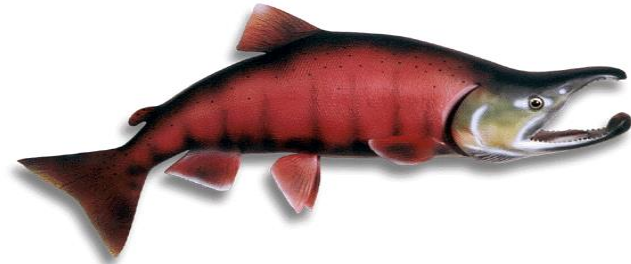
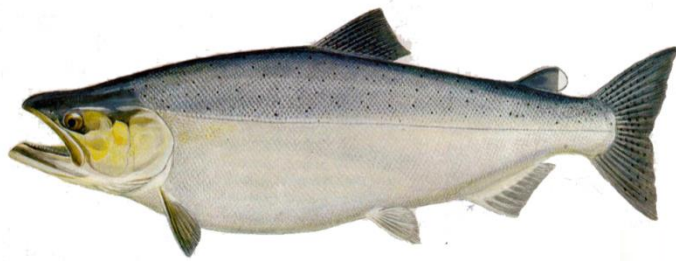




2013 Fraser River Summary Chinook, Coho and Chum





Fraser River Chinook - Background

Diverse group of populations, exhibiting a wide range of life histories, geography, and run timing

Chinook enter the Fraser River from March thru October

Spawning occurs throughout the Fraser, from just above the tidal limits in the Lower Fraser to the upper tributaries of the Stuart basin

Juveniles exhibit both stream and ocean life history types

Currently managed as five Management Units

- Fraser Spring 4(2) Chinook
- Fraser Spring 5(2) Chinook
- Fraser Summer 5(2) Chinook
- Fraser Summer 4(1) Chinook
- Fraser Fall Chinook



2013 Fraser River Stock Assessment - Chinook

In-season Assessment

- Spring and Summer 5(2) Chinook are assessed in-season with an abundance model based on catch from the Albion Test Fishery
- the 2013 in-season estimate of terminal run size (provided on June 14th) was approximately 39,000
- catch generating this estimate was the lowest on record for the preceding 6 week time period (Chinook catch from 8” net was 5 fish)
- this estimate resulted in Zone 1 management for 2013 (Zone 1 < 45K; Zone 2 = 45 to 85K; Zone 3 > 85K)
 - marine approach areas and in-river recreational fisheries were limited
 - management actions included size and retention limits and area closures
 - Area G troll closure in June
 - in-river FSC fisheries were managed to reduced overall effort



2013 Fraser River Stock Assessment - Chinook

Post-season Assessment

- information currently available is limited to preliminary spawner escapement estimates
- escapement estimates represent the sum of all systems surveyed with no expansion for those spawning areas which are not surveyed (this is done through the Run Reconstruction model)
- Run Reconstruction modeling will also provide estimates of terminal returns, harvest rates, and catch by stock (in-river only)
- CWT exploitation rate analysis will be provided for Spring 4(2), Summer 4(1), and Falls (include marine impacts)
- estimated completion dates for these analyses are not available



2013 Fraser River Stock Assessment - Chinook

Fraser Spring 4₂ Chinook

- aggregate escapement was still poor at approx. 3,000
- great improvement over record low 2009 parental brood of 844
- Nicola escapement estimate = approx. 2,150 (visual)

Fraser Spring 5₂ Chinook

- aggregate at or just over parental brood levels, but escapement was poor; 4th lowest since 1980
- aggregate escapement is approx. 17,000
- stocks of concern continue to include Cottonwood and Chilako

Fraser Summer 5₂ Chinook

- aggregate escapement likely below parental brood levels, which was also poor
- aggregate escapement is approx. 13,000
- Chilko (5,180) and Clearwater (2,160)



2013 Fraser River Stock Assessment - Chinook

Fraser Summer 4₁ Chinook (late South Thompson)

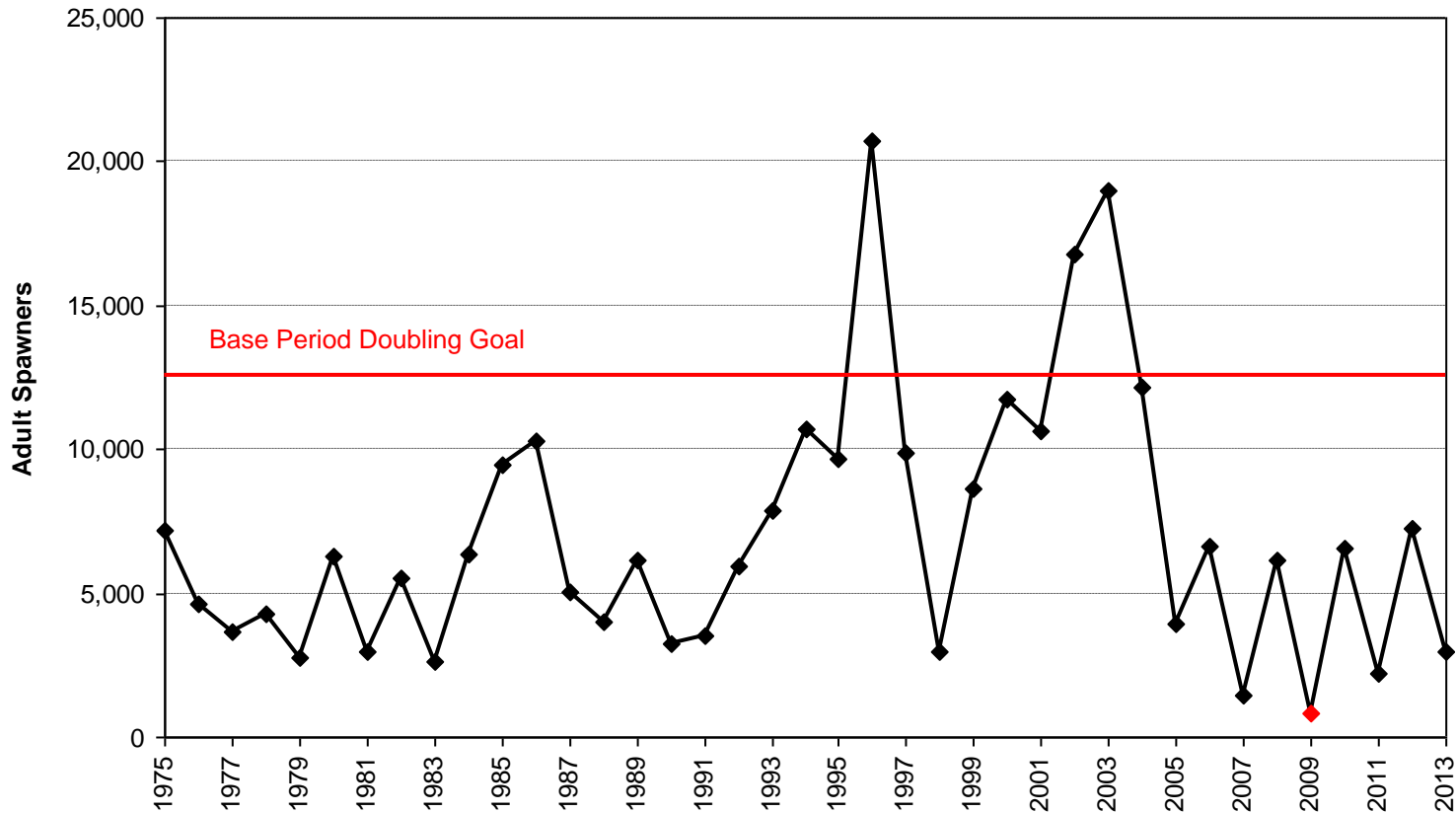
- return improved considerably relative to the decline seen in 2012
- aggregate escapement of 129,000 is about 150% of 2009 parental brood

Lower Fraser Fall Chinook (Harrison and Chilliwack)

- only preliminary information is available, but returns were below forecast for both Harrison and Chilliwack
- escapement goal range for Harrison is 75,100 to 98,500
- pre-season forecast for Harrison *escapement* of less than 50,000
- Harrison preliminary escapement is approx. 38,000 adults
- Chilliwack preliminary escapement unavailable at this time
- terminal abundance estimates available this spring

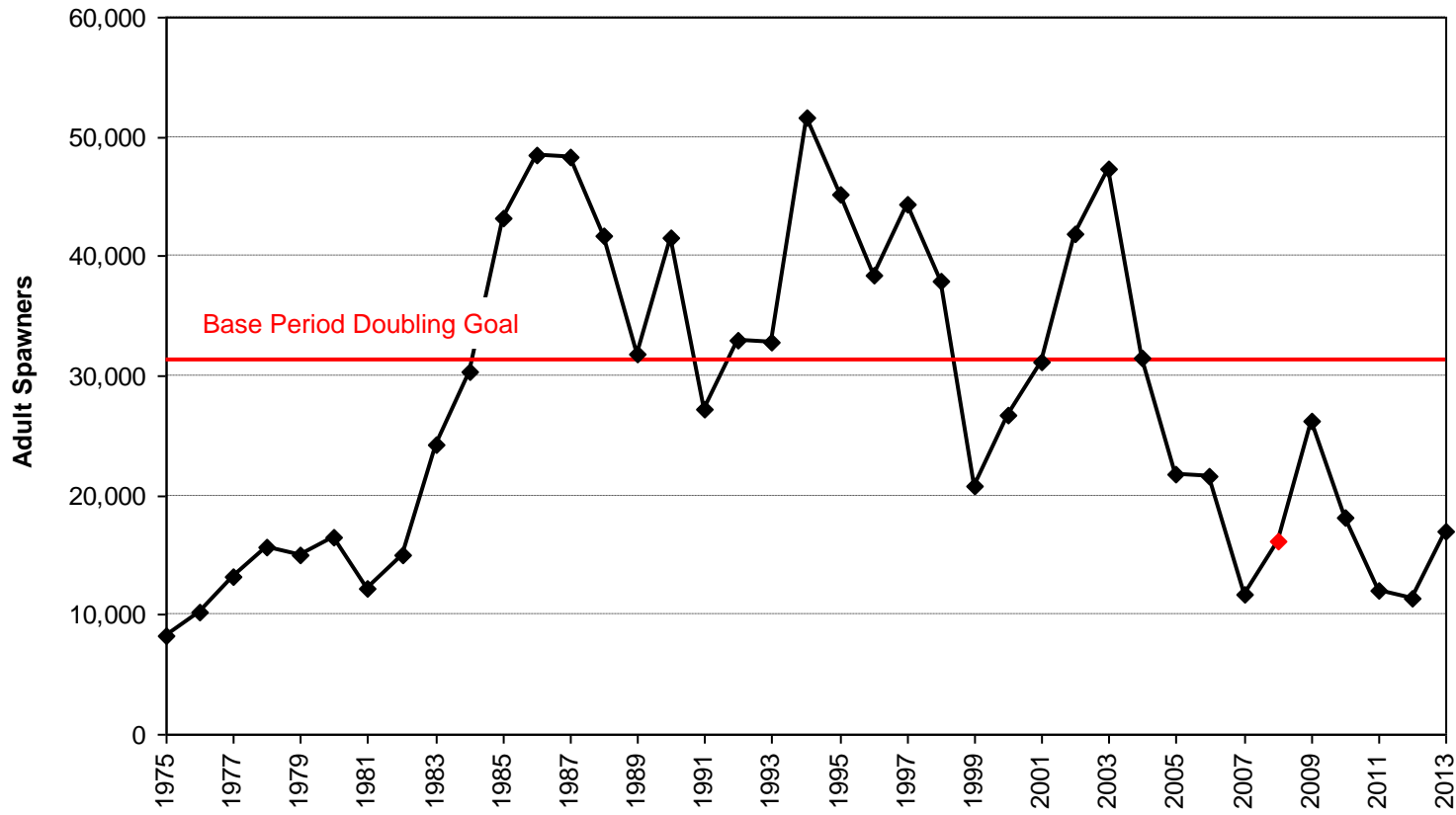


Escapement - Fraser Spring 4₂ Chinook



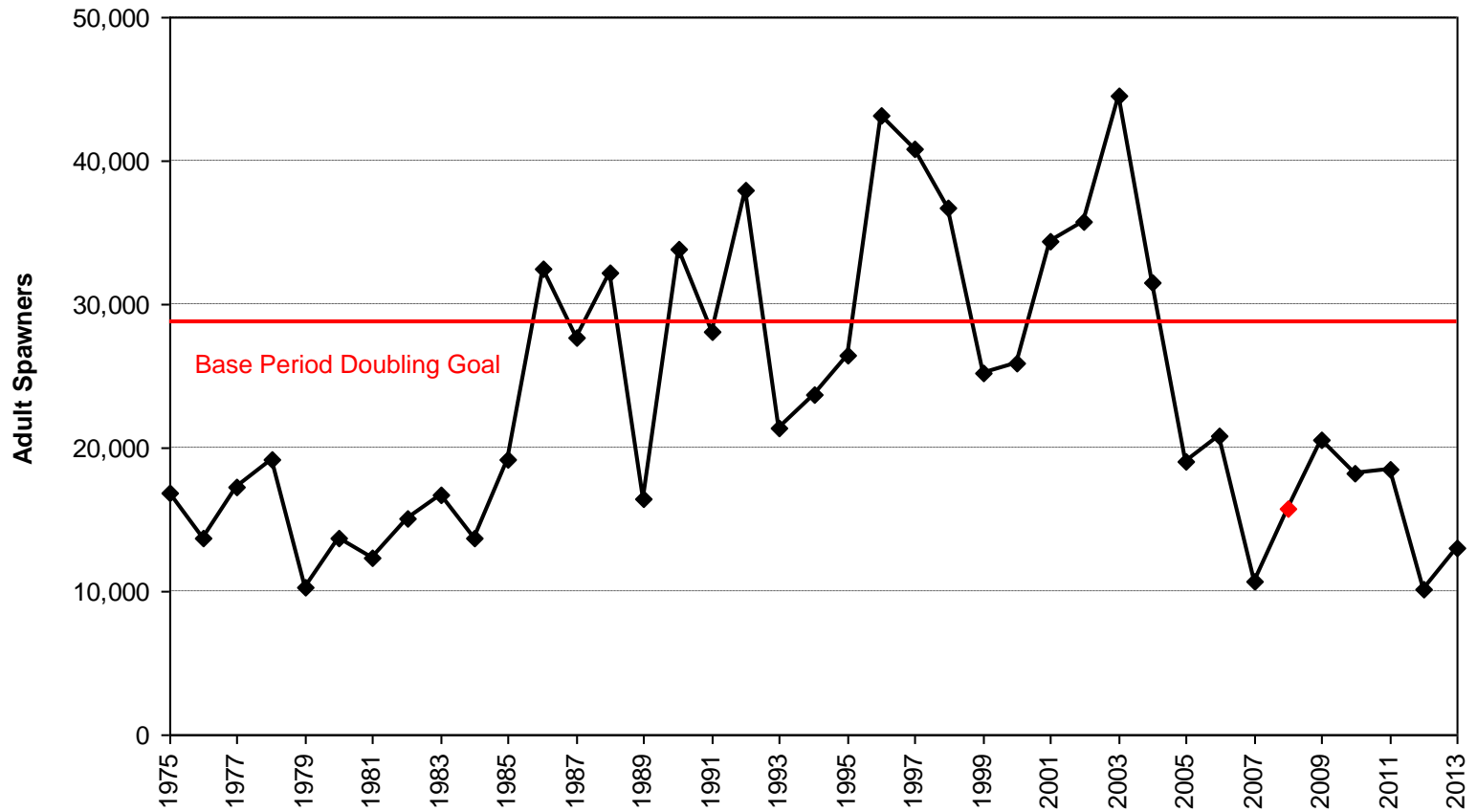


Escapement - Fraser Spring 5₂ Chinook



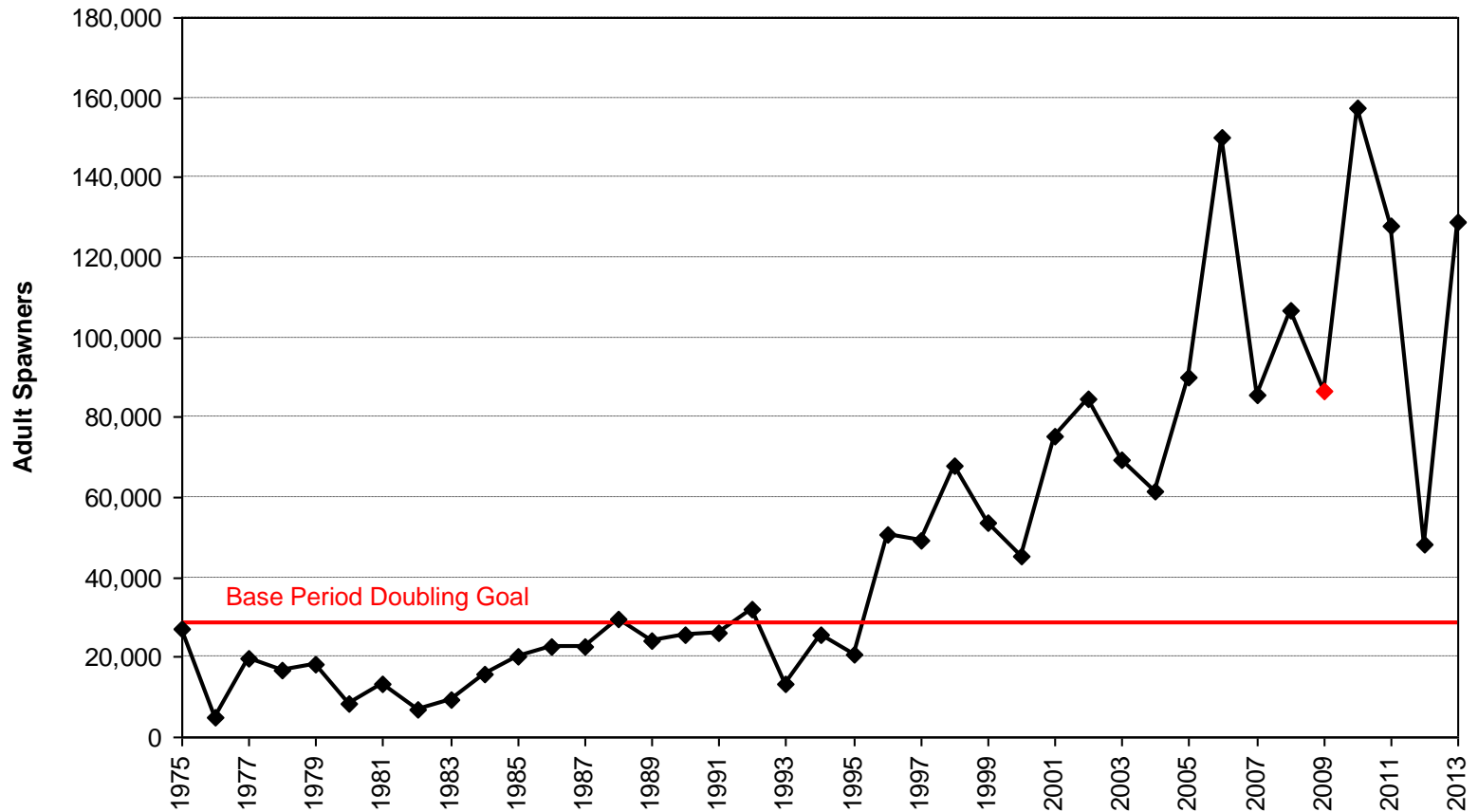


Escapement - Fraser Summer 5₂ Chinook



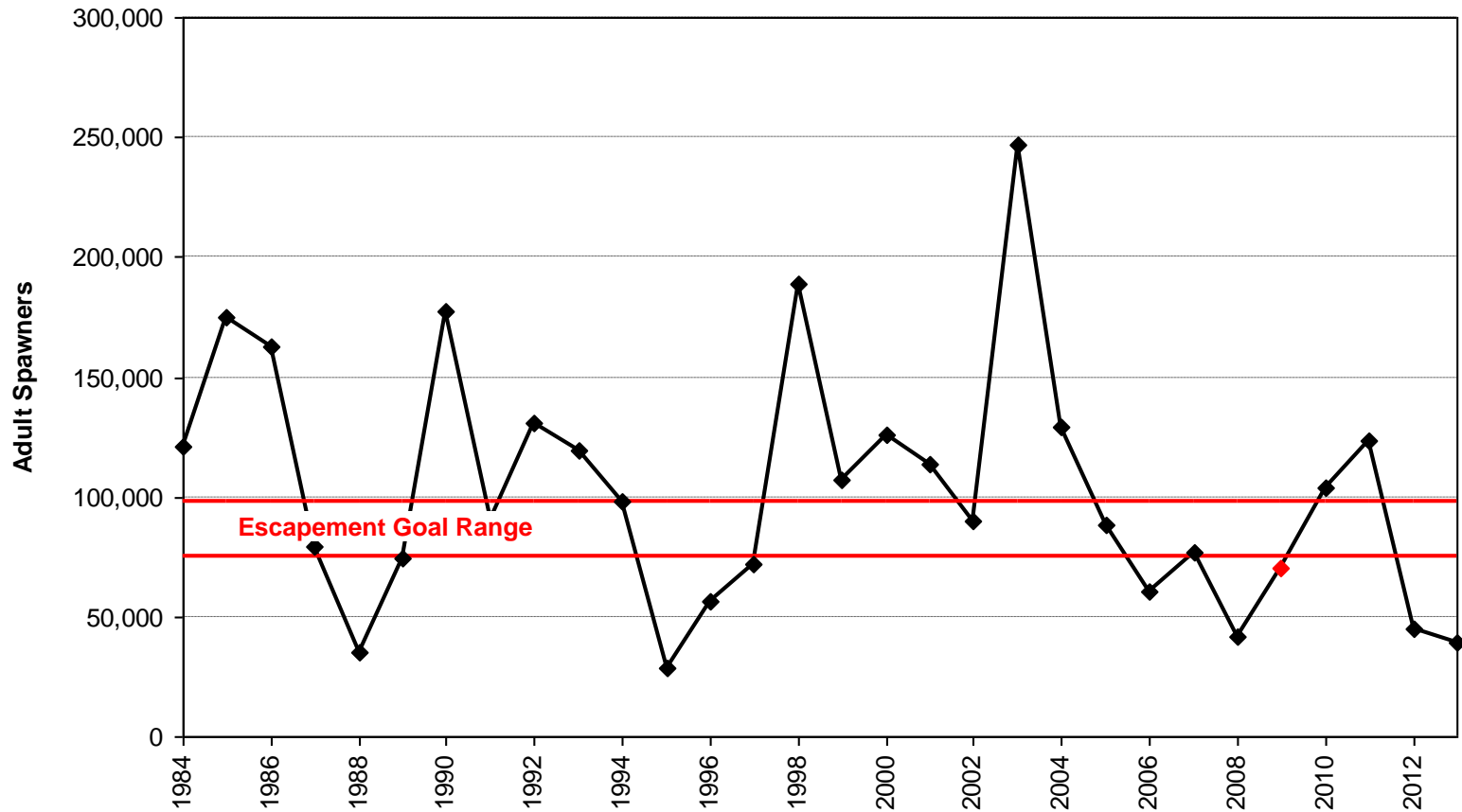


Escapement - Fraser Summer 4₁ Chinook





Escapement - Fraser Fall Chinook





Fraser River Coho - Background

Coho populations spawn throughout the Fraser watershed

- many spawning sites in Lower Fraser River
- Interior Fraser coho return to the Upper Fraser and Thompson Rivers

Stream-type life history

Most return as three year olds

Coho enter the Lower Fraser River from late August to December

- peak migration period for Interior Fraser coho from early September to early October

Interior Fraser coho populations have declined dramatically from peak abundances observed in the 1980's

–significant fishery reductions implemented in late 1990's

While spawning escapements have improved somewhat in recent years, overall returns remain well below levels observed prior this decline



2013 Fraser River Stock Assessment Coho

Interior Fraser coho

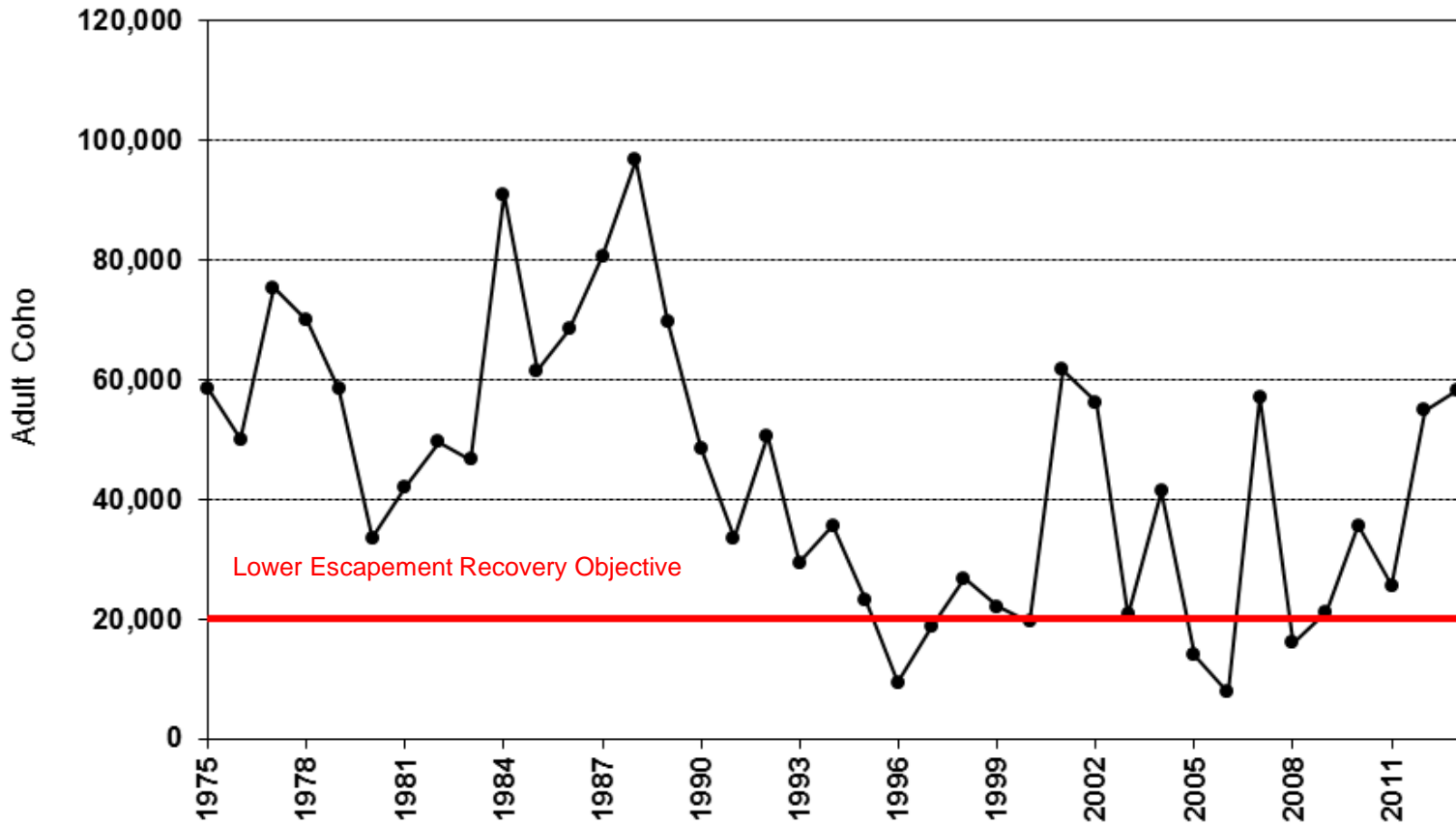
- preliminary escapement estimate approximately 58,000
- increase over 2010 parental brood escapement of ~35,000
- 2012 aggregate escapement was 55,000

Lower Fraser coho

- escapement assessments are still underway
- estimates are expected late February

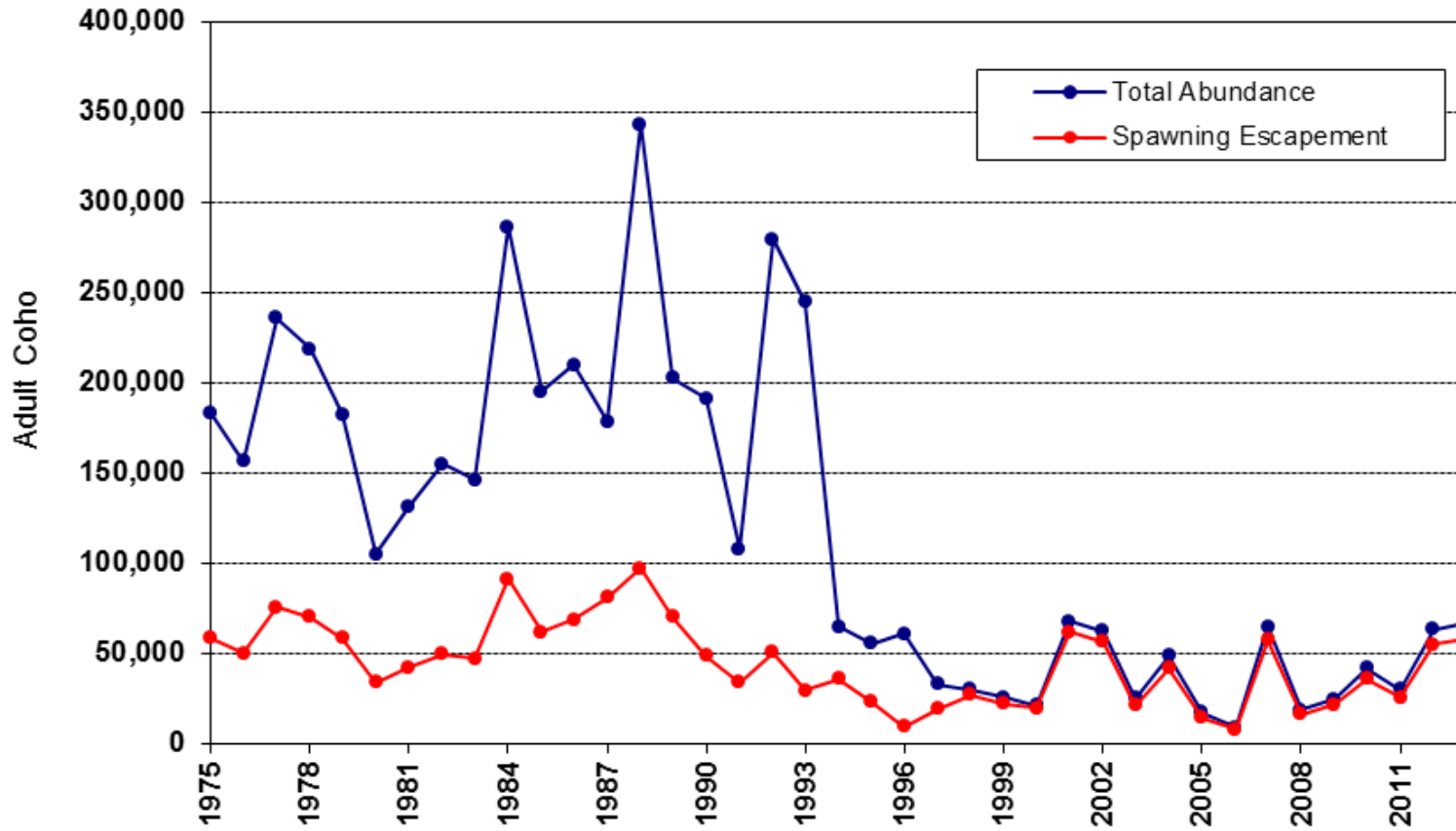


Escapement - Interior Fraser River Coho





Total Abundance - Interior Fraser River Coho





Fraser River Chum - Background

Largest chum population in British Columbia

- two Conservation Units (Lower Fraser and Fraser Canyon)
- managed as one management unit

Escapement goal is 800,000

Return to Fraser from September through November

- recent year peak migration mid/late-October

Major spawning areas are below Hope

- Harrison/Weaver/Chehalis, Chilliwack/Vedder, Stave

Enhancement

- Weaver spawning channels, Inch Creek, Chilliwack, and Chehalis hatcheries
- production relatively constant over the last 10 years
- proportion of fed fry decreased in the last decade, but has been increased in recent years



2013 Fraser River Stock Assessment Chum

Managed based on in-season information derived from the Albion test fishery

2013 in-season assessment

- Albion test fishing catch was strong and consistent from the start of the season
- October 15th preliminary run size estimate of 1.489 million
- October 21st run size estimate was 1.634 million, with a peak date of October 18th

2013 Fraser River fisheries

- in-river FSC fisheries from Oct 5th to Nov 24th
- Economic Opportunity fisheries between Oct 21st and Nov 6th
- Area E opening Oct 24th; Area B Demonstration in Area 29 Oct 17th
- recreational fishery open for chum July 15th through Dec 31st with closure for sockeye concerns last two weeks of August



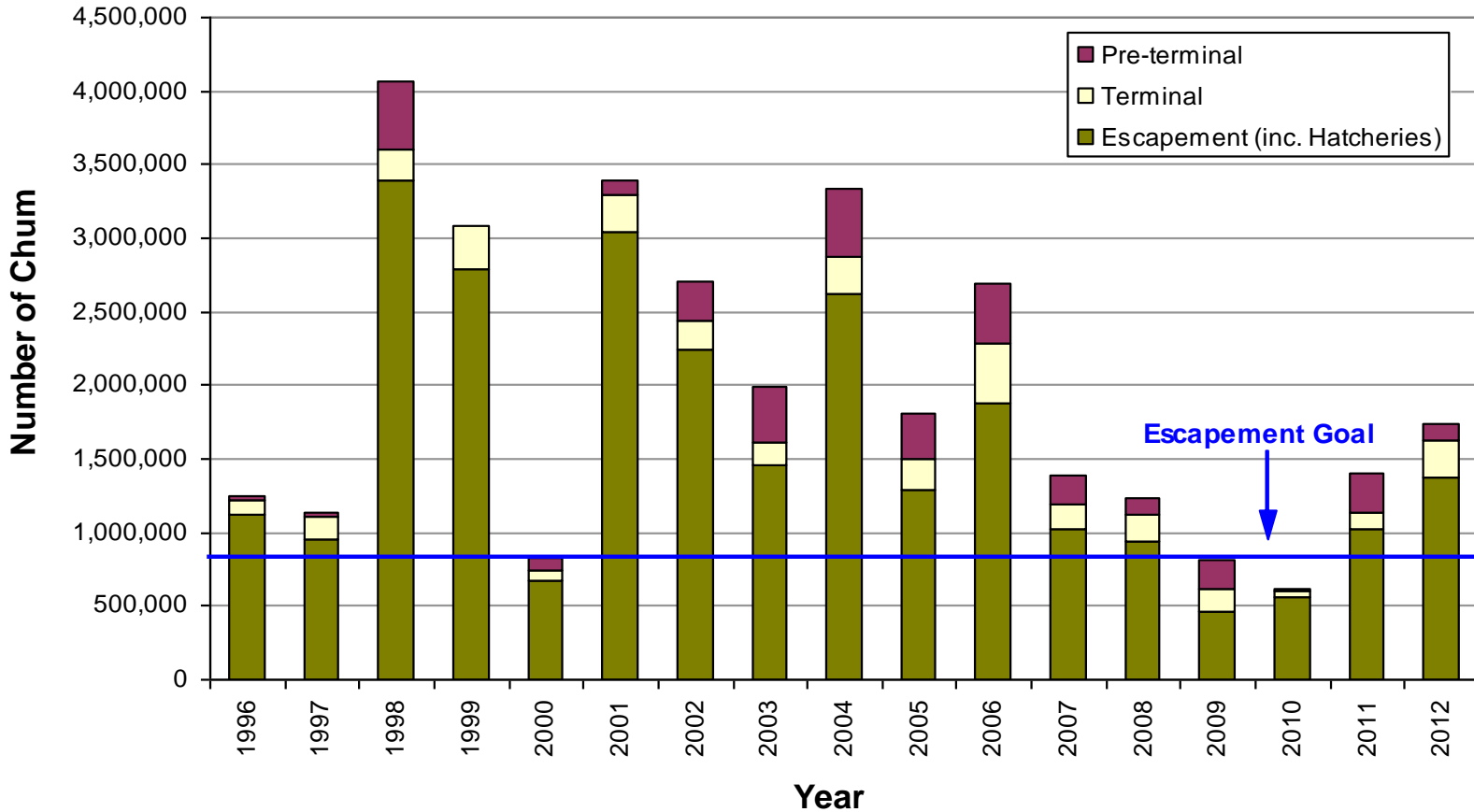
2013 Fraser River Stock Assessment Chum

Post-season assessment

- 2013 escapement estimation is not yet complete
- very preliminary estimates from Harrison are tracking somewhat lower than in-season information
- additional post-season information:
 - complete spawner escapements
 - terminal run reconstruction
 - stock composition from marine fisheries



Run Size - Fraser River Chum





2013 Fraser River Catch Commercial and Demonstration

	Chinook		Coho		Chum	
	<i>rel</i>	<i>kept</i>	<i>rel</i>	<i>kept</i>	<i>rel</i>	<i>kept</i>
Area E						
<i>Chum directed</i>	<i>21</i>	5	<i>1,551</i>	30	<i>61</i>	93,189
Area B						
<i>Pink directed (Area 29)</i>	<i>4127</i>	75	<i>5,577</i>	428	<i>226</i>	943
<i>Chum directed (Area 29)</i>	<i>3</i>	0	<i>101</i>	0	<i>0</i>	6,535
All Fisheries	<i>4,151</i>	80	<i>7,229</i>	458	<i>287</i>	100,667



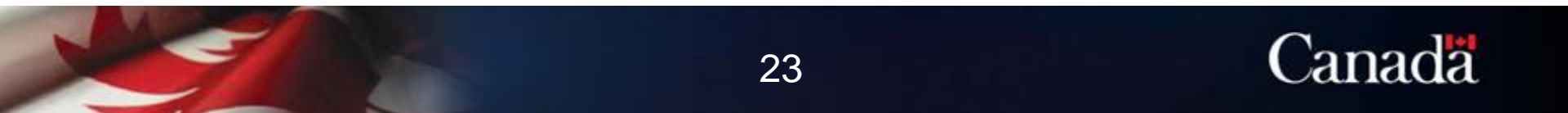
2013 Fraser River Catch Recreational

	Chinook		Coho		Chum	
	<i>rel</i>	kept	<i>rel</i>	kept	<i>rel</i>	kept
Lower Fraser	833	2,838	793	109	355	53
BC Interior	199	2,527	5	0	0	0
Totals	1,032	5,365	798	109	355	53



2013 Fraser River Catch - First Nations

	Chinook		Coho		Chum	
	<i>rel</i>	kept	<i>rel</i>	kept	<i>rel</i>	kept
FSC						
<i>Lower Fraser</i>	<i>100</i>	10,663	<i>418</i>	3,641	<i>42</i>	36,969
<i>BC Interior</i>	<i>13</i>	3,446	<i>0</i>	2	<i>0</i>	0
<i>FSC Total</i>	<i>113</i>	14,109	<i>418</i>	3,643	<i>42</i>	36,969
Economic Opportunity						
<i>Lower Fraser</i>	<i>6,202</i>	119	<i>11,757</i>	154	<i>1,720</i>	112,401
<i>BC Interior</i>	<i>0</i>	1,733	<i>2</i>	0	<i>0</i>	0
<i>Ec Opp Total</i>	<i>6,202</i>	1,852	<i>11,759</i>	154	<i>1,720</i>	112,401
ESSR						
<i>Lower Fraser</i>	<i>0</i>	8,745	<i>0</i>	43,932	<i>0</i>	28,103
<i>BC Interior</i>	<i>0</i>	0	<i>0</i>	0	<i>0</i>	0
<i>ESSR Total</i>	<i>0</i>	8,745	<i>0</i>	43,932	<i>0</i>	28,103
All Catch						
<i>Lower Fraser</i>	<i>6,302</i>	19,527	<i>12,175</i>	47,727	<i>1,762</i>	177,473
<i>BC Interior</i>	<i>13</i>	5,179	<i>2</i>	2	<i>0</i>	0
<i>All Catch Total</i>	<i>6,315</i>	24,706	<i>12,177</i>	47,729	<i>1,762</i>	177,473





2013 Fraser River Fishery Summary



2013 Fraser River Fisheries - Commercial

Directed sockeye and chum fisheries in-river if a commercial TAC is identified

- constraints due to co-migrating stocks of concern
- no sockeye fishery in 2013 due to lack of commercial TAC

Area E Fraser River Chum Fishery

- one 24 hour opening on October 24th/25th
- harvest of 93,000 chum
- 21 Chinook, 1551 coho, and 22 steelhead were released
- retained bycatch of 5 Chinook and 30 coho



2013 Fraser River Fisheries Demonstration Fisheries (excl. First Nations)

Area E Sockeye and Chinook Demonstration fisheries

- did not proceed in 2013 due to unavailability of commercial sockeye TAC

Area B Pink Demo in Area 29

- fishery opened from Sept 1st to 10th, and also Sept 17th and 18th
- harvested approx. 1.5 million pinks
- released bycatch: 5,577 coho; 226 chum; 4,127 Chinook; 39 steelhead
- kept bycatch: 428 coho; 943 chum; 75 Chinook

Area B Chum Demo in Area 29

- fishery opened Oct 17th, targeting up to 50,000 chum
- harvested 6,535 chum
- released bycatch: 101 coho; 3 Chinook; 1 steelhead



2013 Fraser River Fisheries - Recreational

Chinook management actions in Region 2 (Lower Mainland)

- normally opens May 1
- closed in spring to avoid Spring 4(2) Chinook and to start season in Zone 1 management for Sp/Sum 5(2) Chinook
- opened for Chinook on July 27, 4 per day, only 1 over 50 cm
- closed to all salmon Aug 15 due to by-catch concerns for summer run sockeye
- re-opened for Chinook on Sept 5th, 4 per day, only 1 over 62 cm



2013 Fraser River Fisheries - Recreational

Chinook management actions in Region 3 (Thompson-Nicola)

Fisheries in Region 3 generally target a specific stock group and are short duration opportunities designed to avoid impacts on non-target stocks. Areas not specifically mentioned are closed to fishing for salmon year-round.

Fisheries targeting Sp/Sum 5(2) stocks that did not open in 2013 under Zone 1

- Clearwater and North Thompson Rivers
- Fraser River at Bridge River

Fisheries targeting Summer 4(1) stocks that opened late due to Summer-run sockeye concerns

- Fraser River jack fishery opened Aug 22, then closed Aug 27 due to sockeye concerns
- Thompson River opened Sep 6 to Sep 30 (normally opens July 16), daily and size limits varied by area
- Kamloops Lake opened Aug 31 to Sep 22 (normally opens August 22), 4 Chinook per day, 1 > 50 cm
- South Thompson River opened as normal Aug 16 to Sept 22, 4 Chinook per day, 2 > 50 cm



2013 Fraser River Fisheries - Recreational

Chinook management actions in Region 5A and 7 (Cariboo/Peace)

All fisheries in these Regions target Spring or Summer 5(2) Chinook

- fisheries remained closed under Sp/Sum 5(2) Zone 1 management

Chinook management actions in Region 8 (Okanagan)

These fisheries target Summer 4(1) Chinook with some measures in place to avoid Besette Spring 4(2) stocks. Areas not specifically mentioned are closed to fishing for salmon year round.

- Mabel Lake and Lower Shuswap River opened to Chinook Jul 25 to Sept 12 with daily and size limits to avoid Besette stocks in place through Aug 15
- Middle Shuswap River opened to Chinook Jul 25 to Aug 15 with daily and size limits to avoid Besette stocks



2013 Fraser River Fisheries - Recreational

Coho management actions

- Mouth to Sawmill Creek - no fishing for coho (bait ban) during “Coho Window Closure” from early September to mid-October
- Sawmill Creek to Lytton - No fishing for salmon Sept 16 to Dec 31
- Lytton to Williams Lake - No fishing for salmon Sept 23 to Dec 31
- Upstream of Williams Lake - No fishing for salmon Oct 1 to Dec 31

Chum management actions

- July 16 to Aug 15 - 2 per day (Mission to Sawmill Cr); 4 per day (below Mission)
- Aug 15 to 30 - closed due to by-catch concerns for Summer run sockeye
- Aug 31 to Dec 31 - 2 per day (Mission to Sawmill); 4 per day (below Mission)



2013 Fraser River Fisheries

First Nations Food, Social and Ceremonial

Chinook-directed fisheries

Lower Fraser

- started second week of May, depending on group
- reduced overall effort for Zone 1 management
- limited Chinook-selective fisheries in July with 8” nets; many groups did not have directed Chinook fisheries in July

Mid Fraser

- limited Chinook 8-inch mesh in a few areas in early May and directed Chinook with selective gear began May 23rd
- Chinook fisheries with sockeye non-retention occurred from July 8 - July 26

Thompson River Upstream of Bonaparte

- licensed July 18th for Chinook/sockeye

Upper Fraser

- directed Chinook fisheries began June 1 with selective gear including angling and dip net
- sockeye non-retention fisheries occurred during the Early Stuart closure with selective gear, including 8” mesh gillnets



2013 Fraser River Fisheries

First Nations Food, Social and Ceremonial

Sockeye directed fisheries

Lower Fraser

- dry rack fisheries July 10th to 13th
- full FSC openings July 26th and Aug 2nd weekends

Mid Fraser

- sockeye/Chinook fisheries took place from July 28 to August 14th
- fisheries later in August were Chinook-directed, non-retention sockeye

Upper Fraser

- some directed sockeye fishing with dipnet occurred July 11th to the 15th
- sockeye-directed gillnet fishing was initiated following the Early Stuart closure
- some very limited retention in terminal areas with access to only Early Stuart

Coho directed fisheries

- limited directed fishery in the North Thompson River directed at Dunn Creek stock

Chum-directed fisheries (Lower Fraser only)

- October 5th to November 24th using gillnets



2013 Fraser River Fisheries

First Nations Economic Opportunity and Demo

Lower Fraser River Economic Opportunity Fisheries

- targeted chum and pink salmon in 2013
- pink fisheries occurred between Sept 10th and 29th
- chum fisheries occurred between Oct 21st and Nov 6th
- gear types included beach seines, shallow seines and gillnets (*chum only*)
- 112,401 chum; 154 coho and 119 Chinook kept
- 1,720 chum; 11,757 coho; 6,202 Chinook and 232 steelhead released



2013 Fraser River Fisheries First Nations Economic Opportunity and Demo

Mid and Upper Fraser Demonstration fisheries

Secwepemc Fisheries Commission

- targeted South Thompson Chinook on Kamloops lake
- Chinook allocation was 1,800; harvest was 1,733 by 8” Gill Net
- pink allocation was 122,300; harvested 948 and transferred 40,000 to lower Fraser Economic Opportunity fishery
- bycatch mortalities of sockeye (1,323) and coho (1)

Okanagan Nation Alliance

- targeted Columbia/Okanagan sockeye on Osoyoos Lake
- allocation was 5,000; harvested 225 by trolling
- no bycatch of other salmon species



2013 Fraser River Fisheries First Nations Economic Opportunity and Demo

Mid and Upper Fraser Demonstration fisheries (cont.)

Upper Fraser Fisheries Conservation Alliance

- targeted Fraser pinks on Fraser main stem and Chilcotin River
- pink allocation was 122,300
- harvested 3,661 pinks by dip net and transferred 40,000 to Lower Fraser Economic Opportunity fisheries



The End