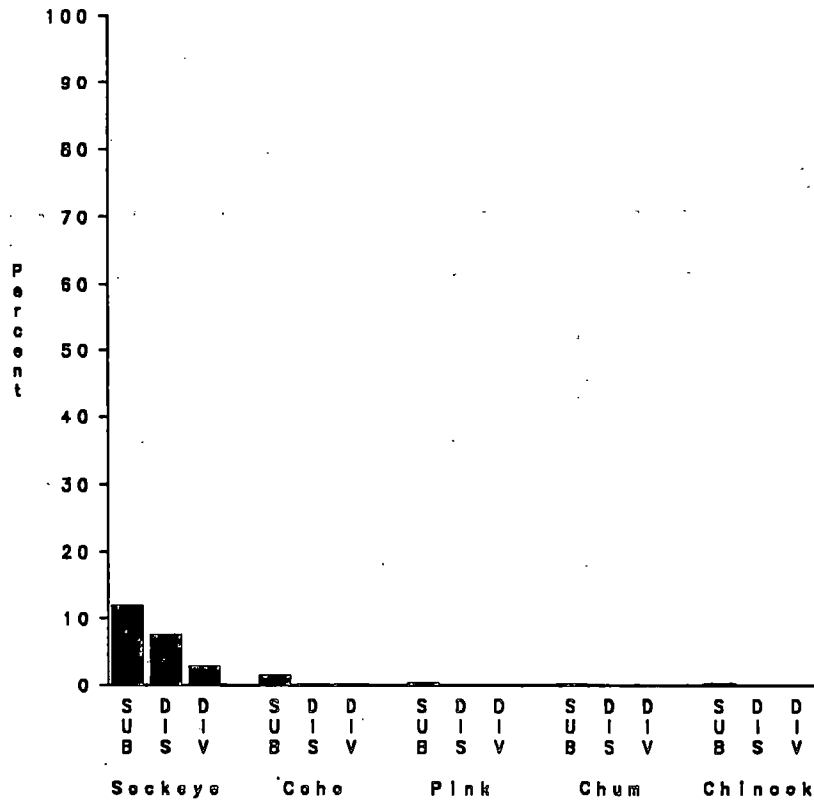
AMBACK CREEK (91-1282-150)

10-yr Mean Escapement
(1980-1989)



AMBACK CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: DALLERY CREEK	D.F.O. Division: NORTH COAST
Local Name: DALLAC CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1282-160	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6354.57263
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' ' '
		Mainstem Length: 19.6 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NE INTO OWIKENO LAKE, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	0.9% FOR LOWER 1.2 KM., 0.4% FOR NEXT 2.6 KM., 1.7% FOR NEXT 0.9 KM., 0.8% FOR NEXT 4.3 KM., ETC. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		0.3		THIS IS A RAPIDS AREA NEAR THE MOUTH - PASSABLE. (REF. 9-16)
C CASCADE		2.9		THIS CASCADE IS PASSABLE, BUT MOST SK SPAWNING OCCURS BELOW. (REF. 9-16, REF. 9-45)
C CASCADE		3.5	CM CHUM SALMON PK PINK SALMON SK SOCKEYE SALMON	PASSABLE TO ST. POSSIBLY PASSABLE TO CO AND CH. (REF. 9-16, REF. 4A-159)
C CASCADE		9.1		THIS CASCADE AREA IS PROBABLY IMPASSABLE TO ALL SPECIES. (REF. 9-16, REF. 4A-159)
R ROCK	6.0	12.1		(REF. 9-16)

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. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	SPAWNING MAINLY 1.8 KM TO 2.7 KM. DISTRIBUTED TO 3.5 KM. (REF. 9-4, REF. 9-16, REF. 9-45)
CO COHO SALMON	OBSERVED AT 2.8 KM. DISTRIBUTED TO AT LEAST 3.5 KM. (REF. 9-16, REF. 9-45)
PK PINK SALMON	SPAWNING MAINLY AT 1.0 KM TO 1.7 KM. NOT PRESENT ABOVE 3.5 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CM CHUM SALMON	SPAWNING MAINLY AT 1.0 KM TO 1.7 KM. NOT PRESENT ABOVE 3.5 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CH CHINOOK SALMON	OBSERVED AT 2.8 KM. DISTRIBUTED TO AT LEAST 3.5 KM. (REF. 9-4, REF. 9-16)
ST STEELHEAD	OBSERVED AT 5.5 KM. PROBABLY PRESENT TO 9.1 KM. (REF. 9-16, REF. 9-46)

D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
DV DOLLY VARDEN	PRESENT TO HEADWATERS ABOVE 10 KM. (REF. 4A-159)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	28050	1980 - 1989	28A-18	60000	28A-18	90000	9-42
CO COHO SALMON	151	1980 - 1989	28A-18	500	28A-18	5000	9-42
PK PINK SALMON	1308	1981 - 1989	28A-18	4000	28A-18	4000	9-42
PK PINK SALMON	3750	1980 - 1988	28A-18	12000	28A-18		
CM CHUM SALMON	21	1980 - 1989	28A-18	50	28A-18	50	9-42
CH CHINOOK SALMON	20	1980 - 1989	28A-18	50	28A-18	500	9-36

Comments: CO RARELY ENUMERATED. (REF. 9-42)

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	P X		
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X X	X P	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X X	P X			
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X	P 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	AREA IS UNDER APPLICATION FOR LOGGING BY 3 DIFFERENT COMPANIES AS OF 1989. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUSCEPTIBLE TO FLOODING. (REF. 9-4)

BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. THE WATERSHED WOULD BE FAIRLY SENSITIVE TO TIMBER HARVESTING DEVELOPMENT, DUE TO THE STEEP VALLEY WALLS. EXTENSIVE WETLANDS IN THE VALLEY BOTTOM PROVIDE VALUABLE REARING HABITAT, AND MAY HELP REDUCE ANY IMPACTS TO THE MAIN CHANNEL. UPPER LIMIT OF DISTRIBUTION FOR SK, CO, AND CH IS UNCLEAR. NONE OF THESE SPECIES HAVE BEEN CONFIRMED PRESENT ABOVE THE CASCADE AT 3.5 KM. (AS OF 1990). (REF. 9-16, REF. 4A-159)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /

Prepared By:

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO
Checked by: TOM PENDRAY
Last checked by: TOM PENDRAY

Date: 1989/03/31
Date: 1989/03/31
Date: 1992/01/09

ESCAPEMENT : DALLERY CREEK

WATERSHED-CODE : 91-1282-160

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	75000	0	0	0	0	UNK
1954	65000	0	0	0	0	UNK
1955	100000	N/O	N/O	N/O	0	UNK
1956	75000	0	0	0	UNK	UNK
1957	35000	0	0	0	0	UNK
1958	15000	N/O	0	0	UNK	UNK
1959	100000	0	0	0	0	UNK
1960	35000	0	0	0	0	UNK
1961	35000	0	UNK	0	UNK	UNK
1962	27500	0	0	0	0	UNK
1963	125000	0	N/O	0	UNK	UNK
1964	100000	UNK	N/O	0	N/O	UNK
1965	15000	750	75	0	200	UNK
1966	15000	UNK	N/O	0	75	UNK
1967	3500	UNK	25	0	200	UNK
1968	15000	UNK	0	0	75	UNK
1969	7500	400	0	0	200	UNK
1970	15000	UNK	UNK	0	75	UNK
1971	20000	UNK	N/O	0	40	UNK
1972	9000	UNK	5000	0	100	UNK
1973	22500	UNK	N/O	0	75	UNK
1974	22500	UNK	4000	UNK	75	UNK
1975	45000	N/O	300	0	30	UNK
1976	12000	500	700	0	N/O	UNK
1977	18000	50	400	50	80	UNK
1978	15000	50	150	N/O	N/O	UNK
1979	15000	N/O	400	25	N/O	UNK
1980	25000	0	750	0	50	UNK
1981	40000	50	450	25	50	UNK
1982	60000	400	N/O	25	25	UNK
1983	37500	400	900	25	25	UNK
1984	22000	500	N/O	50	N/O	UNK
1985	37000	N/O	4000	30	10	UNK
1986	30000	UNK	12000	UNK	UNK	UNK
1987	21500	N/O	200	N/O	N/O	UNK
1988	5000	N/O	6000	10	6	UNK
1989	2500	10	1800	25	12	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

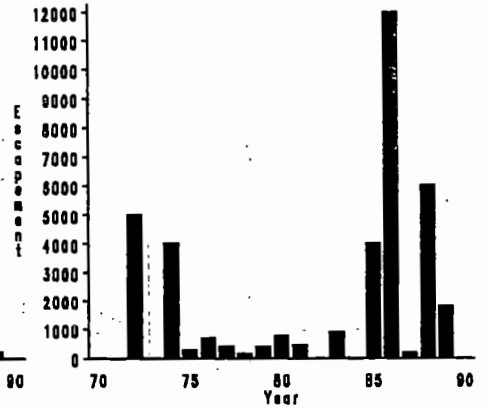
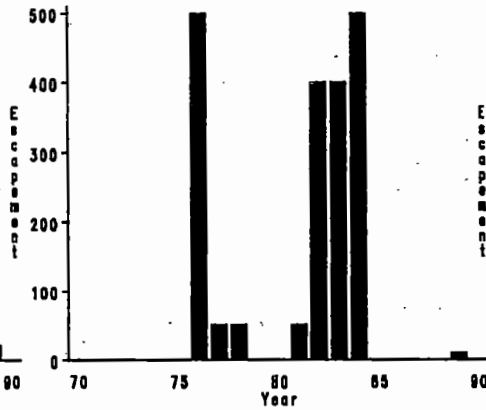
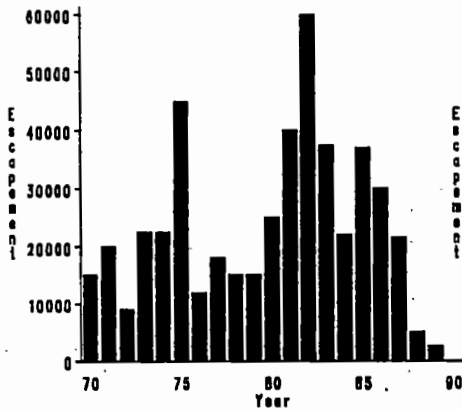
DALLERY CREEK (91-1282-160)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

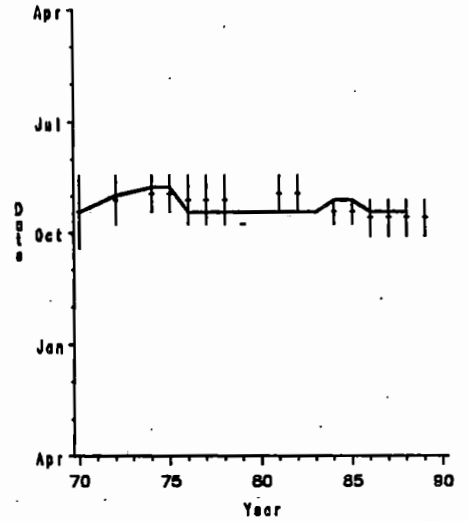
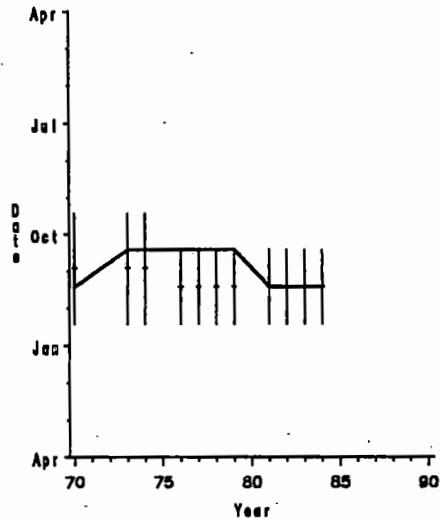
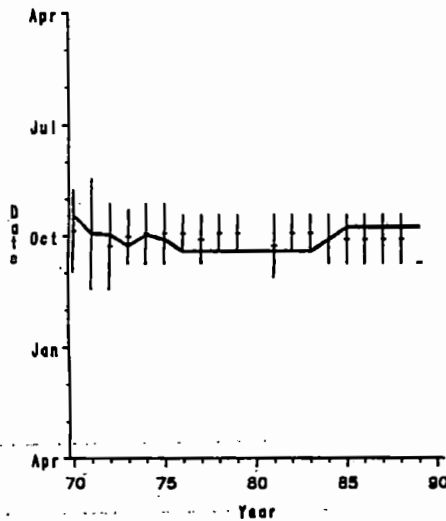
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	15,000	25AUG	15SEP	31OCT
1971	20,000	15AUG	30SEP	15NOV
1972	8,000	05SEP	01OCT	15NOV
1973	22,500	10SEP	10OCT	25OCT
1974	22,500	05SEP	01OCT	25OCT
1975	45,000	05SEP	05OCT	25OCT
1976	12,000	15SEP	15OCT	15OCT
1977	10,000	15SEP	15OCT	25OCT
1978	15,000	15SEP	15OCT	15OCT
1979	15,000	15SEP	15OCT	15OCT
1980	25,000	-	-	-
1981	40,000	15SEP	15OCT	05NOV
1982	60,000	15SEP	15OCT	19OCT
1983	37,500	15SEP	15OCT	19OCT
1984	21,000	15SEP	05OCT	25OCT
1985	37,000	15SEP	25SEP	25OCT
1986	30,000	15SEP	25SEP	25OCT
1987	21,500	15SEP	25SEP	25OCT
1988	5,000	15SEP	25SEP	25OCT
1989	2,500	-	25SEP	25OCT

Coho				
Year	Escapement	Start	Peak	End
1970	-	15SEP	15NOV	15DEC
1971	-	-	-	-
1972	-	-	-	-
1973	-	15SEP	15OCT	15DEC
1974	-	15SEP	15OCT	15DEC
1975	500	-	-	-
1976	500	15OCT	15OCT	15DEC
1977	50	15OCT	15OCT	15DEC
1978	50	15OCT	15OCT	15DEC
1979	0	15OCT	15OCT	15DEC
1980	0	-	-	-
1981	50	15OCT	15NOV	15DEC
1982	400	15OCT	15NOV	15DEC
1983	400	15OCT	15NOV	15DEC
1984	500	15OCT	15NOV	15DEC
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	10	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	-	15AUG	15SEP	15OCT
1971	0	-	-	-
1972	5,000	15AUG	01SEP	25SEP
1973	0	-	-	-
1974	4,000	15AUG	25AUG	15SEP
1975	300	15AUG	25AUG	15SEP
1976	700	15AUG	15SEP	25SEP
1977	400	15AUG	15SEP	25SEP
1978	150	15AUG	15SEP	25SEP
1979	400	-	15SEP	25SEP
1980	750	-	-	-
1981	450	15AUG	15SEP	15SEP
1982	0	15AUG	15SEP	15SEP
1983	0	15SEP	15SEP	15SEP
1984	0	05SEP	05SEP	25SEP
1985	4,000	05SEP	05SEP	25SEP
1986	12,000	05SEP	15SEP	05OCT
1987	200	05SEP	15SEP	05OCT
1988	6,000	05SEP	15SEP	05OCT
1989	1,800	05SEP	-	05OCT

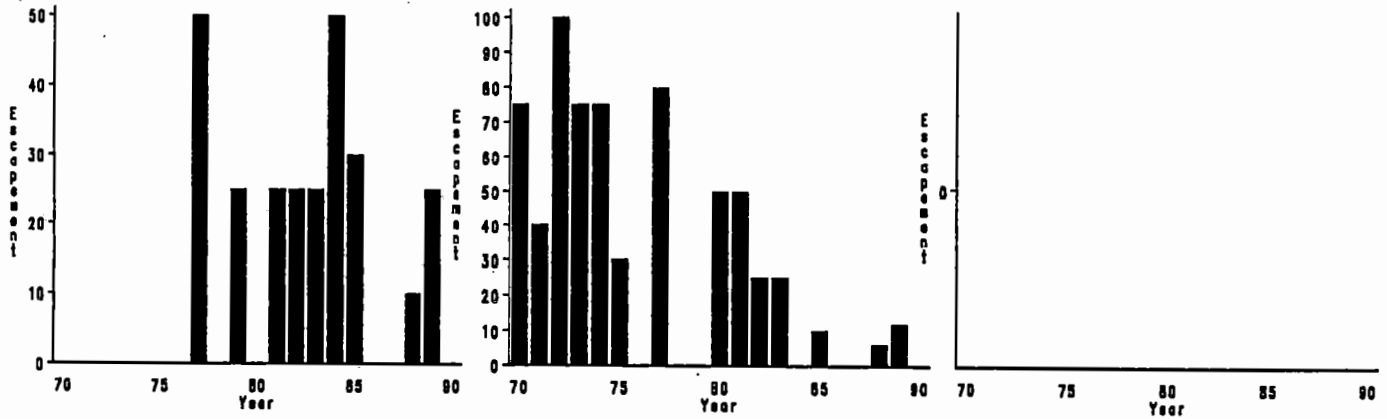
DALLERY CREEK (91-1282-160)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

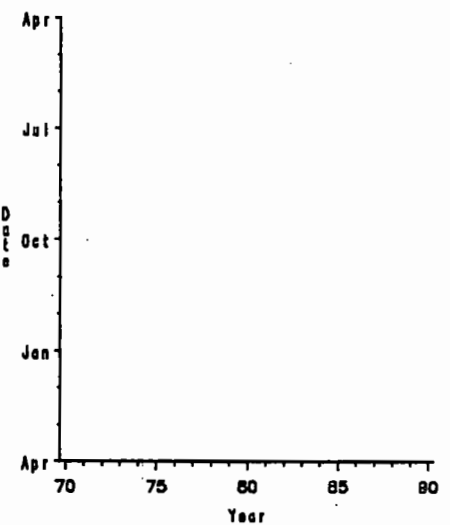
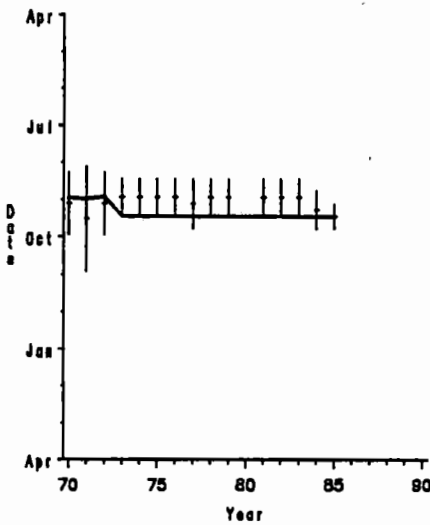
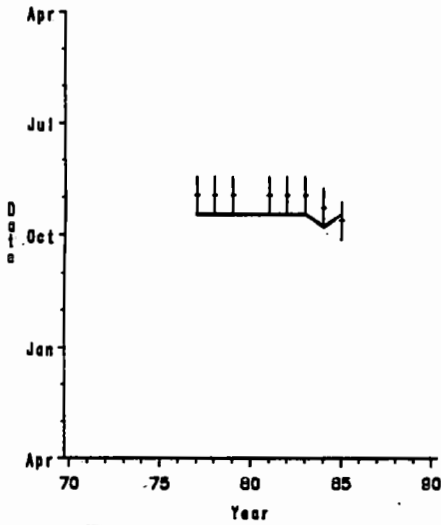
Steelhead (ST)



Chum

Chinook

Steelhead



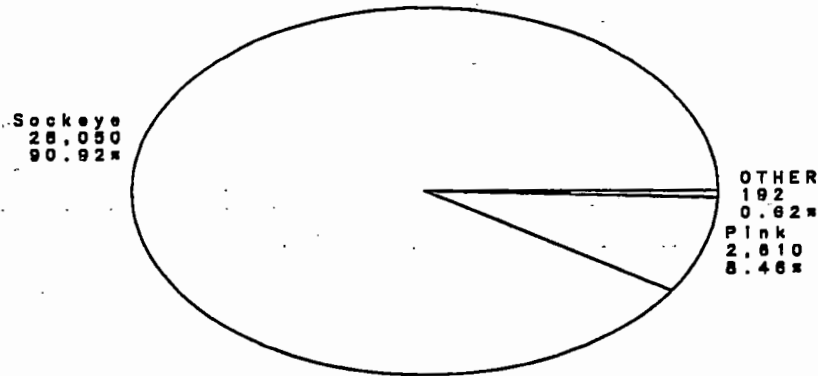
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	50	15AUG	15SEP	15SEP
1978	0	15AUG	15SEP	15SEP
1979	25	15AUG	15SEP	15SEP
1980	0	-	-	-
1981	25	15AUG	15SEP	15SEP
1982	25	15AUG	15SEP	15SEP
1983	25	15AUG	15SEP	15SEP
1984	50	25AUG	25SEP	25SEP
1985	30	05SEP	15SEP	05OCT
1986	-	-	-	-
1987	0	-	-	-
1988	10	-	-	-
1989	25	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	75	18AUG	31AUG	30SEP
1971	40	05AUG	01SEP	30OCT
1972	100	18AUG	30AUG	30SEP
1973	75	15AUG	15SEP	15SEP
1974	75	15AUG	15SEP	15SEP
1975	30	15AUG	15SEP	15SEP
1976	0	15AUG	15SEP	15SEP
1977	80	15AUG	15SEP	25SEP
1978	0	15AUG	15SEP	15SEP
1979	0	15AUG	15SEP	15SEP
1980	50	-	-	-
1981	50	15AUG	15SEP	15SEP
1982	25	15AUG	15SEP	15SEP
1983	25	15AUG	15SEP	15SEP
1984	0	25AUG	15SEP	25SEP
1985	10	05SEP	15SEP	25SEP
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	12	-	-	-

Steelhead				
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	-	-	-	-

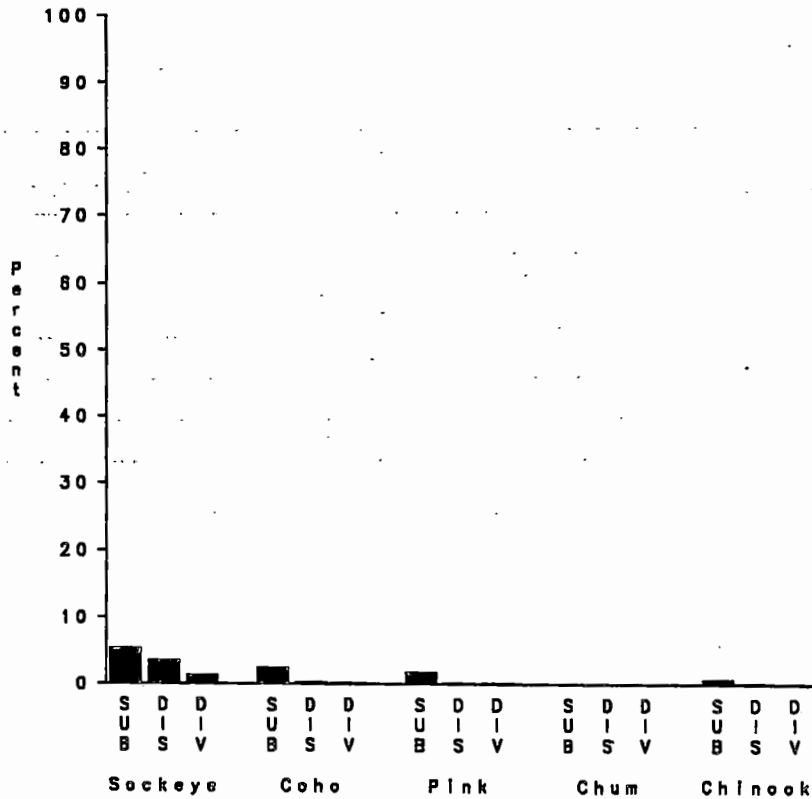
DALLERY CREEK (91-1282-160)

10-yr Mean Escapement
(1980-1989)



DALLERY CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: ASHLULM CREEK	D.F.O. Division: NORTH COAST
Local Name: ASKLUM CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1282-320	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/10
		B.C.G.S. (1:20k) Map: 9.6453.57284
		U.T.M. Mouth: 9.6453.57284
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 15.4 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows SE INTO OWIKENO LAKE, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	1.5% FOR LOWER 6.7 KM. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		5.0		RAPIDS - MAIN SK SPANNING OCCURS BELOW THIS POINT. (REF. 9-4, REF. 9-16)
C CASCADE		7.0		ONE OF A SERIES OF CASCADES BETWEEN 6.7 AND 8.7 KM. NO ANADROMOUS SPECIES FOUND ABOVE THIS POINT DURING THE 1985 SURVEY. (REF. 9-16)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY A SMALL LAKE. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	JUVENILES OBSERVED AT 6.7 KM. - MAIN SPANNING IS BELOW 5 KM. (REF. 9-4, REF. 9-16)
CO COHO SALMON	JUVENILES OBSERVED AT 6.7 KM. (REF. 9-4, REF. 9-16)
PK PINK SALMON	MAINLY SPAWN BELOW 5 KM. (REF. 9-4, REF. 9-16)
CM CHUM SALMON	VERY FEW PRESENT. MAINLY BELOW 5 KM. (REF. 9-4, REF. 9-16)
CH CHINOOK SALMON	JUVENILES OBSERVED AT 6.7 KM. (REF. 9-4, REF. 9-16)
CT CUTTHROAT TROUT	PRESENT. (REF. 9-16)
OV DOLLY VARDEN	PRESENT THROUGHOUT. OBSERVED AT 10.3 KM. (REF. 9-16)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	23220	1980 - 1989	28A-18	47500	28A-18	40000	9-42
CO COHO SALMON		1980 - 1989				200	9-42
PK PINK SALMON	1050	1980 - 1988	28A-18	2000	28A-18	750	9-42
PK PINK SALMON	554	1981 - 1989	28A-18	1400	28A-18		
CM CHUM SALMON	74	1980 - 1989	28A-18	200	28A-18	50	9-42
CH CHINOOK SALMON	21	1980 - 1989	28A-18	60	28A-18	150	9-36

Comments: CO RARELY ENUMERATED - LAST RECORDED IN 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 P	X X		
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X	X P	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X X	P X	X		
CM CHUM SALMON	Migration Spawning Incubation Rearing							X	X X X	P X			
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. 15% BANK EROSION, DEPOSITION OF MATERIALS AT CREEK MOUTH. CHANNEL SCOURING HAS DETERIORATED THE SPAWNING GROUNDS. LOW WATER LEVELS THROUGHOUT THE SPAWNING SEASON. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. GOOD SPAWNING HABITAT THROUGHOUT LOWER 6.7 KM. HIGH FISHERIES VALUE. REARING AREA IS NOT EXTENSIVE DUE TO THE LACK OF OFF-CHANNEL HABITAT. (REF. 9-16)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : ASHLULM CREEK

WATERSHED-CODE : 91-1282-320

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	15000	0	0	0	0	UNK
1954	300	N/O	N/O	N/O	N/O	UNK
1955	3500	0	0	0	0	UNK
1956	15000	0	0	0	0	UNK
1957	15000	0	0	0	0	UNK
1958	35000	0	0	0	0	UNK
1959	3500	0	75	0	0	UNK
1960	400	0	0	0	0	UNK
1961	3500	UNK	UNK	UNK	UNK	UNK
1962	3500	0	0	0	0	UNK
1963	20000	0	0	0	N/O	UNK
1964	3500	N/O	N/O	N/O	N/O	UNK
1965	75	N/O	N/O	N/O	N/O	UNK
1966	1500	N/O	N/O	N/O	UNK	UNK
1967	750	N/O	N/O	0	N/O	UNK
1968	35000	UNK	0	0	0	UNK
1969	750	N/O	0	0	0	UNK
1970	750	25	25	0	0	UNK
1971	1300	N/O	25	0	10	UNK
1972	1500	N/O	75	5	N/O	UNK
1973	27500	25	N/O	0	25	UNK
1974	9000	75	1500	0	N/O	UNK
1975	4500	N/O	300	0	N/O	UNK
1976	4000	N/O	200	0	0	UNK
1977	3000	N/O	400	50	20	UNK
1978	22500	0	0	50	0	UNK
1979	8000	N/O	0	50	N/O	UNK
1980	5000	0	800	50	25	UNK
1981	25000	0	300	50	25	UNK
1982	15000	0	50	N/O	50	UNK
1983	35000	0	450	30	20	UNK
1984	7000	N/O	900	200	N/O	UNK
1985	28700	N/O	1400	150	4	UNK
1986	47500	UNK	1500	10	60	UNK
1987	32000	N/O	22	1	12	UNK
1988	25000	N/O	2000	50	10	UNK
1989	12000	N/O	600	200	3	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

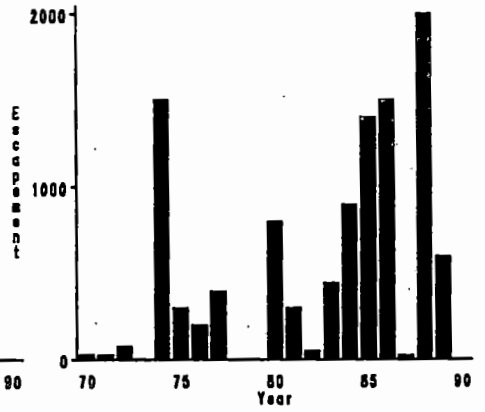
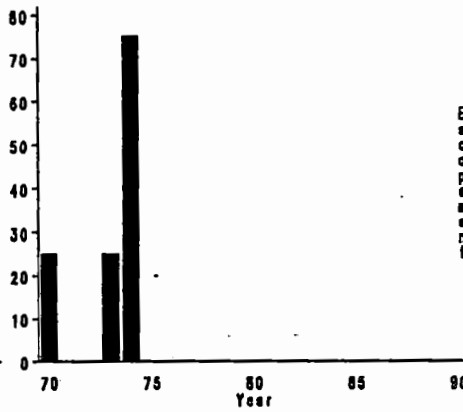
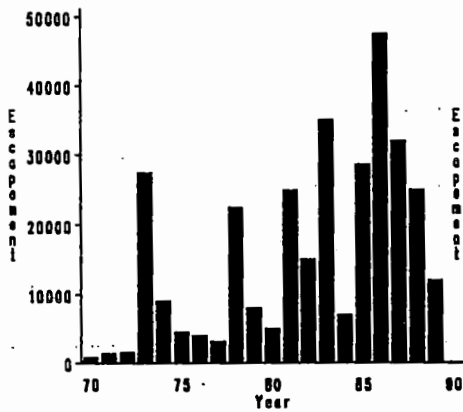
ASHLUM CREEK (91-1282-320)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

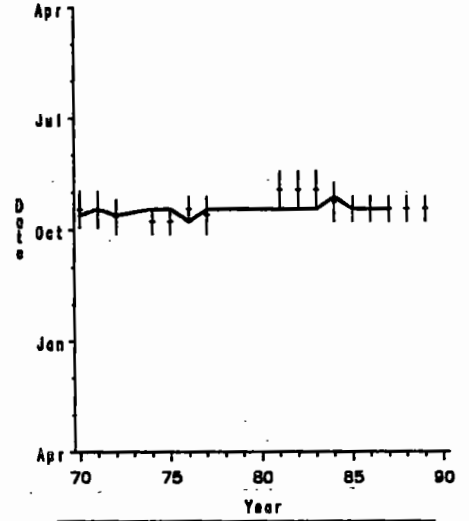
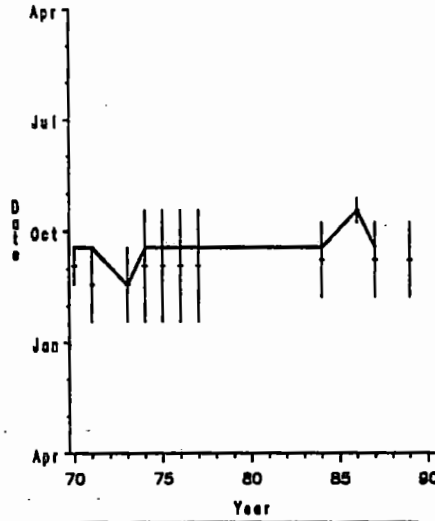
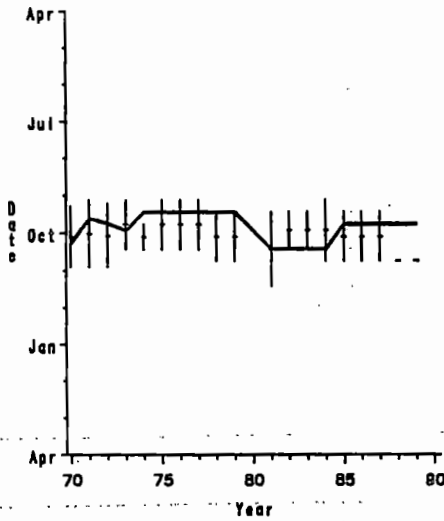
Pink (PK)



Sockeye

Coho

Pink



Year	Escapement	Start	Peak	End
1970	750	10SEP	10OCT	30OCT
1971	1,300	05SEP	20SEP	30OCT
1972	1,500	08SEP	24SEP	30OCT
1973	27,500	05SEP	30SEP	15OCT
1974	8,000	25SEP	15SEP	15OCT
1975	4,500	05SEP	15SEP	15OCT
1976	4,000	05SEP	15SEP	15OCT
1977	3,000	05SEP	15SEP	15OCT
1978	21,500	15SEP	15SEP	25OCT
1979	8,000	15SEP	15SEP	25OCT
1980	5,000	-	-	-
1981	25,000	15SEP	15OCT	15NOV
1982	15,000	15SEP	15OCT	15OCT
1983	35,000	15SEP	15OCT	15OCT
1984	7,000	05SEP	15OCT	25OCT
1985	26,700	15SEP	25SEP	25OCT
1986	47,500	15SEP	25SEP	25OCT
1987	32,000	15SEP	25SEP	25OCT
1988	25,000	-	25SEP	25OCT
1989	12,000	-	25SEP	25OCT

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

Year	Escapement	Start	Peak	End
1970	25	01SEP	20SEP	30SEP
1971	25	01SEP	15SEP	30SEP
1972	75	08SEP	20SEP	05OCT
1973	0	-	-	-
1974	1,500	15SEP	15SEP	05OCT
1975	300	15SEP	15SEP	05OCT
1976	200	05SEP	25SEP	25SEP
1977	400	05SEP	15SEP	05OCT
1978	0	-	-	-
1979	0	-	-	-
1980	800	-	-	-
1981	300	15AUG	15SEP	15SEP
1982	90	15AUG	15SEP	15SEP
1983	450	15AUG	15SEP	15SEP
1984	900	25AUG	05SEP	25SEP
1985	1,400	05SEP	15SEP	25SEP
1986	1,500	05SEP	15SEP	25SEP
1987	22	05SEP	15SEP	25SEP
1988	2,000	05SEP	-	25SEP
1989	800	05SEP	-	25SEP

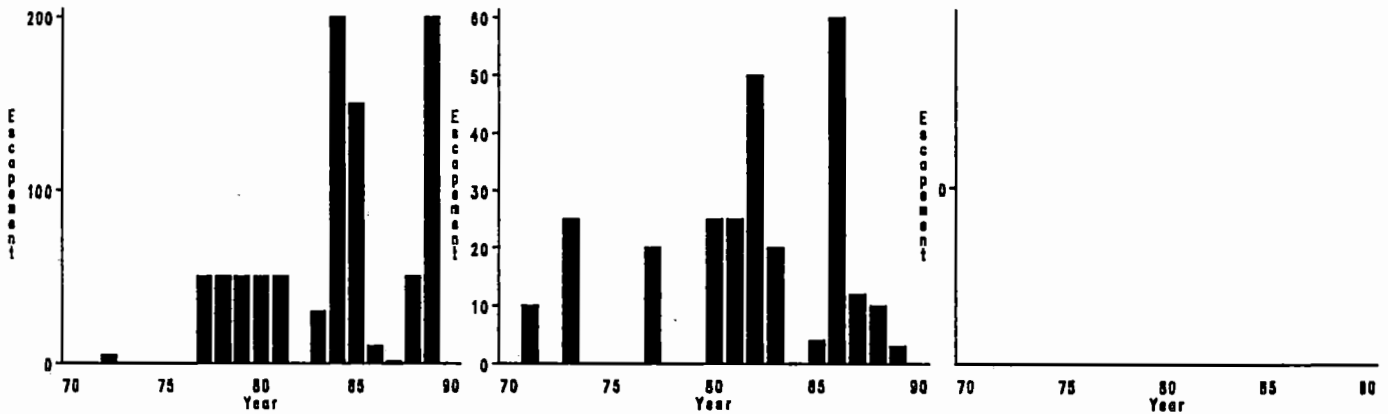
ASHLUM CREEK (91-1282-320)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

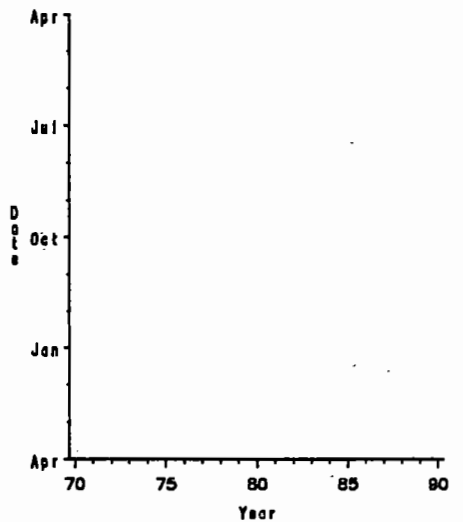
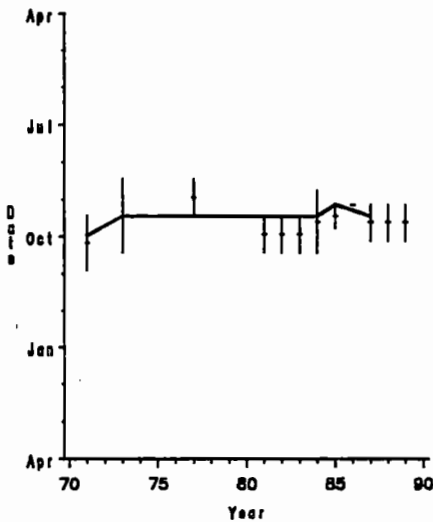
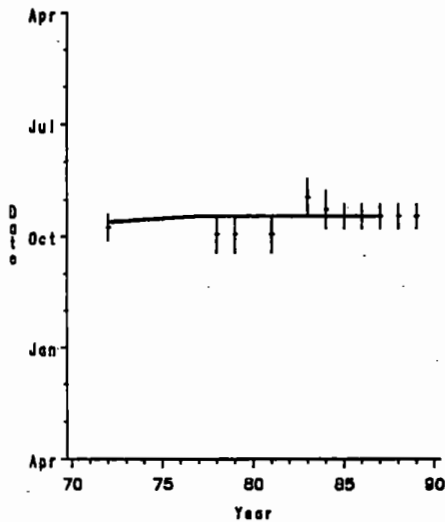
Steelhead (ST)



Chum

Chinook

Steelhead



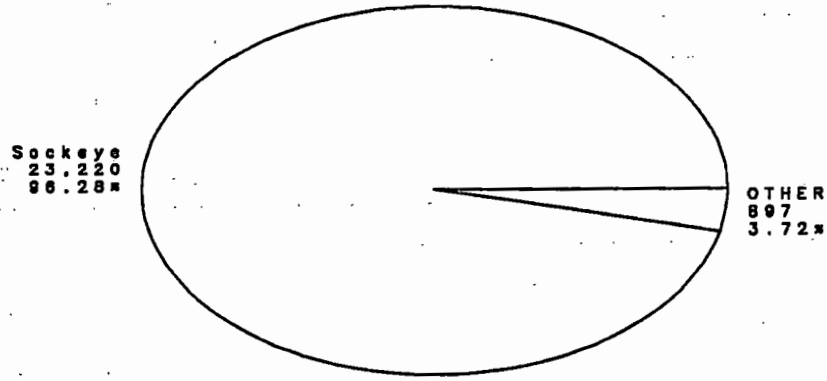
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	5	14SEP	20SEP	05OCT
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	50	15SEP	15SEP	15SEP
1978	50	15SEP	15SEP	15OCT
1979	50	15SEP	15SEP	15OCT
1980	50	-	-	-
1981	50	15SEP	15SEP	15OCT
1982	0	-	-	-
1983	30	15AUG	15SEP	15SEP
1984	200	25AUG	15SEP	25SEP
1985	150	05SEP	15SEP	25SEP
1986	10	05SEP	15SEP	25SEP
1987	1	05SEP	15SEP	25SEP
1988	50	05SEP	-	25SEP
1989	200	05SEP	-	25SEP

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	10	15SEP	01OCT	30OCT
1972	0	-	-	-
1973	25	15AUG	15SEP	15OCT
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	20	15AUG	15SEP	15SEP
1978	0	-	-	-
1979	0	-	-	-
1980	25	-	-	-
1981	25	15SEP	15SEP	15OCT
1982	50	15SEP	15SEP	15OCT
1983	20	15SEP	15SEP	15OCT
1984	0	25AUG	15SEP	15OCT
1985	4	05SEP	05SEP	25SEP
1986	00	05SEP	-	-
1987	12	05SEP	15SEP	05OCT
1988	10	05SEP	-	05OCT
1989	3	05SEP	-	05OCT

Steelhead				
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	-	-	-	-

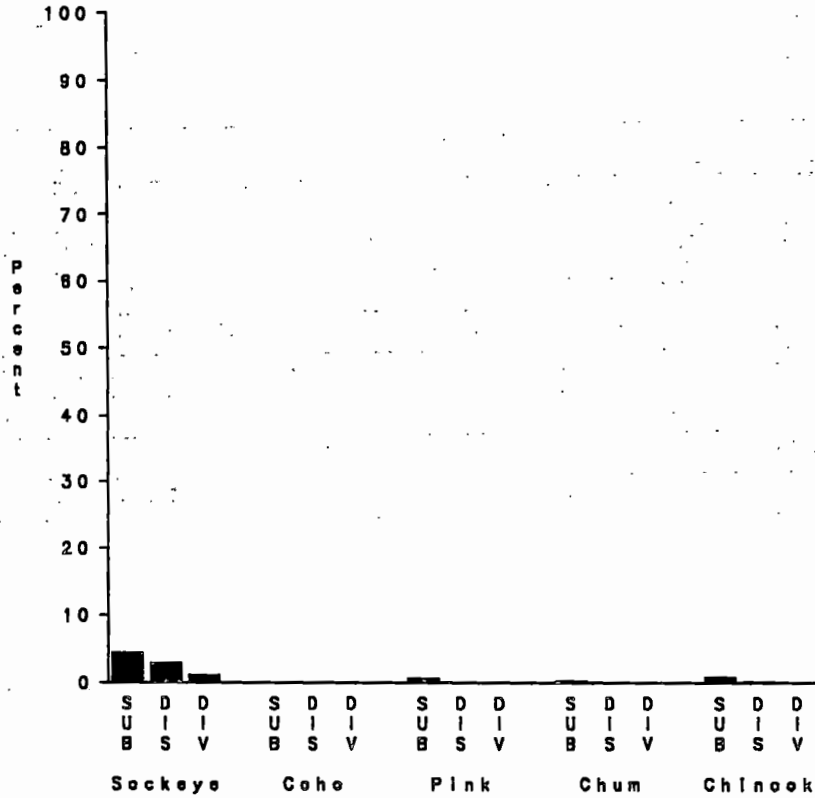
ASHLULM CREEK (91-1282-320)

10-yr Mean Escapement
(1980-1989)



ASHLULM CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: MACHMELL RIVER	D.F.O. Division: NORTH COAST
Local Name: MARKWELL RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-1282-550	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92N/10
NEECHANZ RIVER UNNAMED CREEK	010	B.C.G.S. (1:20k) Map:
	050	U.T.M. Mouth: 9.6593.57250
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 67.2 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS NW INTO OWIKENO LAKE, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	FURTHER GRADIENT INFO AVAILABLE. (REF. 9-16)
0.0- 8.3 8.3- 17.2 17.2- 22.3	

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
R ROCK	4.0	22.2	AF ALL SPECIES	FIRST OF A SERIES OF FALLS WHICH ARE PROBABLY IMPASSABLE TO ALL SPECIES. (REF. 9-16)
R ROCK	3.0	22.5		(REF. 9-16)
R ROCK	3.0	22.7		(REF. 9-16)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: GLACIALLY CONTROLLED FLOW WITH VERY HIGH TURBIDITY IN SUMMER. (REF. 9-16)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	OBSERVED SPawning IN TRIBUTARIES UP TO "CLEAR CREEK". SUSPECT PRESENT TO 22 KM. (REF. 9-4, REF. 9-16, REF. 296-43)
CO COHO SALMON	OBSERVED AT 7.3 KM AND IN TRIBUTARIES. SUSPECT PRESENT TO 22 KM. (REF. 9-4, REF. 9-16)
PK PINK SALMON	IN NEECHANZ RIVER. PROBABLY SOME SPawning IN LOWER 8 KM. OF MAINSTEM. (REF. 9-4, REF. 9-16)
CH CHUM SALMON	IN NEECHANZ RIVER. PROBABLY SOME SPawning IN LOWER 8 KM. OF MAINSTEM. (REF. 9-16)
CH CHINOOK SALMON	IN NEECHANZ RIVER. ALSO SUSPECT PRESENT TO 22 KM. IN MAINSTEM. (REF. 9-4, REF. 9-16, REF. 9-36)
ST STEELHEAD	OBSERVED AT 7.3 KM AND IN TRIBUTARIES. SUSPECT PRESENT TO 22 KM. (REF. 9-4, REF. 9-16)
CT CUTTHROAT TROUT	OBSERVED AT 7.3 KM AND IN TRIBUTARIES. (REF. 9-16)
DV DOLLY VARDEN	PRESENT THROUGHOUT TO ABOVE CANYON. OBSERVED AT 36.0 KM AND IN TRIBUTARIES. (REF. 9-16)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	21100	1980 - 1989	28A-18	80000	28A-18	50000	9-42
CO COHO SALMON		-				1000	9-42
CH CHUM SALMON		1980 - 1989		12	28A-18		
Comments: CO RARELY ENUMERATED. (REF. 9-42)							
CO LAST REPORTED 1979(200) (REF. 28A-18)							
CH ESCAPEMENT FOR 1985(12) 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	P X	X X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
EN ENHANCEMENT ACTS	AF ALL SPECIES		(REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING COMMENCED IN THE WATERSHED IN 1979. (REF. 9-4)
LD LINEAR DEVELOPMENT	LOGGING ROAD CONSTRUCTION COMMENCED. BRIDGE CROSSING RIVER AT 7 KM (1978). TRAINING DYKES HAVE BEEN NECESSARY TO PROTECT LOGGING ROAD IN SEVERAL AREAS. (REF. 9-4, REF. 9-47)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

A SILT LADEN, GLACIAL RIVER, FLOWING IN BRAIDED CHANNELS OVER AN OUTWASH PLAIN. OFTEN THREATENS TO SHIFT COURSE INTO THE GENESEE CREEK AND DAMAGE SPAWNING GROUNDS. THE LOWER CHANNEL FLOWING THROUGH THE DELTA IS ESPECIALLY UNSTABLE. FLOODING IN DECEMBER 1980, CAUSED EXTENSIVE DAMAGE THROUGHOUT THE SYSTEM. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. SK, CO, CH, ST MAY BE PRESENT TO 22 KM. FISHERIES VALUES ARE CONCENTRATED IN THE LOWER 12.3 KM., ESPECIALLY IN THE SIDE CHANNEL AREAS. ABOVE THIS, THE STEEPER GRADIENT CANYON PROBABLY HAS LOWER UTILIZATION. THIS SYSTEM IS GENERALLY NOT VERY SENSITIVE TO TIMBER HARVESTING, BEING GLACIALLY CONTROLLED. (REF. 9-16)
"CLEAR CREEK" IS A GOOD INDICATOR AS TO THE CONDITION OF FISH POPULATIONS IN THE REST OF THE SYSTEM BECAUSE OF ITS GOOD VISIBILITY. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : MACHMELL RIVER

WATERSHED-CODE : 91-1282-550

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	0	0	0	0	UNK
1956	UNK	0	0	0	0	UNK
1957	N/O	0	0	0	0	UNK
1958	UNK	0	0	0	0	UNK
1959	N/O	0	0	0	0	UNK
1960	UNK	0	0	0	0	UNK
1961	0	0	0	0	0	UNK
1962	0	0	0	0	0	UNK
1963	UNK	0	0	0	0	UNK
1964	UNK	0	0	0	0	UNK
1965	N/O	0	0	0	0	UNK
1966	UNK	0	0	0	0	UNK
1967	UNK	0	0	0	0	UNK
1968	UNK	0	0	0	0	UNK
1969	UNK	0	0	0	0	UNK
1970	N/O	0	0	0	0	UNK
1971	N/O	0	0	0	0	UNK
1972	2500	0	0	0	0	UNK
1973	12500	UNK	0	0	UNK	UNK
1974	10000	UNK	0	0	UNK	UNK
1975	7500	0	0	0	0	UNK
1976	7000	0	0	0	0	UNK
1977	2000	0	0	0	0	UNK
1978	15000	UNK	0	0	0	UNK
1979	35000	200	0	0	0	UNK
1980	17500	0	0	0	0	UNK
1981	20000	N/O	0	0	0	UNK
1982	80000	N/O	0	0	0	UNK
1983	37000	0	0	0	0	UNK
1984	5000	N/O	N/O	N/O	N/O	UNK
1985	10000	N/O	N/O	12	N/O	UNK
1986	5000	UNK	UNK	UNK	UNK	UNK
1987	1500	N/O	0	0	0	UNK
1988	30000	0	0	0	0	UNK
1989	5000	N/O	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

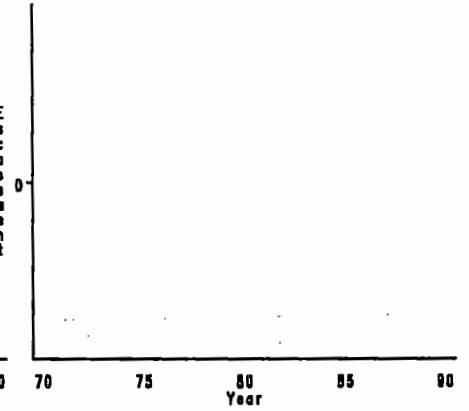
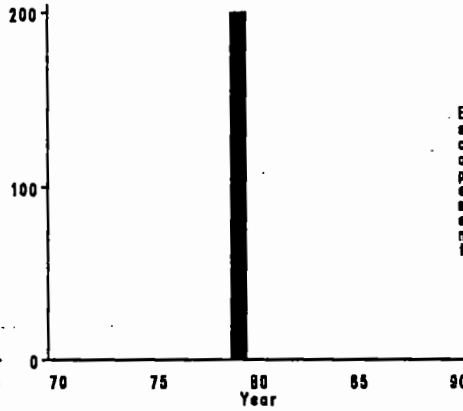
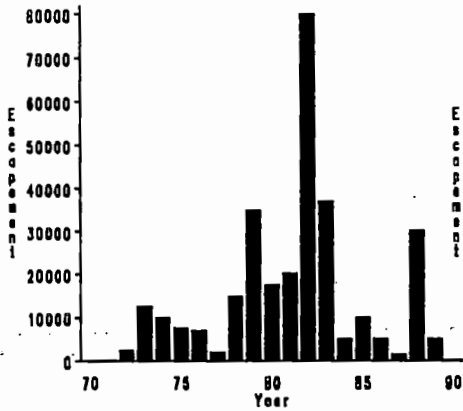
MACHMELL RIVER (91-1282-550)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

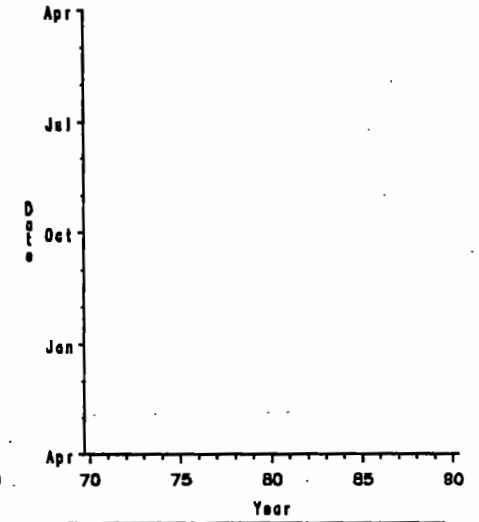
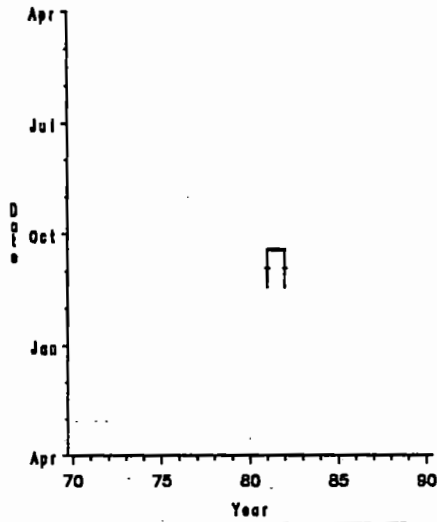
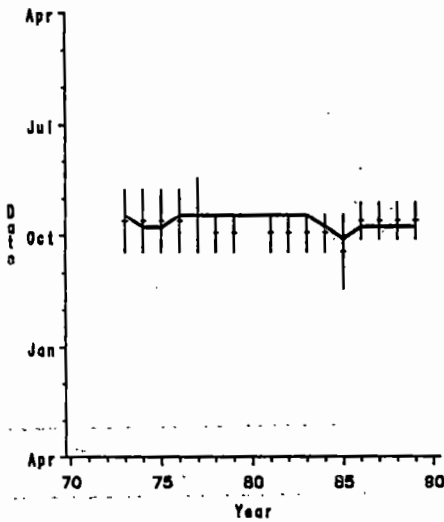
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	2,500	-	-	-
1973	12,500	25AUG	15SEP	15OCT
1974	18,000	25AUG	25SEP	15OCT
1975	7,500	25AUG	25SEP	15OCT
1976	7,000	25AUG	15SEP	15OCT
1977	2,000	15AUG	15SEP	15OCT
1978	15,000	15SEP	15SEP	15OCT
1979	35,000	15SEP	15SEP	15OCT
1980	17,500	-	-	-
1981	28,000	15SEP	15SEP	15OCT
1982	80,000	15SEP	15SEP	15OCT
1983	37,000	15SEP	15SEP	15OCT
1984	5,000	15SEP	25SEP	15OCT
1985	18,000	15SEP	05OCT	15NOV
1986	5,000	05SEP	25SEP	05OCT
1987	1,500	05SEP	25SEP	05OCT
1988	30,000	05SEP	25SEP	05OCT
1989	5,000	05SEP	25SEP	05OCT

Coho				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	200	-	-	-
1980	0	-	-	-
1981	0	15OCT	15OCT	15NOV
1982	0	15OCT	15OCT	15NOV
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
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	0	-	-	-

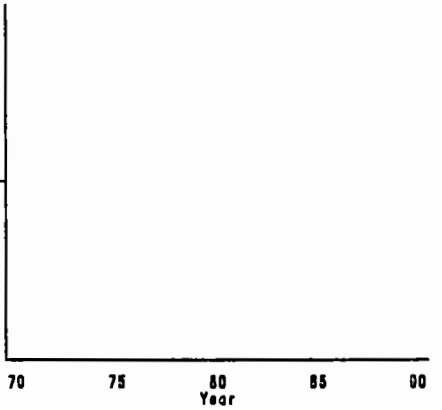
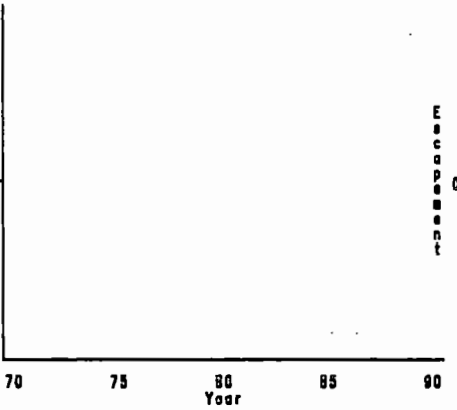
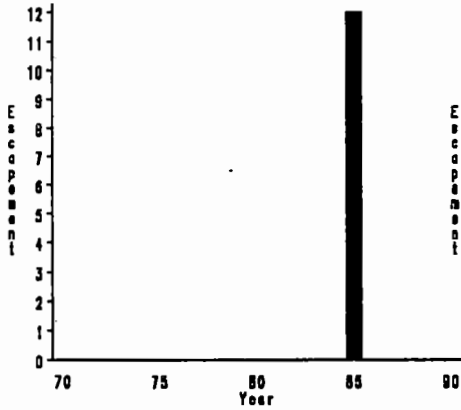
MACHMELL RIVER (91-1282-550)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

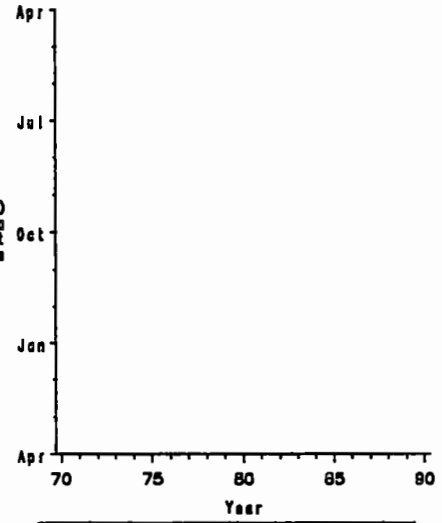
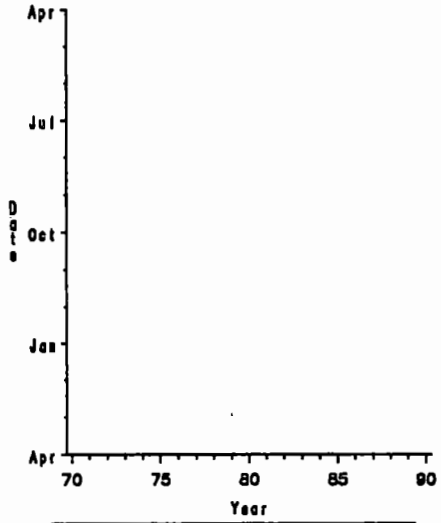
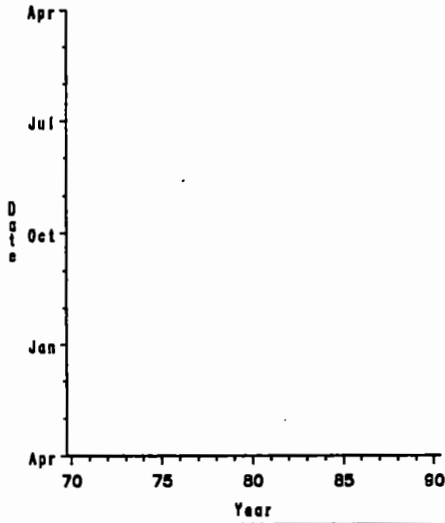
Steelhead (ST)



Chum

Chinook

Steelhead



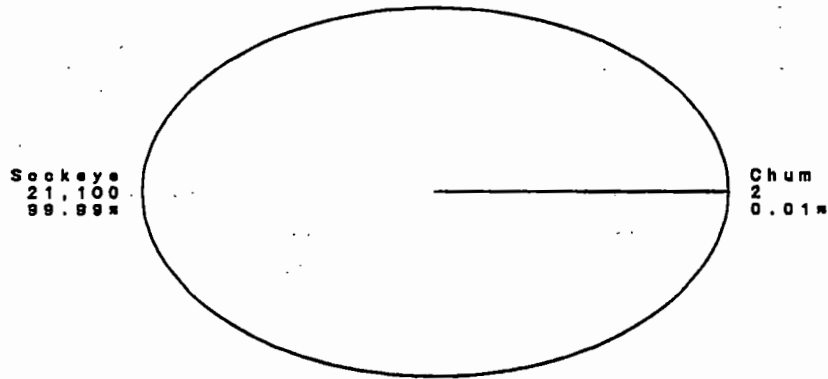
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	12	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	-	-	-	-
1974	-	-	-	-
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	-	-	-	-

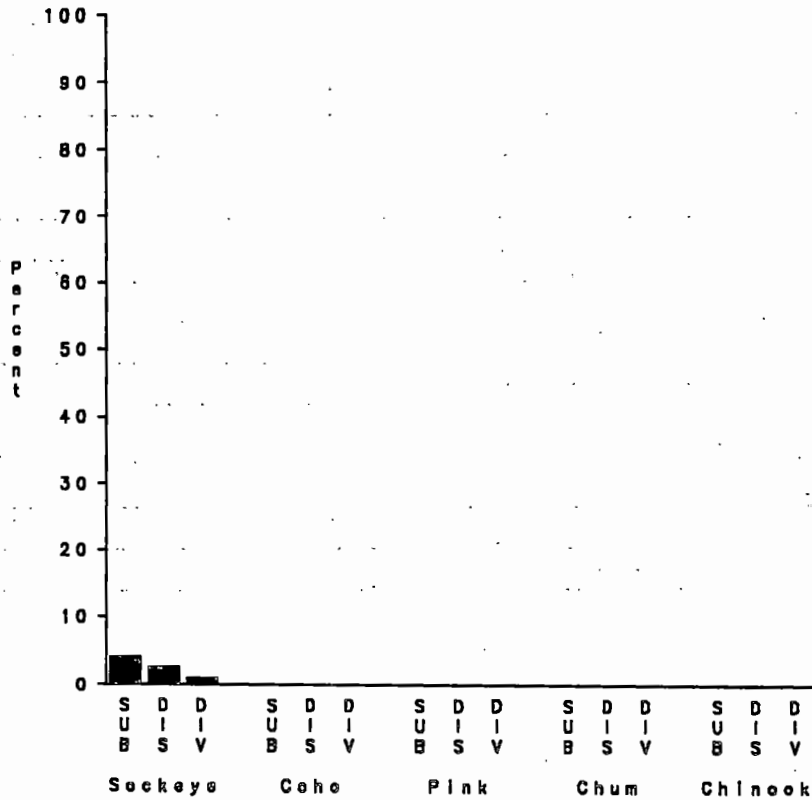
MACHMELL RIVER (91-1282-550)

10-yr Mean Escapement
(1980-1989)



MACHMELL RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: NEECHANZ RIVER	D.F.O. Division: NORTH COAST
Local Name: HOOKINS RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-1282-550-010	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/10
MARBLE CREEK	010	B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6599.57242 Lat./Long. Mouth: DG. ' ' DG. ' ' Mainstem Length: 33.8 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
Location: FLows NW INTO MACHMELL R., OWIKENO LAKE, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	ADDITIONAL GRADIENT INFO AVAILABLE. (REF. 9-16)
0.0- 3.0 3.0- 11.0 11.0- 13.9	

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		4.0		IN LOWER 'CANYON' - PASSABLE. (REF. 9-16)
C CASCADE		11.0	CH CHINOOK SALMON CO COHO SALMON SK SOCKEYE SALMON	CONTINUOUS ZONE OF RAPIDS FOR ALMOST 3 KM. PROBABLY IMPASSABLE TO SK, CO, AND CH. (REF. 9-16)
C CASCADE		16.0		(REF. 9-16)
C CASCADE		23.9		(REF. 6N-28)

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	SPAWNING MAINLY AT 0.6 KM TO 3.6 KM, AND OBSERVED AT 9.2 KM. SUSPECT PRESENT TO 11 KM. (REF. 9-4, REF. 9-16, REF. 29G-43)
CO COHO SALMON	OBSERVED AT 9.2 KM. SUSPECT PRESENT TO 11 KM. (REF. 9-4, REF. 9-16)
PK PINK SALMON	OBSERVED AT 2.9 KM. (REF. 9-4, REF. 9-16)
CH CHUM SALMON	OBSERVED AT 2.9 KM (REF. 9-4, REF. 9-16)
CH CHINOOK SALMON	SPAWNING AT 2.4 KM TO 2.7 KM AND OBSERVED AT 9.2 KM. SUSPECT PRESENT TO 11 KM. (REF. 9-4, REF. 9-16)
ST STEELHEAD	JUVENILES OBSERVED AT 16.4 KM. SUSPECT PRESENT TO AT LEAST 17.5 KM. (REF. 9-16)
CT CUTTHROAT TROUT	OBSERVED AT 2.9 KM. (REF. 9-16)

D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
DV DOLLY VARDEN	OBSERVED AT 16.4 KM. (REF. 9-16)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	38030	1980 - 1989	28A-18	55800	28A-18	50000	9-42
CO COHO SALMON	493	1980 - 1989	28A-18	1000	28A-18	3500	9-42
PK PINK SALMON PK PINK SALMON	517	1980 - 1988 1981 - 1989	28A-18	2 1200	28A-18 28A-18	1000	9-42
CH CHUM SALMON	4	1980 - 1989	28A-18	250	28A-18	100	9-42
CH CHINOOK SALMON	51	1980 - 1989	28A-18	200	28A-18	1000	9-36

Comments: PK EVEN ESCAPEMENT 1984(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	P X	X X		
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X X	X P	X X	X X
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X	P 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
LD LINEAR DEVELOPMENT	LOGGING ROAD BRIDGE CROSSING AT ABOUT 1KM. - BUILT 1988. (REF. 9-36)
FO FORESTRY	LOGGING COMMENCED IN THIS WATERSHED 1987-88. SHOULD BE MONITORED CLOSELY TO AVOID FISHERIES IMPACTS. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

EXTENSIVE SILTATION IN FALL MONTHS. FLOODING IN LATE SEPTEMBER AND NOVEMBER. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. THE LOWER 3 KM OF MAINSTEM AND MARBLE CREEK, ARE THE MOST IMPORTANT SPAWNING HABITAT FOR THE BULK OF THE SK POPULATION. THE REACH FROM 7 - 11 KM. IS PROBABLY IMPORTANT FOR SPAWNING AND REARING OF CO, CH, AND ST. SK, CO, AND CH ARE DISTRIBUTED TO AT LEAST 11 KM., WHILE ST ARE PRESENT TO AT LEAST 17.5 KM. (REF. 9-16)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS CONTINUED

GOOD ACCESS BY JET BOAT OR TRUCK. SEP ENGINEERING HAS PROPOSED A SK SPAWNING CHANNEL FOR THE MARBLE CK. FAN AREA (1988).
(REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /

Prepared By:

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO
Checked by: TOM PENDRAY
Last checked by: TOM PENDRAY

Date: 1989/03/31
Date: 1989/03/31
Date: 1992/01/09

ESCAPEMENT : NEECHANZ RIVER

WATERSHED-CODE : 91-1282-550-010

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	7500	0	0	0	0	UNK
1954	2000	0	0	0	0	UNK
1955	3500	0	0	0	0	UNK
1956	7500	0	0	0	0	UNK
1957	7500	0	0	0	0	UNK
1958	7500	N/O	0	0	75	UNK
1959	7500	UNK	0	0	UNK	UNK
1960	7500	0	UNK	0	UNK	UNK
1961	7500	UNK	UNK	UNK	UNK	UNK
1962	15000	0	0	0	0	UNK
1963	35000	0	N/O	0	0	UNK
1964	15000	0	N/O	N/O	N/O	UNK
1965	7500	N/O	N/O	N/O	400	UNK
1966	15000	N/O	N/O	N/O	25	UNK
1967	7500	UNK	N/O	0	25	UNK
1968	35000	N/O	0	0	25	UNK
1969	3500	25	0	0	400	UNK
1970	15000	400	0	0	75	UNK
1971	4000	N/O	0	0	N/O	UNK
1972	3000	N/O	0	0	25	UNK
1973	50000	500	0	0	50	UNK
1974	45000	400	750	0	100	UNK
1975	45000	N/O	N/O	0	N/O	UNK
1976	25000	N/O	200	0	20	UNK
1977	8000	30	0	0	40	UNK
1978	18000	200	500	UNK	UNK	UNK
1979	42500	200	N/O	N/O	N/O	UNK
1980	32500	0	0	0	0	UNK
1981	40000	400	300	N/O	N/O	UNK
1982	50000	750	N/O	25	75	UNK
1983	50000	700	N/O	N/O	75	UNK
1984	11000	600	2	2	75	UNK
1985	35800	1000	1200	10	14	UNK
1986	53000	UNK	UNK	UNK	26	UNK
1987	37000	N/O	N/O	N/O	20	UNK
1988	53000	UNK	N/O	N/O	20	UNK
1989	18000	UNK	50	N/O	200	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

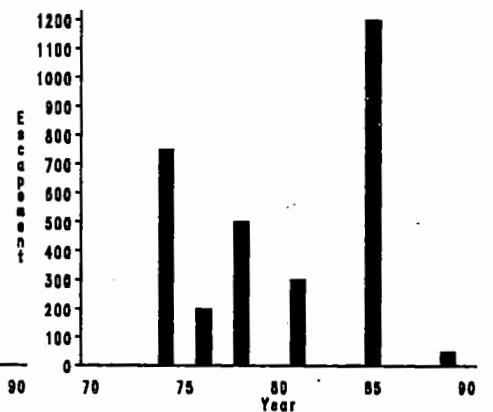
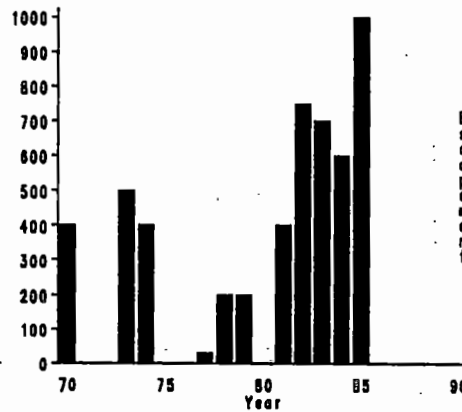
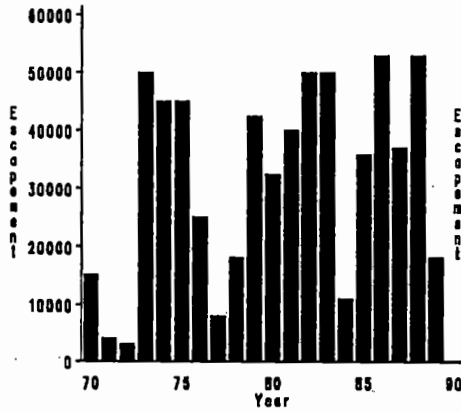
NEECHANZ RIVER (91-1282-550-010)

Escapement & Run Timing

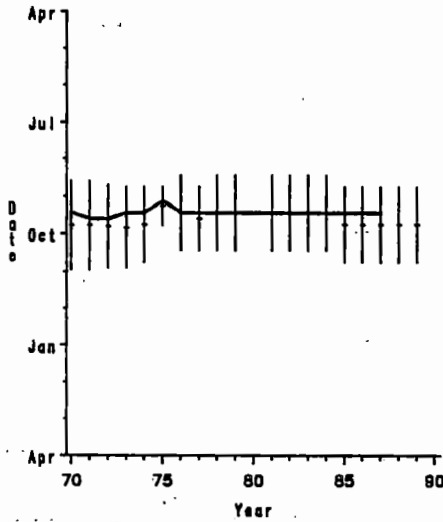
Sockeye (SK)

Coho (CO)

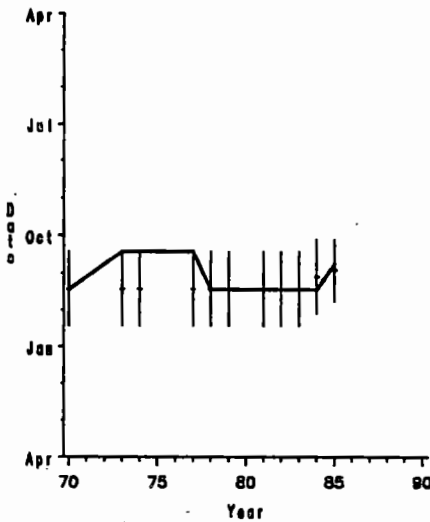
Pink (PK)



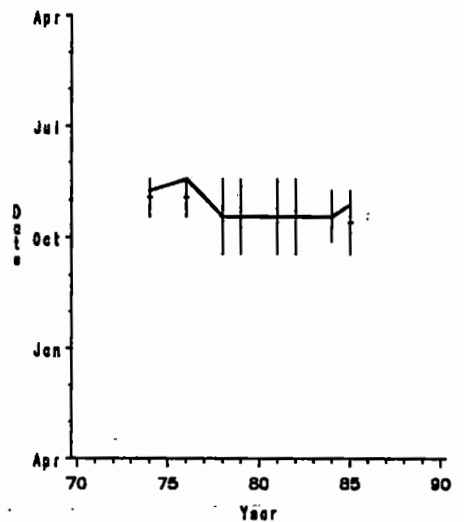
Sockeye



Coho



Pink



Sockeye

Year	Escapement	Start	Peak	End
1970	15,000	20AUG	15SEP	31OCT
1971	4,000	20AUG	20SEP	31OCT
1972	3,000	23AUG	20SEP	30OCT
1973	50,000	25AUG	15SEP	30OCT
1974	45,000	25AUG	15SEP	25OCT
1975	45,000	25AUG	05SEP	25SEP
1976	25,000	15AUG	15SEP	15OCT
1977	8,000	25AUG	15SEP	15OCT
1978	18,000	15AUG	15SEP	15OCT
1979	42,500	15AUG	15SEP	15OCT
1980	32,500	-	-	-
1981	40,000	15AUG	15SEP	15OCT
1982	30,000	15AUG	15SEP	15OCT
1983	50,000	15AUG	15SEP	15OCT
1984	11,000	15AUG	15SEP	15OCT
1985	35,000	25AUG	15SEP	25OCT
1986	53,000	25AUG	15SEP	25OCT
1987	37,000	25AUG	15SEP	25OCT
1988	53,000	25AUG	-	25OCT
1989	18,000	25AUG	-	25OCT

Coho

Year	Escapement	Start	Peak	End
1970	400	15OCT	15NOV	15DEC
1971	0	-	-	-
1972	0	-	-	-
1973	500	15OCT	15OCT	15DEC
1974	400	15OCT	15OCT	15DEC
1975	0	-	-	-
1976	0	-	-	-
1977	30	15OCT	15OCT	15DEC
1978	200	15OCT	15NOV	15DEC
1979	200	15OCT	15NOV	15DEC
1980	0	-	-	-
1981	400	15OCT	15NOV	15DEC
1982	750	15OCT	15NOV	15DEC
1983	700	15OCT	15NOV	15DEC
1984	600	05OCT	15NOV	05OCT
1985	1,000	05OCT	25OCT	25NOV
1986	-	-	-	-
1987	0	-	-	-
1988	-	-	-	-
1989	-	-	-	-
1990	-	-	-	-

Pink

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	750	15AUG	25AUG	15SEP
1975	0	-	-	-
1976	200	15AUG	15AUG	15SEP
1977	0	-	-	-
1978	500	15AUG	15SEP	15OCT
1979	0	15AUG	15SEP	15OCT
1980	0	-	-	-
1981	300	15AUG	15SEP	15OCT
1982	0	15AUG	15SEP	15OCT
1983	0	-	-	-
1984	2	25AUG	15SEP	05OCT
1985	1,200	25AUG	05SEP	15OCT
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-
1990	50	-	-	-

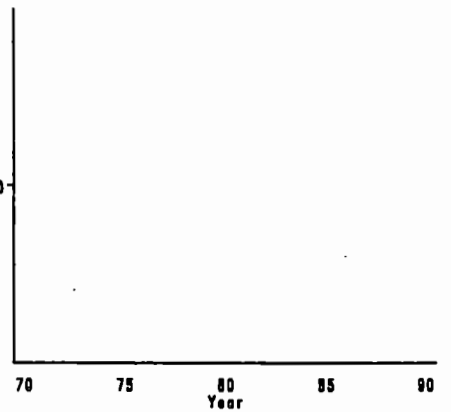
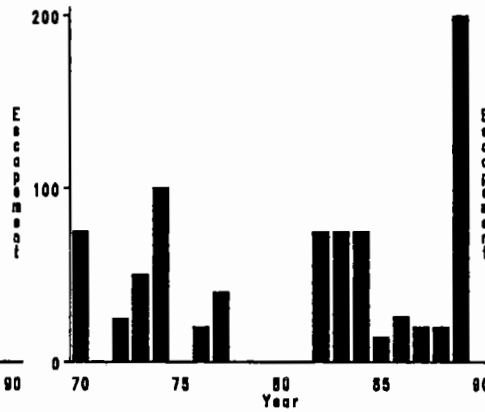
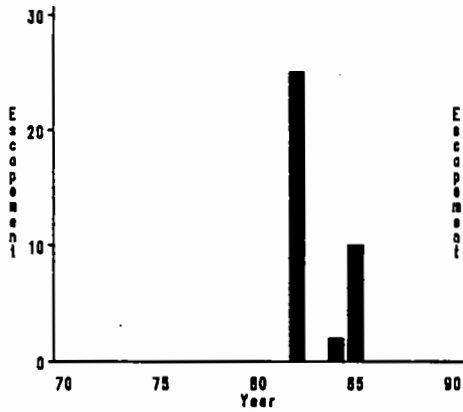
NEECHANZ RIVER (91-1282-550-010)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

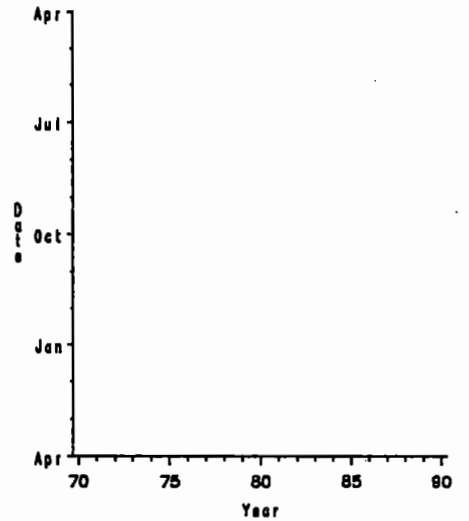
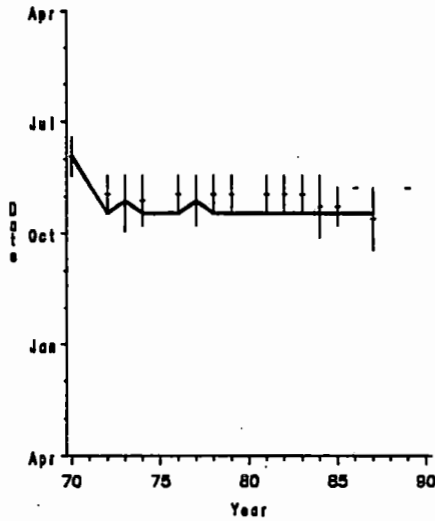
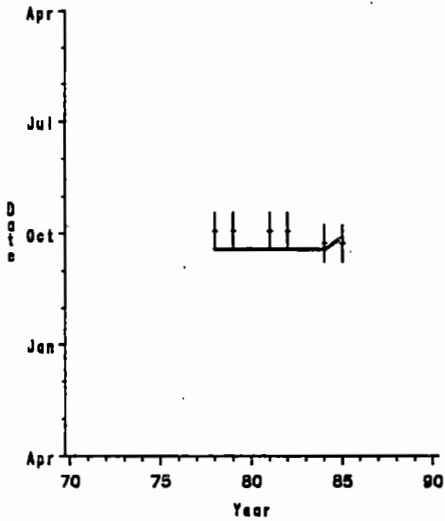
Steelhead (ST)



Chum

Chinook

Steelhead



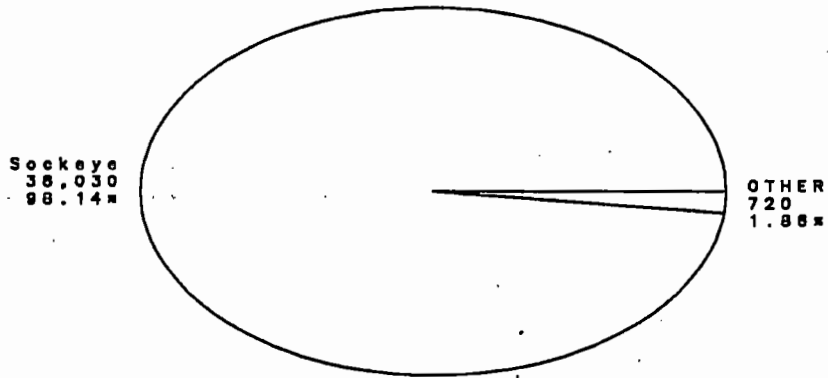
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	-	15SEP	19OCT	19OCT
1979	0	15SEP	19OCT	19OCT
1980	0	-	-	-
1981	0	15SEP	19OCT	19OCT
1982	25	15SEP	19OCT	19OCT
1983	0	-	-	-
1984	2	25SEP	19OCT	25OCT
1985	10	25SEP	05OCT	25OCT
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	75	15JUL	30JUL	15AUG
1971	0	-	-	-
1972	25	15AUG	15SEP	15SEP
1973	50	15AUG	05SEP	30SEP
1974	100	15AUG	15SEP	25SEP
1975	0	-	-	-
1976	20	15AUG	15SEP	15SEP
1977	40	15AUG	05SEP	25SEP
1978	-	15AUG	15SEP	15SEP
1979	0	15AUG	15SEP	15SEP
1980	0	-	-	-
1981	0	15AUG	15SEP	15SEP
1982	75	15AUG	15SEP	15SEP
1983	75	15AUG	15SEP	15SEP
1984	75	15AUG	15SEP	05OCT
1985	14	25AUG	15SEP	25SEP
1986	20	25AUG	-	-
1987	20	25AUG	15SEP	15OCT
1988	20	-	-	-
1989	200	25AUG	-	-

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	-	-	-	-

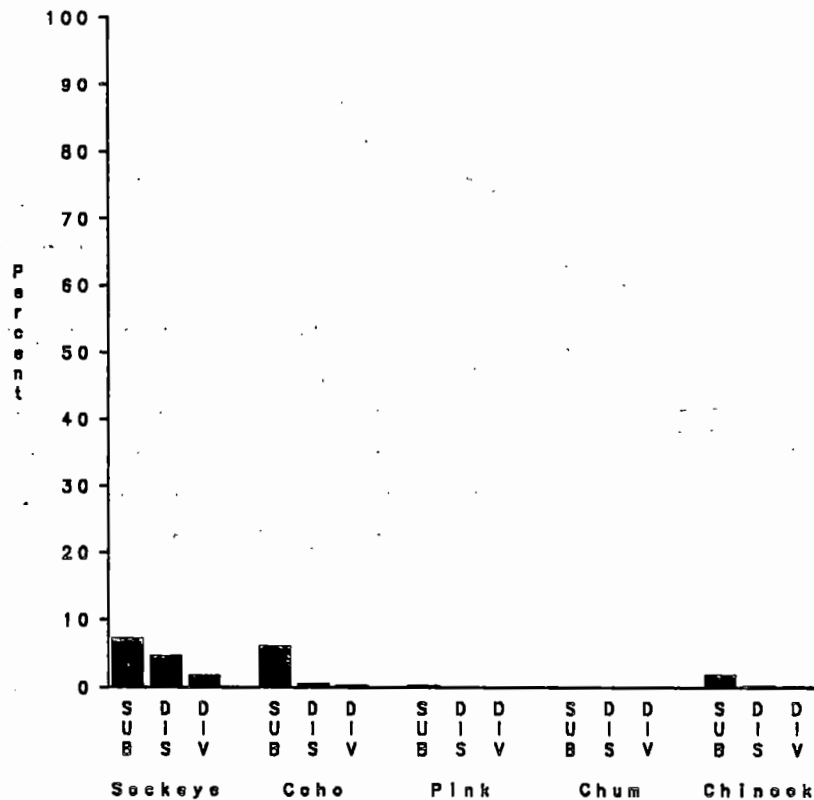
NEECHANZ RIVER (91-1282-550-010)

10-yr Mean Escapement
(1980-1989)



NEECHANZ RIVER : 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.				
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

BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. EXTREMELY HIGH FISHERIES VALUE IN LOWER 0.5 KM FAN AREA. IMPORTANT SK AND CH SPAWNING AREA. GOOD REARING IN MULTIPLE CHANNELS NEAR THE MOUTH. (REF. 9-16)
SEP ENGINEERING HAS PROPOSED A SPAWNING CHANNEL FOR THE FAN AREA AT THE MOUTH (1988). (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name: CLEAR CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1282-550-050	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/10
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6644.57216
		Lat./Long. Mouth: DG. ' ' DG. ' ' ' '
		Mainstem Length: 5.4 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS NW INTO LEFT BANK MACHMELL R., S OF WALKUS LAKE.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	LOWER 0.4 KM FLOWS ALONG THE MACHMELL FLOOD PLAIN AND IS LOW GRADIENT. ABOVE THIS, GRADIENT IS STEEP AND INACCESSIBLE TO FISH. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS		0.6	CD COHO SALMON SK SOCKEYE SALMON	IMPASSABLE FALLS JUST UPSTREAM FROM ROAD CROSSING. (REF. 9-47)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY A SMALL LAKE. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	SPAWNING IN LOWER 0.4 KM. (REF. 9-36, REF. 29G-43)
CD COHO SALMON	JUVENILES PRESENT IN LOWER 0.4 KM. (REF. 4A-159)
CT CUTTHROAT TROUT	PRESENT. (REF. 4A-159)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: THIS AREA IS ENUMERATED EACH YEAR BECAUSE OF ITS GOOD VISIBILITY. (REF. 9-36, REF. 9-45)							

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
LD LINEAR DEVELOPMENT	ROAD CONSTRUCTION IN 1986 CAUSED DEPOSIT OF EXTENSIVE AMOUNTS OF SHOT ROCK INTO THE CHANNEL. (REF. 9-47)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

THIS SYSTEM PROVIDES A GOOD INDICATION OF THE FISH STOCKS IN THE MACHMELL RIVER BECAUSE OF ITS GOOD VISIBILITY, COMPARED TO THE VIRTUAL NONEXISTENT VISIBILITY OF THE MAIN SYSTEM. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / / Prepared By:

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

A. DESCRIPTION

Stream Name: GENESEE CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1282-560	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/10
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6612.57262
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 8.3 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS NW INTO OWIKENO LAKE FROM WALKUS LAKE; RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	LOW GRADIENT FOR LOWER 1 KM, BECOMING VERY STEEP WITH IMPASSABLE FALLS ABOVE 1 KM. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS		1.3	CM CHUM SALMON CD COHO SALMON PK PINK SALMON SK SOCKEYE SALMON	IMPASSABLE FALLS. (REF. 9-4, REF. 9-16, REF. 9-36)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge: Y		
W.S.C. Station No. 1: 08FA009	No. 2:	No. 3:	No. 4:
Comments: FED BY WALKUS LAKE. AREA: 1.1 SQ.KM; PERIMETER: 6.2 KM. (REF. 6N-28, REF. 29F-65)			
LAKE FLOWS VERY STABLE, CONTROLLED NATURALLY BY OVERFLOW POURING THE OTHER WAY INTO MACHMELL RIVER. (REF. 9-36)			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	SPAWNING AT 0.5 KM TO FALLS AT 1.3 KM. (REF. 9-4, REF. 9-36)
CD COHO SALMON	SPAWNING AT 0.5 KM TO FALLS AT 1.3 KM. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING AT 0.5 KM TO FALLS AT 1.3 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING AT 0.5 KM TO FALLS AT 1.3 KM. (REF. 9-4, REF. 9-36)
CT CUTTHROAT TROUT	OBSERVED IN WALKUS LAKE. (REF. 9-16)
DV DOLLY VARDEN	PRESENCE NOTED. (REF. 29G-43)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	13760	1980 - 1989	28A-18	31300	28A-18	25000	9-42
CO COHO SALMON	61	1980 - 1989	28A-18	250	28A-18	300	9-42
PK PINK SALMON	300	1980 - 1988	28A-18	1000	28A-18	3000	9-42
PK PINK SALMON	500	1981 - 1989	28A-18	1400	28A-18		
CH CHUM SALMON	12	1980 - 1989	28A-18	25	28A-18		
CH CHINOOK SALMON		1980 - 1989		2	28A-18		

Comments: CH ESCAPEMENT FOR 1981(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	P X	X X	
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X X	P X	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X X	P 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
RE RESERVES	AREA IS DESIGNATED AN ECOLOGICAL SANCTUARY DOWNSTREAM OF FALLS, AND A GRIZZLY BEAR RESERVE. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

DUE TO THE ACCUMULATION OF GLACIAL CLAY, THE LOWER 300 M OF THE CREEK IS UNSUITABLE FOR SPawning. SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. MACHMELL RIVER FLOOD CHANNEL OFTEN BREAKS THROUGH INTO THE CREEK, DEPOSITING GLACIAL SILT. (REF. 9-4)
MACHMELL FLOODING PROBLEM REPAIRED BY THE BUILDING OF A DYKE. HEAVY GRIZZLY PREDATION. FISHERIES CAMP AT THE MOUTH. (REF. 9-36, REF. 9-45)

J. FISHERY OFFICER NARRATIVE

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

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : GENESEE CREEK

WATERSHED-CODE : 91-1282-560

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	15000	0	1500	0	0	UNK
1954	1000	N/O	N/O	2	N/O	UNK
1955	3500	0	UNK	2	0	UNK
1956	3500	0	200	0	0	UNK
1957	400	0	0	0	0	UNK
1958	3500	0	25	0	0	UNK
1959	3500	0	75	0	0	UNK
1960	3500	0	0	0	0	UNK
1961	3500	0	UNK	0	0	UNK
1962	35000	UNK	0	0	0	UNK
1963	55000	0	25	0	0	UNK
1964	15000	UNK	UNK	0	0	UNK
1965	N/O	N/O	N/O	0	N/O	UNK
1966	15000	75	N/O	0	N/O	UNK
1967	15000	UNK	0	0	UNK	UNK
1968	35000	N/O	N/O	0	0	UNK
1969	15000	25	0	0	0	UNK
1970	7500	75	25	0	0	UNK
1971	55000	N/O	N/O	0	0	UNK
1972	27500	50	UNK	1	0	UNK
1973	45000	25	25	N/O	0	UNK
1974	15000	100	400	N/O	0	UNK
1975	14500	N/O	25	0	0	UNK
1976	2500	N/O	200	0	0	UNK
1977	600	0	N/O	0	0	UNK
1978	5000	0	1500	0	0	UNK
1979	5000	0	3000	0	0	UNK
1980	4500	0	1000	25	0	UNK
1981	15000	250	500	0	2	UNK
1982	8000	50	50	25	0	UNK
1983	25000	N/O	1400	15	0	UNK
1984	23000	150	150	4	N/O	UNK
1985	31300	100	300	25	N/O	UNK
1986	30000	UNK	UNK	UNK	UNK	UNK
1987	200	N/O	300	0	0	UNK
1988	500	2	N/O	0	0	UNK
1989	100	N/O	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

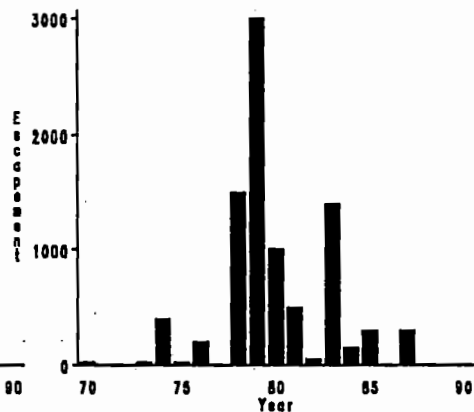
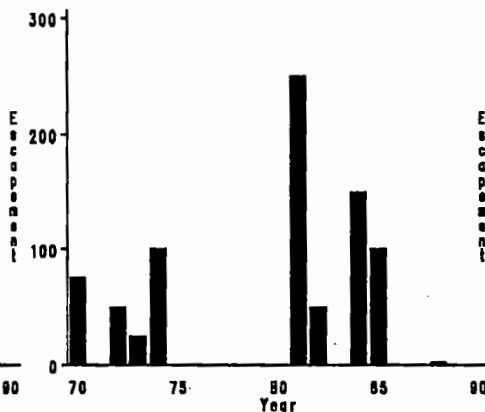
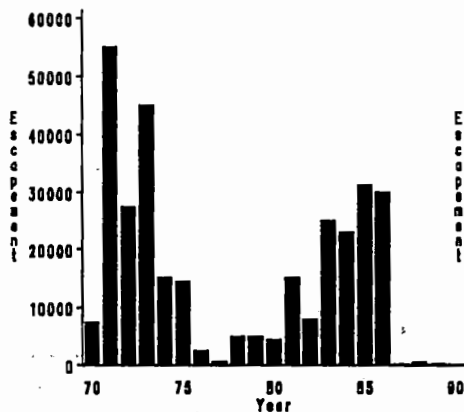
GENESEE CREEK (91-1282-560)

Escapement & Run Timing

sockeye (SK)

Coho (CO)

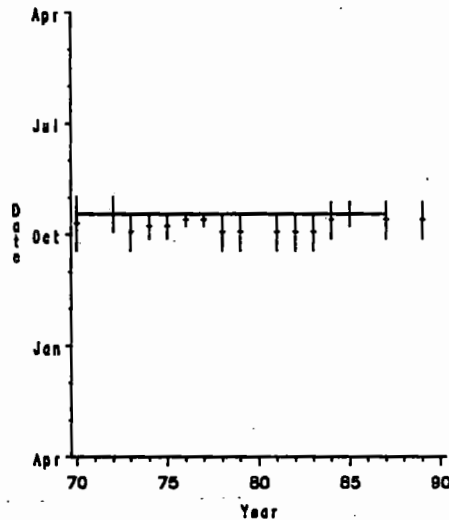
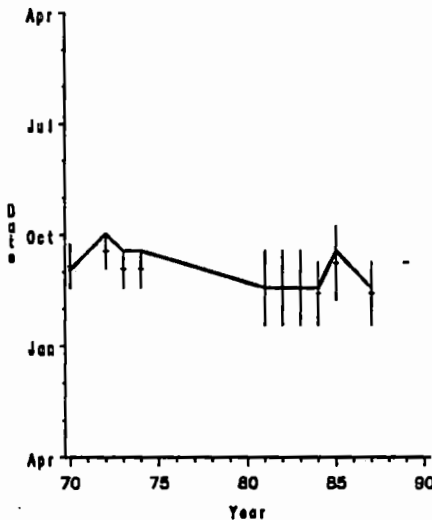
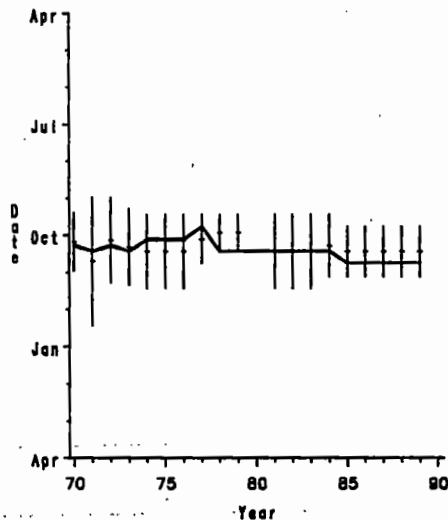
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	7,500	13SEP	19OCT	31OCT
1971	55,000	01SEP	15OCT	15DEC
1972	27,500	01SEP	19OCT	16NOV
1973	15,000	10SEP	15OCT	12NOV
1974	15,000	15SEP	05OCT	15NOV
1975	14,500	15SEP	05OCT	15NOV
1976	2,500	15SEP	05OCT	15NOV
1977	600	15SEP	25SEP	25OCT
1978	5,000	15SEP	15OCT	15OCT
1979	3,000	15SEP	15OCT	15OCT
1980	4,500	-	-	-
1981	13,000	15SEP	15OCT	15NOV
1982	8,000	15SEP	15OCT	15NOV
1983	25,000	15SEP	15OCT	15NOV
1984	23,000	15SEP	15OCT	05NOV
1985	31,300	25SEP	25OCT	05NOV
1986	30,000	25SEP	25OCT	05NOV
1987	200	25SEP	25OCT	05NOV
1988	500	25SEP	25OCT	05NOV
1989	100	25SEP	25OCT	05NOV

Coho				
Year	Escapement	Start	Peak	End
1970	75	19OCT	31OCT	15NOV
1971	0	-	-	-
1972	50	01OCT	01OCT	30OCT
1973	25	13OCT	15OCT	15NOV
1974	100	15OCT	15OCT	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	250	15OCT	15NOV	15DEC
1982	50	13OCT	15NOV	15DEC
1983	0	15OCT	15NOV	15DEC
1984	150	25OCT	15NOV	15DEC
1985	100	25SEP	15OCT	25NOV
1986	-	-	-	-
1987	0	25OCT	15NOV	15DEC
1988	0	-	-	-
1989	0	23OCT	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	25	01SEP	15SEP	15OCT
1971	0	-	-	-
1972	-	01SEP	15SEP	30SEP
1973	25	15SEP	15SEP	15OCT
1974	400	15SEP	15SEP	05OCT
1975	25	15SEP	15SEP	05OCT
1976	200	15SEP	15SEP	25SEP
1977	0	15SEP	15SEP	25SEP
1978	1,500	15SEP	15SEP	15OCT
1979	3,000	15SEP	15SEP	15OCT
1980	1,000	-	-	-
1981	500	15SEP	15SEP	15OCT
1982	50	15SEP	15SEP	15OCT
1983	1,400	15SEP	15SEP	15OCT
1984	150	05SEP	15SEP	05OCT
1985	300	05SEP	15SEP	25SEP
1986	-	-	-	-
1987	300	05SEP	15SEP	05OCT
1988	0	-	-	-
1989	0	05SEP	-	05OCT

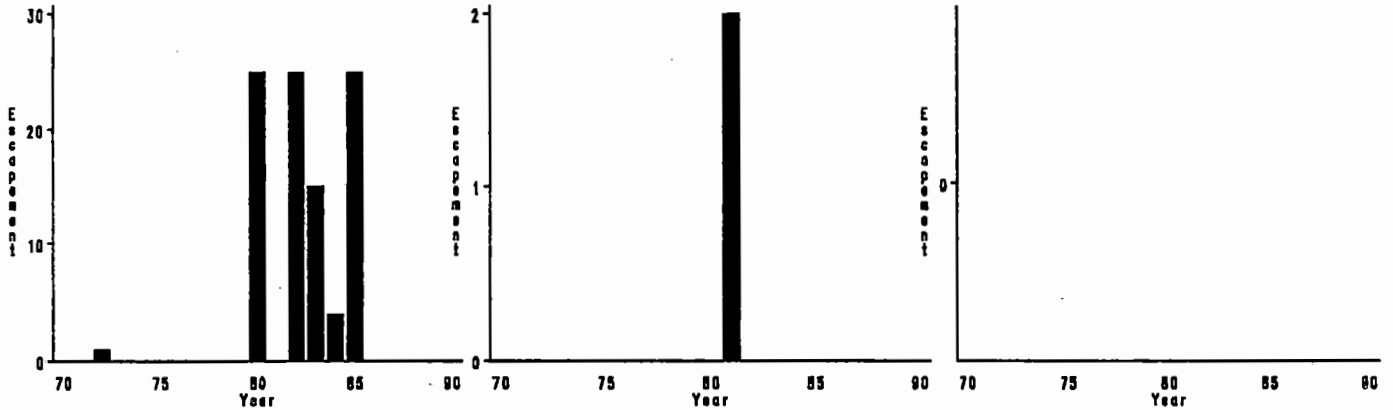
GENESEE CREEK (91-1282-560)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

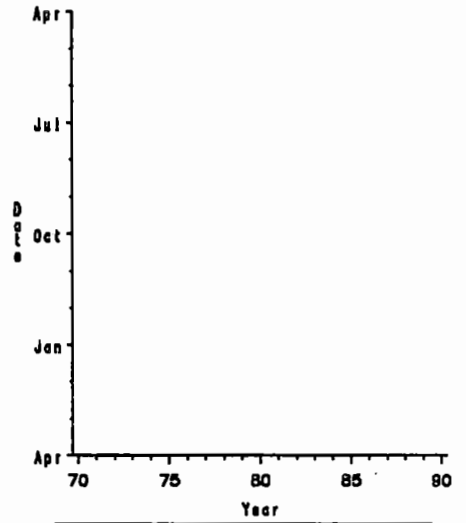
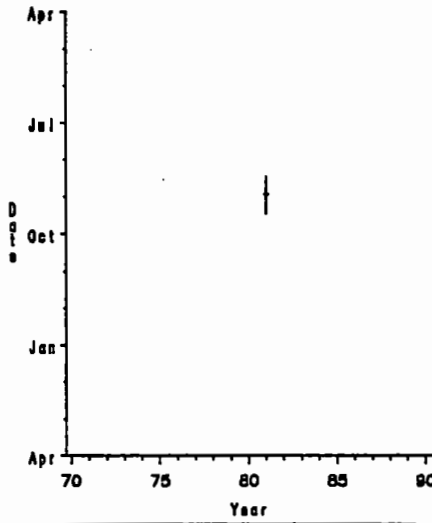
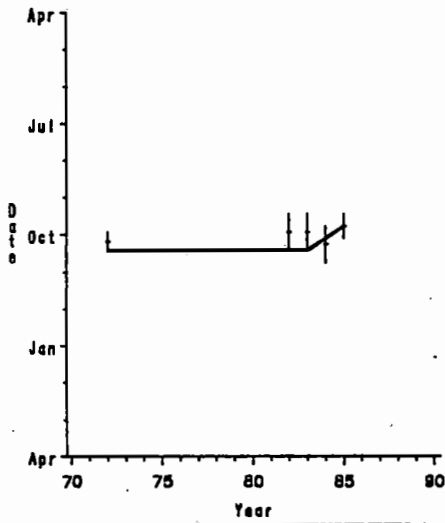
Steelhead (ST)



Chum

Chinook

Steelhead



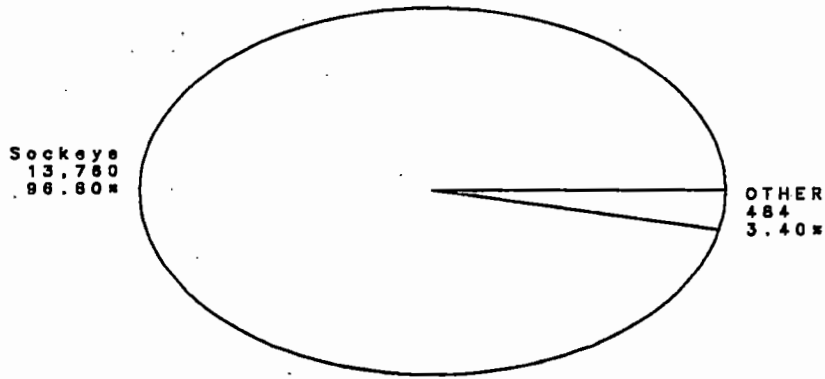
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	1	30SEP	15OCT	18OCT
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	25	-	-	-
1981	0	-	-	-
1982	25	15SEP	15OCT	15OCT
1983	15	15SEP	15OCT	15OCT
1984	4	25SEP	05OCT	25OCT
1985	25	15SEP	25SEP	05OCT
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	2	13AUG	15SEP	15SEP
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	-	-	-	-

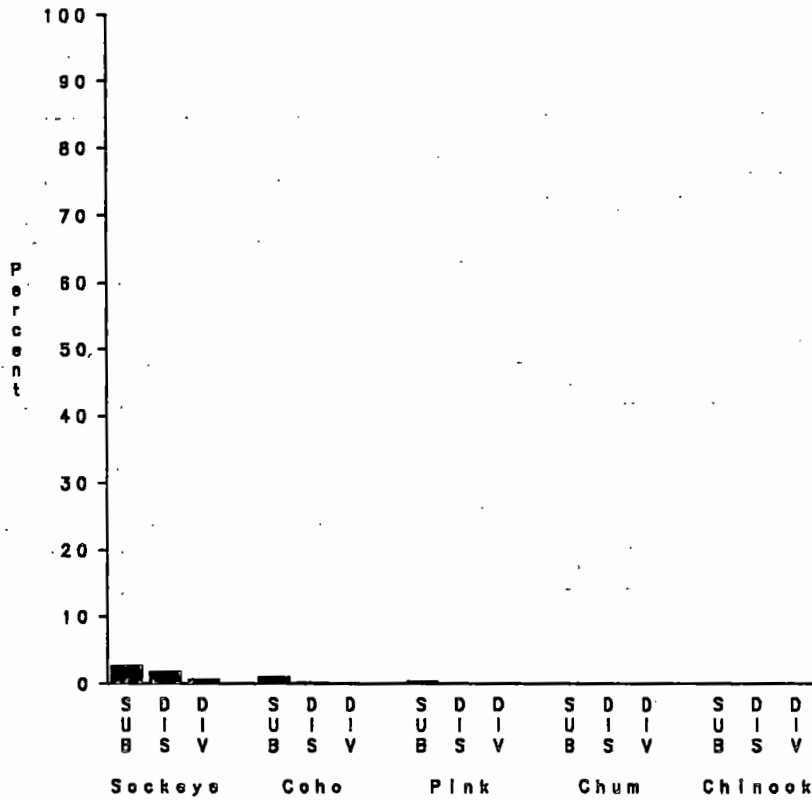
GENESEE CREEK (91-1282-560)

10-yr Mean Escapement
(1980-1989)



GENESEE CREEK : Escapement (1980-1989)

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



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	1522	1980 - 1989	28A-18	8500	28A-18	5000	9-42
CH CHINOOK SALMON		-				1000	9-42
Comments: CH LAST RECORDED 1978(100) (REF. 28A-18)							
VERY HIGH TURBIDITY MAKES ENUMERATION VERY DIFFICULT. (REF. 9-36, REF. 9-45)							

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	P X	X X		
CO COHO SALMON	Migration Spawning Incubation Rearing								X	X X	X P	X X	X X
CH CHINOOK 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
IT TRAP/TRUCK	SK SOCKEYE SALMON	0.0	ADULTS NETTED AND HELICOPTERED ABOVE FALLS. NB. THIS PROGRAM HAS BEEN DISCONTINUED. (REF. 9-36)	1987/1988

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
LD LINEAR DEVELOPMENT	SHEEMAHANT RIVER MAINLINE ROAD CONSTRUCTED IN 1977. SOME BLASTED ROCK SLID INTO THE CHANNEL AND COULD NOT BE SAFELY REMOVED. (REF. 9-4)
FO FORESTRY	LOGGING ONGOING AND ACTIVE IN THE WATERSHED. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. CONSIDERABLE SCOURING OF CHANNEL BED. HEAVY SILT LOAD CARRIED IN SUMMER MONTHS. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. VERY HIGH TURBIDITY MAKES FISHERIES ASSESSMENT DIFFICULT. ALTHOUGH NOT SAMPLED, KULL CREEK, LEMOLO CREEK AND SUMQUOLT CREEK HAVE UNDOUBTEDLY ANADROMOUS FISH PRESENT IN THEIR LOWER REACHES. EXCELLENT SPANMING GRAVEL IN PLACES AND VERY GOOD REARING HABITAT IN WETLANDS AND SIDE CHANNELS. THE FALLS AT 20 KM. INHIBIT ACCESS TO THE UPPER 28 KM. OF EXCELLENT HABITAT. STEELHEAD AND CHUM MAY ALSO BE PRESENT IN SMALL NUMBERS. (REF. 9-16)
LARGEST SK PRODUCER IN THE OWIKENO SYSTEM. EXCELLENT HABITAT ABOVE FALLS (EXTENSIVE). HOT SPRINGS LOCATED IN THE VALLEY AT SEVERAL SPOTS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : SHEEMAHANT RIVER

WATERSHED-CODE : 91-1282-650

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	35000	0	0	0	0	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	UNK	0	0	0	0	UNK
1956	35000	0	0	0	0	UNK
1957	35000	UNK	0	0	0	UNK
1958	UNK	UNK	0	0	0	UNK
1959	7500	UNK	0	0	UNK	UNK
1960	UNK	UNK	0	0	UNK	UNK
1961	35400	UNK	0	0	UNK	UNK
1962	42500	0	0	0	0	UNK
1963	82500	3500	0	0	UNK	UNK
1964	110000	UNK	0	0	N/O	UNK
1965	15000	UNK	0	0	0	UNK
1966	50000	200	0	0	0	UNK
1967	135000	25	0	0	UNK	UNK
1968	75000	UNK	0	0	UNK	UNK
1969	75000	3500	0	0	200	UNK
1970	7500	3500	0	0	UNK	UNK
1971	6000	2000	0	0	N/O	UNK
1972	32500	1000	0	0	0	UNK
1973	250000	UNK	0	0	75	UNK
1974	137500	1500	UNK	0	75	UNK
1975	35000	N/O	N/O	0	N/O	UNK
1976	20000	50	0	0	N/O	UNK
1977	27500	UNK	0	0	25	UNK
1978	150000	800	UNK	0	100	UNK
1979	65000	200	N/O	0	N/O	UNK
1980	61000	2000	0	0	0	UNK
1981	200000	1000	0	0	N/O	UNK
1982	150000	200	0	0	0	UNK
1983	125000	500	0	0	0	UNK
1984	25000	8500	N/O	N/O	N/O	UNK
1985	135000	500	N/O	N/O	N/O	UNK
1986	325000	500	UNK	UNK	UNK	UNK
1987	100000	500	0	0	0	UNK
1988	200000	N/O	0	0	0	UNK
1989	125000	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

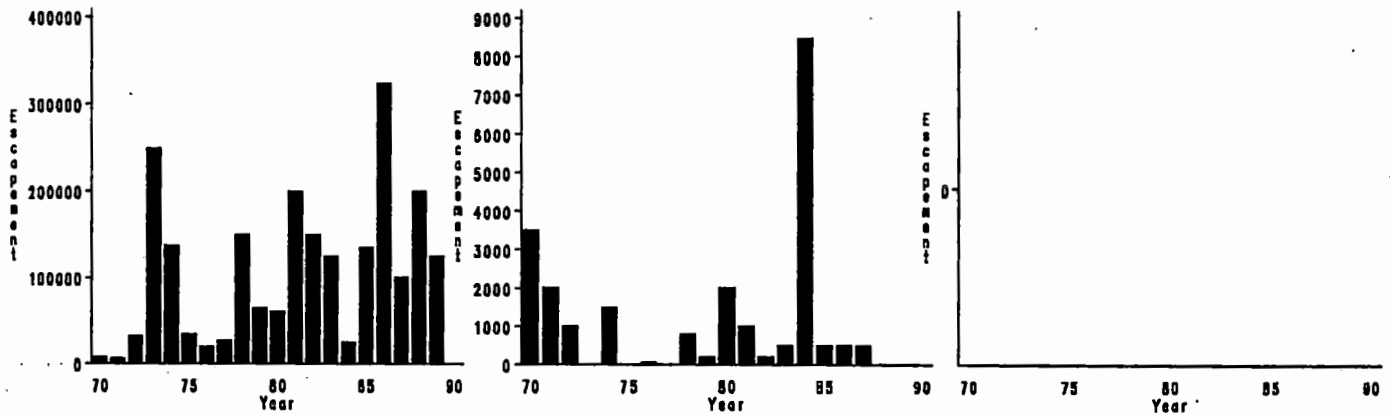
SHEEMAHA NT RIVER (91-1282-650)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

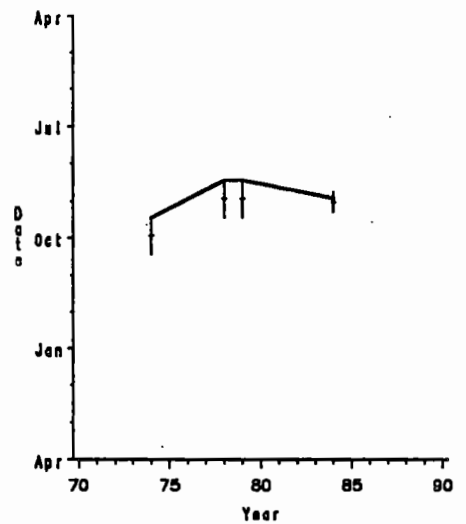
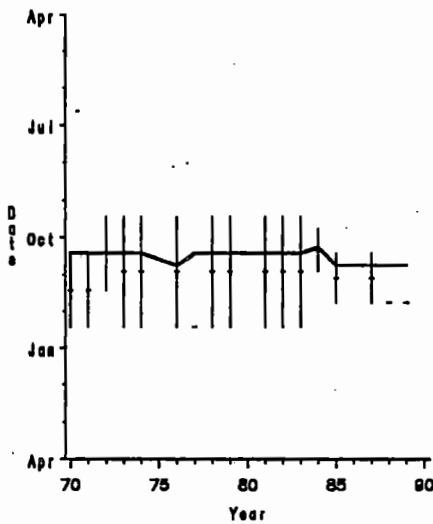
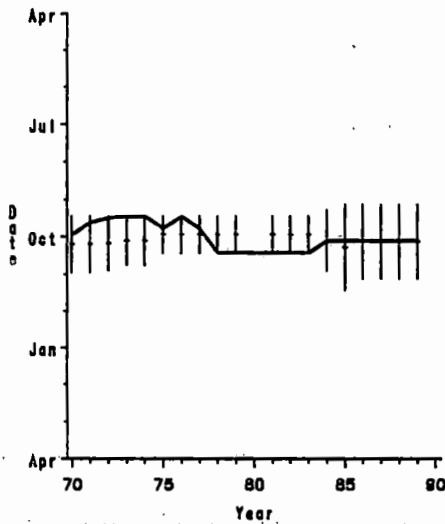
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	7,800	15SEP	30SEP	31OCT
1971	6,900	15SEP	20SEP	31OCT
1972	32,500	15SEP	18SEP	30OCT
1973	250,000	15SEP	15SEP	25OCT
1974	137,300	15SEP	15SEP	25OCT
1975	35,000	15SEP	25SEP	15OCT
1976	20,000	15SEP	15SEP	15OCT
1977	27,500	15SEP	25SEP	15OCT
1978	150,000	15SEP	15OCT	15OCT
1979	85,000	15SEP	15OCT	15OCT
1980	61,000	-	-	-
1981	200,000	15SEP	15OCT	15OCT
1982	190,000	15SEP	15OCT	15OCT
1983	125,000	15SEP	15OCT	15OCT
1984	25,000	10SEP	05OCT	30OCT
1985	135,000	05SEP	03OCT	15NOV
1986	325,000	05SEP	05OCT	05NOV
1987	100,000	05SEP	05OCT	05NOV
1988	200,000	05SEP	05OCT	05NOV
1989	125,000	05SEP	05OCT	05NOV

Coho				
Year	Escapement	Start	Peak	End
1970	3,500	15OCT	15OCT	16DEC
1971	2,000	15OCT	15OCT	15DEC
1972	1,000	15SEP	15OCT	15NOV
1973	-	15SEP	15OCT	15DEC
1974	1,500	15SEP	15OCT	15DEC
1975	0	-	-	-
1976	50	15SEP	25OCT	15DEC
1977	-	-	15OCT	15DEC
1978	800	15SEP	15OCT	15DEC
1979	200	15SEP	15OCT	15DEC
1980	2,000	-	-	-
1981	1,000	15SEP	15OCT	15DEC
1982	200	15SEP	15OCT	15DEC
1983	500	15SEP	15OCT	15DEC
1984	8,500	25SEP	10OCT	30OCT
1985	500	15OCT	25OCT	25NOV
1986	500	-	-	-
1987	500	15OCT	25OCT	25NOV
1988	0	-	25OCT	25NOV
1989	-	-	25OCT	25NOV

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	-	15SEP	15SEP	15OCT
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	15AUG	15AUG	15SEP
1979	0	15AUG	15AUG	15SEP
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	25AUG	30AUG	10SEP
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

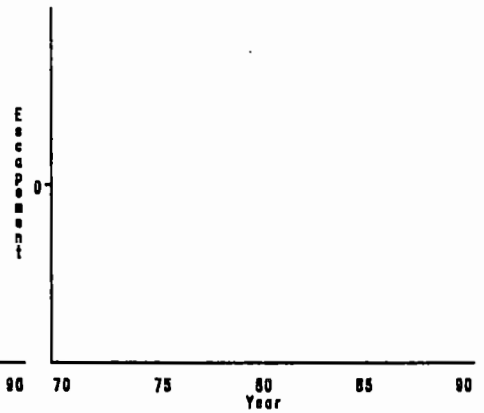
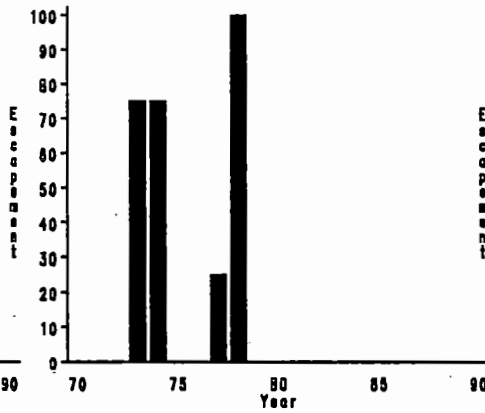
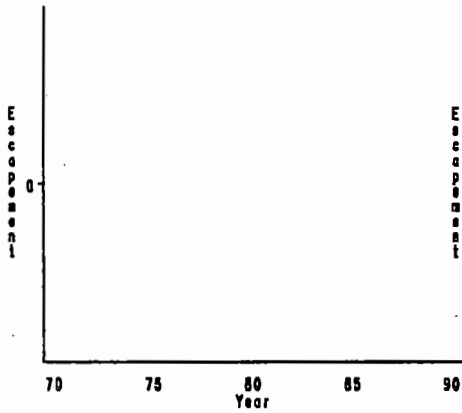
SHEEMAHANT RIVER (91-1282-650)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

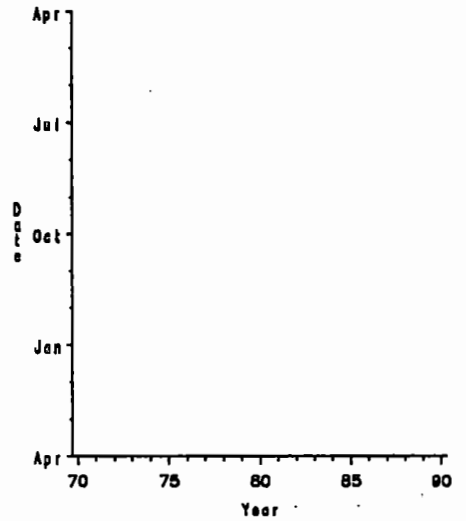
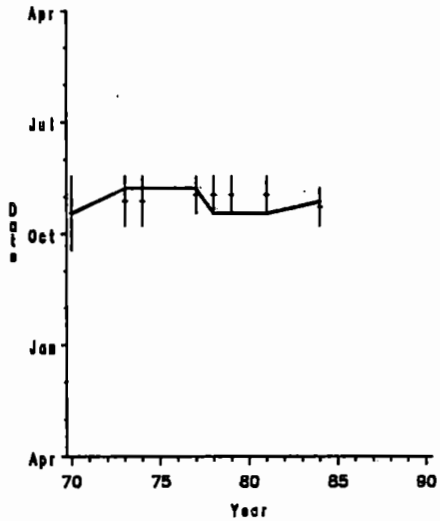
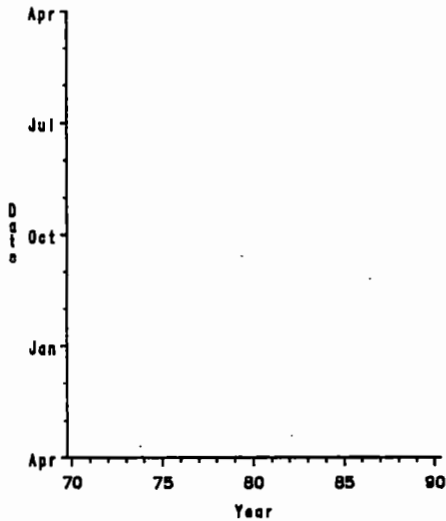
Steelhead (ST)



Chum

Chinook

Steelhead



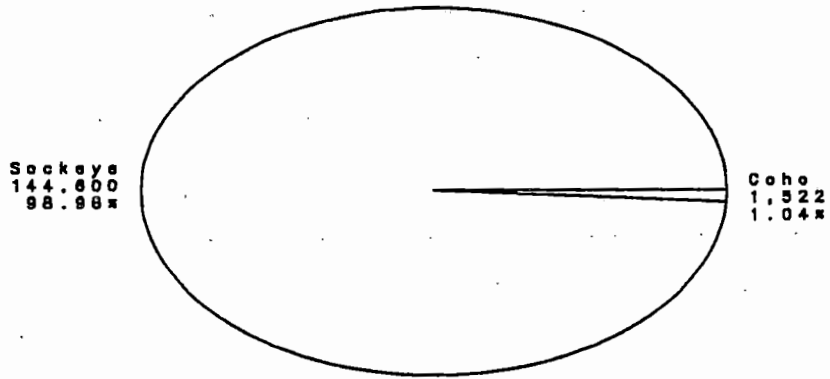
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	-	19AUG	19SEP	19OCT
1971	0	-	-	-
1972	0	-	-	-
1973	75	15AUG	25AUG	25SEP
1974	75	15AUG	25AUG	25SEP
1975	0	-	-	-
1976	0	-	-	-
1977	25	15AUG	25AUG	15SEP
1978	100	15AUG	15SEP	15SEP
1979	0	15AUG	15SEP	15SEP
1980	0	-	-	-
1981	0	19AUG	15SEP	15SEP
1982	0	-	-	-
1983	0	-	-	-
1984	0	25AUG	05SEP	25SEP
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	-	-	-	-

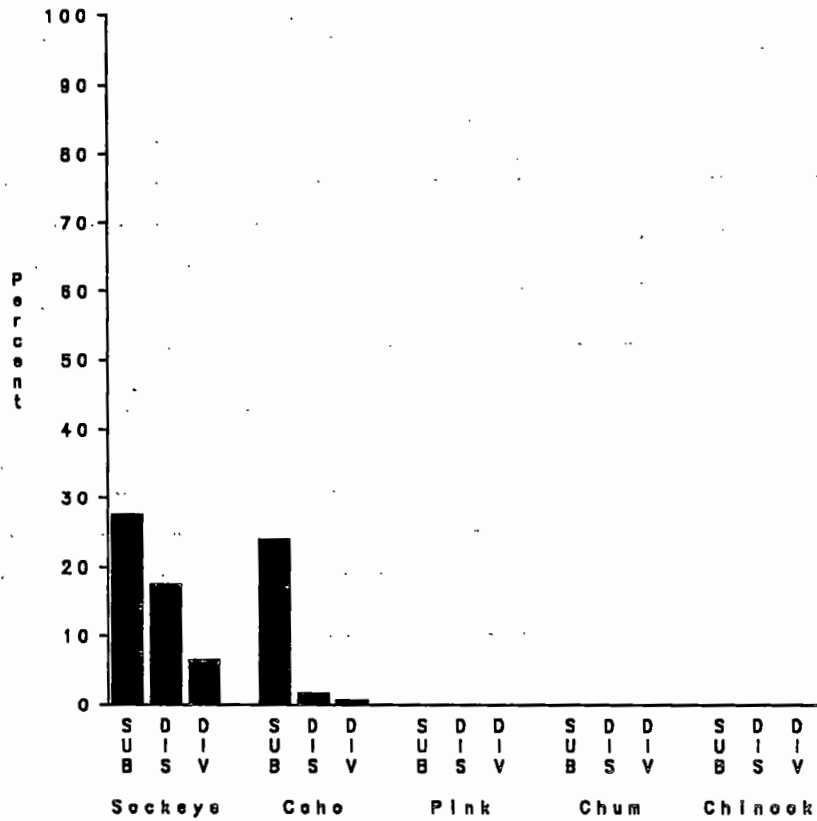
SHEEMAHANT RIVER (91-1282-650)

10-yr Mean Escapement
(1980-1989)



SHEEMAHANT RIVER : Escapement (1980-1989)

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



E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: PK EVEN ESCAPEMENT 1988(10) PK ODD ESC. 1989(40) CO ESCAPEMENT 1984(54) 1985(50) (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	P X	X X		

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
SI STREAM IMPROVEM'T	AF ALL SPECIES	0.0	PLUGGED BREAK IN THE CHANNEL. (REF. 9-36)	1988/
SI STREAM IMPROVEM'T	SK SOCKEYE SALMON	0.0	SPAWNING HABITAT IMPROVEMENT PLANNED NEAR THE MOUTH. (REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. FLOW HAS SHIFTED THROUGH A FLOOD CHANNEL IN THE PAST. (REF. 9-4)
BIDPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. EXTREMELY HIGH FISHERIES VALUE, EXCELLENT SPAWNING GRAVEL. HEAVILY UTILIZED BY SK. SMALL NUMBERS OF PK AND CH MAY ALSO BE PRESENT. (REF. 9-16)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : INZIANA RIVER

WATERSHED-CODE : 91-1282-750

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	75000	0	0	0	0	UNK
1954	25000	0	0	0	0	UNK
1955	3500	N/O	N/O	N/O	N/O	UNK
1956	15000	0	0	0	0	UNK
1957	7500	0	0	0	0	UNK
1958	7500	0	0	0	0	UNK
1959	75000	0	0	0	0	UNK
1960	3500	0	0	0	UNK	UNK
1961	7500	0	0	0	UNK	UNK
1962	35000	0	0	0	0	UNK
1963	175000	0	0	0	0	UNK
1964	75000	0	0	0	N/O	UNK
1965	15000	0	0	0	N/O	UNK
1966	7500	0	0	0	N/O	UNK
1967	1500	0	0	0	N/O	UNK
1968	100000	0	0	0	0	UNK
1969	1500	200	0	0	0	UNK
1970	1500	UNK	0	0	0	UNK
1971	3500	N/O	0	0	0	UNK
1972	1500	N/O	N/O	0	N/O	UNK
1973	162500	N/O	N/O	0	UNK	UNK
1974	40000	0	0	0	0	UNK
1975	30000	N/O	N/O	0	UNK	UNK
1976	25000	N/O	0	0	0	UNK
1977	6000	N/O	0	0	0	UNK
1978	32500	0	0	0	0	UNK
1979	22500	N/O	0	0	0	UNK
1980	22500	0	0	0	0	UNK
1981	18000	0	0	0	0	UNK
1982	40000	0	0	0	0	UNK
1983	33000	0	0	0	0	UNK
1984	17700	54	N/O	N/O	N/O	UNK
1985	20425	50	N/O	N/O	N/O	UNK
1986	47500	UNK	UNK	UNK	UNK	UNK
1987	44800	N/O	0	0	0	UNK
1988	20000	N/O	10	0	0	UNK
1989	15000	N/O	40	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

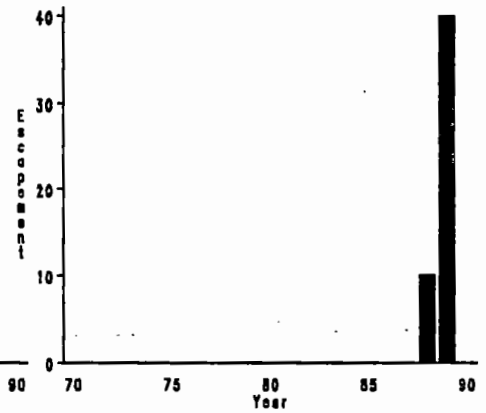
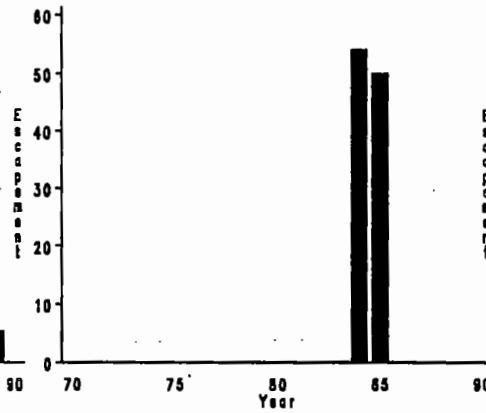
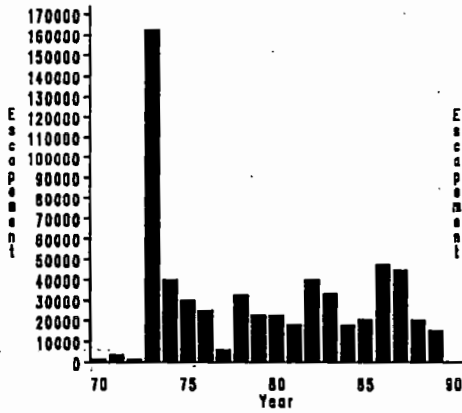
INZIANA RIVER (91-1282-750)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

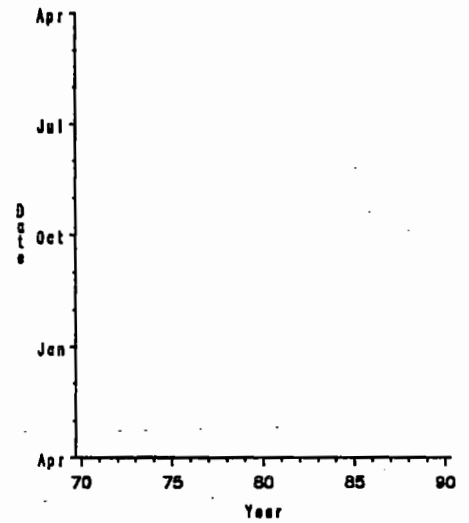
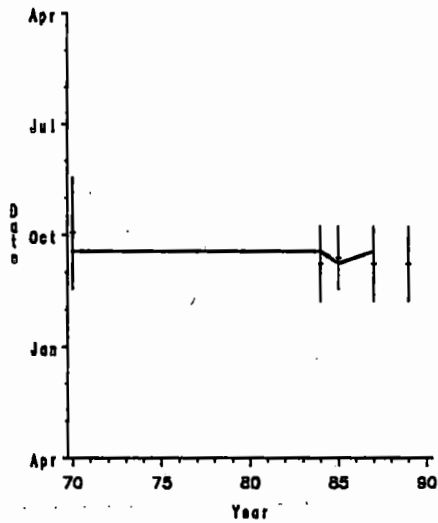
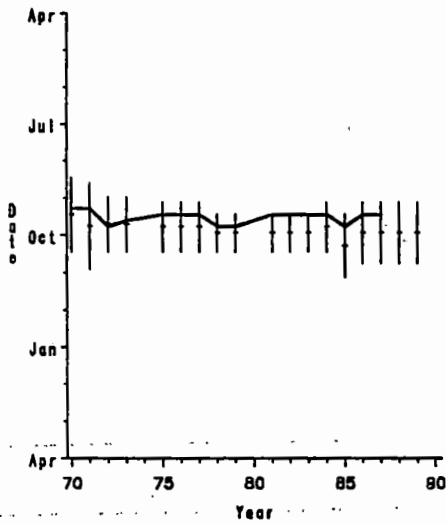
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	1,500	15AUG	18SEP	19OCT
1971	3,500	20AUG	18SEP	30OCT
1972	1,500	01SEP	25SEP	15OCT
1973	162,500	01SEP	28SEP	15OCT
1974	48,000	-	-	-
1975	38,000	05SEP	15SEP	15OCT
1976	25,000	05SEP	15SEP	15OCT
1977	6,000	05SEP	15SEP	15OCT
1978	32,500	15SEP	25SEP	19OCT
1979	22,500	15SEP	25SEP	15OCT
1980	22,500	-	-	-
1981	18,000	15SEP	15SEP	19OCT
1982	48,000	15SEP	15SEP	19OCT
1983	33,000	15SEP	15SEP	19OCT
1984	17,700	05SEP	15SEP	15OCT
1985	28,425	15SEP	25SEP	05NOV
1986	47,500	05SEP	15SEP	25OCT
1987	44,400	05SEP	15SEP	25OCT
1988	28,000	05SEP	-	25OCT
1989	15,000	05SEP	-	25OCT

Coho				
Year	Escapement	Start	Peak	End
1970-1983	0	-	-	-
1984	54	25SEP	15OCT	25NOV
1985	50	25SEP	25OCT	15NOV
1986-1990	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970-1987	0	-	-	-
1988	18	-	-	-
1989	48	-	-	-

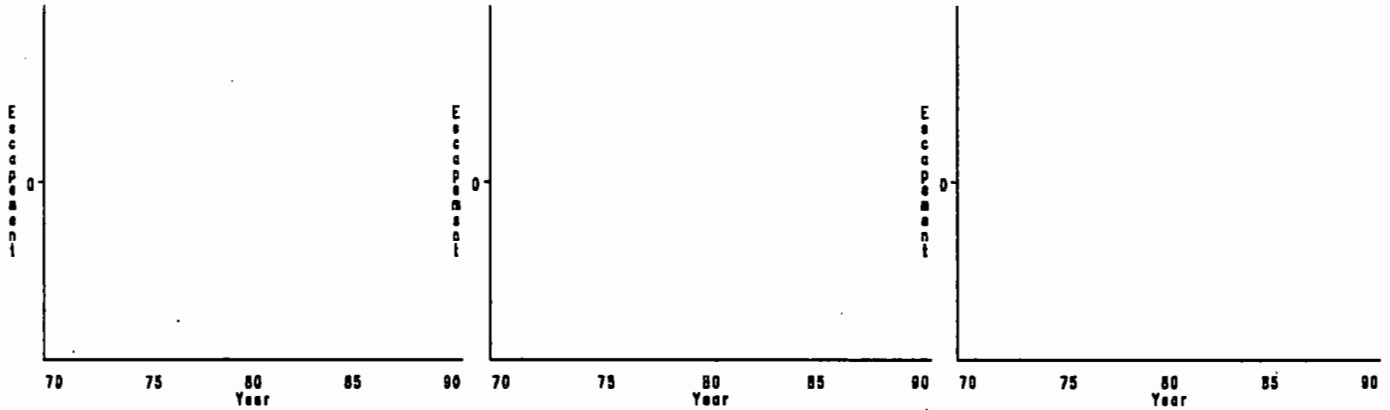
INZIANA RIVER (91-1282-750)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

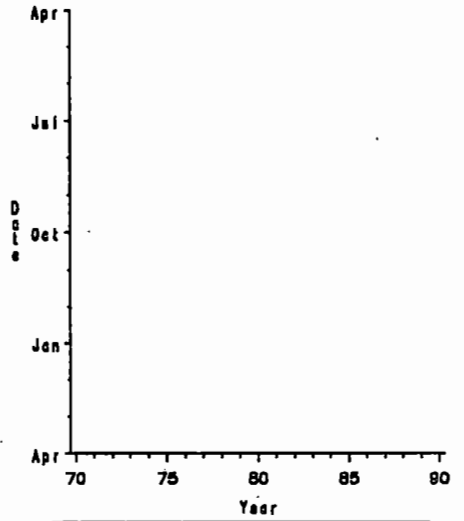
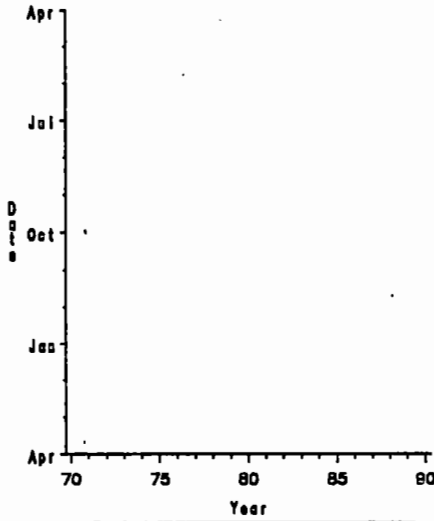
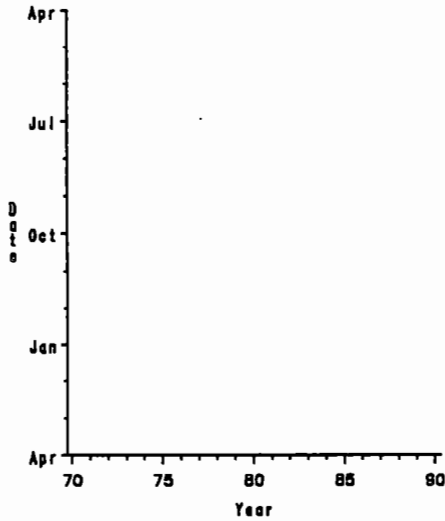
Steelhead (ST)



Chum

Chinook

Steelhead



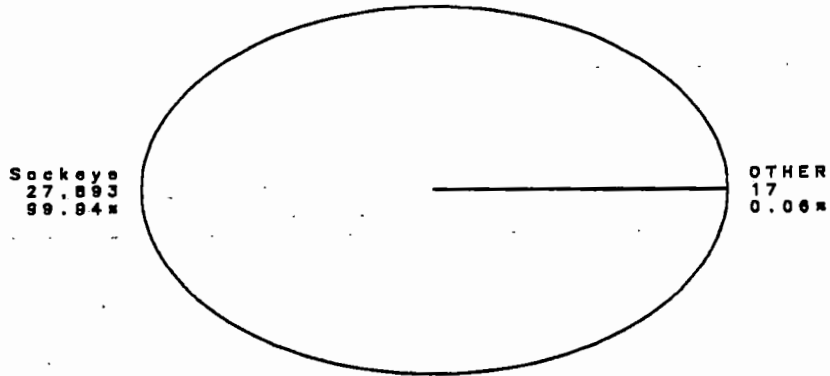
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	-	-	-	-
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	-	-	-	-

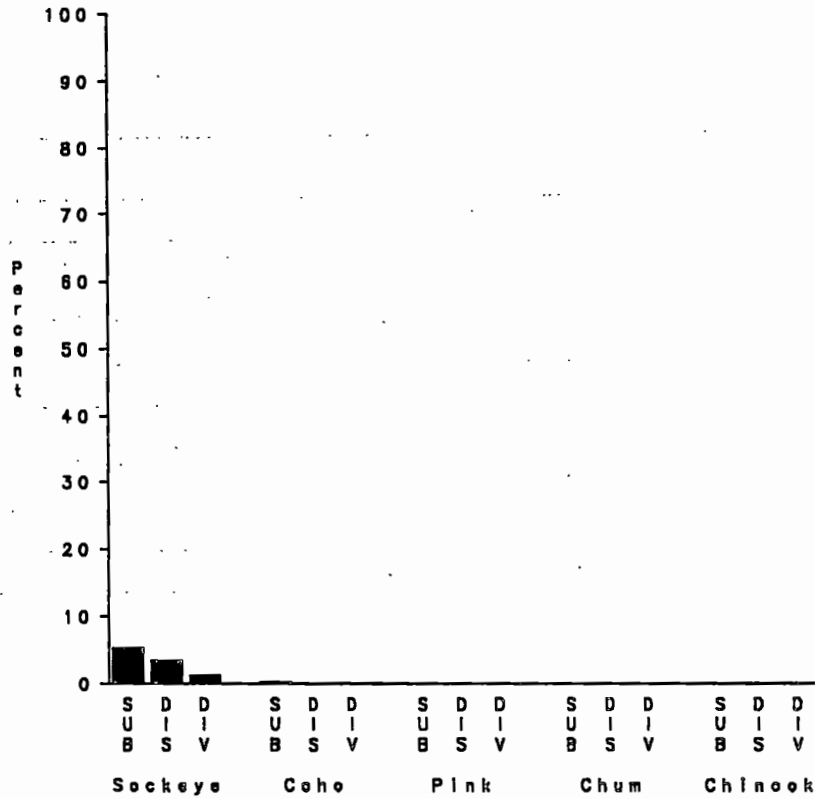
INZIANA RIVER (91-1282-750)

10-yr Mean Escapement
(1980-1989)



INZIANA RIVER : 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	46620	1980 - 1989	28A-18	110000	9-42	100000	9-42
CO COHO SALMON	47	1980 - 1989	28A-18	200	28A-18	1000	9-42
PK PINK SALMON	288	1980 - 1988	28A-18	1000	28A-18	500	9-42
PK PINK SALMON	67	1981 - 1989	28A-18	200	28A-18		
CM CHUM SALMON		1980 - 1989		6	28A-18		
CH CHINOOK SALMON	29	1980 - 1989	28A-18	200	28A-18	3000	9-36

Comments: CM ESCAPEMENTS 1984(1) 1988(1) 1989(6) 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 P	X X		
CO COHO SALMON	Migration Spawning Incubation Rearing	X X							X	X X	X P	X X	X X
CH CHINOOK SALMON	Migration Spawning Incubation Rearing						X	X 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
FC FLOW CONTROL	AF ALL SPECIES	1.6	CHANNEL HAS SHIFTED PERIODICALLY IN THE FAN AREA. SEVERAL ATTEMPTS HAVE BEEN MADE TO STABILIZE THE FLOW (EG. 1973). SEP ENGINEERING HAVE NOW INSTALLED A CONCRETE CONTROL STRUCTURE TO STABILIZE FLOW IN THE 'OLD' CHANNEL. SPAWNING CHANNEL DEVELOPMENT IS ALSO PLANNED. (REF. 9-4, REF. 9-36)	1988/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING ACTIVE IN UPPER REACHES, AND PROPOSED FOR FURTHER WORK. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. EXTENSIVE EROSION DUE TO CHANNEL INSTABILITY IN THE DELTA AREA. 80% OF SPAWN WAS DESTROYED IN FLASH FLOOD IN 1967. CHANNEL INSTABILITY HAS RESULTED IN HIGH SPAWN LOSS ON PAST OCCASIONS, BY CARRYING MOST OF THE FLOW TO THE TZE0 RIVER. IN SPITE OF REMEDIAL CHANNEL WORK IN 1973, TO RESTABILIZE FLOW TO THE MAINSTEM, A NEW CHANNEL BROKE THROUGH TO THE TZE0 RIVER IN 1980, WITH RESULTING HEAVY LOSS OF SPAWN. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. EXCELLENT REARING HABITAT IN THE NUMEROUS SIDE CHANNELS AT THE LOWER END. WASHMASH RIVER FAN AREA IS VERY SENSITIVE TO TIMBER HARVESTING DEVELOPMENT DUE TO THE NATURAL INSTABILITY OF THE AREA. STEELHEAD ALSO SUSPECTED PRESENT. VERY HIGH FISHERIES VALUE. (REF. 9-16)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS CONTINUED

FURTHER CHANNEL WORK PLANNED AND ONGOING IN THE LOWER FAN AREA. LOWER DELTA UNDER RESERVE FROM LOGGING. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /

Prepared By:

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO
Checked by: TOM PENDRAY
Last checked by: TOM PENDRAY

Date: 1989/03/31
Date: 1989/03/31
Date: 1992/01/09

ESCAPEMENT : WASHWASH RIVER

WATERSHED-CODE : 91-1282-780

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	100000	UNK	0	0	75	UNK
1954	500	1500	0	0	0	UNK
1955	7500	UNK	0	0	0	UNK
1956	7500	200	0	0	75	UNK
1957	35000	N/O	0	0	75	UNK
1958	75000	25	0	0	25	UNK
1959	15000	N/O	0	0	75	UNK
1960	3500	0	0	0	UNK	UNK
1961	15000	0	0	0	UNK	UNK
1962	75000	0	0	0	0	UNK
1963	125000	400	0	0	UNK	UNK
1964	75000	750	0	0	N/O	UNK
1965	7500	400	0	0	0	UNK
1966	35000	25	0	0	0	UNK
1967	125000	25	0	0	0	UNK
1968	100000	75	0	0	0	UNK
1969	3500	750	0	0	0	UNK
1970	3500	75	0	0	N/O	UNK
1971	10000	N/O	0	0	10	UNK
1972	22500	UNK	0	0	50	UNK
1973	200000	200	0	0	200	UNK
1974	75000	200	0	0	UNK	UNK
1975	42500	N/O	25	25	25	UNK
1976	20000	200	0	0	20	UNK
1977	35000	N/O	0	0	30	UNK
1978	65000	0	300	0	100	UNK
1979	15000	0	N/O	0	100	UNK
1980	13500	0	0	0	0	UNK
1981	50000	0	N/O	0	N/O	UNK
1982	110000	75	50	0	200	UNK
1983	30000	50	25	0	50	UNK
1984	30000	50	100	1	N/O	UNK
1985	100000	200	100	N/O	1	UNK
1986	30000	UNK	UNK	UNK	UNK	UNK
1987	54700	N/O	12	N/O	1	UNK
1988	35000	UNK	1000	1	10	UNK
1989	13000	N/O	200	6	2	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

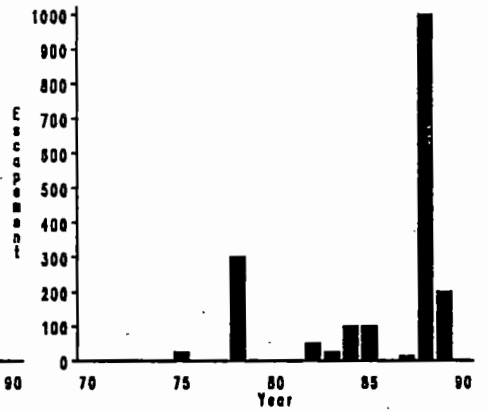
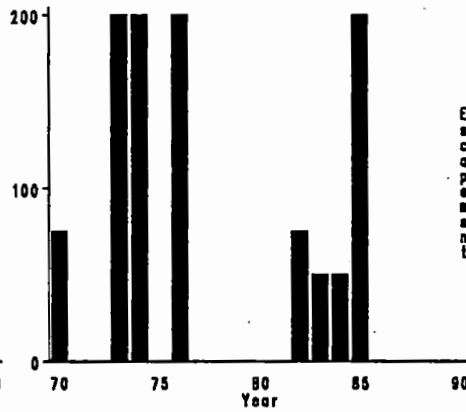
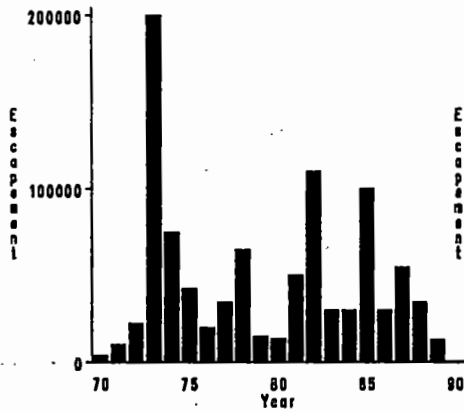
WASHWASH RIVER (91-1282-780)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

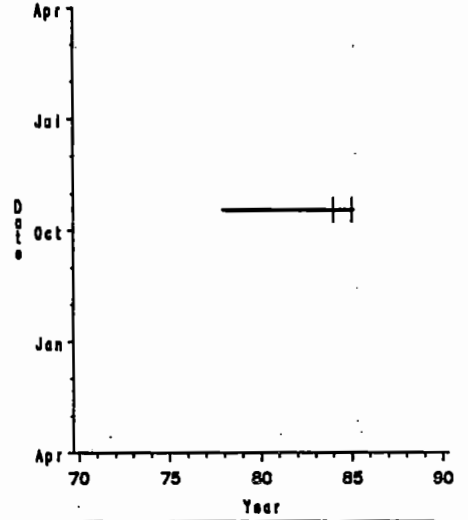
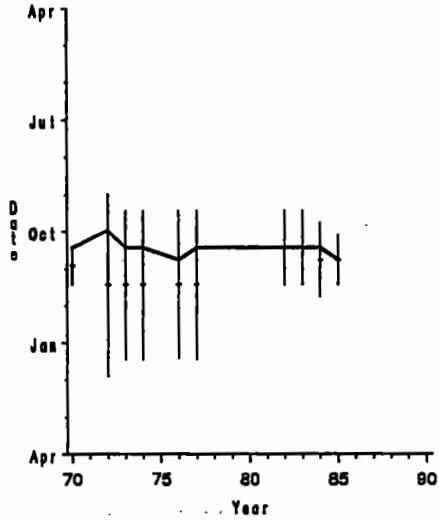
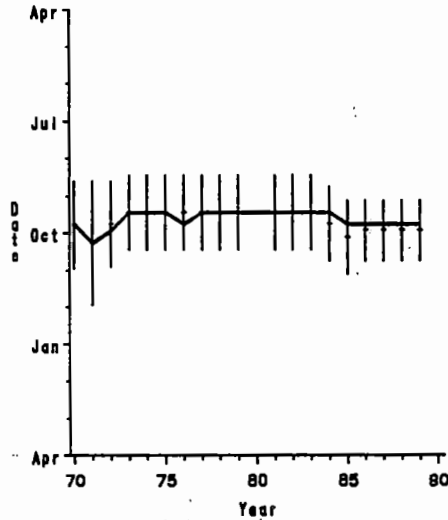
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	3,500	20AUG	25SEP	31OCT
1971	18,000	20AUG	10OCT	30NOV
1972	23,500	20AUG	30SEP	30OCT
1973	208,000	15AUG	15SEP	15OCT
1974	75,000	15AUG	15SEP	19OCT
1975	42,500	15AUG	15SEP	19OCT
1976	29,000	15AUG	25SEP	15OCT
1977	35,000	15AUG	15SEP	15OCT
1978	65,000	15AUG	15SEP	19OCT
1979	15,000	15AUG	15SEP	19OCT
1980	13,500	-	-	-
1981	59,000	15AUG	15SEP	19OCT
1982	118,000	15AUG	15SEP	19OCT
1983	38,000	15AUG	15SEP	19OCT
1984	38,000	25AUG	15SEP	25OCT
1985	108,000	05SEP	25SEP	05NOV
1986	38,000	05SEP	25SEP	25OCT
1987	54,700	05SEP	25SEP	25OCT
1988	38,000	05SEP	25SEP	29OCT
1989	13,000	05SEP	25SEP	29OCT

Coho				
Year	Escapement	Start	Peak	End
1970	75	15OCT	15OCT	15NOV
1971	0	-	-	-
1972	-	01SEP	01OCT	29JAN
1973	200	15SEP	15OCT	15JAN
1974	200	15SEP	15OCT	15JAN
1975	0	-	-	-
1976	200	15SEP	25OCT	14JAN
1977	0	15SEP	15OCT	15JAN
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	75	15SEP	19OCT	15NOV
1983	50	15SEP	15OCT	15NOV
1984	50	25SEP	15OCT	25NOV
1985	200	05OCT	25OCT	15NOV
1986	-	-	-	-
1987	0	-	-	-
1988	-	-	-	-
1989	0	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	25	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	300	15SEP	15SEP	15SEP
1979	0	15SEP	15SEP	15SEP
1980	0	-	-	-
1981	0	15SEP	15SEP	15SEP
1982	50	15SEP	15SEP	15SEP
1983	25	15SEP	15SEP	15SEP
1984	100	05SEP	15SEP	25SEP
1985	100	05SEP	15SEP	25SEP
1986	-	-	-	-
1987	12	-	-	-
1988	1,000	-	-	-
1989	200	-	-	-

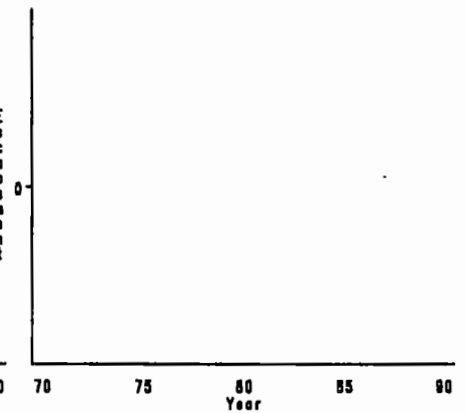
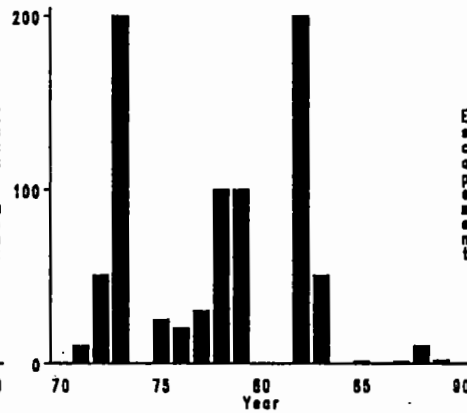
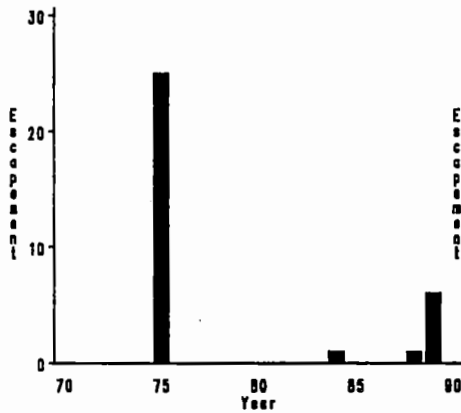
WASHWASH RIVER (91-1282-780)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

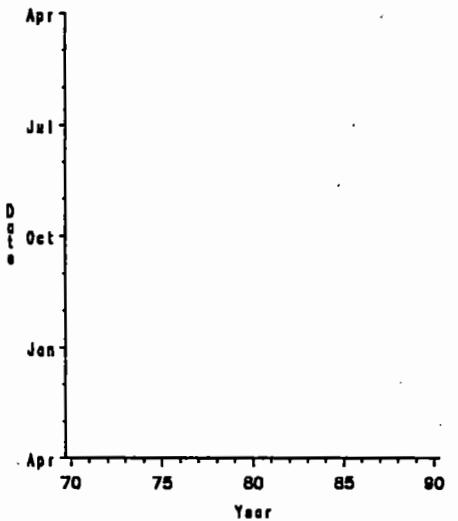
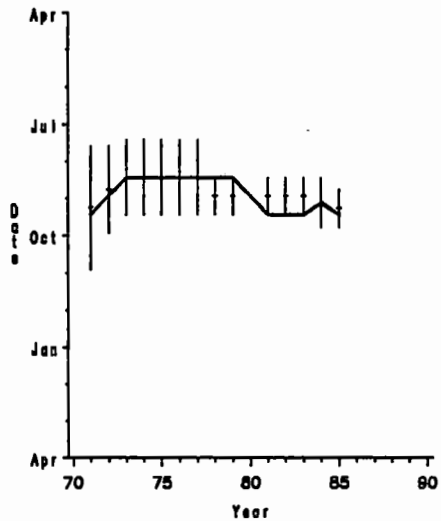
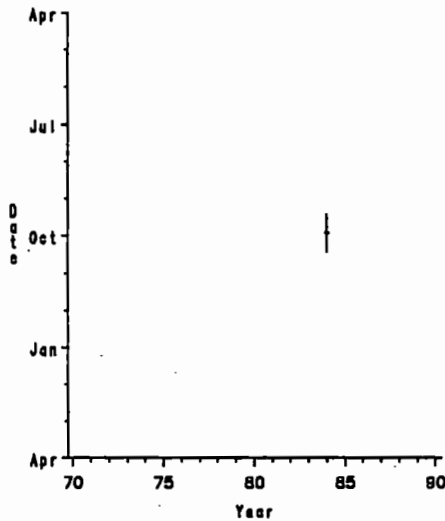
Steelhead (ST)



Chum

Chinook

Steelhead



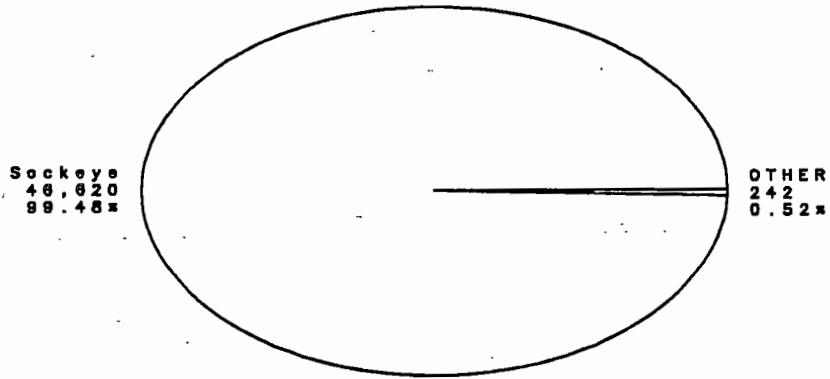
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	25	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	1	15SEP	25SEP	15OCT
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	1	-	-	-
1989	6	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	10	20JUL	15SEP	30OCT
1972	50	20JUL	30AUG	30SEP
1973	200	15JUL	15AUG	15SEP
1974	-	15JUL	15AUG	15SEP
1975	25	15JUL	15AUG	15SEP
1976	20	15JUL	15AUG	15SEP
1977	30	15JUL	15AUG	15SEP
1978	100	15AUG	15AUG	15SEP
1979	100	15AUG	15AUG	15SEP
1980	0	-	-	-
1981	0	15AUG	15SEP	15SEP
1982	200	15AUG	15SEP	15SEP
1983	50	15AUG	15SEP	15SEP
1984	0	15AUG	05SEP	25SEP
1985	1	25AUG	15SEP	25SEP
1986	-	-	-	-
1987	1	-	-	-
1988	10	-	-	-
1989	1	-	-	-

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	-	-	-	-

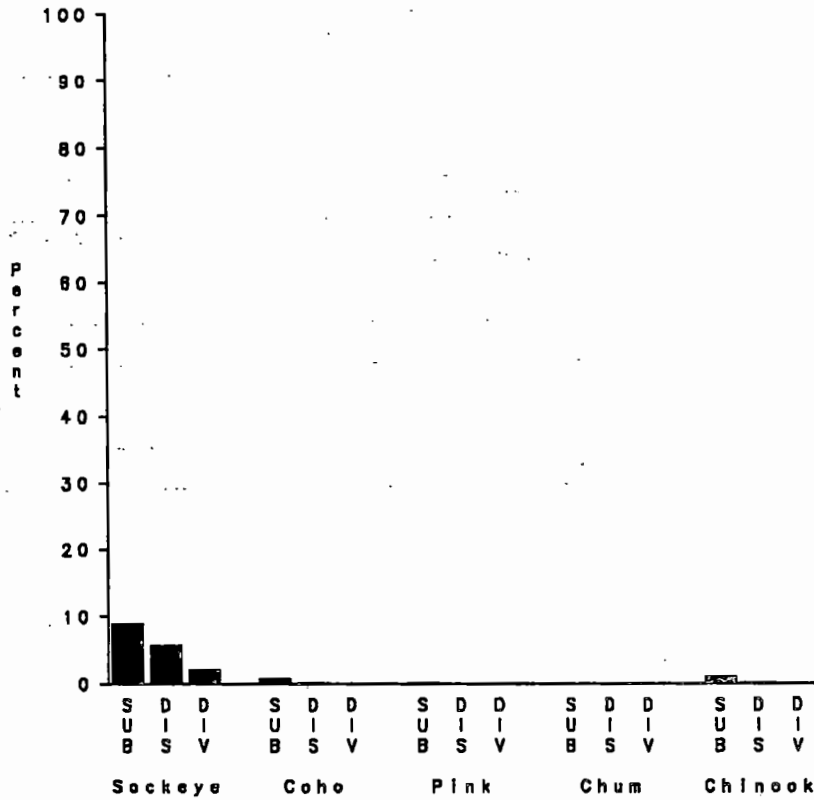
WASHWASH RIVER (91-1282-780)

10-yr Mean Escapement
(1980-1989)



WASHWASH RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: TZEO RIVER	D.F.O. Division: NORTH COAST
Local Name: CHEO RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-1282-800	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/15
		B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6608, 57462 Lat./Long. Mouth: DG. DG. Mainstem Length: 29.5 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
Location: FLOWS SE AND S INTO HEAD OF OWIKENO LAKE, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	1% OR LESS FOR LOWER 10 KM. STEEP ABOVE THIS POINT. (REF. 9-16)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		4.7		PASSABLE BUT HINDERS MIGRATION. BULK OF SPAWN IS BELOW THE CASCADE. (REF. 9-16)
C CASCADE		12.9		SERIES OF CASCADES AND FALLS FROM THIS POINT UPSTREAM ARE PROBABLY IMPASSABLE. (REF. 9-16)
R ROCK	4.0	13.8		(REF. 9-16)

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	SPAWNING MAINLY IN LOWER 1.1 KM AND 4.2 KM TO 4.7 KM. MOST SPAWN BELOW 4.7 KM, BUT OBSERVED SPAWNING TO 9.7 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CO COHO SALMON	OBSERVED SPAWNING AT 9.7 KM. (REF. 9-4, REF. 9-36)
PK PINK SALMON	OBSERVED TO CASCADE AT 4.7 KM. VERY FEW PRESENT. (REF. 9-4, REF. 9-16)
CH CHINOOK SALMON	OBSERVED TO 9.7 KM. (REF. 9-4, REF. 9-16, REF. 9-36)
CT CUTTHROAT TROUT	OBSERVED TO 9.7 KM. (REF. 9-16)
OV DOLLY VARDEN	OBSERVED AT 3.5 KM. (REF. 9-16)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	11350	1980 - 1989	28A-18	55000	28A-18	50000	9-42
CO COHO SALMON	31	1980 - 1989	28A-18	100	28A-18	500	9-42
CH CHINOOK SALMON	24	1980 - 1989	28A-18	200	28A-18	500	9-42

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	P X	X X		
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X	P 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	LOGGING AND FOREST FIRES HAVE CONTRIBUTED TO THE SILTATION PROBLEM IN THE PAST. (REF. 9-4)
LD LINEAR DEVELOPMENT	LOGGING ROAD BUILT ALONG THE RIVER. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SCOURED GRAVEL FROM A CHANNEL IN WASHWASH RIVER HAS ENHANCED SPAWNING GROUNDS IN LOWER RIVER IN 1970. STREAMBED HAS BEEN HEAVILY SILTED SOME YEARS, WITH CONSIDERABLE BANK EROSION. (REF. 9-4)
BIOPHYSICAL INVENTORY DATA AND HABITAT DESCRIPTION AVAILABLE. GOOD HABITAT FOR SPAWNING AND REARING IN REACH FROM 6-10 KM. (IE. ABOVE CASCADE). STEELHEAD MAY ALSO BE PRESENT. (REF. 9-16)
GLACIAL, WITH POOR VISIBILITY. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : TZE0 RIVER

WATERSHED-CODE : 91-1282-800

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	7500	0	0	0	0	UNK
1954	2500	0	0	0	0	UNK
1955	400	0	0	0	0	UNK
1956	15000	0	0	0	0	UNK
1957	7500	75	0	0	0	UNK
1958	7500	400	0	0	0	UNK
1959	15000	0	0	0	0	UNK
1960	400	0	0	0	UNK	UNK
1961	3500	UNK	0	0	UNK	UNK
1962	3500	0	0	0	0	UNK
1963	35000	UNK	0	0	UNK	UNK
1964	15000	UNK	0	0	UNK	UNK
1965	1500	N/O	0	0	N/O	UNK
1966	7500	0	0	0	0	UNK
1967	3500	25	0	0	25	UNK
1968	15000	25	0	0	25	UNK
1969	750	200	0	0	25	UNK
1970	1500	25	25	0	25	UNK
1971	1100	N/O	N/O	0	N/O	UNK
1972	1500	UNK	N/O	N/O	N/O	UNK
1973	55000	UNK	N/O	0	25	UNK
1974	32500	UNK	N/O	0	N/O	UNK
1975	11000	N/O	N/O	0	50	UNK
1976	12000	N/O	0	0	N/O	UNK
1977	4000	N/O	0	0	50	UNK
1978	10000	N/O	0	0	50	UNK
1979	2000	0	0	0	N/O	UNK
1980	4000	UNK	UNK	UNK	N/O	UNK
1981	5000	0	0	0	N/O	UNK
1982	55000	100	0	0	200	UNK
1983	4000	N/O	0	0	N/O	UNK
1984	2000	100	N/O	N/O	N/O	UNK
1985	10000	50	N/O	N/O	N/O	UNK
1986	10000	UNK	UNK	UNK	35	UNK
1987	10500	0	0	0	6	UNK
1988	9500	N/O	0	0	0	UNK
1989	3500	UNK	UNK	UNK	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

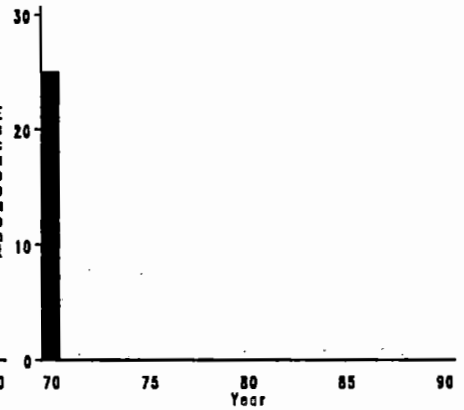
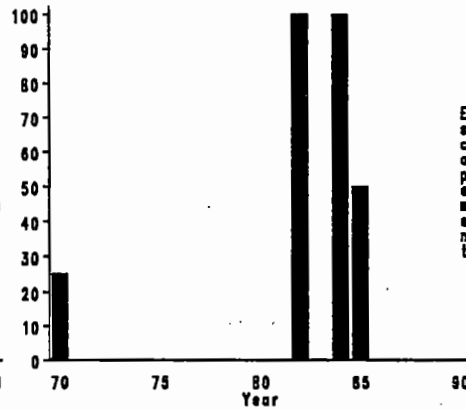
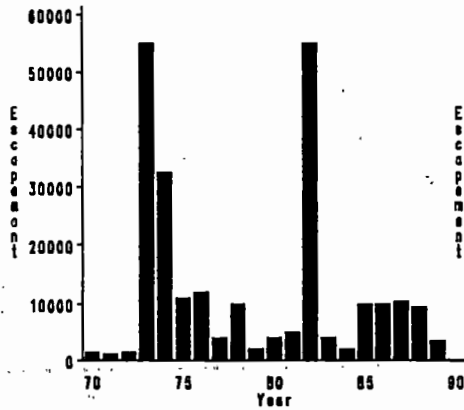
TZEO RIVER (91-1282-800)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

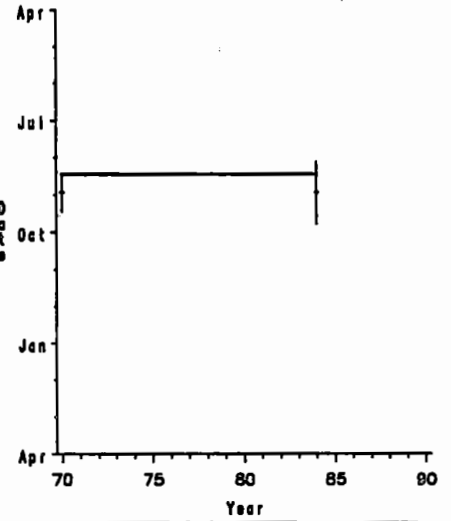
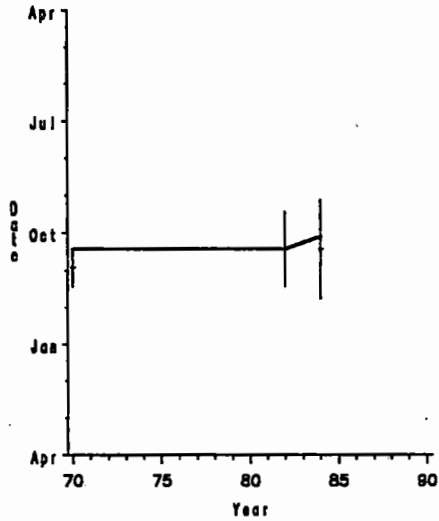
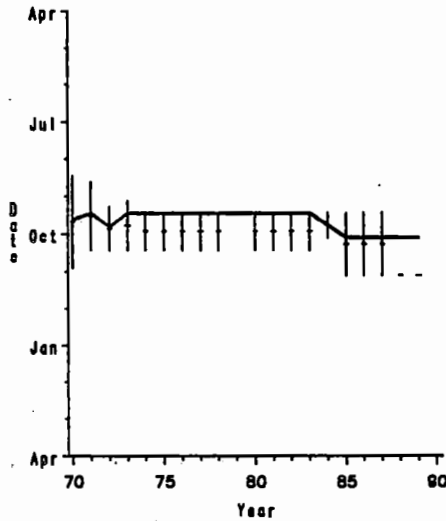
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	1,500	15AUG	29SEP	30OCT
1971	1,100	20AUG	15SEP	15OCT
1972	1,500	10SEP	29SEP	15OCT
1973	55,000	05SEP	15SEP	15OCT
1974	32,500	15SEP	15SEP	19OCT
1975	11,000	15SEP	15SEP	15OCT
1976	12,000	15SEP	15SEP	15OCT
1977	4,000	15SEP	15SEP	15OCT
1978	10,000	15SEP	15SEP	15OCT
1979	2,000	15SEP	13JUN	-
1980	4,000	15SEP	15SEP	15OCT
1981	3,000	15SEP	15SEP	15OCT
1982	59,000	15SEP	15SEP	15OCT
1983	4,000	15SEP	15SEP	15OCT
1984	2,000	15SEP	25SEP	05OCT
1985	10,000	15SEP	05OCT	09NOV
1986	10,000	15SEP	05OCT	05NOV
1987	10,500	15SEP	05OCT	05NOV
1988	9,500	-	05OCT	05NOV
1989	3,500	-	05OCT	05NOV

Coho				
Year	Escapement	Start	Peak	End
1970	25	15OCT	15OCT	15NOV
1971	0	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	100	15SEP	15OCT	15NOV
1983	0	-	-	-
1984	100	05SEP	05OCT	25NOV
1985	50	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

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

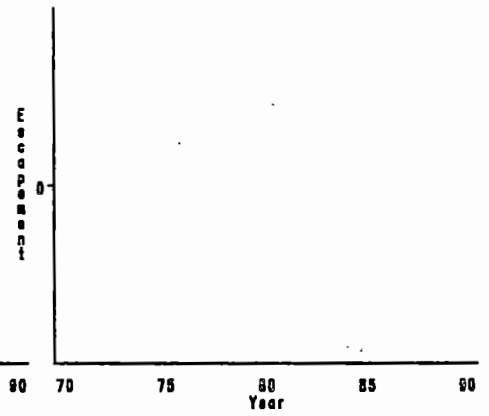
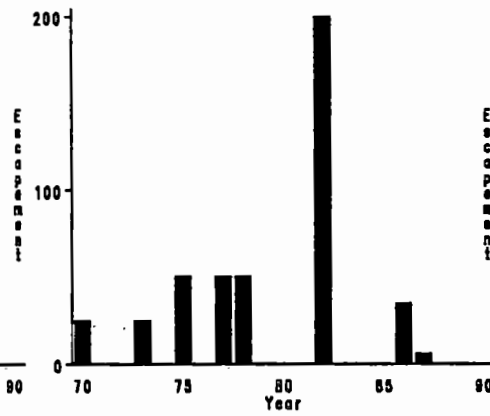
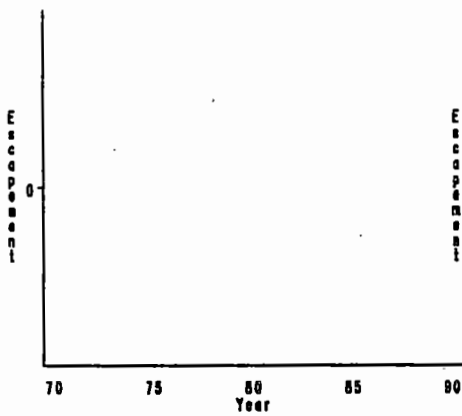
TZEO RIVER (91-1282-800)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

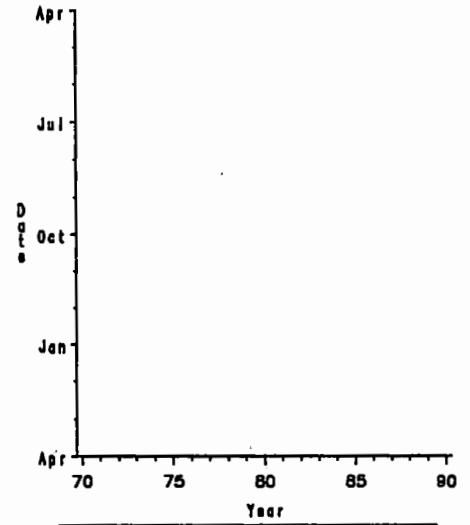
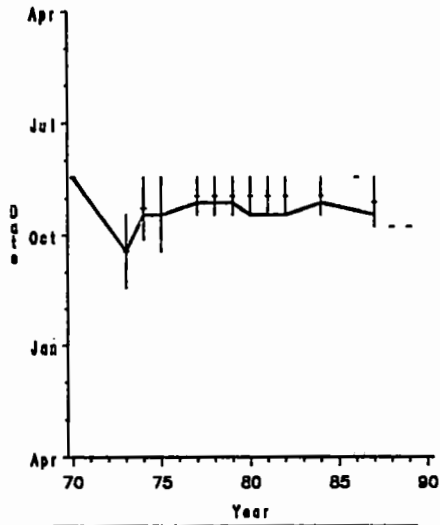
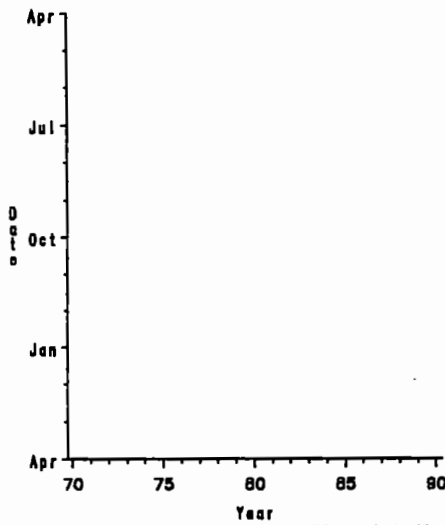
Steelhead (ST)



Chum

Chinook

Steelhead



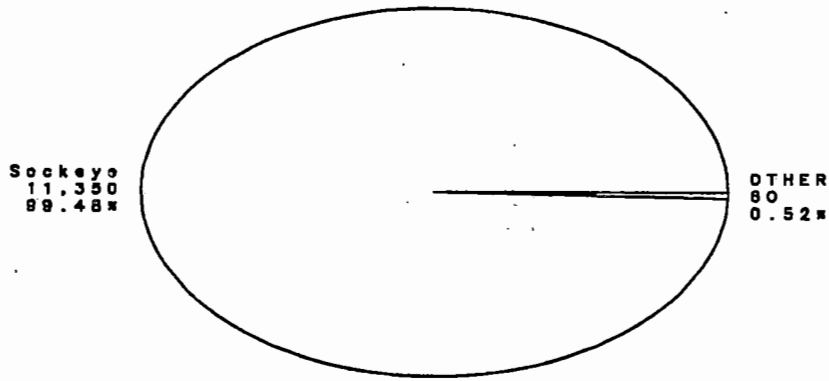
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Year	Escapement	Start	Peak	End
1970	25	15AUG	15AUG	15AUG
1971	0	-	-	-
1972	0	-	-	-
1973	25	15SEP	15OCT	15NOV
1974	0	15AUG	15SEP	05OCT
1975	50	15AUG	15SEP	15OCT
1976	0	-	-	-
1977	50	15AUG	05SEP	15SEP
1978	50	15AUG	05SEP	15SEP
1979	0	15AUG	05SEP	15SEP
1980	0	15AUG	15SEP	15SEP
1981	0	15AUG	15SEP	15SEP
1982	200	15AUG	15SEP	15SEP
1983	0	-	-	-
1984	0	15AUG	05SEP	15SEP
1985	0	-	-	-
1986	35	15AUG	-	-
1987	0	15AUG	15SEP	25SEP
1988	0	-	-	25SEP
1989	0	-	-	25SEP

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	-	-	-	-

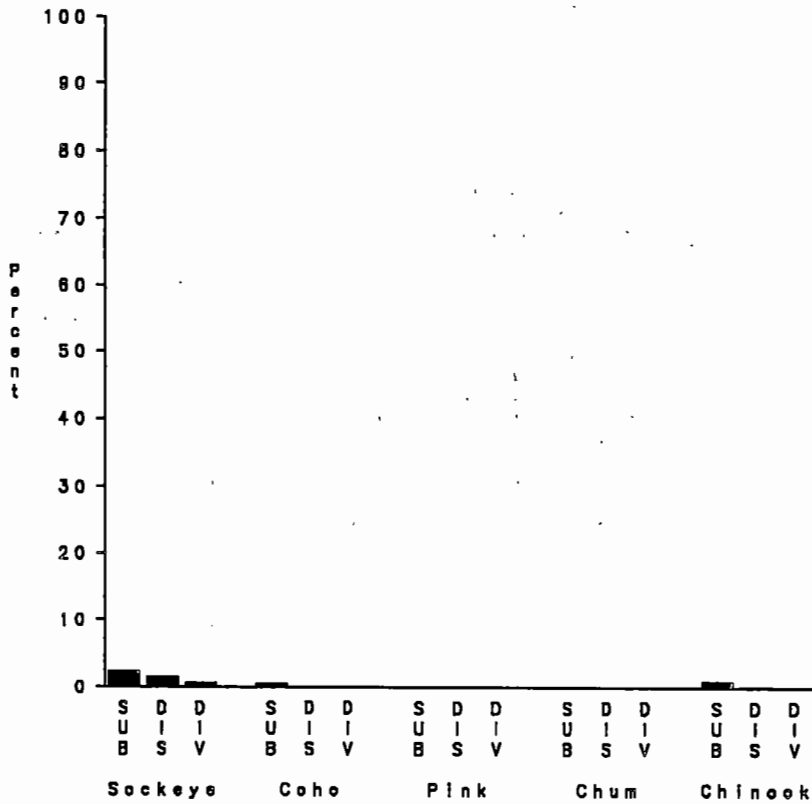
TZEO RIVER (91-1282-800)

10-yr Mean Escapement
(1980-1989)



TZEO RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: KILBELLA RIVER	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
CHUCKWALLA RIVER	050	B.C.G.S. (1:20k) Map:
UNNAMED CREEK	080	U.T.M. Mouth: 9.6147.57293
UNNAMED CREEK	100	Lat./Long. Mouth: DG. ' ' DG. ' '
UNNAMED CREEK	140	Mainstem Length: 64.9 km Ref. No.: 6N-28
KRANTZ CREEK	250	Watershed Area: Ref. No.:
UNNAMED CREEK	290	
UNNAMED CREEK	300	Location: FLOWS S INTO HEAD OF KILBELLA BAY, RIVERS INLET,
UNNAMED CREEK	310	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
C CASCADE		50.2		(REF. 6N-28)
C CASCADE		54.1		(REF. 6N-28)
C CASCADE		57.4		(REF. 6N-28)

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 SPawning TO 44.1 KM. BACK CHANNELS AND TRIBUTARIES UTILIZED FOR REARING. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPawning MAINLY AT 9.9 KM TO 28.8 KM, AND IN TRIBUTARIES. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPawning MAINLY AT 9.9 KM TO 28.8 KM. (REF. 9-4, REF. 9-36)
CH CHINOOK SALMON	SPawning MAINLY AT 15.4 KM TO 38.5 KM, OBSERVED SPawning TO 44.1 KM. (REF. 9-4, REF. 9-36)
ST STEELHEAD	OBSERVED SPawning TO 44.1 KM. (REF. 9-4, REF. 9-36)
DV DOLLY VARDEN	PRESENCE NOTED, OBSERVED IN TRIBUTARY. (REF. 29G-43)
EU EULACHON	SPawning IN TRIBUTARY. (REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	234	1980 - 1989	28A-18	500	9-42	3500	9-42
PK PINK SALMON	13500	1980 - 1988	28A-18	42500	9-42	50000	9-42
PK PINK SALMON	20300	1981 - 1989	28A-18	50000	9-42		
CH CHUM SALMON	741	1980 - 1989	28A-18	5000	9-42	5000	9-42
CH CHINOOK SALMON	282	1980 - 1989	28A-18	1000	9-42	3000	9-42

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	X X	X P	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X P	X X			
CH CHUM SALMON	Migration Spawning Incubation Rearing							X	X X X	X X	P X	X X	
CH CHINOOK SALMON	Migration Spawning Incubation Rearing						X	X X	X X	P X			

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
DS DONOR STOCK	CH CHINOOK SALMON	0.0	BROODSTOCK FOR SHOTBOLT HATCHERY, CAPTURED BY ROD AND REEL. (REF. 9-36)	/
AU AUGMENTATION	CH CHINOOK SALMON	0.0	DATA ON SMOLT AND FRY RELEASES AVAILABLE. (REF. 9-41)	1987/
EN ENHANCEMENT ACTS	CH CHINOOK SALMON	25.4	SEP REARING CHANNEL. CH ARE INCUBATED AT SHOTBOLT C. AND RETURNED TO REARING CHANNEL. (REF. 29G-43)	1988/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
LD LINEAR DEVELOPMENT	LOGGING ROAD CONSTRUCTED TO 24 KM IN 1973. (REF. 9-4)
FO FORESTRY	LOGGING IN PROGRESS. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

PORTION ABOVE MALLON CREEK PROVIDES LITTLE SUITABLE SALMONID HABITAT. SUBJECT TO FLOODING IN LATE SEPTEMBER AND NOVEMBER. EXTENSIVE SILTING AND CHANNEL INSTABILITY TO 6.5 KM. NO SPAWNING IN THIS SECTION. FLOODING HAS CAUSED EXTENSIVE LOSS OF SPAWN IN SOME YEARS. (REF. 9-4)
VERY IMPORTANT ST POPULATION. ACTIVE SPORT FISHERY. BACK CHANNELS AND TRIBUTARIES ARE VERY IMPORTANT CO REARING AREAS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : KILBELLA RIVER

WATERSHED-CODE : 91-1300

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	750	15000	1500	0	UNK
1954	0	500	500	2000	UNK	UNK
1955	0	UNK	3500	400	UNK	UNK
1956	0	75	7500	1500	200	UNK
1957	0	N/O	N/O	N/O	UNK	UNK
1958	0	750	N/O	N/O	N/O	UNK
1959	0	3500	3500	750	750	UNK
1960	0	200	750	75	75	UNK
1961	0	750	3500	1500	400	UNK
1962	0	3500	15000	400	400	UNK
1963	0	400	7500	400	400	UNK
1964	0	1500	7500	400	200	UNK
1965	0	3500	3500	25	200	UNK
1966	0	750	7500	200	200	UNK
1967	0	400	UNK	N/O	3500	UNK
1968	0	1500	7500	N/O	N/O	UNK
1969	0	400	75	N/O	25	UNK
1970	0	400	35000	200	1500	UNK
1971	0	UNK	3500	20	30	UNK
1972	0	750	200000	200	35	UNK
1973	0	400	750	700	100	UNK
1974	0	1500	55000	400	750	UNK
1975	0	N/O	10000	N/O	100	UNK
1976	0	200	20000	0	50	UNK
1977	0	200	2000	400	150	UNK
1978	0	500	500	800	200	UNK
1979	0	100	1000	N/O	N/O	UNK
1980	0	200	5000	450	0	UNK
1981	0	300	4000	300	75	UNK
1982	0	250	3000	1000	400	UNK
1983	0	200	20000	0	1000	UNK
1984	N/O	500	2000	N/O	175	UNK
1985	N/O	150	50000	400	300	UNK
1986	0	UNK	15000	15	150	UNK
1987	0	500	25000	5000	500	UNK
1988	0	0	42500	150	200	UNK
1989	UNK	10	2500	90	23	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

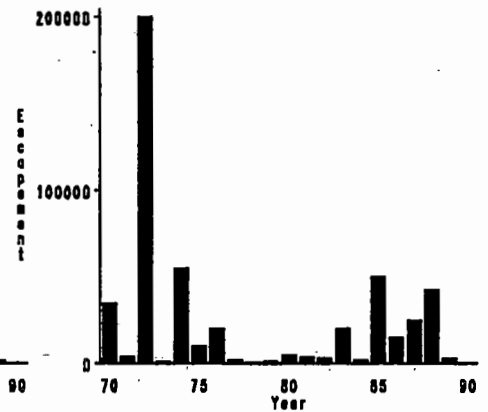
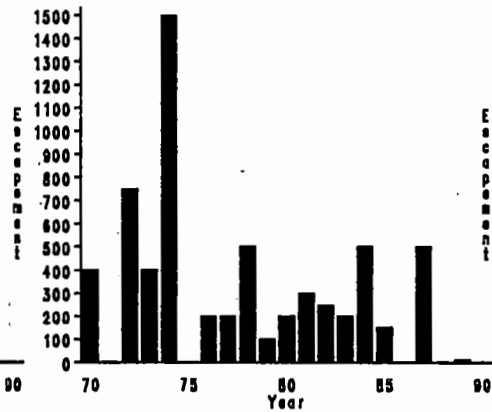
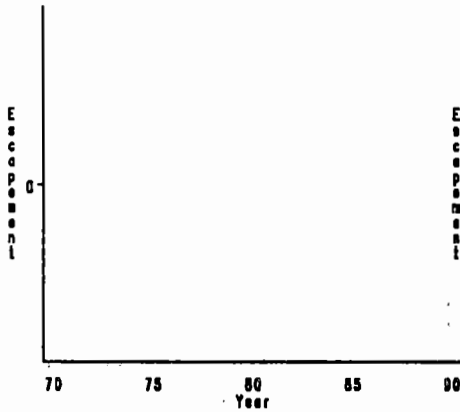
KILBELLA RIVER (91-1300)

Escapement & Run Timing

Socketeye (SK)

Coho (CO)

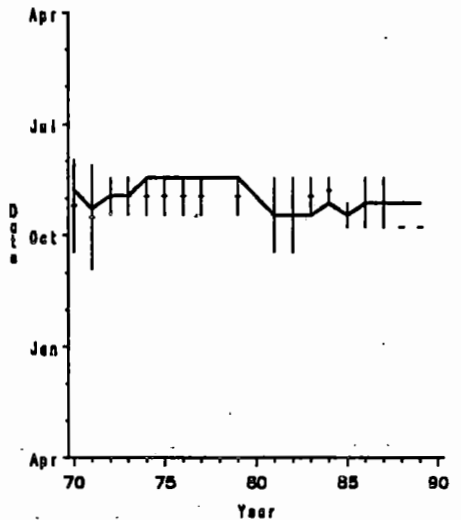
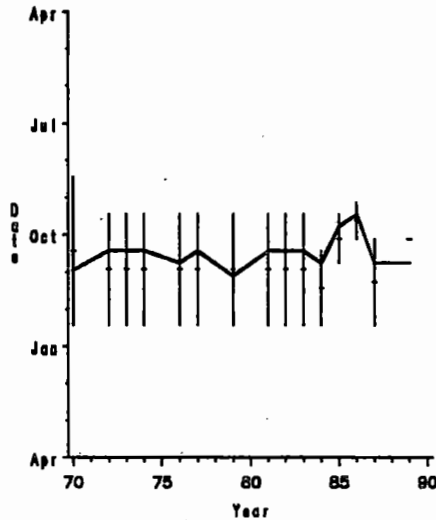
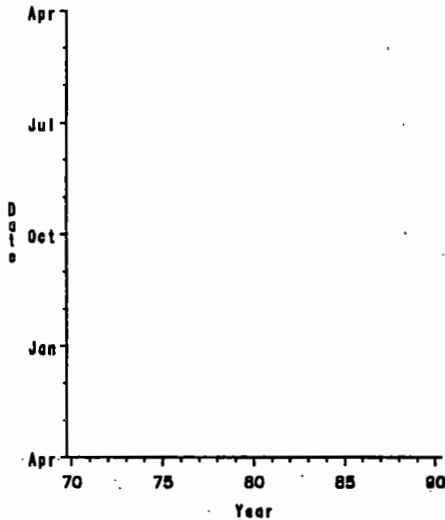
Pink (PK)



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	19AUG	31OCT	19DEC
1971	-	-	-	-
1972	750	19SEP	15OCT	15DEC
1973	400	15SEP	15OCT	15DEC
1974	1,500	19SEP	15OCT	19DEC
1975	0	-	-	-
1976	200	19SEP	25OCT	19DEC
1977	200	15SEP	15OCT	15DEC
1978	500	-	-	-
1979	100	15SEP	05NOV	15DEC
1980	200	-	-	-
1981	300	15SEP	15OCT	15DEC
1982	250	15SEP	19OCT	15DEC
1983	200	15SEP	15OCT	15DEC
1984	500	15OCT	25OCT	15DEC
1985	150	19SEP	25SEP	25OCT
1986	-	05SEP	15SEP	05OCT
1987	500	05OCT	25OCT	15DEC
1988	0	-	-	-
1989	10	05OCT	25OCT	-

Pink				
Year	Escapement	Start	Peak	End
1970	35,000	01AUG	25AUG	19OCT
1971	3,500	05AUG	10SEP	30OCT
1972	200,000	18AUG	30AUG	15SEP
1973	750	15AUG	30AUG	15SEP
1974	55,000	15AUG	15AUG	15SEP
1975	10,000	15AUG	15AUG	15SEP
1976	20,000	15AUG	15AUG	15SEP
1977	2,000	15AUG	15AUG	15SEP
1978	500	-	-	-
1979	1,000	15AUG	15AUG	15SEP
1980	5,000	-	-	-
1981	4,000	15AUG	15SEP	19OCT
1982	3,000	15AUG	15SEP	19OCT
1983	20,000	15AUG	15SEP	15SEP
1984	2,000	15AUG	05SEP	05SEP
1985	50,000	05SEP	15SEP	25SEP
1986	15,000	15AUG	05SEP	25SEP
1987	25,000	15AUG	05SEP	25SEP
1988	42,500	-	05SEP	25SEP
1989	2,500	-	05SEP	25SEP

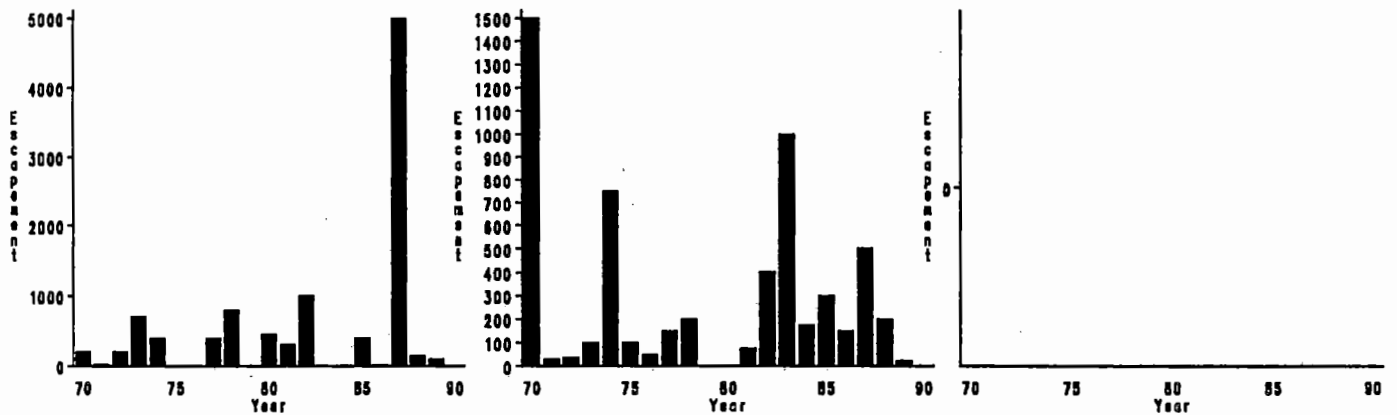
KILBELLA RIVER (91-1300)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

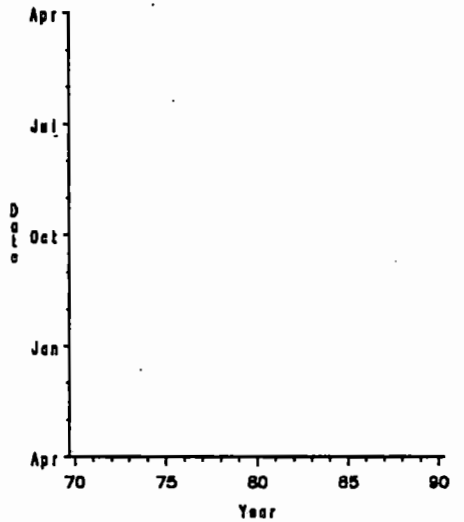
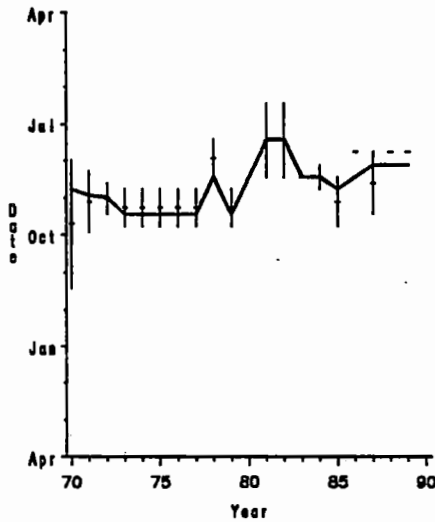
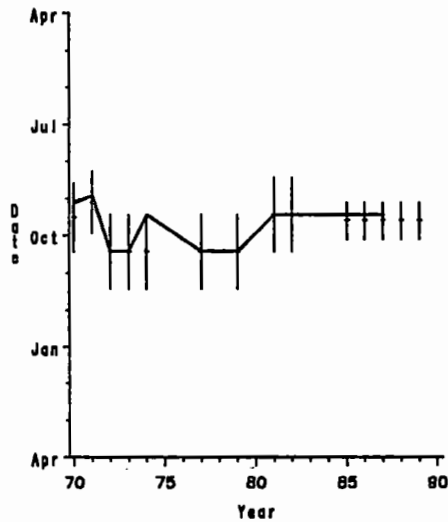
Steelhead (ST)



Chum

Chinook

Steelhead



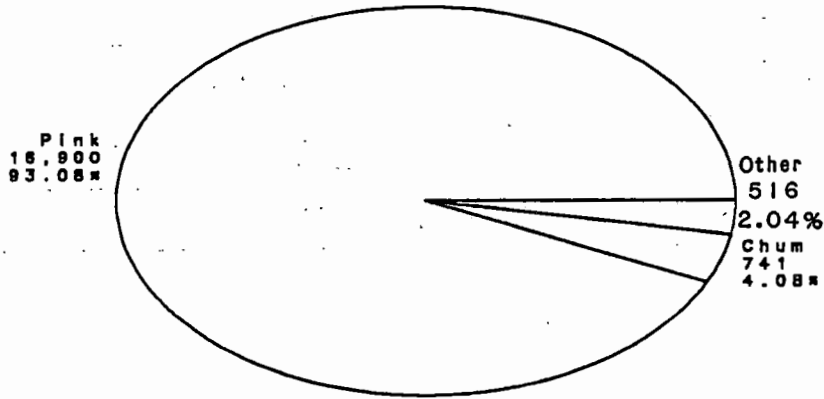
Chum				
Year	Escapement	Start	Peak	End
1970	200	20AUG	05SEP	15OCT
1971	20	10AUG	30AUG	30SEP
1972	200	15SEP	15OCT	15NOV
1973	700	15SEP	15OCT	15NOV
1974	400	15SEP	15SEP	15NOV
1975	0	-	-	-
1976	0	-	-	-
1977	400	15SEP	15OCT	15NOV
1978	800	-	-	-
1979	0	15SEP	15OCT	15NOV
1980	450	-	-	-
1981	300	15AUG	15SEP	15OCT
1982	1,000	15AUG	15SEP	15OCT
1983	0	-	-	-
1984	0	-	-	-
1985	400	05SEP	15SEP	05OCT
1986	15	05SEP	15SEP	05OCT
1987	5,000	05SEP	15SEP	05OCT
1988	150	05SEP	-	05OCT
1989	90	05SEP	-	05OCT

Chinook				
Year	Escapement	Start	Peak	End
1970	1,500	01AUG	25AUG	15NOV
1971	30	10AUG	30AUG	30SEP
1972	35	20AUG	01SEP	15SEP
1973	100	25AUG	15SEP	25SEP
1974	750	25AUG	15SEP	25SEP
1975	100	25AUG	15SEP	25SEP
1976	50	25AUG	15SEP	25SEP
1977	150	25AUG	15SEP	25SEP
1978	200	15JUL	15AUG	15AUG
1979	8	25AUG	15SEP	25SEP
1980	0	-	-	-
1981	75	15JUN	15JUL	15AUG
1982	400	15JUN	15JUL	15AUG
1983	1,000	15AUG	15AUG	15AUG
1984	175	05AUG	15AUG	25AUG
1985	300	15AUG	25AUG	25SEP
1986	150	25JUL	-	-
1987	500	25JUL	05AUG	15SEP
1988	200	25JUL	05AUG	-
1989	23	25JUL	05AUG	-

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	-	-	-	-

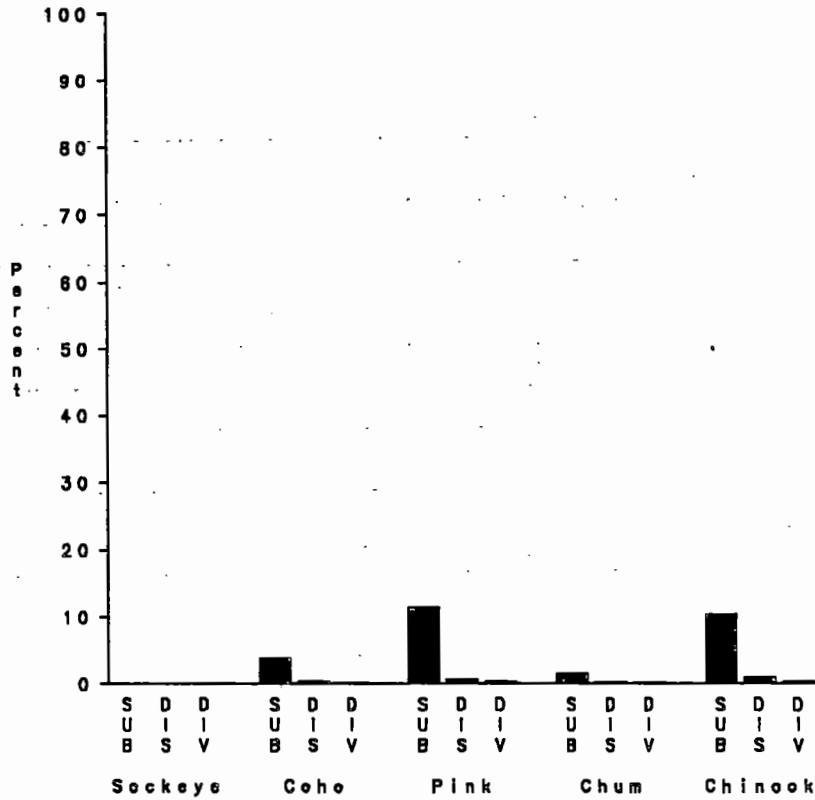
KILBELLA RIVER (91-1300)

10-yr Mean Escapement
(1980-1989)



KILBELLA RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: CHUCKMALLA RIVER	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-050	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
MACKS CREEK	020	B.C.G.S. (1:20k) Map:
JOHNS CREEK	200	U.T.M. Mouth: 9.6147.57319
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: 49.3 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows SW INTO LEFT BANK KILBELLA R., RIVERS INLET, RGE. 2, COAST DIST.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	DETAILED GRADIENT INFORMATION AVAILABLE. (REF. 4D-157)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		15.3		IMPASSABLE AT SOME FLOWS. (REF. 9-4, REF. 9-36)
C CASCADE		38.8		(REF. 6N-28)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: FED BY TRIBUTARY LAKES. (REF. 29F-65)			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED TO 33.4 KM. (REF. 9-4, REF. 9-36, REF. 29G-43)
PK PINK SALMON	SPAWNING MAINLY FROM 1.9 KM TO 12.5 KM. PROBABLY NOT PRESENT ABOVE 15.3 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING MAINLY FROM 1.9 KM TO 12.5 KM. PROBABLY NOT PRESENT ABOVE 15.3 KM. (REF. 9-4, REF. 9-36)
CH CHINOOK SALMON	SPAWNING AT 14.4 KM TO 14.9 KM. OBSERVED TO 24.6 KM. (REF. 9-4, REF. 9-36, REF. 29G-43)
ST STEELHEAD	SPAWNING AT 14.0 KM TO 14.5 KM. OBSERVED TO 26.7 KM. (REF. 9-36)
DV DOLLY VARDEN	OBSERVED IN JOHNS CREEK. (REF. 29G-43)
EU EULACHON	SPAWNING AT 1.5 KM TO 1.9 KM. (REF. 9-36)

E. ESCAPEMENT SUMMARY

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

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON		1980 - 1989		6	28A-18		
CO COHO SALMON	945	1980 - 1989	28A-18	2500	28A-18	3500	9-42
PK PINK SALMON	25400	1980 - 1988	28A-18	60000	28A-18	100000	9-42
PK PINK SALMON	31240	1981 - 1989	28A-28	50000	28A-18		
CM CHUM SALMON	1104	1980 - 1989	28A-18	5000	28A-18	25000	9-42
CH CHINOOK SALMON	184	1980 - 1989	28A-18	550	28A-18	3000	9-36
Comments: SK ESCAPEMENT FOR 1985(6) 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	P X	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X X	P X			
CM CHUM SALMON	Migration Spawning Incubation Rearing							X	X X X	X P	X X	X X	
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X 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
DS DONOR STOCK	CH CHINOOK SALMON	0.0	BROODSTOCK CAPTURE IN POOL BELOW CASCADE FOR SHOTBOLT HATCHERY. (REF. 9-36)	/
AU AUGMENTATION		0.0	DATA ON FRY AND SMOLT RELEASES AVAILABLE. (REF. 9-41)	1987//

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING COMMENCED IN THE WATERSHED IN 1961, COMPLETED IN 1989. (REF. 9-4, REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

LIMITED SPAWNING GROUNDS ABOVE THE CASCADES. UNSTABLE CHANNEL WITH A STREAMBED OF COMPACTED GRAVEL AND FINES TO 1.5 KM; THIS SECTION IS UNSUITABLE FOR SPAWNING. EXTENSIVE EROSION IN LOWER 1.5 KM. LOGGING ROAD CONSTRUCTION IN TRIBUTARIES, PARTICULARLY AT BRIDGE CROSSINGS, HAS DAMAGED SPAWNING AND REARING AREAS. (REF. 9-4)
IMPORTANT ST RUN AND GUIDED ST SPORT FISHERY. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : CHUCKWALLA RIVER

WATERSHED-CODE : 91-1300-050

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	15000	1500	N/O	UNK
1954	0	UNK	UNK	3000	UNK	UNK
1955	0	200	1500	200	UNK	UNK
1956	0	UNK	7500	1500	75	UNK
1957	0	200	3500	N/O	UNK	UNK
1958	0	400	3500	15000	N/O	UNK
1959	0	750	15000	3500	75	UNK
1960	0	200	750	1500	75	UNK
1961	0	750	15000	1500	200	UNK
1962	0	1500	15000	1500	200	UNK
1963	0	750	7500	1500	200	UNK
1964	0	1500	7500	3500	200	UNK
1965	0	1500	15000	200	750	UNK
1966	0	400	35000	200	400	UNK
1967	0	N/O	N/O	25	25	UNK
1968	0	UNK	7500	25	25	UNK
1969	0	200	25	200	25	UNK
1970	0	400	15000	750	200	UNK
1971	0	2000	5000	N/O	150	UNK
1972	0	2250	75000	750	50	UNK
1973	0	800	5000	800	80	UNK
1974	0	1500	90000	750	200	UNK
1975	0	75	15000	200	50	UNK
1976	0	150	80000	70	50	UNK
1977	0	600	3000	400	400	UNK
1978	0	300	25000	500	300	UNK
1979	0	100	12000	2000	50	UNK
1980	0	300	25000	2000	0	UNK
1981	0	450	50000	600	25	UNK
1982	0	1000	8000	5000	550	UNK
1983	0	2500	18000	1000	400	UNK
1984	N/O	2500	9000	25	400	UNK
1985	6	1000	50000	250	40	UNK
1986	0	200	25000	100	25	UNK
1987	0	UNK	30000	1000	200	UNK
1988	0	550	60000	1000	175	UNK
1989	UNK	6	8200	68	25	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

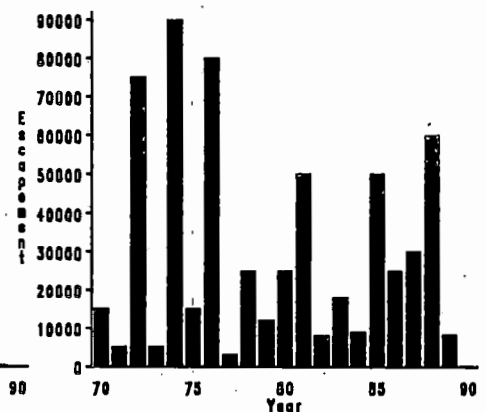
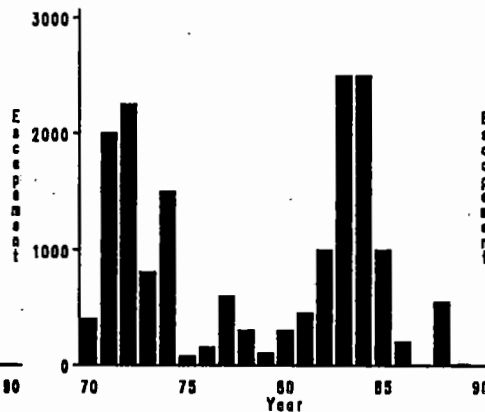
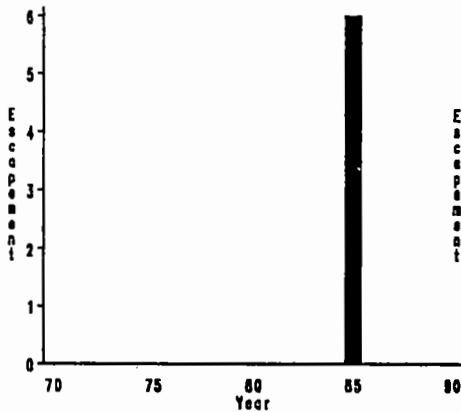
CHUCKWALLA RIVER (91-1300-050)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

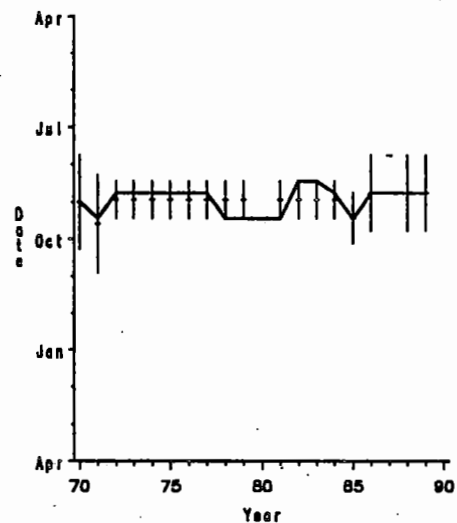
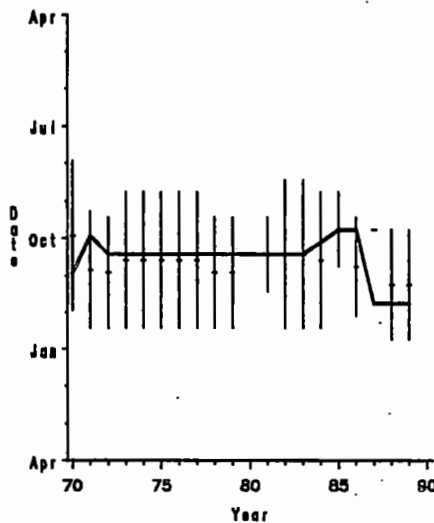
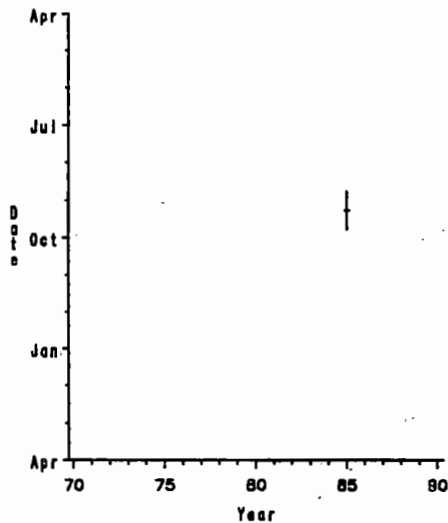
Pink (PK)



Sockeye

Coho

Pink



Sockeye

Coho

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	6	25AUG	15SEP	25SEP
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

Year	Escapement	Start	Peak	End
1970	400	31JUL	31OCT	30NOV
1971	2,000	10SEP	30SEP	15DEC
1972	2,250	15SEP	15OCT	15DEC
1973	800	25AUG	15OCT	15DEC
1974	1,500	25AUG	15OCT	15DEC
1975	75	25AUG	15OCT	15DEC
1976	150	25AUG	15OCT	15DEC
1977	600	25AUG	15OCT	15DEC
1978	300	15SEP	15OCT	15DEC
1979	100	15SEP	15OCT	15DEC
1980	300	-	-	-
1981	450	15SEP	15OCT	10NOV
1982	1,000	15AUG	15OCT	15DEC
1983	2,500	15AUG	15OCT	15DEC
1984	2,500	25AUG	05OCT	15DEC
1985	1,000	25AUG	25SEP	25OCT
1986	200	15SEP	25SEP	05DEC
1987	-	25SEP	25NOV	-
1988	550	25SEP	25NOV	25DEC
1989	0	25SEP	25NOV	25DEC

Year	Escapement	Start	Peak	End
1970	15,000	25JUL	01SEP	10OCT
1971	5,000	10AUG	15SEP	30OCT
1972	75,000	15AUG	25AUG	15SEP
1973	5,000	15AUG	25AUG	15SEP
1974	80,000	15AUG	25AUG	15SEP
1975	15,000	15AUG	25AUG	15SEP
1976	80,000	15AUG	25AUG	15SEP
1977	3,000	15AUG	25AUG	15SEP
1978	25,000	15AUG	15SEP	15SEP
1979	12,000	15AUG	15SEP	15SEP
1980	25,000	-	-	-
1981	50,000	15AUG	15SEP	15SEP
1982	0,000	15AUG	15AUG	15SEP
1983	10,000	15AUG	15AUG	15SEP
1984	8,000	15AUG	25AUG	15SEP
1985	50,000	25AUG	15SEP	05OCT
1986	25,000	25JUL	25AUG	25SEP
1987	30,000	25JUL	25AUG	-
1988	80,000	25JUL	25AUG	25SEP
1989	8,200	25JUL	25AUG	25SEP

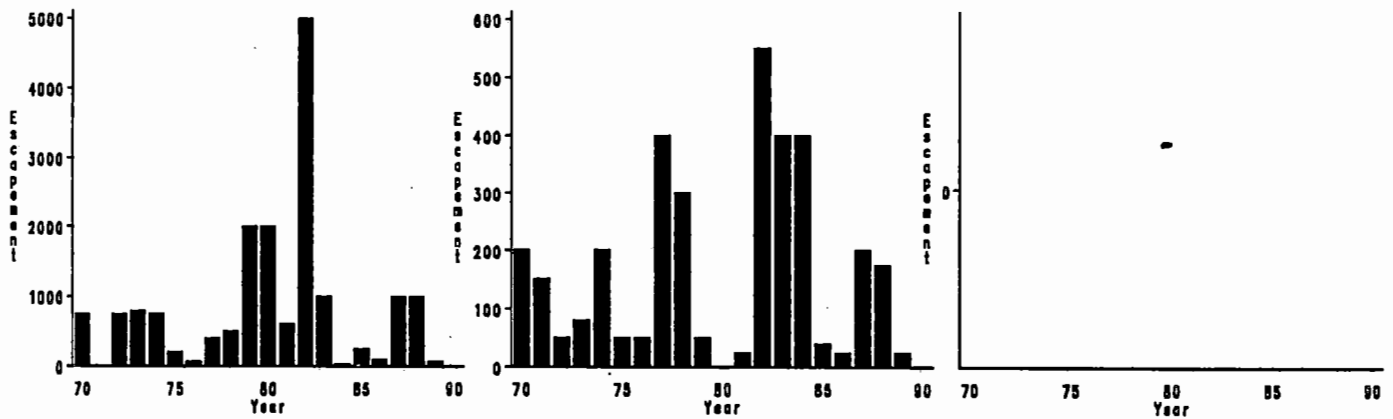
CHUCKWALLA RIVER (91-1300-050)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

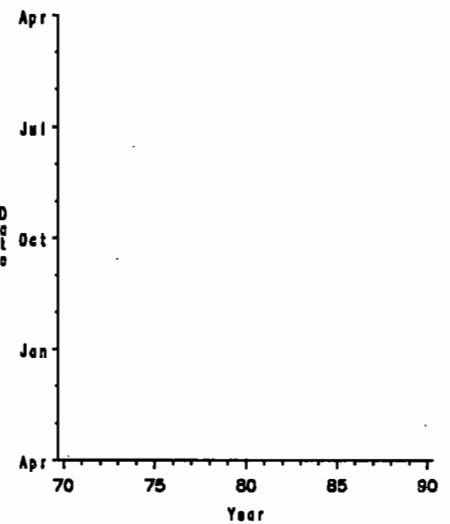
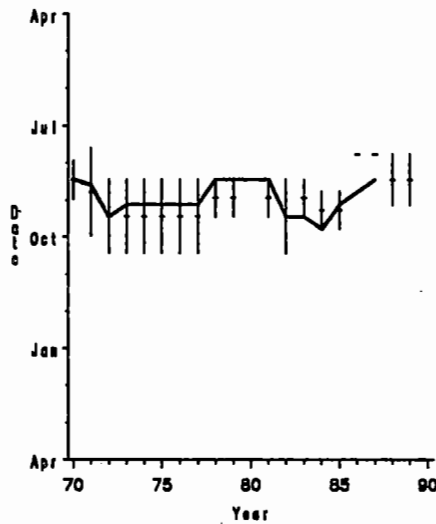
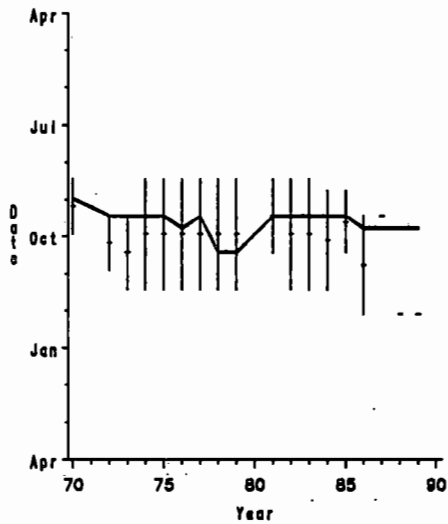
Steelhead (ST)



Chum

Chinook

Steelhead



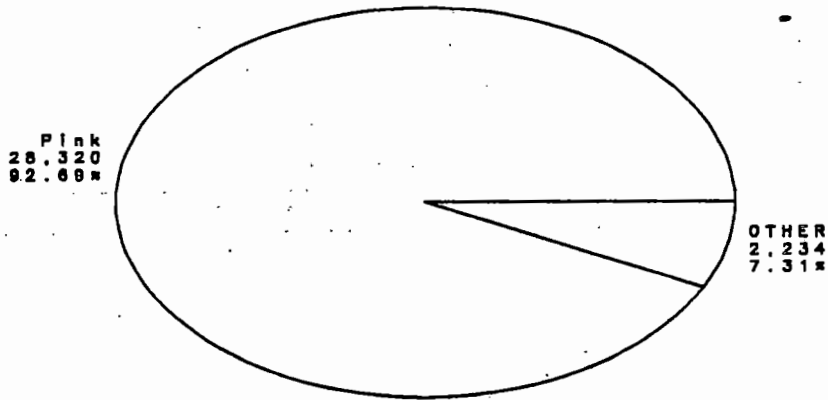
Year	Escapement	Start	Peak	End
1970	750	15AUG	01SEP	30SEP
1971	0	-	-	-
1972	750	15SEP	15SEP	30OCT
1973	800	15SEP	15SEP	15NOV
1974	750	15AUG	15SEP	15NOV
1975	200	15AUG	15SEP	15NOV
1976	70	15AUG	25SEP	15NOV
1977	400	15AUG	15SEP	15NOV
1978	500	15AUG	15OCT	15NOV
1979	2,000	15AUG	15OCT	15NOV
1980	2,000	-	-	-
1981	800	15AUG	15SEP	15OCT
1982	3,000	15AUG	15SEP	15NOV
1983	1,000	15AUG	15SEP	15NOV
1984	25	25AUG	15SEP	15NOV
1985	250	25AUG	15SEP	15OCT
1986	100	15SEP	25SEP	05DEC
1987	1,000	15SEP	25SEP	-
1988	1,000	-	25SEP	05DEC
1989	88	-	25SEP	05DEC

Year	Escapement	Start	Peak	End
1970	200	31JUL	15AUG	31AUG
1971	150	20JUL	20AUG	01OCT
1972	50	15AUG	15SEP	15OCT
1973	80	15AUG	05SEP	15OCT
1974	200	15AUG	05SEP	15OCT
1975	50	15AUG	05SEP	15OCT
1976	50	15AUG	05SEP	15OCT
1977	400	15AUG	05SEP	15OCT
1978	300	15AUG	15AUG	15SEP
1979	50	15AUG	15AUG	15SEP
1980	0	-	-	-
1981	25	15AUG	15AUG	15SEP
1982	550	15AUG	15SEP	15OCT
1983	400	15AUG	15SEP	15OCT
1984	400	25AUG	25SEP	25SEP
1985	40	25AUG	05SEP	25SEP
1986	25	25JUL	-	-
1987	200	25JUL	15AUG	-
1988	175	25JUL	-	05SEP
1989	25	25JUL	-	05SEP

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	-	-	-	-

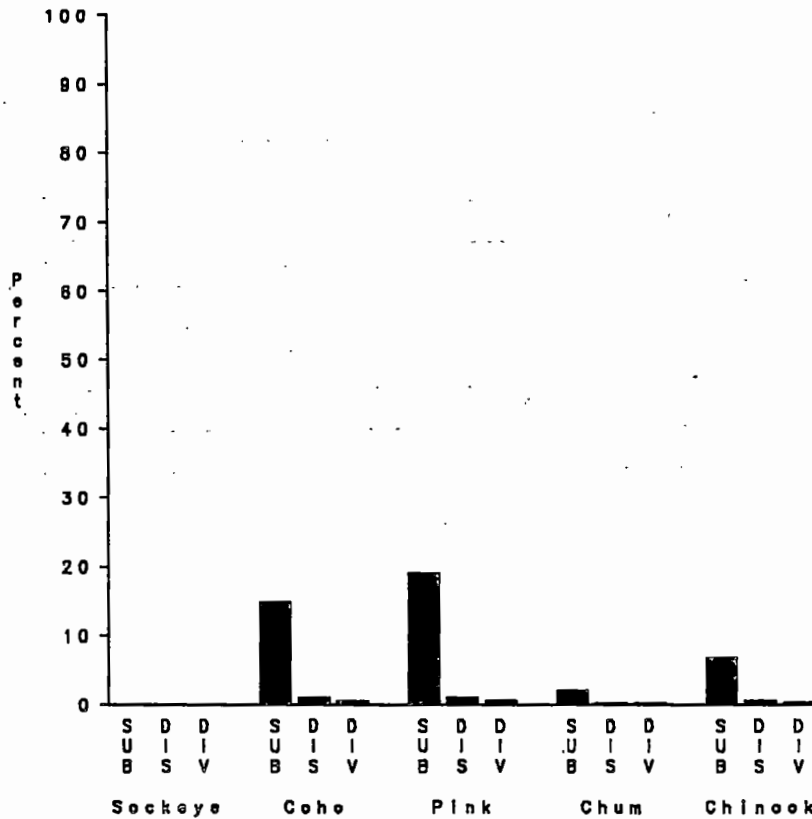
CHUCKWALLA RIVER (91-1300-050)

10-yr Mean Escapement
-(1980-1989)



CHUCKWALLA RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: MACKS CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-050-020	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/11
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6182.57344
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 7.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NW AND SW INTO LEFT BANK CHUCKWALLA R.		

Gradient Class/Location (km upstream from mouth)	Comments
0 - .5% .5 - 2% 2 - 5% 5 - 10% >10%	1-5% FOR LOWER 1KM. GREATER THAN 5% ABOVE. (REF. 4D-157)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
C CASCADE		1.3		(REF. 6N-28)

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
PK PINK SALMON	SPAWNING IN LOWER 0.9 KM. (REF. 9-36)

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

CO AND ST PROBABLY ALSO PRESENT IN LOWER 1 KM. (REF. 9-36)
--

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: JOHNS CREEK	O.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-050-200	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6320.57390
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLows SOUTH INTO THE RIGHT BANK CHUCKWALLA R.		

Gradient Class/Location (km upstream from mouth)					Comments
0 - .5%	.5 - 2%	2 - 5%	5 - 10%	>10%	1-5% IN LOWER 1 KM. (REF. 40-157)

B. OBSTRUCTIONS TO MIGRATION

Barrier (Type)	Height (meters)	Location (km U/S)	Impassable to (species)	Comments
F FALLS		1.0		IMPASSABLE. (REF. 9-36)

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
DV DOLLY VARDEN	OBSERVED ABOVE FALLS. (REF. 296-43)

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

CO, CH, AND ST LIKELY PRESENT IN LOWER 1 KM. (REF. 9-36)
--

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: TOM PENDRAY	Date: 1991/10/30
Checked by: TOM PENDRAY	Date: 1991/10/30
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK Local Name: Watershed Code: 91-1300-080	D.F.O. Division: NORTH COAST District: 7 CENTRAL COAST Subdistrict: 9 RIVERS INLET Statistical Subarea: 9-6 M.O.E. Region: 5 CARIBOO Management Unit: 7
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Tributaries	Code	Topographic (1:50k) Map: 92N/14 B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6162.57382 Lat./Long. Mouth: DG. '' DG. '' Mainstem Length: 2.7 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
Location: FLows SE INTO RIGHT BANK KILBELLA 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: 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	OBSERVED AT 0.4 KM. (REF. 9-36)

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: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-100	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6164.57425
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 1.3 km Ref. No.: 6M-28
		Watershed Area: Ref. No.:
Location: FLows SE INTO RIGHT BANK KILBELLA 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	JUVENILES OBSERVED AT 0.2 KM. (REF. 9-36)

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:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

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

CO, PROBABLY ALSO PRESENT.. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

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

CHANNEL INSTABILITY NOTED. CO PROBABLY ALSO PRESENT. (REF. 9-4, REF. 9-36)
--

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-290	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6236.57508
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 2.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NW INTO LEFT BANK KILBELLA 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
PK PINK SALMON	SPAWNING IN LOWER 0.1 KM. (REF. 9-36)

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

CO PROBABLY ALSO PRESENT. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-300	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6238.57515
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 4.0 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS W INTO LEFT BANK KILBELLA 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
PK PINK SALMON	SPAWNING IN LOWER 0.2 KM. (REF. 9-36)

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	Ju1	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

CO PROBABLY ALSO PRESENT. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1300-310	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-6
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6237.57519
		Lat./Long. Mouth: DG. DG.
		Mainstem Length: 2.5 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS SE AND NE INTO RIGHT BANK KILBELLA 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
PK PINK SALMON	SPAWNING IN LOWER 0.4 KM. (REF. 9-36)

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

CO PROBABLY ALSO PRESENT IN LOWER 400M. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	491	1980 - 1989	28A-18	1950	28A-18	3000	9-42
PK PINK SALMON	35800	1980 - 1988	28A-18	60000	28A-18	50000	9-42
PK PINK SALMON	1034	1981 - 1989	28A-18	1500	28A-18		
CM CHUM SALMON	15081	1980 - 1989	28A-18	70000	28A-18	40000	9-42
CH CHINOOK SALMON	26	1980 - 1989	28A-18	200	28A-18	500	9-42

Comments: ESCAPEMENT NUMBERS SHOWN INCLUDE YOUNG RIVER AND NIEL CREEK. (REF. 9-36)

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	P X	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X X	X P	X X			
CM CHUM SALMON	Migration Spawning Incubation Rearing							X X	X P	X X			
CH CHINOOK 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
OR BARRIER REMOVAL	AF ALL SPECIES	5.4	OBSTRUCTION REMOVAL TO ACCESS UPPER WATERSHED HAS BEEN PROPOSED. (REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING CAMP CONSTRUCTION NEAR THE MOUTH IN 1980. LOGGING COMMENCED IN 1983. (REF. 9-4)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

EXCELLENT SPAWNING GROUNDS ABOVE FALLS TO 13 KM. SEVERE FLOODING HAS RESULTED IN SOME LOSS OF SPAWN IN THE PAST. (REF. 9-4)
DISCUSSION ON ASSESSMENT OF PROPOSED LOGGING ROAD CONSTRUCTION AVAILABLE. (REF. 9-11)
DATA AND RESULTS OF JUVENILE SALMONID INVENTORY AVAILABLE. (REF. 9-12)
A LARGE DELTA HAS BEEN FORMED AT THE JUNCTION OF NIEL CREEK, CLYAK RIVER AND YOUNG RIVER; THIS SECTION IS EXTREMELY BRAIDED, PROVIDING GOOD SPAWNING HABITAT. HABITAT DESCRIPTION AVAILABLE. (REF. 9-27)
MAJOR PK AND CM PRODUCER. SUBJECT TO FRESHETS. VERY IMPORTANT COMMERCIAL FISHERY. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / /

Prepared By:

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO
Checked by: TOM PENDRAY
Last checked by: TOM PENDRAY

Date: 1989/03/31
Date: 1989/03/31
Date: 1992/01/09

ESCAPEMENT : CLYAK RIVER

WATERSHED-CODE : 91-1400

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	75	0	15000	0	UNK
1954	0	0	100	8000	0	UNK
1955	0	0	0	1500	0	UNK
1956	0	N/O	0	3500	0	UNK
1957	0	0	0	3500	0	UNK
1958	0	750	15000	35000	0	UNK
1959	0	200	N/O	750	0	UNK
1960	0	200	3500	7500	0	UNK
1961	0	750	400	3500	0	UNK
1962	0	750	75000	7500	25	UNK
1963	0	400	75	7500	25	UNK
1964	0	750	35000	7500	0	UNK
1965	0	750	75	400	75	UNK
1966	0	750	15000	35000	25	UNK
1967	0	25	N/O	3500	N/O	UNK
1968	0	200	35000	7500	UNK	UNK
1969	0	400	25	1500	N/O	UNK
1970	0	400	75000	15000	25	UNK
1971	0	200	100	5000	N/O	UNK
1972	0	1000	175000	10000	N/O	UNK
1973	0	800	N/O	4500	N/O	UNK
1974	0	1750	35000	22500	N/O	UNK
1975	0	450	500	5000	25	UNK
1976	0	100	60000	400	N/O	UNK
1977	0	300	100	800	30	UNK
1978	0	1000	3000	22000	50	UNK
1979	0	N/O	4000	200	N/O	UNK
1980	0	500	40000	3000	200	UNK
1981	0	350	1000	1200	N/O	UNK
1982	0	850	10000	40000	0	UNK
1983	0	1950	1075	11500	0	UNK
1984	N/O	600	24000	700	N/O	UNK
1985	N/O	300	1200	3700	2	UNK
1986	0	150	60000	70000	UNK	UNK
1987	0	200	1500	15000	0	UNK
1988	0	N/O	45000	5100	2	UNK
1989	UNK	13	394	610	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

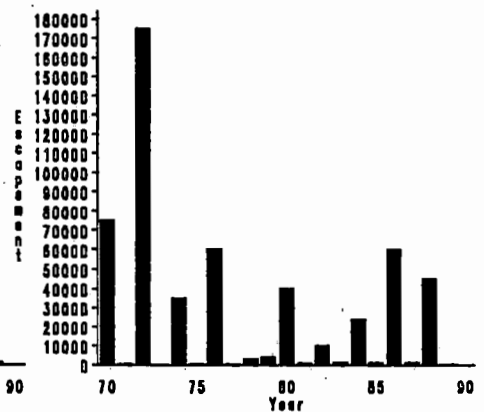
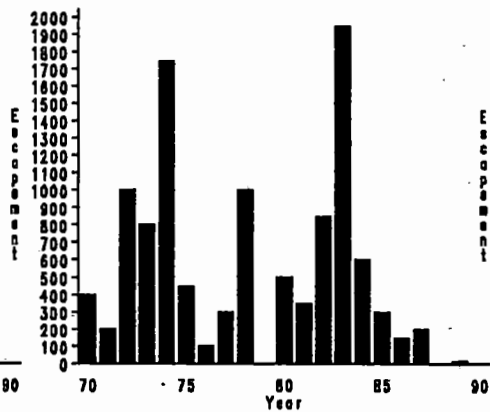
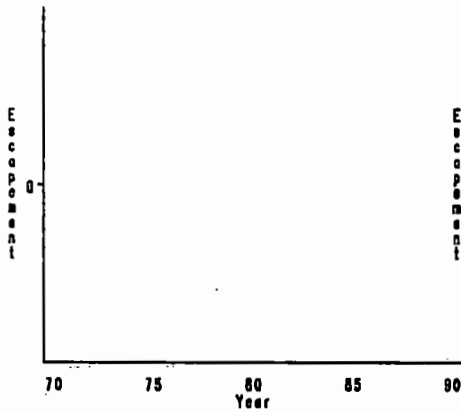
CLYAK RIVER (91-1400)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

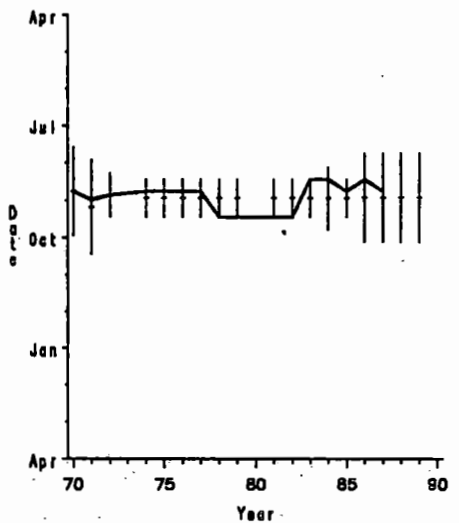
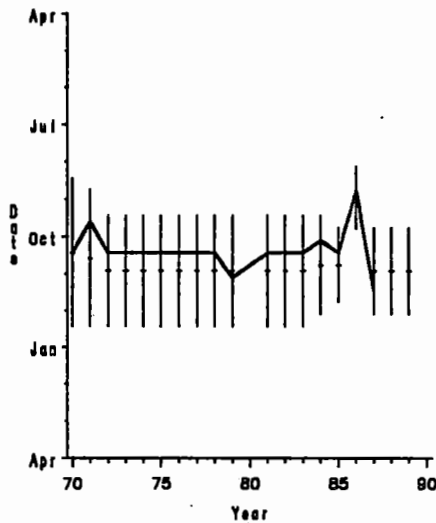
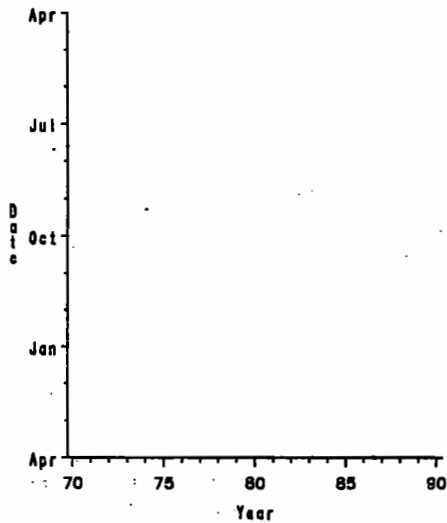
Pink (PK)



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	400	15AUG	15OCT	15DEC
1971	200	25AUG	20SEP	15DEC
1972	1,000	15SEP	15OCT	15DEC
1973	800	15SEP	15OCT	15DEC
1974	1,750	15SEP	15OCT	15DEC
1975	450	15SEP	15OCT	15DEC
1976	100	15SEP	15OCT	15DEC
1977	300	15SEP	15OCT	15DEC
1978	1,000	15SEP	15OCT	15DEC
1979	0	15SEP	05NOV	15DEC
1980	500	-	-	-
1981	350	15SEP	15OCT	15DEC
1982	050	15SEP	15OCT	15DEC
1983	1,950	15SEP	15OCT	15DEC
1984	600	15SEP	05OCT	05DEC
1985	300	25SEP	15OCT	25NOV
1986	150	05AUG	25AUG	25SEP
1987	200	25SEP	15NOV	05DEC
1988	0	25SEP	-	05DEC
1989	13	25SEP	-	05DEC

Pink				
Year	Escapement	Start	Peak	End
1970	75,000	20JUL	25AUG	30SEP
1971	100	30JUL	01SEP	15OCT
1972	175,000	10AUG	20AUG	15SEP
1973	0	-	-	-
1974	35,000	15AUG	25AUG	15SEP
1975	500	15AUG	25AUG	15SEP
1976	80,000	15AUG	25AUG	15SEP
1977	100	15AUG	25AUG	15SEP
1978	3,000	15AUG	15SEP	15SEP
1979	4,000	15AUG	15SEP	15SEP
1980	40,000	-	-	-
1981	1,000	15AUG	15SEP	15SEP
1982	10,000	15AUG	15SEP	15SEP
1983	1,075	15AUG	15AUG	15SEP
1984	24,000	05AUG	15AUG	25SEP
1985	1,200	15AUG	25AUG	15SEP
1986	10,000	25JUL	15AUG	05OCT
1987	1,500	25JUL	25AUG	05OCT
1988	45,000	25JUL	-	05OCT
1989	394	25JUL	-	05OCT

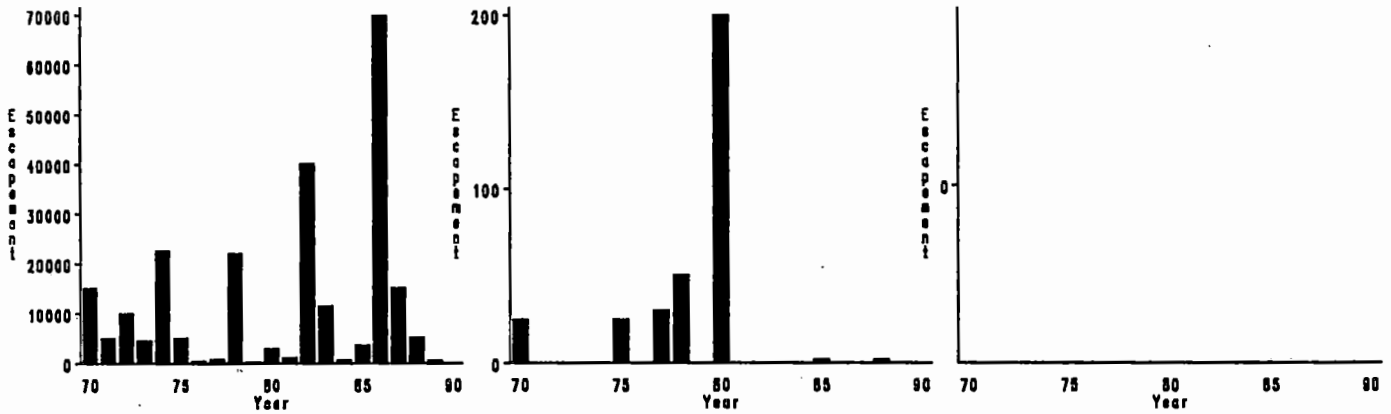
CLYAK RIVER (91-1400)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

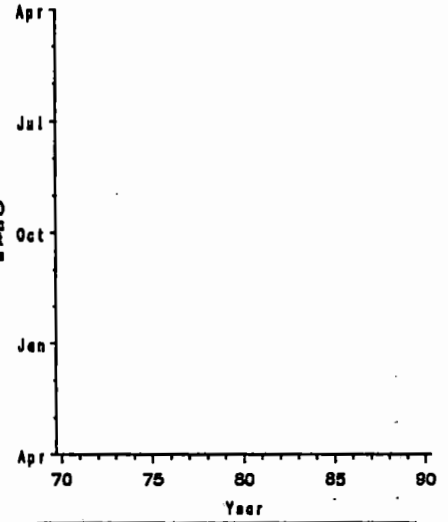
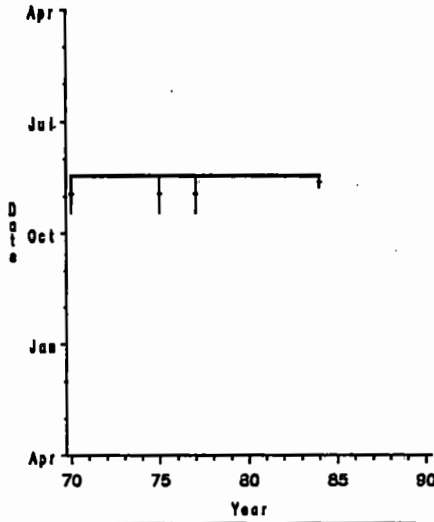
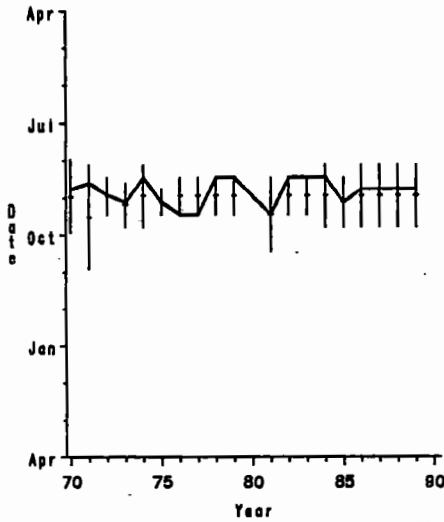
Steelhead (ST)



Chum

Chinook

Steelhead



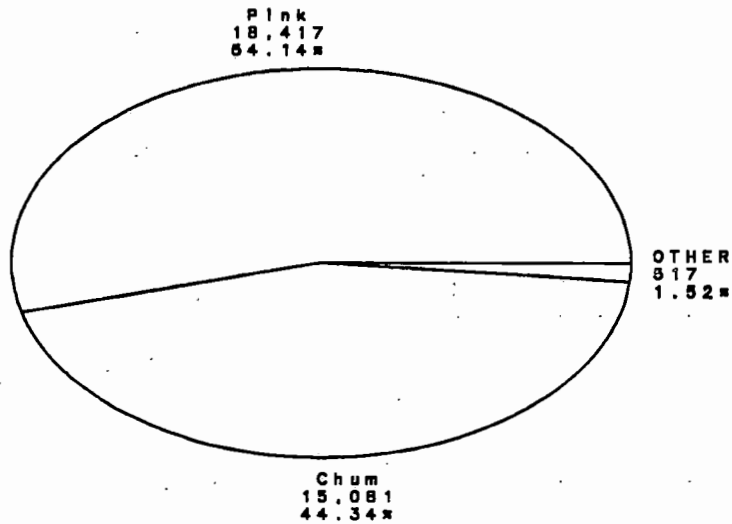
Chum				
Year	Escapement	Start	Peak	End
1970	15,000	01AUG	25AUG	30SEP
1971	5,000	05AUG	28AUG	30OCT
1972	18,000	15AUG	30AUG	15SEP
1973	4,500	20AUG	05SEP	25SEP
1974	22,500	05AUG	15AUG	25SEP
1975	5,000	25AUG	05SEP	15SEP
1976	400	15AUG	15SEP	15SEP
1977	800	15AUG	15SEP	15SEP
1978	22,000	15AUG	15AUG	15SEP
1979	200	15AUG	15AUG	15SEP
1980	3,000	-	-	-
1981	1,200	15AUG	15SEP	15OCT
1982	48,000	15AUG	15AUG	15SEP
1983	11,500	15AUG	15AUG	15SEP
1984	700	05AUG	15AUG	25SEP
1985	3,700	15AUG	05SEP	25SEP
1986	78,000	05AUG	25AUG	25SEP
1987	15,000	05AUG	25AUG	25SEP
1988	5,100	05AUG	25AUG	25SEP
1989	610	05AUG	25AUG	25SEP

Chinook				
Year	Escapement	Start	Peak	End
1970	25	15AUG	15AUG	15SEP
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	25	15AUG	15AUG	15SEP
1976	0	-	-	-
1977	30	15AUG	15AUG	15SEP
1978	50	15AUG	15AUG	15AUG
1979	0	15AUG	15AUG	15AUG
1980	200	-	-	-
1981	0	15AUG	15AUG	15AUG
1982	0	-	-	-
1983	0	-	-	-
1984	0	15AUG	15AUG	25AUG
1985	1	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	2	-	-	-
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	-	-	-	-

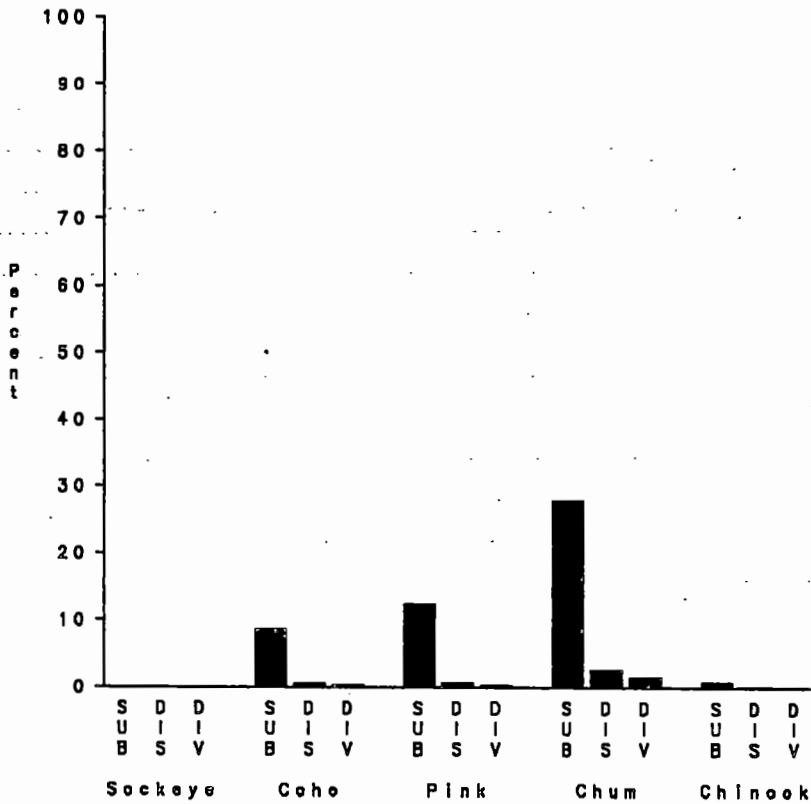
CLYAK RIVER (91-1400)

10-yr Mean Escapement
(1980-1989)



CLYAK RIVER : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: YOUNG RIVER	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1400-050	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-8
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/14
NIEL CREEK	010	B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6136.57508
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 19.4 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows SW AND SE INTO RIGHT BANK CLYAK R., 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
C CASCADE		11.5		MAY BE PASSABLE AT HIGH AND LOW FLOWS. (REF. 9-12)
F FALLS		13.9	CO COHO SALMON	IMPASSABLE TO ALL SPECIES. (REF. 9-12)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:		
W.S.C. Station No. 1:	No. 2:	No. 3:	No. 4:
Comments: FED BY SMALL TRIBUTARY LAKES. (REF. 29F-65)			

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED AT 11.7 KM, AND IN TRIBUTARY. PROBABLY PRESENT TO FALLS AT 13.9 KM. (REF. 9-12)
PK PINK SALMON	SPAWNING MAINLY IN LOWER 2.8 KM. OBSERVED SPAWNING TO 11.1 KM. (REF. 9-36)
CM CHUM SALMON	SPAWNING MAINLY IN LOWER 2.8 KM. (REF. 9-36)
CT CUTTHROAT TROUT	OBSERVED IN TRIBUTARY. (REF. 9-12)
DV DOLLY VARDEN	OBSERVED AT 11.1 KM, AND IN TRIBUTARY. (REF. 9-12)
RB RAINBOW TROUT	OBSERVED AT 11.1 KM, AND IN TRIBUTARY. (REF. 9-12)

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		2	28A-18		

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	700	1980 - 1989	28A-18	1000	28A-18		
PK PINK SALMON	44000	1980 - 1988	28A-18	50000	28A-18		
PK PINK SALMON	900	1981 - 1989	28A-18	1500	28A-18		
CM CHUM SALMON	25386	1980 - 1989	28A-18	80000	28A-18		

Comments: ALL ESCAPEMENT RECORDS FROM 1984 ONLY. SK ESCAPMENT 1985(2) 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
FO FORESTRY	LOGGING IN PROGRESS. BEGAN IN 1987, CAUSING SOME PROBLEMS WITH HABITAT. SHOULD BE MONITORED CLOSELY. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

DATA AND RESULTS OF JUVENILE SALMONID INVENTORY AVAILABLE. LOG JAMS CREATED BY NATURAL BLOWDOWN ARE COMMON, AND OFTEN PROVIDE EXCELLENT REARING HABITAT FOR CO. HEAVY BEAVER ACTIVITY. SLOUGH AND BEAVER IMPOUNDMENT AREAS ARE IMPORTANT REARING AREAS FOR CO. (REF. 9-12)
FAIRLY STABLE FLOWS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : YOUNG RIVER

WATERSHED-CODE : 91-1400-050

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	75	0	7500	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	N/O	1000	38000	45	N/O	UNK
1985	2	100	1500	1500	N/O	UNK
1986	0	300	50000	80000	UNK	UNK
1987	0	100	300	20000	0	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: NIEL CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1400-050-010	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-8
	M.O.E. Region: 5 CARI800
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6134.57514
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 11.8 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS SE INTO RIGHT BANK YOUNG R., MOSES 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		8.1	CO COHO SALMON	IMPASSABLE TO ALL SPECIES. (REF. 9-12)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY SMALL TRIBUTARY LAKES. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED TO FALLS AT 7.9 KM. (REF. 9-12)
PK PINK SALMON	MAIN SPAWNING BELOW 1.6 KM. (REF. 9-12, REF. 9-36)
CM CHUM SALMON	MAIN SPAWNING BELOW 1.6 KM. (REF. 9-12, REF. 9-36)
CT CUTTHROAT TROUT	OBSERVED AT 0.8 KM. (REF. 9-12)
OV DOLLY VARDEN	OBSERVED AT 0.8 KM. (REF. 9-12)
RB RAINBOW TROUT	OBSERVED AT 0.8 KM. (REF. 9-12)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON	133	1980 - 1989	28A-18	300	28A-18		
PK PINK SALMON	21250	1980 - 1988	28A-18	31500	28A-18		
PK PINK SALMON	400	1981 - 1989	28A-18	650	28A-18		

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	2926	1980 - 1989	28A-18	9000	28A-18		
Comments: ESCAPEMENT NUMBERS TAKEN FROM 1984 ON (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
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

OVERSPANNING OF PK IN 1964. (REF. 9-4)
DATA AND RESULTS OF JUVENILE SALMONID INVENTORY AVAILABLE. EXTENSIVELY BRAIDED NEAR THE MOUTH, WITH CHANNEL SHIFTING. (REF. 9-12)
NOT SUSCEPTIBLE TO FLOODING LIKE THE CLYAK RIVER. FAIRLY STABLE FLOWS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : NIEL CREEK

WATERSHED-CODE : 91-1400-050-010

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	0	0	7500	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	N/O	300	11000	5	N/O	UNK
1985	N/O	UNK	650	700	N/O	UNK
1986	0	50	31500	9000	UNK	UNK
1987	0	50	150	2000	0	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: MILTON RIVER	D.F.O. Division: NORTH COAST
Local Name: JIMMY ASH RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-1444	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-7
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/14
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6074.57378
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' ' '
		Mainstem Length: 19.7 km Ref. No.: 6M-28
		Watershed Area: Ref. No.:
Location: FLOWS SOUTH INTO HEAD OF INRIG BAY, MOSES 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
C CASCADE	3.0	1.9	CM CHUM SALMON PK PINK SALMON	(REF. 9-32, REF. 9-36)
C CASCADE		13.1		(REF. 6N-28)

C. FLOW

Flow Control:	Water Survey of Canada (WSC) Flow Gauge:
W.S.C. Station No. 1:	No. 2: No. 3: No. 4:
Comments: FED BY SMALL TRIBUTARY LAKES. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED TO 11.6 KM. (REF. 9-4, REF. 29G-43)
PK PINK SALMON	SPAWNING TO CASCADE AT 1.9 KM. (REF. 9-4, REF. 9-36)
CM CHUM SALMON	SPAWNING TO CASCADE AT 1.9 KM. (REF. 9-4, REF. 9-36)
ST STEELHEAD	OBSERVED AT 3.2 KM. PROBABLY PRESENT TO 12 KM. (REF. 29G-43)

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		2	28A-18		
CO COHO SALMON	58	1980 - 1989	28A-18	150	28A-18	500	9-42
PK PINK SALMON	3590	1980 - 1988	28A-18	7000	28A-18	15000	9-42
PK PINK SALMON	1990	1981 - 1989	28A-18	8000	28A-18		

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	155	1980 - 1989	28A-18	550	28A-18	1500	9-42
Comments: SK ESCAPEMENT FOR 1985(2) 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	XX	PX	XX	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	XX	PX			
CM CHUM SALMON	Migration Spawning Incubation Rearing							X	XX	PX	XX		

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 COMMENCED IN THE WATERSHED IN 1979. DOMANS LTD HAS A CAMP AT THE MOUTH OF THE RIVER. (REF. 9-4, REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO LOW FLOWS DURING SPAWNING SEASON AND NOVEMBER FLOODING. (REF. 9-4)
HABITAT DESCRIPTION AVAILABLE. (REF. 9-32)
BRACKISH, TANNIC COLOURED WATER. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : MILTON RIVER

WATERSHED-CODE : 91-1444

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	0	25	0	UNK
1954	0	0	0	100	0	UNK
1955	0	0	400	75	0	UNK
1956	0	0	0	750	0	UNK
1957	N/O	N/O	N/O	N/O	N/O	UNK
1958	0	N/O	200	0	0	UNK
1959	0	0	0	N/O	0	UNK
1960	0	0	750	25	0	UNK
1961	0	0	25	25	0	UNK
1962	0	0	1500	200	0	UNK
1963	0	25	25	75	0	UNK
1964	0	75	7500	200	0	UNK
1965	0	N/O	N/O	N/O	0	UNK
1966	0	75	35000	25	0	UNK
1967	0	25	N/O	N/O	0	UNK
1968	0	200	15000	25	0	UNK
1969	0	25	N/O	25	0	UNK
1970	0	0	15000	75	0	UNK
1971	0	N/O	400	35	0	UNK
1972	0	400	7500	1500	0	UNK
1973	0	50	200	100	0	UNK
1974	0	75	2250	50	0	UNK
1975	0	N/O	250	25	0	UNK
1976	0	N/O	1500	25	0	UNK
1977	0	50	N/O	90	0	UNK
1978	0	200	4000	N/O	0	UNK
1979	0	100	100	N/O	0	UNK
1980	0	0	7000	0	0	UNK
1981	0	150	600	50	0	UNK
1982	0	100	750	400	0	UNK
1983	0	N/O	N/O	100	0	UNK
1984	N/O	100	2000	100	N/O	UNK
1985	2	30	8000	550	N/O	UNK
1986	0	2	2200	70	UNK	UNK
1987	0	50	750	100	0	UNK
1988	0	25	6000	80	0	UNK
1989	UNK	125	600	100	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

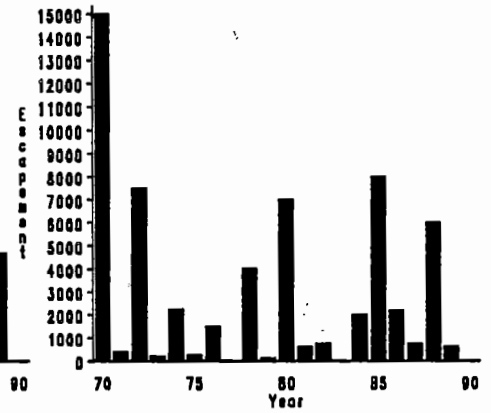
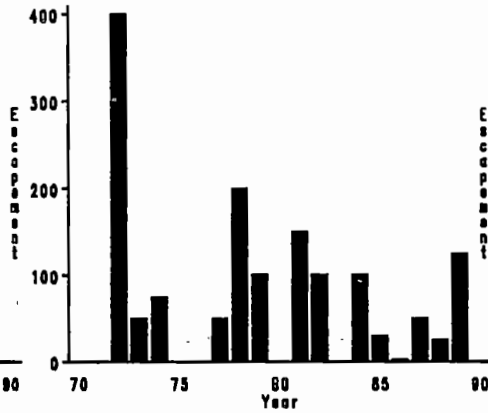
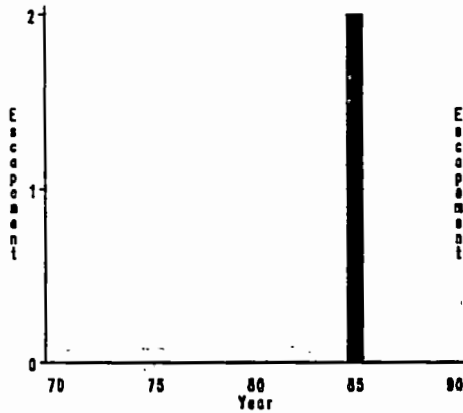
MILTON RIVER (91-1444)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

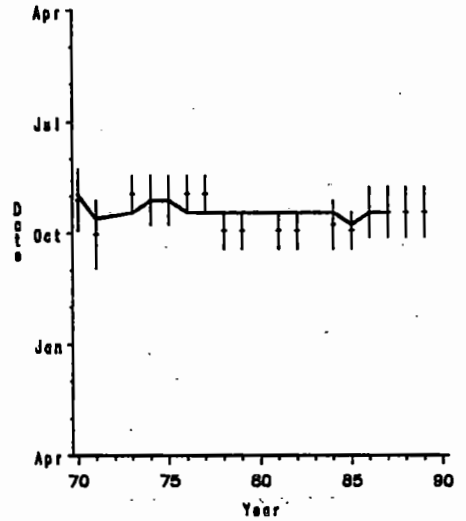
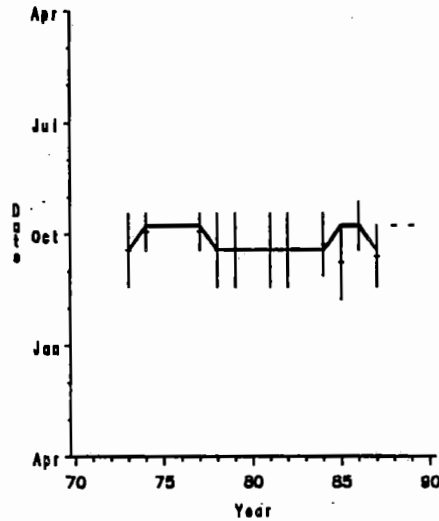
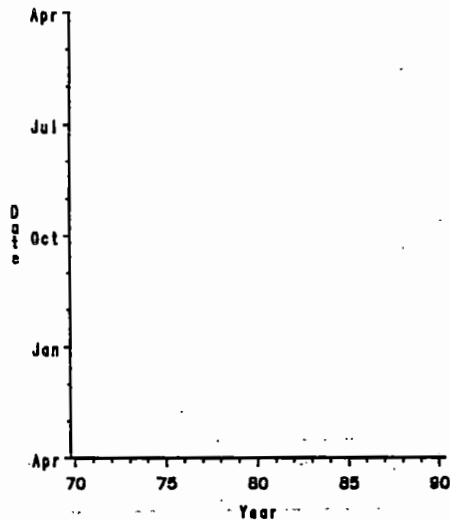
Pink (PK)



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	2	-	15SEP	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	400	-	-	-
1973	50	15SEP	15OCT	15NOV
1974	75	15SEP	25SEP	15OCT
1975	0	-	-	-
1976	0	-	-	-
1977	50	15SEP	25SEP	15OCT
1978	200	15SEP	15OCT	15NOV
1979	100	15SEP	15OCT	15NOV
1980	0	-	-	-
1981	130	15SEP	15OCT	15NOV
1982	100	15SEP	15OCT	15NOV
1983	0	-	-	-
1984	120	15SEP	15OCT	05NOV
1985	30	25SEP	25SEP	25NOV
1986	1	05SEP	25SEP	15OCT
1987	50	25SEP	15OCT	15NOV
1988	25	25SEP	-	-
1989	125	25SEP	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	15,000	10AUG	31AUG	30SEP
1971	400	05SEP	20SEP	31OCT
1972	7,500	-	-	-
1973	200	15AUG	15SEP	15SEP
1974	2,250	15AUG	05SEP	25SEP
1975	250	15AUG	05SEP	25SEP
1976	1,500	15AUG	15SEP	15SEP
1977	0	15AUG	15SEP	15SEP
1978	4,000	15SEP	15SEP	15OCT
1979	100	15SEP	15SEP	15OCT
1980	7,000	-	-	-
1981	800	15SEP	15SEP	15OCT
1982	750	15SEP	15SEP	15OCT
1983	0	-	-	-
1984	2,000	05SEP	15SEP	15OCT
1985	0,000	15SEP	25SEP	15OCT
1986	2,200	25AUG	15SEP	05OCT
1987	750	25AUG	15SEP	05OCT
1988	0,000	25AUG	-	05OCT
1989	500	25AUG	-	05OCT

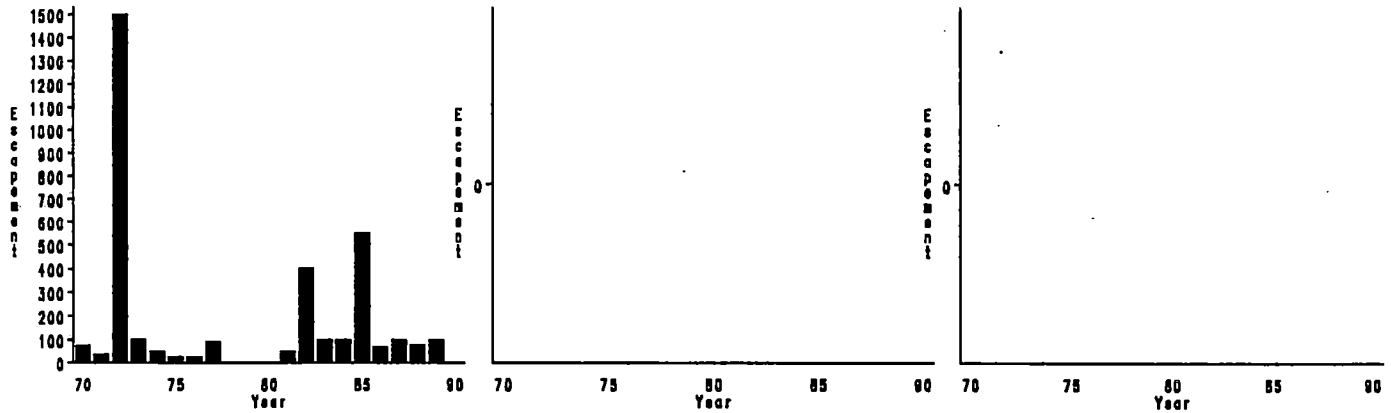
MILTON RIVER (91-1444)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

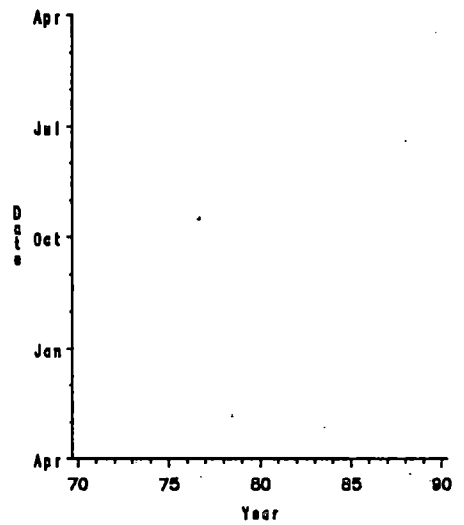
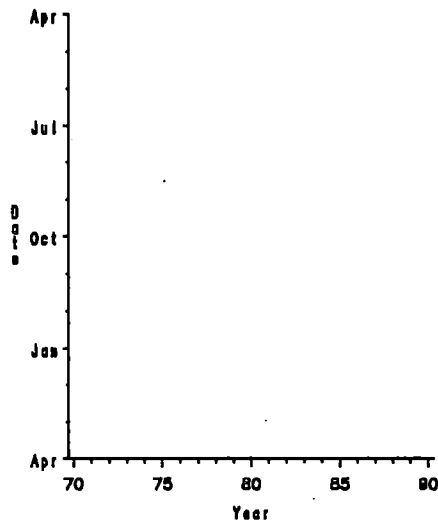
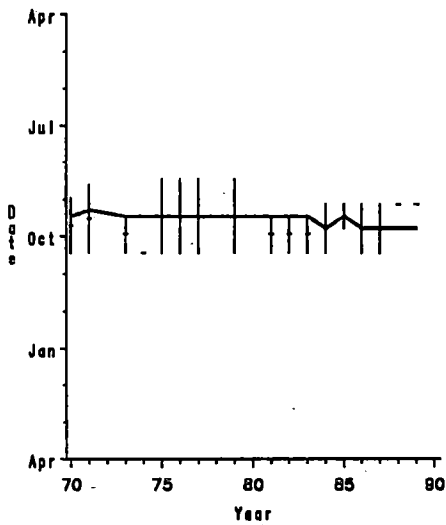
Steelhead (ST)



Chum

Chinook

Steelhead



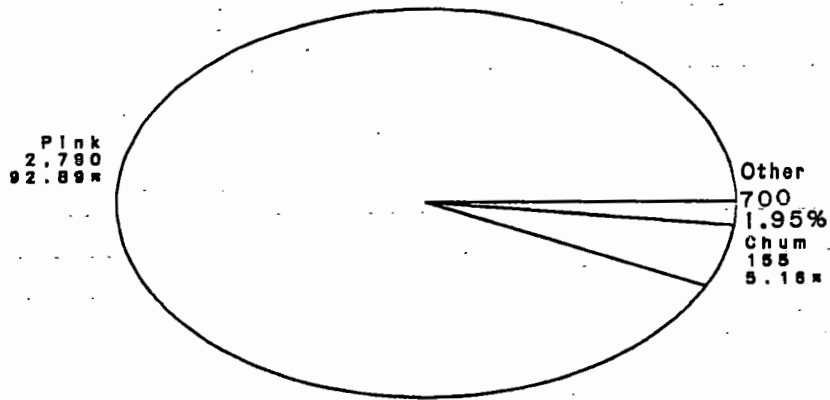
Year	Escapement	Start	Peak	End
1970	75	31AUG	15SEP	15OCT
1971	35	20AUG	10SEP	15OCT
1972	1,500	-	-	-
1973	100	15SEP	15SEP	15OCT
1974	50	-	-	15OCT
1975	25	15AUG	15SEP	15OCT
1976	25	15AUG	15SEP	15OCT
1977	00	15AUG	15SEP	15OCT
1978	0	-	-	-
1979	0	15AUG	15SEP	15OCT
1980	0	-	-	-
1981	50	15SEP	15SEP	15OCT
1982	400	15SEP	15SEP	15OCT
1983	100	15SEP	15SEP	15OCT
1984	100	05SEP	25SEP	15OCT
1985	550	05SEP	15SEP	25SEP
1986	70	05SEP	25SEP	15OCT
1987	100	05SEP	25SEP	15OCT
1988	80	05SEP	25SEP	-
1989	100	05SEP	25SEP	-

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	-	-	-

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	-	-	-	-

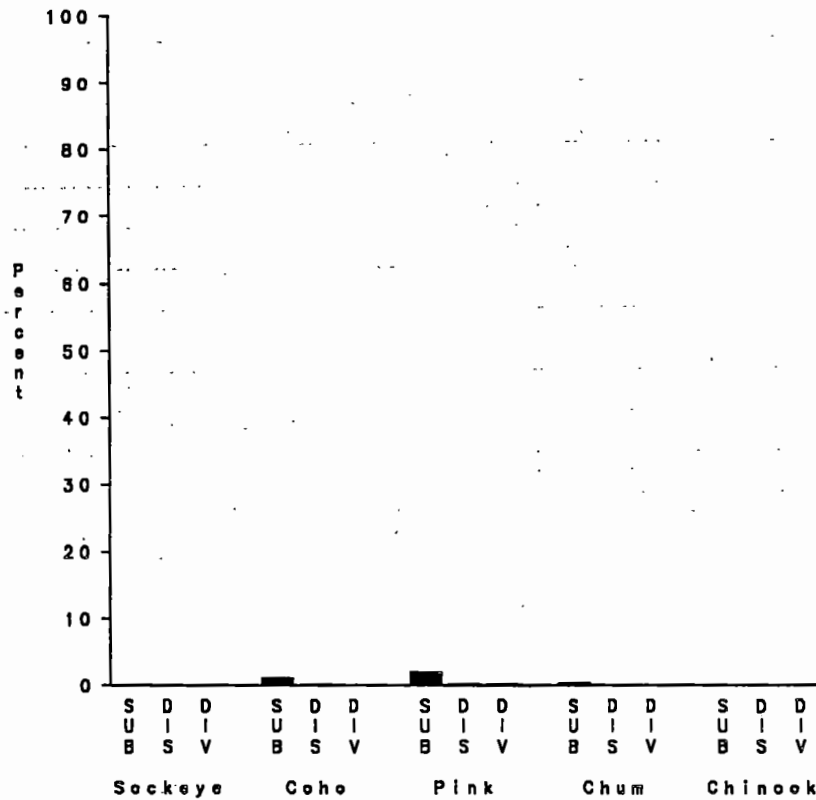
MILTON RIVER (91-1444)

10-yr Mean Escapement
(1980-1989)



MILTON RIVER : Escapement (1980-1989)

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



E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	2305	1980 - 1989	28A-18	4500	28A-18	4500	9-42

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 P	X X	X X
PK PINK SALMON	Migration Spawning Incubation Rearing							X	P X	X X			
CM CHUM SALMON	Migration Spawning Incubation Rearing								X 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOWER 1/4 MILE WAS HAND LOGGED IN THE EARLY 1900'S. (REF. 9-31)
FO FORESTRY	LOGGING PROPOSED FOR THE AREA. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SPAWNING GROUNDS ARE OF POOR QUALITY. (REF. 9-4)
HABITAT JUDGED TO BE GOOD FOR REARING BUT ONLY POOR TO MODERATE FOR SPAWNING. OVERALL SPAWNING HABITAT IS PROBABLY LIMITED TO THE FEW SIDE CHANNELS PRESENT DURING LOW FLOWS IN THE LOWER 1/2 MILE. HABITAT DESCRIPTION AVAILABLE. (REF. 9-31)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : MACNAIR CREEK

WATERSHED-CODE : 91-1500

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	0	25	0	UNK
1954	0	N/O	50	3500	0	UNK
1955	0	0	0	200	0	UNK
1956	0	0	0	200	0	UNK
1957	0	75	N/O	3500	0	UNK
1958	0	200	0	7500	0	UNK
1959	0	0	0	750	0	UNK
1960	0	25	0	3500	0	UNK
1961	0	400	0	3500	0	UNK
1962	0	200	200	3500	0	UNK
1963	0	200	0	3500	0	UNK
1964	0	400	200	3500	0	UNK
1965	0	N/O	N/O	200	0	UNK
1966	0	N/O	7500	3500	0	UNK
1967	0	N/O	N/O	3500	0	UNK
1968	0	N/O	7500	3500	0	UNK
1969	0	200	0	200	0	UNK
1970	0	75	N/O	25	0	UNK
1971	0	N/O	30	2500	1	UNK
1972	0	N/O	1500	3500	0	UNK
1973	0	50	25	900	0	UNK
1974	0	75	750	400	0	UNK
1975	0	20	250	350	0	UNK
1976	0	N/O	1500	100	0	UNK
1977	0	N/O	N/O	500	0	UNK
1978	0	200	10000	500	0	UNK
1979	0	N/O	200	500	0	UNK
1980	0	0	5000	750	0	UNK
1981	0	10	200	1500	0	UNK
1982	0	50	3000	4500	0	UNK
1983	0	25	1200	600	0	UNK
1984	N/O	75	950	1650	N/O	UNK
1985	N/O	25	6500	7000	N/O	UNK
1986	0	UNK	2300	2400	UNK	UNK
1987	0	0	1000	4000	0	UNK
1988	0	20	3000	250	0	UNK
1989	UNK	14	400	400	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

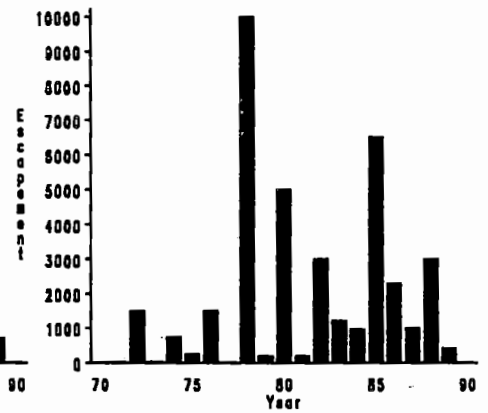
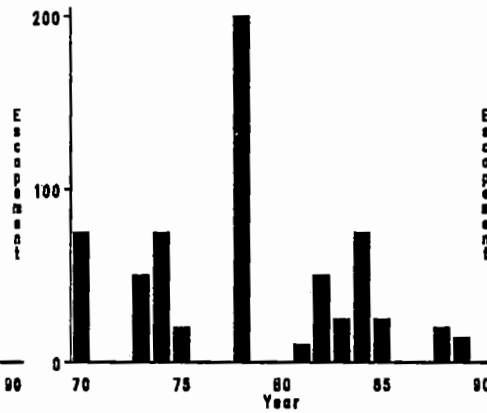
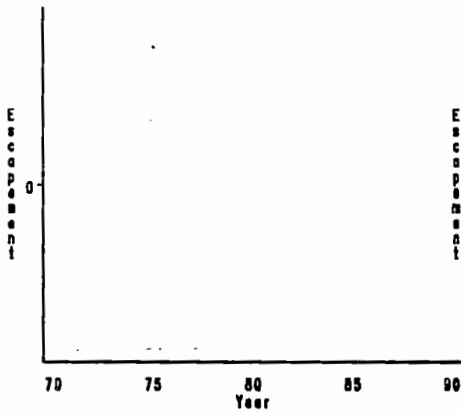
MACNAIR CREEK (91-1500)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

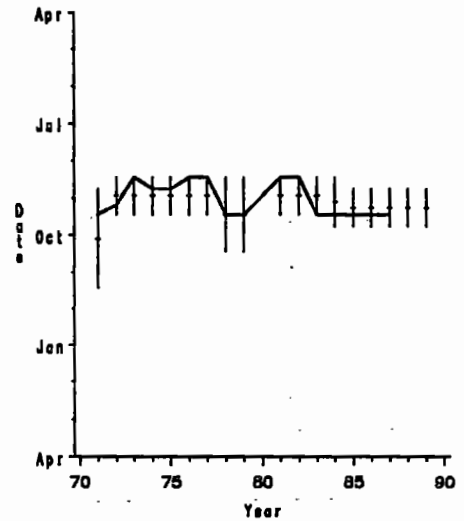
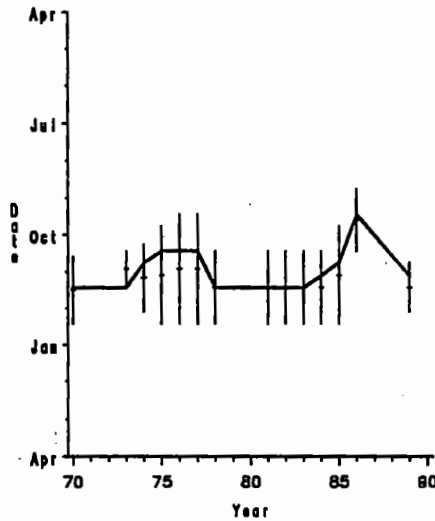
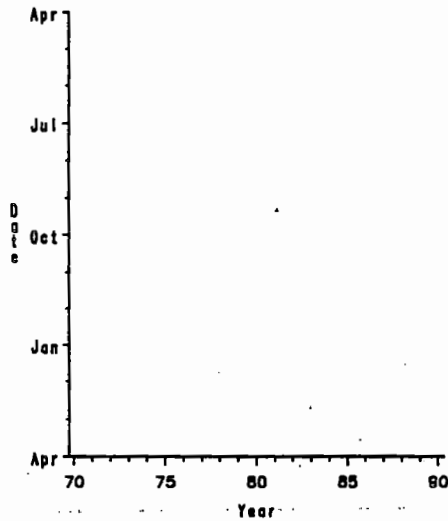
Pink (PK)



Sockeye

Coho

Pink



Sockeye

Coho

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	-	-	-	-

Year	Escapement	Start	Peak	End
1970	75	20OCT	15NOV	15DEC
1971	0	-	-	-
1972	0	-	-	-
1973	50	15OCT	15NOV	15NOV
1974	75	10OCT	25OCT	05DEC
1975	20	25SEP	15OCT	15DEC
1976	0	15SEP	15OCT	15DEC
1977	0	15SEP	15OCT	15DEC
1978	200	15OCT	15NOV	15DEC
1979	0	-	-	-
1980	0	-	-	-
1981	10	15OCT	15NOV	15DEC
1982	50	15OCT	15NOV	15DEC
1983	25	13OCT	15NOV	15DEC
1984	75	15OCT	05NOV	15DEC
1985	25	25SEP	25OCT	15DEC
1986	-	25AUG	15SEP	15OCT
1987	0	-	-	-
1988	20	-	-	-
1989	14	23OCT	05NOV	05DEC

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	30	25AUG	15SEP	15NOV
1972	1,500	15AUG	07SEP	15SEP
1973	25	15AUG	15AUG	15SEP
1974	750	15AUG	25AUG	15SEP
1975	250	15AUG	25AUG	15SEP
1976	1,500	15AUG	15AUG	15SEP
1977	0	15AUG	15AUG	15SEP
1978	10,000	15AUG	15SEP	15OCT
1979	200	15AUG	15SEP	15OCT
1980	5,000	-	-	-
1981	200	15AUG	15AUG	15SEP
1982	3,000	15AUG	15AUG	15SEP
1983	1,200	15AUG	15SEP	15SEP
1984	950	15AUG	15SEP	25SEP
1985	6,500	25AUG	15SEP	25SEP
1986	2,300	25AUG	15SEP	25SEP
1987	1,000	25AUG	15SEP	25SEP
1988	3,000	25AUG	-	25SEP
1989	400	25AUG	-	25SEP

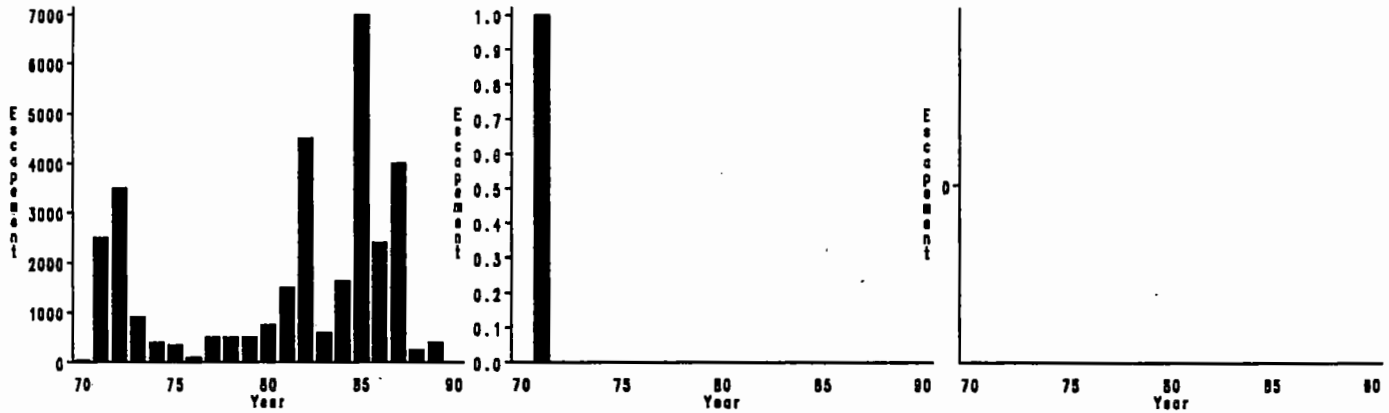
MACNAIR CREEK (91-1500)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

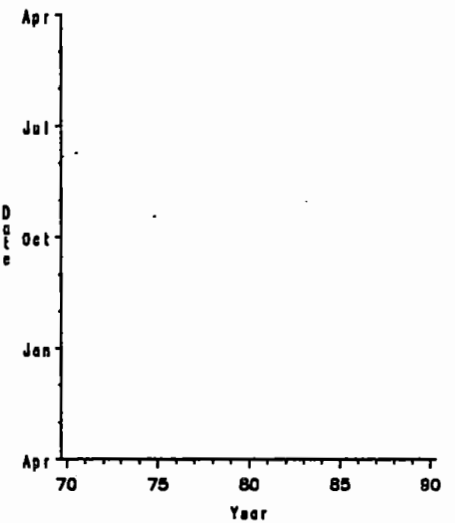
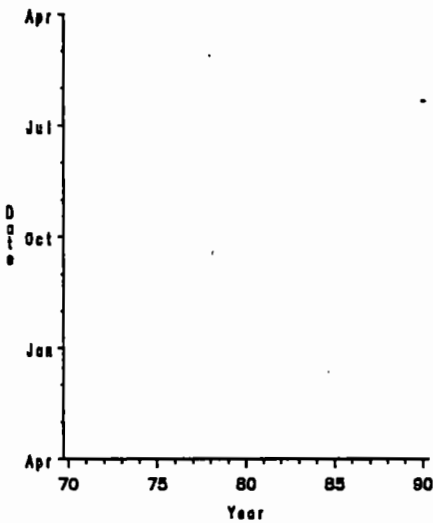
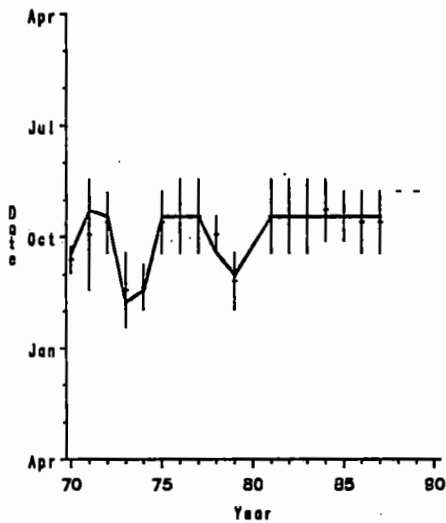
Steelhead (ST)



Chum

Chinook

Steelhead



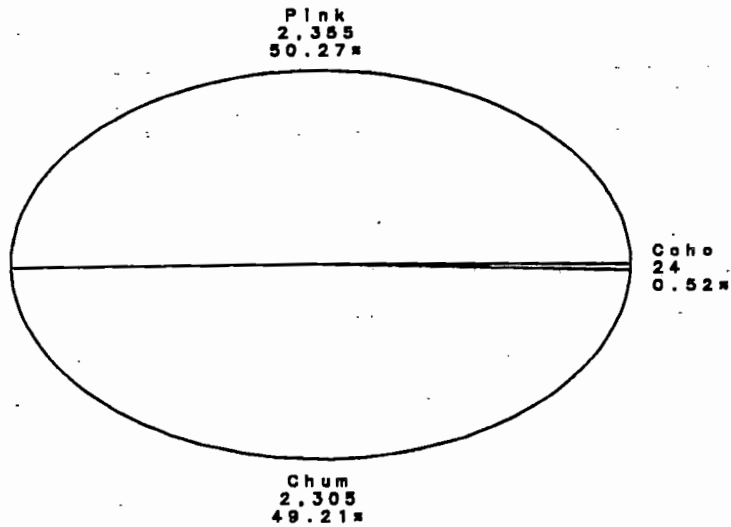
Chum				
Year	Escapement	Start	Peak	End
1970	25	10OCT	15OCT	31OCT
1971	2,500	15AUG	10SEP	15NOV
1972	3,500	28AUG	15SEP	15OCT
1973	900	15OCT	25NOV	15DEC
1974	400	25OCT	13NOV	01DEC
1975	350	25AUG	15SEP	15OCT
1976	100	15AUG	15SEP	15OCT
1977	500	15AUG	15SEP	15OCT
1978	500	15SEP	15OCT	15OCT
1979	300	15OCT	02NOV	01DEC
1980	750	-	-	-
1981	1,300	15AUG	15SEP	15OCT
1982	4,300	15AUG	15SEP	15OCT
1983	600	15AUG	15SEP	15OCT
1984	1,650	15AUG	15SEP	05OCT
1985	7,000	25AUG	15SEP	05OCT
1986	2,400	25AUG	15SEP	15OCT
1987	4,000	25AUG	15SEP	15OCT
1988	250	25AUG	-	-
1989	400	25AUG	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	1	-	-	-
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	-	-	-	-

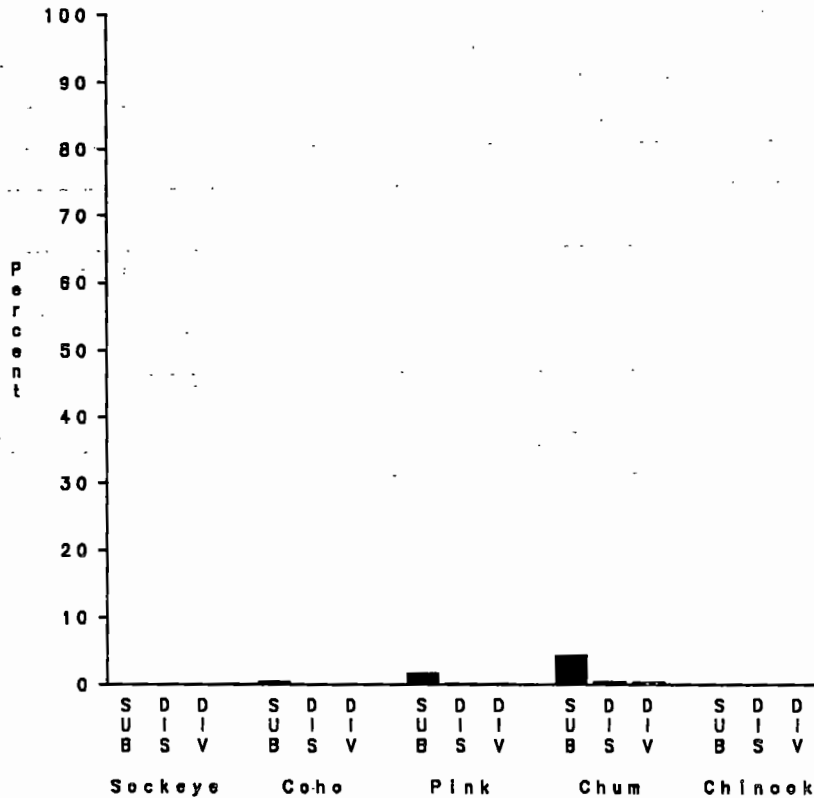
MACNAIR CREEK (91-1500)

10-yr Mean Escapement
(1980-1989)



MACNAIR CREEK : Escapement (1980-1989)

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



A. DESCRIPTION

Stream Name: DORIS CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-1504	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-9
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.5974.57295
		Lat./Long. Mouth: DG. ' ' DG. ' '
		Mainstem Length: 8.1 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLWS SE INTO HARDY 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		2.0		(REF. 4A-159)

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	PRESENCE NOTED. PROBABLY ONLY IN LOWER 2 KM. (REF. 9-4, REF. 9-36, REF. 4A-159)
CT CUTTHROAT TROUT	SAMPLED AT 4.2 KM. (REF. 4A-159)
DV DOLLY VARDEN	SAMPLED AT 4.2 KM. (REF. 4A-159)

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

RARELY INSPECTED. (REF. 9-36)
BIOPHYSICAL SURVEY INFORMATION AVAILABLE. (REF. 4A-159)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : DORIS CREEK

WATERSHED-CODE : 91-1504

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	0	N/O	0	3	0	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	0	N/O	N/O	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: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name: BRUNSWICK CREEK, SANDELL BAY CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1595	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-4
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6004.57245
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: 0.3 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS S INTO HEAD OF SANDELL 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
PK PINK SALMON	THROUGHOUT. CONSIDERABLE TIDAL SPawning. (REF. 9-36)

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
FO FORESTRY	LOGGING IN THE BAY IN THE PAST. (REF. 9-36)
IP INDUSTRIAL PROCESSING	A BRUNSWICK CANNERY WAS IN OPERATION HERE IN THE 1930'S. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

A LITTLE CREEK WITH A VERY SHORT WATERCOURSE. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / / Prepared By:

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name: BEAVER CREEK, COHOE CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1688	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-11
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92N/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.5870, 57101
		Lat./Long. Mouth: DG. DG.
		Mainstem Length: 7.7 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLOWS SW INTO PIERCE BAY, FROM HOY LAKE, 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
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: FED BY SEVERAL LAKES. HOY LAKE AREA: 1.3 SQ.KM; PERIMETER: 9.7 KM. ELSIE LAKE AREA: 0.3 SQ.KM; PERIMETER: 2.4 KM. (REF. 6N-28, REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	OBSERVED SPAWNING MAINLY BELOW ELSIE LAKE. SOME SPAWNING ABOVE. (REF. 9-4, REF. 9-36)
CO COHO SALMON	OBSERVED SPAWNING MAINLY BELOW ELSIE LAKE. OCCASIONALLY TO HOY LAKE. (REF. 9-4, REF. 9-36)
PK PINK SALMON	SPAWNING BELOW ELSIE LAKE. (REF. 9-4, REF. 9-36)
CH CHUM SALMON	SPAWNING BELOW ELSIE LAKE (REF. 9-4, REF. 9-36)
DV DOLLY VARDEN	PRESENCE NOTED. (REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	43	1980 - 1989	28A-18	185	9-42	2000	9-42
CO COHO SALMON	221	1980 - 1989	28A-18	600	9-42	3500	9-42
PK PINK SALMON	73	1980 - 1988	28A-18	200	9-42	500	9-42
PK PINK SALMON	31	1981 - 1989	28A-18	75	9-42		

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	457	1980 - 1989	28A-18	2000	9-42	2000	9-42

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 P	X X	
PK PINK SALMON	Migration Spawning Incubation Rearing							X	X P	X X			
CM CHUM SALMON	Migration Spawning Incubation Rearing									X 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO LOW WATER LEVELS. (REF. 9-4)
HEAVY DEBRIS ACCUMULATION, CLEARANCE WORK REQUIRED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last updated by: MARG ANDERSON	Date: 1992/01/23
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : BEAVER CREEK

WATERSHED-CODE : 91-1688

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	0	400	0	UNK
1954	0	300	0	27	0	UNK
1955	0	200	0	0	0	UNK
1956	0	75	0	0	0	UNK
1957	0	N/O	0	N/O	0	UNK
1958	0	3500	0	N/O	0	UNK
1959	0	400	0	N/O	0	UNK
1960	0	200	0	200	0	UNK
1961	750	3500	0	75	0	UNK
1962	0	3500	0	200	0	UNK
1963	3500	750	0	0	0	UNK
1964	400	1500	0	200	0	UNK
1965	75	75	0	0	0	UNK
1966	0	750	0	0	0	UNK
1967	N/O	25	0	N/O	0	UNK
1968	N/O	N/O	0	N/O	0	UNK
1969	N/O	400	0	N/O	0	UNK
1970	N/O	25	0	0	0	UNK
1971	N/O	75	0	0	0	UNK
1972	N/O	200	25	400	0	UNK
1973	N/O	200	N/O	200	0	UNK
1974	25	UNK	200	N/O	0	UNK
1975	N/O	UNK	300	N/O	0	UNK
1976	0	150	100	200	0	UNK
1977	0	100	N/O	800	0	UNK
1978	N/O	200	300	2000	0	UNK
1979	0	3000	750	250	0	UNK
1980	UNK	600	200	2000	UNK	UNK
1981	75	500	25	300	UNK	UNK
1982	N/O	500	100	800	0	UNK
1983	1	200	75	250	UNK	UNK
1984	N/O	400	N/O	250	N/O	UNK
1985	185	N/O	50	1	N/O	UNK
1986	125	10	15	600	UNK	UNK
1987	0	N/O	3	20	0	UNK
1988	N/O	N/O	50	350	0	UNK
1989	N/O	N/O	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

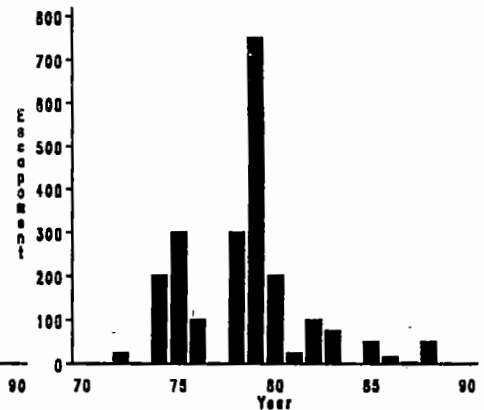
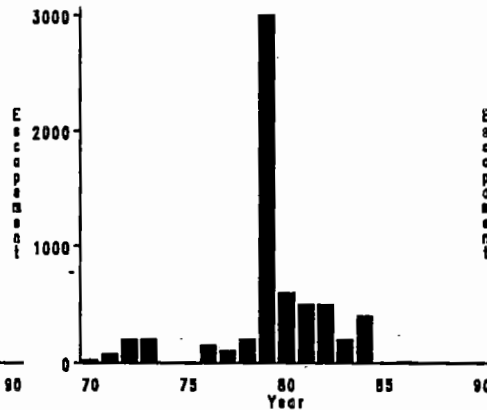
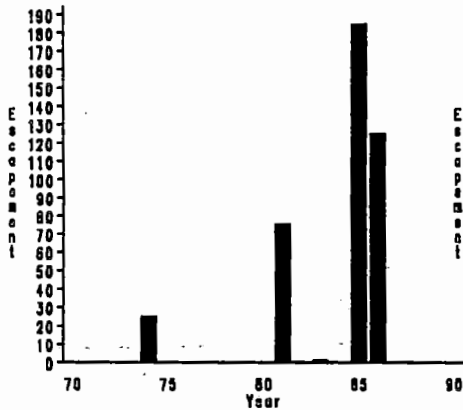
UNNAMED C (91-1688)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

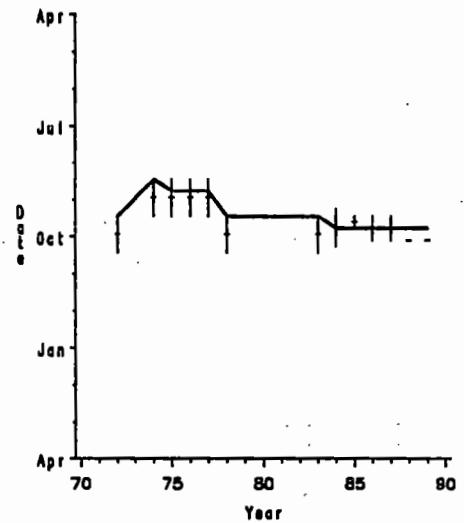
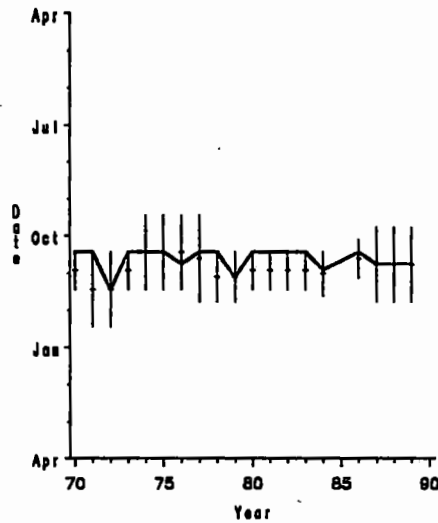
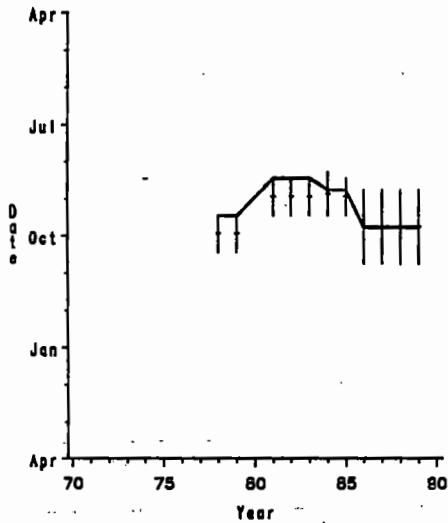
Pink (PK)



Sockeye

Coho

Pink



Sockeye					
Year	Escapement	Start	Peak	End	
1970	0	-	-	-	
1971	0	-	-	-	
1972	0	-	-	-	
1973	0	-	-	-	
1974	25	15AUG	-	-	
1975	0	-	-	-	
1976	0	-	-	-	
1977	0	-	-	-	
1978	0	15SEP	15SEP	15OCT	
1979	0	15SEP	15SEP	15OCT	
1980	-	-	-	-	
1981	75	15AUG	15AUG	15SEP	
1982	0	15AUG	15AUG	15SEP	
1983	1	15AUG	15AUG	15SEP	
1984	0	10AUG	25AUG	15SEP	
1985	185	15AUG	25AUG	15SEP	
1986	125	25AUG	25SEP	25OCT	
1987	0	25AUG	25SEP	25OCT	
1988	0	25AUG	25SEP	25OCT	
1989	0	25AUG	25SEP	25OCT	

Coho					
Year	Escapement	Start	Peak	End	
1970	25	15OCT	15OCT	15NOV	
1971	75	15OCT	15OCT	15DEC	
1972	200	15OCT	15NOV	15DEC	
1973	200	15OCT	15OCT	15NOV	
1974	-	15SEP	15OCT	15NOV	
1975	-	15SEP	15OCT	15NOV	
1976	150	15SEP	25OCT	15NOV	
1977	100	15SEP	15OCT	25NOV	
1978	200	15OCT	15OCT	25NOV	
1979	3,000	15OCT	05NOV	25NOV	
1980	800	15OCT	15OCT	15NOV	
1981	500	15OCT	15OCT	15NOV	
1982	500	15OCT	15OCT	15NOV	
1983	200	15OCT	15OCT	15NOV	
1984	400	15OCT	30OCT	20NOV	
1985	0	-	-	-	
1986	10	05OCT	15OCT	05NOV	
1987	0	25SEP	25OCT	25NOV	
1988	0	25SEP	25OCT	25NOV	
1989	0	25SEP	25OCT	25NOV	

Pink					
Year	Escapement	Start	Peak	End	
1970	0	-	-	-	
1971	0	-	-	-	
1972	25	15SEP	15SEP	15OCT	
1973	0	-	-	-	
1974	200	15AUG	15AUG	15SEP	
1975	300	15AUG	25AUG	15SEP	
1976	100	15AUG	25AUG	15SEP	
1977	0	15AUG	25AUG	15SEP	
1978	300	15SEP	15SEP	15OCT	
1979	750	15SEP	15SEP	15SEP	
1980	200	15SEP	15SEP	15SEP	
1981	25	15SEP	15SEP	15SEP	
1982	100	15SEP	15SEP	15SEP	
1983	75	15SEP	15SEP	15OCT	
1984	0	05SEP	25SEP	10OCT	
1985	50	15SEP	25SEP	25SEP	
1986	15	15SEP	25SEP	05OCT	
1987	3	15SEP	25SEP	05OCT	
1988	50	-	25SEP	05OCT	
1989	0	-	25SEP	05OCT	

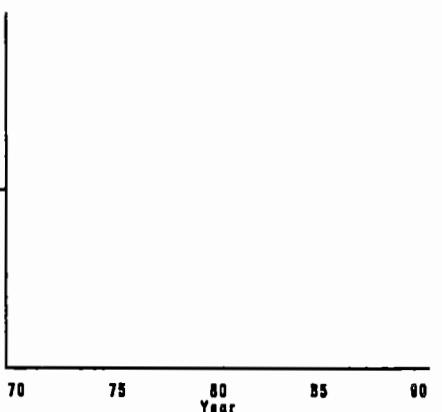
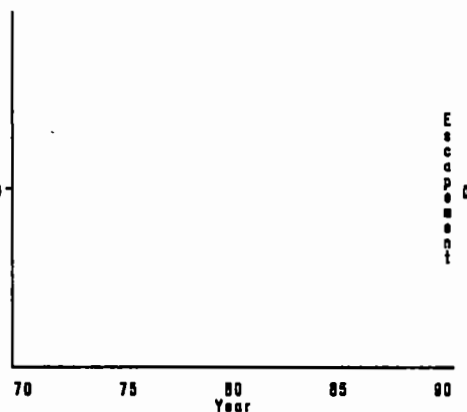
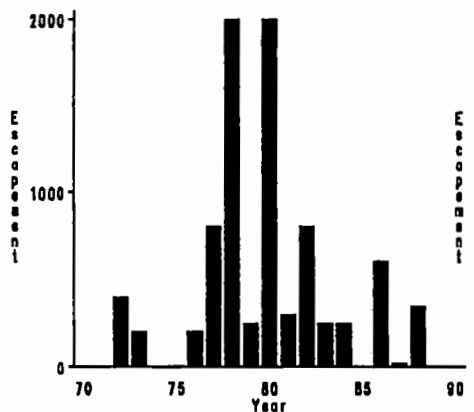
UNNAMED C (91-1688)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

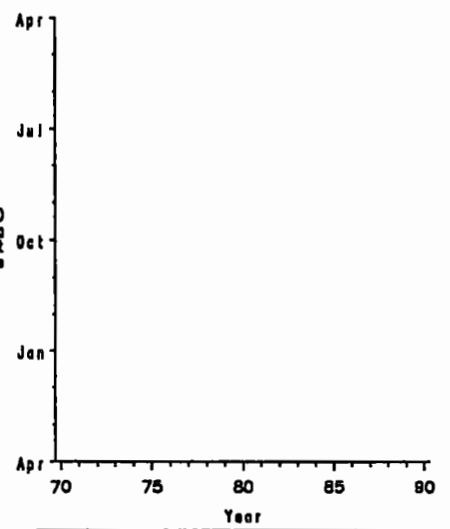
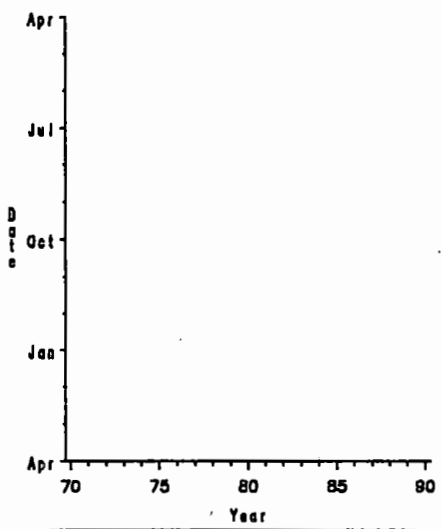
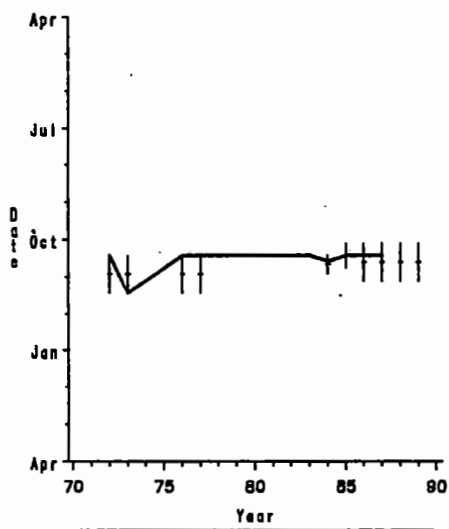
Steelhead (ST)



Chum

Chinook

Steelhead



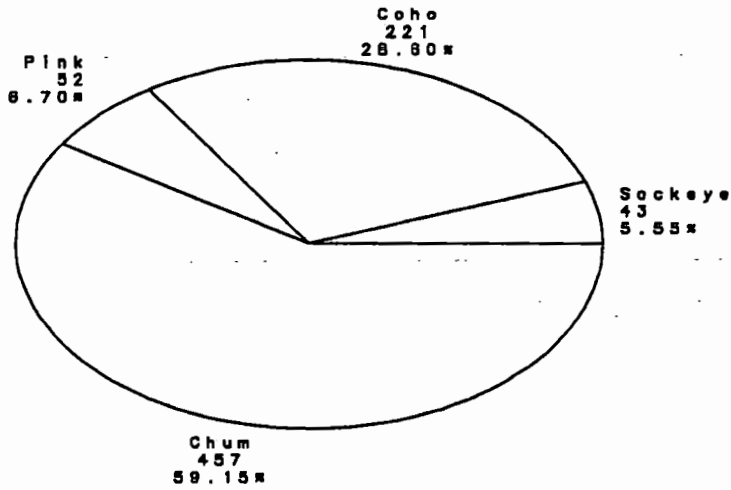
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	400	15OCT	15OCT	15NOV
1973	200	15OCT	15NOV	15NOV
1974	0	-	-	-
1975	0	-	-	-
1976	200	15OCT	15OCT	15NOV
1977	800	15OCT	15OCT	15NOV
1978	2,000	15OCT	15OCT	15OCT
1979	250	15OCT	15OCT	15OCT
1980	2,000	15OCT	15OCT	15OCT
1981	300	15OCT	15OCT	15OCT
1982	800	15OCT	15OCT	15OCT
1983	250	15OCT	15OCT	15OCT
1984	250	15OCT	20OCT	30OCT
1985	1	05OCT	15OCT	25OCT
1986	600	05OCT	15OCT	05NOV
1987	20	05OCT	15OCT	05NOV
1988	350	05OCT	-	05NOV
1989	0	05OCT	-	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	-	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	-	-	-	-
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	-	-	-	-

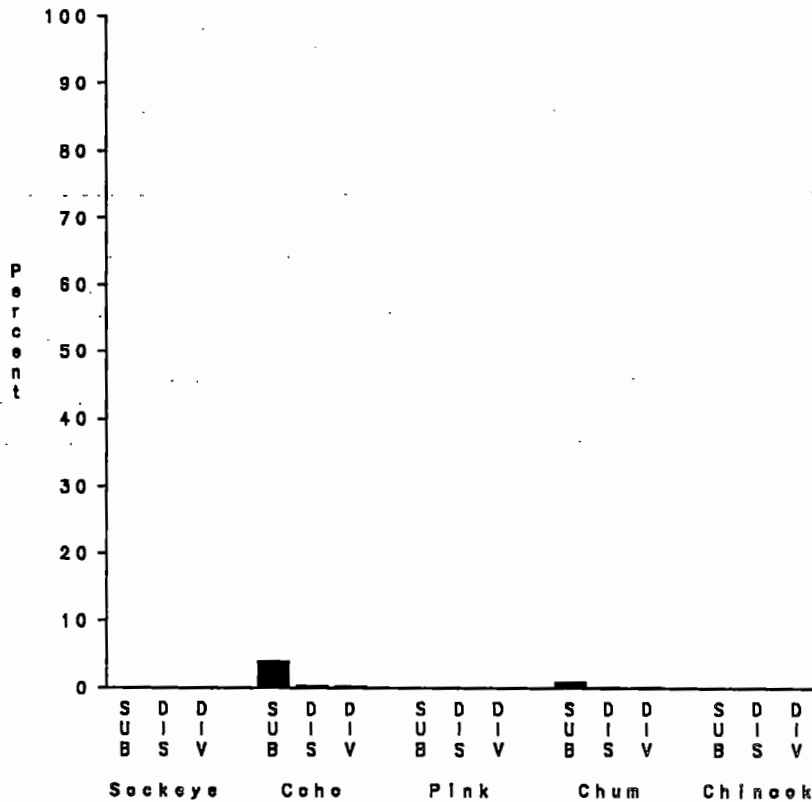
UNNAMED C (91-1688)

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: NORTH COAST
Local Name: FISH EGG CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-1900-300	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 8-16
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.5875.57305
		Lat./Long. Mouth: 0 DG. 0' 0'' 0 DG. 0' 0''
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLows SOUTH INTO EAST END OF ELIZABETH LAKE, WEST OF HARDY INLET.		

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
SK SOCKEYE SALMON	REPORTED HISTORICALLY. (REF. 8-65)
CO COHO SALMON	REPORTED THROUGHOUT. (REF. 8-65)
PK PINK SALMON	PRESENT. (REF. 8-82)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
PK PINK SALMON	8000	1981 - 1985	8-82	8000	8-82		
Comments: HISTORICAL ESCAPEMENTS OF SK AND CO WERE RECORDED BY LOCAL RESIDENTS IN THE 1940'S AND 1950'S. HAS NEVER BEEN INSPECTED ADEQUATELY DUE TO ITS ISOLATED NATURE. (REF. 8-65, REF. 8-82)							

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

FORESTRY PLANNING/IMPACTS DATA AVAILABLE. (REF. 8-63)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / / Prepared By:

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1986/03/19
Checked by:	TOM PENDRAY	Date:	1988/02/17
Last updated by:	TOM PENDRAY	Date:	1991/12/08
Last checked by:	TOM PENDRAY	Date:	1991/02/26

A. DESCRIPTION

Stream Name: OATSOALIS CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 97-0500-340	Subdistrict: 9 RIVERS INLET
	Statistical Subarea: 9-12
	M.O.E. Region: 5 CARIBOO
	Management Unit: 8

Tributaries	Code	Topographic (1:50k) Map: 92M/12
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.5736.57090
		Lat./Long. Mouth: 06. ' ' ' 06. ' ' '
		Mainstem Length: 3.6 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLWS E INTO HEAD OF SAFETY COVE, CALVERT ISLAND, FITZ HUGH SOUND.		

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	HISTORICAL PRESENCE. (REF. 9-4)
PK PINK SALMON	PRESENCE NOTED. (REF. 9-4, REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CO COHO SALMON		-				100	9-42
PK PINK SALMON	786	1980 - 1989	28A-18	3000	28A-18	1000	9-42

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	HAS BEEN LOGGED IN THE PAST. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO LOW WATER LEVELS. (REF. 9-4)
IN RECENT YEARS VERY FEW FISH OBSERVED, THEREFORE, RARELY INSPECTED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENORAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : OATSOALIS CREEK

WATERSHED-CODE : 97-0500-340

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	0	0	2000	0	0	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	0	0	100	0	0	UNK
1979	0	0	N/O	0	0	UNK
1980	0	0	3000	0	0	UNK
1981	0	N/O	N/O	N/O	0	UNK
1982	0	0	250	0	0	UNK
1983	0	0	N/O	0	0	UNK
1984	N/O	N/O	180	N/O	N/O	UNK
1985	N/O	N/O	N/O	N/O	N/O	UNK
1986	0	UNK	500	UNK	UNK	UNK
1987	0	0	N/O	0	0	UNK
1988	0	0	N/O	0	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

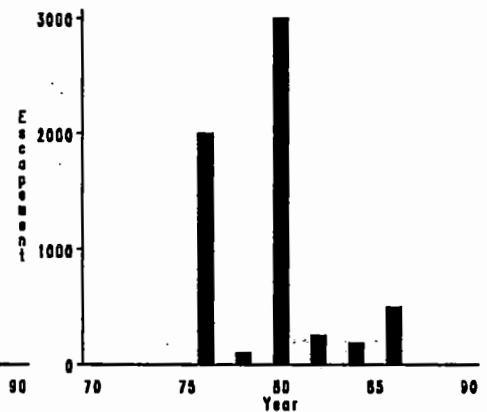
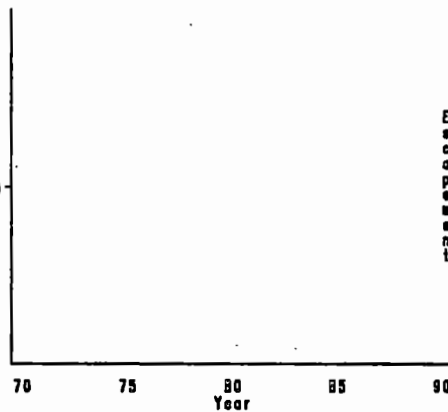
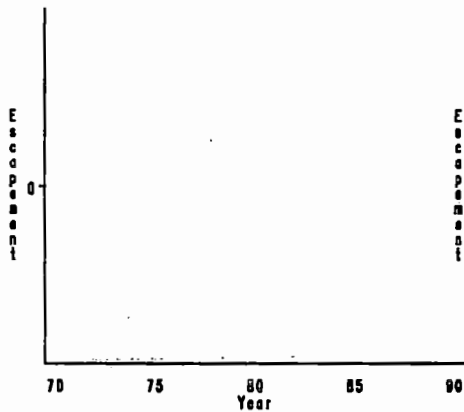
OATSOALIS CREEK (97-0500-340)

Escapement & Run Timing

sockeye (SK)

Coho (CO)

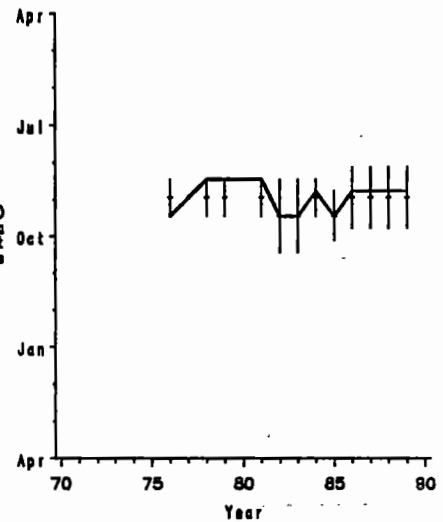
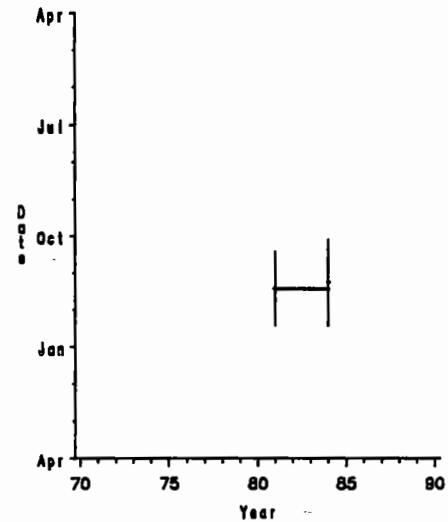
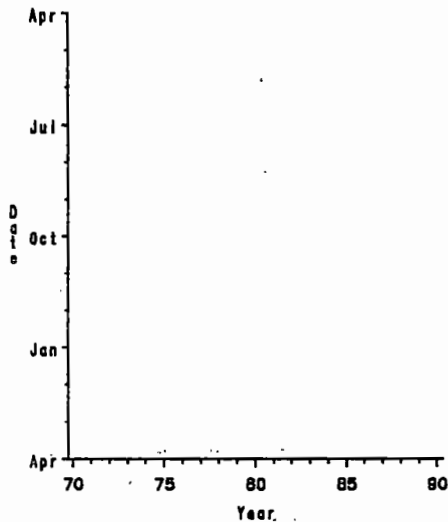
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	0	-	-	-
1977	-	-	-	-
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	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	0	-	-	-
1977	-	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	15OCT	15NOV	15DEC
1982	0	-	-	-
1983	0	-	-	-
1984	0	05OCT	15NOV	15DEC
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-
1990	-	-	-	-

Pink				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	2,000	15AUG	15SEP	15SEP
1977	-	-	-	-
1978	100	15AUG	15AUG	15SEP
1979	0	15AUG	15AUG	15SEP
1980	3,000	-	-	-
1981	0	15AUG	15AUG	15SEP
1982	250	15AUG	15SEP	15OCT
1983	0	15AUG	15SEP	15OCT
1984	100	15AUG	25AUG	15SEP
1985	0	25AUG	15SEP	05OCT
1986	500	05AUG	25AUG	25SEP
1987	0	05AUG	25AUG	25SEP
1988	0	05AUG	25AUG	25SEP
1989	0	05AUG	25AUG	25SEP
1990	-	-	-	-

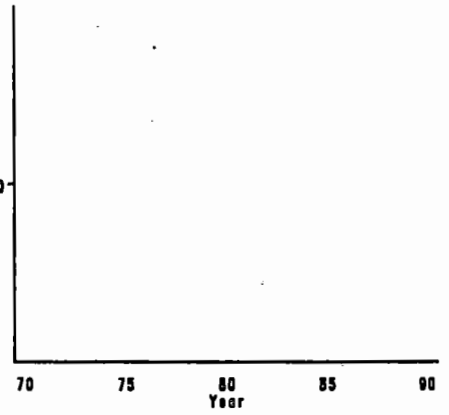
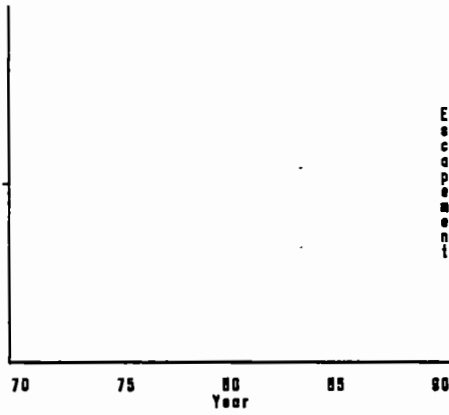
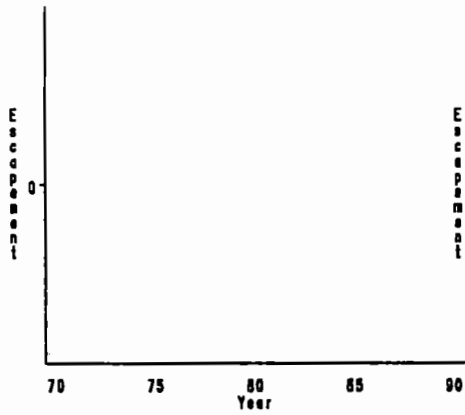
OATSOALIS CREEK (97-0500-340)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

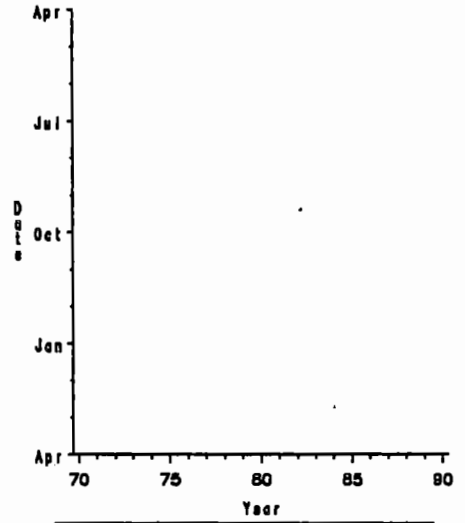
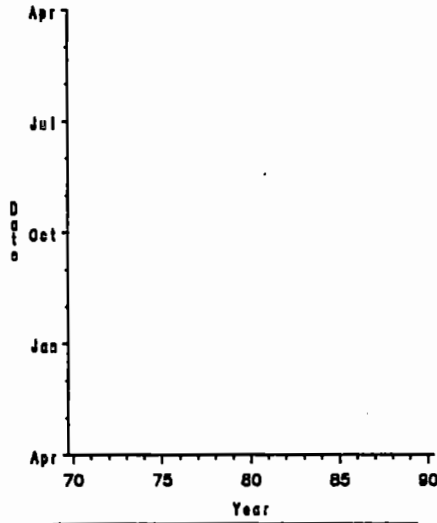
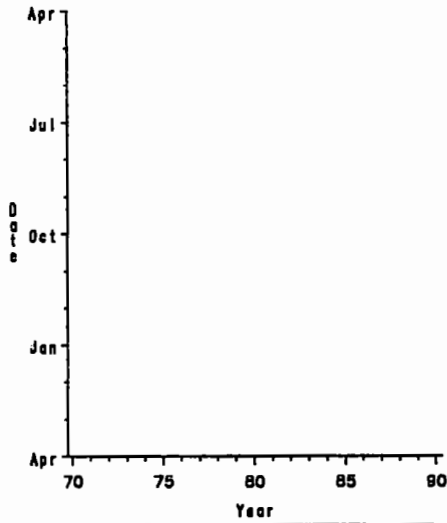
Steelhead (ST)



Chum

Chinook

Steelhead



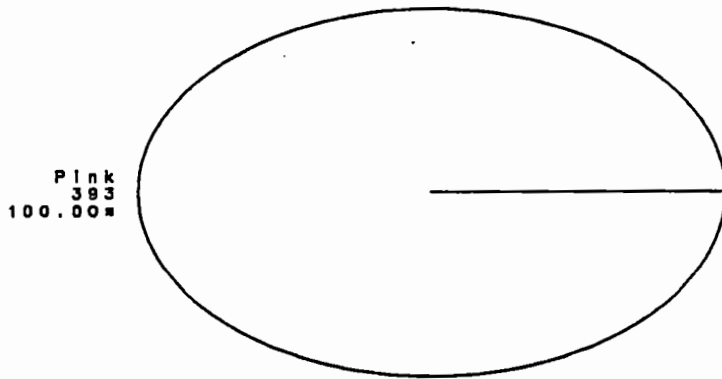
Chum				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	0	-	-	-
1977	-	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	-	-	-	-
1976	0	-	-	-
1977	-	-	-	-
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	-	-	-	-

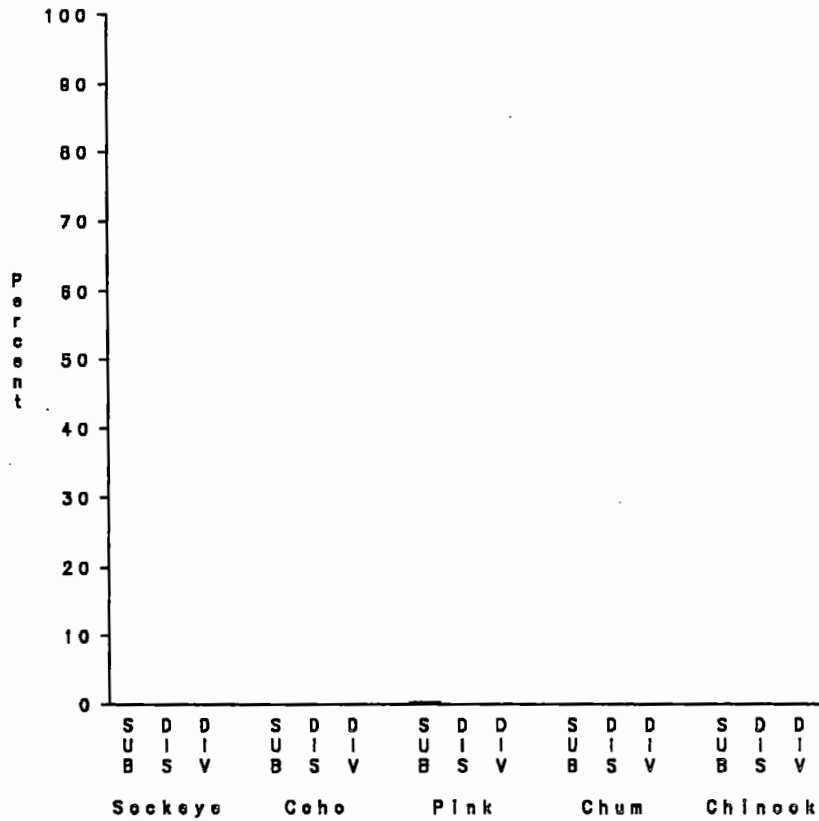
OATSOALIS CREEK (97-0500-340)

10-yr Mean Escapement
(1980-1989)



OATSOALIS CREEK : Escapement (1980-1989)

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



SUBDISTRICT # 10

SMITH INLET

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	2	1980 - 1988	28A-18	6	28A-18		
PK PINK SALMON		1981 - 1989		3	28A-18		
CH CHUM SALMON	4010	1980 - 1989	28A-18	7000	28A-18	15000	9-42

Comments: PK EVEN ESCAPEMENT 1984(6) 1988(3) ONLY. PK ODD ESCAPEMENT 1983(1) 1987(3) (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	P X	X X
CH 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
NO INFORMATION AVAILABLE	

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

RESULTS OF ADULT SALMONID RECONNAISSANCE PROGRAM, BIOPHYSICAL DATA AND DETAILED HABITAT DESCRIPTION AVAILABLE. (REF. 10-13, REF. 10-14)
DETAILED DATA ON JUVENILE POPULATIONS AND MIGRATION, AVAILABLE. (REF. 10-15)
HABITAT DESCRIPTION AVAILABLE. STREAM HAS LOW GRADIENT AND FLOWS THROUGH A PINE BOG FOR MOST OF ITS LENGTH. (REF. 10-35)
ENUMERATION IS BECOMING MORE DIFFICULT TO MAINTAIN, DUE TO BUDGET CONSTRAINTS. DIFFICULT BOAT ACCESS. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : TAKUSH RIVER

WATERSHED-CODE : 91-0100

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	75	0	3500	0	UNK
1954	0	0	0	5000	0	UNK
1955	0	N/O	N/O	750	0	UNK
1956	0	N/O	0	3500	0	UNK
1957	0	400	0	3500	0	UNK
1958	0	1500	0	3500	0	UNK
1959	0	400	0	1500	0	UNK
1960	0	200	0	3500	0	UNK
1961	0	400	0	1500	0	UNK
1962	0	1500	0	35000	0	UNK
1963	0	UNK	0	7500	0	UNK
1964	0	UNK	0	7500	0	UNK
1965	0	N/O	0	75	0	UNK
1966	0	N/O	0	3500	0	UNK
1967	0	N/O	0	200	0	UNK
1968	0	400	0	7500	0	UNK
1969	0	400	0	750	0	UNK
1970	0	N/O	0	15000	0	UNK
1971	0	N/O	0	16000	0	UNK
1972	0	N/O	0	750	0	UNK
1973	0	400	0	12500	0	UNK
1974	0	400	0	3500	0	UNK
1975	0	0	0	UNK	0	UNK
1976	0	N/O	0	1000	0	UNK
1977	0	200	0	500	0	UNK
1978	0	100	0	3000	0	UNK
1979	0	750	0	10000	0	UNK
1980	0	0	0	4000	0	UNK
1981	0	100	N/O	2500	N/O	UNK
1982	0	500	0	7000	0	UNK
1983	0	500	1	6000	0	UNK
1984	N/O	400	6	3500	N/O	UNK
1985	N/O	30	N/O	3500	N/O	UNK
1986	0	10	UNK	2600	UNK	UNK
1987	0	50	3	3000	0	UNK
1988	0	N/O	3	6000	0	UNK
1989	UNK	N/O	N/O	2000	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

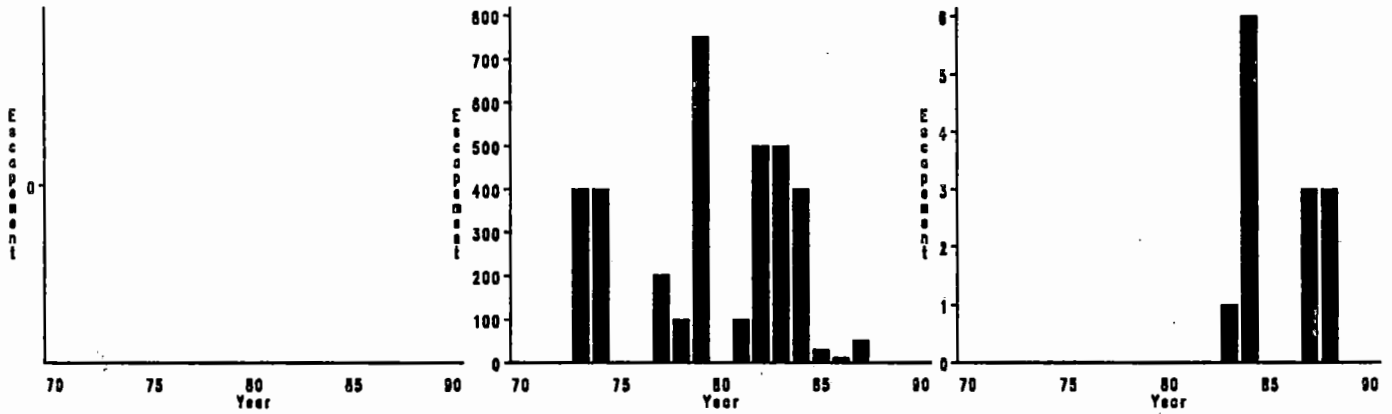
TAKUSH RIVER (91-0100)

Escapement & Run Timing

sockeye (SK)

Coho (CO)

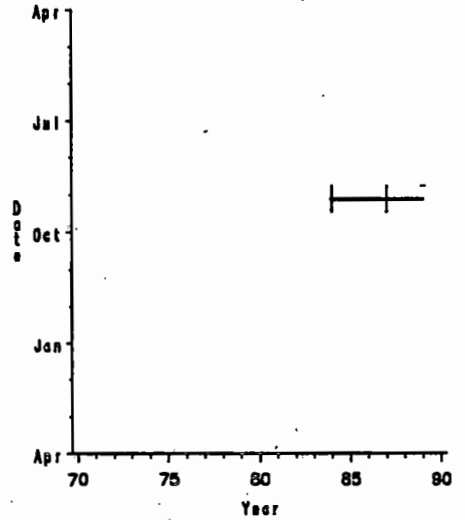
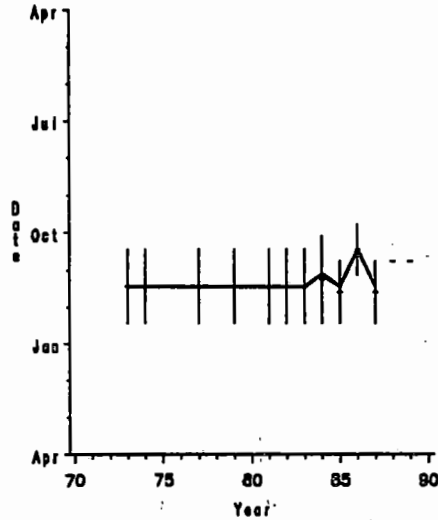
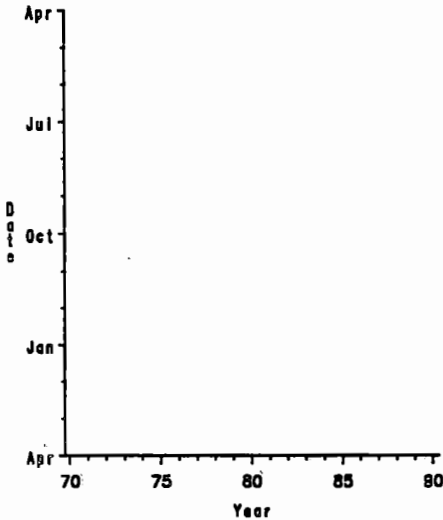
Pink (PK)



Sockeye

Coho

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	-	-	-	-

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

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	25AUG	05SEP	15SEP
1985	0	-	-	-
1986	-	-	-	-
1987	3	25AUG	05SEP	15SEP
1988	3	-	-	-
1989	0	25AUG	05SEP	-

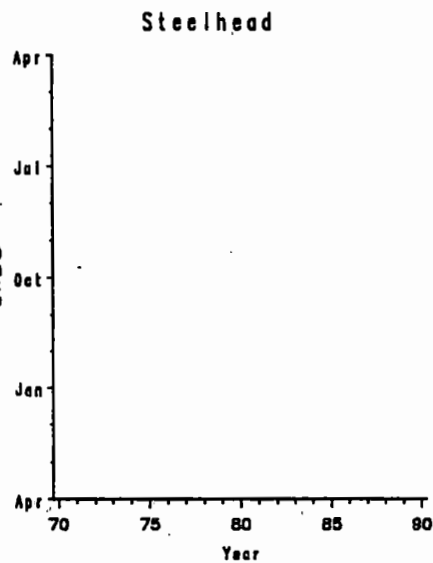
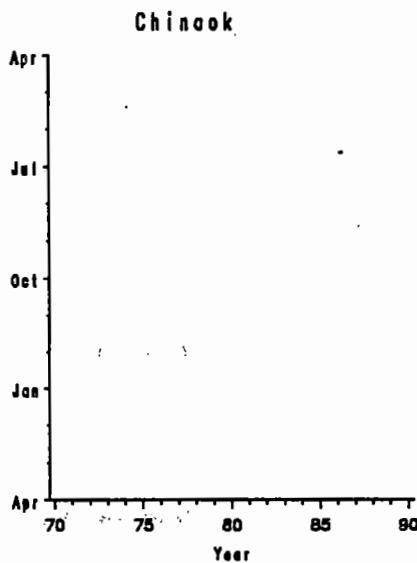
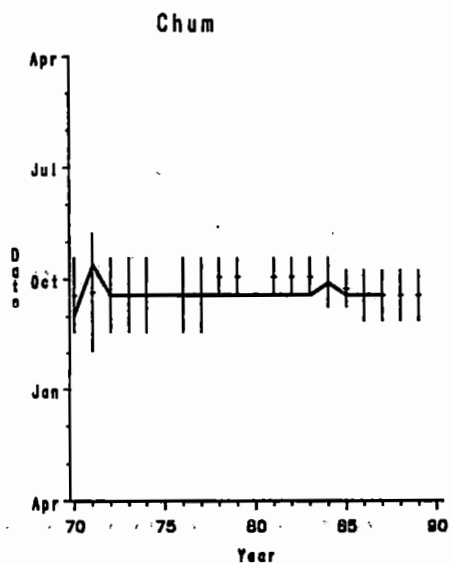
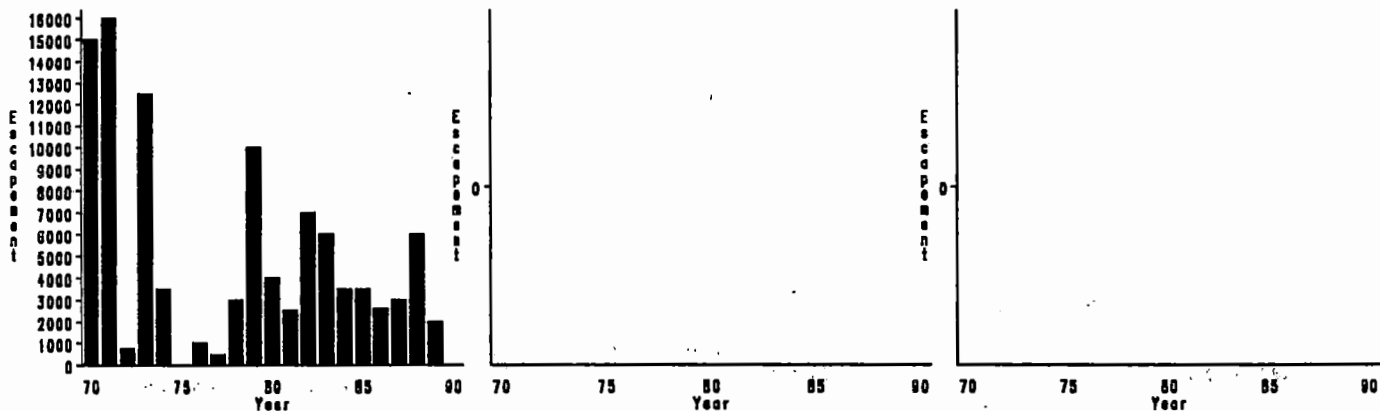
TAKUSH RIVER (91-0100)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

Steelhead (ST)



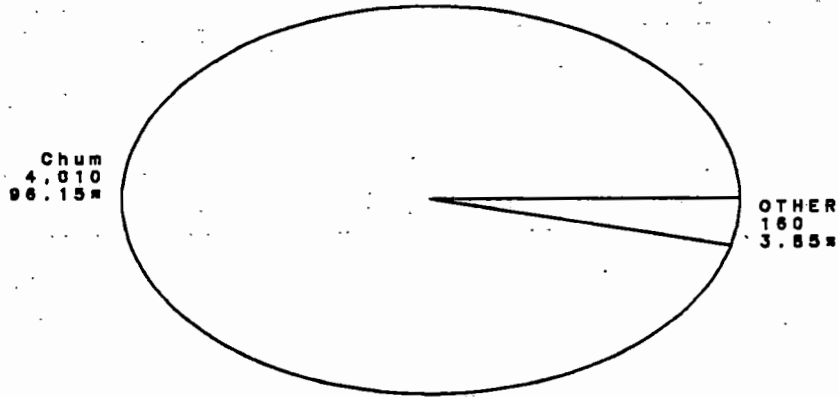
Chum				
Year	Escapement	Start	Peak	End
1970	15,000	15SEP	31OCT	19NOV
1971	10,000	25AUG	20SEP	30NOV
1972	750	15SEP	15OCT	15NOV
1973	12,500	15SEP	15OCT	15NOV
1974	3,500	15SEP	15OCT	19NOV
1975	-	-	-	-
1976	1,000	15SEP	15OCT	15NOV
1977	500	15SEP	15OCT	15NOV
1978	3,000	15SEP	15OCT	15OCT
1979	10,000	15SEP	15OCT	15OCT
1980	4,000	-	-	-
1981	2,300	15SEP	15OCT	15OCT
1982	7,000	15SEP	15OCT	15OCT
1983	0,000	15SEP	15OCT	15OCT
1984	3,500	15SEP	05OCT	25OCT
1985	3,500	25SEP	15OCT	25OCT
1986	2,000	25SEP	15OCT	05NOV
1987	3,000	25SEP	15OCT	05NOV
1988	0,000	25SEP	-	05NOV
1989	2,000	25SEP	-	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	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	-	-	-	-

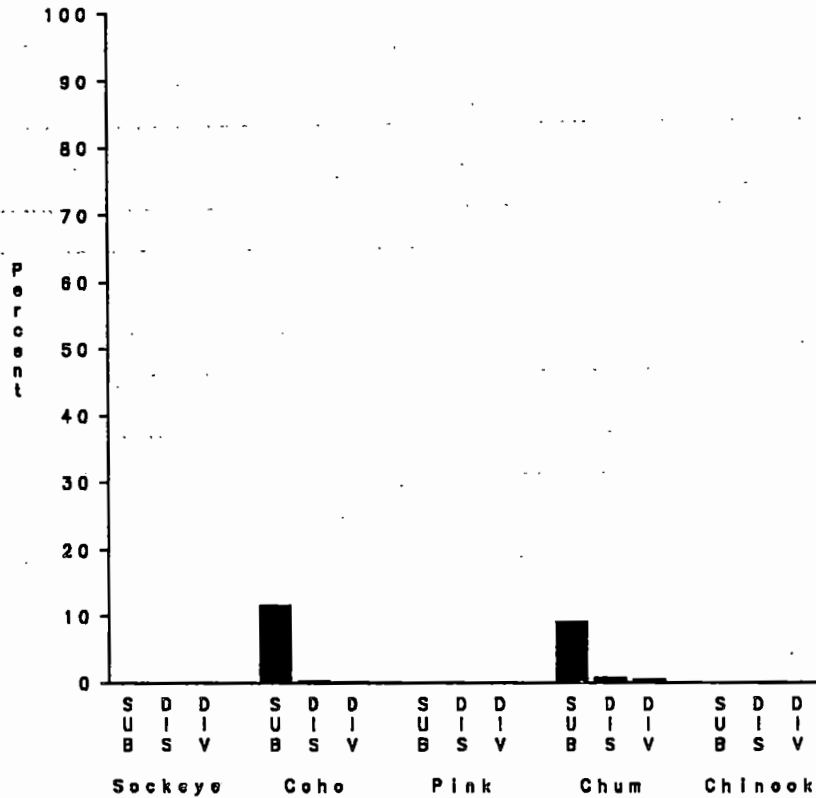
TAKUSH RIVER (91-0100)

10-yr Mean Escapement
(1980-1989)



TAKUSH 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: NORTH COAST
Local Name: DOCEE RIVER, GOAT RIVER	District: 7 CENTRAL COAST
Watershed Code: 91-0228	Subdistrict: 10 SMITH INLET
	Statistical Subarea: 10-11
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92N/3
CANOE CREEK SMOKEHOUSE CREEK	210 230	B.C.G.S. (1:20k) Map: U.T.M. Mouth: 9.6161.56768 Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' Mainstem Length: 26.3 km Ref. No.: 6N-28 Watershed Area: Ref. No.:
Location: FLOWS NW INTO WYCLEES LAGOON FROM LONG LAKE, SMITH 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
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: FED BY LONG LAKE. AREA: 21.3 SQ.KM; PERIMETER: 58.1 KM. (REF. 6N-28, REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
SK SOCKEYE SALMON	TO LAKE TRIBUTARIES. SOME LAKESHORE SPAWING BETWEEN CANOE AND SMOKEHOUSE CKS. (REF. 9-45)
CO COHO SALMON	PRESENCE NOTED; ALSO IN TRIBUTARIES. (REF. 9-4)
PK PINK SALMON	OBSERVED SPAWING NEAR LONG LAKE OUTLET. (REF. 9-36)
CM CHUM SALMON	PRESENT IN VERY SMALL NUMBERS. (REF. 9-45)
CH CHINOOK SALMON	SPAWNING ABOVE AND BELOW COUNTING FENCE AT LAKE OUTLET. (REF. 9-4, REF. 9-45)
CT CUTTHROAT TROUT	PRESENCE NOTED. (REF. 9-36)
DV DOLLY VARDEN	PRESENCE NOTED. (REF. 9-36)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
SK SOCKEYE SALMON	165891	1980 - 1989	28A-18	250000	28A-18	100	9-42

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		-				400	9-42
PK PINK SALMON		1981 - 1989		150	28A-18		
CH CHINOOK SALMON	835	1980 - 1989	28A-18	1500	28A-18	3000	9-42

Comments: NO CO RECORDED SINCE 1974. PK ESCAPEMENT FOR 1983(150). PK AND CH USALLY PRESENT IN VERY SMALL NUMBERS. (REF. 9-45, 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	X X
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X	X X 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
FT LAKE FERTILIZAT'N		0.0	LAKE FERTILIZATION OF LONG LAKE. ASSESSED ANNUALLY BY PACIFIC BIOLOGICAL STATION. HAS BEEN CARRIED OUT SINCE 1977 EACH YEAR EXCEPT 1980 AND 1981. (REF. 1-43, REF. 9-36)	1977/
CF COUNTING FENCE	CO COHO SALMON SK SOCKEYE SALMON	0.3	DFO. RECENTLY REFURBISHED. (REF. 9-4, REF. 9-36)	1972/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING OPERATION IN THE WATERSHED COMMENCED IN 1957. LOGGING DEBRIS ACCUMULATION ON SPAWNING GROUNDS HAS BEEN A RECURRING PROBLEM. (REF. 9-4)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

LAKESHORE SPAWNING OCCURS IN LONG LAKE, BETWEEN CANOE AND SMOKEHOUSE CREEK, LOGGING DEBRIS HAS CAUSED SERIOUS DETERIORATION OF LONG LAKE SPAWNING GROUNDS. (REF. 9-4)
LAKE SURVEY INFORMATION FOR LONG LAKE AVAILABLE. (REF. 10-17)
GOOD TROUT FISHING. (REF. 9-36)
ST SUSPECTED PRESENT, BUT NONE CONFIRMED. (REF. 9-45)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last updated by:	MARG ANDERSON	Date:	1992/01/23
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : DOCEE RIVER

WATERSHED-CODE : 91-0228

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	400	0	0	3500	UNK
1954	0	0	0	0	5000	UNK
1955	0	0	0	0	1500	UNK
1956	0	0	0	0	1700	UNK
1957	75	0	0	0	3500	UNK
1958	75	0	0	0	1500	UNK
1959	75	0	0	0	750	UNK
1960	25	200	0	0	200	UNK
1961	25	400	0	0	1500	UNK
1962	75	200	0	0	400	UNK
1963	68687	25	0	0	400	UNK
1964	200	400	0	0	400	UNK
1965	UNK	75	0	0	25	UNK
1966	UNK	75	0	0	750	UNK
1967	UNK	75	0	0	400	UNK
1968	197929	75	0	0	200	UNK
1969	200	75	0	0	75	UNK
1970	70065	UNK	0	0	200	UNK
1971	135068	N/O	0	0	700	UNK
1972	76248	UNK	0	0	800	UNK
1973	169753	200	0	0	550	UNK
1974	91023	400	0	0	1750	UNK
1975	62967	N/O	0	0	900	UNK
1976	60904	0	0	0	1000	UNK
1977	128607	UNK	0	0	1000	UNK
1978	84105	N/O	0	0	2000	UNK
1979	19232	N/O	0	0	500	UNK
1980	128453	0	0	0	1200	UNK
1981	214345	0	0	0	1000	UNK
1982	214500	N/O	0	0	1500	UNK
1983	199653	0	150	0	1000	UNK
1984	89154	N/O	N/O	N/O	750	UNK
1985	250000	N/O	N/O	N/O	200	UNK
1986	199000	UNK	UNK	UNK	500	UNK
1987	N/O	N/O	0	0	1000	UNK
1988	200000	N/O	0	0	1000	UNK
1989	163804	N/O	UNK	UNK	200	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

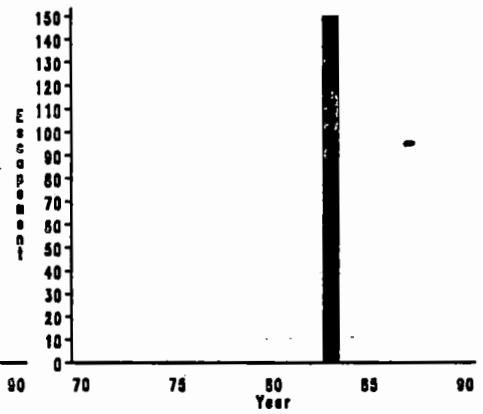
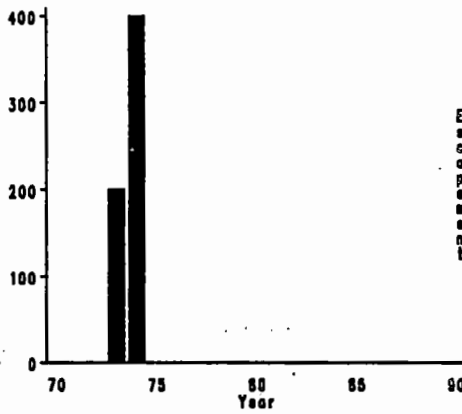
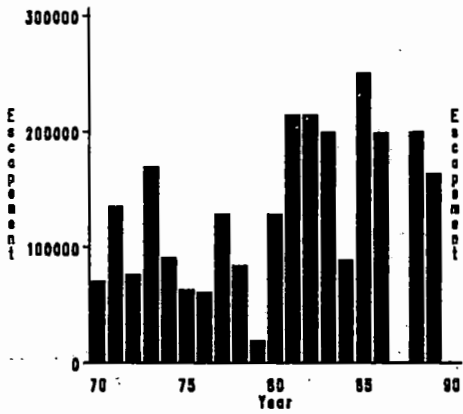
UNNAMED C (91-0228)

Escapement & Run Timing

Sockeye (SK)

Coho (CO)

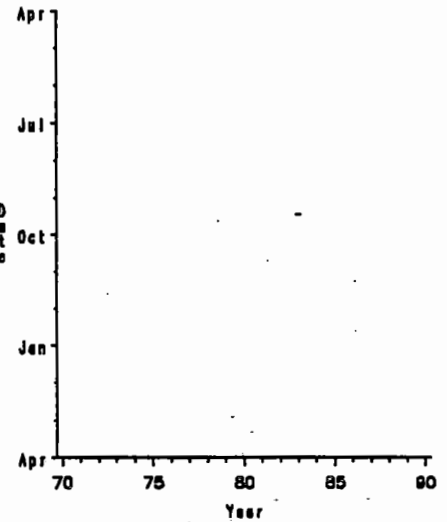
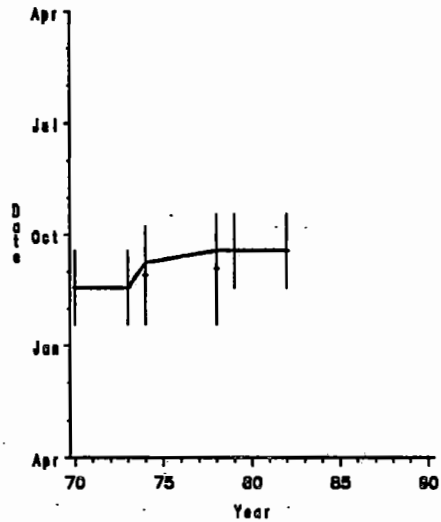
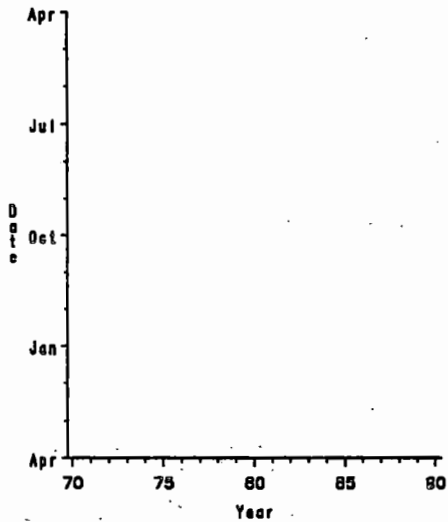
Pink (PK)



Sockeye

Coho

Pink



Sockeye				
Year	Escapement	Start	Peak	End
1970	78,085	-	-	-
1971	135,668	-	-	-
1972	78,248	-	-	-
1973	168,753	-	-	-
1974	91,623	-	-	-
1975	82,987	-	-	-
1976	88,904	-	-	-
1977	126,607	-	-	-
1978	84,105	-	-	-
1979	19,232	-	-	-
1980	128,433	-	-	-
1981	214,345	-	-	-
1982	214,300	-	-	-
1983	198,453	-	-	-
1984	88,154	-	-	-
1985	258,000	-	-	-
1986	198,800	-	-	-
1987	0	-	-	-
1988	208,600	-	-	-
1989	183,204	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	-	18OCT	19NOV	19DEC
1971	0	-	-	-
1972	-	-	-	-
1973	200	15OCT	15NOV	15DEC
1974	400	28SEP	25OCT	15DEC
1975	0	-	-	-
1976	0	-	-	-
1977	-	-	-	-
1978	0	18SEP	15OCT	15DEC
1979	0	18SEP	15OCT	15NOV
1980	0	-	-	-
1981	0	-	-	-
1982	0	18SEP	15OCT	15NOV
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
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	150	15SEP	15SEP	15SEP
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

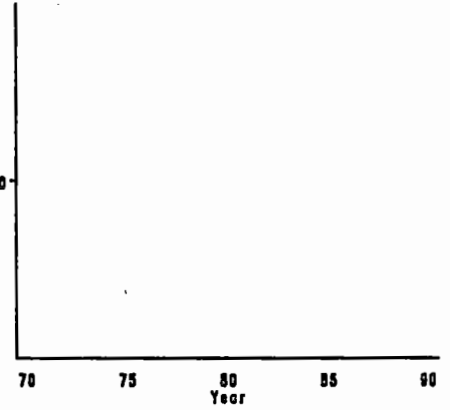
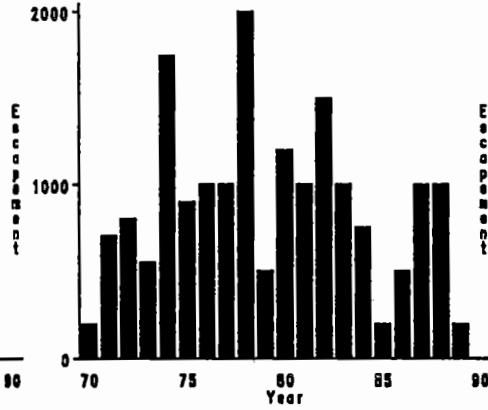
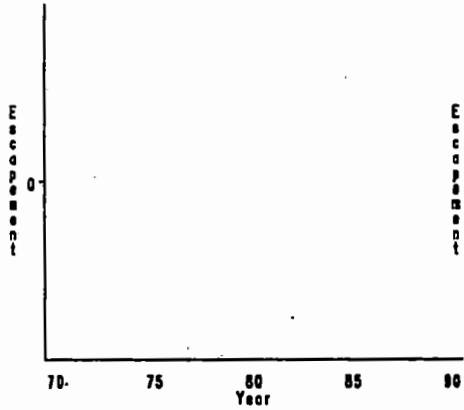
UNNAMED C (91-0228)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

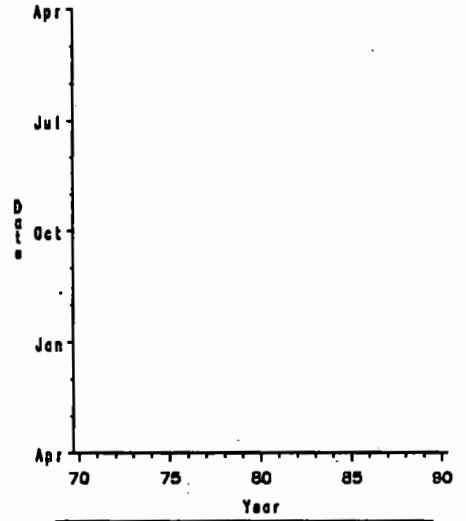
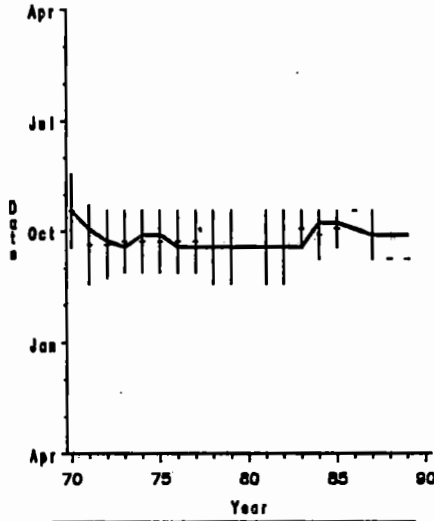
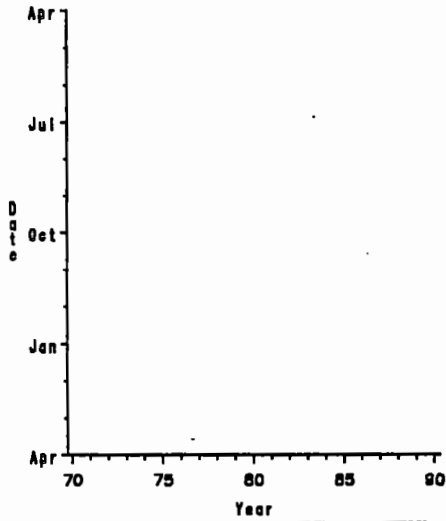
Steelhead (ST)



Chum

Chinook

Steelhead



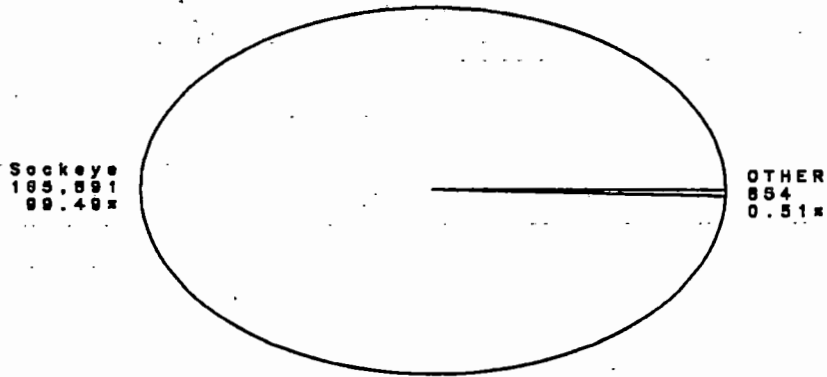
Chum				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

Chinook				
Year	Escapement	Start	Peak	End
1970	200	15AUG	15SEP	15OCT
1971	700	15SEP	30SEP	15NOV
1972	800	15SEP	10OCT	10NOV
1973	550	15SEP	15OCT	05NOV
1974	1,750	15SEP	05OCT	05NOV
1975	800	15SEP	05OCT	05NOV
1976	1,000	15SEP	15OCT	05NOV
1977	1,000	15SEP	15OCT	05NOV
1978	2,000	15SEP	15OCT	15NOV
1979	500	15SEP	15OCT	15NOV
1980	1,200	-	-	-
1981	1,000	15SEP	15OCT	15NOV
1982	1,500	15SEP	15OCT	15NOV
1983	1,000	15SEP	15OCT	15OCT
1984	750	15SEP	25SEP	25OCT
1985	200	15SEP	25SEP	15OCT
1986	500	15SEP	-	-
1987	1,000	15SEP	05OCT	25OCT
1988	1,000	-	05OCT	25OCT
1989	200	-	05OCT	25OCT

Steelhead				
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	-	-	-	-

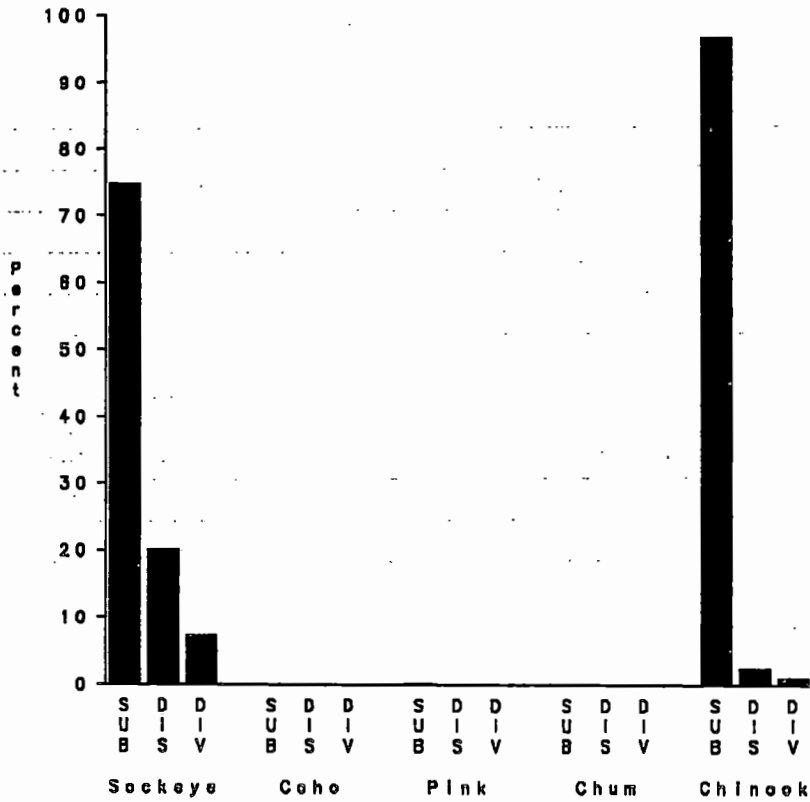
UNNAMED C (91-0228)

10-yr. Mean Escapement
(1980-1989)



UNNAMED C : Escapement (1980-1989)

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



E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: 1. PK & CM USUALLY PRESENT IN VERY SMALL NUMBERS. 2. CANOE CK. HAS NOT BEEN DIRECTLY ENUMERATED IN RECENT YEARS-TOTAL DOCEE FENCE COUNT IS USUALLY APPORTIONED BETWEEN CANOE & SMOKEHOUSE AT 30% -70% RESPECTIVELY. (REF. 9-4, REF. 9-45)							
3. RECORDED COHO ESCAPEMENTS WERE MUCH HIGHER IN 1950'S AND 1960'S WITH A MAXIMUM OF 3500 RECORDED (REF. 9-4)							
SK ESCAPEMENTS NOT RECORDED FROM 1970 - 1985 (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	P X	X X	
CO COHO SALMON	Migration Spawning Incubation Rearing									X	P 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

GENERALLY A CASCADING STREAM HAVING LARGE BOULDER SUBSTRATE. GOOD SPAWNING HABITAT IN SIDE CHANNEL AREA NEAR MILE 1. (REF. 10-26)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : CANOE CREEK

WATERSHED-CODE : 91-0228-210

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	35000	0	0	0	0	UNK
1954	50000	300	0	0	0	UNK
1955	35000	750	0	0	0	UNK
1956	15000	0	0	0	0	UNK
1957	7500	N/O	0	0	0	UNK
1958	7500	25	0	0	0	UNK
1959	15000	200	0	0	0	UNK
1960	3500	0	0	0	0	UNK
1961	7500	3500	0	0	0	UNK
1962	35000	3500	0	0	0	UNK
1963	UNK	1500	0	0	0	UNK
1964	15000	1500	0	0	0	UNK
1965	3500	750	0	0	0	UNK
1966	15000	N/O	0	0	0	UNK
1967	15000	25	0	0	0	UNK
1968	UNK	75	0	0	0	UNK
1969	35000	400	0	0	0	UNK
1970	UNK	75	0	0	0	UNK
1971	UNK	200	0	0	0	UNK
1972	UNK	UNK	0	0	N/O	UNK
1973	UNK	150	0	0	N/O	UNK
1974	UNK	200	0	0	0	UNK
1975	UNK	N/O	0	0	0	UNK
1976	UNK	0	0	0	0	UNK
1977	UNK	N/O	0	0	0	UNK
1978	UNK	N/O	0	0	0	UNK
1979	UNK	0	0	0	0	UNK
1980	UNK	0	0	0	0	UNK
1981	UNK	0	0	0	0	UNK
1982	UNK	0	0	0	0	UNK
1983	UNK	0	0	0	0	UNK
1984	UNK	N/O	N/O	N/O	N/O	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	59700	UNK	UNK	UNK	UNK	UNK
1987	60000	N/O	0	0	0	UNK
1988	UNK	UNK	UNK	UNK	UNK	UNK
1989	40951	N/O	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

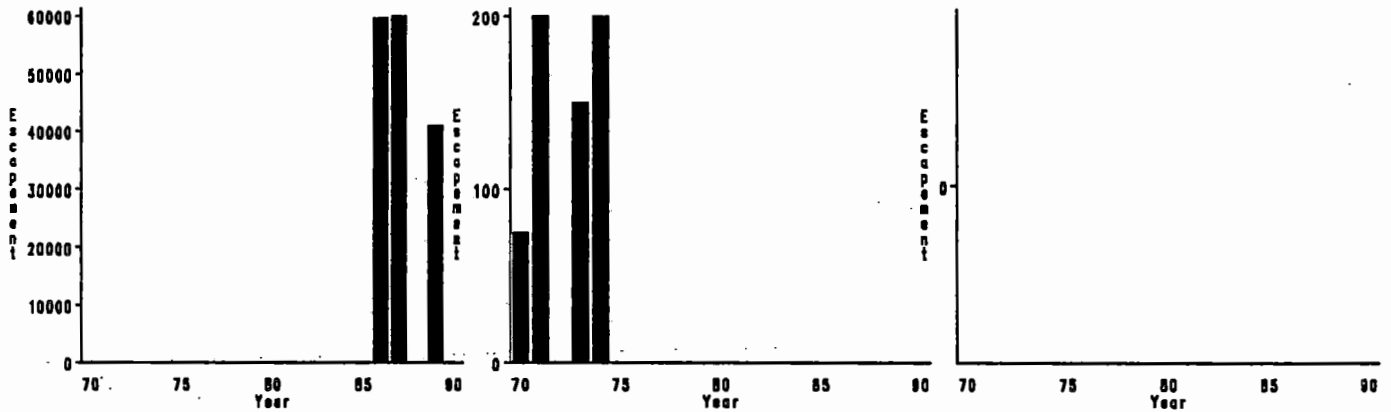
CANOE CREEK (91-0228-210)

Escapement & Run Timing

Socketeye (SK)

Coho (CO)

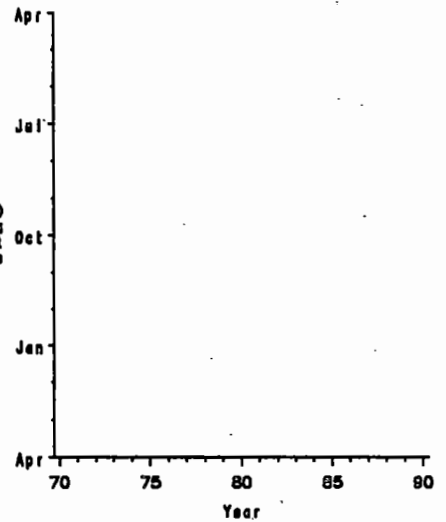
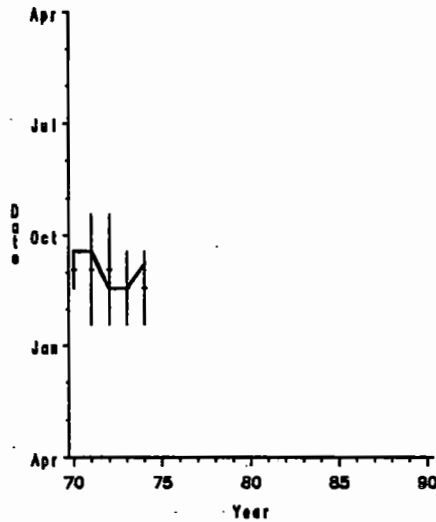
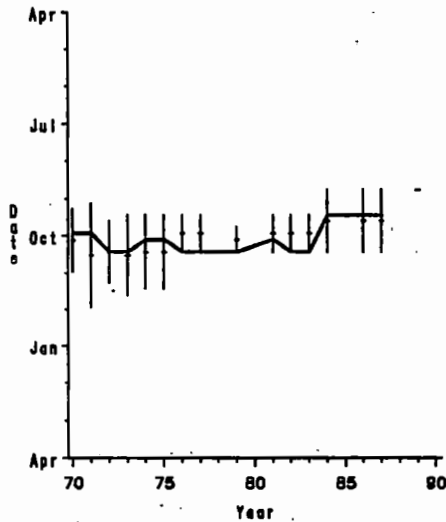
Pink (PK)



Sockeye

Coho

Pink



Sockeye

Coho

Pink

Year	Escapement	Start	Peak	End
1970	-	10SEP	30SEP	31OCT
1971	-	05SEP	30SEP	30NOV
1972	-	20SEP	15OCT	10NOV
1973	-	15SEP	15OCT	20NOV
1974	-	13SEP	03OCT	15NOV
1975	-	15SEP	05OCT	15NOV
1976	-	15SEP	15OCT	15OCT
1977	-	15SEP	15OCT	15OCT
1978	-	-	-	-
1979	-	25SEP	15OCT	19OCT
1980	-	-	-	-
1981	-	13SEP	05OCT	15OCT
1982	-	13SEP	13OCT	19OCT
1983	-	15SEP	15OCT	15OCT
1984	-	25AUG	15SEP	15OCT
1985	-	-	-	-
1986	58,700	25AUG	15SEP	15OCT
1987	60,000	25AUG	15SEP	15OCT
1988	-	-	-	-
1989	48,951	25AUG	-	-

Year	Escapement	Start	Peak	End
1970	75	15OCT	15OCT	15NOV
1971	200	15SEP	15OCT	15DEC
1972	-	15SEP	15NOV	15DEC
1973	150	15OCT	15NOV	15DEC
1974	200	15OCT	25OCT	15DEC
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	-	-	-

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	-	-	-	-
1989	-	-	-	-

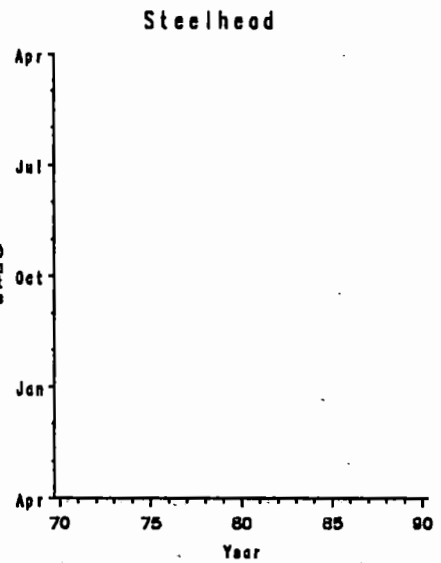
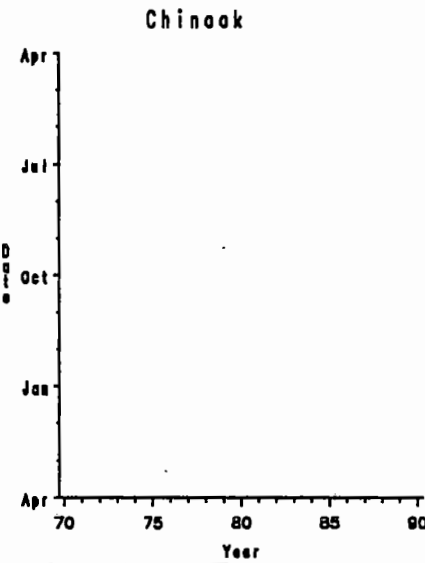
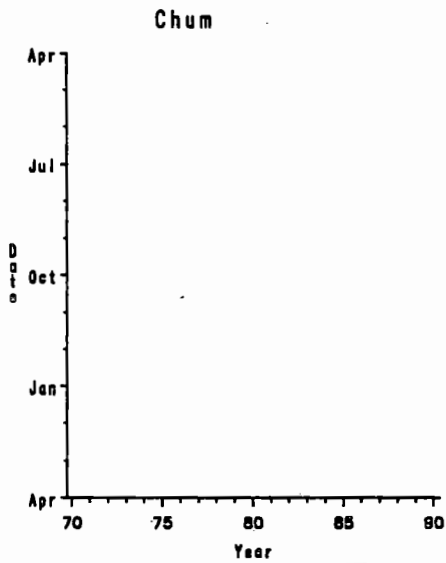
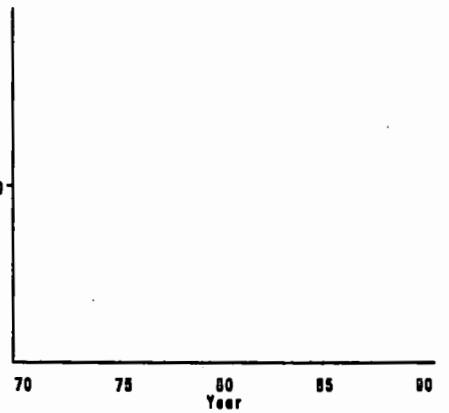
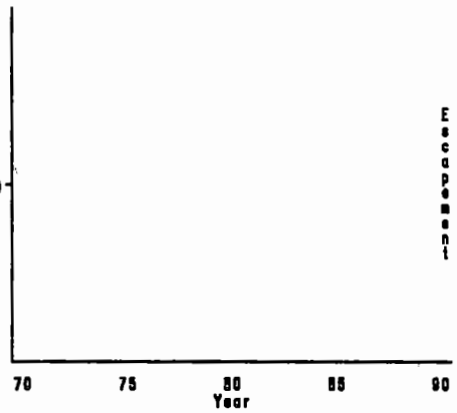
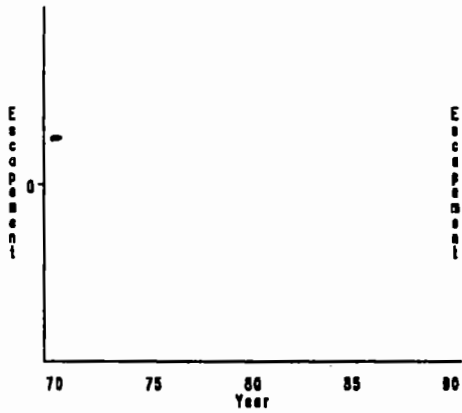
CANOE CREEK (91-0228-210)

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	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	-	-	-	-
1989	-	-	-	-

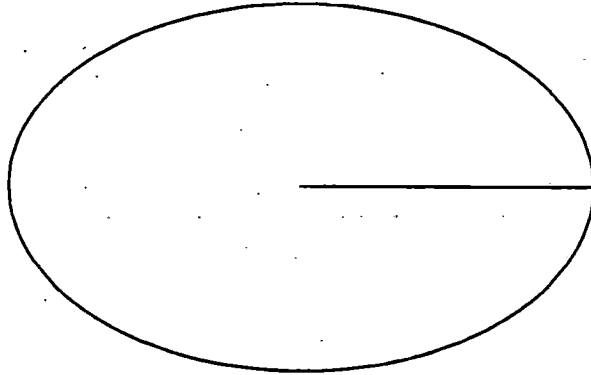
Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	-	-	-	-
1989	-	-	-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

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	-	-	-	-

CANOE CREEK (91-0228-210)

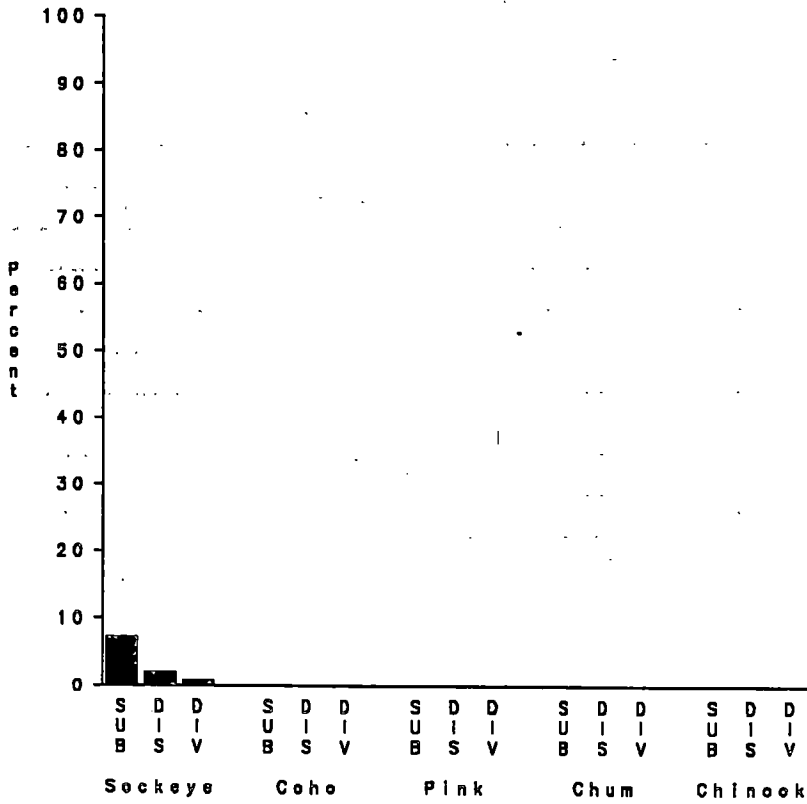
10-yr Mean Escapement
(1980-1989)

Sockeye
53.550
100.00%



CANOE CREEK : Escapement (1980-1989)

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



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		-				3000	9-42
Comments: 1) PK AND CH USUALLY PRESENT IN VERY SMALL NUMBERS. 2) SMOKEHOUSE CK HAS NOT BEEN DIRECTLY ENUMERATED IN RECENT YEARS - TOTAL DOCEE FENCE COUNT IS NOW USUALLY APPORTIONED BETWEEN SMOKEHOUSE AND CANOE CREEKS AT 70%-30% RESPECTIVELY. (REF. 9-4, REF. 9-45)							
SK ESCAPEMENT RECORDED FOR THE YEARS 1986 TO 1989 (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	P 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

SUBJECT TO LOW FLOWS IN SUMMER AND EARLY FALL. LAKESHORE SPAWNING OCCURS IN LONG LAKE, BETWEEN CANOE AND SMOKEHOUSE CREEKS. (REF. 9-4)
HABITAT DESCRIPTION AVAILABLE. (REF. 10-34)
CH AND POSSIBLE ST ARE SUSPECTED TO BE PRESENT IN SMALL NUMBERS. (REF. 9-45)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : SMOKEHOUSE CREEK

WATERSHED-CODE : 91-0228-230

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	35000	0	0	0	0	UNK
1954	35000	0	0	0	0	UNK
1955	75000	N/O	N/O	N/O	N/O	UNK
1956	75000	N/O	N/O	N/O	N/O	UNK
1957	15000	0	0	0	0	UNK
1958	15000	N/O	0	0	0	UNK
1959	35000	0	0	0	0	UNK
1960	15000	0	0	0	0	UNK
1961	15000	0	0	0	0	UNK
1962	75000	0	0	0	0	UNK
1963	UNK	UNK	0	0	UNK	UNK
1964	35000	0	0	0	0	UNK
1965	7500	0	0	0	0	UNK
1966	35000	0	0	0	0	UNK
1967	35000	0	0	0	UNK	UNK
1968	UNK	N/O	0	0	N/O	UNK
1969	75000	N/O	0	0	N/O	UNK
1970	UNK	N/O	0	0	N/O	UNK
1971	UNK	N/O	0	0	N/O	UNK
1972	UNK	N/O	0	0	N/O	UNK
1973	UNK	N/O	0	0	N/O	UNK
1974	UNK	N/O	0	0	N/O	UNK
1975	UNK	N/O	0	0	N/O	UNK
1976	UNK	0	0	0	0	UNK
1977	UNK	0	0	0	0	UNK
1978	UNK	0	0	0	0	UNK
1979	UNK	0	0	0	0	UNK
1980	UNK	UNK	UNK	UNK	UNK	UNK
1981	UNK	0	0	0	0	UNK
1982	UNK	0	0	0	0	UNK
1983	UNK	0	0	0	0	UNK
1984	UNK	N/O	N/O	N/O	N/O	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	139300	UNK	UNK	UNK	UNK	UNK
1987	140000	N/O	0	0	0	UNK
1988	UNK	N/O	0	0	0	UNK
1989	122853	N/O	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

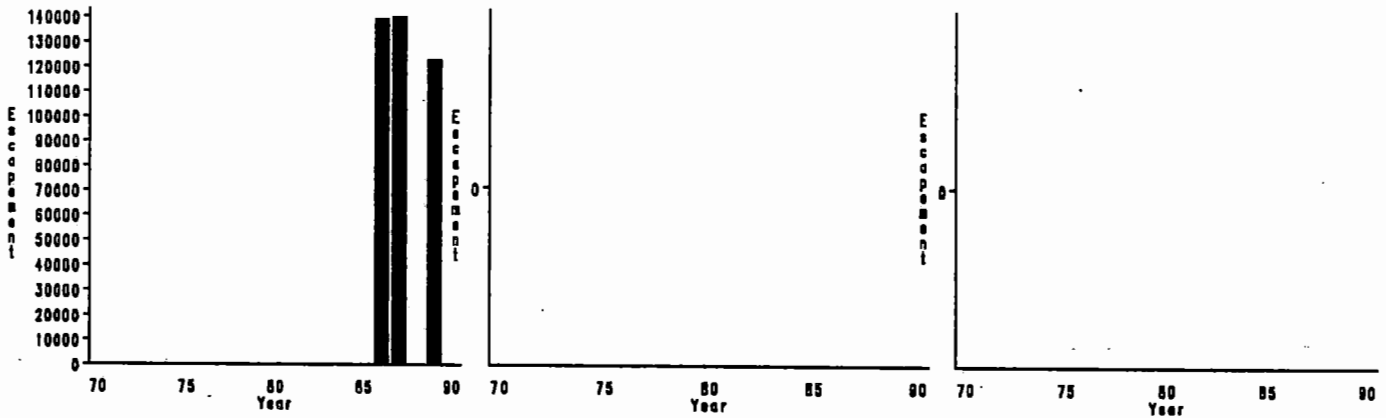
SMOKEHOUSE CREEK (91-0228-230)

Escapement & Run Timing

sockeye (SK)

Coho (CO)

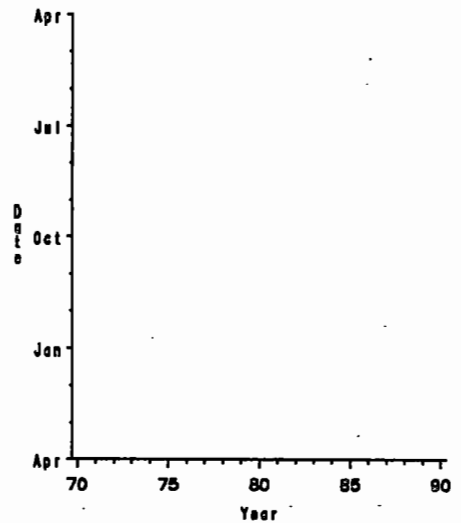
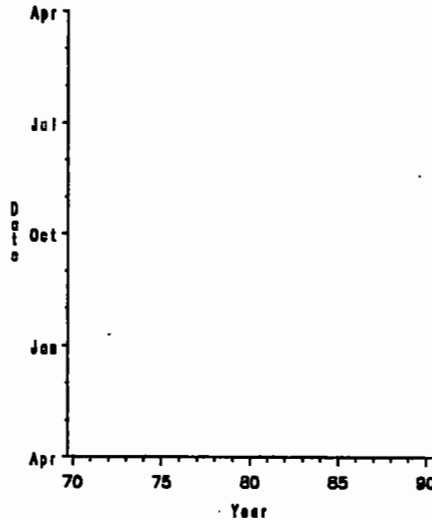
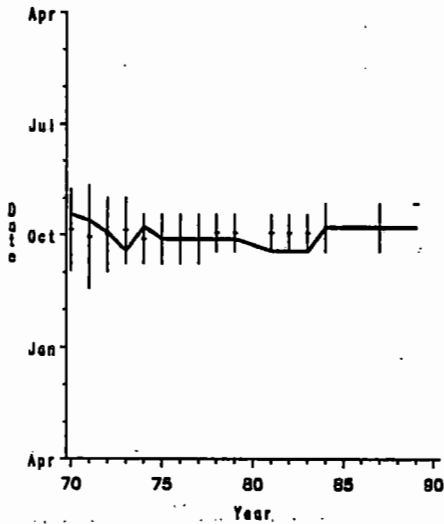
Pink (PK)



Sockeye

Coho

Pink



Sockeye

Coho

Pink

Year	Escapement	Start	Peak	End
1970	-	25AUG	15SEP	31OCT
1971	-	22AUG	28SEP	15NOV
1972	-	01SEP	30SEP	01NOV
1973	-	01SEP	15OCT	25OCT
1974	-	15SEP	25SEP	25OCT
1975	-	15SEP	05OCT	25OCT
1976	-	15SEP	05OCT	25OCT
1977	-	15SEP	05OCT	25OCT
1978	-	15SEP	05OCT	15OCT
1979	-	15SEP	05OCT	15OCT
1980	-	-	-	-
1981	-	15SEP	15OCT	15OCT
1982	-	15SEP	15OCT	15OCT
1983	-	15SEP	15OCT	15OCT
1984	-	05SEP	25SEP	15OCT
1985	-	-	-	-
1986	139,300	-	-	-
1987	148,600	05SEP	25SEP	15OCT
1988	-	-	-	-
1989	122,653	05SEP	25SEP	-

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	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

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	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

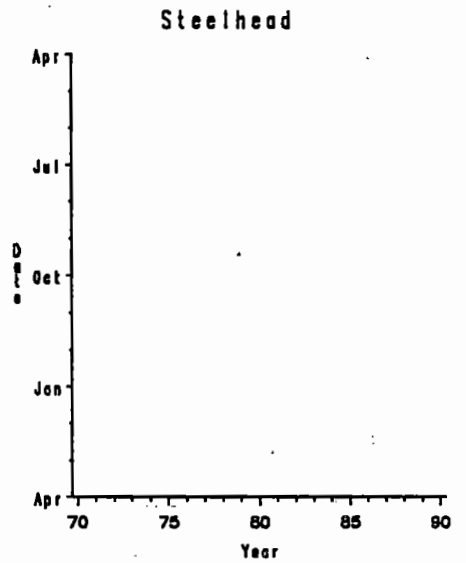
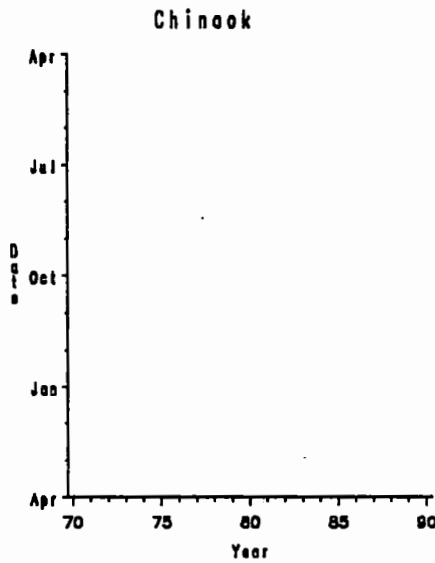
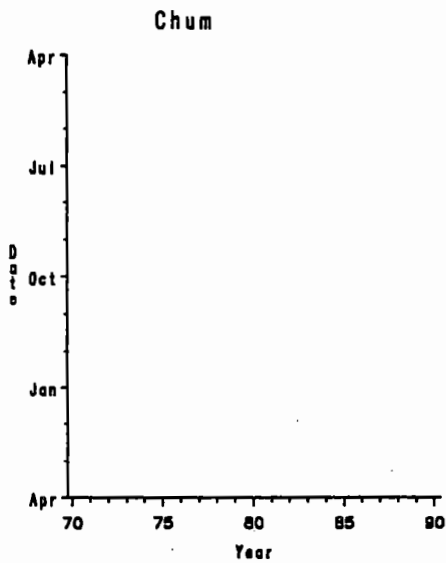
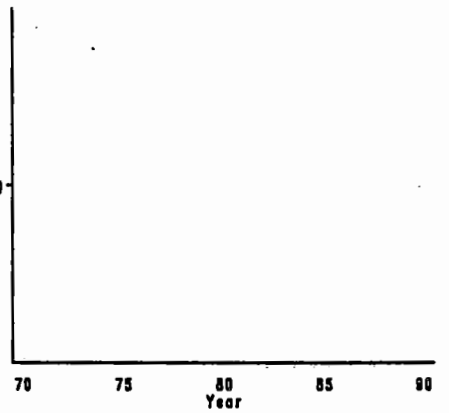
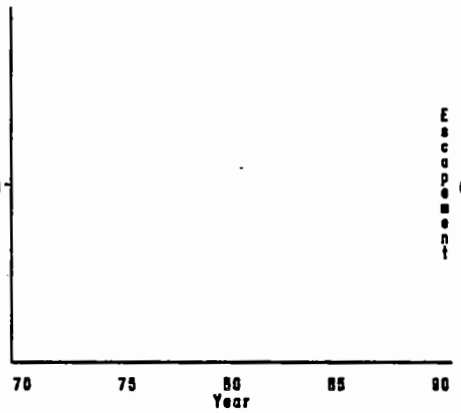
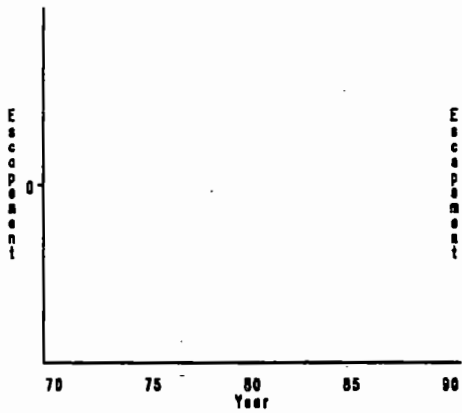
SMOKEHOUSE CREEK (91-0228-230)

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	0	-	-	-
1979	0	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

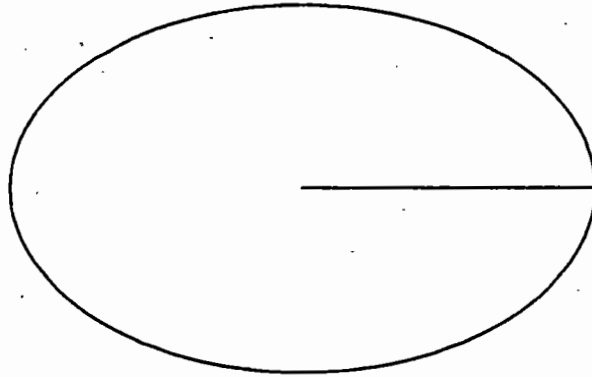
Chinook				
Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	0	-	-	-
1974	0	-	-	-
1975	0	-	-	-
1976	0	-	-	-
1977	0	-	-	-
1978	0	-	-	-
1979	0	-	-	-
1980	-	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	0	-	-	-
1985	-	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-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

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	-	-	-	-

SMOKEHOUSE CREEK (91-0228-230)

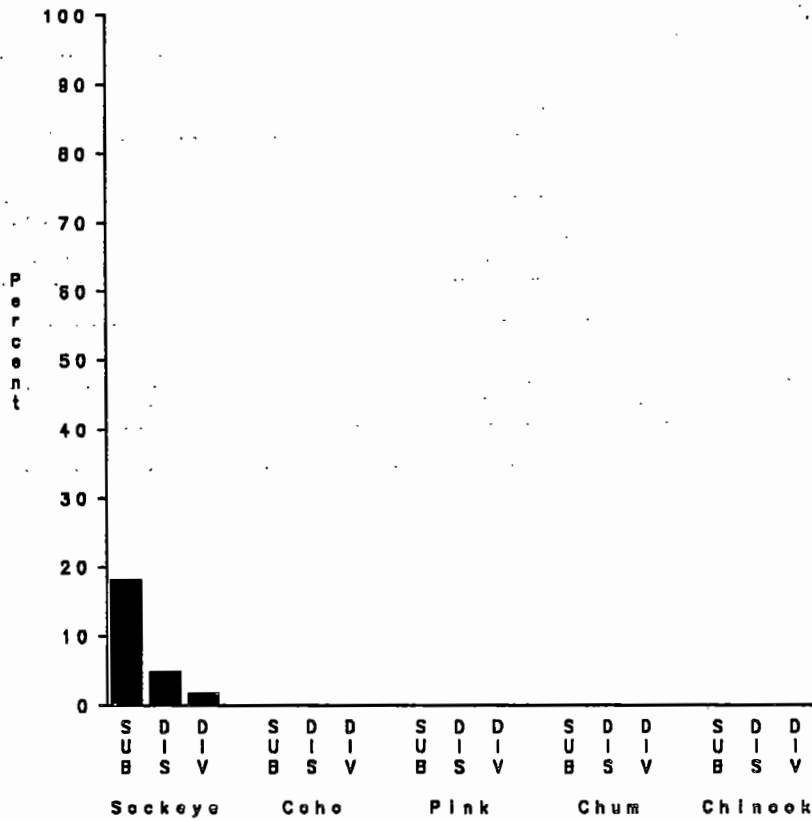
10-yr Mean Escapement
(1980-1989)

Sockeye
134,051
100.00%



SMOKEHOUSE 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

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: TOM PENDRAY	Date: 1991/12/08
Checked by: TOM PENDRAY	Date: 1991/12/08
Last checked by: TOM PENDRAY	Date: 1992/01/09

E. ESCAPEMENT SUMMARY CONTINUED

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
CM CHUM SALMON	3170	1980 - 1989	28A-18	8000	28A-18	7500	9-42
Comments: SK ESCAPEMENT FOR 1989(1) 1983(1) (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	P X	X X		
CM 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
NO INFORMATION AVAILABLE				

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING OPERATIONS CONDUCTED AT THE MOUTH OF THE STREAM IN 1975 (REF. 9-4)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SUBJECT TO FREQUENT FLASH FLOODING AND SCOURING. FLOODING AND CHANNEL SHIFTING IN NOVEMBER 1962 DESTROYED 90% OF THE SPAWN. (REF. 9-4)
RESULTS OF ADULT SALMONID RECONNAISSANCE PROGRAM, BIOPHYSICAL DATA AND DETAILED HABITAT DESCRIPTION AVAILABLE. (REF. 10-13, REF. 10-14)
DETAILED DATA ON JUVENILE POPULATION AND MIGRATION AVAILABLE. (REF. 10-15)
SOME TIDAL SPAWNING OF CM. HEAVY BEAR PREDATION. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : WALKUM CREEK

WATERSHED-CODE : 91-0384

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	75	0	7500	0	UNK
1954	0	N/O	1000	5000	0	UNK
1955	0	0	N/O	3500	0	UNK
1956	0	0	25	9000	0	UNK
1957	0	200	N/O	1500	0	UNK
1958	0	200	0	1500	0	UNK
1959	0	25	0	7500	0	UNK
1960	0	75	0	1500	0	UNK
1961	0	25	0	750	0	UNK
1962	0	400	0	1500	0	UNK
1963	0	200	0	750	0	UNK
1964	0	75	0	400	0	UNK
1965	0	N/O	0	25	0	UNK
1966	0	N/O	0	25	0	UNK
1967	0	25	0	25	0	UNK
1968	0	25	25	75	0	UNK
1969	0	200	N/O	400	0	UNK
1970	0	200	N/O	UNK	0	UNK
1971	0	600	N/O	3000	0	UNK
1972	0	100	25	2500	0	UNK
1973	0	300	30	9000	0	UNK
1974	0	700	UNK	7500	0	UNK
1975	0	200	500	2500	0	UNK
1976	0	UNK	100	500	0	UNK
1977	0	300	100	2000	0	UNK
1978	0	300	1000	3000	0	UNK
1979	25	100	250	750	0	UNK
1980	0	0	500	3000	0	UNK
1981	0	300	25	3000	N/O	UNK
1982	0	200	25	8000	0	UNK
1983	1	150	100	3000	0	UNK
1984	N/O	100	10	700	N/O	UNK
1985	N/O	30	600	3500	N/O	UNK
1986	0	UNK	70	5000	UNK	UNK
1987	0	0	30	2500	0	UNK
1988	0	0	10	2500	0	UNK
1989	1	2	6	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

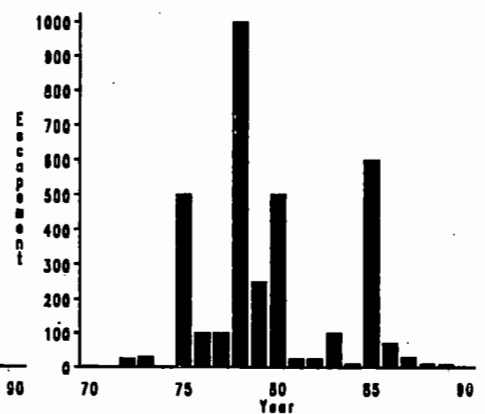
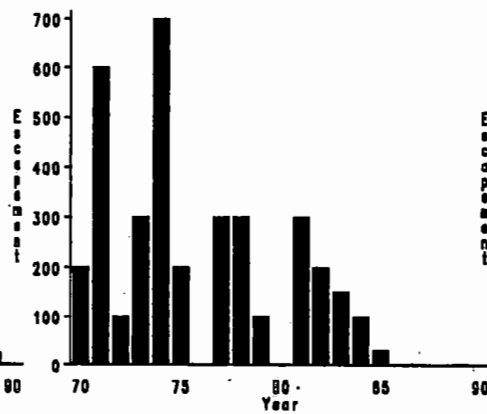
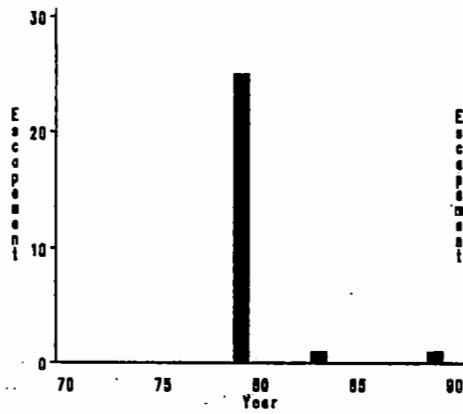
WALKUM CREEK (91-0384)

Escapement & Run Timing

Socketeye (SK)

Coho (CO)

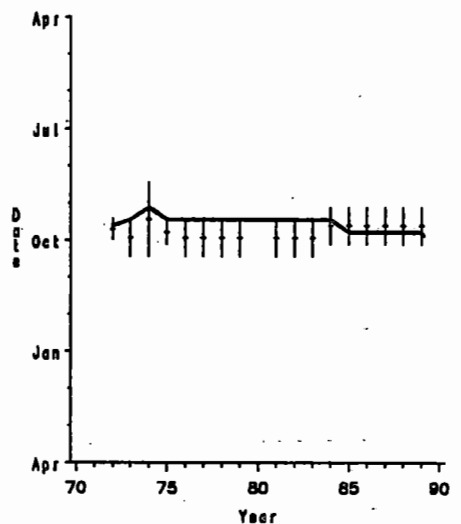
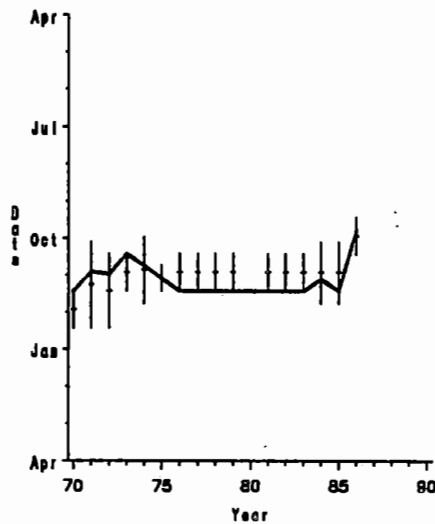
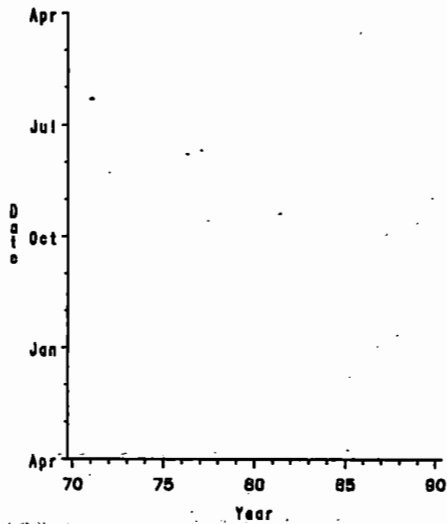
Pink (PK)



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	25	-	-	-
1980	0	-	-	-
1981	0	-	-	-
1982	0	-	-	-
1983	1	-	-	-
1984	0	-	-	-
1985	0	-	-	-
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	1	-	-	-

Coho

Year	Escapement	Start	Peak	End
1970	200	13NOV	15NOV	19DEC
1971	600	05OCT	30OCT	15DEC
1972	100	15OCT	01NOV	15DEC
1973	300	15OCT	15OCT	15NOV
1974	700	01OCT	25OCT	25NOV
1975	200	23OCT	05NOV	15NOV
1976	-	19OCT	15NOV	15NOV
1977	300	19OCT	15NOV	15NOV
1978	300	13OCT	15NOV	15NOV
1979	100	19OCT	15NOV	15NOV
1980	0	-	-	-
1981	300	19OCT	15NOV	15NOV
1982	200	19OCT	15NOV	15NOV
1983	150	19OCT	15NOV	15NOV
1984	100	09OCT	05NOV	25NOV
1985	30	05OCT	15NOV	25NOV
1986	-	13SEP	25SEP	15OCT
1987	0	-	-	-
1988	0	-	-	-
1989	2	-	-	-

Pink

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	25	15SEP	20SEP	01OCT
1973	30	15SEP	15SEP	15OCT
1974	-	15AUG	05SEP	15OCT
1975	500	15SEP	15SEP	05OCT
1976	100	15SEP	15SEP	15OCT
1977	100	15SEP	15SEP	15OCT
1978	1,000	15SEP	15SEP	15OCT
1979	250	15SEP	15SEP	15OCT
1980	500	-	-	-
1981	25	15SEP	15SEP	15OCT
1982	25	15SEP	15SEP	15OCT
1983	100	15SEP	15SEP	15OCT
1984	10	05SEP	15SEP	05OCT
1985	600	05SEP	25SEP	05OCT
1986	70	05SEP	25SEP	05OCT
1987	30	05SEP	25SEP	05OCT
1988	10	05SEP	25SEP	05OCT
1989	0	05SEP	25SEP	05OCT

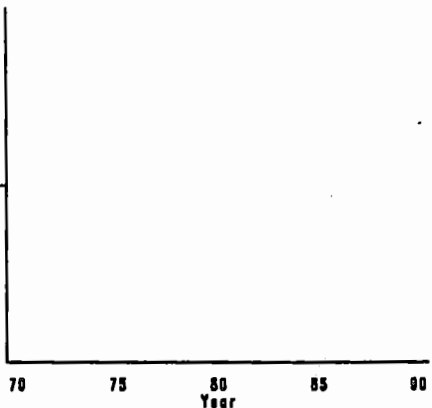
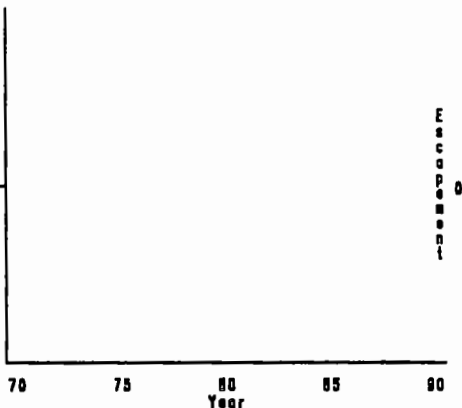
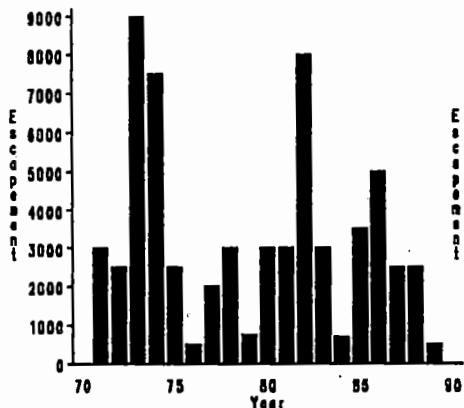
WALKUM CREEK (91-0384)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

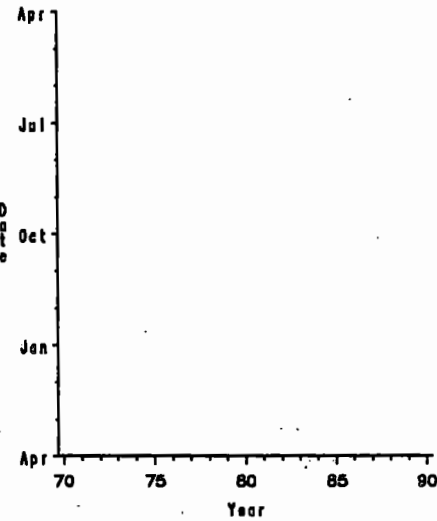
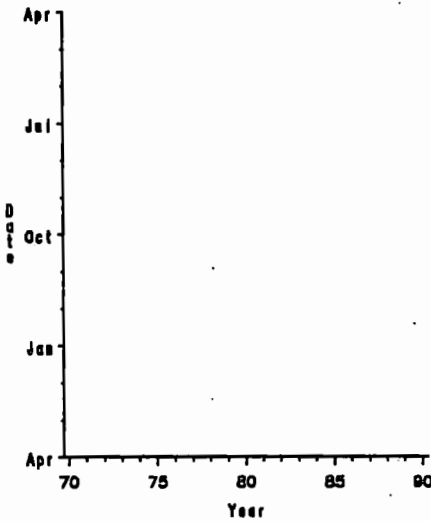
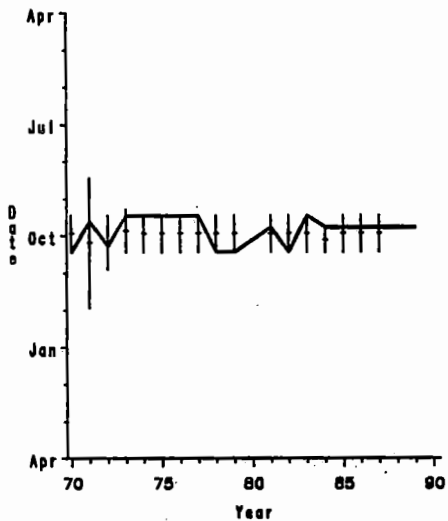
Steelhead (ST)



Chum

Chinook

Steelhead



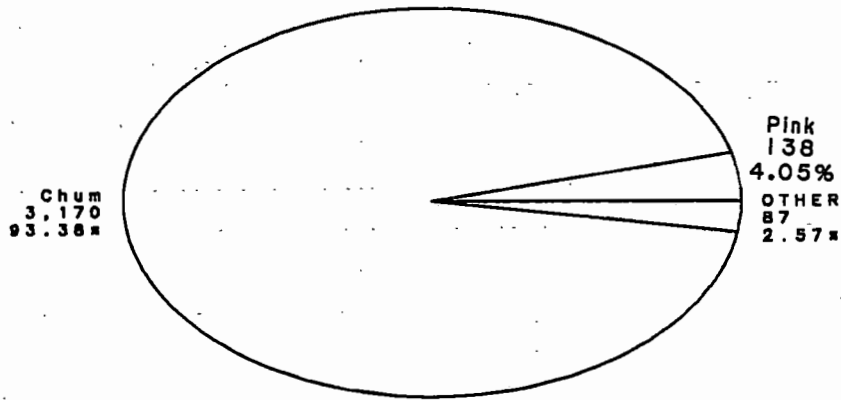
Chum				
Year	Escapement	Start	Peak	End
1970	-	15SEP	15OCT	15OCT
1971	3,000	15AUG	20SEP	30NOV
1972	2,500	15SEP	10OCT	30OCT
1973	3,000	10SEP	15SEP	15OCT
1974	7,500	15SEP	15SEP	15OCT
1975	2,500	15SEP	15SEP	15OCT
1976	500	15SEP	15SEP	15OCT
1977	2,000	15SEP	15SEP	15OCT
1978	1,600	15SEP	15OCT	15OCT
1979	750	15SEP	15OCT	15OCT
1980	3,000	-	-	-
1981	3,000	15SEP	25SEP	15OCT
1982	8,000	15SEP	15OCT	15OCT
1983	3,000	15SEP	15SEP	15OCT
1984	700	25SEP	25SEP	15OCT
1985	3,500	15SEP	25SEP	15OCT
1986	5,000	15SEP	25SEP	15OCT
1987	2,500	15SEP	25SEP	15OCT
1988	2,500	-	25SEP	-
1989	500	-	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	-	-	-	-

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	-	-	-	-

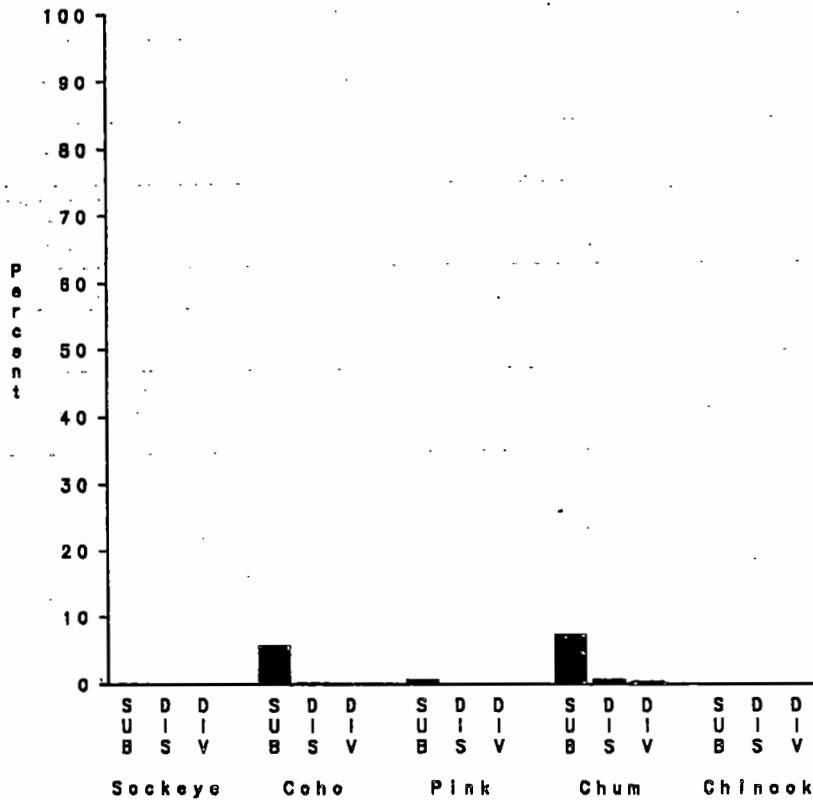
WALKUM CREEK (91-0384)

10-yr Mean Escapement
(1980-1989)



WALKUM 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

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: UNNAMED CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-0384-150	Subdistrict: 10 SMITH INLET
	Statistical Subarea: -
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6358.56903
		Lat./Long. Mouth: 06. 06. "
		Mainstem Length: 3.3 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows NW INTO WALKJN CREEK FROM A SERIES OF SMALL LAKES.		

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: LAKE FED. (REF. 29F-65)	

D. DISTRIBUTION SUMMARY

Species	Watershed Distribution
CO COHO SALMON	OBSERVED SPAWNING AT 0.3 KM. (REF. 10-13, REF. 10-14)
CN CHUM SALMON	OBSERVED SPAWNING AT 0.3 KM. (REF. 10-13, REF. 10-14)

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: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

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: 1989/03/31
Checked by: TOM PENORAY	Date: 1989/03/31
Last checked by: TOM PENORAY	Date: 1992/01/09

D. DISTRIBUTION SUMMARY CONTINUED

Species	Watershed Distribution
ST STEELHEAD	SPAWNING FOR 0.2 KM AT 7.8 KM. (REF. 296-43)
CT CUTTHROAT TROUT	OBSERVED IN TRIBUTARY. (REF. 10-37, REF. 296-23, REF. 296-43)
DV DOLLY VARDEN	OBSERVED IN TRIBUTARY LAKE. (REF. 10-37)
KD KOKANEK	OBSERVED IN TRIBUTARY LAKE. (REF. 10-37)
RB RAINBOW TROUT	OBSERVED IN TRIBUTARY. (REF. 9-36)

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		5	28A-18		
CO COHO SALMON	1115	1980 - 1989	28A-18	2000	9-36	3500	9-42
PK PINK SALMON	11800	1980 - 1988	28A-18	26500	28A-18	65000	9-42
PK PINK SALMON	38200	1981 - 1989	28A-18	65000	28A-18		
CN CHUM SALMON	36750	1980 - 1989	28A-18	60000	28A-18	60000	9-42
CH CHINOOK SALMON	28	1980 - 1989	28A-18	50	28A-18	3500	9-42
Comments: NEKITE SPAWNING CHANNEL ESCAPEMENTS ARE AS FOLLOWS FOR 1987: CN - 2000; CO - 200; PK - 200. (REF. 28A-18)							
SK ESCAPEMENT 1985(2) 1989(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	XX	XP	XX	XX
PK PINK SALMON	Migration Spawning Incubation Rearing							X	XX	PX			
CN CHUM SALMON	Migration Spawning Incubation Rearing								X X	PX	X		
CH CHINOOK SALMON	Migration Spawning Incubation Rearing							X X	XX	PX	XX		
Comments: LATE WINTER RUN OF ST. (REF. 9-36)													

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
MR MARK RECOVERY	CN CHUM SALMON PK PINK SALMON	0.0	FOR SEP ADULT RECONNAISSANCE PROGRAM. (REF. 10-14)	1985/1985

G. ENHANCEMENT/MANAGEMENT ACTIVITIES IN WATERSHED CONTINUED

Type of Activity	Species	Location (km U/S)	Comments	Period of Operation Start/Finish
CH SPAWNING CHANNEL	CM CHUM SALMON	6.4	UNMANNED SPAWNING CHANNEL. OCCASIONALLY INSPECTED. SEP. (REF. 9-36)	/

H. LAND USE/WATER USE/WATER QUALITY

Activity	Description/Location
FO FORESTRY	LOGGING OPERATIONS COMMENCED IN THE WATERSHED IN 1958. (REF. 9-4)
LD LINEAR DEVELOPMENT	LOGGING ROAD BUILT TO 11.0 KM IN 1972. (REF. 9-4)
FO FORESTRY	VIRTUALLY ALL MERCHANTABLE TIMBER HAS BEEN LOGGED ON MAINSTEM NEKITE, BARER CREEK AND LOWER PIPER RIVER. DOMANS LTD. HAS PROPOSED TO LOG UPSTREAM OF PIPER LAKE. (REF. 10-33)
FO FORESTRY	LOG DUMP REOPENING IN 1990 BY DOMANS LTD. FOR LOGGING IN PIPER RIVER VALLEY. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

SPAWNING GROUNDS PRESENT ABOVE IMPASSABLE FALLS. EXTENSIVE SCOURING AT END OF AUGUST AND THROUGHOUT SEPTEMBER. (REF. 9-4)
RESULTS OF ADULT SALMONID RECONNAISSANCE PROGRAM, BIOPHYSICAL DATA AND DETAILED HABITAT DESCRIPTION AVAILABLE. (REF. 10-13, REF. 10-14)
DETAILED DATA ON JUVENILE SALMONID POPULATIONS AND MIGRATION AVAILABLE. (REF. 10-15)
DISCUSSION AND ON SITE OBSERVATIONS OF POTENTIAL CONFLICTS CREATED BY THE CONSTRUCTION OF A CM SPAWNING CHANNEL, IN RELATION TO ST HABITAT REQUIREMENTS AVAILABLE. (REF. 10-19)
HABITAT DESCRIPTION AVAILABLE. (REF. 10-33)
EXCELLENT HABITAT ABOVE BARRIERS. (REF. 9-36)
SPAWNING CHANNEL UTILIZED BY ST, CH, CD AND PK. GOOD SANCTUARY DURING EXTREMELY HIGH FLOWS. GOOD ROAD ACCESS TO BRIDGE. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : NEKITE RIVER

WATERSHED-CODE : 91-0400

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	200	15000	7500	0	UNK
1954	0	100	5000	10000	0	UNK
1955	0	0	22500	400	0	UNK
1956	0	0	35000	1500	0	UNK
1957	0	75	7500	7500	0	UNK
1958	0	200	3500	35000	0	UNK
1959	0	1500	15000	3500	0	UNK
1960	0	200	3500	7500	0	UNK
1961	0	750	7500	3500	0	UNK
1962	0	750	35000	7500	0	UNK
1963	0	400	7500	7500	0	UNK
1964	0	1500	1500	7500	0	UNK
1965	0	3500	7500	1500	25	UNK
1966	0	400	7500	400	25	UNK
1967	0	UNK	3500	15000	UNK	UNK
1968	0	1500	15000	3500	0	UNK
1969	0	750	400	1500	0	UNK
1970	0	200	15000	7500	N/O	UNK
1971	0	400	4000	6000	0	UNK
1972	0	1500	2500	40000	0	UNK
1973	0	400	5000	50000	20	UNK
1974	0	750	9000	17500	50	UNK
1975	0	600	800	5000	60	UNK
1976	0	N/O	22000	7000	N/O	UNK
1977	0	700	20000	40000	50	UNK
1978	0	400	18000	30000	100	UNK
1979	1000	300	30000	3000	N/O	UNK
1980	0	1500	2000	50000	0	UNK
1981	N/O	450	65000	60000	20	UNK
1982	N/O	1500	9000	55000	N/O	UNK
1983	0	1500	45000	35000	50	UNK
1984	N/O	1700	3500	10000	20	UNK
1985	2	300	35000	19000	30	UNK
1986	0	2000	26500	60000	32	UNK
1987	0	1500	18000	30000	50	UNK
1988	0	500	18000	30000	50	UNK
1989	5	200	28000	18500	25	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

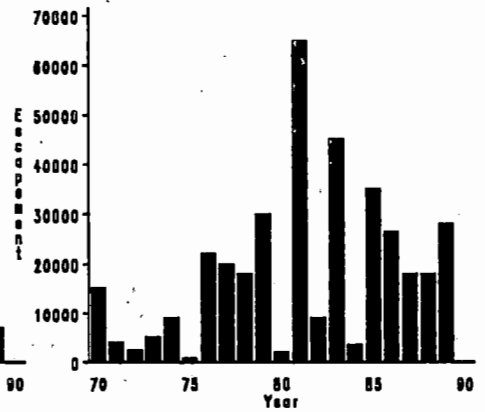
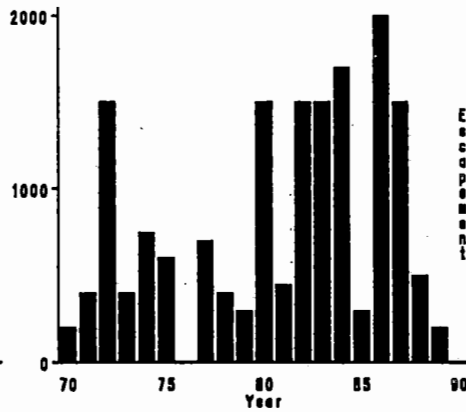
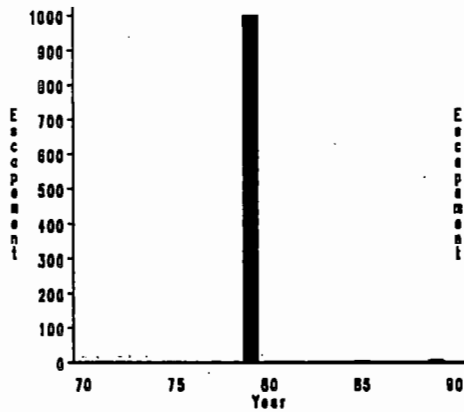
NEKITE RIVER (91-0400)

Escapement & Run Timing

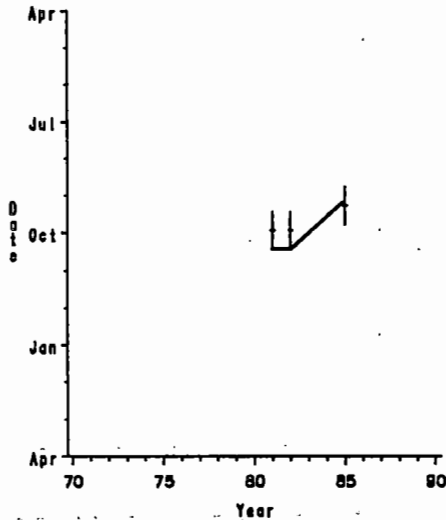
Sockeye (SK)

Coho (CO)

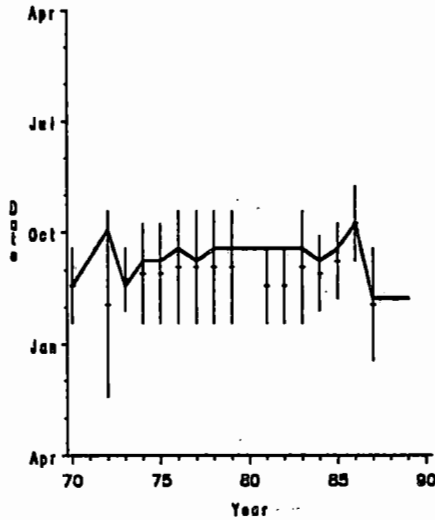
Pink (PK)



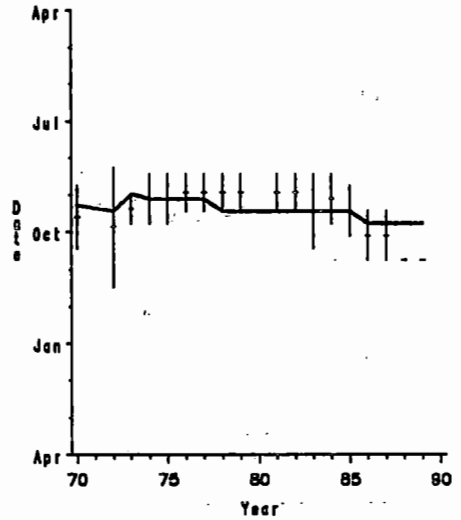
Sockeye



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	1,000	-	-	-
1980	0	-	-	-
1981	0	19SEP	19OCT	19OCT
1982	0	19SEP	19OCT	19OCT
1983	0	-	-	-
1984	0	-	-	-
1985	2	25AUG	05SEP	25SEP
1986	0	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	5	-	-	-

Coho				
Year	Escapement	Start	Peak	End
1970	200	19OCT	19NOV	19DEC
1971	400	-	-	-
1972	1,500	15SEP	30SEP	14FEB
1973	400	19OCT	19NOV	05DEC
1974	750	25SEP	25OCT	19DEC
1975	800	25SEP	25OCT	19DEC
1976	0	19SEP	19OCT	19DEC
1977	700	19SEP	25OCT	19DEC
1978	400	19SEP	19OCT	19DEC
1979	300	19SEP	19OCT	19DEC
1980	1,500	-	-	-
1981	450	19OCT	19OCT	19DEC
1982	1,500	19OCT	19OCT	19DEC
1983	1,500	19SEP	19OCT	19DEC
1984	1,700	09OCT	25OCT	05DEC
1985	300	25SEP	19OCT	25NOV
1986	2,000	25AUG	25SEP	25OCT
1987	1,500	19OCT	25NOV	15JAN
1988	500	-	25NOV	-
1989	200	-	25NOV	-

Pink				
Year	Escapement	Start	Peak	End
1970	15,000	25AUG	10SEP	19OCT
1971	4,000	-	-	-
1972	2,500	18AUG	15SEP	18NOV
1973	5,000	31AUG	01SEP	25SEP
1974	8,000	19AUG	05SEP	25SEP
1975	800	19AUG	05SEP	25SEP
1976	22,000	19AUG	05SEP	19SEP
1977	20,000	19AUG	05SEP	19SEP
1978	18,000	19AUG	15SEP	15SEP
1979	30,000	19AUG	15SEP	15SEP
1980	2,000	-	-	-
1981	85,000	19AUG	15SEP	15SEP
1982	9,000	19AUG	15SEP	15SEP
1983	45,000	19AUG	15SEP	15OCT
1984	3,500	19AUG	15SEP	25SEP
1985	35,000	25AUG	15SEP	05OCT
1986	24,500	19SEP	25SEP	25OCT
1987	18,000	15SEP	25SEP	25OCT
1988	18,000	-	25SEP	25OCT
1989	28,000	-	25SEP	25OCT

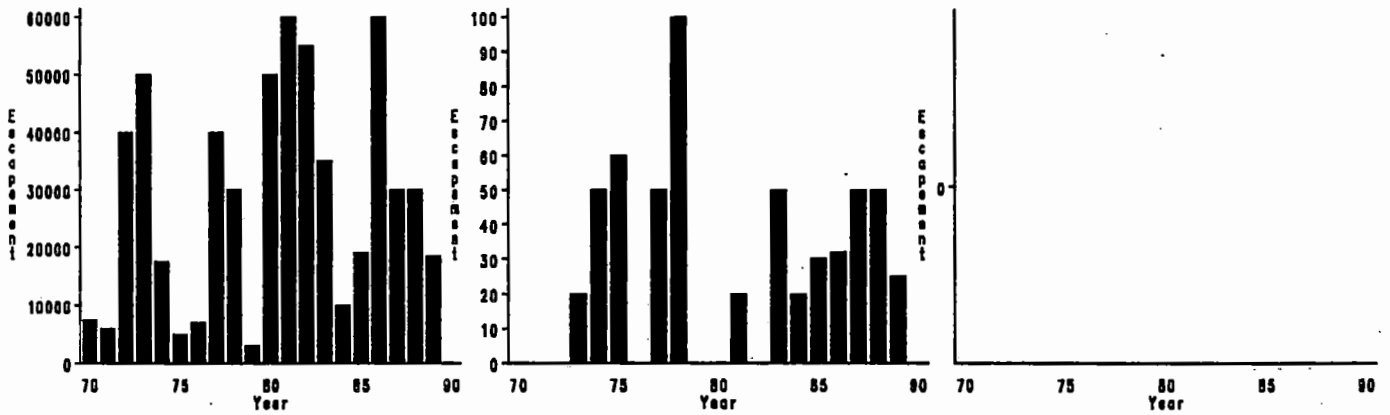
NEKITE RIVER (91-0400)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

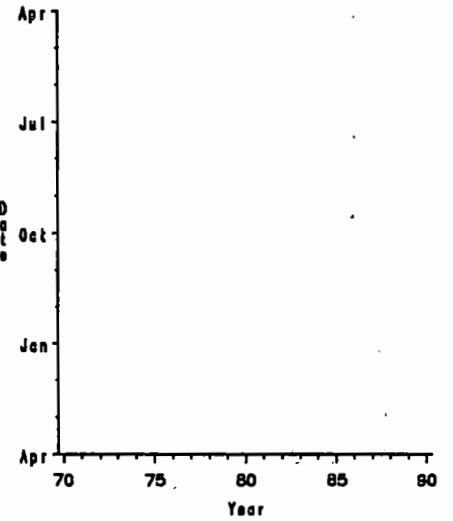
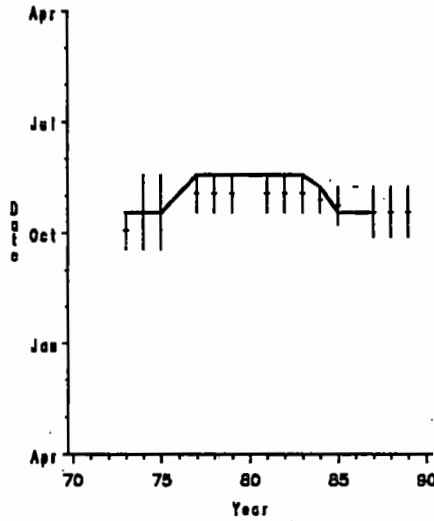
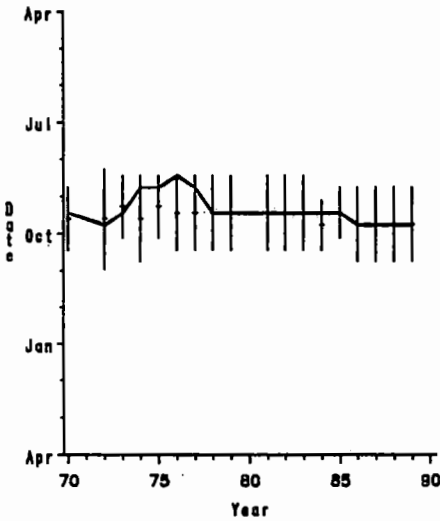
Steelhead (ST)



Chum

Chinook

Steelhead



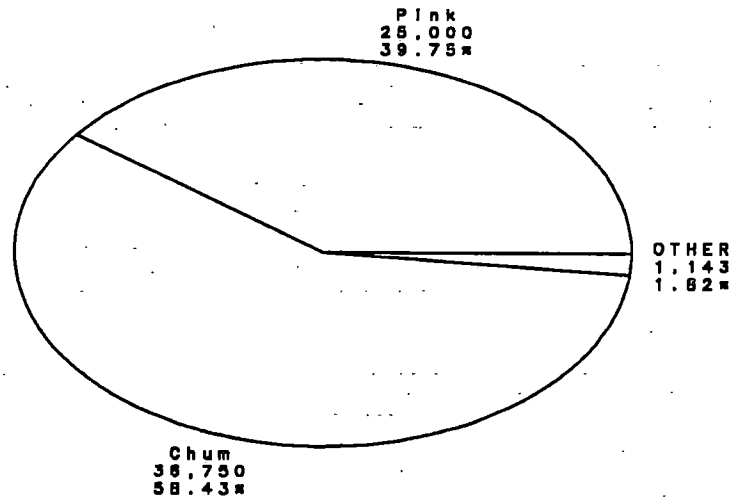
Year	Escapement	Start	Peak	End
1970	7,900	29AUG	15SEP	15OCT
1971	6,000	-	-	-
1972	48,000	10AUG	25SEP	31OCT
1973	58,000	15AUG	15SEP	05OCT
1974	17,500	15AUG	25AUG	25OCT
1975	5,000	15AUG	25AUG	05OCT
1976	7,000	15AUG	15AUG	15OCT
1977	48,000	15AUG	25AUG	15OCT
1978	38,000	15AUG	15SEP	15OCT
1979	3,000	15AUG	15SEP	15OCT
1980	58,000	-	-	-
1981	88,000	15AUG	15SEP	15OCT
1982	95,000	15AUG	15SEP	15OCT
1983	35,000	15AUG	15SEP	15OCT
1984	18,000	03SEP	15SEP	15OCT
1985	18,000	25AUG	15SEP	05OCT
1986	88,000	25AUG	25SEP	25OCT
1987	38,000	25AUG	25SEP	25OCT
1988	38,000	25AUG	25SEP	25OCT
1989	18,500	25AUG	25SEP	25OCT

Year	Escapement	Start	Peak	End
1970	0	-	-	-
1971	0	-	-	-
1972	0	-	-	-
1973	20	15SEP	15SEP	15OCT
1974	50	15AUG	15SEP	15OCT
1975	80	15AUG	15SEP	15OCT
1976	0	-	-	-
1977	50	15AUG	15AUG	15SEP
1978	100	15AUG	15AUG	15SEP
1979	0	15AUG	15AUG	15SEP
1980	0	-	-	-
1981	20	15AUG	15AUG	15SEP
1982	0	15AUG	15AUG	15SEP
1983	50	15AUG	15AUG	15SEP
1984	20	25AUG	25AUG	15SEP
1985	30	25AUG	15SEP	25SEP
1986	32	25AUG	-	-
1987	58	25AUG	15SEP	05OCT
1988	58	25AUG	-	05OCT
1989	25	25AUG	-	05OCT

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	-	-	-	-

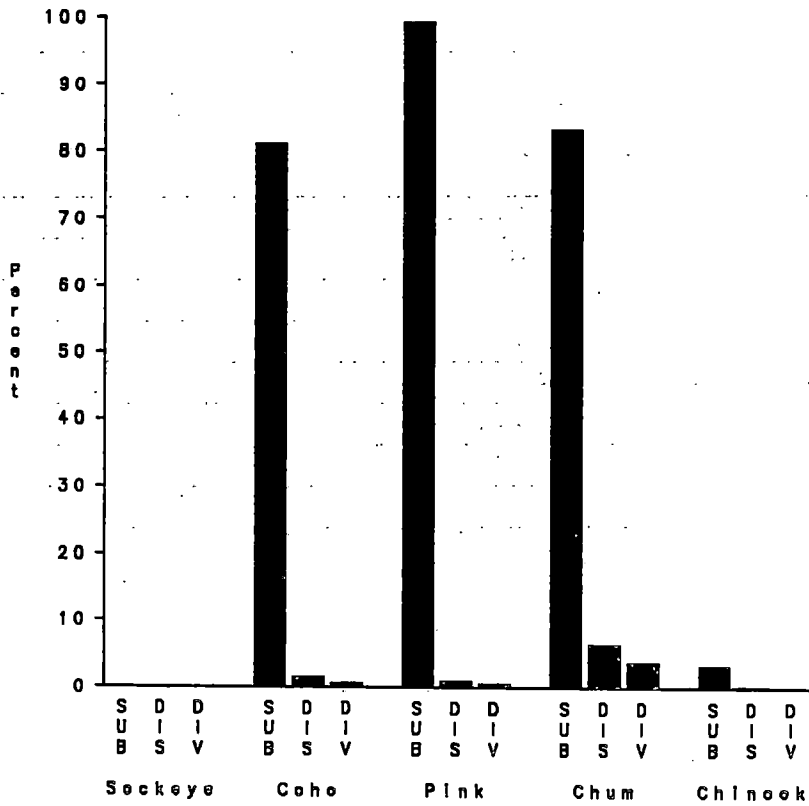
NEKITE RIVER (91-0400)

10-yr. Mean Escapement
(1980-1989)



NEKITE RIVER : 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.				
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
FO FORESTRY	PIPER LAKE DRAINAGE IS PLANNED TO BE LOGGED BY DOMANS LTD. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

RESULTS OF ADULT SALMONID RECONNAISSANCE PROGRAM, BIOPHYSICAL DATA AND DETAILED HABITAT DESCRIPTION AVAILABLE. (REF. 10-13, REF. 10-14)
DETAILED DATA ON JUVENILE SALMONID POPULATIONS AND MIGRATION AVAILABLE. (REF. 10-15)
LIMNOLOGICAL SURVEY DATA OF PIPER LAKE, WITH REGARDS TO UTILIZATION AS A WATER SUPPLY SOURCE FOR THE PROPOSED NEKITE RIVER HATCHERY COMPLEX, AVAILABLE. (REF. 10-37)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: BARER CREEK	D.F.O. Division: NORTH COAST
Local Name:	District: 7 CENTRAL COAST
Watershed Code: 91-0400-100	Subdistrict: 10 SMITH INLET
	Statistical Subarea: 10-10
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6333.57018
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' ' ' '
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLows SE INTO THE RIGHT BANK OF THE MEKITE 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
CT CUTTHROAT TROUT	OBSERVED (REF. 296-43)

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
FO FORESTRY	EXTENSIVELY LOGGED IN EARLY 1970'S. (REF. 10-33)

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: TOM PENDRAY	Date: 1991/12/08
Checked by: TOM PENDRAY	Date: 1991/12/08
Last checked by: TOM PENDRAY	Date: 1992/01/09

A. DESCRIPTION

Stream Name: MAYSASH CREEK	D.F.O. Division: NORTH COAST
Local Name: BOULDER CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-0558	Subdistrict: 10 SMITH INLET
	Statistical Subarea: 10-7
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/6
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.6172.56886
		Lat./Long. Mouth: DG. DG.
		Mainstem Length: 8.9 km Ref. No.: 6N-28
		Watershed Area: Ref. No.:
Location: FLows SW INTO MAYSASH INLET, SMITH INLET.		

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	FEW PRESENT (REF. 9-36)
PK PINK SALMON	FEW PRESENT (REF. 9-36)

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
FO FORESTRY	LOGGING PROPOSED IN THE AREA. (REF. 9-36)

I. FISH PRODUCTION POTENTIAL/CONSTRAINTS/GENERAL COMMENTS

RARELY INSPECTED BECAUSE OF THE SMALL NUMBERS OF FISH PRESENT. STREAM WILL PROBABLY BE INSPECTED MORE OFTEN IF LOGGING OPERATIONS COMMENCE. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

Date Prepared: / / Prepared By:

K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : NAYSASH CREEK

WATERSHED-CODE : 91-0558

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	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

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

GOOD SPAWNING GROUNDS THROUGHOUT ACCESSIBLE PORTION. RARELY INSPECTED. (REF. 9-4, REF. 9-36)
--

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : MARGARET CREEK

WATERSHED-CODE : 91-0628

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	0	25	0	0	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	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	N/O	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	0	UNK	UNK	UNK	UNK	UNK
1987	0	0	0	0	0	UNK
1988	0	0	0	0	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

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		

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

SUBJECT TO EXTREME LOW FLOWS DURING SPawning SEASON. A MAJOR CHANNEL SHIFT OCCURRED IN 1962 NOVEMBER FLOOD. (REF. 9-4)
RARELY INSPECTED. (REF. 9-36)

J. FISHERY OFFICER NARRATIVE

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

K. SIS COMPLETED BY

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : COHO CREEK

WATERSHED-CODE : 91-0672

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	0	25	25	0	0	UNK
1954	0	300	0	0	0	UNK
1955	UNK	UNK	UNK	UNK	UNK	UNK
1956	0	200	0	0	0	UNK
1957	N/O	N/O	N/O	N/O	N/O	UNK
1958	0	75	0	0	0	UNK
1959	0	75	25	0	0	UNK
1960	0	N/O	N/O	0	0	UNK
1961	0	75	0	0	0	UNK
1962	0	75	0	0	0	UNK
1963	UNK	UNK	UNK	UNK	UNK	UNK
1964	0	200	0	0	0	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	0	200	0	0	0	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	0	0	0	0	UNK
1981	UNK	6	12	UNK	UNK	UNK
1982	0	N/O	6	0	0	UNK
1983	0	20	20	0	0	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	N/O	N/O	N/O	N/O	N/O	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	N/O	N/O	0	0	UNK
1988	0	N/O	N/O	0	0	UNK
1989	UNK	N/O	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

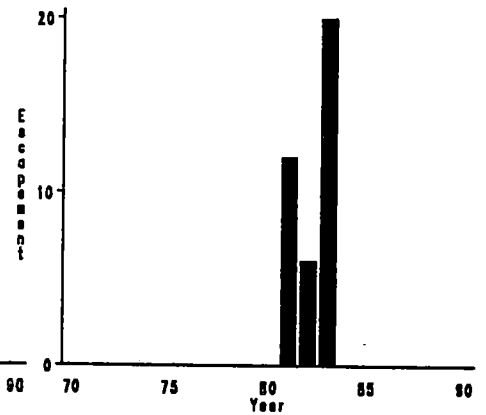
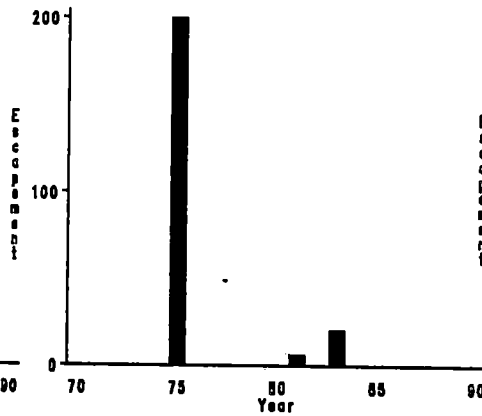
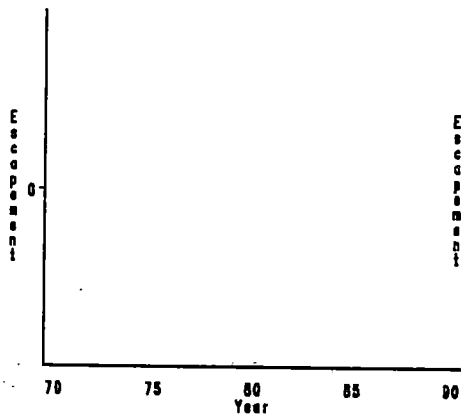
UNNAMED C (91-0672)

Escapement & Run Timing

Socketeye (SK)

Coho (CO)

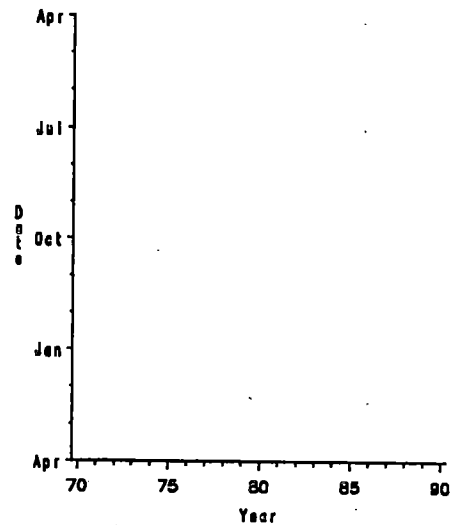
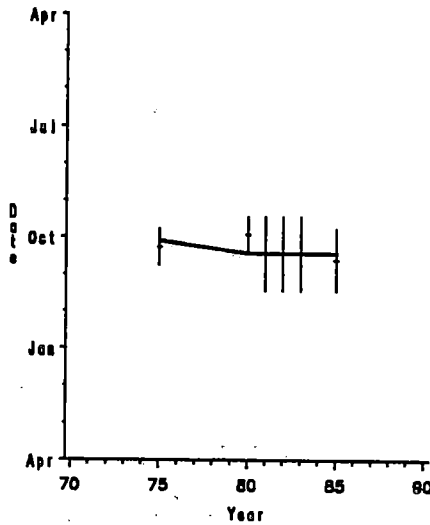
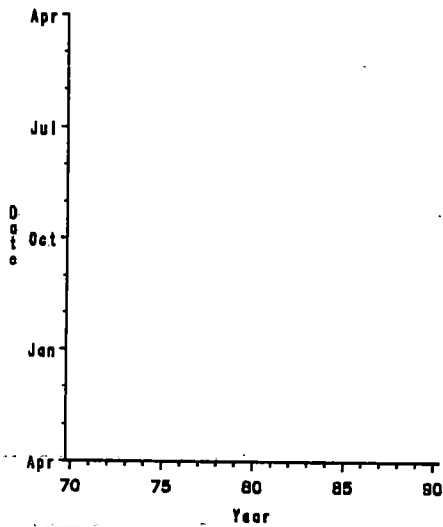
Pink (PK)



Socketeye

Coho

Pink



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

Coho				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	200	23SEP	05OCT	25OCT
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	0	13SEP	15OCT	15OCT
1981	6	13SEP	15OCT	15NOV
1982	0	13SEP	15OCT	15NOV
1983	20	13SEP	15OCT	15NOV
1984	-	-	-	-
1985	0	23SEP	15OCT	15NOV
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	0	-	-	-

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

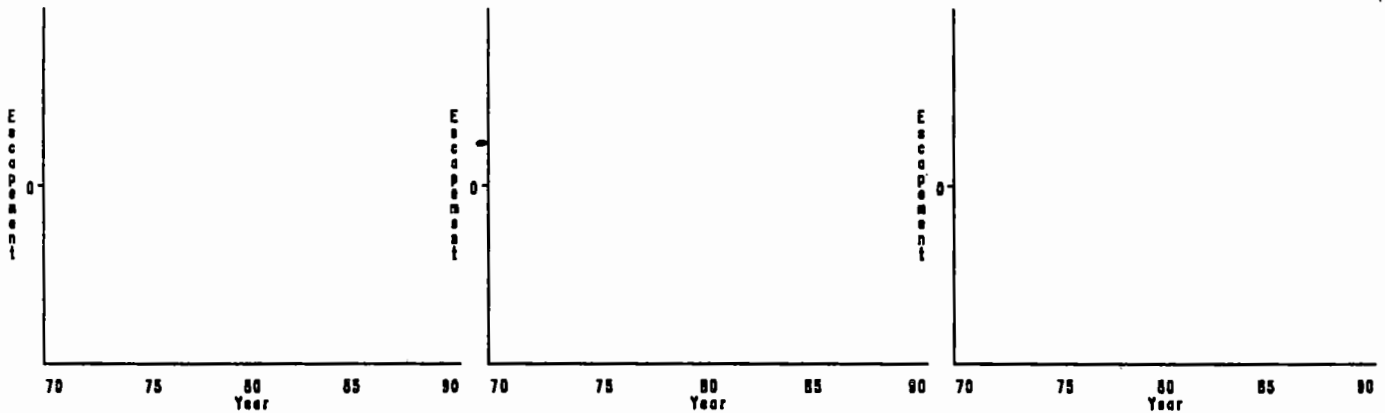
UNNAMED C (91-0672)

Escapement & Run Timing

Chum (CM)

Chinook (CH)

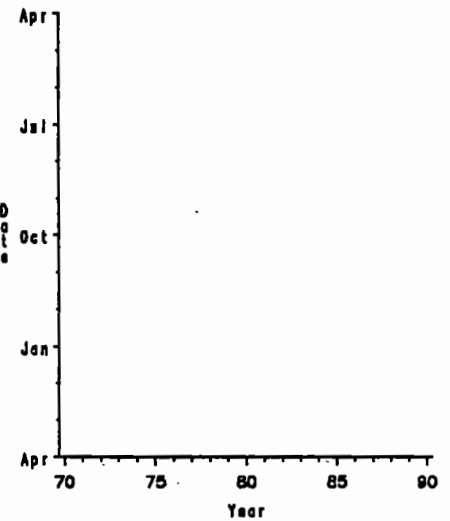
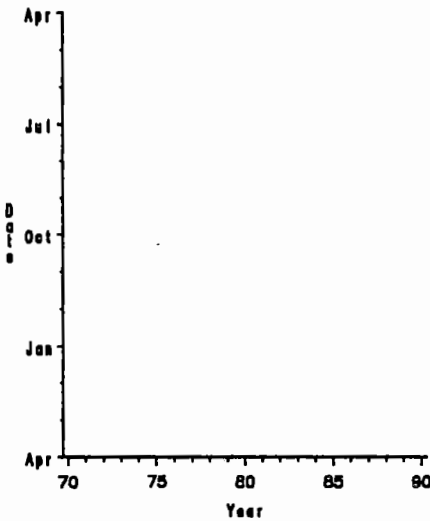
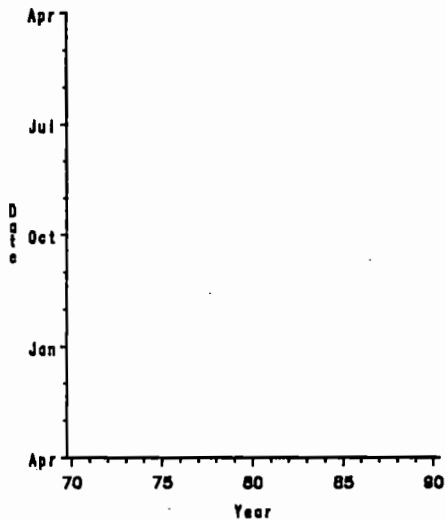
Steelhead (ST)



Chum

Chinook

Steelhead



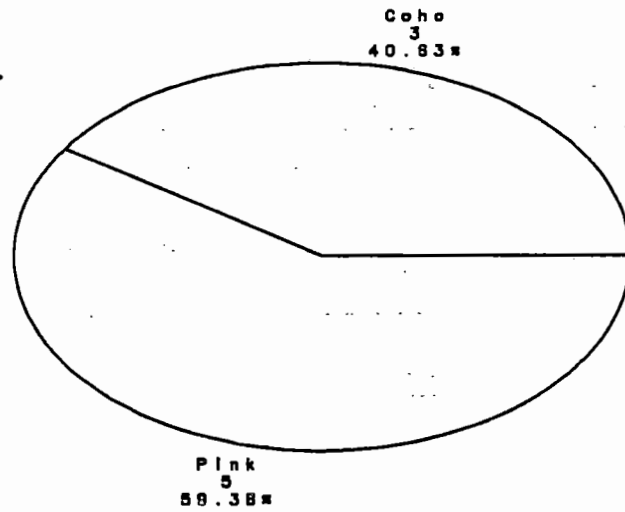
Chum				
Year	Escapement	Start	Peak	End
1970	-	-	-	-
1971	-	-	-	-
1972	-	-	-	-
1973	-	-	-	-
1974	-	-	-	-
1975	0	-	-	-
1976	-	-	-	-
1977	-	-	-	-
1978	-	-	-	-
1979	-	-	-	-
1980	0	-	-	-
1981	-	-	-	-
1982	0	-	-	-
1983	0	-	-	-
1984	-	-	-	-
1985	0	-	-	-
1986	-	-	-	-
1987	0	-	-	-
1988	0	-	-	-
1989	-	-	-	-

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

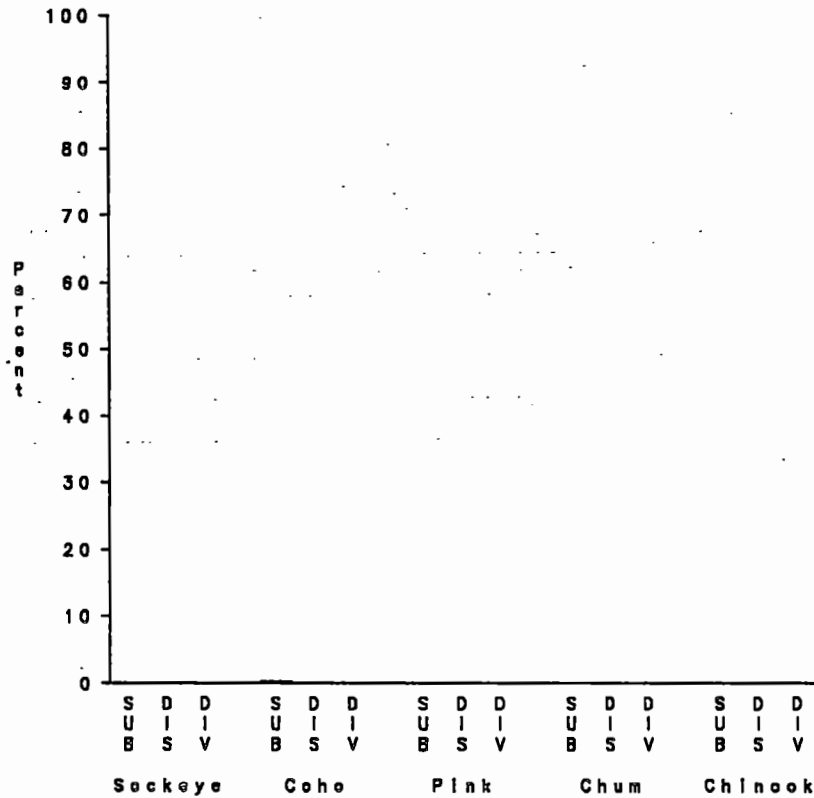
UNNAMED C (91-0672)

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: NORTH COAST
Local Name: DSULISH CREEK	District: 7 CENTRAL COAST
Watershed Code: 91-0775	Subdistrict: 10 SMITH INLET
	Statistical Subarea: 10-4
	M.O.E. Region: 5 CARIBOO
	Management Unit: 7

Tributaries	Code	Topographic (1:50k) Map: 92M/5
		B.C.G.S. (1:20k) Map:
		U.T.M. Mouth: 9.5913.56882
		Lat./Long. Mouth: DG. ' ' ' ' DG. ' ' ' '
		Mainstem Length: Ref. No.:
		Watershed Area: Ref. No.:
Location: FLows SOUTH INTO DSULISH BAY, SMITH SOUND.		

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	PRESENT TO AT LEAST 1.6 KM. (REF. 9-4)

E. ESCAPEMENT SUMMARY

Species	Escapement			Maximum Recorded Escapement	Ref. No.	Management Target Escapement	Ref. No.
	Mean	Period of Record	Ref. No.				
Comments: HISTORICAL COHO ESCAPEMENT RECORDS TO MAX. 400 IN 1950'S. NOT INSPECTED RECENTLY. (REF. 9-4)							

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:	TOM PENDRAY	Date:	1991/12/08
Checked by:	TOM PENDRAY	Date:	1991/12/08
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : DSULISH CREEK

WATERSHED-CODE : 91-0775

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	0	400	75	0	0	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	UNK	UNK	UNK	UNK	UNK	UNK
1958	UNK	UNK	UNK	UNK	UNK	UNK
1959	0	75	0	0	0	UNK
1960	0	75	0	0	0	UNK
1961	0	75	0	0	0	UNK
1962	0	75	0	0	0	UNK
1963	0	25	0	0	0	UNK
1964	UNK	UNK	UNK	UNK	UNK	UNK
1965	0	N/O	0	0	0	UNK
1966	0	N/O	0	0	0	UNK
1967	0	N/O	0	0	0	UNK
1968	0	N/O	0	0	0	UNK
1969	0	N/O	0	0	0	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	0	N/O	0	0	0	UNK
1976	0	UNK	0	0	0	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	0	0	N/O	0	0	UNK
1982	0	N/O	0	0	0	UNK
1983	0	N/O	0	0	0	UNK
1984	UNK	UNK	UNK	UNK	UNK	UNK
1985	UNK	UNK	UNK	UNK	UNK	UNK
1986	0	UNK	UNK	UNK	UNK	UNK
1987	0	0	0	0	0	UNK
1988	0	0	0	0	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

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:
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K. SIS COMPLETED BY

Completed by:	ROSS DE MARCO	Date:	1989/03/31
Checked by:	TOM PENDRAY	Date:	1989/03/31
Last checked by:	TOM PENDRAY	Date:	1992/01/09

ESCAPEMENT : HAGEN CREEK

WATERSHED-CODE : 91-0800

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK	STEELHEAD
1953	UNK	UNK	UNK	UNK	UNK	UNK
1954	UNK	UNK	UNK	UNK	UNK	UNK
1955	0	400	0	0	0	UNK
1956	UNK	UNK	UNK	UNK	UNK	UNK
1957	N/O	N/O	N/O	N/O	N/O	UNK
1958	N/O	N/O	N/O	N/O	N/O	UNK
1959	N/O	N/O	N/O	N/O	N/O	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	0	UNK	UNK	UNK	UNK	UNK
1987	UNK	UNK	UNK	UNK	UNK	UNK
1988	0	0	0	0	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

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

ENUMERATION DIFFICULT DUE TO OPAQUE WATER. (REF. 9-4)

J. FISHERY OFFICER NARRATIVE

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

Completed by: ROSS DE MARCO	Date: 1989/03/31
Checked by: TOM PENDRAY	Date: 1989/03/31
Last checked by: TOM PENDRAY	Date: 1992/01/09

ESCAPEMENT : CHIC CHIC CREEK

WATERSHED-CODE : 97-0500-570

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	N/O	UNK	0	0	0	UNK
1976	UNK	UNK	UNK	UNK	UNK	UNK
1977	UNK	UNK	UNK	UNK	UNK	UNK
1978	N/O	UNK	UNK	UNK	0	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	0	UNK	UNK	UNK	UNK	UNK
1987	0	0	0	0	0	UNK
1988	0	0	0	0	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

REFERENCE LIST **NUMERIC BIBLIOGRAPHY**

1992/01/21

Page: 1

REFERENCE NO: 1- 43

AUTHOR: HYATT, DR. K.
 DESCRIPTION: 1980-CONT. VARIOUS UNPUBLISHED REPORTS, DEPT OF FISHERIES AND OCEANS, BIOLOGICAL SCIENCES BRANCH, SALMON STOCK ASSESSMENT SECTION, NANAIMO, B.C.
 LOCATION: J DFO - PACIFIC BIOLOGICAL STATION - NANAIMO
 KEYWORDS: PS POPULATION SAMPLING

REFERENCE NO: 8- 63

AUTHOR: CHESTON, W.C., R.B. ADDISON, AND V.A. HOLM
 DESCRIPTION: 1975. BELLA COOLA REGIONAL STUDY, VOLUMES I AND II. B.C. FOREST SERVICE REPORT.
 LOCATION: GG MINISTRY OF FORESTS - VICTORIA
 KEYWORDS: AF ALL SPECIES EN ENHANCEMENT FO FORESTRY

REFERENCE NO: 8- 65

AUTHOR: MANZON, C.I. AND D.E. MARSHALL
 DESCRIPTION: 1980. CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 8 (BELLA COLLA). CANADIAN DATA REPORT OF FISHERIES AND AQUATIC SCIENCES. NO.219.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: AD ALL SALMON M MIGRATION OB OBSTRUCTIONS
 PS POPULATION SAMPLING S SPAWNING ST STEELHEAD

REFERENCE NO: 8- 82

AUTHOR: THOMSON, B., R.GORJUK, H.MCMAIRNAY, D.PEACOCK, ET AL
 DESCRIPTION: 1987. SALMON ESCAPEMENT AND TIMING DATA FOR STATISTICAL AREA 8 OF THE CENTRAL COAST OF BRITISH COLUMBIA. (DRAFT)
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: AD ALL SALMON M MIGRATION S SPAWNING

REFERENCE NO: 9- 4

AUTHOR: BRITTON, E.W.; MARSHALL, D.E.;
 DESCRIPTION: CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 9 AND 10 (RIVER AND SMITH INLETS). SEP.1980. DFO CANADIAN DATA REPORT OF FISHERIES AND AQUATIC SCIENCES NO.222.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: CH CHINOOK CN CHUM CO COHO
 EN ENHANCEMENT M MIGRATION PK PINK
 PY PHYSICAL HABITAT S SPAWNING SK SOCKEYE

REFERENCE NO: 9- 5

AUTHOR: RUGGLES, C.P.;
 DESCRIPTION: OWIKENO LAKE JUVENILE SOCKEYE STUDIES 1960-63. MAR.1965. DEPT. OF FISHERIES OF CANADA TECHNICAL REPORT. 26PP + APPS.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PS POPULATION SAMPLING
 SK SOCKEYE TE TEMPERATURE

REFERENCE NO: 9- 6

AUTHOR: WOOD, F.E.A.; SCHUTZ, D.C.;
 DESCRIPTION: TOW-NET CATCHES OF JUVENILE SOCKEYE SALMON IN OWIKENO LAKE 1960-1968. JUN.1970. CANADA DEPT. OF FISHERIES AND FORESTRY, FISHERIES SERVICE. MANUSCRIPT REPORT 1970-2. 124 PP.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PS POPULATION SAMPLING
 SK SOCKEYE TE TEMPERATURE

REFERENCE NO: 9- 7

AUTHOR: CHERNOFF, B.W.
 DESCRIPTION: BEHAVIOUR OF UNDERYEARLING SOCKEYE SALMON RELATED TO LIMNETIC ZOOPLANKTON IN OWIKENO LAKE, BRITISH COLUMBIA. APR.1971. CANADA DEPT. OF FISHERIES AND FORESTRY, FISHERIES SERVICE, TECHNICAL REPORT 1971-4. 52 PP.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PS POPULATION SAMPLING
 SK SOCKEYE TE TEMPERATURE

REFERENCE NO: 9- 8

AUTHOR: AMON.
 DESCRIPTION: FISHERIES PROBLEMS ASSOCIATED WITH THE DEVELOPMENT OF LOGGING PLANS WITHIN THE OWIKENO LAKE DRAINAGE SYSTEM. FEB.1962. DEPT. OF FISHERIES CANADA REPORT. 15 PP.
 LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
 KEYWORDS: AD ALL SALMON FO FORESTRY LU LAND USE

REFERENCE NO: 9- 9

AUTHOR: WOOD, F.E.A.; SCHUTZ, D.C.; HOLLAND, J.D.C.
DESCRIPTION: PHYSICAL AND BIOLOGICAL DATA TO 1968 FROM THE RIVERS INLET SOCKEYE SPAWNING AREAS. CANADA DEPT. OF FISHERIES AND FORESTRY, FISHERIES SERVICE, MANUSCRIPT REPORT 1970-1. 69 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AO ALL SALMON PS POPULATION SAMPLING PY PHYSICAL HABITAT

REFERENCE NO: 9- 10

AUTHOR: SIGMA RESOURCE CONSULTANTS LTD.
DESCRIPTION: OWIKENO HYDRO POWER STUDY. OCT.1978. SIGMA RESOURCE CONSULTANTS LTD. STUDY SRCL 3226, FOR DEPT. OF INDIAN AND NORTHERN AFFAIRS OWIKENO BAND COUNCIL.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: LU LAND USE WU WATER USE

REFERENCE NO: 9- 11

AUTHOR: HENDREN, M.K.; OLMSTED, W.R.
DESCRIPTION: BIOPHYSICAL ASSESSMENT OF PROPOSED LOGGING ROAD CONSTRUCTION ALONG THE CLYAK RIVER, MOSES INLET, B.C. MAY 1983. E.V.S. CONSULTANTS LTD. REPORT FOR CROWN ZELLERBACH, PROJECT 522. 16 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: FO FORESTRY LD LINEAR DEVELOPMENT

REFERENCE NO: 9- 12

AUTHOR: OLMSTED, W.R.
DESCRIPTION: BASELINE SPAWNER AND JUVENILE SALMONID INVENTORY OF CLYAK RIVER AND TRIBUTARIES, MOSES INLET, IN RELATION TO LOGGING DEVELOPMENT. OCT.1983. E.V.S. CONSULTANTS LTD. REPORT FOR CROWN ZELLERBACH, PROJECT 523. 27 PP + APPS.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
CT CUTTHROAT TROUT DV DOLLY VARDEN CHAR FO FORESTRY
FS FISH SAMPLING HS HABITAT SAMPLING LD LINEAR DEVELOPMENT
MO MORPHOLOGY PK PINK PS POPULATION SAMPLING
RB RAINBOW TROUT ST STEELHEAD

REFERENCE NO: 9- 16

AUTHOR: PENDRAY, T.
DESCRIPTION: BIOPHYSICAL INVENTORY OF TRIBUTARIES TO OWIKENO LAKE 1984-85. MAR.1988. DEPT. OF FISHERIES AND OCEANS NORTH COAST DIVISION TYPED REPORT. 23 PP + APPS. AND MAPS.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AF ALL SPECIES FO FORESTRY FS FISH SAMPLING
HS HABITAT SAMPLING PY PHYSICAL HABITAT

REFERENCE NO: 9- 18

AUTHOR: ANON.
DESCRIPTION: OWIKENO LAKE. OCT.1975. COPY OF LAKE SURVEY DATA ON FILE.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: AO ALL SALMON CT CUTTHROAT TROUT DV DOLLY VARDEN CHAR
FS FISH SAMPLING HS HABITAT SAMPLING PY PHYSICAL HABITAT
ST STEELHEAD WQ WATER QUALITY

REFERENCE NO: 9- 25

AUTHOR: LEGGETT, WESTOVER, WILKINSON
DESCRIPTION: ALLARD CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PY PHYSICAL HABITAT

REFERENCE NO: 9- 27

AUTHOR: ANON.
DESCRIPTION: CLYAK RIVER. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 29

AUTHOR: ANON.
DESCRIPTION: JOHNSTON CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 30

AUTHOR: AMON.
DESCRIPTION: LOCKHART GORDON CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 31

AUTHOR: AMON.
DESCRIPTION: MACNAIR CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 32

AUTHOR: AMON.
DESCRIPTION: MILTON RIVER. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 36

AUTHOR: LUNN, BRIAN
DESCRIPTION: FISHERIES OFFICER, DEPT. OF FISHERIES AND OCEANS, DAWSON'S LANDING, B.C. 1989. PERSONAL COMMUNICATION AND SUBDISTRICT FILES.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT FO FORESTRY
LU LAND USE M MIGRATION PY PHYSICAL HABITAT
S SPANNING WJ WATER USE

REFERENCE NO: 9- 38

AUTHOR: SCOTT, G.R.
DESCRIPTION: DRAFT LAND USE PLAN OMEEKEENO RESERVE RIVERS INLET. NO DATE. WESTCOAST LAND USE CONSULTANTS LTD. TYPED REPORT. 22 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EU EULACHON LU LAND USE WJ WATER USE

REFERENCE NO: 9- 39

AUTHOR: WOOD, F.E.A.
DESCRIPTION: RIVERS INLET SOCKEYE. 1970. CANADA DEPT. OF FISHERIES AND FORESTRY FISHERIES SERVICE REPORT 1970-7. 65 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT SK SOCKEYE

REFERENCE NO: 9- 41

AUTHOR: COOK, ROBERTA
DESCRIPTION: SALMONID ENHANCEMENT PROGRAM, DEPT OF FISHERIES AND OCEANS, VANCOUVER, B.C. PERSONAL COMMUNICATION.
LOCATION: C DFO - SALMONID ENHANCEMENT PROGRAM - VANCOUVER
KEYWORDS: EN ENHANCEMENT

REFERENCE NO: 9- 42

AUTHOR: THOMSON, B., R. GORUK, H. MCNAIRNAY, ET AL
DESCRIPTION: 1988. SALMON ESCAPEMENT AND TIMING DATA FOR STATISTICAL AREA 9 OF THE CENTRAL COAST OF BRITISH COLUMBIA. DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 9- 45

AUTHOR: BACHEN, S.
DESCRIPTION: SALMON TECHNICIAN, DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C. PERSONAL COMMUNICATION.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 9- 46

AUTHOR: RAHIER, G.
DESCRIPTION: FISHERY OFFICER, DEPT. OF FISHERIES AND OCEANS, DAWSON'S LANDING, B.C. PERSONAL COMMUNICATION.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS:

REFERENCE NO: 9- 47

AUTHOR: ORR, U.
DESCRIPTION: HABITAT BIOLOGIST, DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C. PERSONAL COMMUNICATION.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 10- 13

AUTHOR: MCGIVNEY, K.K.; BOWMAN, S.L.; MURRAY, P.R.
DESCRIPTION: SMITH INLET ADULT SALMONID RECONNAISSANCE PROGRAM, DEC.1985. ENVIROCOM LTD. REPORT FOR DFO, 1945/WP 2035. 106 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EN ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING PY PHYSICAL HABITAT WQ WATER QUALITY

REFERENCE NO: 10- 14

AUTHOR: SLANEY, T.L.
DESCRIPTION: ADULT SALMONID RECONNAISSANCE OF SELECTED SMITH INLET STREAMS IN 1985. MAR.1986. AQUATIC RESOURCES LTD. REPORT FOR DFO. 85 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EN ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING PY PHYSICAL HABITAT ST STEELHEAD
WQ WATER QUALITY

REFERENCE NO: 10- 15

AUTHOR: FIELDEN,R.J.; SLANEY,T.L.; GALESLOOT,M.M.; BIRCH,G
DESCRIPTION: SMITH INLET JUVENILE SALMONID RECONNAISSANCE. MAR.1986. AQUATIC RESOURCES LTD. REPORT FOR DFO. 193 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EN ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING WQ WATER QUALITY

REFERENCE NO: 10- 17

AUTHOR: NO AUTHOR
DESCRIPTION: LONG LAKE. OCT.1975. COPY OF LAKE SURVEY DATA ON FILE.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: CH CHINOOK CO COHO FS FISH SAMPLING
HS HABITAT SAMPLING PY PHYSICAL HABITAT SK SOCKEYE
WQ WATER QUALITY

REFERENCE NO: 10- 19

AUTHOR: TREDGER, D.
DESCRIPTION: NEKITE RIVER. NOV.20,1986. F&W B FISHERIES IMPROVEMENT UNIT RECONNAISSANCE REPORT. FILE 0140-5.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: CM CHUM EN ENHANCEMENT FS FISH SAMPLING
ST STEELHEAD

REFERENCE NO: 10- 26

AUTHOR: ANON.
DESCRIPTION: CANOE CREEK. APR.20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 33

AUTHOR: ANON.
DESCRIPTION: NEKITE RIVER. APRIL 20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 34

AUTHOR: ANON.
DESCRIPTION: SMOKEHOUSE CREEK. APR.20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 35

AUTHOR: ANON.
DESCRIPTION: TAKUSH RIVER. APR.20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 37

AUTHOR: SLANEY,T.L.
DESCRIPTION: BASELINE LIMNOLOGICAL SURVEY OF PIPER LAKE. MAR.1986. AQUATIC RESOURCES LTD. REPORT FOR DFO. 41 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT FS FISH SAMPLING WQ WATER QUALITY

REFERENCE NO: 10- 40

AUTHOR: SKOG, ROSS
DESCRIPTION: FISHERIES PATROLMAN, AREA 10, DEPT. FISHERIES AND OCEANS. PERSONAL COMMUNICATION.
LOCATION: NA NOT APPLICABLE
KEYWORDS: AO ALL SALMON OB OBSTRUCTIONS

REFERENCE NO: 4A-159

AUTHOR: PENDRAY, T.
DESCRIPTION: T. PENDRAY. HABITAT INVENTORY BIOLOGIST. DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C. PERSONAL COMMUNICATION AND MISCELLANEOUS FISH SAMPLING.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 4D-157

AUTHOR: B.C. MIN. OF ENVIRONMENT
DESCRIPTION: DIGITIZED GRADIENT DATA BY D.R.SYSTEMS LTD. FOR F.& W.B., B.C. MIN. OF ENVIRONMENT, VICTORIA, B.C.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: GA GRADIENT

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: 110- 14

AUTHOR: ELSON, M.S.; STEIGENBERGER, L.W.
DESCRIPTION: MEASUREMENTS OF CHINOOK SALMON COLLECTED IN THE YUKON RIVER COMMERCIAL FISHERY NEAR DAWSON CITY IN 1975 AND 1976. FEBRUARY, 1977. NORTHERN NATURAL RESOURCE SERVICES LTD. REPORT FOR NORTHERN BRITISH COLUMBIA AND YUKON BRANCH. 27 PP.
LOCATION: D DFO - FRASER R., NORTHERN B.C. & YUKON DIVISION - NEW WEST
KEYWORDS: CH CHINOOK CM CHUM 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: 28A- 28

AUTHOR: GODIN, RANDY
DESCRIPTION: 1990. DEPT. OF FISHERIES & OCEANS. FISH CULTURIST, CAPILANO HATCHERY, NORTH VANCOUVER, B.C. PERSONAL COMMUNICATION.
LOCATION:
KEYWORDS: CC SCULPINS (GENERAL) L LAMPREYS (GENERAL)

REFERENCE NO: 29F- 65

AUTHOR: NATIONAL TOPOGRAPHIC SYSTEM MAPS
DESCRIPTION: 1972-1974 SURVEYS AND MAPPING BRANCH, DEPT. OF ENERGY, MINES AND RESOURCES. 1:50,000.
LOCATION: D DFO - FRASER R., NORTHERN B.C. & YUKON DIVISION - NEW WEST
KEYWORDS: AR AGRICULTURE DA DAMS FO FORESTRY
LD LINEAR DEVELOPMENT PR PARKS RE RESERVES
UD URBAN DEVELOPMENT

REFERENCE NO: 296- 23

AUTHOR: WILKINSON, T.
DESCRIPTION: 1986. PERS. COMM. FISH AND WILDLIFE BRANCH, MOE.
LOCATION: D DFO - FRASER R., NORTHERN B.C. & YUKON DIVISION - NEW WEST
KEYWORDS: EN ENHANCEMENT ST STEELHEAD

REFERENCE NO: 296- 43

AUTHOR: YOUNG, JIM
DESCRIPTION: 1986. HABITAT PROTECTION TECHNICIAN, MOE, WILLIAMS LAKE. PERSONAL COMMUNICATION.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT FO FORESTRY KO KOKANEE
OB OBSTRUCTIONS RB RAINBOW TROUT

ALPHABETIC BIBLIOGRAPHY

REFERENCE NO: 9- 8

AUTHOR: ANON.
DESCRIPTION: FISHERIES PROBLEMS ASSOCIATED WITH THE DEVELOPMENT OF LOGGING PLANS WITHIN THE OMIKENO LAKE DRAINAGE SYSTEM.
FEB.1962. DEPT. OF FISHERIES CANADA REPORT. 15 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AO ALL SALMON FO FORESTRY LU LAND USE

REFERENCE NO: 9- 18

AUTHOR: ANON.
DESCRIPTION: OMIKENO LAKE. OCT.1975. COPY OF LAKE SURVEY DATA ON FILE.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: AO ALL SALMON CT CUTTHROAT TROUT DV DOLLY VARDEN CHAR
FS FISH SAMPLING HS HABITAT SAMPLING PY PHYSICAL HABITAT
ST STEELHEAD WQ WATER QUALITY

REFERENCE NO: 9- 27

AUTHOR: ANON.
DESCRIPTION: CLYAK RIVER. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 29

AUTHOR: ANON.
DESCRIPTION: JOHNSTON CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 30

AUTHOR: ANON.
DESCRIPTION: LOCKHART GORDON CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 31

AUTHOR: ANON.
DESCRIPTION: MACNAIR CREEK. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 9- 32

AUTHOR: ANON.
DESCRIPTION: MILTON RIVER. APR.21,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 26

AUTHOR: ANON.
DESCRIPTION: CANOE CREEK. APR.20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 33

AUTHOR: ANON.
DESCRIPTION: NEKITE RIVER. APRIL 20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 34

AUTHOR: ANON.
DESCRIPTION: SMOKEHOUSE CREEK. APR.20,1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: PY PHYSICAL HABITAT

REFERENCE NO: 10- 15

AUTHOR: FIELDEN, R.J.; SLANEY, T.L.; GALESLOOT, M.M.; BIRCH, G.
DESCRIPTION: SMITH INLET JUVENILE SALMONID RECONNAISSANCE. MAR. 1986. AQUATIC RESOURCES LTD. REPORT FOR DFO. 193 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EN ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING WQ WATER QUALITY

REFERENCE NO: 28A- 28

AUTHOR: GODIN, RANDY
DESCRIPTION: 1990. DEPT. OF FISHERIES & OCEANS. FISH CULTURIST, CAPILANO HATCHERY, NORTH VANCOUVER, B.C. PERSONAL COMMUNICATION.
LOCATION:
KEYWORDS: CC SCULPINS (GENERAL) L LAMPREYS (GENERAL)

REFERENCE NO: 9- 11

AUTHOR: HENDREN, M.K.; OLMSTED, W.R.
DESCRIPTION: BIOPHYSICAL ASSESSMENT OF PROPOSED LOGGING ROAD CONSTRUCTION ALONG THE CLYAK RIVER, MOSES INLET, B.C. MAY 1983. E.V.S. CONSULTANTS LTD. REPORT FOR CROWN ZELLERBACH, PROJECT 522. 16 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: FO FORESTRY LD LINEAR DEVELOPMENT

REFERENCE NO: 1- 43

AUTHOR: HYATT, DR. K.
DESCRIPTION: 1980-CONT. VARIOUS UNPUBLISHED REPORTS, DEPT OF FISHERIES AND OCEANS, BIOLOGICAL SCIENCES BRANCH, SALMON STOCK ASSESSMENT SECTION, NANAIMO, B.C.
LOCATION: J DFO - PACIFIC BIOLOGICAL STATION - NANAIMO
KEYWORDS: PS POPULATION SAMPLING

REFERENCE NO: 9- 25

AUTHOR: LEGGETT, WESTOVER, WILKINSON
DESCRIPTION: ALLARD CREEK. APR. 21, 1979. COASTAL INVENTORY STREAM SURVEY FORM.
LOCATION: T MOE - REGION 5 - WILLIAMS LAKE
KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PY PHYSICAL HABITAT

REFERENCE NO: 9- 36

AUTHOR: LUNN, BRIAN
DESCRIPTION: FISHERIES OFFICER, DEPT. OF FISHERIES AND OCEANS, DAWSON'S LANDING, B.C. 1989. PERSONAL COMMUNICATION AND SUBDISTRICT FILES.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: AF ALL SPECIES EN ENHANCEMENT FO FORESTRY
LU LAND USE M MIGRATION PY PHYSICAL HABITAT
S SPAWNING WJ WATER USE

REFERENCE NO: 8- 65

AUTHOR: MANZON, C.I. AND D.E. MARSHALL
DESCRIPTION: 1980. CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS OF STATISTICAL AREA 8 (BELLA COLLA). CANADIAN DATA REPORT OF FISHERIES AND AQUATIC SCIENCES. NO. 219.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AD ALL SALMON M MIGRATION OB OBSTRUCTIONS
PS POPULATION SAMPLING S SPAWNING ST STEELHEAD

REFERENCE NO: 10- 13

AUTHOR: MCGIVNEY, K.K.; BOWMAN, S.L.; MURRAY, P.R.
DESCRIPTION: SMITH INLET ADULT SALMONID RECONNAISSANCE PROGRAM. DEC. 1985. ENVIROCON LTD. REPORT FOR DFO, 1945/WP 2035. 106 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EN ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING PY PHYSICAL HABITAT WQ WATER QUALITY

REFERENCE NO: 29F- 65

AUTHOR: NATIONAL TOPOGRAPHIC SYSTEM MAPS
DESCRIPTION: 1972-1974 SURVEYS AND MAPPING BRANCH, DEPT. OF ENERGY, MINES AND RESOURCES. 1:50,000.
LOCATION: D DFO - FRASER R., NORTHERN B.C. & YUKON DIVISION - NEW WFST
KEYWORDS: AR AGRICULTURE DA DAMS FO FORESTRY
LD LINEAR DEVELOPMENT PR PARKS RE RESERVES
UD URBAN DEVELOPMENT

REFERENCE NO: 10- 17

AUTHOR: NO AUTHOR
DESCRIPTION: LONG LAKE, OCT.1975. COPY OF LAKE SURVEY DATA ON FILE.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: CH CHINOOK CO COHO FS FISH SAMPLING
HS HABITAT SAMPLING PY PHYSICAL HABITAT SK SOCKEYE
MQ WATER QUALITY

REFERENCE NO: 9- 12

AUTHOR: OLMSTED, W.R.
DESCRIPTION: BASELINE SPawner AND JUVENILE SALMONID INVENTORY OF CLYAK RIVER AND TRIBUTARIES, MOSES INLET, IN RELATION TO LOGGING DEVELOPMENT. OCT.1983. E.V.S. CONSULTANTS LTD. REPORT FOR CROWN ZELLERBACH, PROJECT 523. 27 PP + APPS.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
CT CUTTHROAT TROUT DV DOLLY VARDEN CHAR FO FORESTRY
FS FISH SAMPLING HS HABITAT SAMPLING LD LINEAR DEVELOPMENT
MO MORPHOLOGY PK PINK PS POPULATION SAMPLING
RB RAINBOW TROUT ST STEELHEAD

REFERENCE NO: 9- 47

AUTHOR: ORR, U.
DESCRIPTION: HABITAT BIOLOGIST, DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C. PERSONAL COMMUNICATION.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 9- 16

AUTHOR: PENDRAY, T.
DESCRIPTION: BIOPHYSICAL INVENTORY OF TRIBUTARIES TO OWIKENO LAKE 1984-85. MAR.1988. DEPT. OF FISHERIES AND OCEANS NORTH COAST DIVISION TYPED REPORT. 23 PP + APPS. AND MAPS.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AF ALL SPECIES FO FORESTRY FS FISH SAMPLING
HS HABITAT SAMPLING PY PHYSICAL HABITAT

REFERENCE NO: 4A-159

AUTHOR: PENDRAY, T.
DESCRIPTION: T. PENDRAY. HABITAT INVENTORY BIOLOGIST. DEPT. OF FISHERIES AND OCEANS, PRINCE RUPERT, B.C. PERSONAL COMMUNICATION AND MISCELLANEOUS FISH SAMPLING.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 9- 46

AUTHOR: RAHIER, G.
DESCRIPTION: FISHERY OFFICER, DEPT. OF FISHERIES AND OCEANS, DAWSON'S LANDING, B.C. PERSONAL COMMUNICATION.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS:

REFERENCE NO: 9- 5

AUTHOR: RUGGLES, C.P.;
DESCRIPTION: OWIKENO LAKE JUVENILE SOCKEYE STUDIES 1960-63. MAR.1965. DEPT. OF FISHERIES OF CANADA TECHNICAL REPORT. 26PP + APPS.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PS POPULATION SAMPLING
SK SOCKEYE TE TEMPERATURE

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: 9- 38

AUTHOR: SCOTT, G.R.
DESCRIPTION: DRAFT LAND USE PLAN OWEEKEENO RESERVE RIVERS INLET. NO DATE. WESTCOAST LAND USE CONSULTANTS LTD. TYPED REPORT. 22 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EU EULACHON LU LAND USE MU WATER USE

REFERENCE NO: 9- 10

AUTHOR: SIGMA RESOURCE CONSULTANTS LTD.
DESCRIPTION: OWIKEND HYDRO POWER STUDY. OCT.1978. SIGMA RESOURCE CONSULTANTS LTD. STUDY SRCL 3226, FOR DEPT. OF INDIAN AND
NORTHERN AFFAIRS OWIKENO BAND COUNCIL.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: LU LAND USE WJ WATER USE

REFERENCE NO: 10- 40

AUTHOR: SKOG, ROSS
DESCRIPTION: FISHERIES PATROLMAN, AREA 10, DEPT. FISHERIES AND OCEANS. PERSONAL COMMUNICATION.
LOCATION: NA NOT APPLICABLE
KEYWORDS: AO ALL SALMON DB OBSTRUCTIONS

REFERENCE NO: 10- 14

AUTHOR: SLANEY, T.L.
DESCRIPTION: ADULT SALMONID RECONNAISSANCE OF SELECTED SMITH INLET STREAMS IN 1985. MAR.1986. AQUATIC RESOURCES LTD. REPORT FOR
DFO. 85 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: CH CHINOOK CM CHUM CO COHO
EM ENHANCEMENT FS FISH SAMPLING PK PINK
PS POPULATION SAMPLING PY PHYSICAL HABITAT ST STEELHEAD
WQ WATER QUALITY

REFERENCE NO: 10- 37

AUTHOR: SLANEY, T.L.
DESCRIPTION: BASELINE LIMNOLOGICAL SURVEY OF PIPER LAKE. MAR.1986. AQUATIC RESOURCES LTD. REPORT FOR DFO. 41 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT FS FISH SAMPLING WQ WATER QUALITY

REFERENCE NO: 9- 42

AUTHOR: THOMSON, B., R. GORUK, H. MCNAIRNAY, ET AL
DESCRIPTION: 1988. SALMON ESCAPEMENT AND TIMING DATA FOR STATISTICAL AREA 9 OF THE CENTRAL COAST OF BRITISH COLUMBIA. DEPT. OF
FISHERIES AND OCEANS, PRINCE RUPERT, B.C.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS:

REFERENCE NO: 8- 82

AUTHOR: THOMSON, B., R. GORUK, H. MCNAIRNAY, D. PEACOCK, ET AL
DESCRIPTION: 1987. SALMON ESCAPEMENT AND TIMING DATA FOR STATISTICAL AREA 8 OF THE CENTRAL COAST OF BRITISH COLUMBIA. (DRAFT)
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AO ALL SALMON M MIGRATION S SPAWNING

REFERENCE NO: 10- 19

AUTHOR: TREDGER, O.
DESCRIPTION: NEKITE RIVER. NOV.20,1986. F&W B FISHERIES IMPROVEMENT UNIT RECONNAISSANCE REPORT. FILE D140-5.
LOCATION: M MOE - FISHERIES BRANCH - VICTORIA
KEYWORDS: CM CHUM EN ENHANCEMENT FS FISH SAMPLING
ST STEELHEAD

REFERENCE NO: 296- 23

AUTHOR: WILKINSON, T.
DESCRIPTION: 1986. PERS. COMM. FISH AND WILDLIFE BRANCH, MOE.
LOCATION: D DFO - FRASER R., NORTHERN B.C. & YUKON DIVISION - NEW WEST
KEYWORDS: EN ENHANCEMENT ST STEELHEAD

REFERENCE NO: 9- 39

AUTHOR: WOOD, F.E.A.
DESCRIPTION: RIVERS INLET SOCKEYE. 1970. CANADA DEPT. OF FISHERIES AND FORESTRY FISHERIES SERVICE REPORT 1970-7. 65 PP.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT SK SOCKEYE

REFERENCE NO: 9- 6

AUTHOR: WOOD, F.E.A.; SCHUTZ, D.C.;
DESCRIPTION: TOW-NET CATCHES OF JUVENILE SOCKEYE SALMON IN OWIKENO LAKE 1960-1968. JUN.1970. CANADA DEPT. OF FISHERIES AND FORESTRY, FISHERIES SERVICE. MANUSCRIPT REPORT 1970-2. 124 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: FS FISH SAMPLING HS HABITAT SAMPLING PS POPULATION SAMPLING
SK SOCKEYE TE TEMPERATURE

REFERENCE NO: 9- 9

AUTHOR: WOOD, F.E.A.; SCHUTZ, D.C.; HOLLAND, J.D.C.
DESCRIPTION: PHYSICAL AND BIOLOGICAL DATA TO 1968 FROM THE RIVERS INLET SOCKEYE SPAWNING AREAS. CANADA DEPT. OF FISHERIES AND FORESTRY, FISHERIES SERVICE. MANUSCRIPT REPORT 1970-1. 69 PP.
LOCATION: H DFO - NORTH COAST DIVISION - PRINCE RUPERT
KEYWORDS: AO ALL SALMON PS POPULATION SAMPLING PY PHYSICAL HABITAT

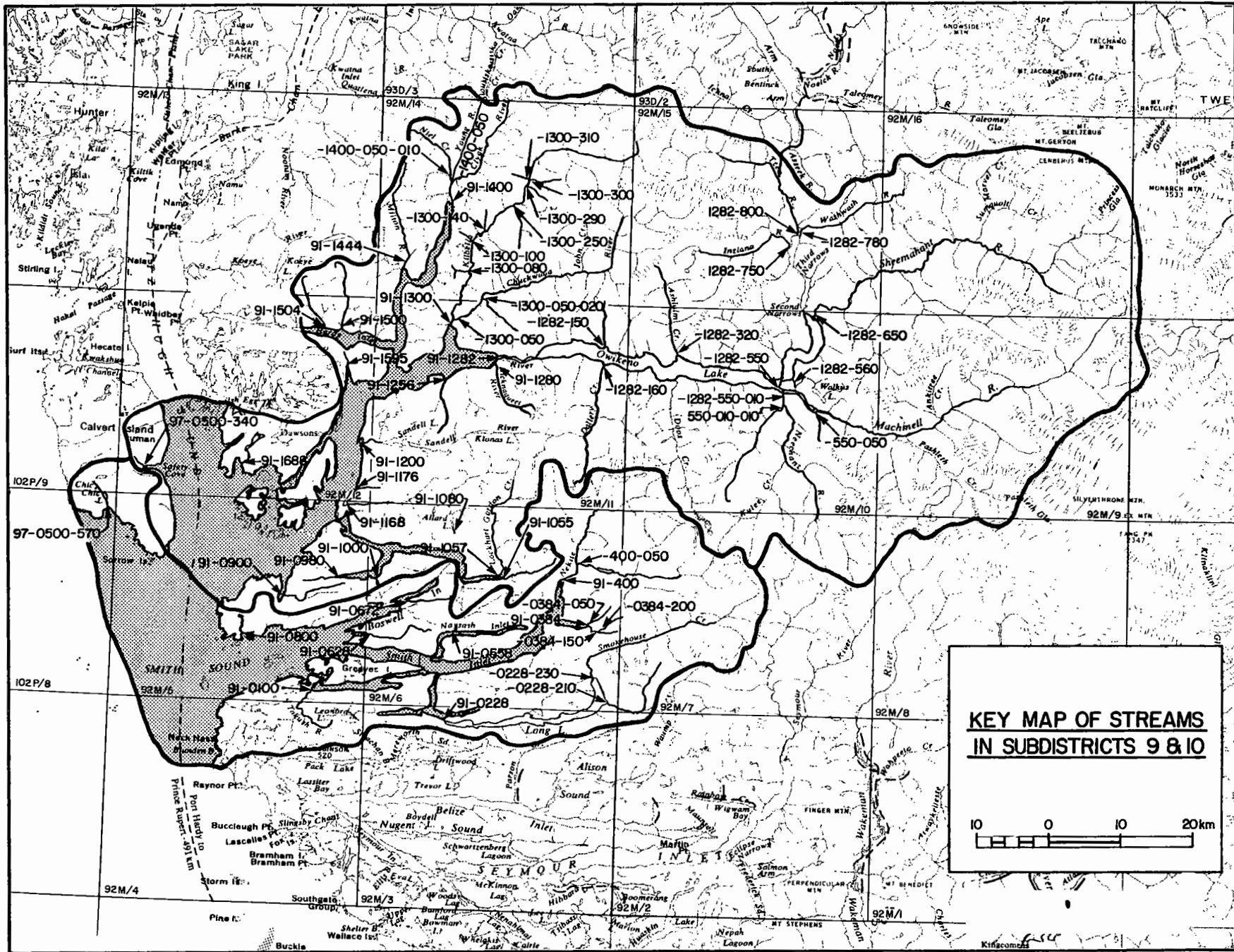
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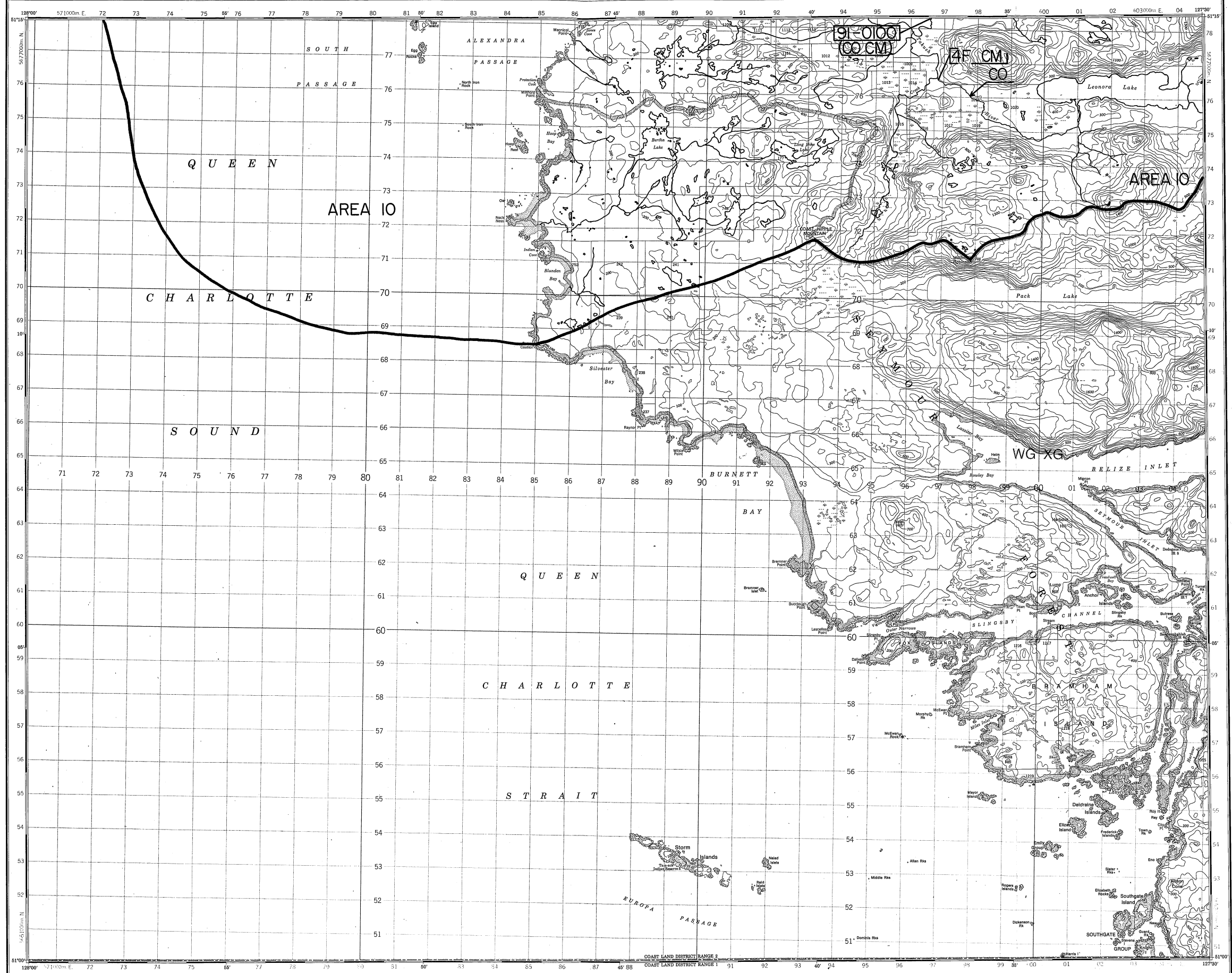
AUTHOR: YOUNG, JIM
DESCRIPTION: 1986. HABITAT PROTECTION TECHNICIAN, MOE, WILLIAMS LAKE. PERSONAL COMMUNICATION.
LOCATION: S DFO - SUBDISTRICT (INCLUDED IN REF. NO)
KEYWORDS: EN ENHANCEMENT FO FORESTRY KO KOKANEE
OB OBSTRUCTIONS RB RAINBOW TROUT

MAPS

This section contains the following Stream Summary Maps:

92M/3	BELIZE INLET
92M/4	CAPE CAUTION
92M/5	GOOSE BAY
92M/6	SMITH INLET
92M/7	MOUNT PHILLEY
92M/9	MACHMELL RIVER
92M/10	OWIKENO LAKE
92M/11	RIVERS INLET
92M/12	FISH EGG INLET
92M/13	NAMU
92M/14	KILBERRA RIVER
92M/15	TZEO RIVER
92M/16	SHEEMAHANT RIVER
102P/8E	BLACKNEY ISLAND





Military users, refer to this map as: Série A 721 Série 92 M/4 Carte
 Références de cette carte pour usage militaire: ÉDITION 2 MCE ÉDITION

GLOSSARY GLOSSAIRE

Artificial	Terminus d'entretien
Area	Adress
City Limits	Limites de ville
Customs	Douane
Ditch	Fossé
Dugout	Abri souterrain
Dyke	Digue
Fertilizer Plant	Usine de fabrication d'engrais
Gas	Gaz
Oil Cans	Reservoirs de pétrole
Jack Yard	Atelier
Mill	Moulin
Lakehead	Bonnet de barrage
Mill Race	Chemin de dérivation
Oil Wells	Puits de pétrole
Park	Parc
Rail	Piste à l'usage des trains
Small Dam	Barrage à faible hauteur
St. Area	Station de service
Sting Dam	Barrage à l'échelle
Swamp	Marécage
Tank	Reservoir
Water	Eau
Winter Road	Chemin d'hiver

For a complete glossary see reverse side
 Pour un glossaire complet, voir le verso

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY

91-2900 CO CM ST 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 * 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

W5C08FB003 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
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

TABLEAU D'ADRESSEMENT DU SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE

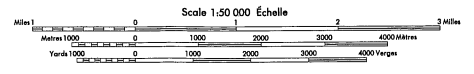
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127°30'	51°30'	92 M/4	92 M/4
127°30'	51°30'	92 M/4	92 M/4

INDEX TO ADDRESSING MAPS OF THE NATIONAL SPATIAL REFERENCE SYSTEM

Produced by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Derived from aerial photography taken in 1977. Published in 1979.

Cartes produites par le Service des levés et de la cartographie, Ministère de l'Énergie, des Mines et des Ressources. Basées sur des photographies aériennes prises en 1977. Publiées en 1979.

CAPE CAUTION BRITISH COLUMBIA



Information concerning location and precise elevation of bench marks can be obtained by writing to the Geodetic Survey, Survey and Mapping Branch, Ottawa.

CONVERSION SCALE FOR ELEVATIONS
 Metres 30 20 10 0 10 20 30
 Feet 100 50 0 50 100 150

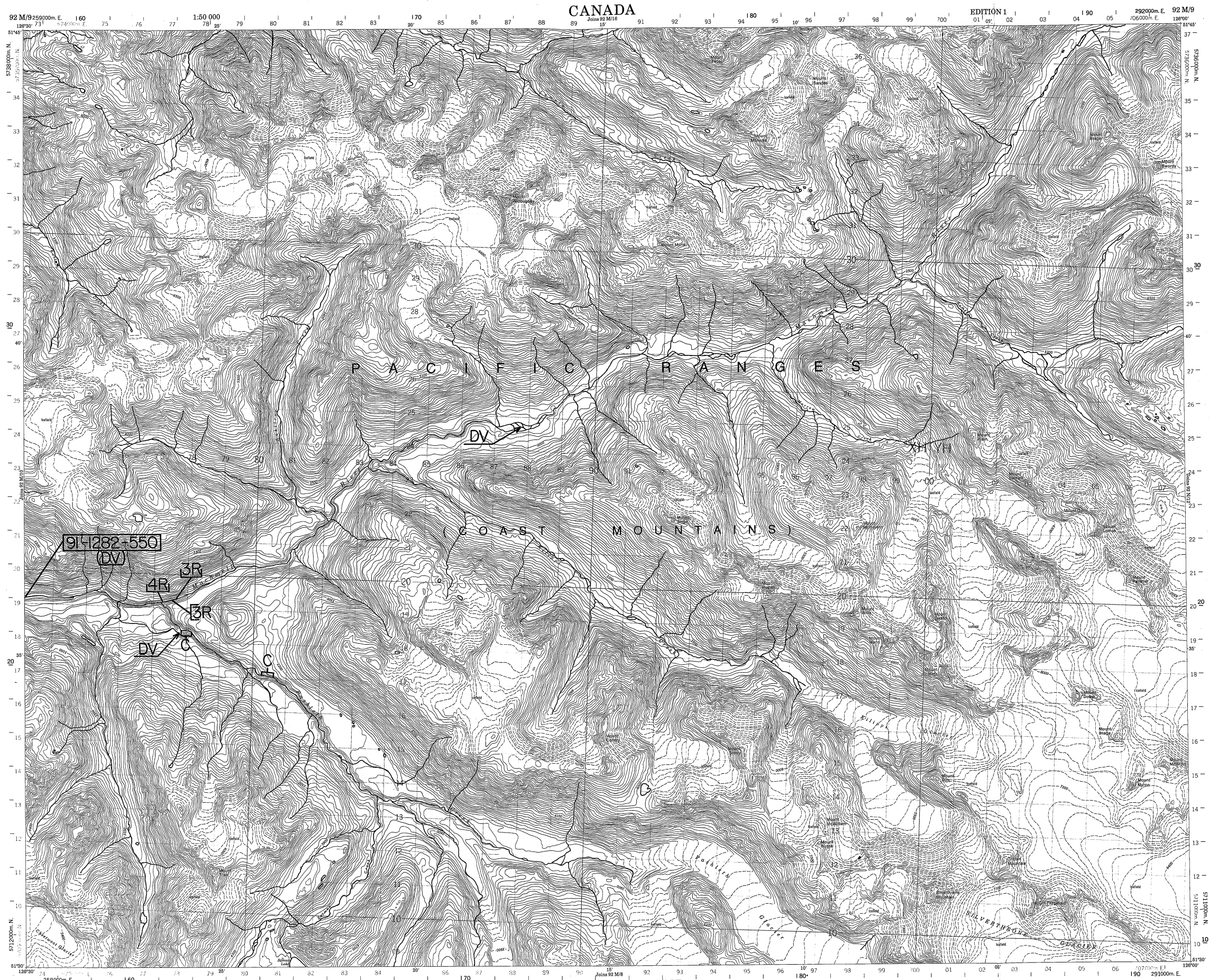
ECHÉLLE DE CONVERSION DES ALTITUDES
 Mètres 30 20 10 0 10 20 30
 Pieds 100 50 0 50 100 150

Do not obtain this map from the file of published maps of the Department of Energy, Mines and Resources. It is a special edition of the National Topographic System.

Ne pas obtenir des renseignements sur le lieu et l'altitude exacts des repères de nivellement en consultant les cartes géographiques, Directeur des levés et de la cartographie.

Do not obtain this map from the file of published maps of the Department of Energy, Mines and Resources. It is a special edition of the National Topographic System.

Ne pas obtenir des renseignements sur le lieu et l'altitude exacts des repères de nivellement en consultant les cartes géographiques, Directeur des levés et de la cartographie.



Military users, refer to this map as: Références de cette carte pour usage militaire.
 SERIES A 721 SÉRIE MAP 92 M/9 CARTE ÉDITION 1 MCE ÉDITION

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY

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 *
 CM * upper limit of spawning

OBSTRUCTIONS (measurements included where known)

X log jam (persistent)
 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

WSC08FB003 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
EU - Eulachan	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

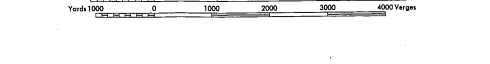
Federal, 1972, by the SURVEY AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Some aerial photographs taken in 1976. Printed in Canada. Reproduction in whole or in part is prohibited without the prior written permission of the Minister of Energy, Mines and Resources, Ottawa. Copyright not published in 1980.

This map was compared with aerial photography taken in 1976, provided by Survey and Mapping Branch, Ministry of Energy, Mines and Resources, Ottawa. Reproduction in whole or in part is prohibited without the prior written permission of the Minister of Energy, Mines and Resources, Ottawa. Copyright not published in 1980.

This Provisional Map is equivalent to a standard map in accuracy of content. Some names on this map are not yet official. Corrections or additions are invited by the Survey and Mapping Branch.

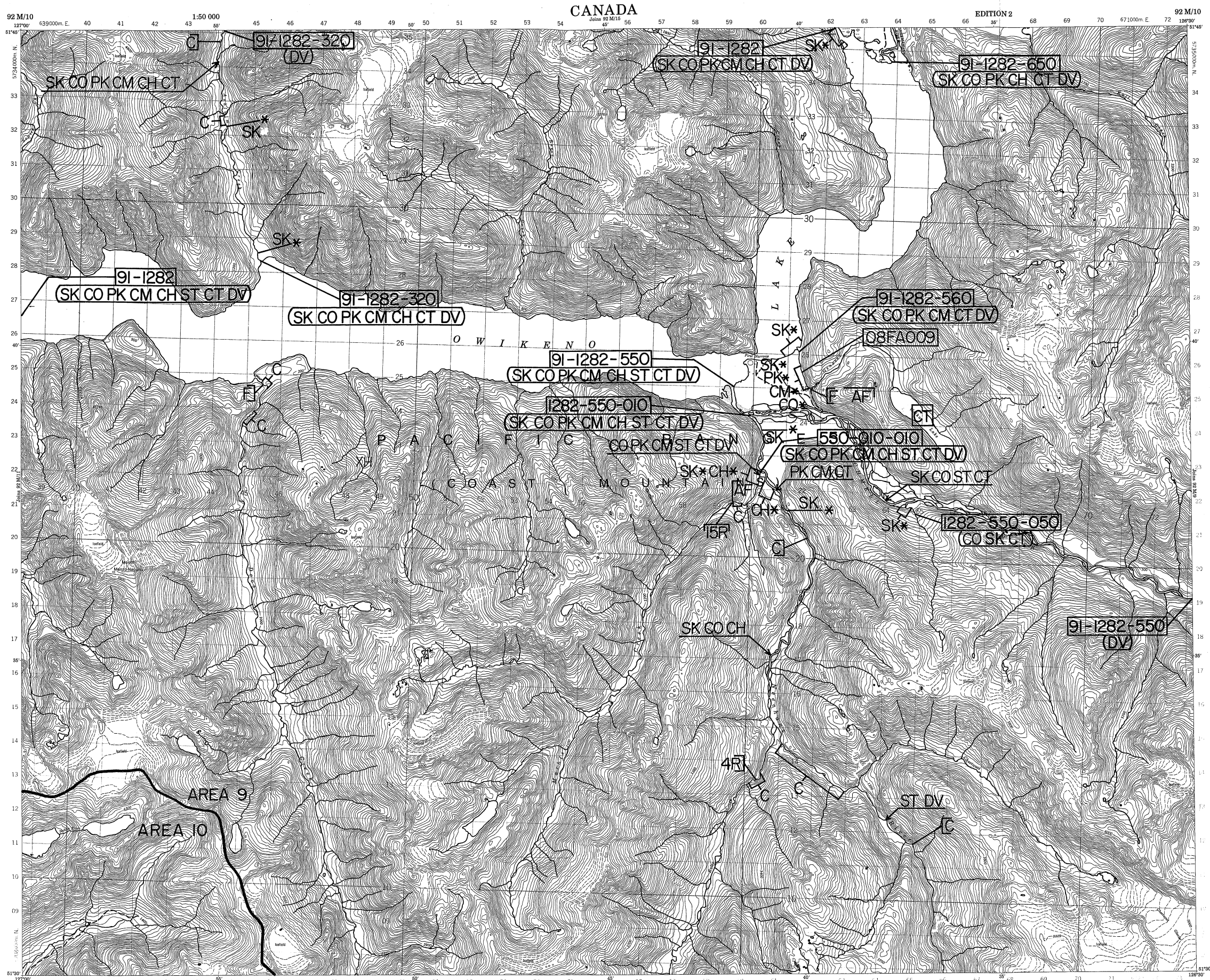
Cette carte provisoire équivaut à une carte régulière en ce qui concerne la précision de l'information. Certains noms inscrits sur cette carte ne sont pas encore officiels. La Direction des levés et de la cartographie accepte les corrections et les ajouts de renseignements et d'additions.

Cette carte a été comparée à une photographie aérienne prise en 1976 et à des données de terrain de la Direction des levés et de la cartographie de Ressources Canada. Les données de terrain ont été prises en 1976. Réimpression en 1978. Les données de terrain ont été prises en 1976. Réimpression en 1978.



CONTOUR INTERVAL: 100 FEET
 ÉLEVATIONS EN PIEDS: 100 PIEDS
 North American Datum, 1927
 Projection: Transverse Mercator

Échelle: 1:50 000
 Altitudes en mètres: 100 MÈTRES
 Datum: Nord-Américain, 1927
 Projection: Méridienne Transverse



Military users, refer to this map as: **MAP 92M/10 CARTE**
 Références de cette carte: **EDITION 2 MCE ÉDITION**

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM
STREAM INFORMATION SUMMARY

91-2500 (CO CM ST) 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 * upper limit of spawning
- CM * upper limit of spawning

OBSTRUCTIONS
 (measurements included where known)

- X 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

WSC08FB003 Water Survey of Canada Gauging Station

300 CO tributary watershed code

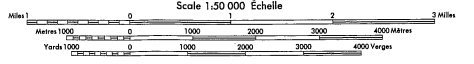
SPECIES ABBREVIATION LIST

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
EU - Eulachon	TR - Trout (general)

This Stream Information Summary map complements a companion Stream Inventory Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

MAR. 89

OWIKENO LAKE
 COAST LAND DISTRICT RANGE 2
 BRITISH COLUMBIA



Produced, 1973, by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND TECHNICAL SERVICES, BRITISH COLUMBIA. Descriptors and published in 1974.

Derived from aerial photographs taken in 1973, provided by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND TECHNICAL SERVICES, BRITISH COLUMBIA. Descriptors and published in 1974.

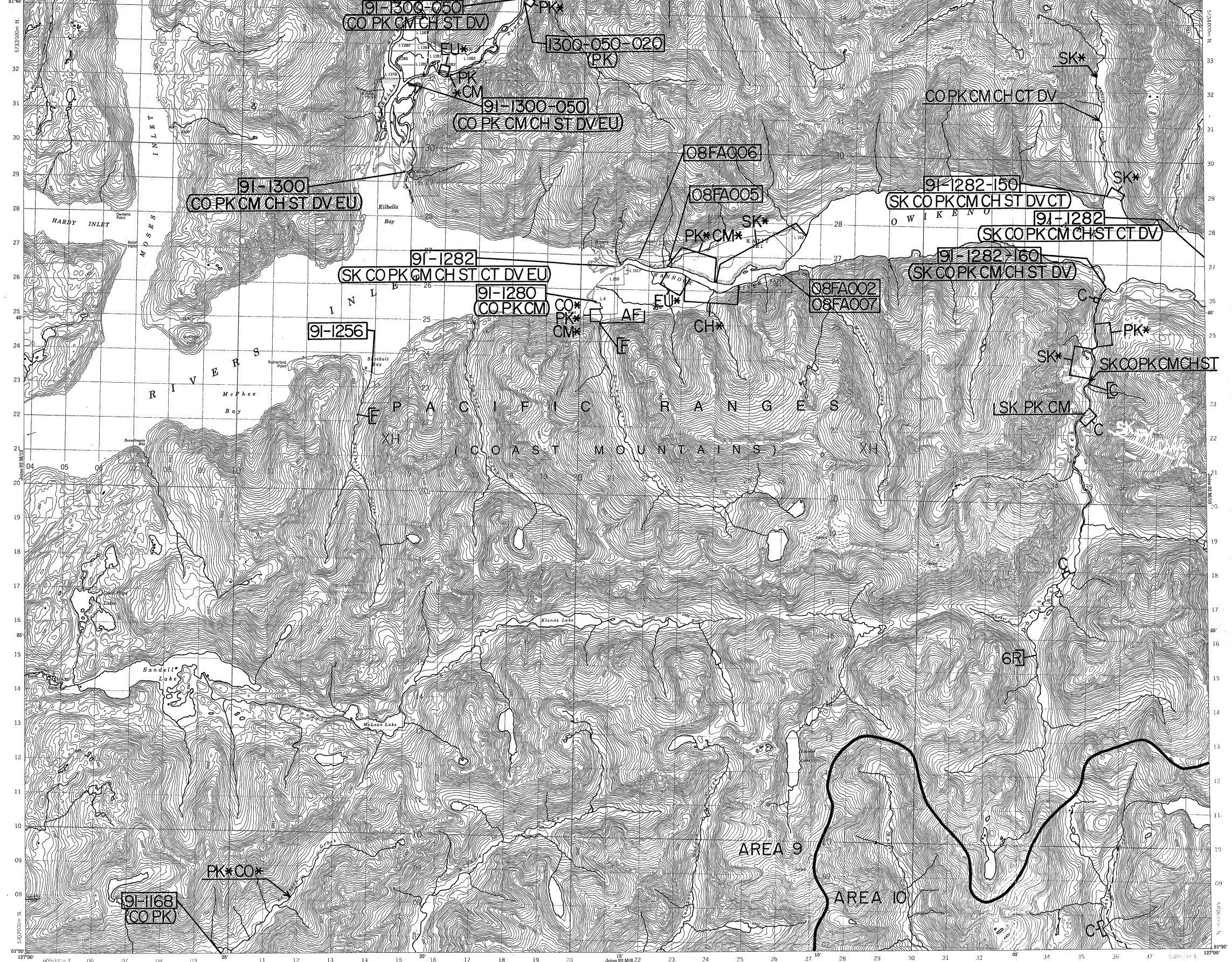
ROADS-ROUTES:
 - - - - - loose surface - de gravier

This Preliminary Map is equivalent to a standard map to accuracy of contour.

Carte préliminaire équivalente à une carte régulière au point de vue précision de l'altimétrie.

Map is part of a series of photographs obtained from 1973, prepared by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND TECHNICAL SERVICES, BRITISH COLUMBIA. Descriptors and published in 1974.

Carte préliminaire obtenue à partir d'une série de photographies obtenues en 1973, préparées par le BUREAU DES SURVEILLANCES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, PÉRIODE BRITISH COLUMBIA. Descriptors et publiée en 1974.



Military users, refer to this map as: Références de cette carte pour usage militaire.

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 *
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

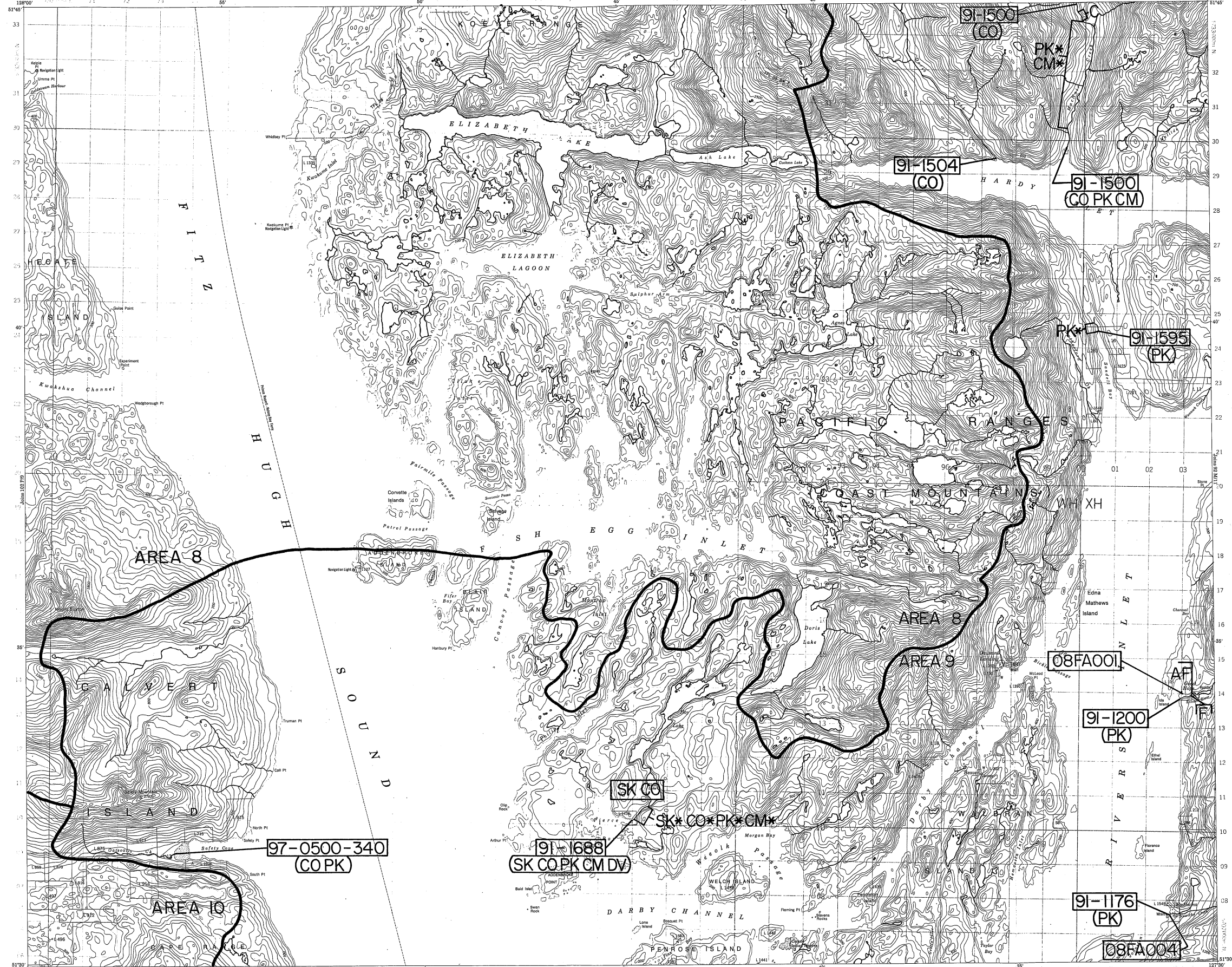
WSC0FB003 Water Survey of Canada Gauging Station
300 tributary watershed code

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
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



Military users: refer to this map as: Références de cette carte pour usage militaire: SERIES A721 SÉRIE MAP 92 M/12 CARTE EDITION 2 MCE EDITION

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY

91-2900 (CO CM ST) 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* upper limit of spawning
 CM* upper limit of spawning

OBSTRUCTIONS (measurements included where known)

X 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

WSC08FB003 Water Survey of Canada Gauging Station
 300 CO tributary watershed code

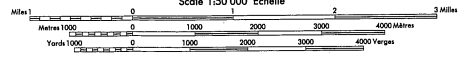
SPECIES ABBREVIATION LIST

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
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

FISH EGG INLET
 COAST LAND DISTRICT RANGE 2
 BRITISH COLUMBIA
 Scale 1:50 000 Échelle

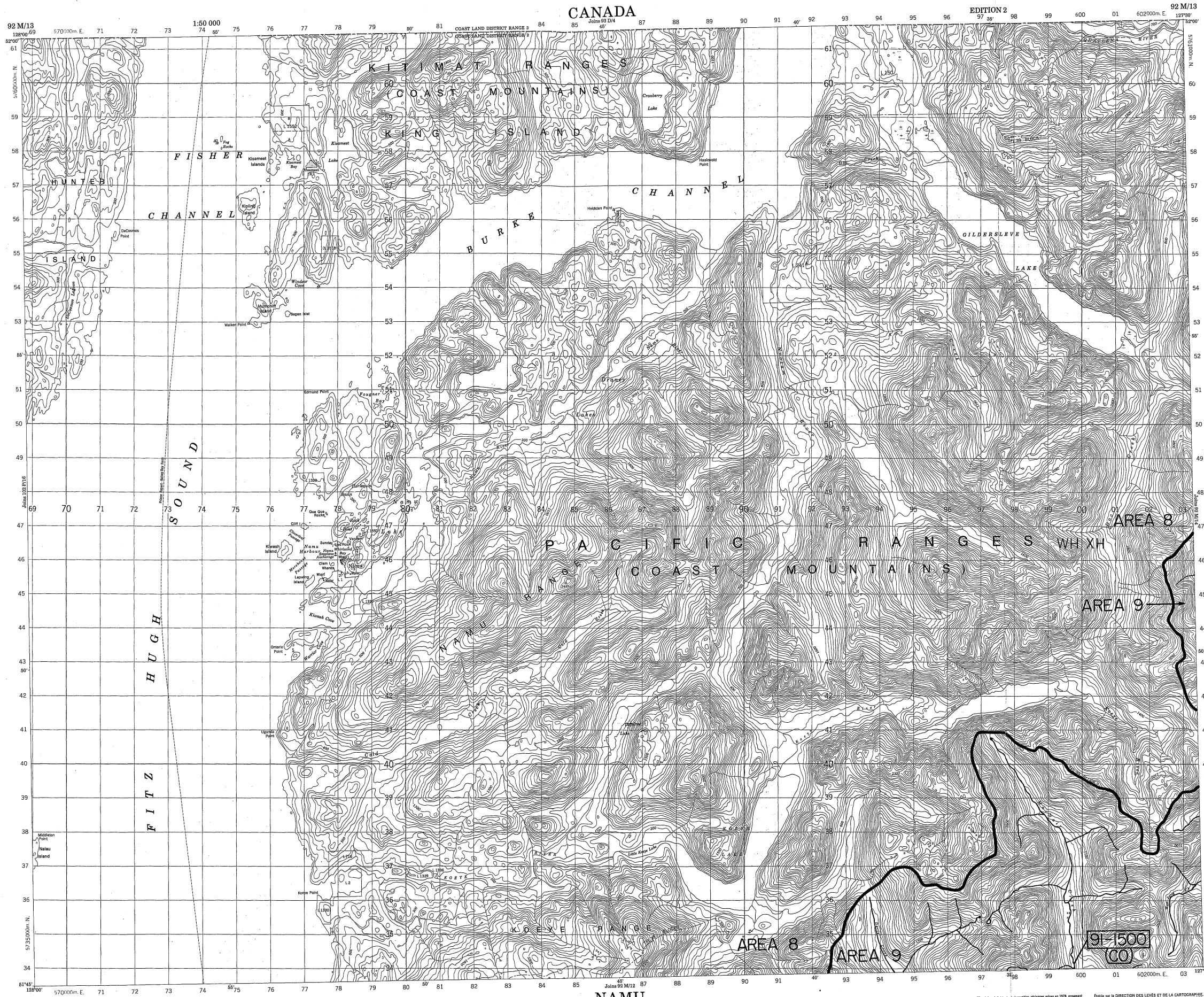


Produced 1978 by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Sourced from aerial photographs taken in 1976 provided by the SURVEYS AND MAPPING BRANCH, MINISTRY OF ENVIRONMENT, BRITISH COLUMBIA. Digitized and published in 1989.

This Provisional Map is equivalent to a standard map in accuracy of content. Some names on this map are not yet official. Corrections or additions are invited by the Surveys and Mapping Branch. CONTACT: DISTRICT OFFICE, 100 WEST BROADVIEW AVENUE, TORONTO, ONT. M6E 1B7. (416) 967-1111. Division of Field Sales and Map Sales. North American Datum 1927. Transverse Mercator Projection.

Cette carte provisoire équivaut à une carte régulière en ce qui concerne sa précision et son exactitude. Certains noms inscrits sur cette carte ne sont pas encore officiels. La Direction des cartes et de la cartographie accepte les suggestions de corrections et d'ajouts. CONTACT: BUREAU CENTRAL, 100, RUE WEST, TORONTO, ONT. M6E 1B7. (416) 967-1111. Division des ventes de cartes et de cartes au détail. Système de référence géodésique nord-américain, 1927. Projection transverse de Mercator.

Mise à jour à l'aide de photographies aériennes prises en 1976, présentée par la DIRECTION DES CARTES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Ce document est le résultat de la compilation et de la mise à jour de données géographiques existantes en 1976. Établi en 1978 par la DIRECTION DES CARTES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Ce document est le résultat de la compilation et de la mise à jour de données géographiques existantes en 1976. Ce document est le résultat de la compilation et de la mise à jour de données géographiques existantes en 1976. Ce document est le résultat de la compilation et de la mise à jour de données géographiques existantes en 1976.



Military users:
refer to this map as:
Référence de cette carte:
pour usage militaire:
SÉRIE A 721 SÉRIE
MAP 92 M/13 CARTE
ÉDITION 2 MCE ÉDITION

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*
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

W508FB003 Water Survey of Canada Gauging Station

300 CO tributary watershed code

SPECIES ABBREVIATION LIST

SK - Sockeye	BS - Bass (general)
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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 (general)

This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

AUG. 90

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NAMU
COAST LAND DISTRICT RANGE 2
BRITISH COLUMBIA
Scale 1:50 000 Échelle

Miles 0 1 2 3
Kilometers 0 1 2 3 4 5
Yards 0 1000 2000 3000 4000
Meters 0 1000 2000 3000 4000

Scale 1:50 000 Échelle
Miles 0 1 2 3
Kilometers 0 1 2 3 4 5
Yards 0 1000 2000 3000 4000
Meters 0 1000 2000 3000 4000

This Provincial Map is equivalent to a standard map of accuracy of 1:50 000.
Cet atlas provincial équivaut à une carte régionale de précision standard de 1:50 000.

Échelle par la DIRECTION DES LÈVES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, à l'échelle de 1:50 000, en 1976.
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 Références de cette carte: **MAP 92 M/15 CARTE**
 pour usage militaire: **EDITION 2 MCE ÉDITION**

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM STREAM INFORMATION SUMMARY

91-2900 CO CM ST 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 * upper limit of spawning

OBSTRUCTIONS
 (measurements included where known)

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 cascade, chute or canyon (height = 2m, length = 100m)

ENHANCEMENT/MANAGEMENT ACTIVITIES

HY = hatchery
 FW = fishway
 SC = side channel
 CH = spawning channel

WSC08FB003 Water Survey of Canada Gauging Station
 300 CO tributary watershed code

SPECIES ABBREVIATION LIST

SK - Sockeye	BS - Bass (general)
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PK - Pink	DV - Dolly Varden
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AO - All salmon	RB - Rainbow
EU - Eulachon	TR - Trout (general)

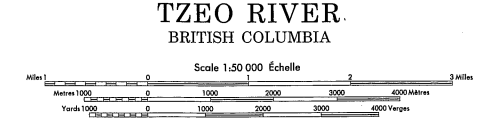
This Stream Information Summary map complements a companion Stream Summary Catalogue, organized by DFO Subdistrict. Maps and files are organized by watershed code.

MAR. 89

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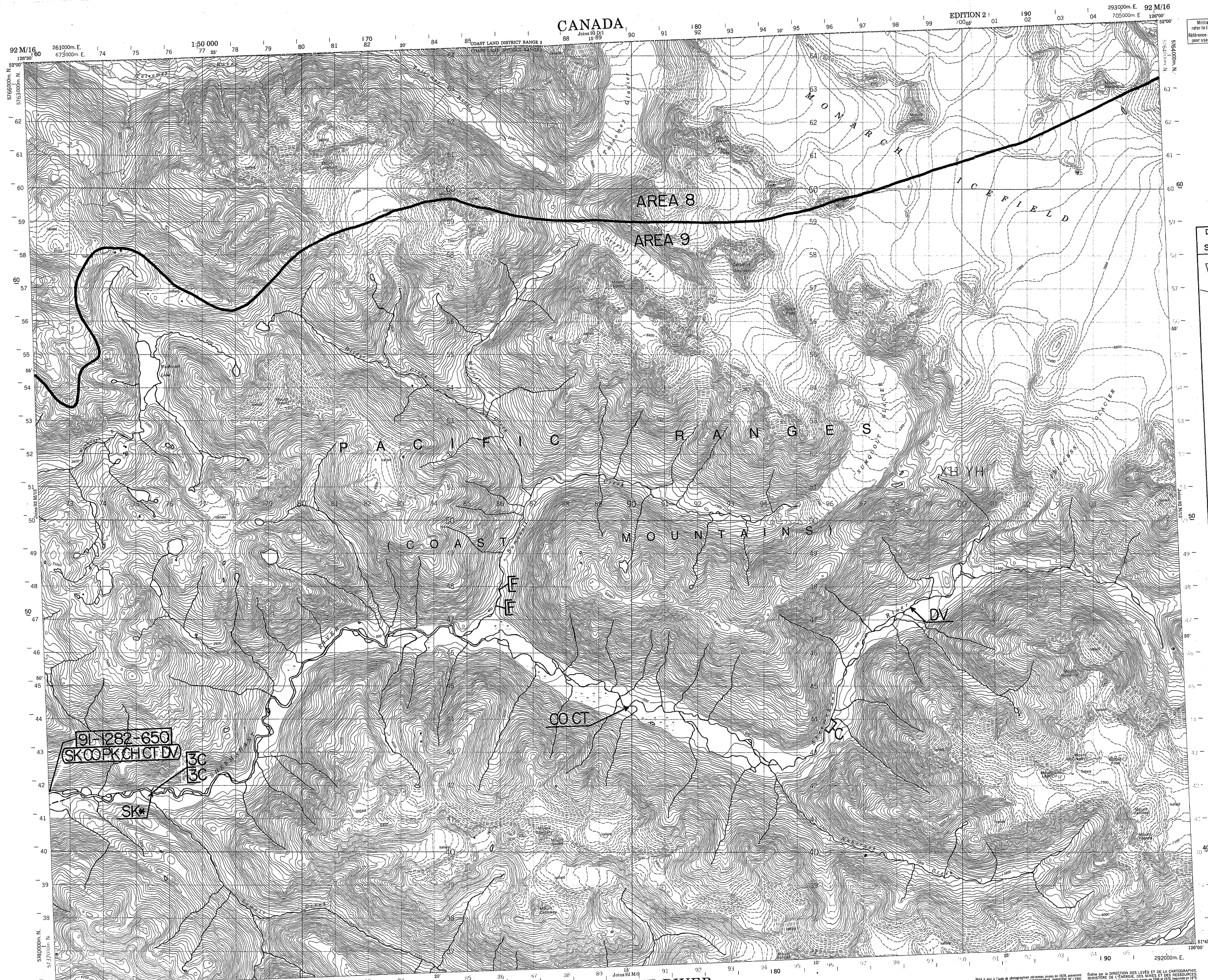
TZEO RIVER BRITISH COLUMBIA
 Scale 1:50 000 Échelle

Roads: loose or stabilized surface, all weather, gravel aggregate, built season, 2 lanes, 4 lanes, 6 lanes, 8 lanes, 10 lanes, 12 lanes, 14 lanes, 16 lanes, 18 lanes, 20 lanes, 22 lanes, 24 lanes, 26 lanes, 28 lanes, 30 lanes, 32 lanes, 34 lanes, 36 lanes, 38 lanes, 40 lanes, 42 lanes, 44 lanes, 46 lanes, 48 lanes, 50 lanes, 52 lanes, 54 lanes, 56 lanes, 58 lanes, 60 lanes, 62 lanes, 64 lanes, 66 lanes, 68 lanes, 70 lanes, 72 lanes, 74 lanes, 76 lanes, 78 lanes, 80 lanes, 82 lanes, 84 lanes, 86 lanes, 88 lanes, 90 lanes, 92 lanes, 94 lanes, 96 lanes, 98 lanes, 100 lanes.



This Provisional Map is equivalent to a standard map as shown on the cover.
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 Corrections ou ajouts sont invités par la Branche des Levés et de la Cartographie.

Mix & Match: This is a composite map of the Tzeo River watershed, based on the 1:50,000 scale maps of the Survey and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, and the 1:25,000 scale maps of the Survey and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, and the 1:25,000 scale maps of the Survey and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, and the 1:25,000 scale maps of the Survey and Mapping Branch, Department of Energy, Mines and Resources, Ottawa.



Military units, refer to this map as: Références de cette carte pour usage militaire. SERIES: A121, 92M/16, MAP 92M/16, CARTE. EDITION: 2MCE, ÉDITION.

DFO/MOEP FISH HABITAT INVENTORY AND INFORMATION PROGRAM
STREAM INFORMATION SUMMARY

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
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OBSTRUCTIONS
 (measurements included where known)

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ENHANCEMENT / MANAGEMENT ACTIVITIES

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 SC = side channel
 CH = spawning channel

WSC08FB03 Water Survey of Canada Gauging Station

300 CO tributary watershed code

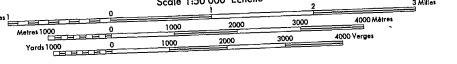
SPECIES ABBREVIATION LIST

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CO - Coho	CT - Cutthroat
PK - Pink	DV - Dolly Varden
CM - Chum	KO - Kokanee
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AF - All fish	MW - Mountain whitefish
AO - All salmon	RB - Rainbow
EU - Eulachon	TR - Trout (general)

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MAR. 89

SHEEMAHANT RIVER
 COAST LAND DISTRICT RANGE 2
 BRITISH COLUMBIA



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Échelle: 1:50 000

Projeté selon le système de coordonnées géographiques de référence de 1983.

