

Yukon River Chinook Salmon Outlook 2010

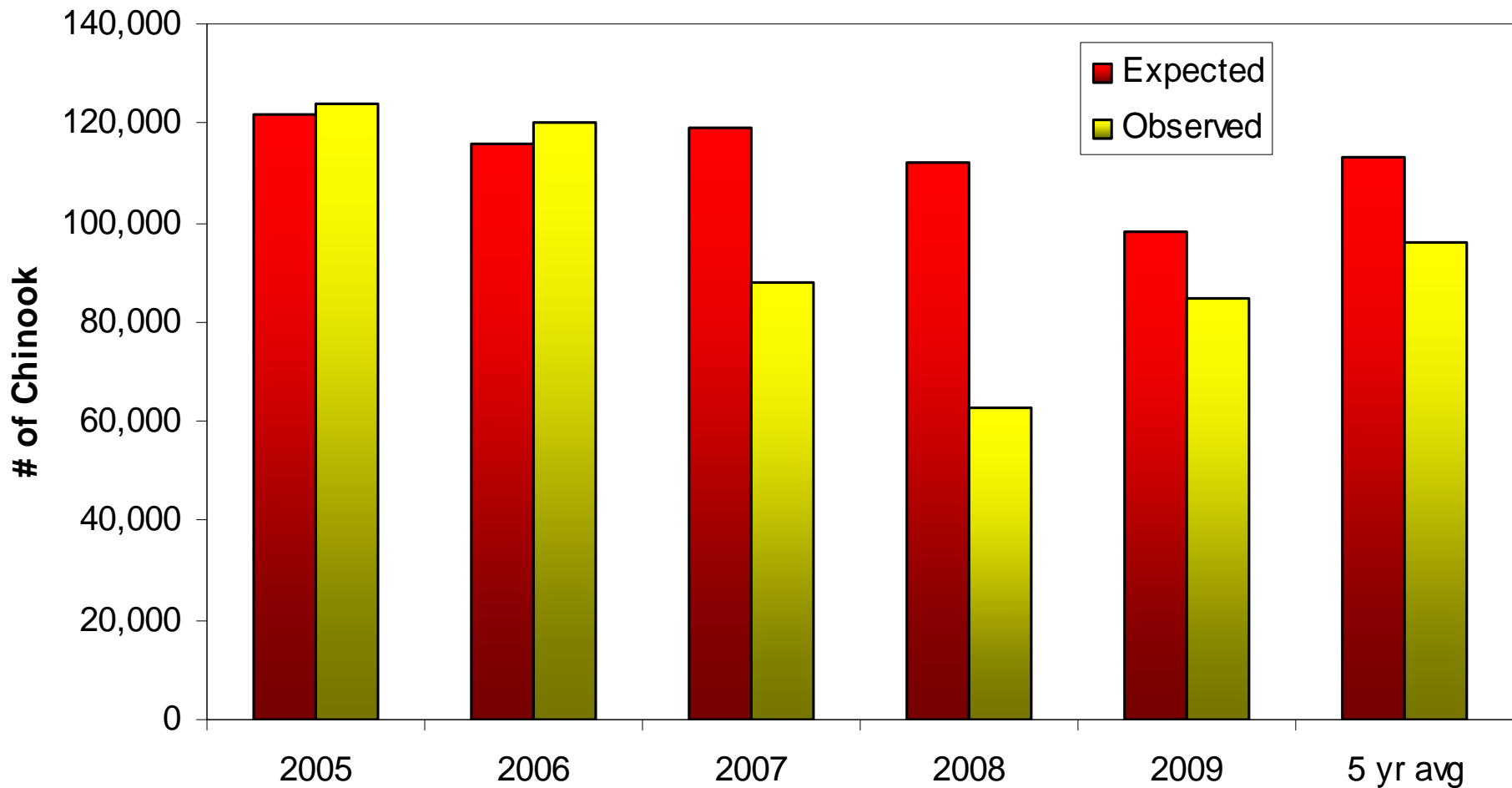


Yukon River Panel meeting, March 2010

2010 Canadian-origin Upper Yukon Chinook Outlook

- The precautionary outlook range is **77,800-113,100**, which constitutes a below average to average run
- Upper end of range is based on the average of sibling (116,400)- and stock/recruitment (109,800)- based forecasts
- Lower end of range accounts for recent run sizes being lower than model forecasts
- Models do not account for sudden changes in environmental factors, bycatch, reductions in productivity, and other phenomena

Observed vs Expected Runs Based on Avg of Sibling and Ricker Relationships



2010 Canadian-origin Upper Yukon Chinook

- Outlooks based on a revised database
- Weighted (by age) base level brood year escapement that will contribute to the 2010 run is ~57,600 fish
~67,700 fish- was base level for 2009 run
- Primary brood year escapements exceeded the minimum Interim Management Escapement Goal (IMEG) of 45,000 used in 2008 and 2009
 - 2003- (age-7) 80,594
 - 2004- (age-6) 48,469
 - 2005- (age-5) 68,551
 - 2006- (age-4) 62,993

Canadian-origin Chinook Escapement Goals

- IMEG of >45,000 established for 2008 and continued in 2009
 - revised historical escapement database was used in developing the IMEG;
 - escapement is determined from the Eagle sonar estimate minus catches in U.S. and Canada upstream of the sonar site.

Eagle Sonar Program

Left bank (split beam) and right bank (DIDSON)



JTC IMEG Recommendation for 2010

- Consensus to establish a range:
 - Range offers more flexibility with respect to uncertainties associated with management;
 - Range offers more management options:
 - » management objectives can vary with changes in run abundance;
 - » Example- more fish to spawning areas in high abundance years.
- No consensus on lower bound of the range:
 - Option 1: 40,000-55,000
 - Option 2: 45,000-55,000

JTC IMEG Recommendation for 2010

- **Option 1: 40,000 - 55,000**
 - Brackets previously used goal of >45,000
 - Allows for flexibility during poor runs to provide subsistence opportunities in the US and Canada
- **Option 2: 45,000 – 55,000**
 - Consistent with previously established IMEG of >45,000
 - Goal has been in place for only 2 years and returns from these escapements have not been evaluated

Expected 2010 Run Sizes and Harvest Sharing Based on IMEG of 45,000

Expected Run Size	Esc. Target	TAC	CDN Share @ 23%	U.S. Share (CDN stock)	Border Passage Target
77,800	45,000	32,800	7,500	25,300	52,500
113,100	45,000	68,100	15,700	52,400	60,700

*** uncertainty results in wide range of expected run sizes and potential U.S. and Canadian harvests**

Potential Harvests based on 2010 Outlook Range (77,800-113,100) and selected Escapement Levels

- **Escapement @ 40,000**
 - Border passage target 48,700-56,800
 - CDN harvest share 8,700-16,800
 - US harvest share 29,100-56,300
- **Escapement @ 45,000**
 - Border passage target 52,500-60,700
 - CDN harvest share 7,500-15,700
 - US harvest share 25,300-52,400
- **Escapement @ 55,000**
 - Border passage target 60,200-68,400
 - CDN harvest share 5,200-13,400
 - US harvest share 17,600-44,700

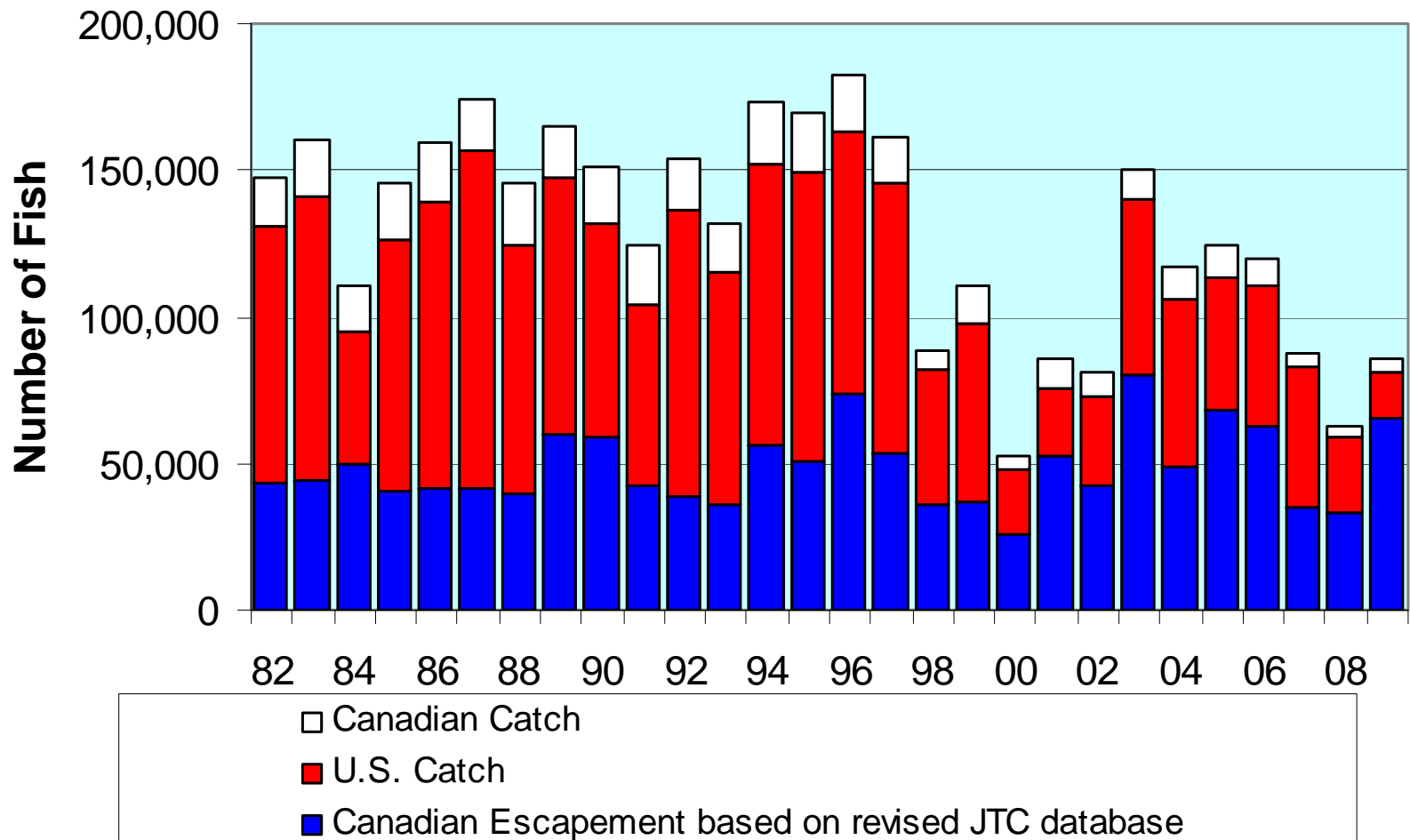
Potential Factors Influencing the 2010 Run:

2007 -2009 runs were below average, and lower than model predictions

- High seas Chinook salmon bycatch?
 - Marine and freshwater environmental factors?
 - Ocean productivity?
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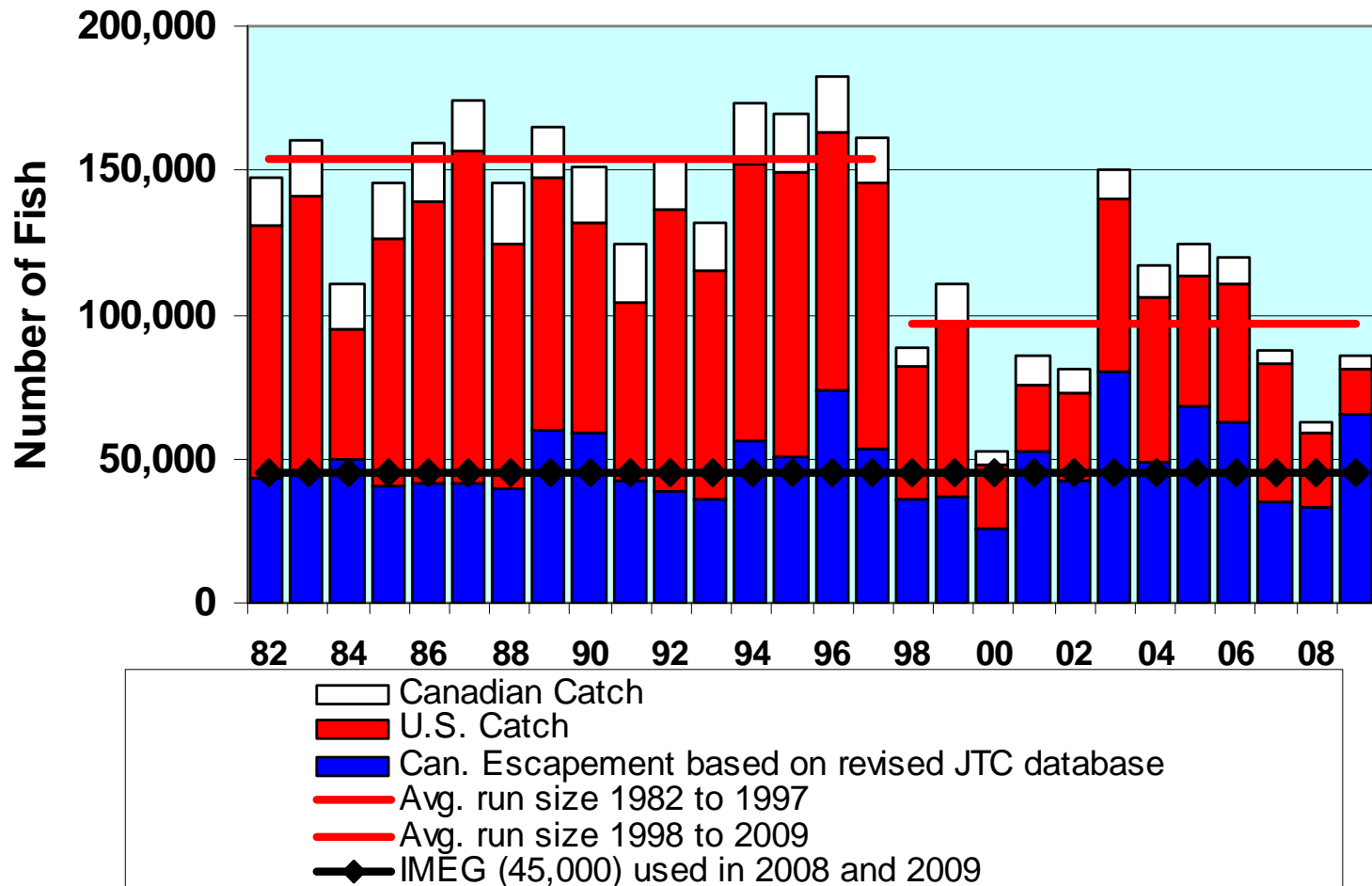
Are we observing the early stages of a long-term trend?

Canadian-origin Chinook Run Sizes (1982 to 2009)

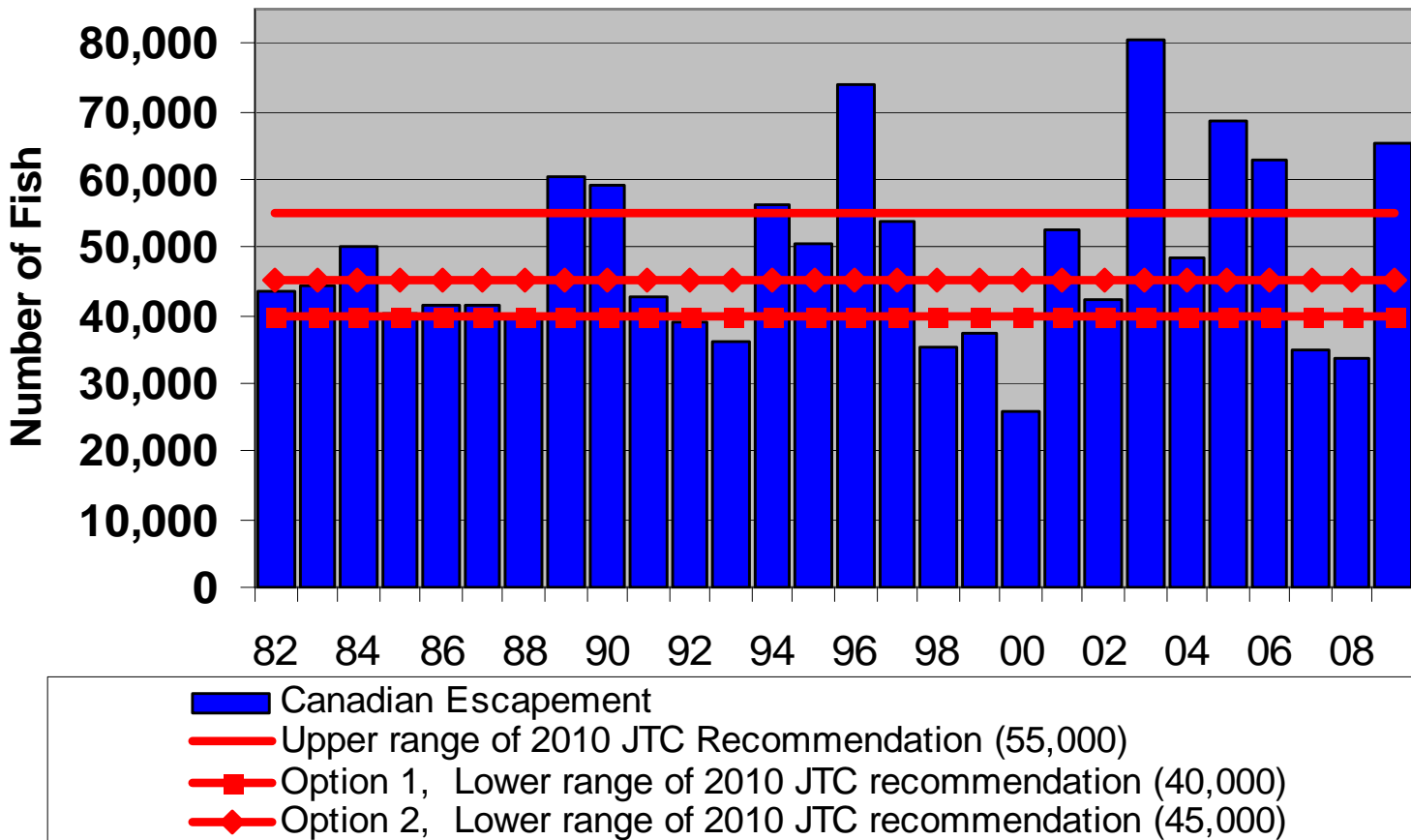


Canadian-origin Chinook Run Sizes

(avg. run size of 153,500 for 1982-1997, and 97,100 for 1998-2009)



1982-2009 Canadian Escapements with Proposed 2010 IMEG Ranges



Canadian Chinook Salmon Fisheries Management

- Eagle sonar will be used for 3rd year to determine escapement into Canada.
- Fishing opportunities in recreational, commercial, and domestic fisheries are expected to be limited in 2010.
- Restrictions are not expected to be required in First Nation fisheries unless run abundance is weaker than the lower end of the outlook range.
 - In 2008, FN fisheries reduced to <50% of average
 - In 2009, FN fisheries initially reduced to 50%-75% of average, then a full fishery very late in the season

Precautionary Fisheries Management

- 2010 Chinook salmon outlook is for a below average to average run
- Inseason management will be based on Eagle sonar program
- Canadian fishers should enter the 2010 season with the expectation that conservation measures may be required

Canadian Fisheries Management Decision Matrix

(2009 Chinook example- with colour coded mgmt. reference points)

	Border Escapement Projections	Fishery	Guideline Harvest	Anticipated Management Action
RED ZONE	<11,000 11,000 – 19,000	all	0	No fishing; assessment test fishery closed.
		TF	1,000	Assessment test fishery only: fish to be distributed by Tr'ondek Hwech'in FN.
		FN	0	Closures considered.
		CF	0	Closed.
		RF	0	Closed, i.e. Chinook quota varied to zero.
		DF	0	Closed.
YELLOW ZONE	19,000 – 54,000	TF	1,000	
		FN	0 to 8,000	Catch target to vary with abundance within zone: 0 at run size of 19,000; 8,000 catch at run of 54,000. Catch is subject to International harvest sharing provisions.
		CF	0	Closed.
		RF	0	Closed, i.e. Chinook quota varied to zero.
		DF	0	Closed.
GREEN ZONE	>54,000	TF	0	Not required. Assessment data collected through commercial fishery.
		FN	8,000+	Unrestricted.
		CF	Variable	Catch target to vary with abundance and be consistent with International agreement on harvest shares.
		RF	100-700	Expected harvest range based on recent harvests. Opportunities subject to abundance and International agreement on harvest shares.
		DF	100–300	

Legend: TF = test fishery; FN = First Nation fishery; CF = commercial fishery; RF = recreational fishery; DF = domestic fishery.

2009 Run Reconstruction

Eagle Sonar Estimate	69,957
U.S. subsistence catch (above Eagle sonar)	382
Canadian Border Passage	69,575
Canadian Catch	4,297
Estimated Canadian Escapement	65,278
U.S. catch estimate below Eagle sonar	15,618
Total Run Size Estimate	85,575
2009 IMEG- Escapement Target	45,000
TAC	40,575

2009 Run Reconstruction (continued)

Harvest Sharing Obligations	TAC	Estimated Harvest	% of TAC Harvested
U.S. share TAC (mid-point of 74-80%)	31,243	16,000	51%
Cdn share TAC (mid-point of 20-26%)	9,332	4,297	46%
TOTAL	40,575	20,297	50%

U.S. Border Passage Obligation	54,332
Estimated Border Passage	69,575

Canadian upper Yukon Catch	
First Nation	3,791
Commercial	364
Domestic	17
Sport	125
TOTAL	4,297

Yukon River Chinook Salmon Drainage-wide Outlook 2010

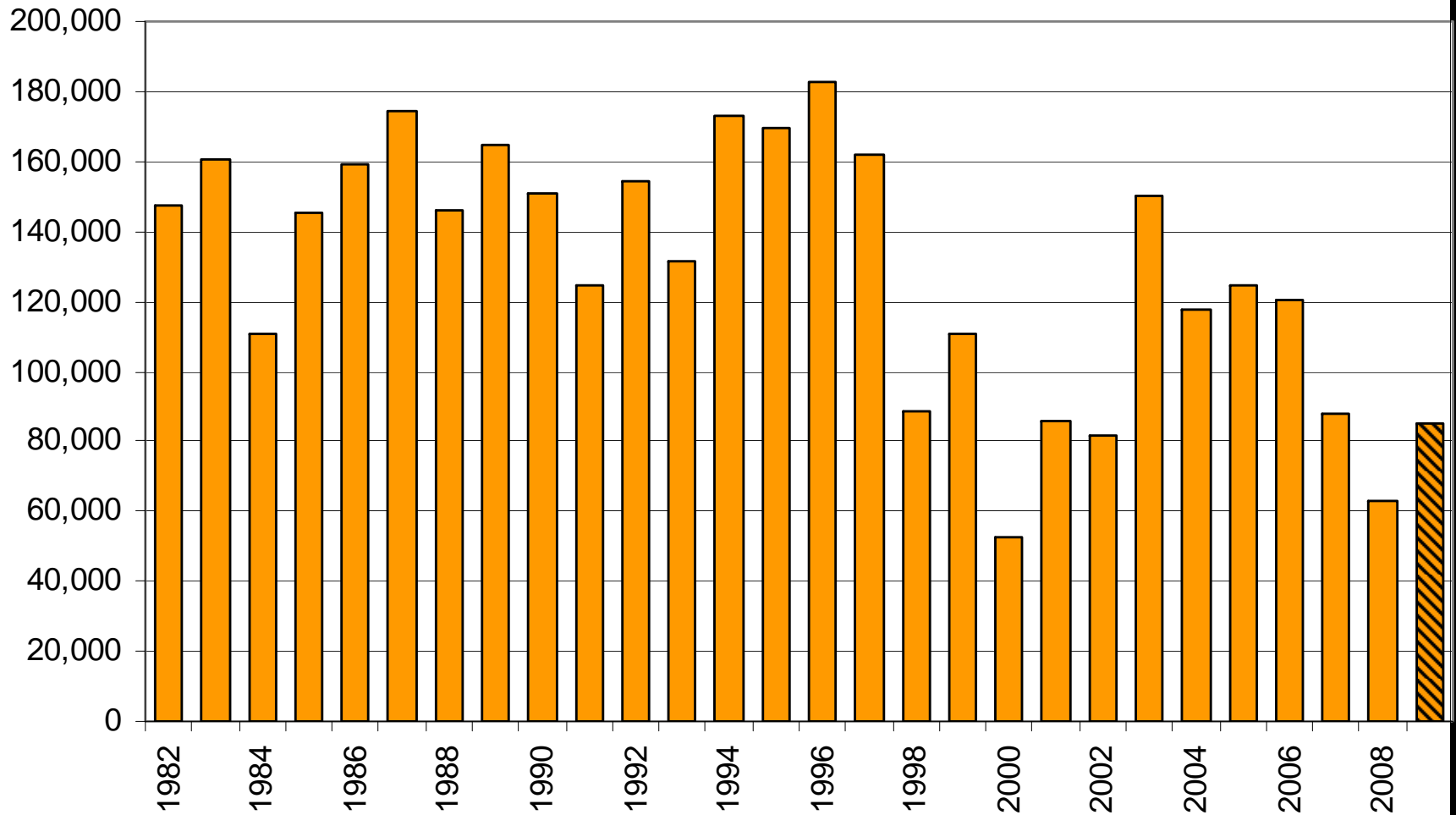


JTC meeting, March 2009

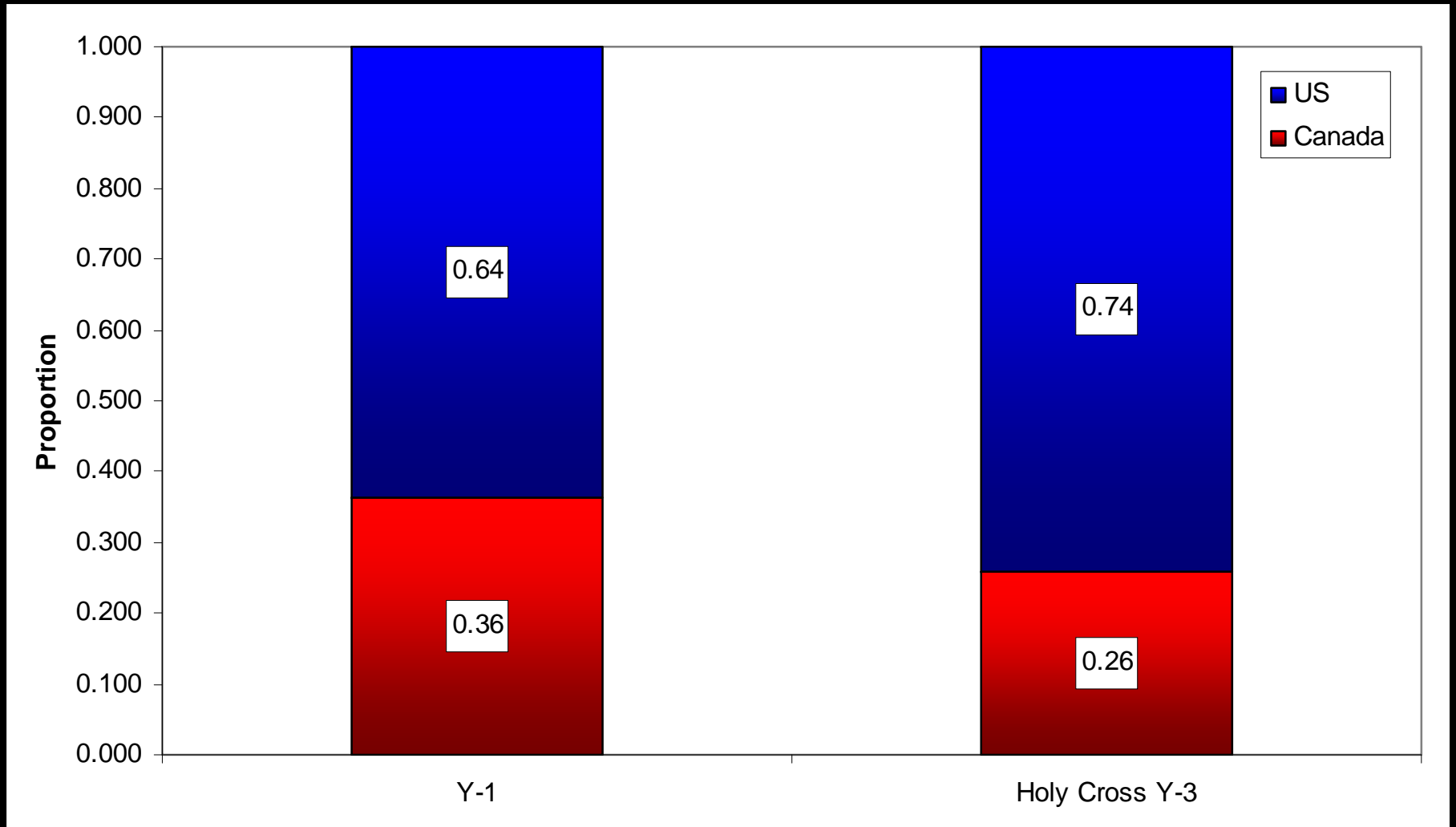
2010 Drainage-wide Chinook Outlook

- The precautionary outlook range is 155,600-226,200
- Below average to average run
- Upper end of range based on historical sibling and stock/recruitment (S/R) relationships which, when averaged, predict a run of 226,200 in 2010
- Lower end of range based on recent experience where runs have been much lower than preseason outlooks
- Models do not account for sudden changes in:
 - environmental factors, bycatch, reductions in productivity, and other phenomena

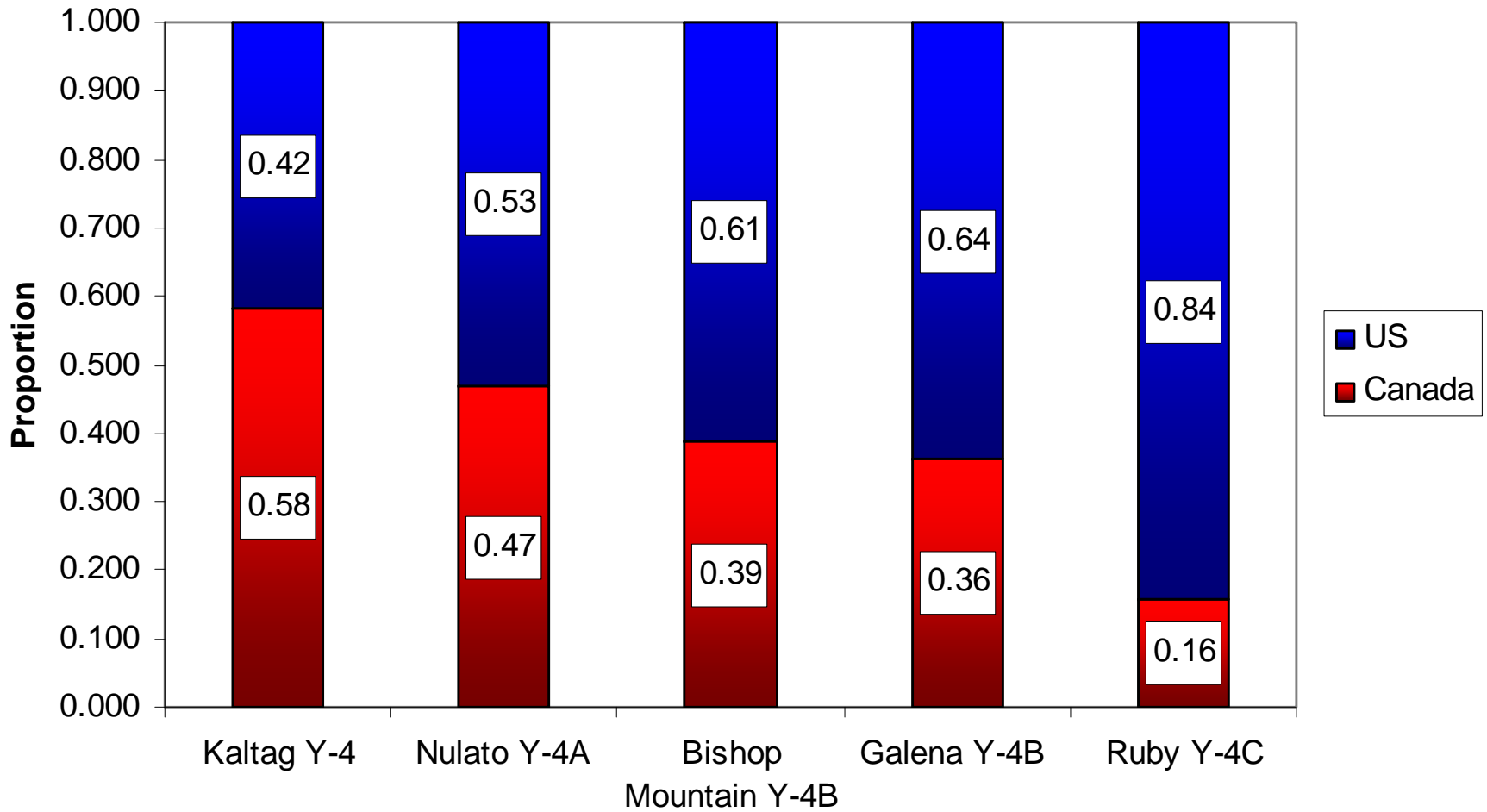
Estimated Total Canadian-origin Chinook Salmon Run



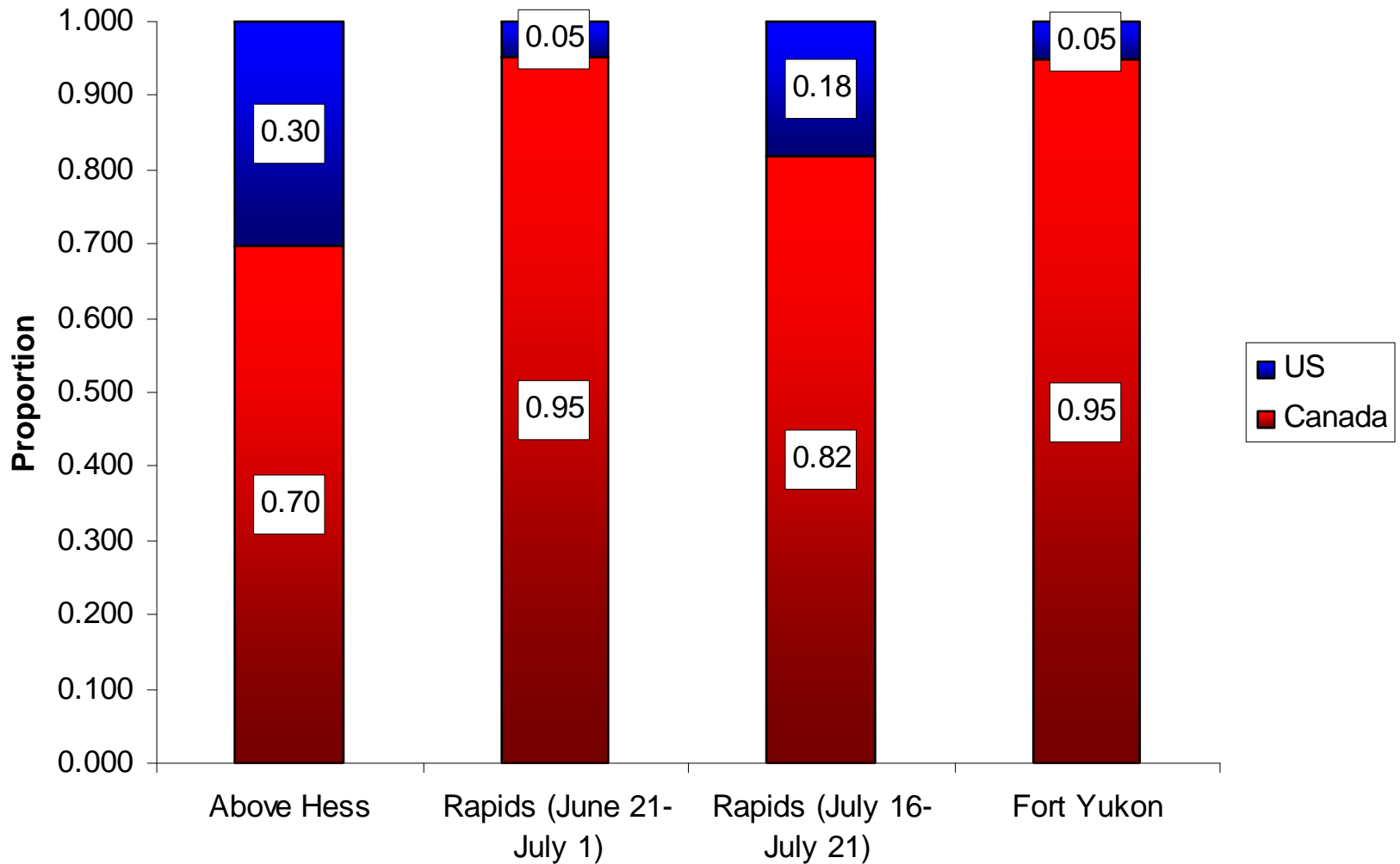
2009 Lower River Subsistence Harvest



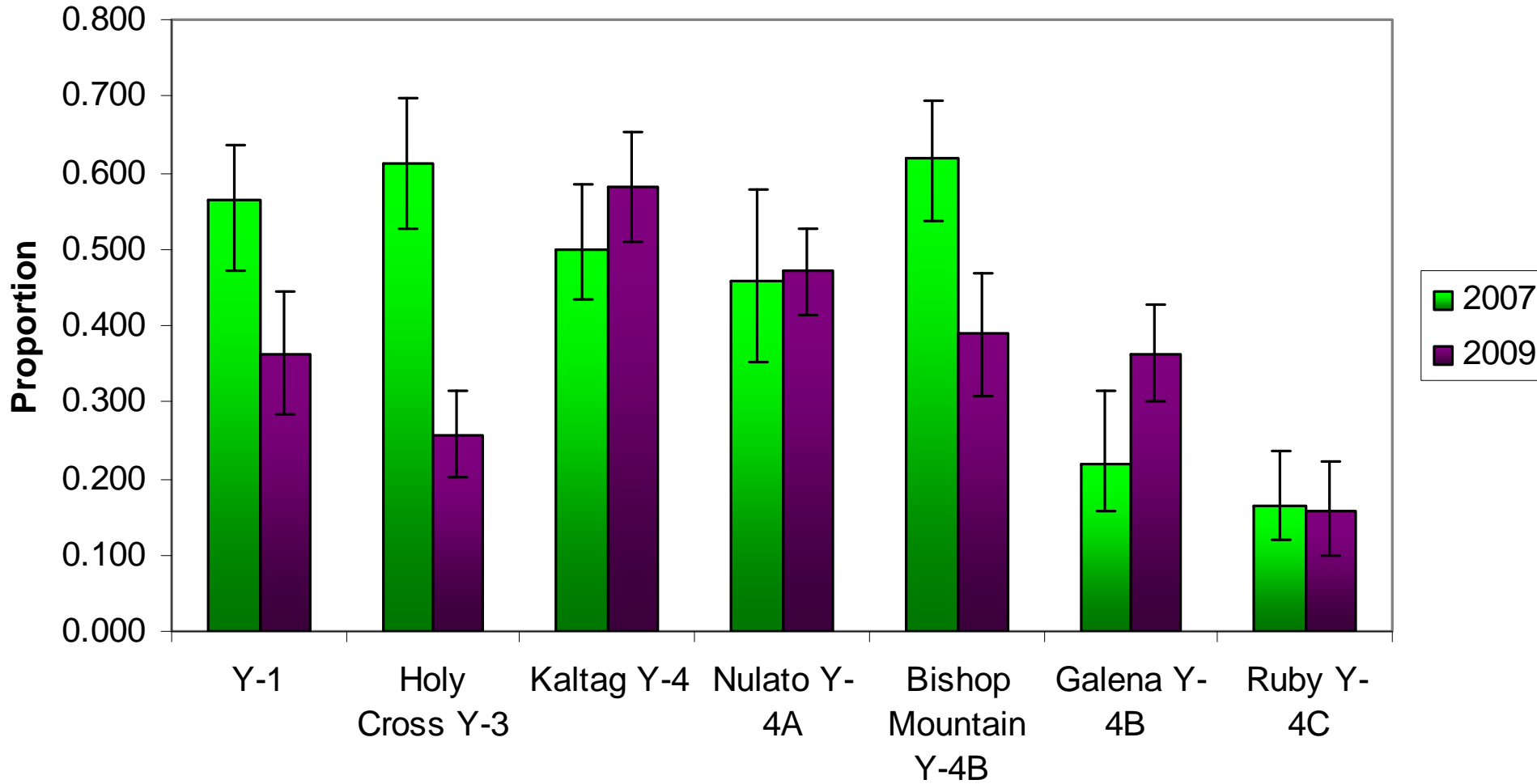
2009 Y-4 Subsistence Harvest



2009 Y-5 Subsistence Harvest



Proportion of Canadian-origin Chinook in Subsistence Harvest



2010 Alaska Preseason Management Chinook

- Gathering input from stakeholders
- Below *average to average run*
- Expect escapement goals will be met
- Expect subsistence priority (ANS) will be met
- Do not anticipate a mainstem directed commercial fishery

2010 Alaska Preseason Management Summer Chum

- Average Run
- Expect escapement goals will be met
- Expect subsistence priority (ANS) will be met
- Expect a 250,000-500,000 surplus for commercial harvest

What's Next?

- YRDFA meetings
- Develop management plan/ conservation measures for 2010
- Pilot Station
- LYTF
- Mountain Village test fishery

Thank You

