

2011 US Chinook and Summer Chum Season Summary



**Yukon River JTC Meeting
November 2011**

**Steve Hayes
Dr. Katie Howard**

US Preseason Chinook Outlook

Poor to below average run:

= 130,000 – 178,000

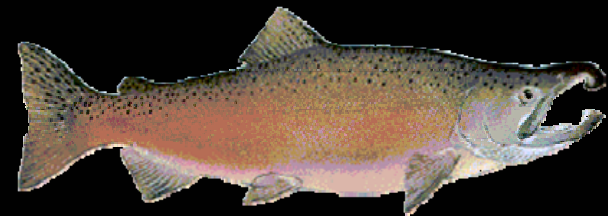
- Highest priority:
 - US Escapement and Canadian Border Obligations
- Subsistence Priority may not be met
- Conservation measures would be needed

US Preseason Management Development

- YRDFA facilitated meeting
 - In-person meeting
 - Input from fishermen in developing the management strategies
 - Regional meetings
 - Provide outlook and management strategies
 - St. Mary's, Nulato, Fort Yukon

US Preseason Mainstem Management Strategies

1. Initial management would be based on preseason projections and shift to inseason run assessment as runs develop
2. No Chinook-directed commercial fishing



3. Regulatory subsistence salmon fishing schedule

Area	Reduced Regulatory Subsistence Fishing Periods	Approximate Schedule to Begin	Days of the Week
Coastal District	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
District Y-1	Two 36-hour periods/week	June 6	Mon. 8 pm to Wed. 8 am /Thu. 8 pm to Sat. 8 am
District Y-2	Two 36-hour periods/week	June 8	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
District Y-3	Two 36-hour periods/week	June 12	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
Subdistrict Y-4-A	Two 48-hour periods/week	June 15	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Subdistricts Y-4-B, C	Two 48-hour periods/week	June 22	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Koyukuk and Innoko Rivers	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
Subdistricts Y-5-A, B, C	Two 48-hour periods/week	June 28	Tue. 6 pm to Thu. 6 pm /Fri. 6 pm to Sun. 6 pm
Subdistrict Y-5-D	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
District Y-6	Two 42-hour periods/week	All Season	Mon. 6 pm to Wed. Noon /Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/week	All Season	Friday 6 pm to Wednesday 6 pm

US Preseason Mainstem Management Strategies

4. Beginning in District 1, reduce fishing time on first pulse of Chinook (5 day closure)
5. If inseason assessment of Chinook salmon continues to be poor an additional period may be closed or reduced
6. Chinook sport fishery: bag and possession limit in tributaries (excluding the Tanana River drainage) would be reduced from three to one fish. No retention in the mainstem Yukon River

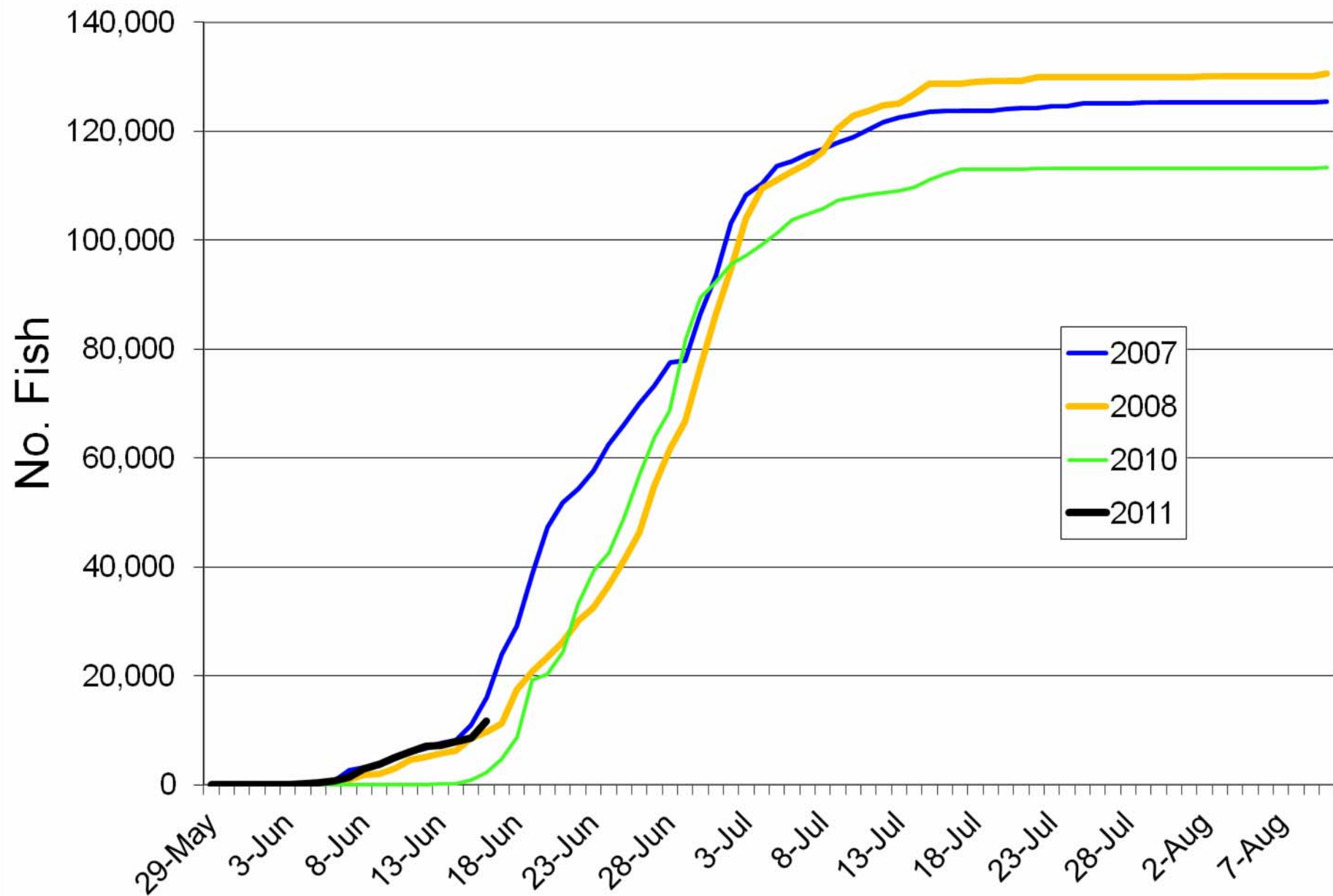
US Preseason Mainstem Management Strategies

7. Tanana River fisheries would be managed to meet Chinook salmon escapement
8. Summer chum salmon commercial anticipated. Harvest dependent upon the strength of the Chinook salmon run
9. No sale of incidental Chinook salmon
 - ▶ A person may not take salmon with a gillnet that has a mesh size larger than 7.5 inches

Are more actions necessary beyond those specified in preseason plan (first pulse closure, no commercial fishing, etc.)?

CHINOOK	LYTF Age 6:5 Ratio	LYTF % Female	Fishermen's reports	LYTF Cumulative CPUE	Pilot Station Cumulative Passage Estimate
Date	16-Jun	16-Jun	Fish looked healthy. Catches were good on early fish. Subsistence reports not available for first pulse because of fishing closure.	16-Jun	16-Jun
Data to Date	1.71	39.8%		3.99	11,683
Expected for Date	2.21	48.0%		7.20	35,725
Percent Difference from Expected	-22.62%	-17.08%		-44.56%	-67.30%
Assessment	slightly below average	slightly below average		OK	below average
Comments			lot of debris and high water	poor conditions: high water and debris	poor conditions: high water and debris

Pilot Station Cumulative Chinook



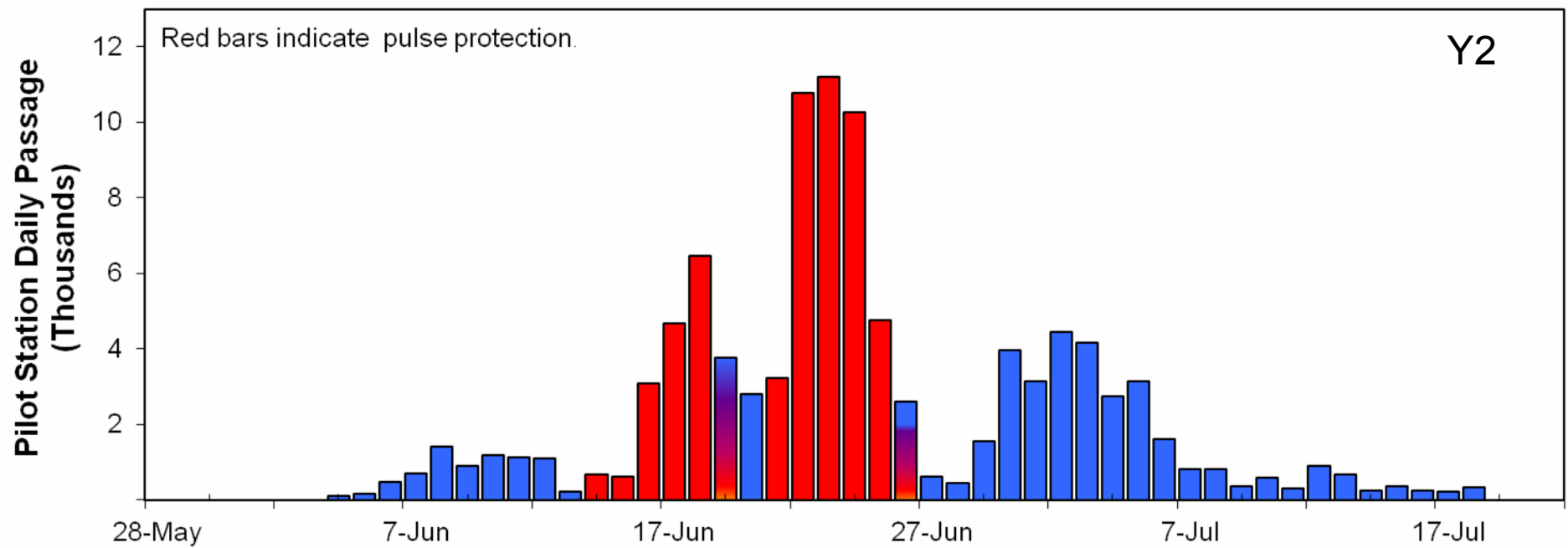
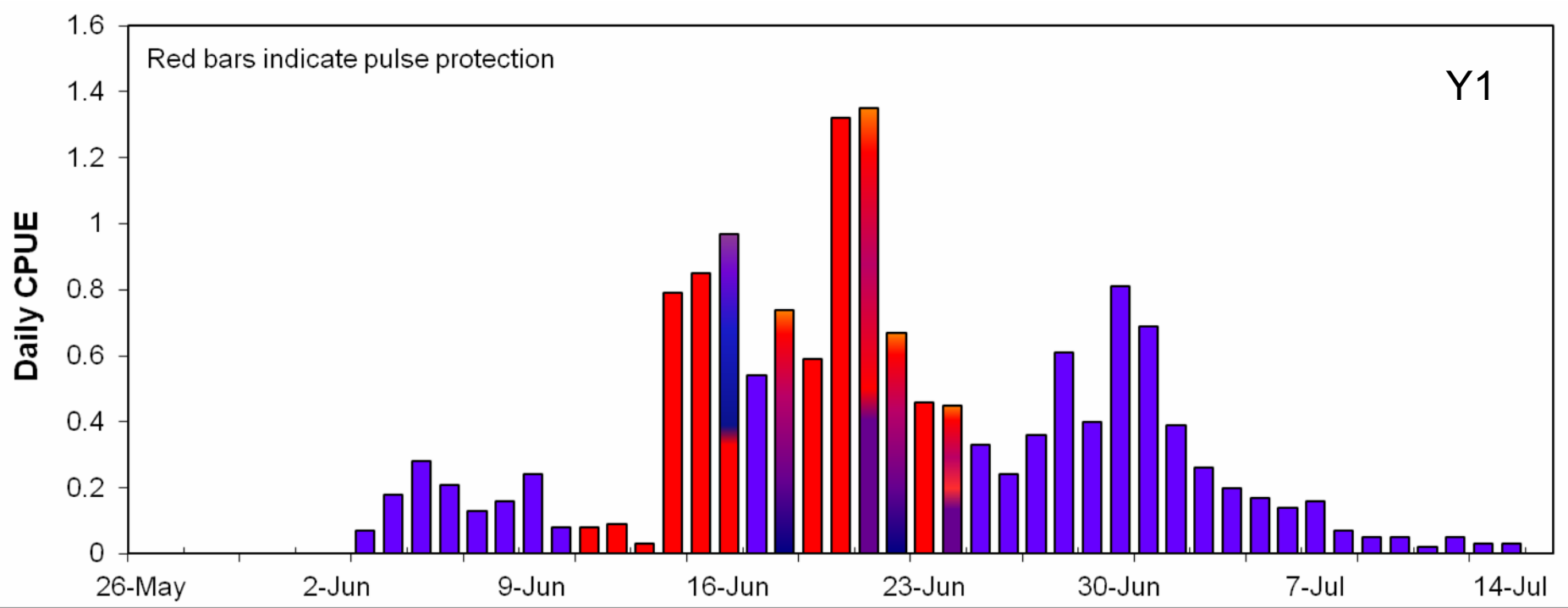
Inseason Decision

June 19

1. Do nothing
2. Pull another subsistence fishing period starting in Y-1 and follow it upriver to protect the second pulse
3. Reduce subsistence fishing periods by half (e.g. in Y-1 there would be an 18-hour period instead of a 36-hour period). This would protect the front end of the second pulse of Chinook salmon.

Management Action Taken

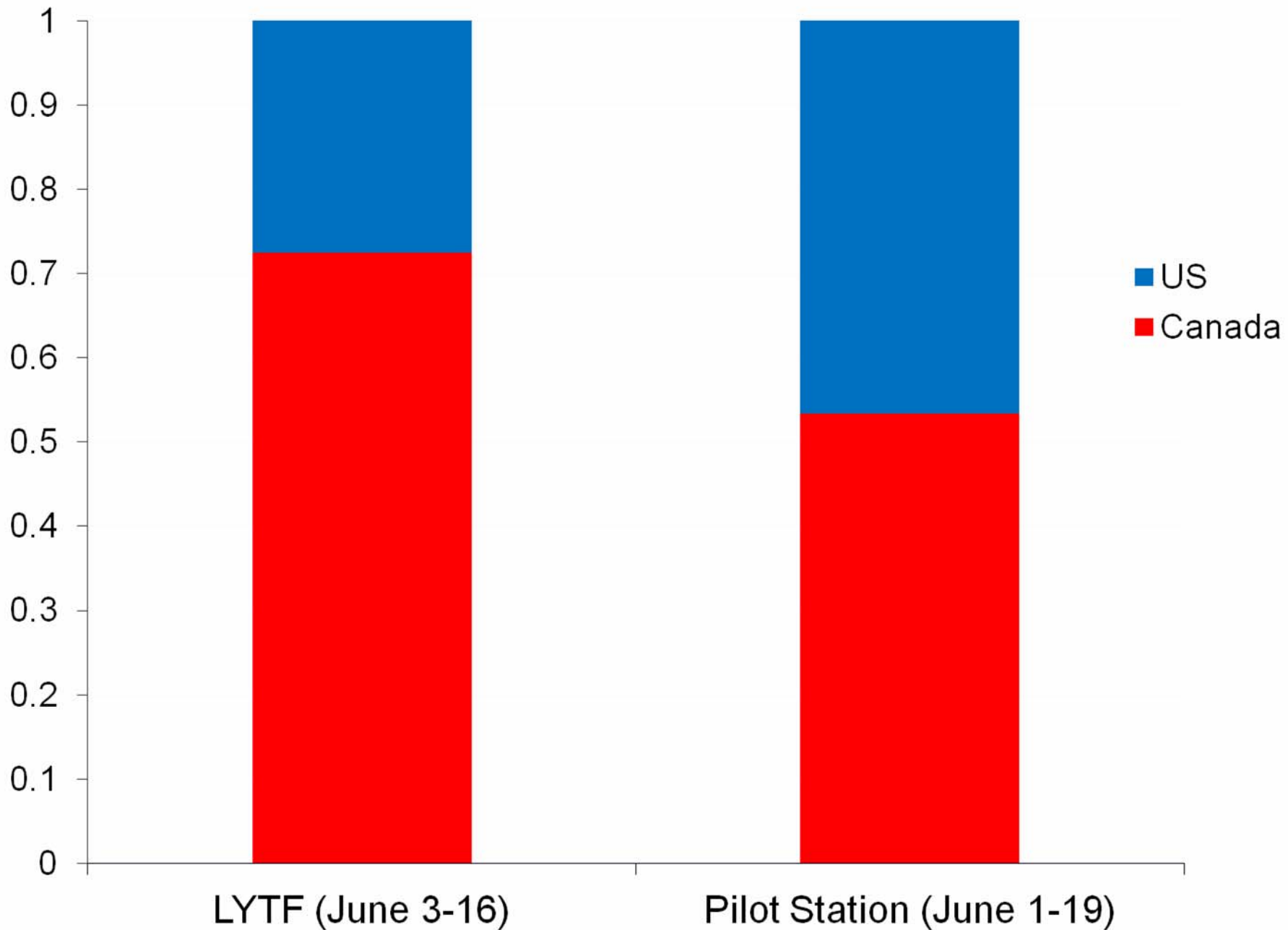
- Option 2 chosen
- Pull another subsistence fishing period starting in Y-1 and follow it up the river to protect the second pulse of Chinook salmon



Can commercial fishing for chum salmon be initiated without adversely impacting Chinook salmon?

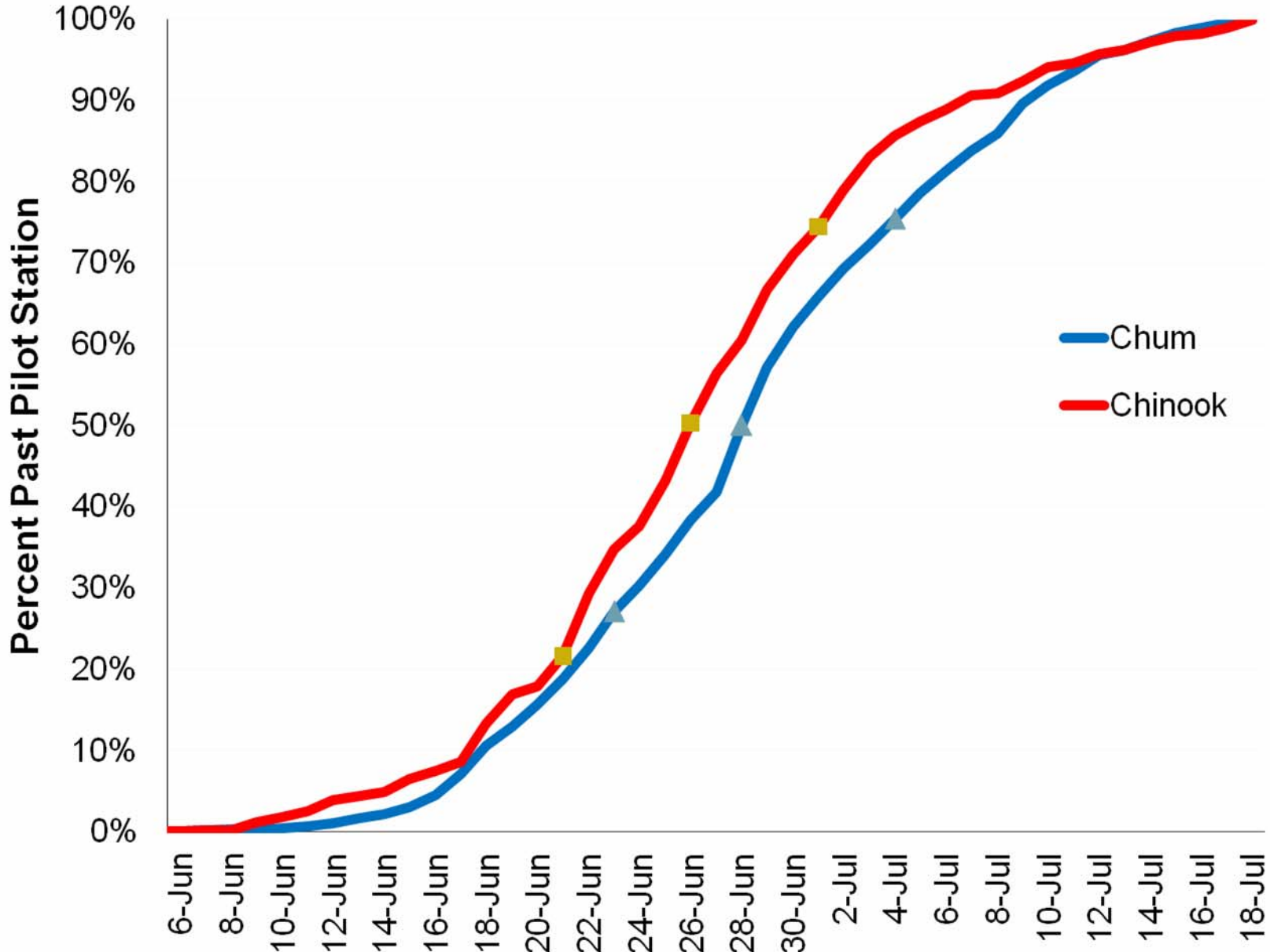
CHINOOK	LYTF Age 6:5 Ratio	LYTF % Female	Fishermen's reports	Cumulativ e CPUE	Cumulative Passage Estimate	
Date	19-Jun	19-Jun	Fish looked healthy. Catches were good on early fish. Subsistence reports not available for first pulse because of fishing closure.	20-Jun	20-Jun	
Data to Date	1.75	43.4%		7.16	28,228	
Expected for Date	2.23	48.0%		10.58	57,920	
Percent Difference from Expected	-21.52%	-9.58%		-32.31%	-51.26%	
Assessment	slightly below average	slightly below average		OK	below average	below average
Comments	results as expected	results as expected		lot of debris and high water	poor conditions: high water and debris early in the run	poor conditions: high water and debris early; silt problems getting better but still present; subsistence fishing effort in front of sonar affects counts

First Pulse of Chinook Salmon



CHUM	LYTF Age 5:4 Ratio	LYTF % Female	Fishermen's reports	LYTF Cumulative CPUE	Pilot Station Cumulative Passage Estimate
Date	19-Jun	19-Jun	Fish look good. Large chum in early portion of run. Good catches. Very abundant	20-Jun	20-Jun
Data to Date	1.25	62.3%		3864.02	273,051
Expected for Date	2.06	57.0%		971.25	242,237
Percent Difference from Expected	-39.32%	9.30%		297.84%	12.72%
Assessment	slightly below average	slightly above average	very good	well above average	slightly above average
Comments	strong age 5 component. age 5 fish dominate some years and age 4 dominate others			poor conditions: high water and debris early in the run	poor conditions: high water and debris early; silt problems getting better but still present; subsistence fishing effort in front of sonar affects counts

Approximate Timing of 2011 Chinook and Summer Chum Runs



Inseason Decision

June 22

1. Commercial period concurrent with a 18-hour subsistence period beginning in Y-1 Friday, June 24. The commercial period would be 4 hours on the front end (2-6pm Fri). Mesh size would be restricted to 6 inch for both commercial and subsistence fishers. No Chinook salmon may be sold.
2. Commercial period concurrent with a shorter subsistence period of 9 hours beginning in Y-1 Friday, June 24. Mesh size would be restricted to 6 inches for both. No Chinook salmon may be sold.
3. Delay commercial further until Monday, June 27.

Management Action Taken

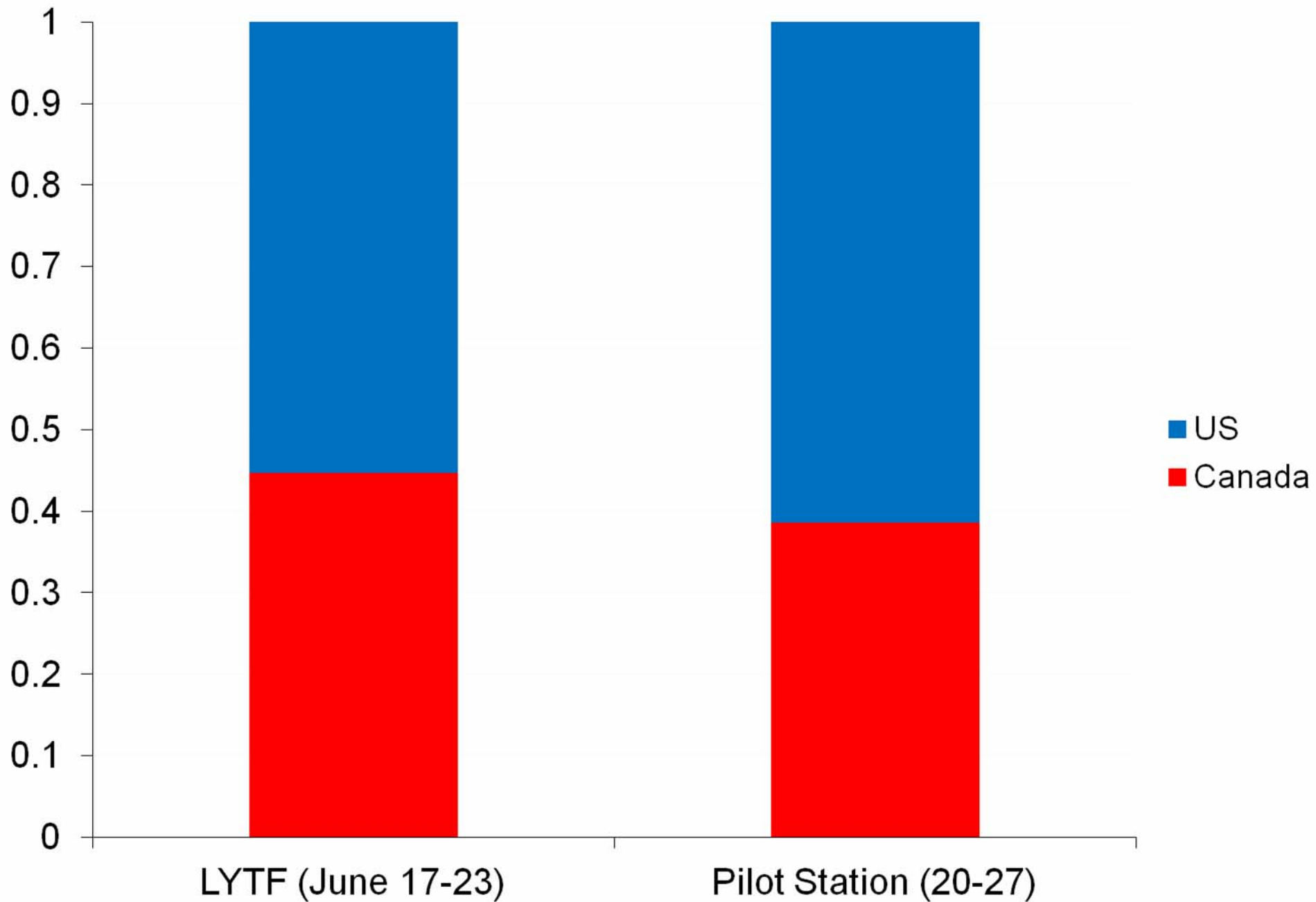
Option 1 was chosen with a change to the commercial fishing time

- 18 hr subsistence period
- 6 hr commercial period concurrent with subsistence
- Mesh size restricted to six-inch or smaller

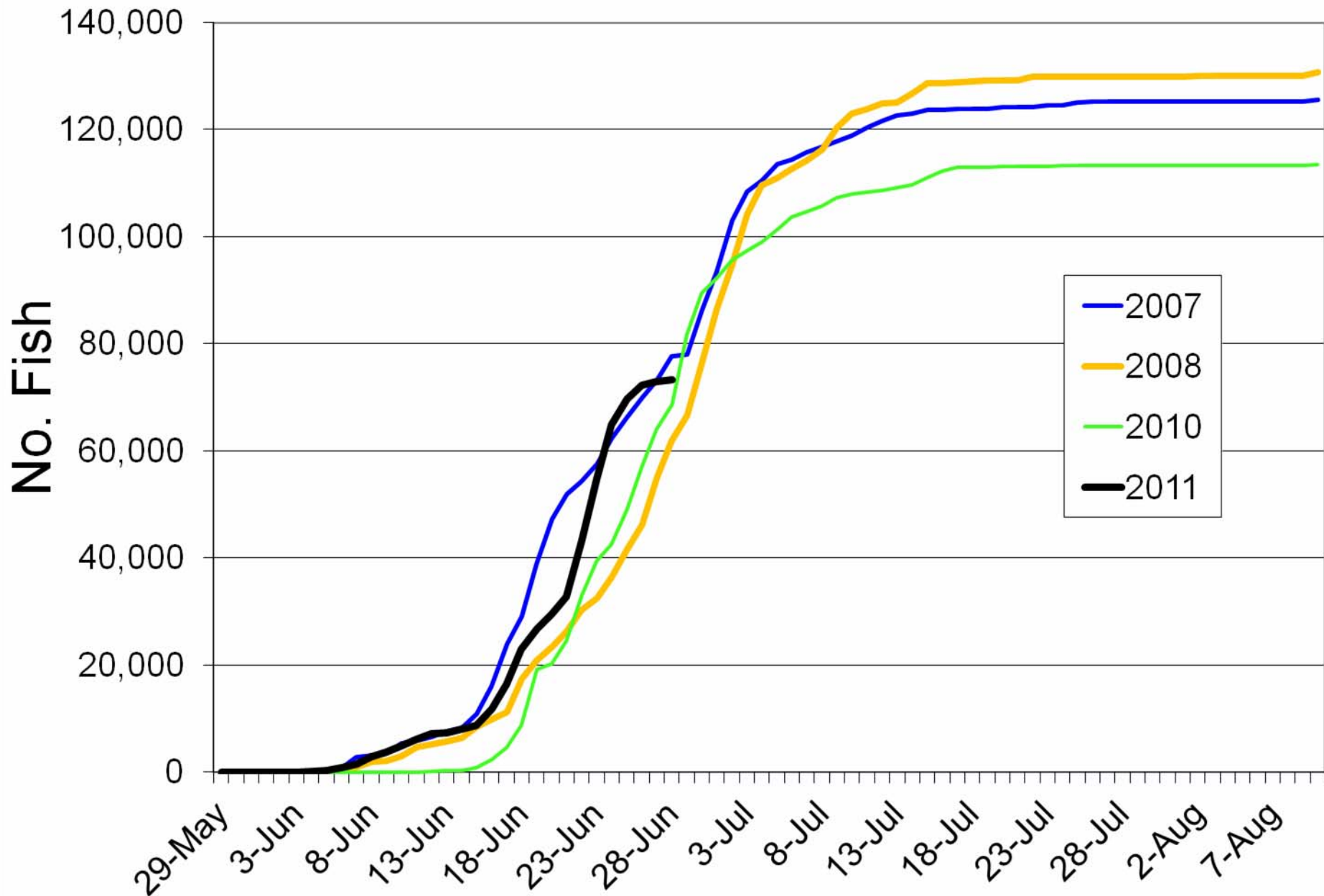
Does the third pulse of Chinook
salmon need some protection too?

CHINOOK	LYTF Age 6:5 Ratio	LYTF % Female	Fishermen' s reports	LYTF Cumulativ e CPUE	Pilot Station Cumulative Passage Estimate
Date	23-Jun	23-Jun	Subsistence reports variable	28-Jun	28-Jun
Data to Date	1.96	44.8%		11.74	73,358
Expected for Date	2.20	48.0%		17.80	110,851
Percent Difference from Expected	-10.91%	-6.67%		-34.03%	-33.82%
Assessment	near average	near average		below average	below average
Comments	results as expected	results as expected		poor conditions early in run: high water and debris	poor conditions early in run: high water and debris early; silt no longer a problem as of June 22; subsistence fishing effort in front of sonar affects counts

Second Pulse Chinook Salmon

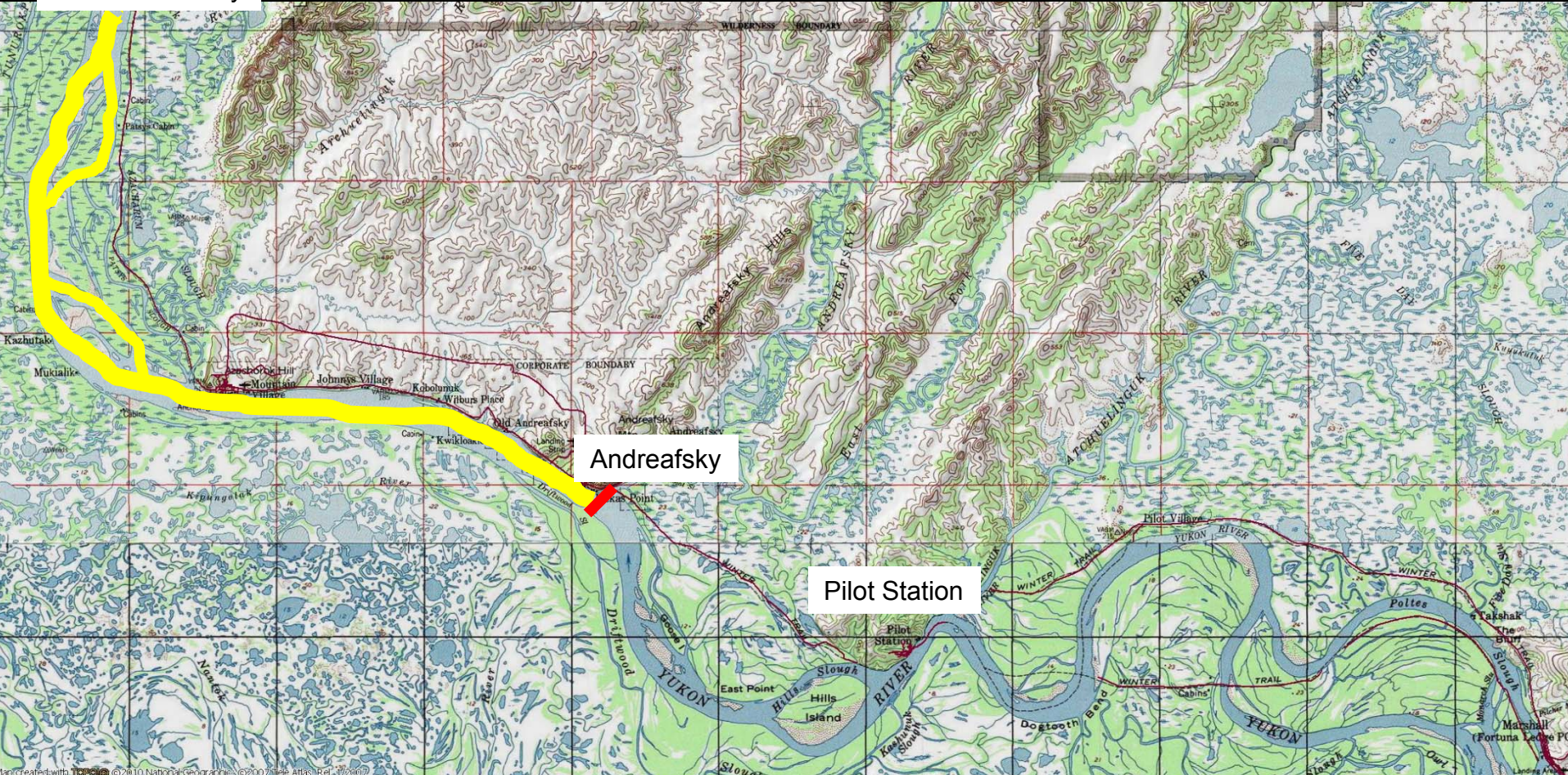


Pilot Station Cumulative Chinook





Y1/Y2 Boundary

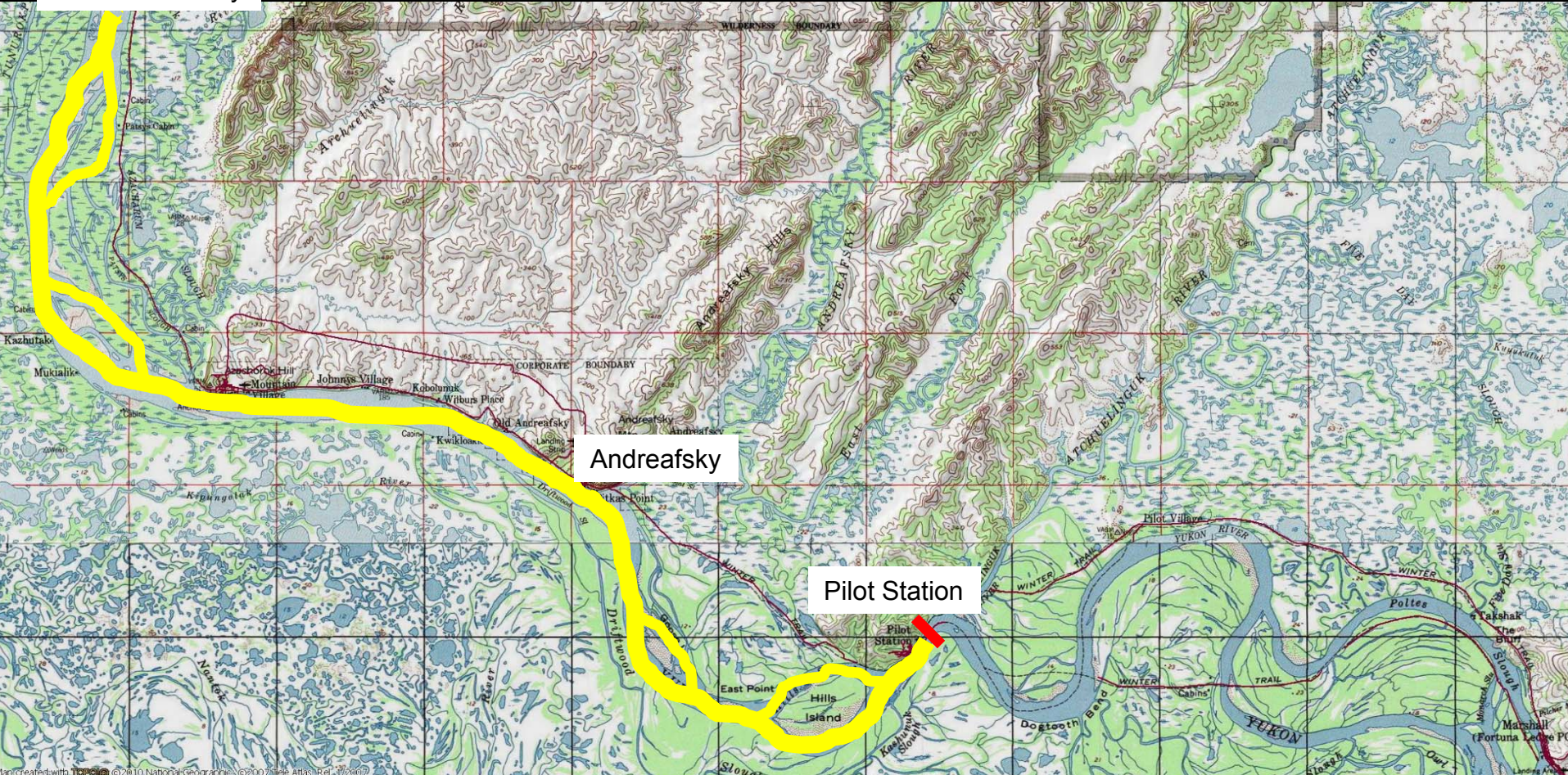


Andreafsky

Pilot Station

Y2/Y3 Boundary

Y1/Y2 Boundary



Andreafsky

Pilot Station

Y2/Y3 Boundary

Map created with TopoTools © 2010 National Geographic © 2007/1996 Atlas, Rel. 2/2009

Inseason Decision

June 29

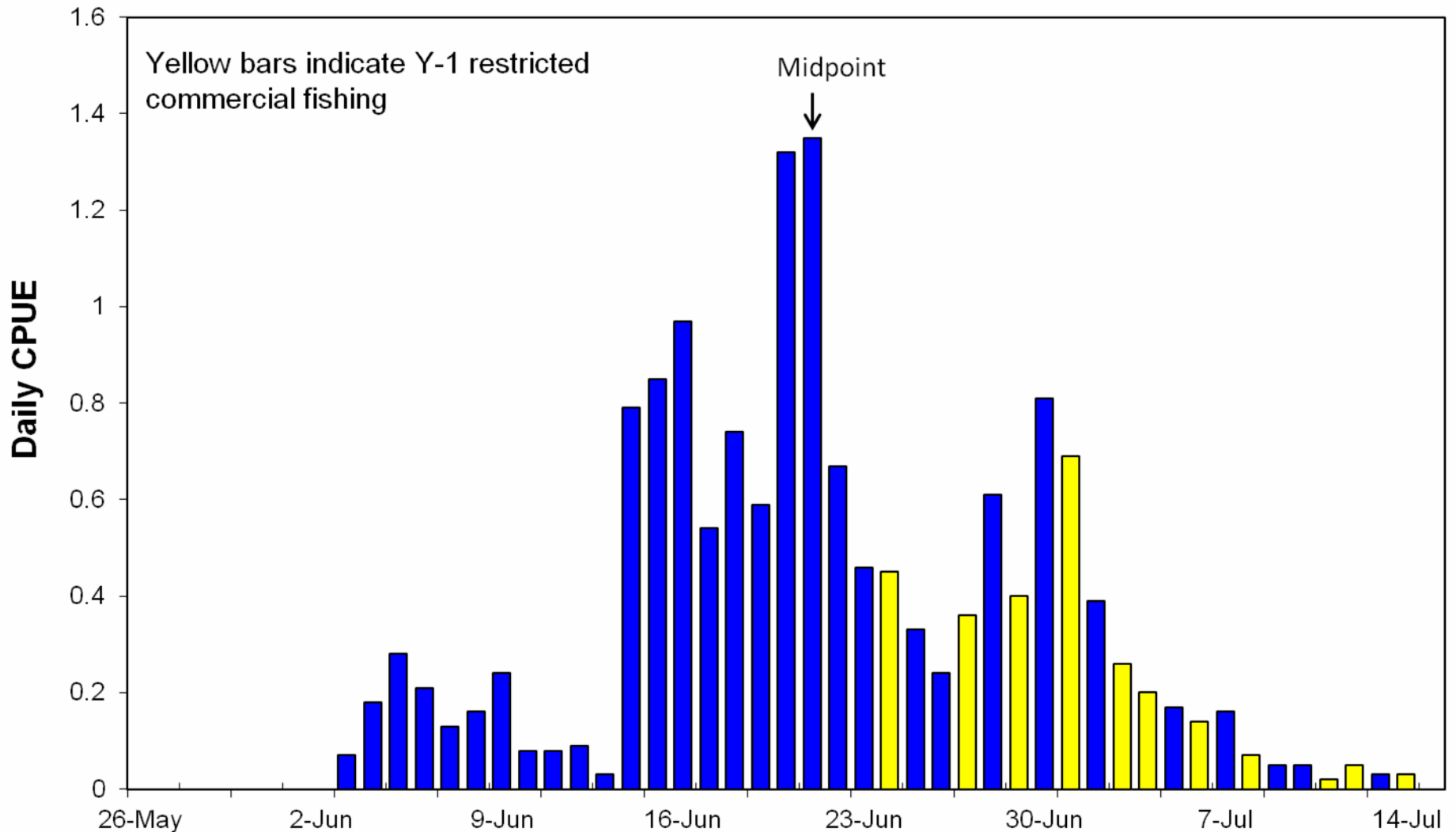
- 1) Continue to surgically place the commercial periods where we deem safe and Chinook salmon are low, or
- 2) Delay fishing on summer chum salmon for 2 or 3 days until we are comfortable that we have the 3rd pulse of Chinook salmon through.

Management Action Taken

Option 1 was chosen

- Continue to surgically place the commercial periods where we deem safe and Chinook salmon are low
- Commercial periods took place the South Mouth in District 1 and a portion of District 2 to avoid Chinook salmon

2011 LYTF Daily CPUE

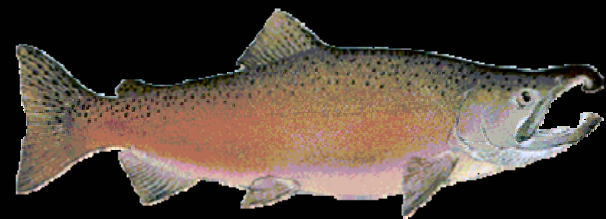


Additional Management Actions Taken

- Reduced mesh size to six-inch or smaller during subsistence periods
 - Y-1 = June 24
 - Y-2 = June 29
- Remained in effect until July 15

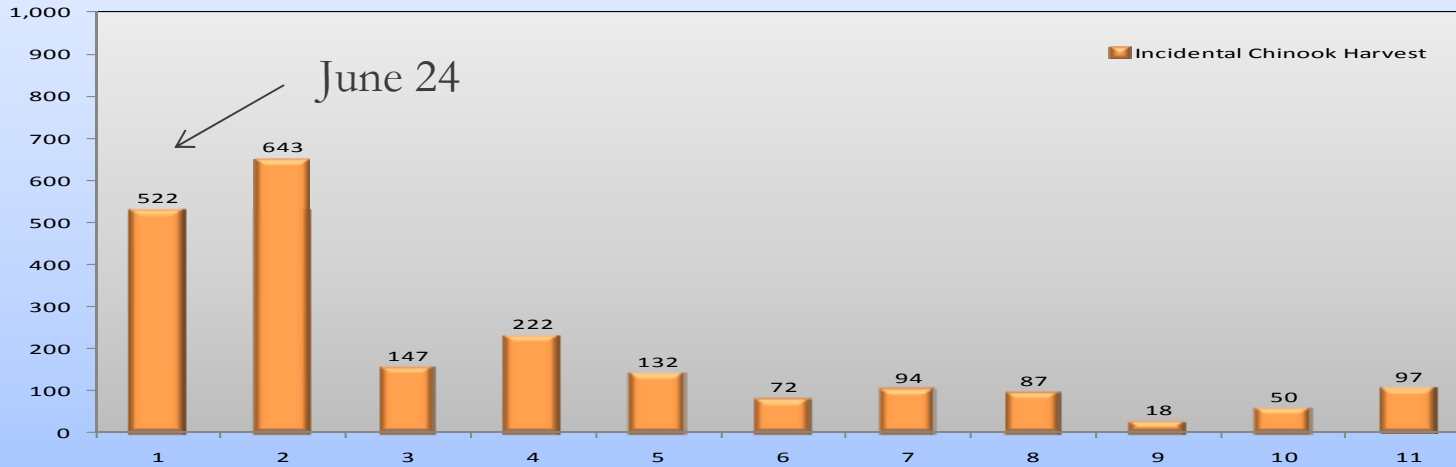
2011 Alaskan Chinook Harvest

- Surgical commercial periods helped reduce incidental catch by more than half of that in 2010

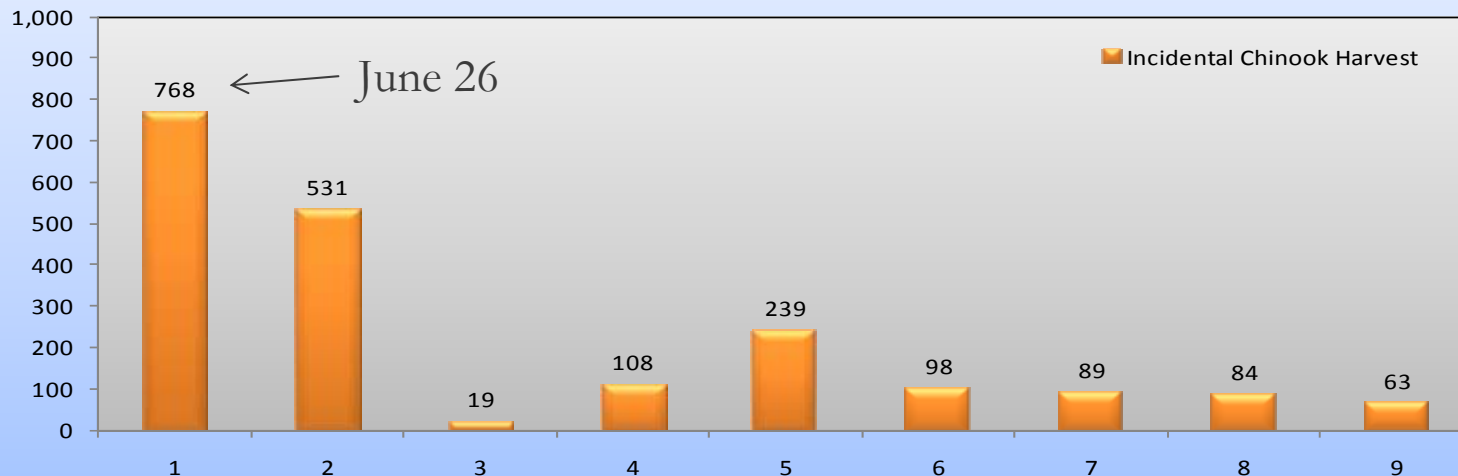


2011 Incidental Chinook Harvest

Y-1 Incidental Chinook Salmon Harvest



Y-2 Incidental Chinook Salmon Harvest

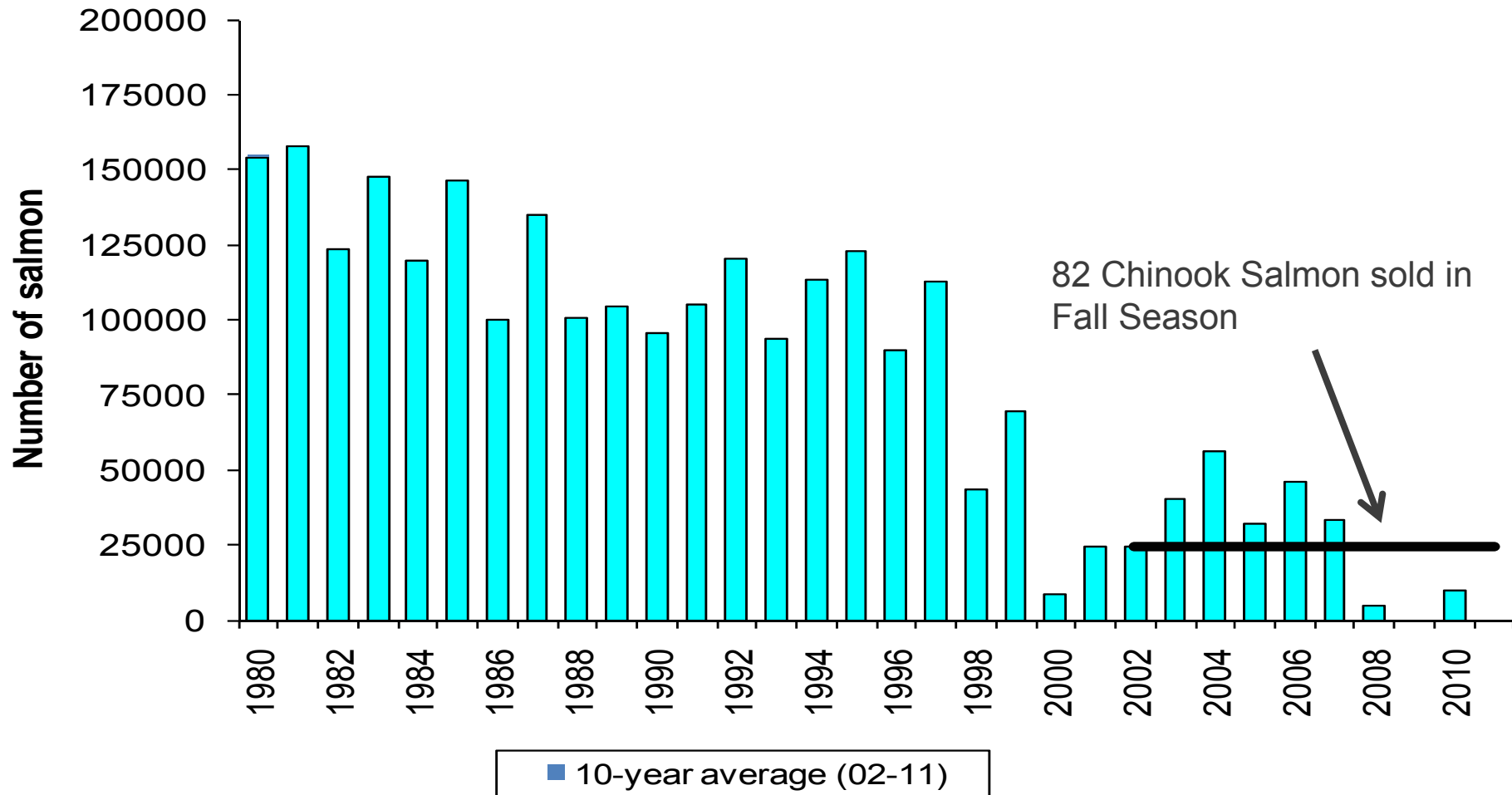


2011 Chinook Harvest

- Incidental Summer and fall season caught but not sold = 4,156
- Fall season sold = 82
 - Fall season average weight = 12.0 lbs



U.S. Chinook Salmon Commercial Harvest

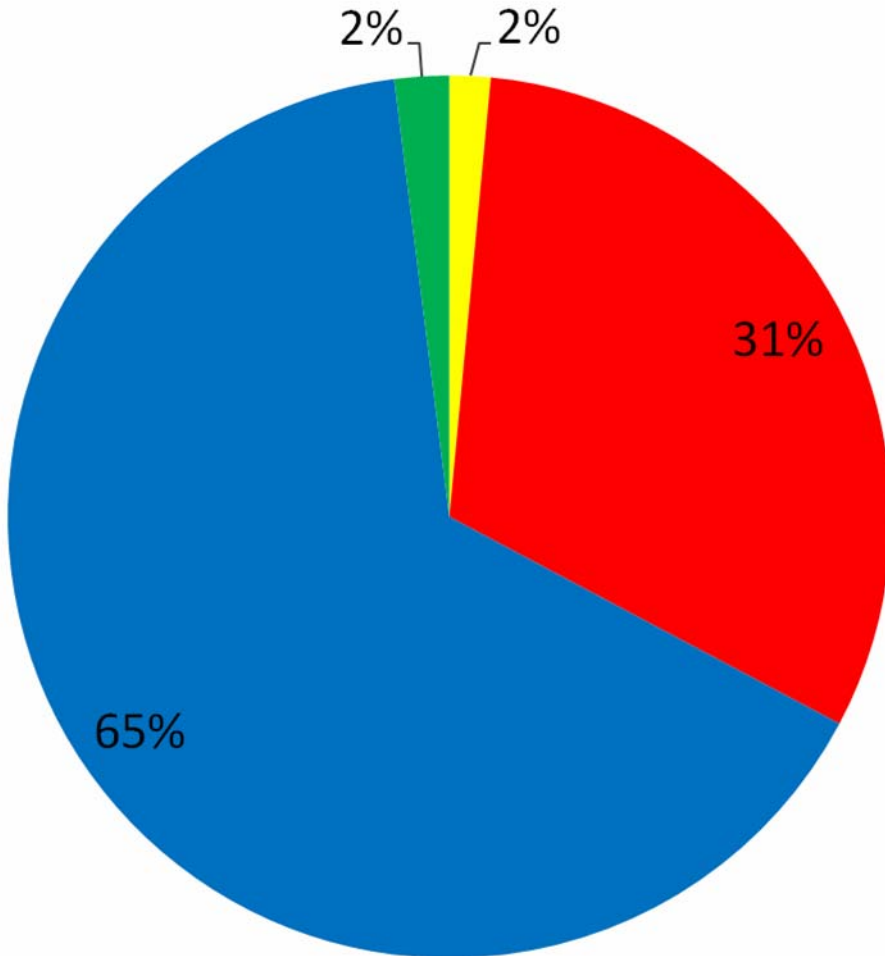


Chinook Postseason Assessment

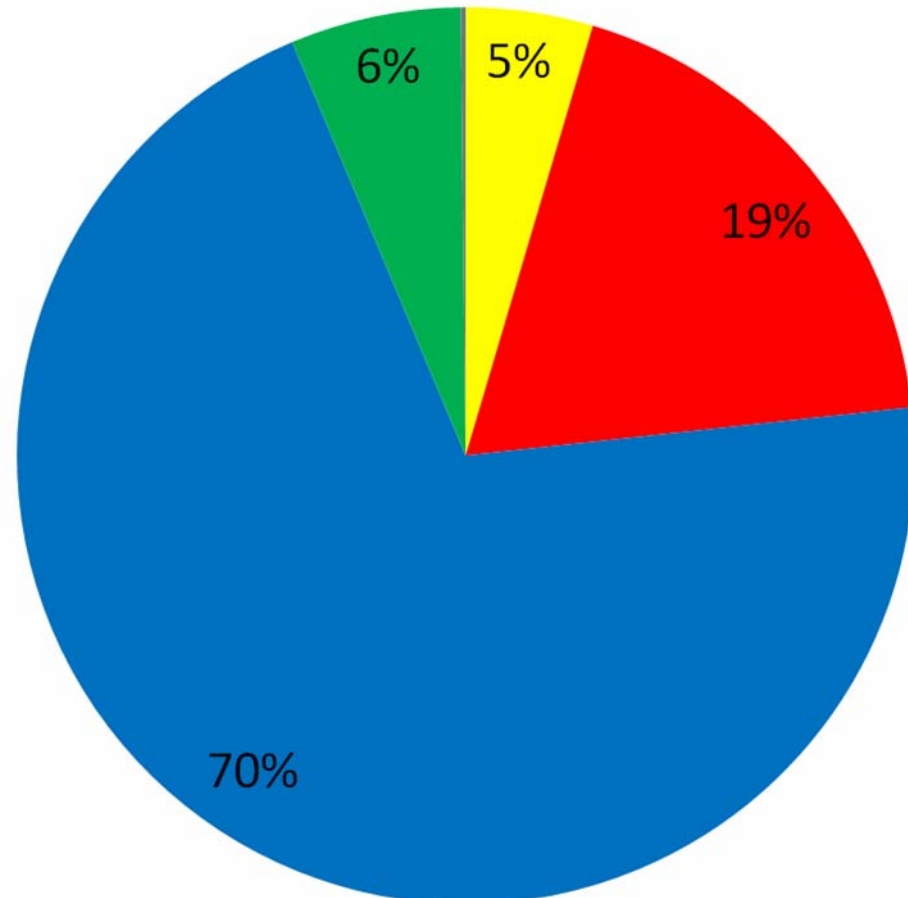
- Subsistence harvests: catch estimates, ASL, genetics - ongoing
- Escapement projects and TAC assessment
 - ASL-ongoing
- Pilot Station genetics
 - ASL-ongoing
- Commercial harvest genetics
 - ASL-ongoing
- Preliminary run reconstruction

LYTF Age Composition

2011



Average Across Odd Years



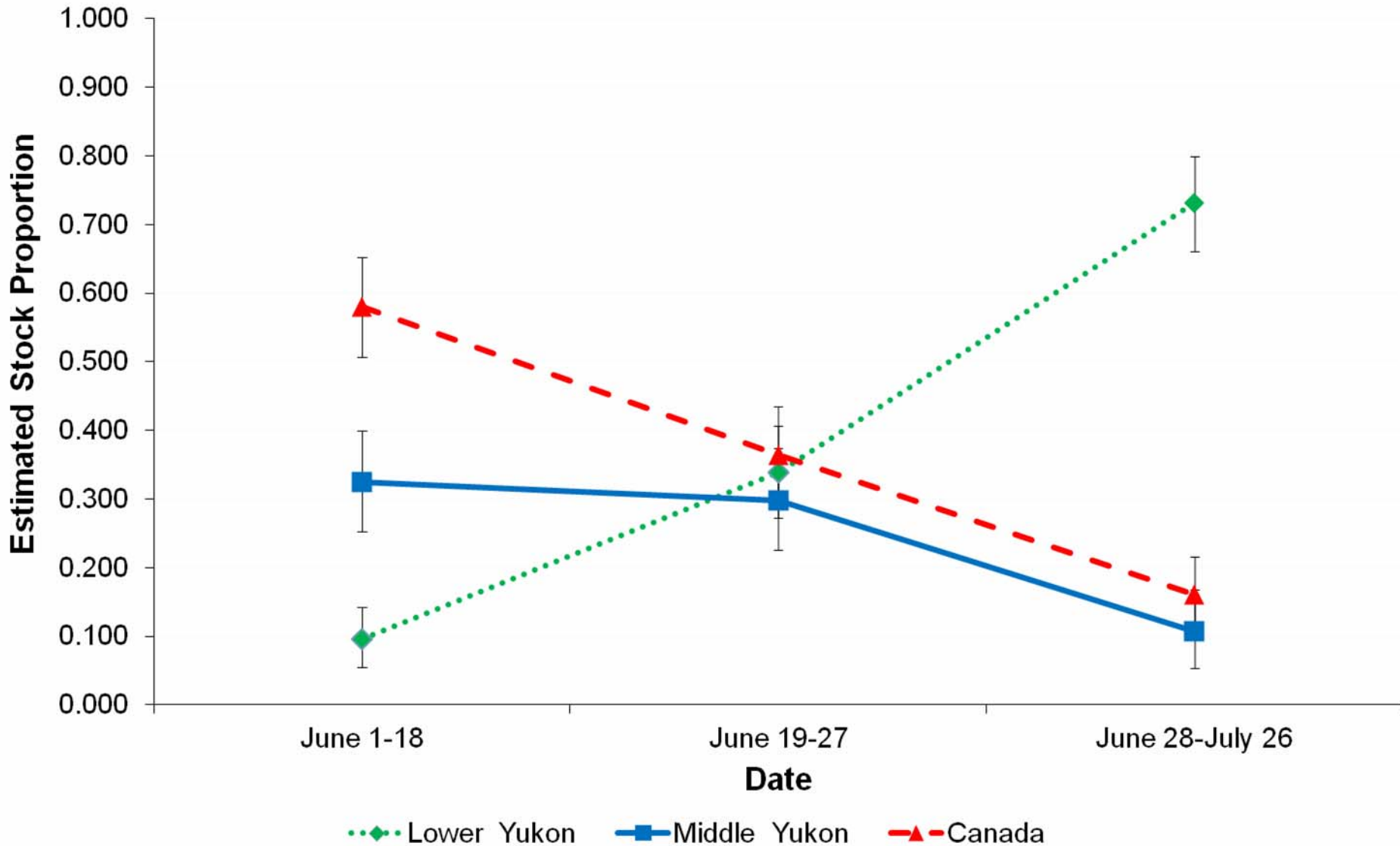
age 4 age 5 age 6 age 7

age 4 age 5 age 6 age 7

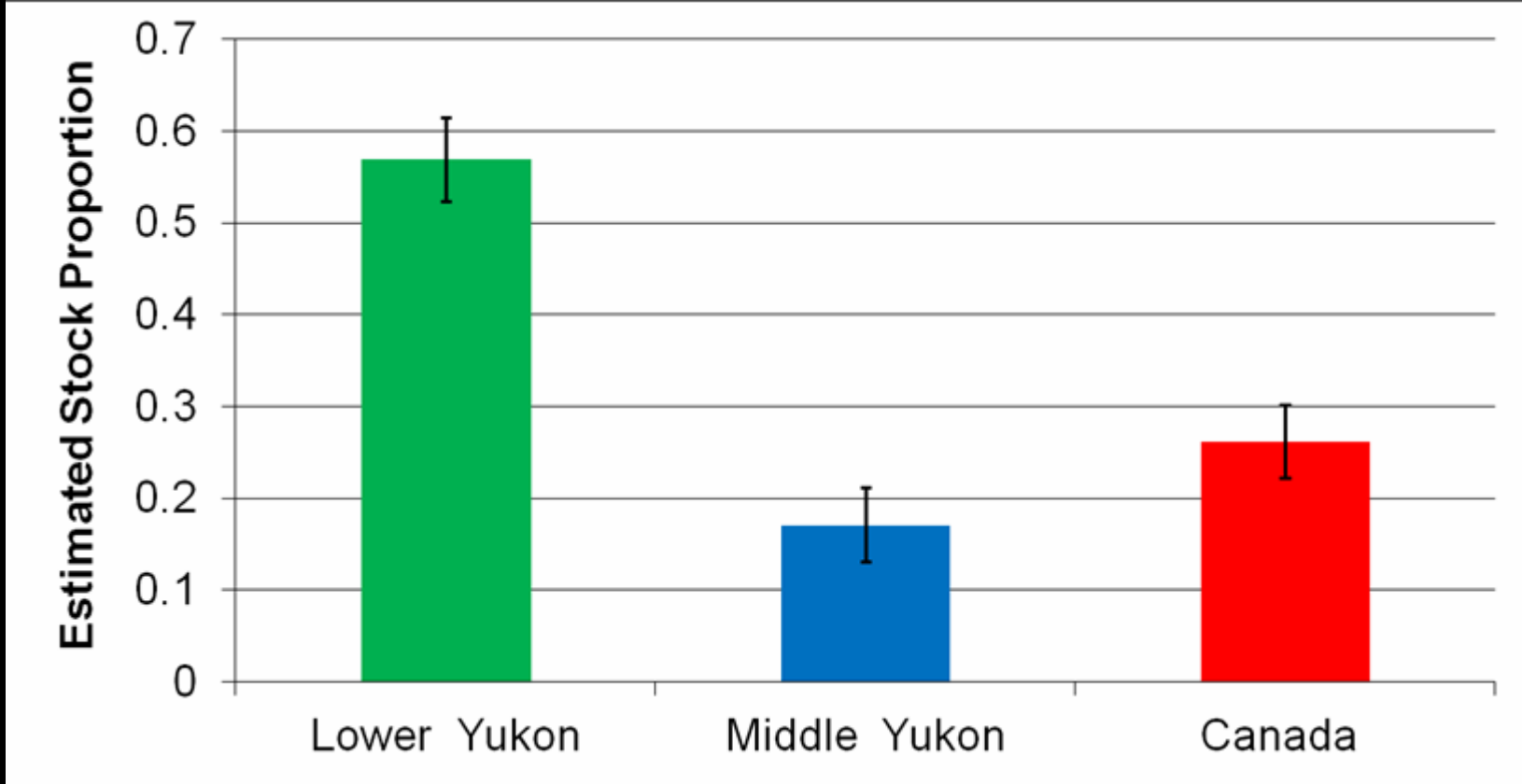
Chinook Escapements

Stream	Current Goal	Type of Goal	2011
East Fork Andreafsky River Weir	2,100–4,900	SEG	5,213
West Fork Andreafsky River Aerial	640–1,600	SEG	1,173
Anvik River Index Aerial	1,100–1,700	SEG	501
Nulato River Aerial (Forks Combined)	940–1,900	SEG	1,401
Chena River Tower	2,800–5,700	BEG	N/A
Salcha River Tower	3,300–6,500	BEG	N/A
Canada	42,500–55,000	IMEG	50,397

Postseason Genetics – Pilot Station

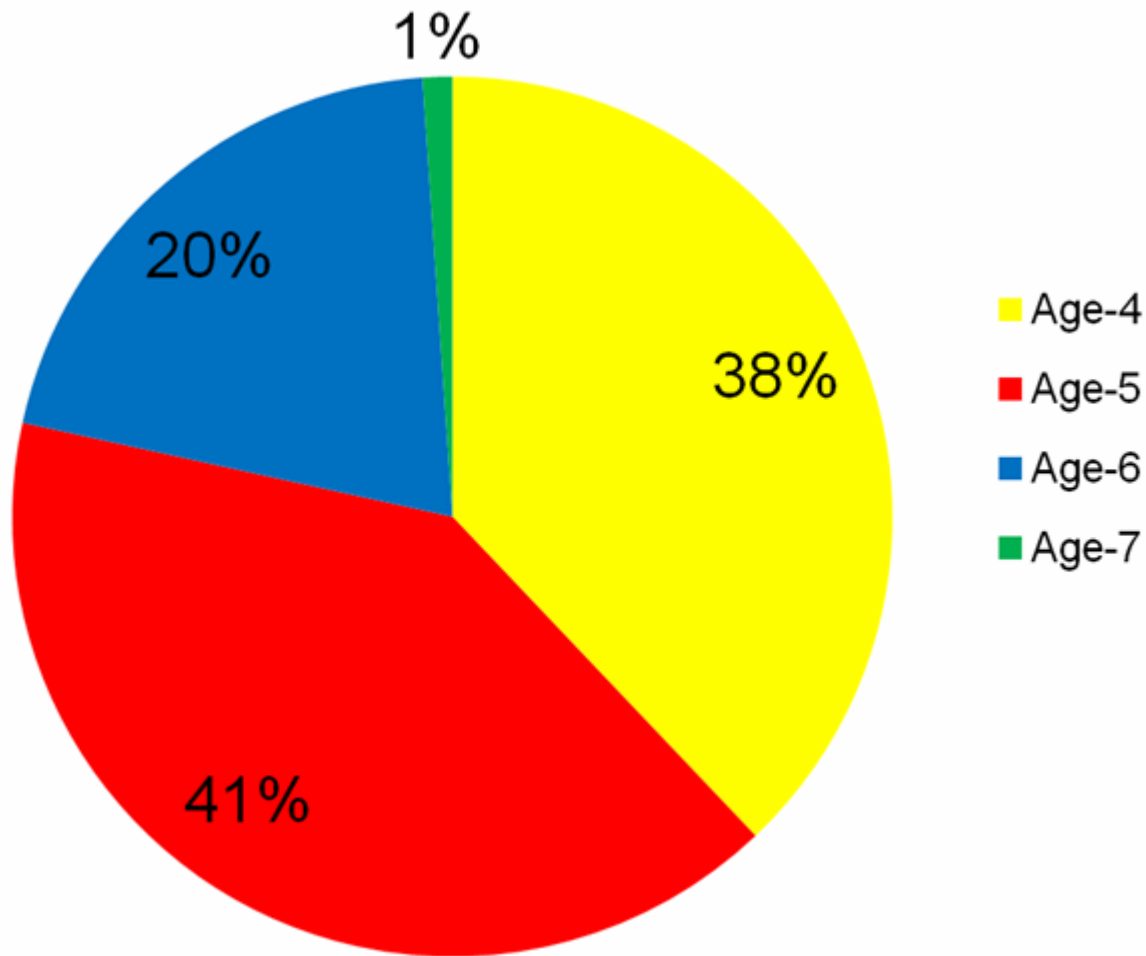


Postseason Genetics – Incidental Commercial Harvest



4,156 x .26 = 1080 CDN origin fish
kept for subsistence

Age Composition of Incidental Harvest Y1 & Y2



Preliminary Run Reconstruction

CDN-origin run reconstruction

=

Alaskan harvest on CDN-origin fish

+

Border Passage

Preliminary Run Reconstruction

- Subsistence harvest of CDN origin fish in 2009 ~16,000
- Uncertainty due to difficult fishing conditions mentioned in fishermen reports and relative stock abundances and timing

Estimate **15,000-25,000** subsistence harvest

Preliminary Run Reconstruction

15,000-25,000 Alaskan harvest on CDN origin
fish

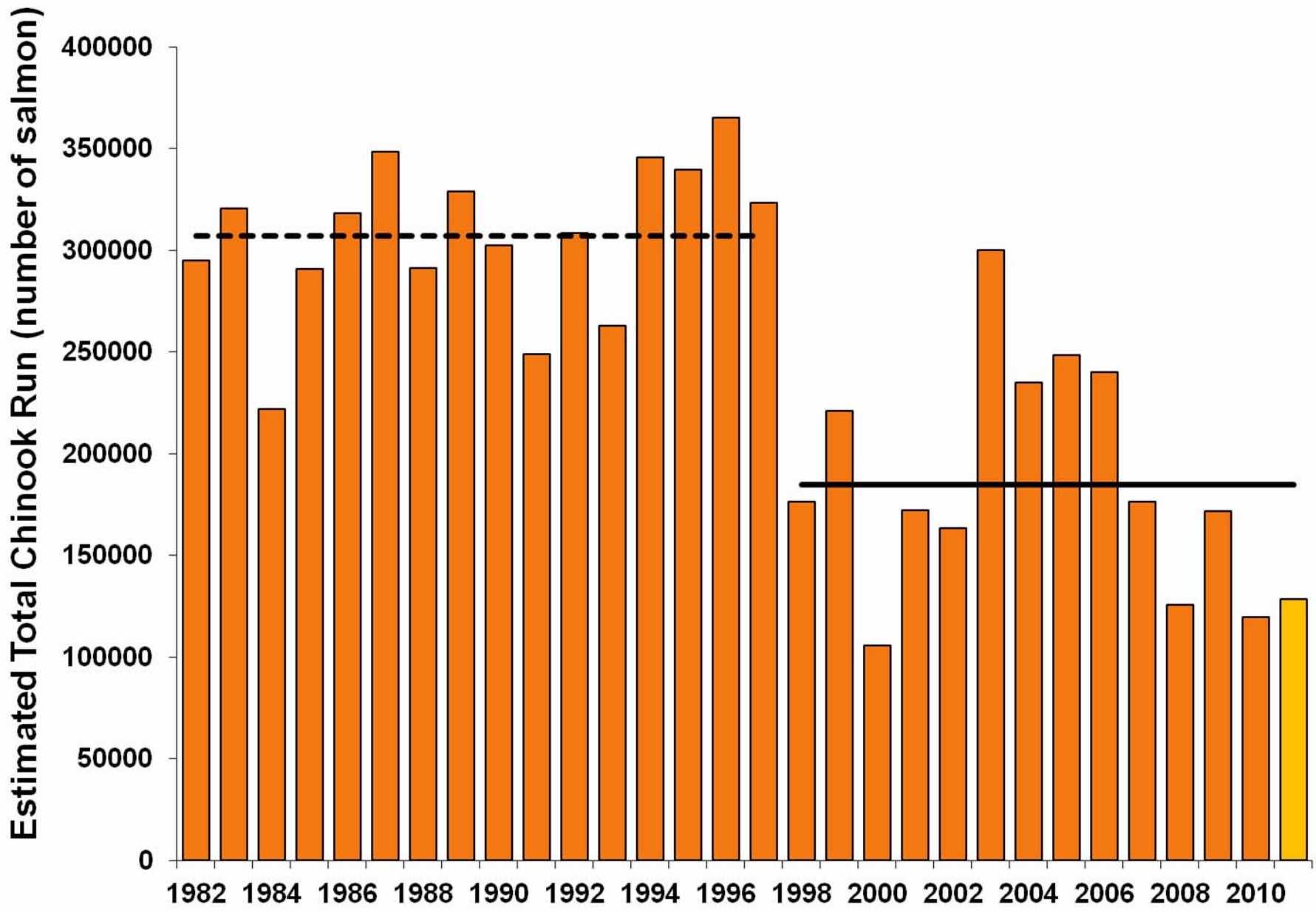
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50,397

=

65,000-75,000 CDN-origin fish run
reconstruction

(65,000-89,000)



--- Historical Average (1982-1997)

— Contemporary Average (1998-2011)

Summer Chum Preseason Outlook

Average run = 1.3-1.6 million

- Expected:
 - Escapements would be met
 - Subsistence priority met
 - 300,000 - 600,000 surplus

Actual commercial harvest dependent on
Chinook run

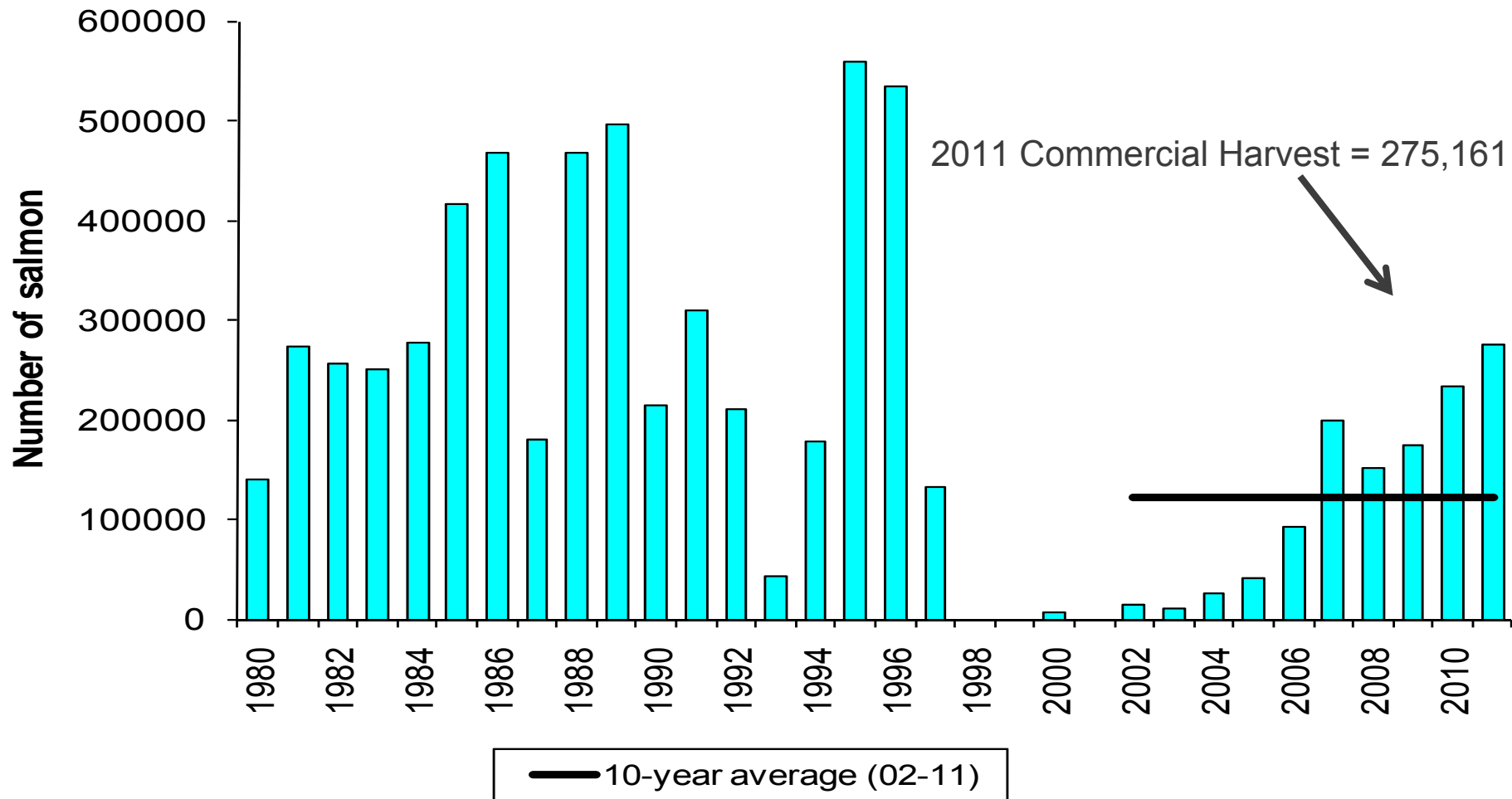
Summer Chum Run Summary

- Estimated passage past Pilot Station sonar = 1.8 Million
- Drainage-wide minimum escapement objective based on the Pilot station sonar = 600,000
- Run size was above preseason projection range, ~2 million

2011 Summer Chum Harvest Summary

- Districts 1 and 2 = 266,510
- District 6 = 8,651
- Total commercial harvest = 275,161
- Subsistence harvest data pending

Summer Chum Salmon Commercial Harvest



Summer Chum Escapements

Stream	Current Goal	Type of Goal	2011
East Fork Andreafsky River Weir	> 40,000	SEG	100,473
Anvik River Sonar	350,000-750,000	BEG	642,527
Gisasa River Weir	N/A		95,796
Henshaw Creek Weir	N/A		248,247
Chena River Tower	N/A		3331
Chena River Aerial	N/A		4,600
Salcha River Tower	N/A		31,002
Salcha River Aerial	N/A		1,107

What's Next?

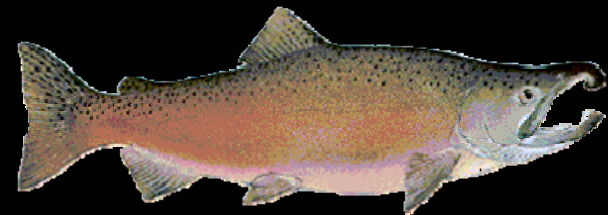
- Evaluating management measures used in 2011
- Discuss changes that may be necessary in 2012

What's Next?

- Evaluation of 7.5 inch mesh restriction
 - Fishermen reported catching more fish
 - Most reported smaller fish caught

What's Next?

- YRDFA preseason meeting
- Preseason Management Development
 - Input from fishermen
 - Develop management strategies



Thank You

