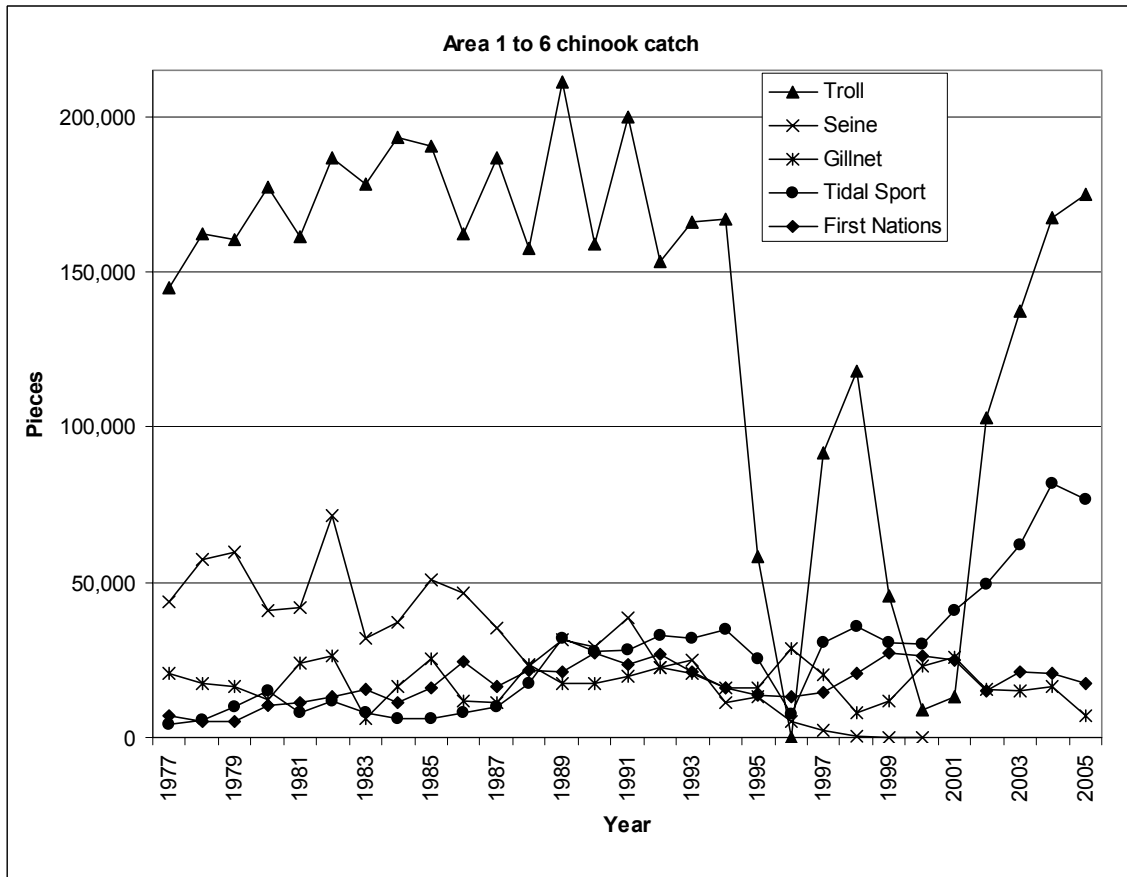


North Coast Chinook Salmon 2005:
Stock Status
by Ivan Winther, Fisheries & Oceans Canada

- Assessment requirements based on level of resource use (fishing).
- Current information indicates that all NC Chinook stocks are fished at significant levels.
- A few stocks -Yakoun, Upper Bulkley, Cedar- have lower impacts due to temporal or spatial differences.

General Chinook Catch Trends
(recent history)

- Reduced abundance in 2005 relative to past few years
- Overall, NC commercial chinook catch has declined since the early '70s
- troll catch decreased to almost 0 in near shore Areas 2E to 10 and increased in offshore Areas 1&2W (when allowed to fish)
- Seine decline to 0 - non-retention
- Gillnet catch near 0 in Areas 5, 6, 7, 9 & 10
- Gillnet catch maintained in Areas 3, 4 & 8
- Sport catch increasing (everywhere?)
- First Nations' catch increased then stable?



2005 Nass & Skeena Chinook Harvests

Fishery	Chinook Catch	Nass	Skeena	Source Data
Alaska	AABM 416,400	6,561	14,335	Kalum cwt's
NC Troll	174,806	391	4,135	NC Troll DNA
QCI Sport	68,800	154	1,627	NC Troll DNA
Area 3 Sport	4,550	728	910	LLY old DNA data
Area 4 Sport	4,250	0	1,700	LLY catch - guessed 40% Skeena
Area 3 Gillnet	3,713	2,785	371	old cwt and DNA data - LGL table A3
Area 4 Gillnet	3,162	0	3,162	
River Sport	7,000	2,000	5,000	Guess
River FN	13,907	6,662	7,245	
Total catch	280,188	19,280	38,485	
Escapement		14,219	31,067	guessed 2000 Kispiox

preliminary

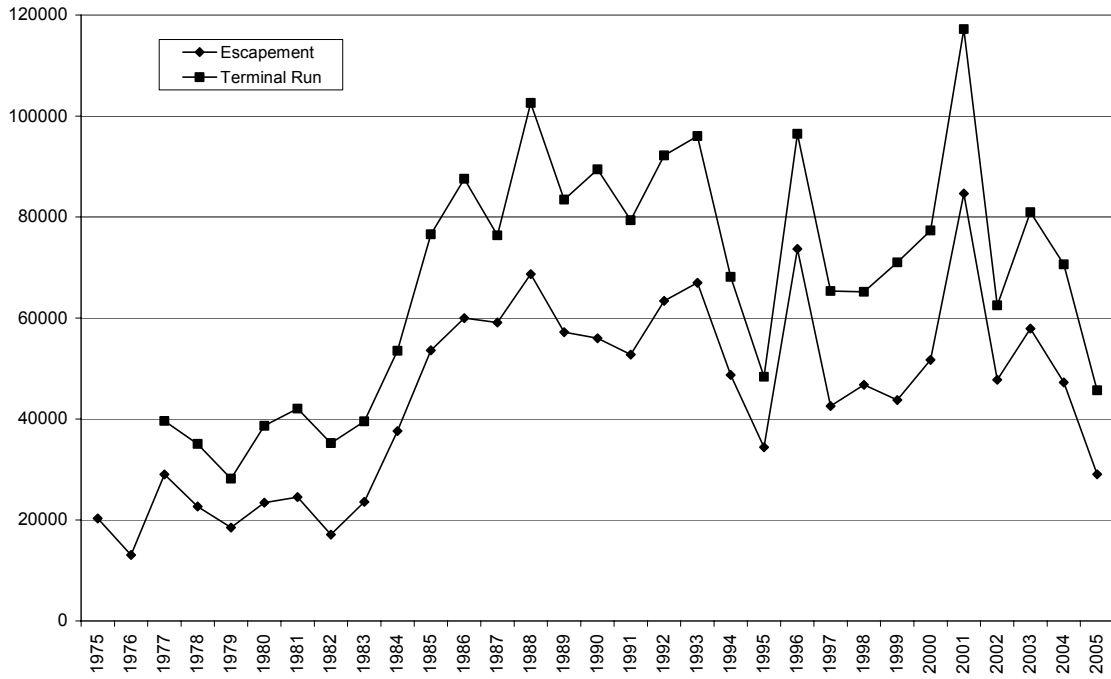
2004 Nass & Skeena Chinook Harvests

Fishery	Chinook Catch	Nass	Skeena	Source Data
Alaska	433,446	4,390	11,234	Kalum cwt's
NC Troll	167,508	419	4,302	NC Troll DNA
QCI Sport	74,000	986	2,409	QCI sport DNA
Area 3 Sport	4,550	728	910	LLY old DNA data
Area 4 Sport	4,250	0	1,700	LLY catch - guessed 40% Skeena
Area 3 Gillnet	8,417	6,270	842	old cwt and DNA data - LGL table A3
Area 4 Gillnet	8,124	0	6,908	RGS + 50% of other Area 4
River Sport	9,234	2,954	6,280	LLY Skeena - LGL Table 4 Nass
River FN	16,975	5,598	11,377	
Total catch	726,504	21,344	45,962	
Escapement		18,460	47,243	guessed 3000 Kispiox

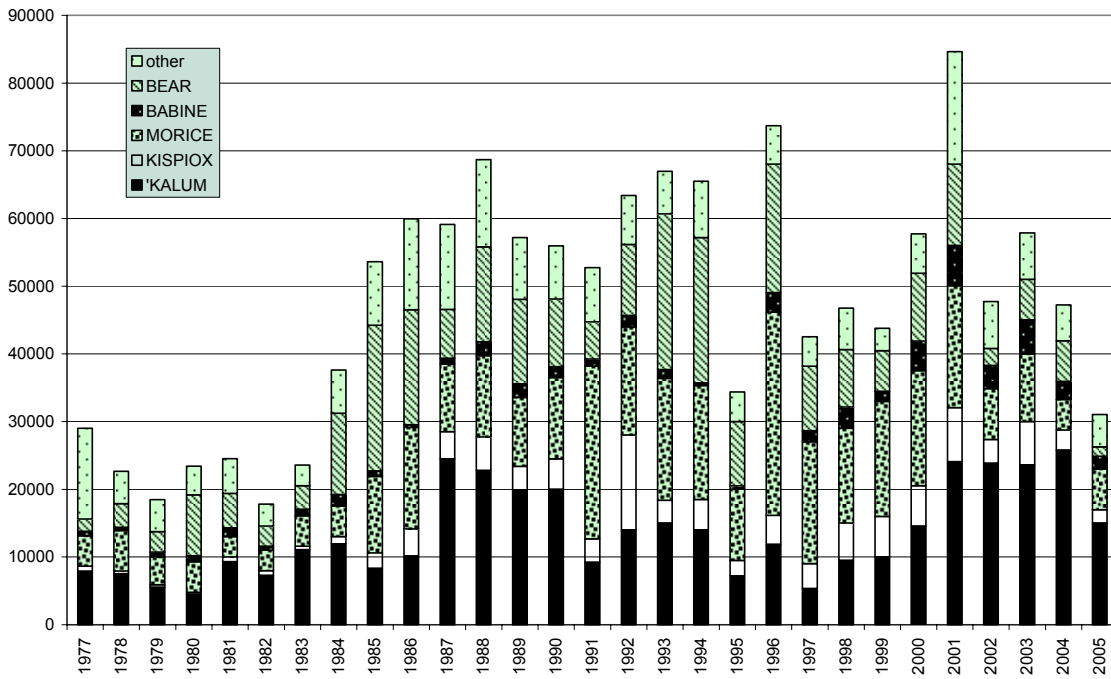
Skeena River System

- Chinook are found in over 60 Skeena tributaries.
- The Kitsumkalum, Morice and Bear Rivers contribute 65 to 75%.
- The Kispiox, Babine and Kitwanga Rivers contribute 10 to 15%.
- 20 trib's contain <1000 chinook.
- >30 trib's contain <100 chinook.
- The Skeena mainstem is not counted but has a large population.
- Most escapement estimates are based on visual counts except in the Kitsumkalum where a mark-recapture is conducted.

Skeena River



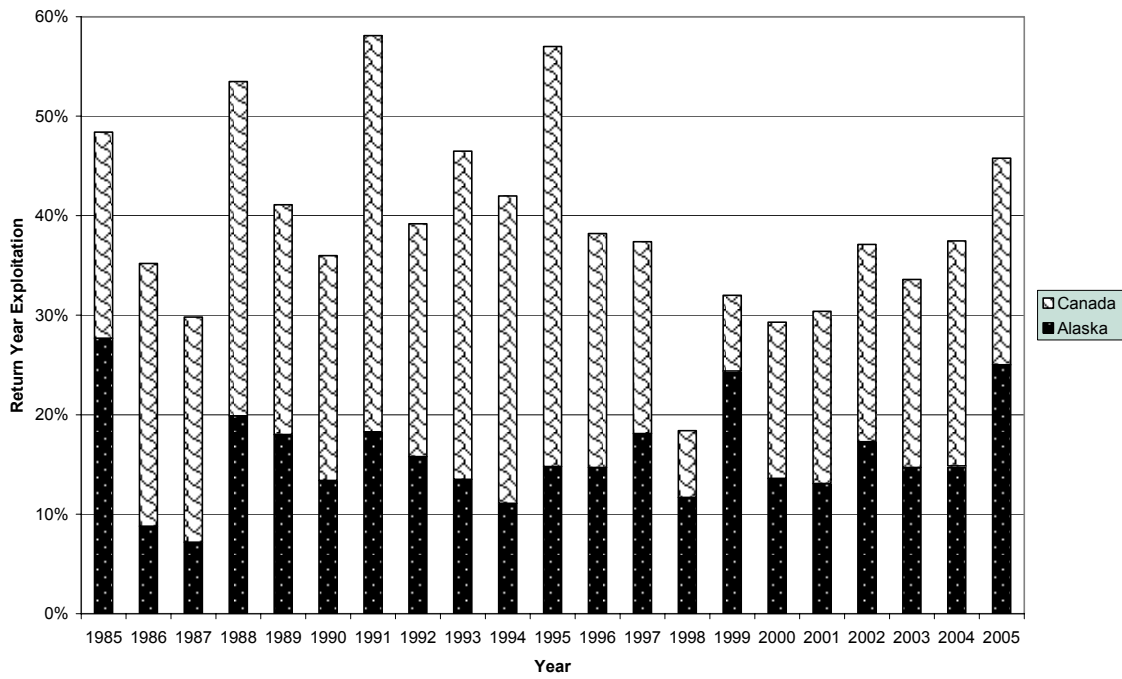
Chinook Escapement to Skeena Tributaries



Kitsumkalum escapement by return year and brood year.

Both Sexes		Brood Year >																											
Return	Year	Esc.	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
1984	11825	326	6681	2858	1538	422																							
1985	8304		0	2424	4966	731	183																						
1986	9273			15	4391	3942	722	203																					
1987	23657				0	17771	4484	982	421																				
1988	22267					552	17260	2765	1345	345																			
1989	17925						369	13987	3338	123	108																		
1990	18147							168	12627	2350	2445	429	128																
1991	9288								1390	5084	2077	678	59																
1992	12437									61	7258	4936	183	0															
1993	14059										32	11884	1841	303															
1994	12629											334	9713	2205	376														
1995	7220												221	5031	1969	0													
1996	12403													2007	4119	5274	1003												
1997	5342														191	2457	2250	254	191										
1998	11065															61	5430	4243	887	444									
1999	9763																	16	4540	2079	2877	251							
2000	14722																		1135	5982	4571	2839	195						
2001	24076																			0	10416	12705	441	514					
2002	23849																				194	15596	6548	1512	0				
2003	23608																					313	4700	17354	1120	120			
2004	25767																							121	13228	6296	5336	786	
2005	15046																								19	3547	9397	1229	855
Return from Brood		6681	5297	10895	23418	23018	18104	19121	7963	11918	18260	12145	9545	6654	7791	8700	10171	9139	18501	31704	12005	32627	10963	14853	2015	855			

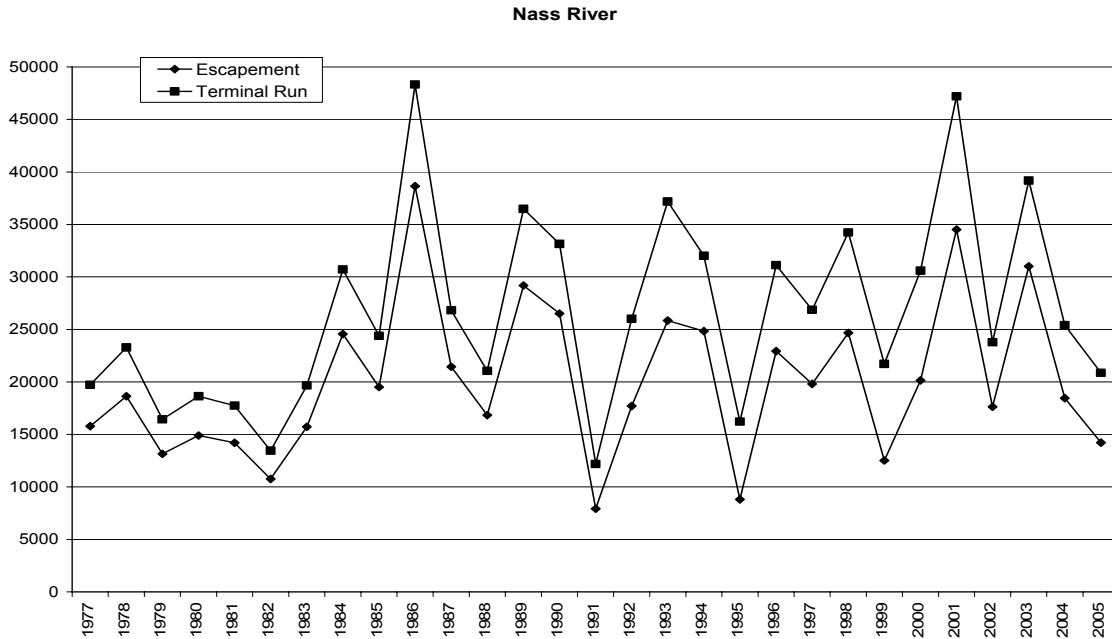
Exploitation by Country of Kitsumkalum Chinook (from cwt's)



Note that these analyses are missing in-river sport and First Nations' catches.

Nass River

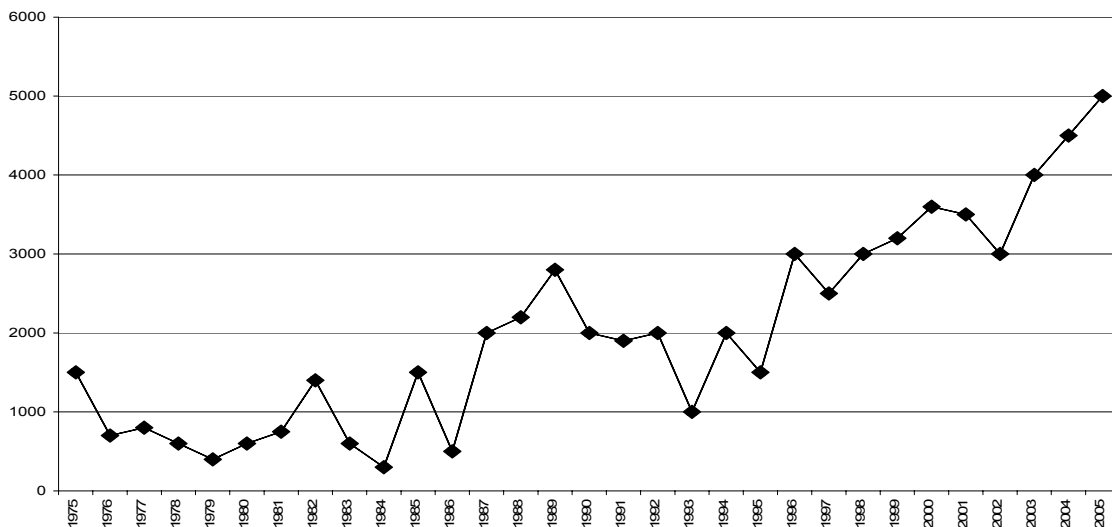
- CTC indicator stock.
- Nisga'a fishwheel mark-recapture has provided the escapement estimate since 1992.
- Historic visual estimates were calibrated to the fishwheel estimates.
- age data similar to Skeena



Yakoun River

- The only wild chinook stock on Haida Gwaii (the Queen Charlotte Islands).
- Appeared to respond well to Pacific Salmon Treaty provisions (1985).
- Chinook Technical Committee (CTC) indicator stock.
- Difficult to enumerate.
- Mixed stream and ocean types.

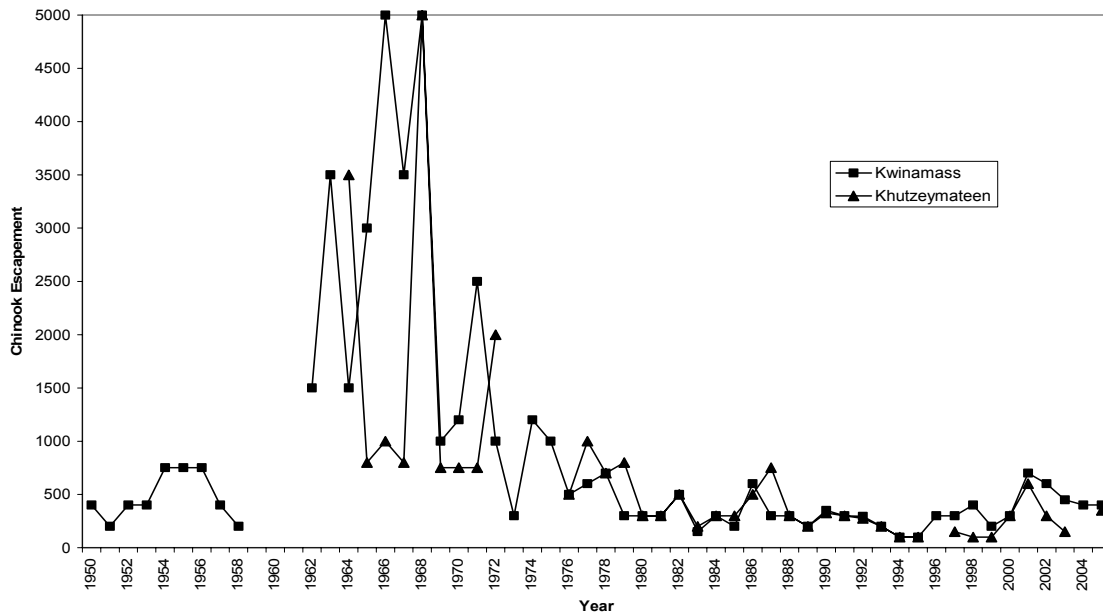
Yakoun River Escapement



Kwinamass/Khutzeymateen

- Didn't respond to PST initiatives in 1985.
- Epitomize the mixed stock problem: 2 small weak populations between 2 large healthy populations.
- Some improvement evident in 2001 but declined later

Kwinamass & Khutzeymateen River Chinook Escapements



North Coast Troll

DNA as a tool for stock ID in-season

WCVI problem

2001 first samples, test fisheries only, 13,100 total catch

2002 structured fishery and test samples

2003 to 2005 sampling designed to provide advice for management

Domestic Considerations

Past

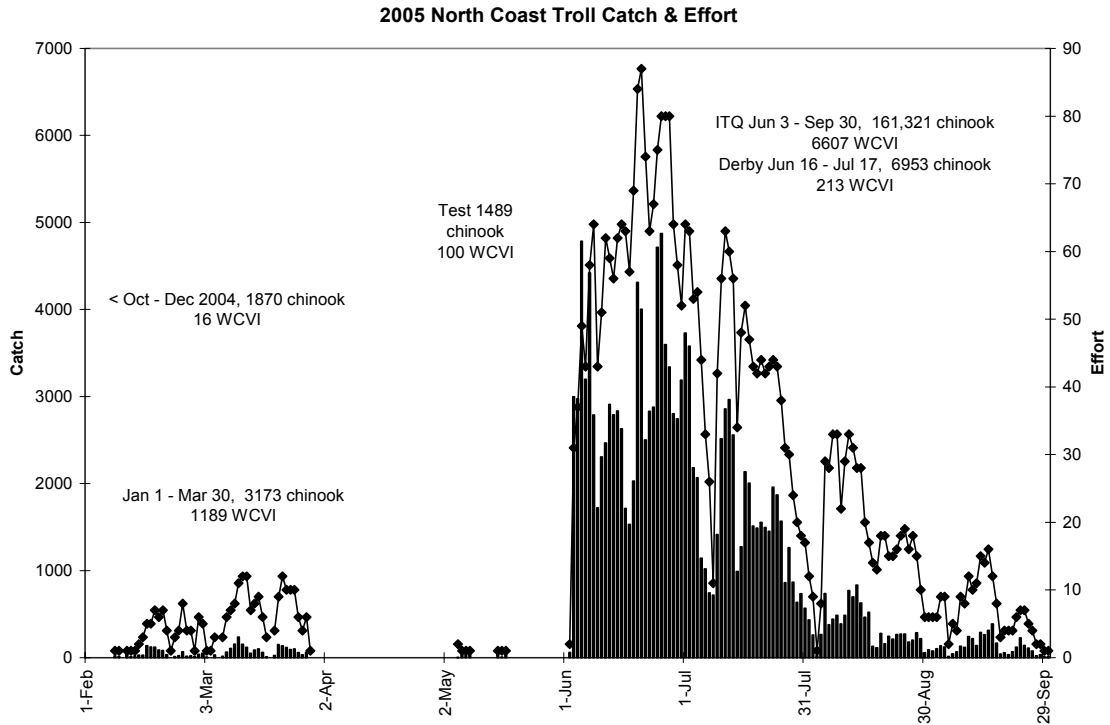
WCVI Chinook

- Upper Skeena Coho
- Thompson Coho
- Rivers Inlet Chinook

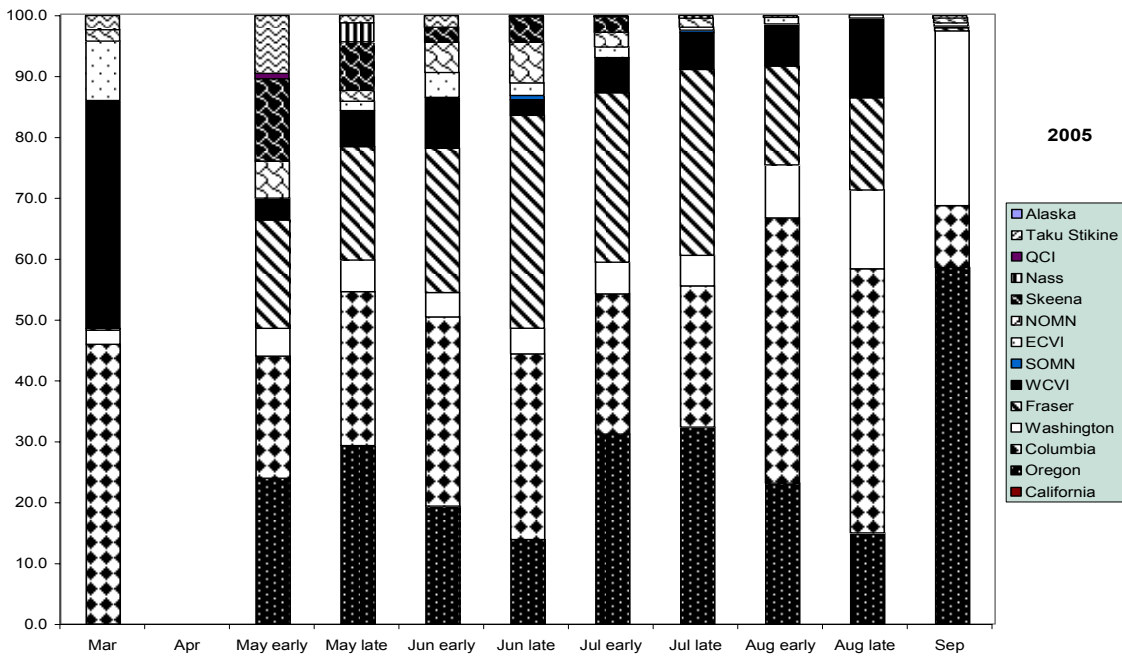
2006

- WCVI wild chinook
- Cowichan chinook
- Rivers Inlet Chinook
- Thompson Coho

2005 North Coast Troll
 Catch 174,806
 WCVI 8,125
 PST allocation 246,600 AABM
 177,800 NBC Troll, 68,800 QCI Sport



2005 North Coast Troll Test Chinook Stock Composition



% WCVI per sample for years 2004 & 2005
diamond = Area 1 sample
square = Area 2W sample

