

# Canadian Fall Chum Salmon Outlooks 2009



Yukon River Panel meeting, March 2009

# 2009 Canadian-origin Upper Yukon Fall Chum Salmon Outlook

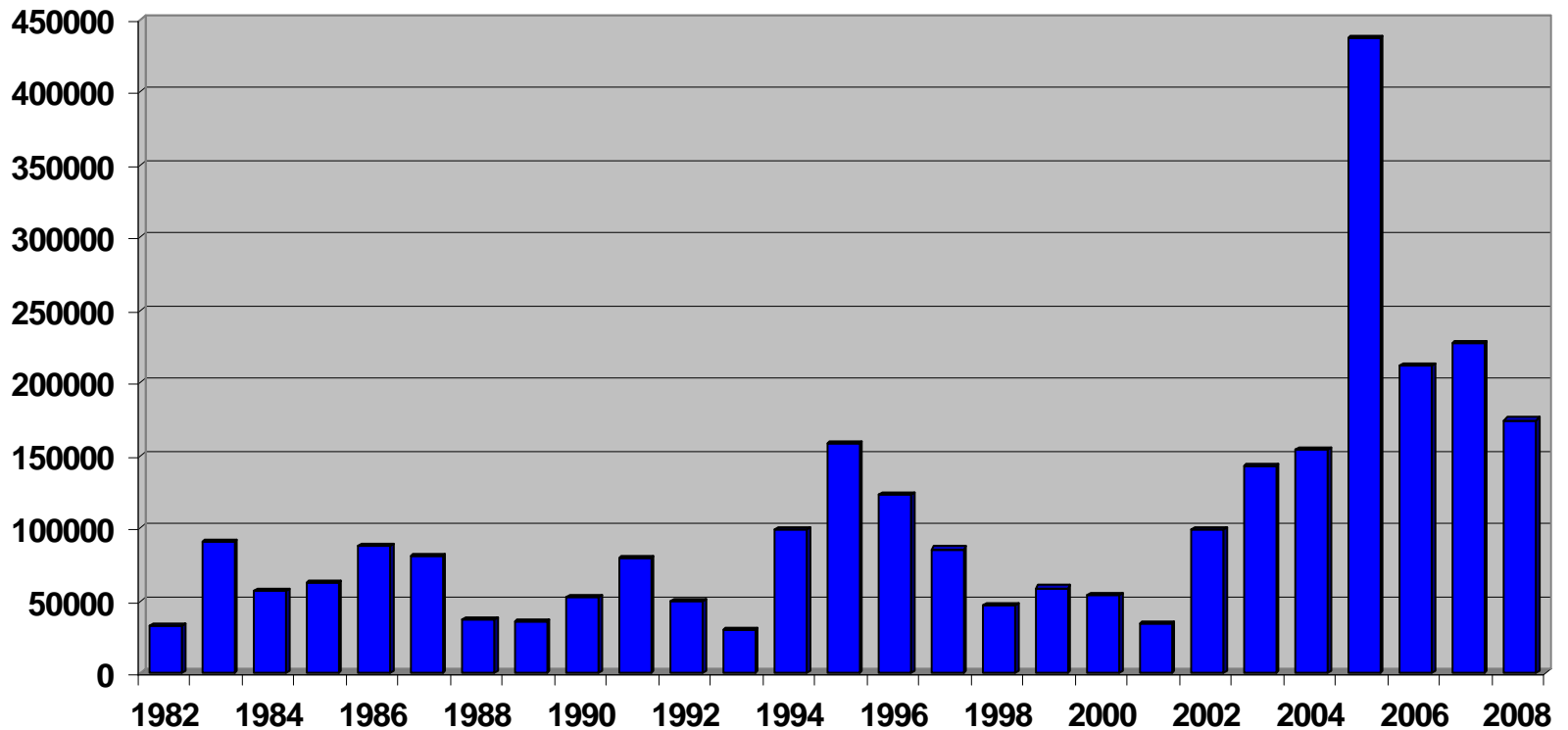
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- Dominant age classes which will contribute to 2009 run were age-4 and age-5 fish:
  - 437,733 in 2005 (age-4)
  - 154,080 in 2004 (age-5)
- Weighted (by age) average BY escapement contributing to the 2009 return is 342,000 fish
  - For comparison, average escapement for the 1998-2007 period was 146,300
  - 4-year olds comprise ~66% of odd year return
- Returns from the escapements exceeding 100,000 chum salmon used in the stock recruitment model occurred during a period of low marine survival

# Canadian-origin Upper Yukon Fall Chum Salmon Escapement

Estimated Escapement of Upper Yukon River fall chum salmon:  
1982-2008

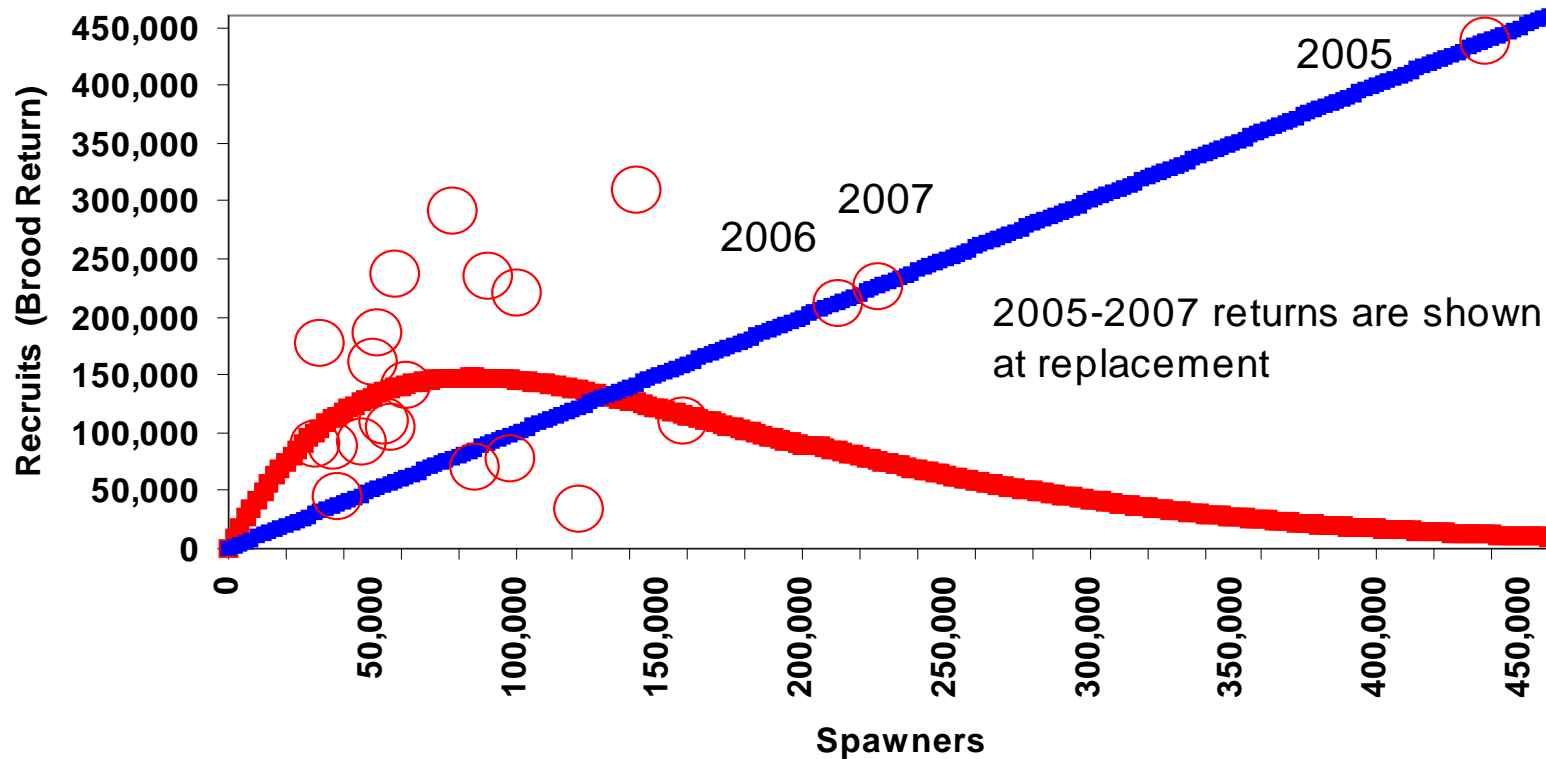


■ Escapement Estimates (Based on tagging prior to 2008)

# Poor production is expected from the 2005 escapement based on a spawner-recruitment model

Returns from high escapements 2005-07 are outside our experience

What will Upper Yukon fall chum returns from the high escapements in 2005-2007 be?



■ Spawner Recruit Curve ■ Replacement ○ Observed (except 05-07)

# 2009 Upper Yukon Fall Chum Salmon Outlook

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- Was very difficult to develop the 2009 outlook
- There is considerable uncertainty associated with the return from the record high 2005 escapement
- Spawner-recruitment model suggests the return from 2005 escapement will be well below replacement
  - However, we have no experience with returns from high escapements in 2005, 2006, and 2007

# Upper Yukon Fall Chum Salmon Outlook

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- Approach taken applied average Canadian contribution to ADF&G drainage wide outlook of 600,000 to 980,000
  - ADF&G analyses involves a longer time series
  - Canadian contribution ~30% of the drainage wide return
  - Upper Yukon component is likely at least 25% of the drainage
- 2009 Upper Yukon outlook range is from 150,000 to 240,000 fall chum salmon
- JTC recommends Yukon Panel maintain an escapement goal of >80,000 Upper Yukon fall chum salmon

# Canadian Fisheries Management

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- Uncertainly associated with the 2009 Upper Yukon fall chum salmon outlook
- In-season assessment programs will determine the actual run strength
- Appropriate management actions will be taken to ensure conservation (>80,000 escapement goal) and harvest sharing objectives are achieved
- Eagle sonar program will be used for second year to determine escapement into Canada
- Decision matrix within the Integrated Fisheries Management Plan (IFMP) will provide detailed guidance for specific in-season run abundance levels

# 2009 Fishing Branch Fall Chum Salmon Outlook

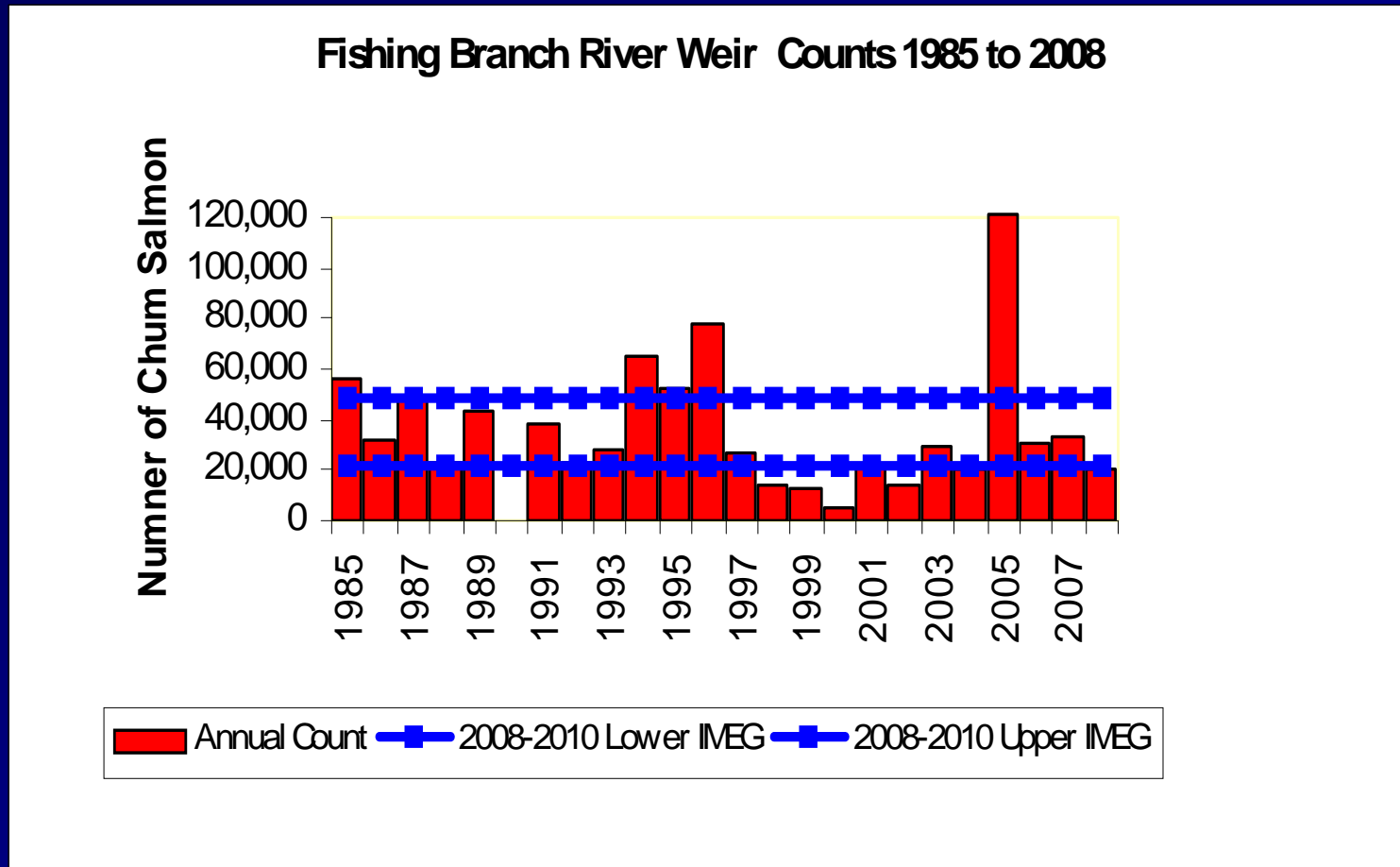
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- Base level escapement for 2009 run is ~94,000
- 2005 escapement was very high (121,413)
- Similar to Upper Yukon, approach taken applied average Canadian contribution to ADF&G drainage wide outlook of 600,000 to 980,000
  - Fishing Branch run is ~5% of the drainage wide total
- 2009 Fishing Branch outlook range is from 30,000 to 49,000 fall chum salmon
  - **this is well below replacement!**

# 1985-2008 Fishing Branch Weir counts

## Yukon Panel adopted IMEG of 22,000-49,000



# Canadian Fisheries Management

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- Uncertainly associated with the 2009 Fishing Branch fall chum salmon outlook
- In-season assessment programs will determine the actual run strength
- Appropriate management actions will be taken to ensure conservation (22-49,000 escapement goal) is achieved
- Decision matrix within the Integrated Fisheries Management Plan (IFMP) will provide detailed guidance for specific in-season run abundance levels

# Assessment is based on a weir program Sonar program in the future?

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# Fishing Branch Discussion Items

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- In-season assessment involves USF&WS In-season genetic mixed stock analyses
  - analyses has under-represented the run size
- Porcupine CPUE Index program near Old Crow
- Fishing Branch weir

# The End

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