



SALMON & STEELHEAD
ENHANCEMENT SOCIETY

February 15, 2001

Attn : Roberta Cook
Fisheries and Oceans
Vancouver , BC

Upper Bulkley Coho Escapement Estimate (2000)

The total count of coho at the upper Bulkley counting fence in 2000 was 166 spawners. These numbers include fish captured in the trap and fish seined from the pool just downstream of the fence. All of the coho captured were sampled for marks and a total of 37 were wild unmarked fish (22.3%) while 109 were adipose-clipped hatchery returns (65.7%). The remainder were ventral clips (9.0%) and maxillary clips (3.0%).

Using the comparative abundance of coded-wire tags estimated in Alaskan commercial fisheries, from the post-season data supplied by the Department of Fish and Game, may provide a "best" estimate of approximately 983 upper Bulkley spawners in 2000. This number is based on the assumption that the coho abundance at catch reflects a similar ratio of this abundance in the upriver escapement reaching the spawning grounds.

Bulkley coho were only 42.0 % as abundant in the Alaskan catch as the Toboggan CWT's. The Toboggan escapement was 1,535 CWT's in 2000, which indicates a Bulkley CWT escapement of 645 coho salmon. This in turn indicates a spawner escapement of 983 upper Bulkley River coho in total; 219 wild unmarked salmon, 89 ventral clips, 30 maxillary clips, and 645 adipose clips.

Male to female sex ratios in the Bulkley sample were higher than that of the Toboggan sample for 2000, 1.3:1 as compared to 1.1:1. Although this is not a substantial variance it may indicate that the Bulkley coho missed were from the later component of the run.

Cheers,

Mike O'Neill, Manager

c.c. Don Baily, DFO, Vancouver
Brenda Donas, DFO, Smithers
Barry Finnegan, DFO, Nanaimo

ESCAPEMENT SUMMARY ATTACHMENT (2000)

Bulkley Coho (478)

Estimate of spawners u/s of fence - 166 coho were sampled at the fence in 2000. By comparing survival to catch data from the Alaskan fishery, and assuming this comparison is also reflected in the escapement, it is estimated that 983 Bulkley coho would have escaped to spawn in 2000 (see attached).

Estimate of spawners d/s of fence - we did not carry out an estimate of spawners below fence, but the methodology used should account for coho spawners upstream and downstream of the fence site.

Estimate of angler catch of coho - assuming anglers landed the same proportion of the Bulkley stock as they did for the Toboggan stock (7%) there would have been 69 coho landed by anglers in 2000, at a 5% mortality rate for released fish this would result in 4 dead coho.

Estimate of native catch of coho - based on tagging mortalities associated with coho tagging study at Moricetown, funded by DFO (3,000 tagged x 0.06 Bulkley stock component x 0.05 mortality rate) indicates 9 mortalities of Bulkley coho.

ESCAPEMENT SUMMARY FORM

TOTAL RETURNS TO RIVER FOR : 2000 Bulkley River Coho Summer-run Page 1
478

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
FISH REMOVED FROM THE SYSTEM						
Number of fish taken for brood stock		24	23	47		
Number of fish given to natives (not including brood stock carcasses)				0		
Number of fish sold for surplus (not including brood stock carcasses)				0		
Number of mortalities and/or fish used for other purposes				0		

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
TOTAL NATURAL SPAWNING POPULATION ABOVE FENCE						
Number sampled for marks and released		71	48	119		
Number counted but NOT sampled for marks				0		
Additional fish estimated to pass above fence (during periods when fence not operated etc.)		425	392	817		
+ Total Hatchery staff estimate of above fence spawners	0	496	440	936	0	0
Other Branch / Agency estimate of above fence spawners				0		

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
TOTAL NATURAL SPAWNING POPULATION BELOW FENCE						
Number sampled for marks and released				0		
Number counted but NOT sampled for marks				0		
Additional fish estimated below fence				0		
+ Total Hatchery staff estimate of below fence spawners	0	0	0	0	0	0
Other Branch / Agency estimate of below fence spawners				0		

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
ESTIMATED FRESH WATER SPORT FISHERY (IF APPLICABLE)						
+ Total Hatchery staff estimate of sport fishery		2	2	4		
Other Branch / Agency estimate of sport fishery				0		

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
ESTIMATED NATIVE FISHERY (IF APPLICABLE)						
+ Total Hatchery staff estimate of native fishery		5	4	9		
Other Branch / Agency estimate of native fishery				0		

INDICATE METHODS USED TO ESTIMATE POPULATION. (IF COMMENTS ARE REQUIRED, PLEASE USE REVERSE)	
<input type="checkbox"/>	Fence, Fishway, flashboard or tower (Continuous Count- 24 hrs /day)
<input type="checkbox"/>	Fence, fishway, flashboard or tower (Interpolated Count < 24hrs / day)
<input type="checkbox"/>	Petersen estimate
<input type="checkbox"/>	Index by Redd count, peak count, dead pitch, floats, helicopter, etc.
<input type="checkbox"/>	Visual estimate from brood stock collection, walks or spotchecks, etc.
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	Other method - Use reverse or space below to describe.

LEASE STAPLE

COMPLETE FOR EACH STOCK

ESCAPEMENT SUMMARY FORM

COMPLETE FOR EACH STOCK AND STAPLE

Prepared: 13-Mar-01

SAMPLING INFORMATION FOR : 2000 Bulkley River Coho Summer-run Page 2

SAMPLE: 478

- Hatchery Swim-Ins
- Channel Dead Pitch
- Live +
- Dead -
- Salt Water
- Estuary
- Fresh Water
- + Lake
- + River
- + Above Fence
- + Below Fence
- + At Fence
- + Total Count
- + Partial Count

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
NUMBER OF FISH COUNTED (at trap or fence if appropriate)	1	95	71	167		
NUMBER OF FISH EXAMINED FOR MARKS		95	71	166		
NUMBER OF C.W.T. MARKS FOUND		62	47	109		
NUMBER OF other MARKS FOUND		11	9	20		
NUMBER OF HEADS REMOVED FOR TAG DECODING		1	15	16		
NUMBER OF HEADS DISSECTED FOR TAGS		1	15	16		
NUMBER OF LOST OR MISSING HEADS						

(recorded as NO-DATA by the Head Lab)

IF ANGLING OR NETTING, ARE LIVE FISH RETURNED TO THE RIVER SAMPLED FOR MARKS BEFORE RELEASE

YES NO

IF YES, ARE RELEASED FISH MARKED TO PREVENT DOUBLE COUNTING?

(If released fish are not marked, describe the method used to obtain a representative mark rate. Use reverse if necessary.)

YES NO

ARE RECAPTURES A SIGNIFICANT PORTION OF FISH EXAMINED FOR MARKS?

YES NO

NUMBER OF ADIPOSE CLIPS RECORDED AS:

	Unknown Adults	Males	Females	Total Adults	Jacks	Immatures
No data	500000			0		
Cut short	600000			0		
Unreadable	700000			0		
No pin	800000			0		
Lost pin	900000			0		
Subtotal		0	0	0	0	0