State of Alaska
Department of Fish and Game
Nomination for Waters
Important to Anadromous Fish

Year of Revision

Anadromous Water Catalog Volume (Region I)

USGS Quad Craig B-2

Name of Waterway Old Franks

Anadromous Water Catalog Number of Waterway

102-60-10440 & 102-60-10440-2015

Change to _____ Atlas

_____ Catalog

XX Both

Addition _____

Deletion _____

Correction Range Extension

Name addition:

USGS name _____

Local name _____

For Office Use

Nomination # 97 110 OK

Regional Supervisor — 1-2-97 Date

1/23/98

Drafted — 4/8/98 Date

Species	Date(s) Observed	Spawning	Rearing	Migration
Coho Salmon	Summers, 1992-95	X	X	X
Pink Salmon	Summers, 1992-95	X		X
Steelhead trout	Summer 1995			X

Comments: Provide any clarifying information, including number of fish observed, location of fish survey data, etc.

(See attached information from USFS and ADF&G)

PER J. HANNON 4/7/98. COHO IN SMALL LAKE SECT. 21 SOUTH OF LAKE MARY. WILL SEND DATA REPORT 1997 ON VIRGINIA CK, SM LAKE, & POLYGONS OLD FRANK SYSTEM.

ALASKA DEPT. OF FISH & GAME
JAN 30 1997
REGION II
HABITAT AND RESTORATION DIVISION

Attach a copy of a map showing location of mouth and upper points of each species, specific stream reaches identified for spawning or rearing, locations of barriers, such as falls. Attach a copy of the fish survey data, if available.

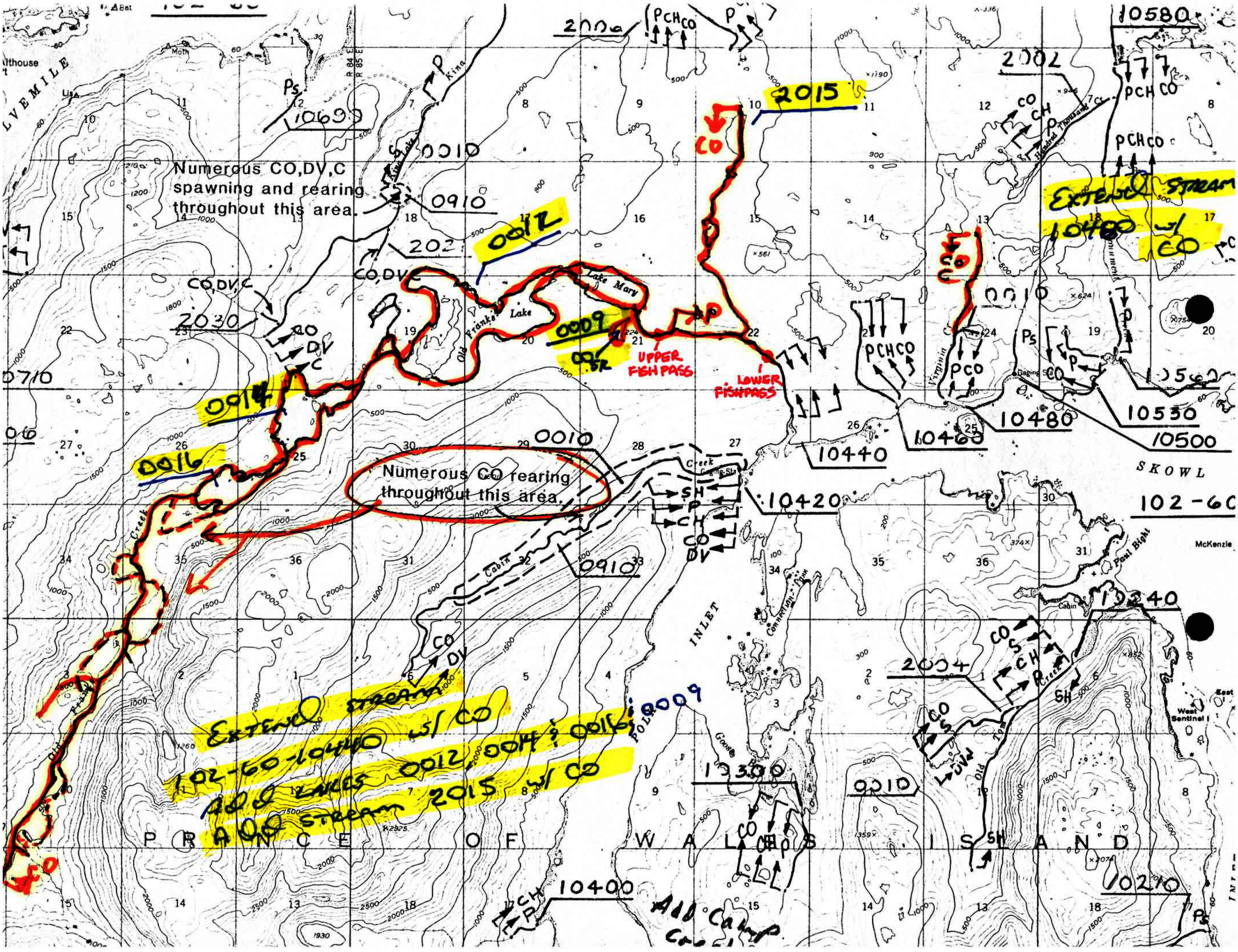
Name of Observer (please print) USFS, Craig Ranger District, Contact person: John Hannon

Date: 4-02-96 Signature: Carol Denton

Address: 2030 Sea Level Drive, #205

Ketchikan, AK 99901

Signature of Area Biologist: Jack Gustafson


Numerous CO,DV,C spawning and rearing throughout this area.
Numerous CO rearing throughout this area.
Franks Lake
Lake Mary
UPPER FISH PASS
LOWER FISHPASS
EXTEND STREAM 10400 w/ CO
EXTEND STREAM 102-60-10440 w/ CO
ADD LAKES 0012, 0014 & 0016;
ADD STREAM 2015 w/ CO
ADD Camp Creek
SKOWL
INLET
PRINCE OF WALES ISLAND
102-60
McKenzie
Paul Bight
West Sentinel I
10580
2002
2015
10690
0010
0910
0012
2021
2030
0009
0014
0016
0710
10420
10440
10460
10480
10530
10500
10240
2004
10300
0210
10400
10210
PCHCO
CO,DV,C

STATE OF ALASKA

Department of Fish & Game
Habitat & Restoration Division
Region I, Ketchikan Office
2030 Sea Level Drive, Suite 205
Ketchikan, AK 99901
(907) 225-2027 Fax: 225-2676

FACSIMILE TRANSMISSION

DATE: 12/23/96 NUMBER OF PAGES: 5

TO: Jim Durst

FROM: Jack Gustafson

MEMO: Jim: I am signing this nomination form from Carol for Old Franks stocking/enhancement, but it may need more specific information. If you have more information, or if John Hannan from the Craig Ranger District does, then we should attempt to supplement this submission with everything currently available. Thanks.

Weiss, Ed

From: Weiss, Ed
Sent: Monday, March 24, 1997 10:18 AM
To: Durst, James D.
Cc: Gustafson, Jack E.
Subject: Old Franks Creek Nomination

I'm currently processing a nomination for the Old Franks Creek system which was signed by Carol Denton of the USFS for various extensions and additions based on a 1995 summary of the fishpass project. An enclosed FAX dated 12/23/96 from Jack asks about further information. Did you ever come up with anything. Specific information I'm looking for is sample sites, methods, and results in support of the several tributary additions and extensions for Coho along Old Franks Creek, steelhead within Old Franks and addition of a trib to Virginia Creek for coho.

Ed Weiss
Habitat Biologist
ADF&G Habitat & Restoration Division
edw@fishgame.state.ak.us

Old Franks Fishpasses--summary from 1995

Three years after construction of the fishpasses it appears that coho are readily colonizing the available habitat. The coho run in Old Franks prior to fishpass construction was larger than we originally thought. We estimate that the natural run in Old Franks averaged around 300 coho. The first increase in the coho run due to the fishpasses occurred in 1995. The 1995 escapement estimate of 700 coho is a doubling of escapement compared to 1992 - 1994. This increase is due to natural reproduction from fish that passed through the fishpass in 1992. Coho adults have been found throughout the system; in Kidney Lake, above the small lake south of Lake Mary, and in upper Old Franks Creek. It is expected that coho juveniles will quickly exploit all available rearing habitat. They are now present throughout the lake system and in many off-channel habitats. Stocked coho are expected to start returning in 1996 so a larger run is anticipated. Returns from coded wire tags in 1996 will give a picture of survival of stocked coho and show which fisheries the sytstem is contributing to. Sockeye may take longer to establish than originally predicted as returns from the 1992 stocking were lower than needed to fully seed the system. The fate of stocked sockeye in Old Franks is probably similar to what occurs in Margaret Lake (Bryant et al 1995) where resident cutthroat find the sockeye to be easy prey. In addition, Old Franks has rainbow trout, not present in Margaret Lake, which may add to the predation on sockeye. Old Franks also has extensive littoral habitat where many sockeye-trout interactions probably occur.

Passage for pink salmon through the cascade falls between the two fishpasses appears to be flow dependent. Only one pink salmon has been documented through the upper fishpass so full habitat utilization by pink and chum salmon will probably not occur. The majority of pink salmon spawning is currently in the first one km above the lower fishpass. Steelhead have now been positively documented in the lower stream. Population increases may occur, but based on other escapement counts on Craig Ranger District (CRD 1994 and 1995) steelhead populations do not appear to be ultimately limited by habitat availability so predictions are difficult to make.

Rainbow populations in the lakes are consistently higher than cutthroat as indicated by catch per unit effort and population estimates. Reasons for the difference in population sizes are unknown. The size distribution of cutthroat has been consistently larger than rainbow throughout the years surveyed.

The entire lake system offers a high quality fishing experience for those willing to make the effort to access the lakes with a canoe. The lakes receive very little utilization by anglers although use will probably increase due to the introduction of coho and the recently completed road which comes to about one km from Upper Upper Old Franks Lake.

Resident fish densities in upper Old Franks Creek have been consistently lower than other Prince of Wales streams, although Old Franks is the largest of the streams we have surveyed. Observations in tributaries and palustrine habitats appear to show higher densities of resident fish, especially dolly varden, than the mainstem. However, no quantitative surveys of these "off the main channel" habitats have been conducted. The primary area of overlap of habitat utilization on the mainstem currently appears to be in the floodplain channel types in mid-channel scour pools, lateral scour pools, and some backwater pools. In these areas, competition between juvenile cutthroat/rainbow and the larger and bolder juvenile coho could result in smaller trout. It appears that nearly all rearing after the first winter occurs in either the tributaries or lakes, not in the mainstem. Resident fish less than 130 mm were captured in low numbers in the lakes as well, but this may be due to sampling methods rather than actual lower numbers of fish. In future lake surveys both small and large minnow traps and possibly beach seines could be used to determine numbers of smaller trout in the lakes.

Timber harvest in the upper watershed, above the lakes, will occur again in 1997. Currently, there are 14 harvest units of between 9 and 132 acres planned. These units were planned prior to the completion of the Old Franks Watershed Analysis (KTN Area 1994) and many units lie within the riparian habitat conservation areas. The watershed analysis will be taken into account during unit layout, but the recommendations may not be fully implemented in some high sediment transfer hazard areas. This could have some effect on the upper Old Franks stream system.

FROM
USFS - CRAIG RANGER DIST.
ANNUAL REPORT

Alaska Department of Fish and Game

Old Franks Lakes
Coho Bioenhancement Project

USFS, Craig Ranger District, completed two fishpasses on lower Old Franks Creek, In 1992, opening up 730 acres of lake habitat and 3.8 miles of stream habitat to anadromous fish. The Karta River coho stock was chosen for this project by ADF&G because it is geographically the closest major coho run to the Old Franks system.

The third and final brood for this project is now incubating at SSRAA's Whitman Lake Hatchery. The egg take and fish planting record is presented below:

Brood Year	Eggs taken	Fish planted	Stocking Location
1993	210,000	96,600	Upper Old Franks Lake
1994	220,000	78,700	Bridge, inlet stream
		139,400	Old Franks Lake
1995	165,000	(July 1996)	(Old Franks Lake)

Adult return of enhanced fish will begin in 1996. Tag recoveries by ADF&G's port sampling program will give us a first look at run timing and interception pattern.

The project has been funded by U.S./Canada mitigation money.

Little Coal Bay Units--Fisheries Report

Units 613-123, 124, 121, 127, 125, 126, 127?, 612-101

George Nickerson and John Hannon looked at these units August 24-26, 1993 to make the following fisheries prescription recommendations. We looked at all areas with fish habitat or potential fish habitat. We also flagged in any class III streams we came across along the way. There are probably some additional class III streams in some of the units that we did not see. The following are fisheries prescriptions for these units.

613-124 — Virginia Creek

The stream between units 613-124 and 613-123 is anadromous up to a 20 foot falls at about 300 feet above the private land boundary. Another 10 foot cascade falls is about 75 feet above this falls. Coho and cutthroat fingerlings are abundant up to the falls. We need to send a revision in for the anadromous catalog as this stream is catalogued as being anadromous only up to the lake, 3/4 mile below the unit. Above this falls no fish were caught in four traps set for six hours baited with salmon eggs and no fish were observed. The channel type of this stream is B2/B6 below the falls and B1/B2 above the falls to a point about 400 feet above the flagged road crossing where it becomes more bedrock controlled in a B4 channel. The stream is about six meters wide below and above the falls with gravel as the dominant substrate and cobble as subdominant. The following buffer widths are recommended on this stream:

below barrier falls: 100' TTRA buffer required, flagged blue/white
above barrier falls: B1/B2 portion--60' buffer (no fish above falls)
B4 portion--25' buffer. The stream is flagged orange/white above the falls.

One rearing channel with coho present was flagged along this stream for about 100'. The rearing channel parallels the main stream about 15' to the east.

Fish timing is not required on the road crossing on this stream as long as instream work can be limited to a low flow period as anadromous habitat is only 1/3 mile downstream. Fish passage is not required on the crossing as no fish were found above barrier. Fish passage would be easy to provide as the stream is at a low gradient with little control at the crossing.

Lake north of 613-124: This lake is approximately 50 acres and appears to be fairly deep from the shore and on aerial photos. The lake has a high shoreline development with many low gradient tributary streams and slough and beaver pond habitat making for some good rearing habitat for fish. No fish were observed when walking along the south edge of the lake or along a tributary stream on the southeast. The outlet stream is catalogued as being anadromous (coho, pink, chum) up the lake outlet but not into the lake. We did not walk around the lake to check for fish or fish barriers in the outlet stream. The FEIS calls for a 200' buffer on class I lakes and 200' of 75% retention on class II and III lakes. No lake sizes are specified in the standards and guidelines. The lake flows directly into a class I stream so a 100' buffer is required whether or not fish are present according to the Proposed Revised Forest Plan. It calls for uneven aged management in the zone 100' to 500' out for lakes greater than 50 acres. **I recommend a 200' no-cut buffer on this lake.**

Lake southeast of 613-124: This lake is approximately seven acres and at an elevation of about 470 feet. The entire lake appears to be relatively shallow with half of it less than four feet deep. The deep area in the center is probably about ten feet deep. The lake bottom is largely muck. No fish were observed when walking along the west shoreline. The outlet stream is not catalogued as being anadromous until about one mile below the lake. The Proposed Revised Forest Plan calls for maintaining 50% of natural shading vegetation on class III temperature sensitive lakes. I would consider this area temperature sensitive as it is a south facing watershed and much of the watershed has been harvested. The FEIS again calls for 200' of 75% retention along class II and III lakes although no size categories are given for a lake (versus a pond or whatever). On this lake **I recommend a 50' no-cut buffer with another 50' of partial cut.** This should not conflict with the proposed unit boundary.

There was a piece of green/white flagging hung at the top of a stream in the east part of this unit. At that point it didn't appear to be a stream that would need to be protected under the key. We did not walk down the stream as it didn't appear to flow to an area where it would have an effect on fish habitat.

Unit 613-123: The unit contains an A5 channel which is a tributary to the fish stream at about 300' above the road crossing. We flagged the stream orange/white through the A5 portion as the sideslopes are unstable (>50%) and the incision depth throughout the reach averages around eight feet. The stream flattens out on the south side of the unit in an A7 channel. The stream is flagged green/white through this portion until it leaves the unit.

No other streams were found in this unit, although we did not walk all the way to the north end of the unit.

Units 613-127 and 613-121: No streams were encountered in these two units.

613-125: A seven acre lake is at the base of this unit to the east. The lake

is at about 600 feet elevation. It looks fairly deep from the shore and on aerial photos. The shore is mostly mucky silt. No fish were observed when walking along the west and north lake shore. The outlet stream is steep so fish access from below is not possible. FEIS S&G's call for 200' of 75% retention along class II and III lakes although no sizes are given to define a lake. The Proposed Revised Forest Plan allows all silvicultural systems available while meeting objectives on class III lakes. On class II lakes over five acres it allows uneven-aged management within 100' of lakes and ponds. Since anadromous habitat is about a mile downstream and the lake probably has no resident fish population **I recommend a 60' buffer** (or a 50' buffer with another 50' of partial cut if partial cut is a viable option).

The road is flagged in within 50' of the northwest corner of the lake and would run along the top of the small outflow channel for about 75'. The channel doesn't appear to recieve very high flows but **I recommend changing**

the road location so it crosses perpendicular to the stream and is a little farther away from the lakeshore.

613-127: The outflow stream from the lake flows through this unit. It is an A4 channel at the top of the unit, incised 16' and flagged orange/white. In the center of the unit the stream flattens out and is shallowly incised so it is flagged green/white for about a 300' reach. Below this to the bottom of the unit it is a deeply incised, A1, channel and flagged orange/white. The stream doesn't get real high flows but is deeply incised with unstable sideslopes and boulder substrate.

Another stream east of the above stream is flagged orange/white at the bottom of the unit where it serves as the unit boundary. It's an A4 channel incised about 20' at a 30% gradient. The unit boundary then crosses the stream and heads on over to the east. We did not walk up this stream to the top of the unit.

There may be one other class III stream that needs to be protected in the west part of the unit.

613-126: We did not walk through this unit. On the topo map there appears to be a class III stream on the west unit boundary.

102-60-10600

612-101: The stream below this unit to the north is class I with coho juveniles and dolly varden present. **A 100' TTRA buffer is required.** The stream is flagged blue/white. It's a B2 channel below the unit, B1 at the mouth, and B6 above the unit to its origin in the muskeg system to the west. No streams were seen entering this stream from the unit. We did not walk up through the unit.

We walked the stream up to check whether the road crossed it and needed fish passage or timing. The road is about 300 feet above the origin of the stream so nothing is required. Fish are present in the stream all the way up to its origin in the muskeg. The stream is catalogued for pink salmon only and only up to about the west edge of the unit. We need to send in a revision adding in coho to the top of the drainage.

John Hannon
Fisheries Biologist

Camp Creek 1992 Survey Data

1991

NO		UNIT	TYP	LENGT	WIDTH	DEPT	AREA	Max Dept	Dom. Subst	RIPARIAN TYPE	wood no's	Cover x size	other	SPAWN GRAVEL%	Spawnin Area	REARIN %	Rearing Area	GRADIEN	CH.TYP
Channel Around beaver pond																			
side channel insert at r23																			
14		P07	BW	305	244	15	7.442	20	GR	Alder-2 G	1	2				75	5.6815	2	B1
18	*	P10	BW	305	2745	20	83723	30	SD	Alder-2 G	2	3				100	8.3723	2	B1
27	*	P15	BW	915	2745	20	25117		SD	Alder-2 G	2	2	OB			100	25.117	2	B1
28		P16	BW	549	1525	10	83723		CB	Alder-2 G	1	3				75	6.2792	2	B1
47		P27	BW	7.625	3355	20	25.582	50	CB	Alder-2 GR			OB			70	17.907	2	B1
54		P31	BW	5185	305	20	15.814		CB	Alder-2 GR						70	11.07	2	B1
56		P33	BW	854	488	30	41.675		CB	Alder-2 G	2	2				100	41.675	2	B1
10		P04	DM	1403	8845	25	124.1	25	GR	Alder-2 G	2	5		50	62.0477	25	31.024	2	B1
17		P09	DM	1281	854	40	109.4	100	CB	Alder-2 G	2	6		10	10.9397	50	54.699	2	B1
34	*	P20	DM	122	61	35	74.42	75	GR	Alder-2 G	2	7	RW2	10	7.442	50	37.21	2	B1
87		P46	DM	32.33	5185	30	167.63	40	SD	Alder-2 G	2	3		5	8.38155	40	67.052	2	B1
105		P54	DM	10675	1.83	25	19.535	40	CB	Alder-2 G	3	1	RW2			25	4.8838		B1
117		P59	DM	14335	3355	30	48.094	40	GR	Alder-2 G	5	1		5	2.4047	25	12.023		B1
119		P60	DM	61	366	40	22.326	70	GR	Alder-2 G	2	3	RW			70	15.628		B1
50		P29	ED	23.485	6.405	30	150.42		CB	Alder-2 G	3	2	RW2			40	60.169	2	B1
65		P37	ED	488	488	40	23.814	50	CB	Alder-2 GR			RW			50	11.907	2	B1
96	*	P50	ED	5185	366	30	18.977	70	CB	Alder-2 G	4	2				50	9.4886		B1
26		P14	G	183	488	25	89.304		CB	Alder-2 G	2	2		50	44.652	3	2.6791	2	B1
52	*	P30	G	3416	61	25	208.38		CB	Alder-2 G	3	2	RW3	20	41.6752	10	20.838	2	B1
20		P11	LSC	19215	61	30	117.21	110	CB	Alder-2 G	1	6	RW	25	29.3029	50	58.606	2	B1
22		P12	LSC	19215	5795	30	111.35	70	CB	Alder-2 G	2	2		25	27.8377	10	11.135	2	B1
24		P13	LSC	8235	7625	30	62.792	75	CB	Alder-2 G	1	7	RW			10	6.2792	2	B1
29		P17	LSC	1891	549	30	103.82	90	CB	Alder-2 G	2	6		5	5.1908	30	31.145	2	B1
31		P18	LSC	793	488	40	38.698	75	CB	Alder-2 G	2	6				40	15.479	2	B1
39		P23	LSC	1586	7625	25	120.93	40	CB	Alder-2 G	2	1	RW2	5	6.04663	10	12.093	2	B1
41		P24	LSC	16165	4575	30	73.955	50	CB	Alder-2 G	2	2	RW	10	7.39549	10	7.3955	2	B1
43	*	P25	LSC/	20.435	3965	30	81.025	40	CB	Alder-2 G	3	1	OB	5	4.05124	10	8.1025	2	B1
45		P26	LSC	38735	61	30	236.28	120	CB	Alder-2 G	6	3	RW3	50	118.142	50	118.14	2	B1
59		P34	LSC	854	61	30	52.094		CB	Alder-2 G	1	3	RW			50	26.047	2	B1
61	*	P35	LSC	9.456	3.965	30	37.489	40	CB	Alder-2 G	3	2				30	11.247	2	B1
63		P36	LSC	1037	549	50	56.931	100	CB	Alder-2 GR			RW	10	5.69313	70	39.852	2	B1
76	*	P40	LSC	14.945	4575	30	68.373	70	CB	Alder-2 G	9	5		5	3.41867	60	41.024	3	B2
82		P43	LSC	244	61	30	148.84	80	CB	Alder-2 G	5	1	RW2	10	14.884	75	111.63	2	B1
84		P44	LSC	3.965	732	25	29.024	40	CB	Alder-2 G	5	2	RW			25	7.256	2	B1
86	*	P45	LSC	122	7625	30	93.025	100	CB	Alder-2 G	15	5	RW			70	65.118	2	B1
90		P47	LSC	183	183	25	33.489	35	CB	Alder-2 G	8	4				25	8.3723		B1
92		P48	LSC	122	4575	30	55.815	50	CB	Alder-2 G	1	3	RW			65	36.28		B1
94		P49	LSC	854	183	20	15.628	30	CB	Alder-2 GR			OB			50	7.8141		B1
110		P56	LSC	7016	3965	35	27.814	70	CB	Alder-2 G	1	2	RW3			70	19.47		B1
3		P02	MSC	13115	5795	40	76.001	70	BD	Bridge						10	7.6001	3	E1
11	*	P05	MSC	1769	549	30	97.118	30	CB	Alder-2 G	4	5		10	9.71181	5	4.8559	2	B1
80		P42	MSC	1037	427	30	44.28		CB	Alder-2 G	5	5	RW			35	15.498	3	B2
106	*	P55	MSC	2867	3965	30	113.68	75	CB	Alder-2 G	15	4	RW3/O	5	5.68383	75	85.257		B1
121		P61	MSC	1037	366	20	37.954	40	CB	Alder-2 GR						40	15.182		B1
129		P66	MSC	1342	5795	50	77.769	75	BD	Alder-2 G	3	2	RW			80	62.215		B4
9		P03	PP	11895	61	20	7256	35	CB	Alder-2 G	2	5		25	181399	5	3.628	2	B1
13		P06	PP	1098	6405	30	70.327	75	CB	Alder-2 G	2	5				20	14.065	2	B1
16		P08	PP	8845	7625	35	67.443	55	CB	Alder-2 G	2	6				50	33.722	2	B1
32		P19	PP	1037	7015	30	72.746	60	CB	Alder-2 G	1	2	RW			20	14.549	2	B1
36		P21	PP/B	366	2501	50	91.537	110	CB	Alder-2 G	3	6	RW			75	68.652	2	B1
38		P22	PP/L	10675	549	40	58.606	80	GR	Alder-2 G	5	2	RW	5	2.93029	75	43.954	2	B1
48		P28	PP	2013	7625	30	153.49		CB	Alder-2 G	2	2	RW2	25	38.3728	25	38.373	2	B1
56		P32	PP	4575	8235	30	37.675	50	CB	Alder-2 G	2	5	RW			40	15.07	2	B1
67		P38	PP	7625	732	30	55.815	60	CB	Alder-2 G	6	3	RW2			70	39.071	3	B2
70		P39	PP	7015	5185	25	36.373	40	CB	Alder-2 G	6	4	RW			5	1.8186	3	B2
78		P41	PP	3965	549	40	21.768	75	CB	Alder-2 G	1	3				50	10.884	3	B2
98		P51	PP	732	2135	30	15.628	50	CB	Alder-2 G	3	3	RW	5	0.78141	50	7.8141		B1
99		P52	PP	16165	3965	40	64.094	60	CB	Alder-2 G	1	3	RW/OB	25	16.0236	60	38.457		B1
104		P53	PP	61	1525	25	9.3025	40	CB	Alder-2 G	2	3	OB			25	2.3256		B1
112		P57	PP	366	488	30	17.861	50	BD	Alder-2 G	4	3	RW2			50	8.9304		B1
115	*	P58	PP	976	854	70	83.35	90	GR	Alder-2 G	7	3	RW			100	83.35		B1
123		P62	PP	488	7625	40	37.21	90	BD	Alder-2 G	2	3	RW			100	37.21		B1
124		P63	PP	793	427	40	33.861	70	BD	Alder-2 G	5	3	RW			100	33.861		B1
125	*	P64	PP	4575	854	40	39.071	60	BD	Alder-2 G	10	3	RW			95	37.117		B4
127		P65	PP	488	4575	90	22.326	120	BD	Alder-2 G	7	2				80	17.861		B4
2		P01	TR	5185	4575	75	23.721	100	BR	Con-2 GR						10	2.3721	3	E1
12		R07	CS	732	5185	10	37.954	10	BD	Alder-2 GR								2	B1
4		R02	G	24705	61	20	150.7	35	CB	Con-2 GR	2	5				3	4.521	3	B2
6	*	R04	G	915	6405	20	58.606	30	CB	Alder-2 GR			RW	50	29.3029	5	2.9303	2	B1
40		R17	G	13115	6405	10	84.002		CB	Alder-2 G	1	5		5	4.20008			2	B1

68	*	R25	G	15.555	6.71	20	104.37		CB	Alder-2 G	2	1		25	26.0935	3	3.1312	2	B1
72		R33	G	13.115	4.27	25	56.001		CB	Alder-2 G	1	4	RW			3	1.68	3	B2
74		R35	G	15.25	3.05	30	46.513	40	CB	Alder-2 G	1	5	RW2	5	2.32563	10	4.6513	3	B2
81	*	R39	G	24.095	6.405	25	154.33		BD	Alder-2 G	5	2				10	15.433	2	B1
88		R42	G	21.35	4.575	15	97.676		GR	Beaver P.	2	2	RW	50	48.8381	10	9.7676	2	B1
91		R44	G	39.955	3.66	15	146.24		CB	Alder-2 GR				5	7.31177	5	7.3118		B1
97		R47	G	13.42	1.83	20	24.559		CB	Alder-2 G	10	1				5	1.2279		B1
100		R48	G	69.54	1.83	20	127.26		CB	Alder-2 G	20	1		5	6.36291	1	1.2726		B1
102		R50	G	12.2	3.355	20	40.931		CB	Alder-2 G	2	1				5	2.0466		B1
113		R55	G	18.605	4.575	20	85.118	40	GR	Alder-2 G	4	2	RW2	75	63.8384	10	8.5118		B1
116		R57	G	15.25	4.27	20	65.118	30	GR	Alder-2 G	3	2	RW	70	45.5823	5	3.2559		B1
1		R01	RF	11.285	5.185	25	58.513	60	BR	Con-2 GR								3	E1
5		R03	RF	50.325	6.1	20	306.98	20	CB	Alder	2	2		5	15.3491			3	B1
7		R05	RF	23.18	6.405	20	148.47	25	BR	Alder-2 GR								3	B1
8		R06	RF	25.01	6.1	15	152.56	20	CB	Alder-2 G	1	5		10	15.2561			2	B1
15		R08	RF	27.755	3.05	15	84.663	15	CB	Alder-2 G	4	2						2	B1
19		R09	RF	49.105	9.455	15	464.29	15	CB	Alder-2 GR				10	46.4288	2	9.2858	2	B1
21		R10	RF	10.065	7.015	10	70.606		CB	Alder-2 GR								2	B1
	*	R11	RF	6.4008	7.01	10	44.872		CB	Alder-2 GR								2	B1
25		R12	RF	10.065	5.795	10	58.327		CB	Alder-2 G	1	6						2	B1
30		R13	RF	19.215	6.405	15	123.07		CB	Alder-2 G	2	6		5	6.1536	3	3.6922	2	B1
33		R14	RF	9.15	1.525	15	13.964		CB	Alder-2 GR			OB					2	B1
35		R15	RF	6.1	6.1	5	37.21		CB	Alder-2 GR								2	B1
37		R16	RF	8.845	3.66	10	32.373		CB	Alder-2 GR								2	B1
42	*	R18	RF	13.725	7.015	20	96.281		CB	Alder-2 G	1	2	RW					2	B1
44		R19	RF	30.805	7.93	10	244.28		CB	Alder-2 GR			OB					2	B1
46		R20	RF	61.85	6.405	20	332.1		CB	Alder-2 G	1	3	RW					2	B1
49		R21	RF	35.075	3.05	10	106.98	50	CB	Alder-2 GR								2	B1
51		R22	RF	40.565	9.15	20	371.17	50	CB	Alder-2 G	4	5						2	B1
53		R23	RF	76.25	4.27	15	325.59		CB	Alder-2 GR								2	B1
57		R24	RF	38.43	8.845	10	339.91		CB	Alder-2 GR								2	B1
60		R26	RF	43.615	5.49	10	239.46	30	CB	Alder-2 G	2	5	RW	2	4.78893	2	4.7889	2	B1
62		R27	RF	6.71	5.49	10	36.838		CB	Alder-2 GR								2	B1
64		R28	RF	157.08	6.1	10	958.16	25	CB	Alder-2 G	10	2				1	9.5816	2	B1
66		R29	RF	17.385	3.965	15	68.932	30	CB	Alder-2 GR			RW					2	B1
68		R30	RF	60.085	6.1	10	366.52	25	CB	Alder-2 GR			RW2					3	B2
69		R31	RF	94.55	7.625	15	720.94		CB	Alder-2 G	2	2	RW					3	B2
71	*	R32	RF	31.415	4.27	20	134.14		CB	Alder-2 G	10	4						3	B2
73		R34	RF	78.995	6.405	15	505.96		CB	Alder-2 G	4	4	RW			1	5.0596	3	B2
75		R36	RF	57.34	7.015	15	402.24		CB	Alder-2 G	10	4	RW2			1	4.0224	3	B2
77		R37	RF	17.385	4.27	10	74.234		CB	Alder-2 GR								3	B2
79		R38	RF	28.365	7.625	10	216.28		CB	Alder-2 G	1	6				1	2.1628	3	B2
83		R40	RF	44.835	4.27	20	191.45		CB	Alder-2 G	4	5	RW2	3	5.74336			2	B1
85		R41	RF	104.92	7.32	15	768.01		CB	Alder-2 G	10	2	RW					2	B1
89		R43	RF	12.81	1.22	10	15.628		CB	Alder-2 G	2	2							B1
93		R45	RF	23.18	2.44	10	56.559		CB	Alder-2 G	10	1							B1
95	*	R46	RF	26.23	3.66	10	96.002		CB	Alder-2 G	1	2	OB						B1
101		R49	RF	42.395	4.88	20	206.89		CB	Alder-2 G	10	1							B1
103		R51	RF	33.245	2.745	15	91.258		CB	Alder-2 G	5	1							B1
107		R52	RF	22.875	2.745	20	62.792		CB	Alder-2 G	2	3	RW						B1
109	*	R53	RF	53.375	4.27	15	227.91		BD	Alder-2 G	4	3				2	4.6582		B1
111		R54	RF	14.335	6.1	10	87.444		BD	Alder-2 GR									B1
114		R56	RF	10.675	5.49	10	58.606		CB	Alder-2 G	1	2	RW2	10	5.86057				B1
118		R58	RF	7.625	6.405	20	48.838	30	CB	Alder-2 G	8	2	RW/OB			20	9.7676		B1
120		R59	RF	15.86	6.1	10	96.746	20	CB	Alder-2 G	2	1		30	29.0238				B1
122	*	R60	RF	8.845	2.745	20	24.28		BD	Alder-2 G	2	1		10	2.42795	2	0.4856		B1
126		R61	RF	38.43	6.1	35	234.42	45	BD	Alder-2 GR				25	58.6058				B4
128		R62	RF	13.115	7.93	30	104	40	BD	Alder-2 GR			RW2						B4

STREAM LENGTH SURVEYED	2710.53 METERS
TOTAL STREAM AREA	15071 SQUARE METERS
STREAM AREA PER KILOMETER	5560.17 SQUARE METERS
TOTAL POOL AREA	4284.92 SQUARE METERS
TOTAL RIFFLE AREA	10786.1 SQUARE METERS
POOL RIFFLE RATIO	0.39726

BACKWATER POOL AREA	132.375	BW
DAM POOL AREA	565.499	DM
EDDY POOL AREA	193.213	ED
GLIDE POOL AREA	297.68	G
LATERAL SCOUR POOL AREA	1566.59	LSC
MID-CHANNEL SCOUR POOL AREA	646.799	MSC
PLUNGE POOL AREA	1061.06	PP
TRENCH POOL AREA	23.7216	TR
CASCADE AREA	37.9542	CB
GLIDE AREA	1241.42	G
RIFFLE AREA	9506.72	RF

	TOTAL #	SPAWNING AREA	REARING AREA
POOLS	4284.92	491.14874375	1829.785
RIFFL	10786	423.49352175	119.1655
TOTAL	15071	915	1948.929

DOMINANT SUBSTRATE (# OF UNITS)	
BOULDER	16
BEDROCK	3
COBBLE	98
GRAVEL	10
SAND	3
TOTAL	128

Final TOTALS 7 29 92

UNIT	COHO	CUTTHROAT	DOLLY	RAINBO	TYPE	AREA	COHO/	CUTTHROAT	DOLLY	RAINBOW/M**2
P05	4				MSC	97.1	0.041	0	0	0
P10	11				SW	8.57	1.316	0	0	0
P20	27	1		11	DM	74.4	0.369	0.0134372	0	0.148
P25	3		1	25	LSC	81	0.037	0	0.012	0.309
P30	37			5	G	208	0.178	0	0	0.024
P35	12			6	LSC	37.5	0.32	0	0	0.16
P40	93			22	LSC	68.4	1.36	0	0	0.322
P45	9				LSC	93	0.097	0	0	0
P50	20				ED	19	1.056	0	0	0
P55	276			11	MSC	114	2.465	0	0	0.097
P56	20			1	PP	83.4	0.24	0	0	0.012
P64	4		1		PP	39.1	0.102	0	0.026	0
R04	0	6	1	1	G	58.6	0	0.1023716	0.017	0.017
R11	0			6	RF	44.9	0	0	0	0.178
R18	1			4	RF	96.3	0.01	0	0	0.062
R25	93			23	G	104	0.891	0	0	0.22
R32	22			3	RF	134	0.164	0	0	0.022
R39	50				G	154	0.324	0	0	0
R46	9			1	RF	96	0.094	0	0	0.01
R53	13				RF	228	0.057	0	0	0
R60	0				RF	24.3	0	0	0	0

GRAPHS

Totals

combine cohob/nc

combine

HABITA	COHO	CUTTHROAT	DOLLY	RAINBOW	AREA	COHO	CUTTHROAT	DOLLY	RAINBOW		FISH/1000 SQUARE METERS COHO	CUTTHROA	DOLLY	RAINBOW
POOL	510	1	2	81	923	0.561	0.0010831	0.002	0.088	POOLS	561.04	1.08	2.17	87.73
RIFFLE	188	6	1	40	941	0.2	0.0063776	0.001	0.043	RIFFLES	199.83	6.38	1.06	42.52

TOTAL FISH POPULATIONS

POOL	POOL CO	****	POOL CU	6.66	POOL DOL	9.28	POOL RAIN ******
RIFF	RIFFLE	****	RIFFLE	68.79	RIFFLE DOLL	****	RIFFLE RAIN ******
TOTA	TOTAL C	****	TOTAL C	75.43	TOTAL DOLL	****	TOTAL RAIN ******

COHO CUTTHROAT DOLLY RAINBOW

REGRESSION OF COHO NUMBERS VS UNIT AREA

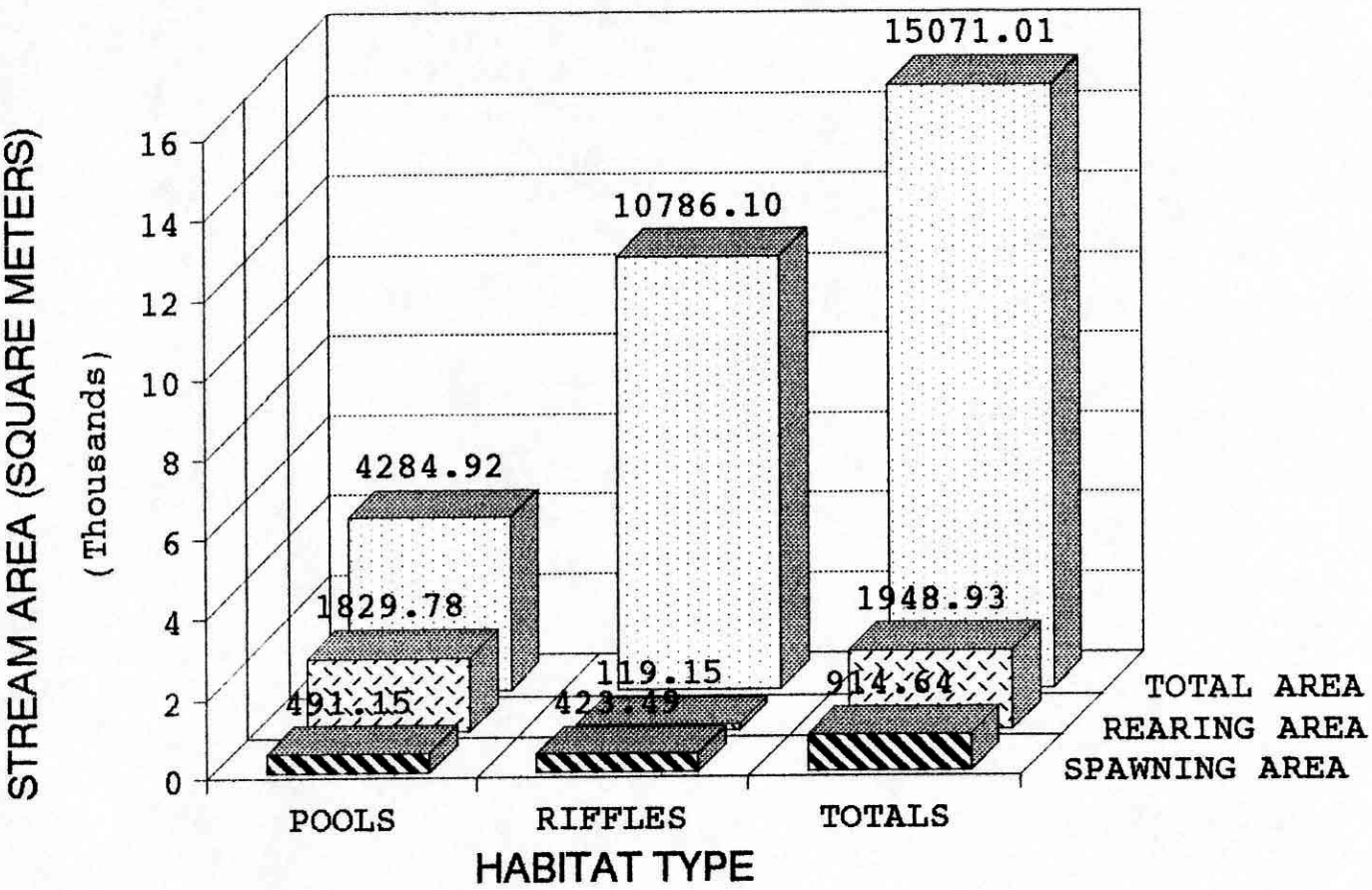
Regression Output:

Constant	15
Std Err of Y E	63
R Squared	0.0
No of Obser	21
Degrees of F	19

X Coef 0.21
Std Er 0.25

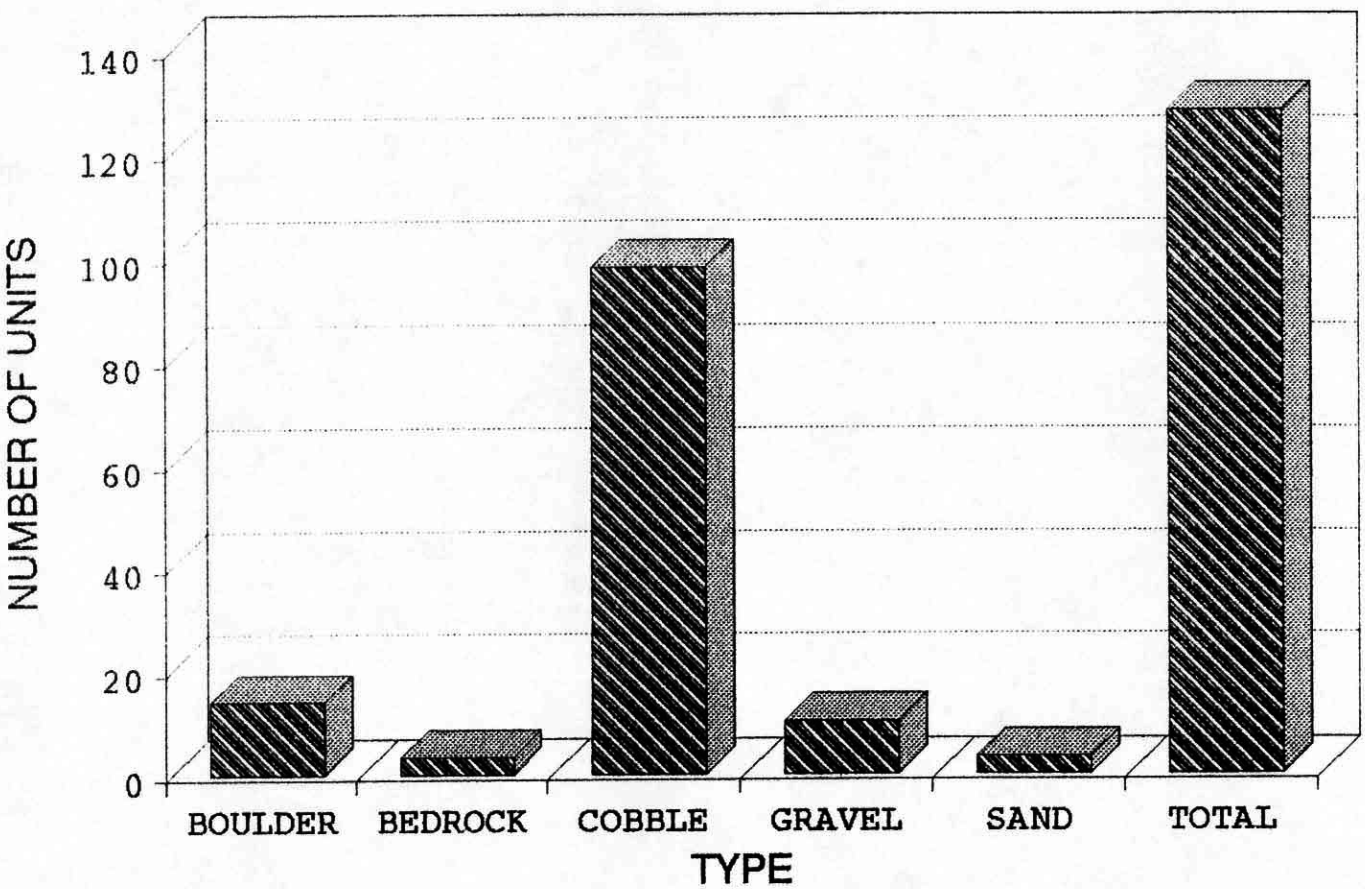
CAMP CREEK

SPAWNING REARING AREA



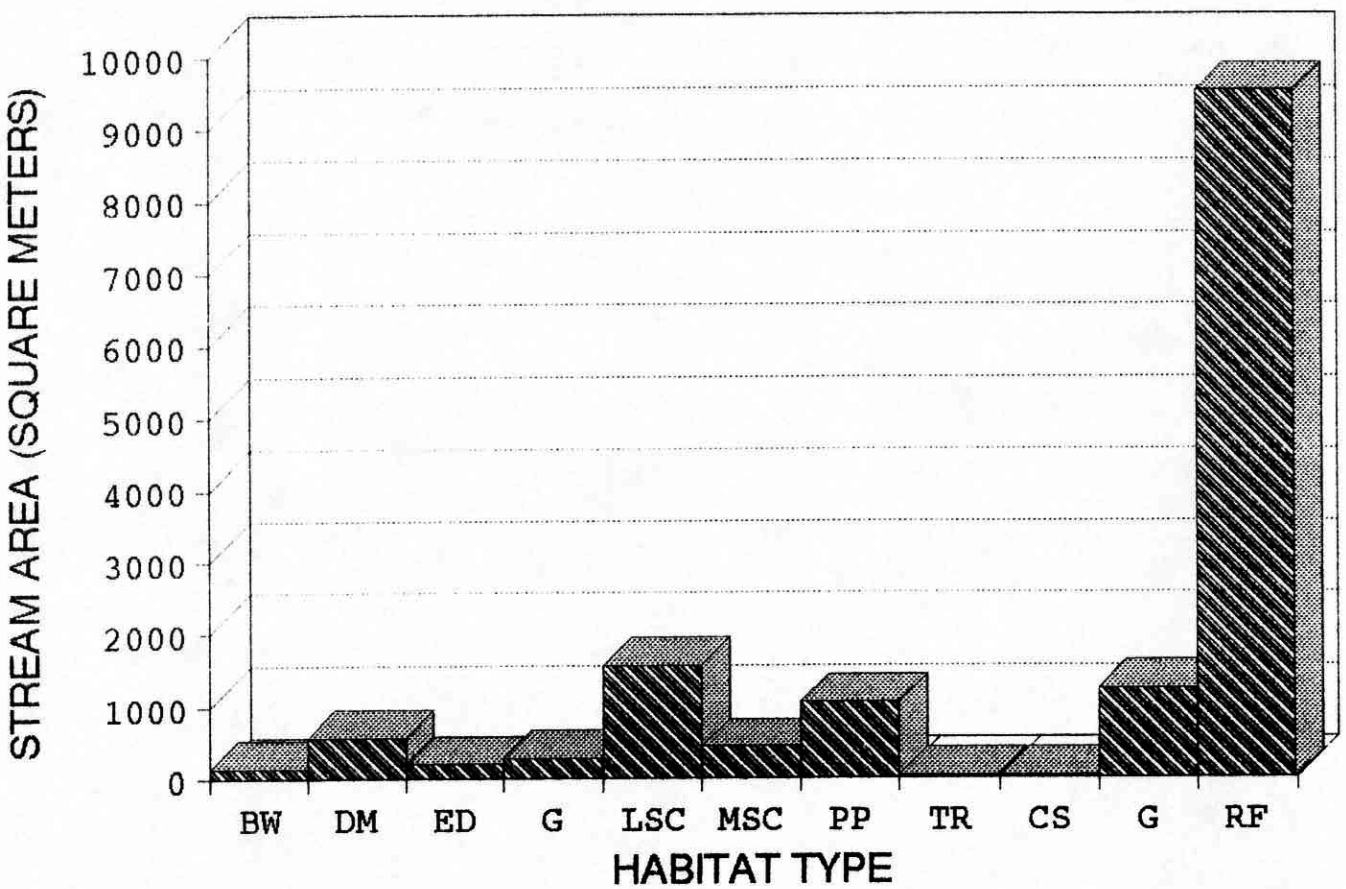
CAMP CREEK

SUBSTRATE



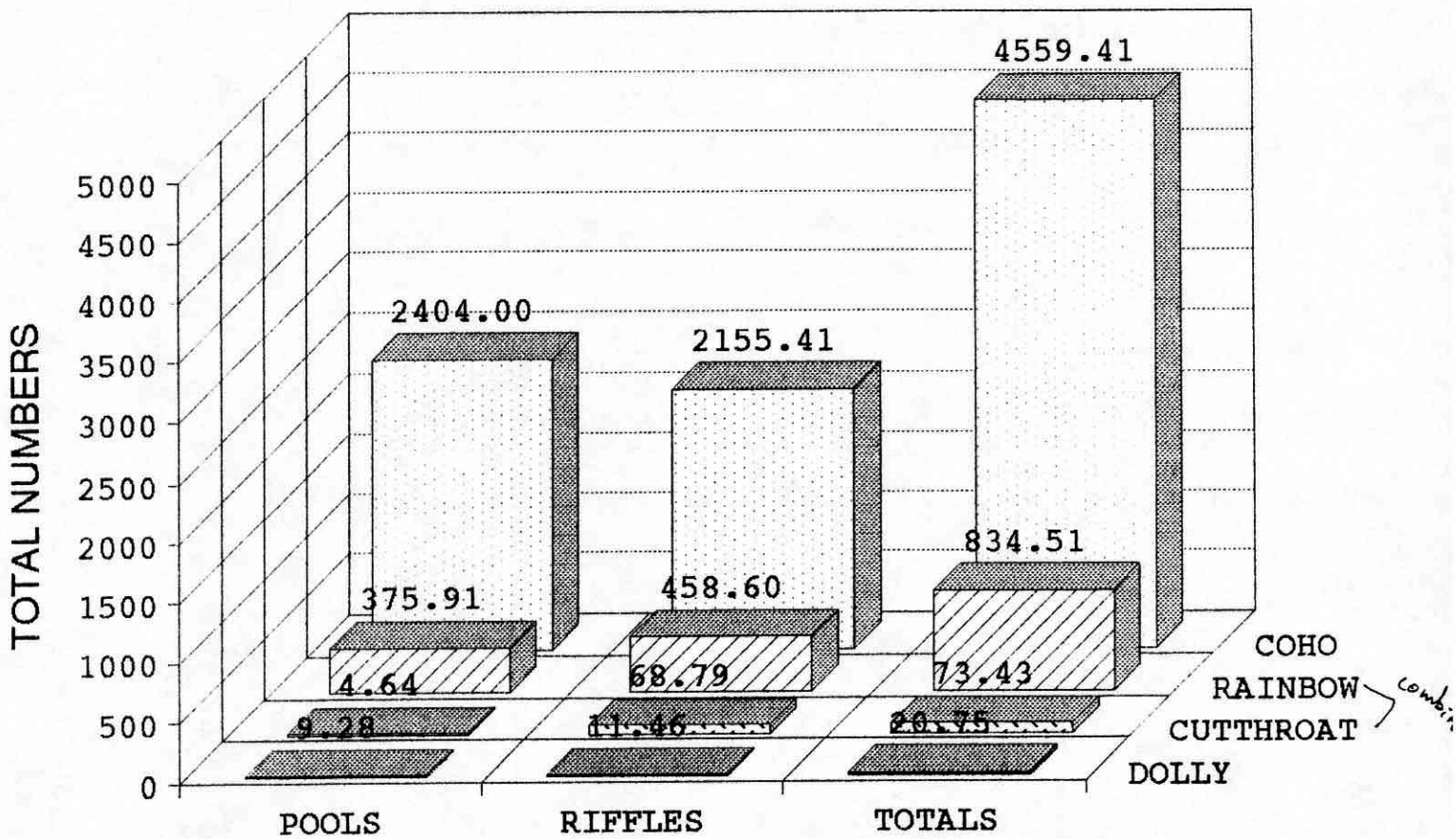
CAMP CREEK

HABITAT AREAS BY TYPE

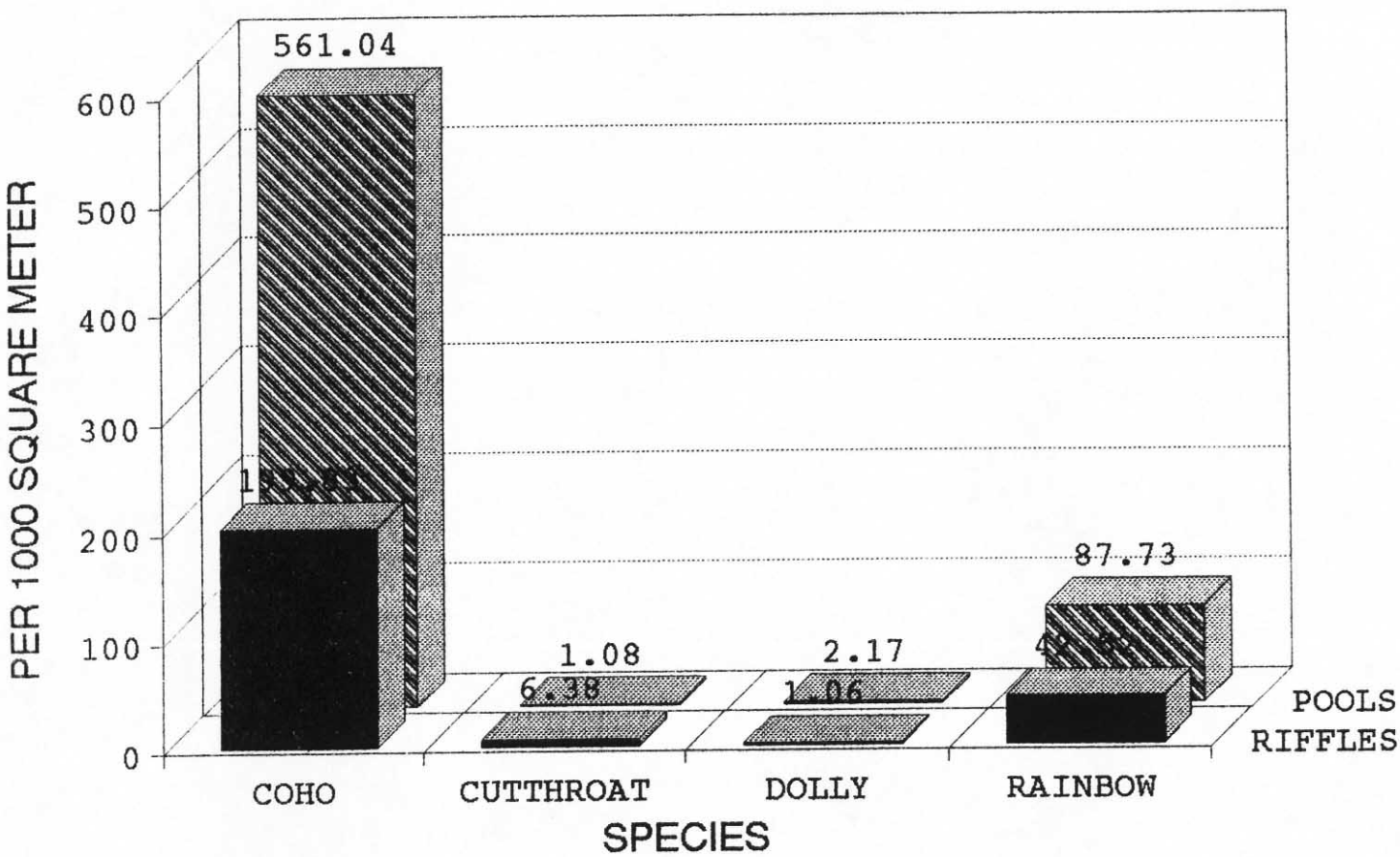


CAMP CREEK

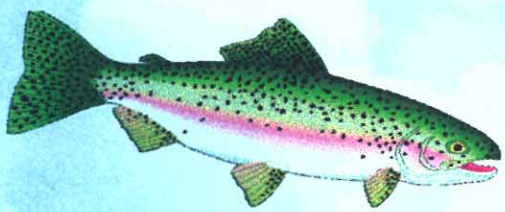
TOTAL STREAM POPULATIONS

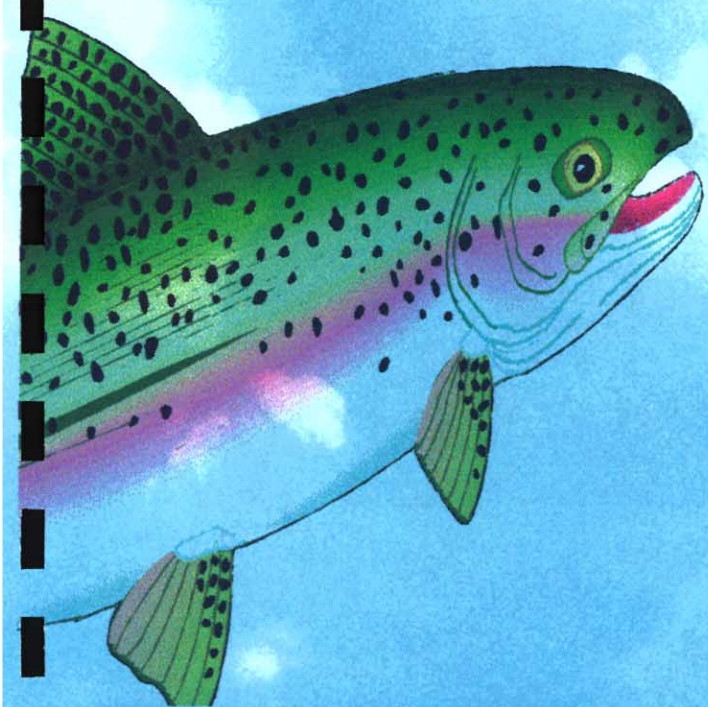


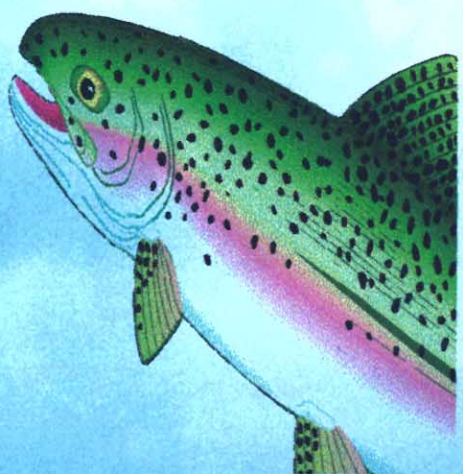
CAMP CREEK
FISH POPULATIONS



Old Franks Monitoring 1997







Old Franks Fishpasses–1997 Monitoring Update (11-26-97)

This report summarizes the results of monitoring the Old Franks Fishpass Project during 1997. Monitoring efforts during 1997 were scaled back from 1996 and focused primarily on coho salmon escapement and colonization in the Old Franks system.

The 1997 monitoring activities included the following:

- Escapement monitoring at the upper fishpass and in selected parts of the stream system
- Coded wire tag collection from the common property fisheries by ADF&G
- Snorkel population surveys in upper Old Franks Creek
- Population estimates in Trail Creek and Toque Creek
- Stream survey of Toque Creek
- Stream flow and temperature monitoring

Background Information

The Alaska Department of Fish and Game began fisheries investigations in the Old Franks Watershed in 1978. These were augmented with additional fisheries data collected in 1989 (Zadina and Haddix 1993). The Forestry Sciences Lab collected baseline population and habitat data on the system in 1990 to evaluate the response of the system to the introduction of anadromous salmonids (Bryant 1991). The Craig Ranger District began to monitor population and habitat conditions in the system in 1991 (Craig Ranger District 1994, 1995, & 1996). The Ketchikan Area conducted a watershed analysis in the upper watershed in 1994 (USDA 1994).

Two fishpasses were constructed over waterfalls on lower Old Franks Creek in 1992. Coho salmon (*Oncorhynchus kisutch*) and pink salmon (*O. gorbuscha*) negotiated the fishpasses during the 1992 run. Coho moved into the upper reaches of the accessible habitat during that year while pink salmon did not travel all the way to the upper fishpass. Pink numbers have since increased and some pink salmon now make it through the upper fishpass. Chum salmon (*O. Keta*) have also begun to colonize the habitat between the fishpasses.

Sockeye salmon (*O. nerka*) fingerlings were stocked in 1992 and coho fingerlings were stocked in 1994, 1995, and 1996 (Table 1). The coho bioenhancement program was a three year project conducted by the Alaska Department of Fish and Game. Coho egg takes were conducted above Salmon Lake in McGilvery Creek, in the Karta system. Egg takes were conducted in late October and November. Sockeye and king salmon were both stocked into the system in the past. No sockeye or king salmon runs developed, but there is a kokanee population in the Old Franks Lake system which may have been established from the sockeye stocking. Presently no other stocking is planned. Resident salmonids present above the barrier waterfalls in the system prior to fishpass construction and stocking were cutthroat trout (*O. clarki*), rainbow trout (*O. mykiss*), and dolly varden char (*Salvelinus malma*).

Table 1. Stocking History of the Old Franks system

Date	Species	Age	Number	Location	Source
1952	Sockeye	Green Eggs	60,000	Unknown	Buschmann Creek
1952	Sockeye	Eyed Eggs	35,000	Unknown	Buschmann Creek
1953	Sockeye	Green Eggs	165,550	Unknown	Buschmann Creek
1962	King Salmon	Fry	33,750	Lakes	Soos Cr., WN
1963	King Salmon	Fry	46,223	Lakes	Soos Cr., WN
5-14-92	Sockeye	Fingerling	227,200	Lakes	Karta (Beaver Falls reared)
8-16-94*	Coho	Fingerling	96,600	Upper Lake	Karta (Klawock H reared)
7-21-95*	Coho	Fingerling	78,719	Bridge	Karta (Klawock H reared)
7-26-95*	Coho	Fingerling	139,405**	OF Lake	Karta (Klawock H reared)
6-25-96*	Coho	Fingerling	143,000	OF Lake	Karta (Beaver Falls reared)

* 34,735 cohos were coded wire tagged in 1994, 32,728 were tagged in 1995, and 44,431 were tagged in 1996.
**9,223 cohos with the same tag code were accidentally released into the Klawock River in 1995.

Methods

Site Description

The Old Franks watershed on Prince of Wales Island is 32 km east of Craig (Figure 1). It covers 65 km^2 and flows into Polk Inlet (Figure 2). The lakes in the system cover over 300 ha and there are over 19 km of anadromous streams made accessible by the fishpasses. Monitoring work has been conducted primarily on the mainstem of Old Franks Creek below the lakes (escapement), above the lakes (juvenile fish) and within the lakes (resident fish).

Escapement Counts

A Smith Root Model 1100 Fish Counter was installed in a horizontal flume at the upper fishpass and has been used to count returning adult salmon since 1993. The picket fish trap was installed in July of 1997 in the exit pool of the fishpass, above the fish counter. The trap helped to validate counts made on the fish counter. Adult salmon captured in the picket trap were measured (mid-eye to fork length), examined for adipose clips, and tagged with a numbered 30 cm yellow spaghetti tag. The tag allowed us to identify fish upstream that passed through the fishpass and to identify fish that went back down over the falls. We took scales from up to ten coho salmon each day and from all sockeye. Twenty of the adipose-clipped coho were killed to recover the coded-wire tags. The tags identify which stocked group the fish is from. We also conducted periodic snorkel counts from Lake Mary down to saltwater to monitor the upstream migration of the salmon. A Peterson mark-recapture estimate (Chapman modification) was used to estimate escapement through both fishpasses. Confidence intervals were calculated using Appendix II of Ricker (1975).

Trail Creek and Toque Creek Fish Survey

Trail Creek flows through a large beaver pond before emptying into Old Franks Creek from the south between the upper fishpass and Lake Mary. Toque Creek flows into Old Franks Lake from the north near the lake outlet. We estimated the juvenile coho population in September in Trail

Figure 1. Location of Old Franks and Karta on Prince of Wales Island.

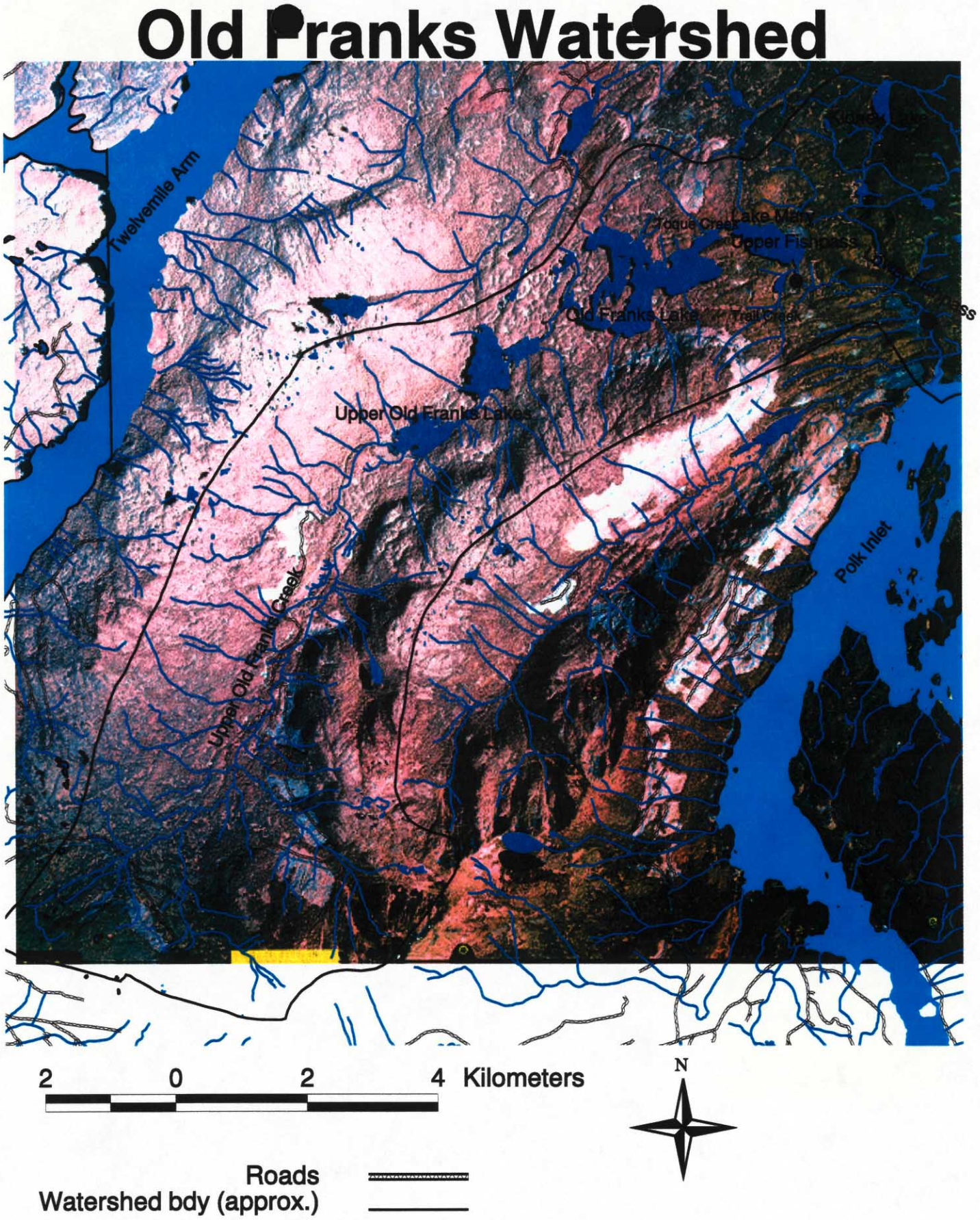


Figure 2. The Old Franks watershed in relation to Polk Inlet and Twelvemile Arm.

Creek, upstream of the pond, and in Toque Creek. Fish were captured in minnow traps baited with salmon eggs. All fish captured (coho, cutthroat, and dolly varden) were measured and dye marked. Insufficient numbers of cutthroat or dolly varden were caught to conduct population estimates on those species.

Stream Population and Habitat Surveys
Habitat surveys were conducted in 1990, 1991, 1992, and 1994 on upper Old Franks Creek from the upper lake to the top of anadromous fish habitat. Fish densities (all ages and species) were determined annually since 1990 by snorkeling established habitat units. New snorkel units were marked periodically to adjust for natural changes in habitat units. The existing marked habitat units were re-measured in 1997. The draft Region 10 stream survey protocol (Coghill 1997) was used in 1997 to survey Toque Creek.

Water Temperature and Streamflow Monitoring
Since 1991, water temperature has been monitored above and below the lake system during summer and fall by using Ryan Temp Mentors recording at one-hour intervals. Water level was recorded daily in lower Old Franks Creek using readings from a staff gauge at the outlet of Lake Mary.

Results

Salmon escapement in Old Franks Creek

Coho Salmon
The 1997 coho escapement estimate was down from the 1996 return. It consisted of returns from coho stocked in 1994 and 1995. It also included returns from coho that spawned upstream of the fishpass in 1993 and 1994.

The pickets were installed for the season on August 5 and the first coho was captured the same day. The number of fish that used the fishpass prior to August 5 is unknown. A total of 461 coho passed through the fishpass by October 9 (Figure 3). A majority of the coho jump the falls without passing through the fishpass so the fishpass count is a subsample of the total. Run timing has been similar each year (1995 - 1997). The majority of coho pass the upper fishpass between late August and mid-September during rising streamflows.

Upstream snorkel escapement counts were used to obtain an escapement estimate. The primary count in 1997 was conducted in upper Old Franks Creek on October 10. Counts later in the run and in other tributaries were hindered by high streamflows. The escapement estimate for 1997 was 4,488 coho (95% CI = 2,228 - 9,817). This compares to estimates of 6,664 in 1996, 2,222 in 1995 and 250 in 1993 and 1994 (Figure 4).

We examined 347 coho at the fishpass for missing adipose fins (indicating the presence of a coded wire tag). Of the 347 coho, 11% had adipose clips. The percentage of tagged coho fingerlings

released was 15%. This indicates that approximately 71% of the return was from bioenhancement (Karta stock) fish and 29% was from Old Franks spawned fish. The 1996 return consisted of a slightly higher proportion of Old Franks spawned fish than the 1997 return (Table 2).

Table 2. Breakdown of bioenhanced and Old Franks spawned coho returns, 1996 - 1997.

Return Year	fingerlings adipose clipped	adults with clips	% bioenhanced returns	% Old Franks spawned
1996	36% of 96,600	24% of 431	66	34
1997	15% of 218,124	11% of 347	71	29

The Alaska Department of Fish and Game collected 116 Old Franks tagged coho from the common property fishery. The estimated bioenhancement contribution to the commercial fishery was 1,790 coho in 1997 and 1,915 coho in 1996 (Figure 5). Two sport caught coho were collected in 1996, in Sitka and Ketchikan. Two sport caught coho were collected in 1997 at Sitka. No sport contribution was estimated. The 1997 commercial catch consisted 99% of coho from the 1994 brood and 1% of coho from the 1993 brood. The commercial contribution by gear type is presented in Table 3.

Table 3. Estimated coho bioenhancement contribution (number of fish) to commercial fisheries by gear type.

Gear Type	1996	1997
Troll	668	1,219
Drift Gillnet	699	367
Purse Seine	528	204
Total	1,915	1,790

Pink and Chum Salmon

The pink and chum salmon escapement estimate is from a snorkel escapement count conducted on August 13. The count was 16,681 pinks and 30 chums. More than 10,000 of the pink salmon were counted upstream of the lower fishpass. A total of 12 pink salmon made it through the upper fishpass, although approximately 500 were within 300' downstream of the fishpass. Twenty seven pink salmon and one chum salmon made it through the upper fishpass in 1996.

Sockeye Salmon

Three sockeye were captured in the picket trap after it was installed. Sockeye that went through prior to the August 5 installation were missed. During 1996, 32 sockeye were captured in the trap. No bioenhanced sockeye were expected back in 1997 from those stocked in 1992.

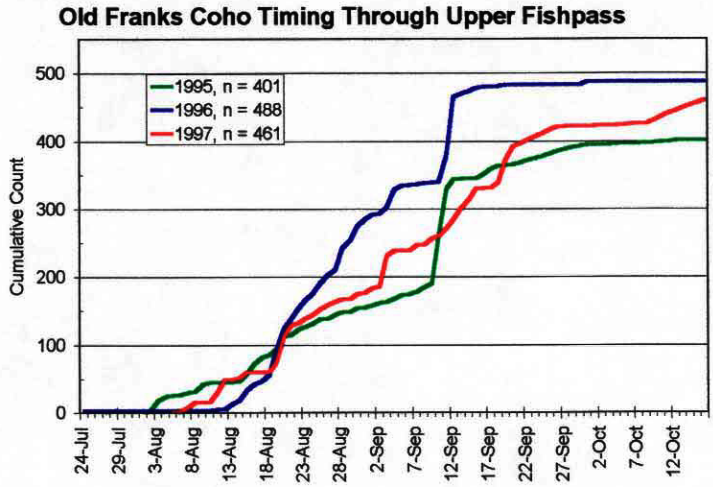


Figure 3. Cumulative coho escapement through the upper Old Franks Fishpass, 1995 - 1997.

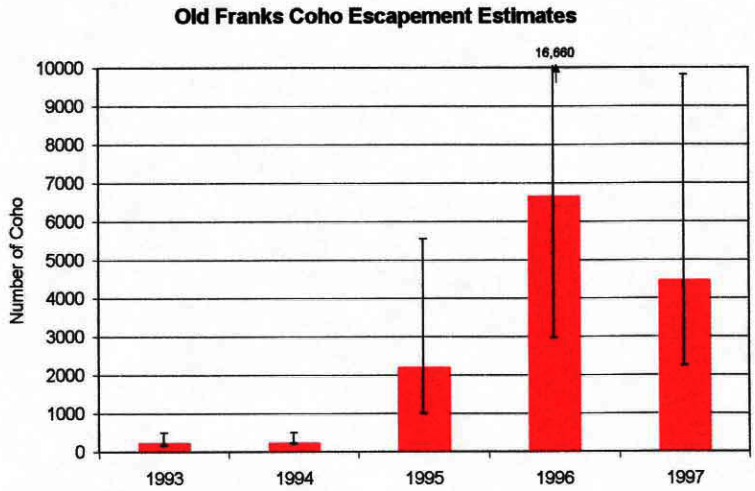


Figure 4. Old Franks Creek coho escapement estimates, 1993 - 1997. Confidence intervals in 1993 and 1994 are estimated with the minimum at the number of coho seen during any one count and the maximum set at 500 fish. Confidence intervals in 1995 - 1997 are 95% (Peterson estimates)

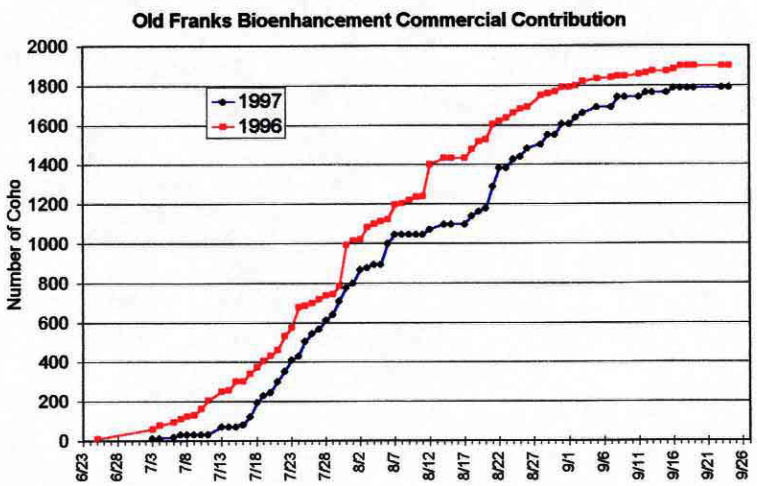


Figure 5. Old Franks bioenhancement cumulative contribution to commercial fisheries, 1996 - 1997.

Juvenile Coho in Trail Creek and Toque Creek

The population estimate for coho in Trail Creek was 456 +/- 42 in mid-September. This compares to an estimate of 1,038 +/- 73 in mid-August of 1996. We counted 29 spawning coho in Trail Creek in 1996. Trail Creek flows through a large beaver pond before emptying into Old Franks Creek between Lake Mary and the upper fishpass. The size distribution of coho in Trail Creek showed the coho to be smaller in 1997 than in 1996 (Figure 6).

This was the first coho population estimate in Toque Creek. Toque Creek is a tributary to Old Franks Lake, near the lake outlet. The estimate was 344 +/- 28. The size distribution in Toque Creek was similar to Trail Creek. The coho in these two tributary streams exhibit slower growth rates than the coho in the lakes, probably due to the cooler water temperatures. Few cutthroat, rainbow, or dolly varden were captured in Trail Creek or Toque Creek.

Salmonid Abundance and Distribution in Upper Old Franks Creek

A snorkel survey of 51 habitat units in upper Old Franks Creek showed coho densities to be similar to 1996 but lower than 1995 densities (Figure 7). The coho counted in 1997 and 1996 were all Old Franks spawned fish. The 1995 count included primarily stocked coho which showed a very patchy distribution. Coho densities were highest in lateral scour and mid-channel scour pools in 1997.

The cutthroat/rainbow density was lower than in any year since 1993. The survey in 1997 was conducted in mid-June, prior to cutthroat and rainbow emergence so consisted entirely of age 1+ fish. Surveys in previous years were conducted between mid-July and late September (Table 3). The density of age 1+ cutthroat/rainbow was also the lowest since 1993.

Table 3. Percentage of age 1+ cutthroat/rainbow (>50 mm) and coho (>55 mm) counted during snorkel surveys.

	1994	1995	1996	1997
Cut/Rnb	23%	25%	30%	100%
Coho		0%	13%	12%

The highest cutthroat/rainbow densities were found in boulder riffles. No dolly varden were observed during the June survey, although some were observed later in the fall during the snorkel escapement count.

Toque Creek Stream Survey

A tier 3 stream survey was conducted on all anadromous habitat (937 meters) in Toque Creek. The stream contains a 740 meter reach of MM1 channel type with an average bed width of 2.4 meters downstream of a 197 meter reach of HC2 channel type with an average bed width of 2.6 meters. Above the HC2 reach gradient steepens and fish habitat is marginal. The stream flows through a productive lowland riparian area along the lakeshore. There is a 97 meter reach of clearcut along the left bank of the stream starting at 668 meters upstream of Old Franks Lake, in the transition from lowlands to footslope. This area was harvested around 1990.

Survey data analysis is presented in Table 4. Survey data was compared with Region 10 Riparian Habitat Management Objectives (USDA Forest Service 1995). Toque Creek values lie between the 50th and 75th percentiles for all three riparian habitat management objectives: Pieces of large woody debris per 1,000 square meters of wetted stream area, percent of wetted stream area in pool habitat, and bankfull width to depth ratio (bankfull width divided by average bankfull depth in a cross section). Better fish habitat is generally associated with the high ends of the range for woody debris density and pool area and with the low ends of the range for width to depth ratio. No RHMO's have been developed for HC channels. The predominant habitat types in the MM1 reach were scour pools and riffles. The predominant habitat types in the HC2 reach were riffles. Dominant substrate in the MM1 reach was gravel and in the HC2 reach it was cobble.

The habitat in Toque Creek is good for coho spawning. Coho adults were observed in Toque Creek in October but high flows prevented a total count. A spaghetti tag from 1996 was found in Toque Creek in 1997. Toque Creek is used by coho for rearing but the stream is rearing habitat limited and most juveniles probably move downstream into Old Franks Lake for rearing.

Table 4. Tier 3 stream survey statistics for Toque Creek.

Channel Type	Length of Channel Type,m	% Pool	Pools per km	Avg Resid Pool Depth,m	BFW/ Depth (CTV)	Avg CBW	Chann Width Per Pool	LWD per 1,000 m**2	LWD per km	LWD Key per km	LWD RWke per km	LWD Both per km	Undercut length/ Stream length
MM1	740	66.2	67.6	.37	14.7	2.4	6.2	72	207	81	8	4	.38
HC2	197	13.2	35.6	.27	No data	2.6	10.8	40	138	56	31	0	.17

Stream Flows During 1997

Stream flows in Old Franks Creek were higher in 1997 than in past years that escapement has been monitored. This made snorkel and walking escapement counts difficult. Ideally staff gauge level at the outlet of Lake Mary needs to be about 1.2 feet or less to conduct an effective count in Old Franks Creek (Figure 6). The level can be slightly higher for tributary counts but frequent rainfall in October kept flows up in the tributary streams much of the time.

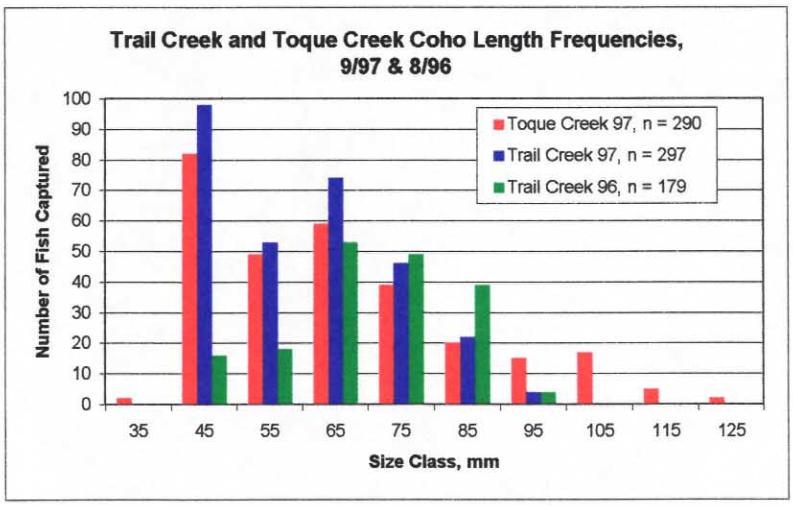


Figure 6. Juvenile coho length frequencies in Trail Creek (1996 and 1997) and Toque Creek (1997).

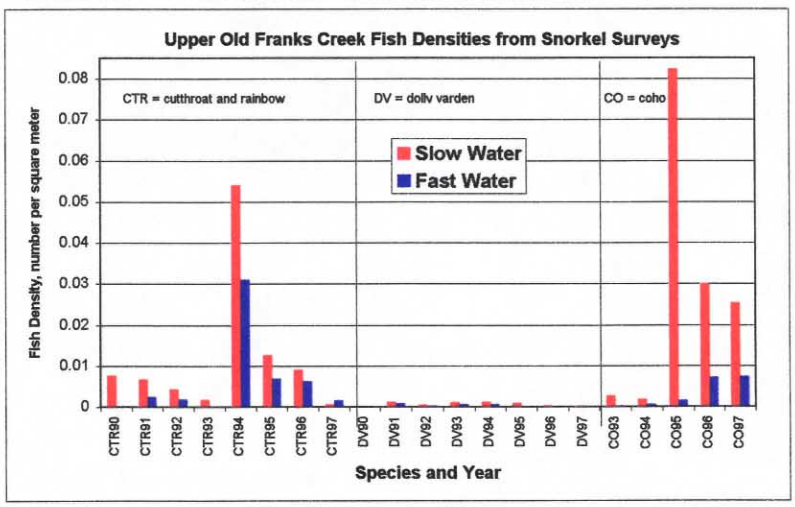


Figure 7. Fish densities in upper Old Franks Creek in slow water and fast water habitats, 1990 - 1997.

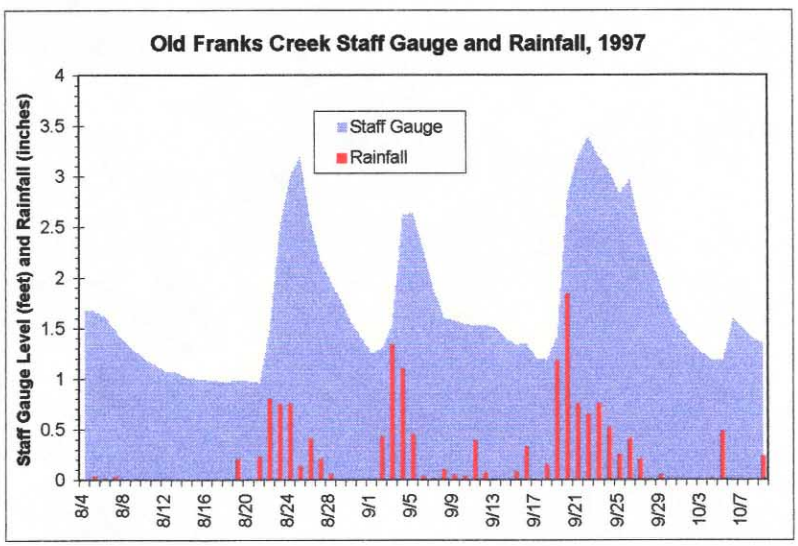


Figure 8. Staff gauge at Lake Mary outlet and rainfall at Old Franks, 1997.

Discussion

Coho salmon juveniles are now present throughout the accessible habitat in the Old Franks watershed, although all habitat is not yet fully seeded. The coho escapement in 1997 was down from 1996 even though more juveniles were stocked in 1995 than in 1994. The lower than expected escapement in Old Franks is consistent with the rest of Southeast Alaska where coho returns were low. The reason behind the lower returns is unknown but believed to be associated with factors in the ocean. The number of spawning coho counted in upper Old Franks Creek was higher in 1997 than in 1996. This may be because 36% of the coho were stocked at the bridge over upper Old Franks Creek in 1995. None were stocked in the stream in 1994. Coho adults were observed upstream of the road bridge for the first time in 1997.

Old Franks continued to receive fishing pressure near the mouth of the stream in 1997. Sport fishers were observed near the mouth on many occasions. Both pink salmon and coho salmon were harvested there.

The final year of coho returns from the bioenhancement effort will occur in 1998. Starting with the 1999 return, nearly all returning coho will be from fish spawned within the Old Franks system.

The sockeye return was lower in 1997 because no bioenhancement returns came back. The sockeye returning were either strays from other streams or returns from kokanee progeny that outmigrated and returned as adults.

Pink salmon escapement continues to increase. The pink salmon escapement was the highest we have documented even though pink salmon returns were lower than expected in Southeast Alaska. Pink salmon migration to the upper fishpass is highly flow dependent. Fewer pinks made it through the upper fishpass in 1997 than in 1996. Many pink salmon migrated to within 500' of the fishpass but went back downstream to spawn. The habitat between the fishpasses is not yet fully seeded with pinks. The chum salmon escapement was fairly low in 1997 but the count is considered low because the number of pink salmon made it difficult to differentiate the chums.

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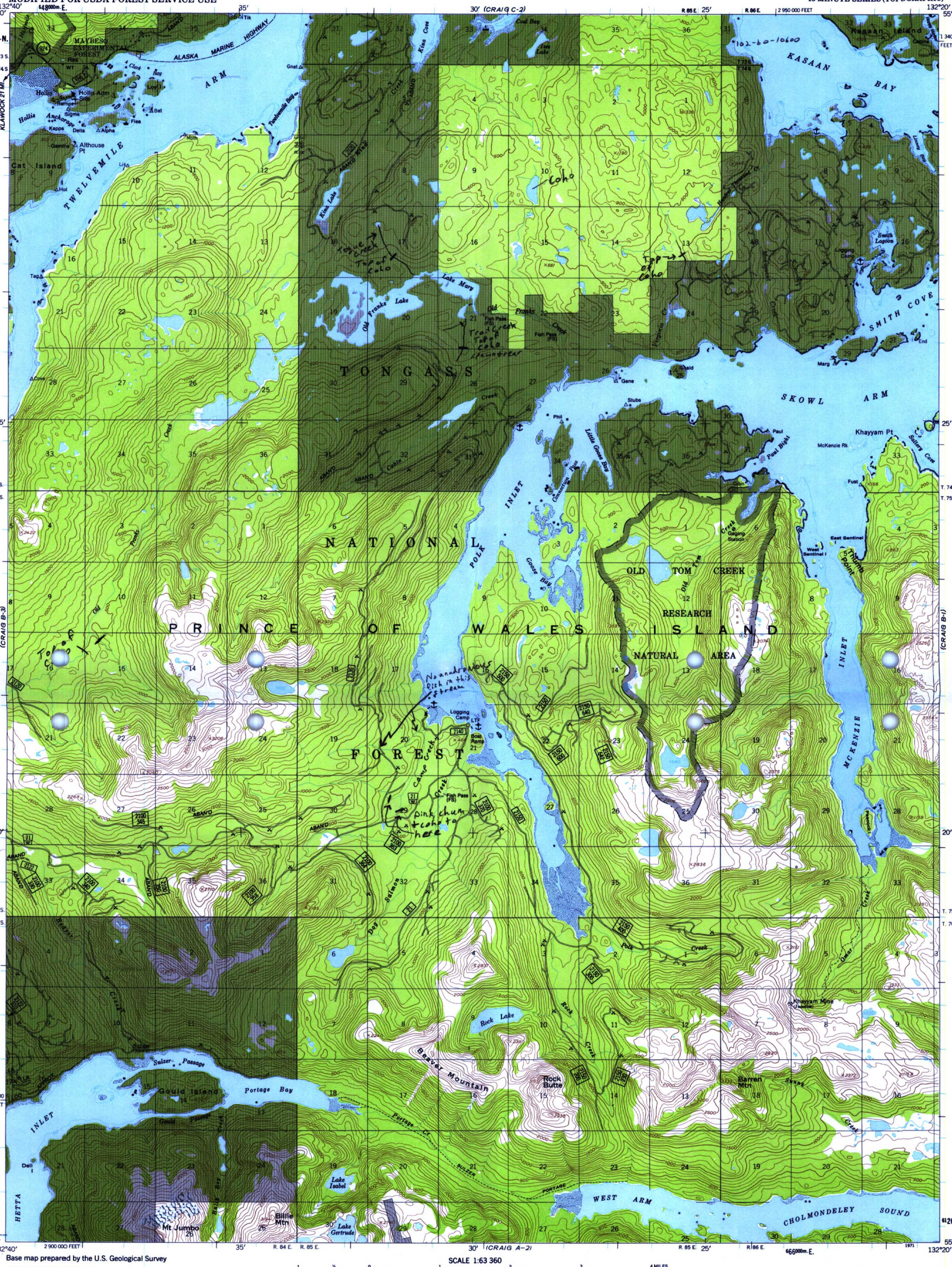
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
MODIFIED FOR USDA FOREST SERVICE USE

CRAIG (B-2) QUADRANGLE
ALASKA
15 MINUTE SERIES (TOPOGRAPHIC)



Base map prepared by the U.S. Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photography taken 1948, field annotated 1949. Map not field checked

Selected hydrographic data compiled from NOS/NOAA Chart 17426 (1979) and USC&GS Charts 8142 (1962) and 8147 (1957). This information is not intended for navigational purposes

Universal Transverse Mercator projection, 1927 North American Datum
10,000-foot grid based on Alaska coordinate system, zone 1
1,000-meter Universal Transverse Mercator grid ticks, zone 8, shown in blue

Land lines represent surveyed locations, unsurveyed and unmarked locations predetermined by the State of Alaska, Division of Lands, Copper River Meridian

Entire land area is within the Tongass National Forest

To place on the predicted North American Datum 1983 move the projection lines 40 meters north and 106 meters east

Screened pattern shown on glacial features indicates glacial advance or recession, visible as of the date of photography

Modification to USGS base map by the Geometronics Service Center from 1971 - 1991 aerial photography and 1993 correction guides furnished by the Alaska Region

Landnet revised according to additional Forest Service evidence

MN
25°
444 MILS

1993 MAGNETIC NORTH DECLINATION AT CENTER OF MAP

SCALE 1:63 360

1 ½ 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
1 .5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES IN FEET-DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 13 FEET

National Forest Boundary

Alienated Lands within the National Forest Boundary

TOWNSHIP AND SECTION LINE CLASSIFICATION

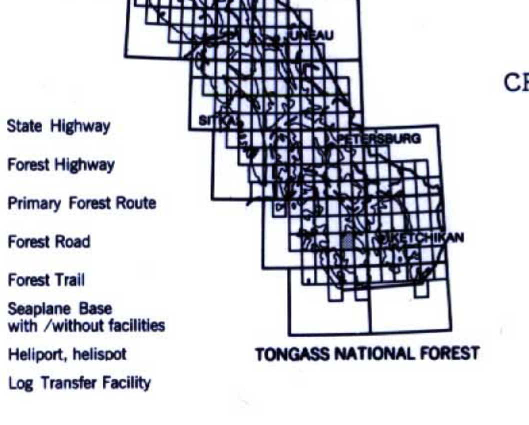
Surveyed

Surveyed, Location Doubtful

Unsurveyed, Protraction

Alaska Marine Highway
Primary Highway
Secondary Highway
Improved Road, Paved
Improved Road
Unimproved Road
Trail
LOC AP Road, Location Approximate
Trail, Location Approximate
Borrow Pit

43 State Highway
FH40 Forest Highway
82 Primary Forest Route
8384 Forest Road
138 Forest Trail
Seaplane Base with /without facilities
Heliport, helispot
LTF Log Transfer Facility



TONGASS NATIONAL FOREST

PRIMARY BASE SERIES
1993

CRAIG (B-2), ALASKA
N5515-W13220/15X20

1949
MINOR REVISIONS 1963