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Chair  
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Idaho

W. Bill Booth  
Idaho



Rhonda Whiting  
Vice-Chair  
Montana

Bill Bradbury  
Oregon

Tom Karier  
Washington

Phil Rockefeller  
Washington

February 23, 2012

## MEMORANDUM

**TO:** Council Members

**FROM:** Jim Ruff – Manager, Mainstem Passage and River Operations

**SUBJECT:** Briefing on 2012 Columbia River Basin Fish Run Forecasts and 2011 Fishery Retrospective

At the March 7, 2012, Council meeting, Bill Tweit (Columbia River Policy Lead for the Washington Department of Fish and Wildlife), Ed Schriever (Chief of Fisheries for the Idaho Department of Fish and Game) and Tom Rien (Columbia River Investigations Program Leader) will present the latest information on the 2012 adult salmon and steelhead run forecasts for the Columbia and Snake rivers and a brief summary of expectations for the 2012 fisheries. Bill Tweit's presentation will also include a retrospective review of the 2011 adult salmon and steelhead fisheries in the lower Columbia River. In addition, Bill and Tom will present a review of white sturgeon population status and management concerns for the populations in the reservoirs from Bonneville Dam upstream to McNary Dam, as well as for the sturgeon population below Bonneville Dam in the lower Columbia River.

Ed Schriever will summarize the recent, historical returns of salmon and steelhead to the Snake River Basin, focusing on the species/run groupings of spring, summer, fall Chinook salmon; summer steelhead; and sockeye salmon. For each species/run grouping, counts of fish crossing Lower Granite Dam will be presented. Numbers of fish passing Lower Granite Dam comprise the aggregate count of adult salmon and steelhead destined for eastern Oregon's Grande Ronde and Imnaha river drainages and Idaho's Clearwater and Salmon river drainages. In addition to historical return information, 2012 forecast information for Snake River spring/summer Chinook salmon, summer steelhead, and sockeye salmon will be presented.

w:\jr\ww\2012\2-23-12 2012 crb salmon run forecast memo.docx

# The Snake River Update – Recent trends in salmon and steelhead abundance and outlook on 2012 adult returns



**Ed Schriever**  
**Idaho Department of Fish and Game**



# The Snake River Update – Recent trends in salmon and steelhead abundance and outlook on 2012 adult returns

## Content:

1. 2000-2011 time-series return information for Snake River:
  - a. Fall Chinook Salmon
  - b. Sockeye Salmon
  - c. Summer Steelhead
  - d. Spring/Summer Chinook Salmon
  
2. 2012 run-size forecasts for:
  - a. Fall Chinook Salmon
  - b. Sockeye Salmon
  - c. Summer Steelhead
  - d. Spring/Summer Chinook Salmon



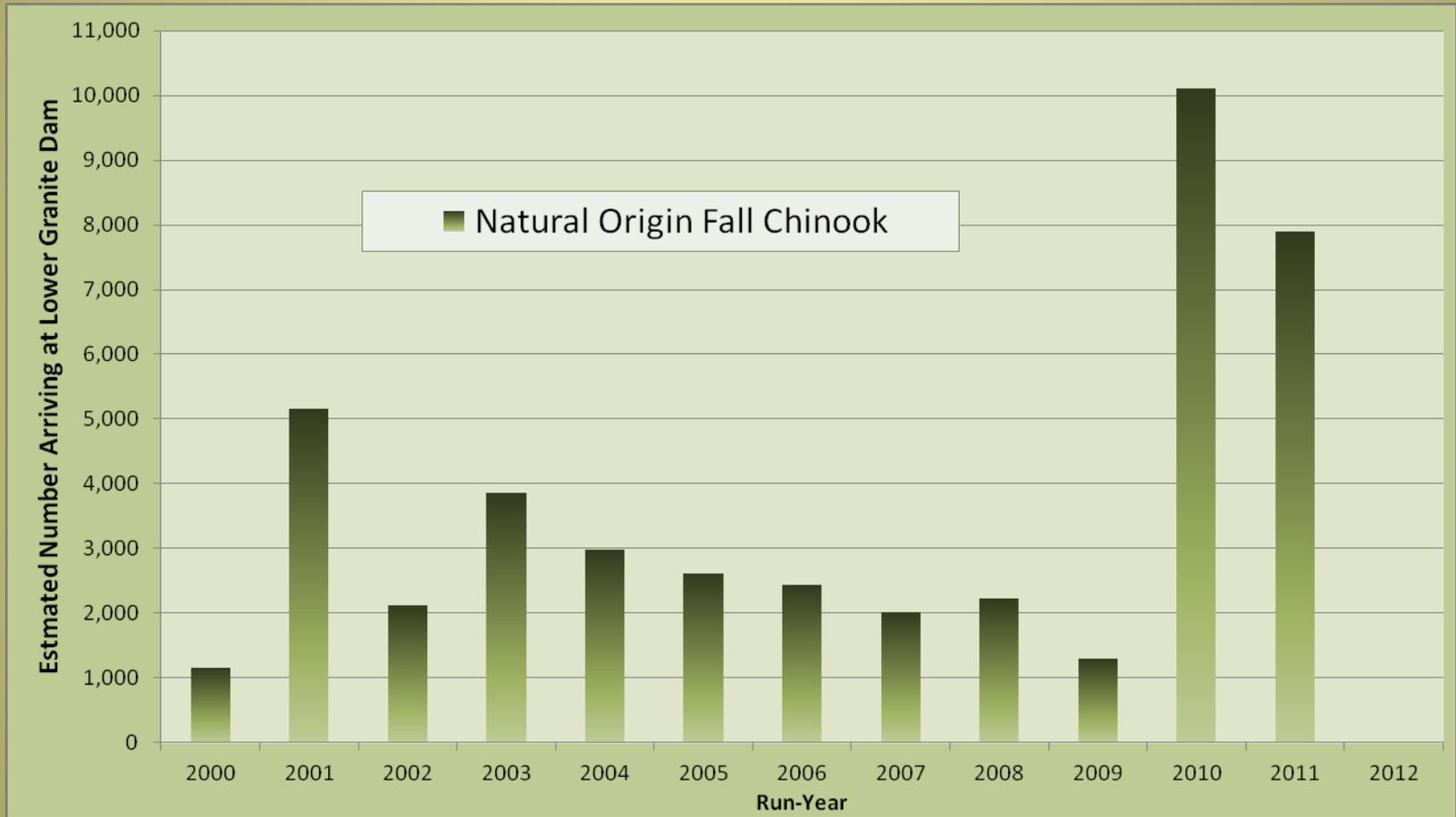
# Fall Chinook Salmon



# Fall Chinook Salmon

## Estimated Return Of

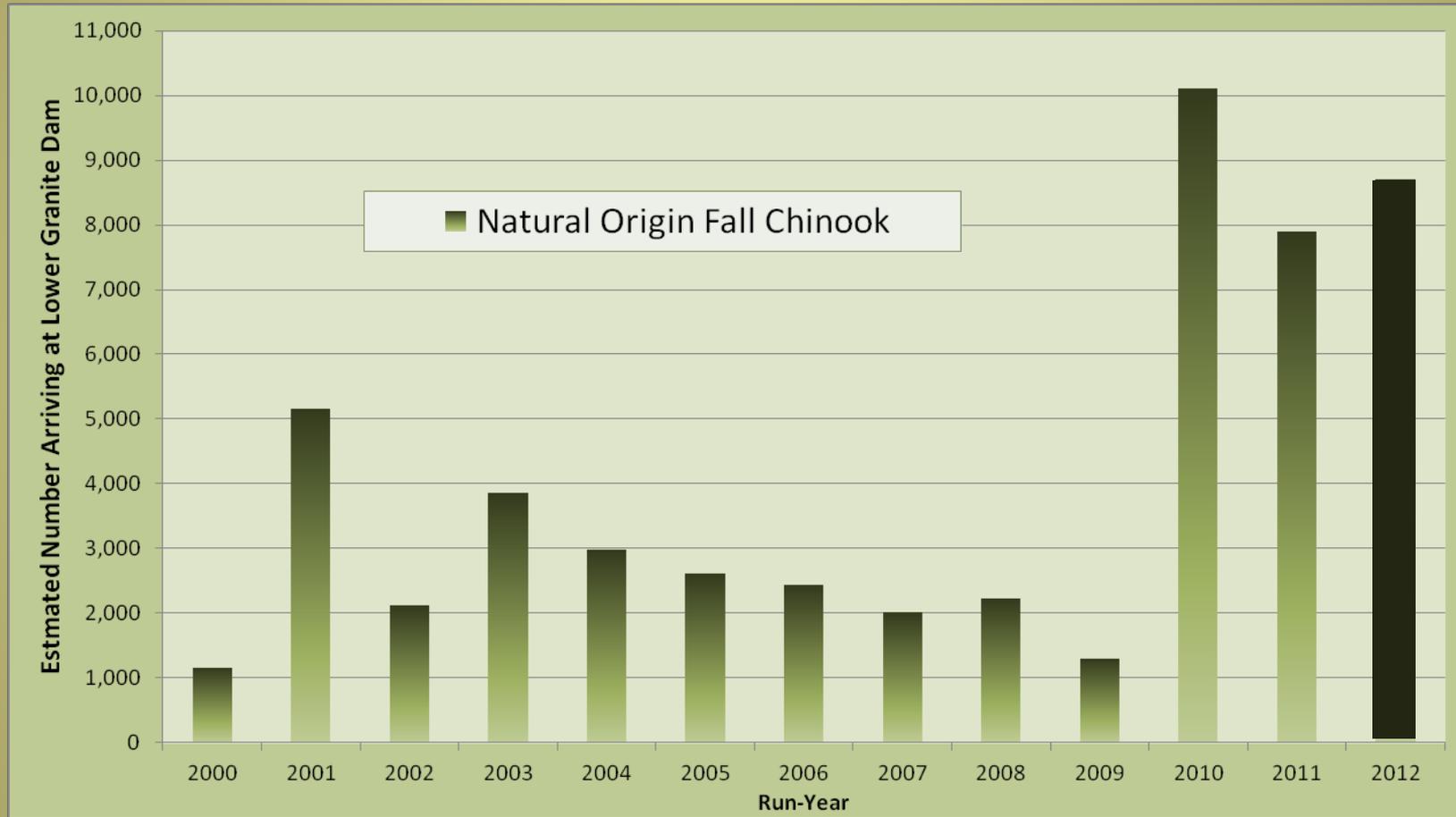
*Species:* Chinook Salmon  
*Run:* Fall  
*Origin:* Natural  
*Period:* 2000 – 2011



# Fall Chinook Salmon

## Estimated Return Of

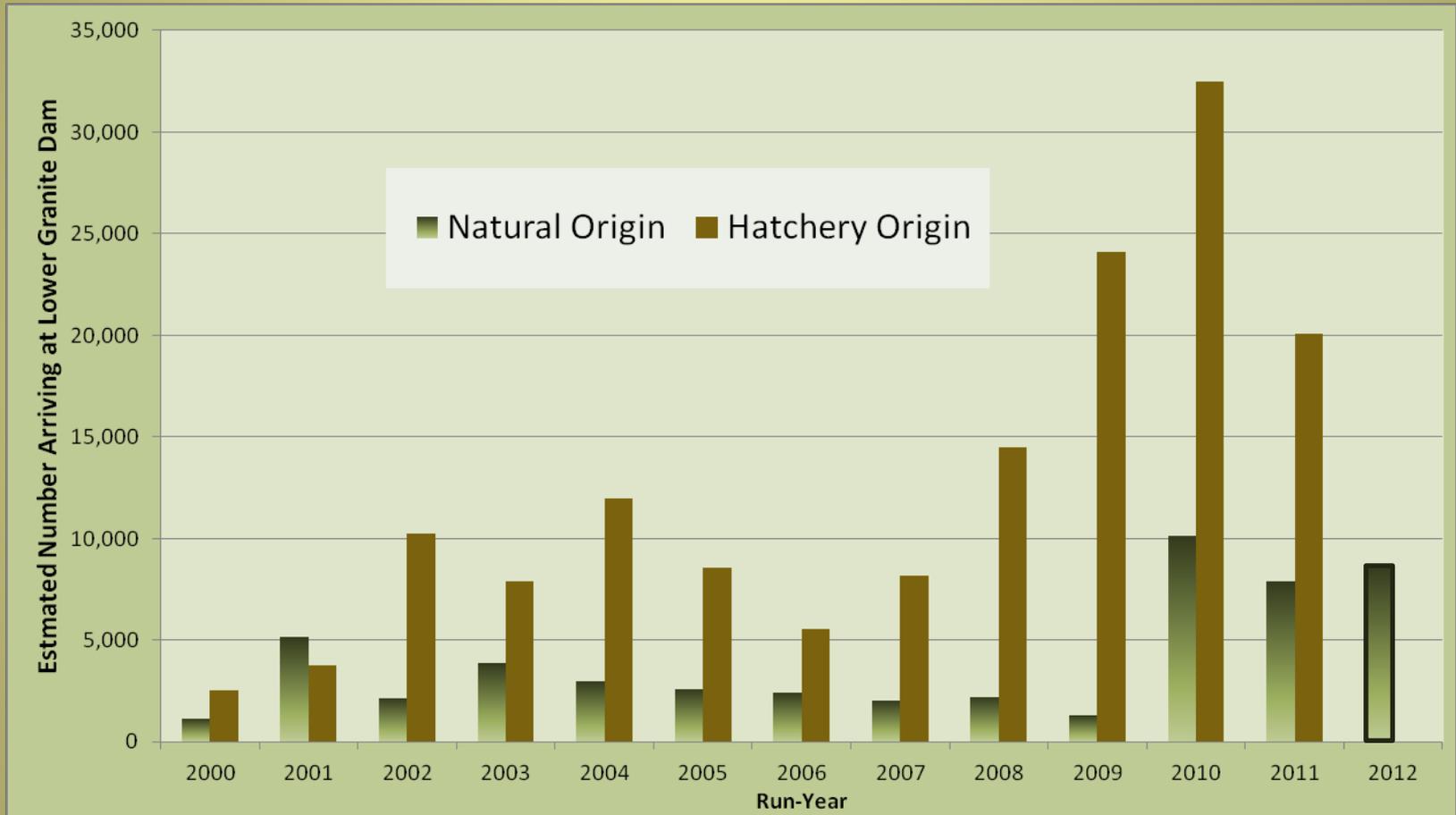
*Species:* Chinook Salmon  
*Run:* Fall  
*Origin:* Natural  
*Period:* 2000 – 2011 with 2012 Forecast



# Fall Chinook Salmon

## Estimated Return Of

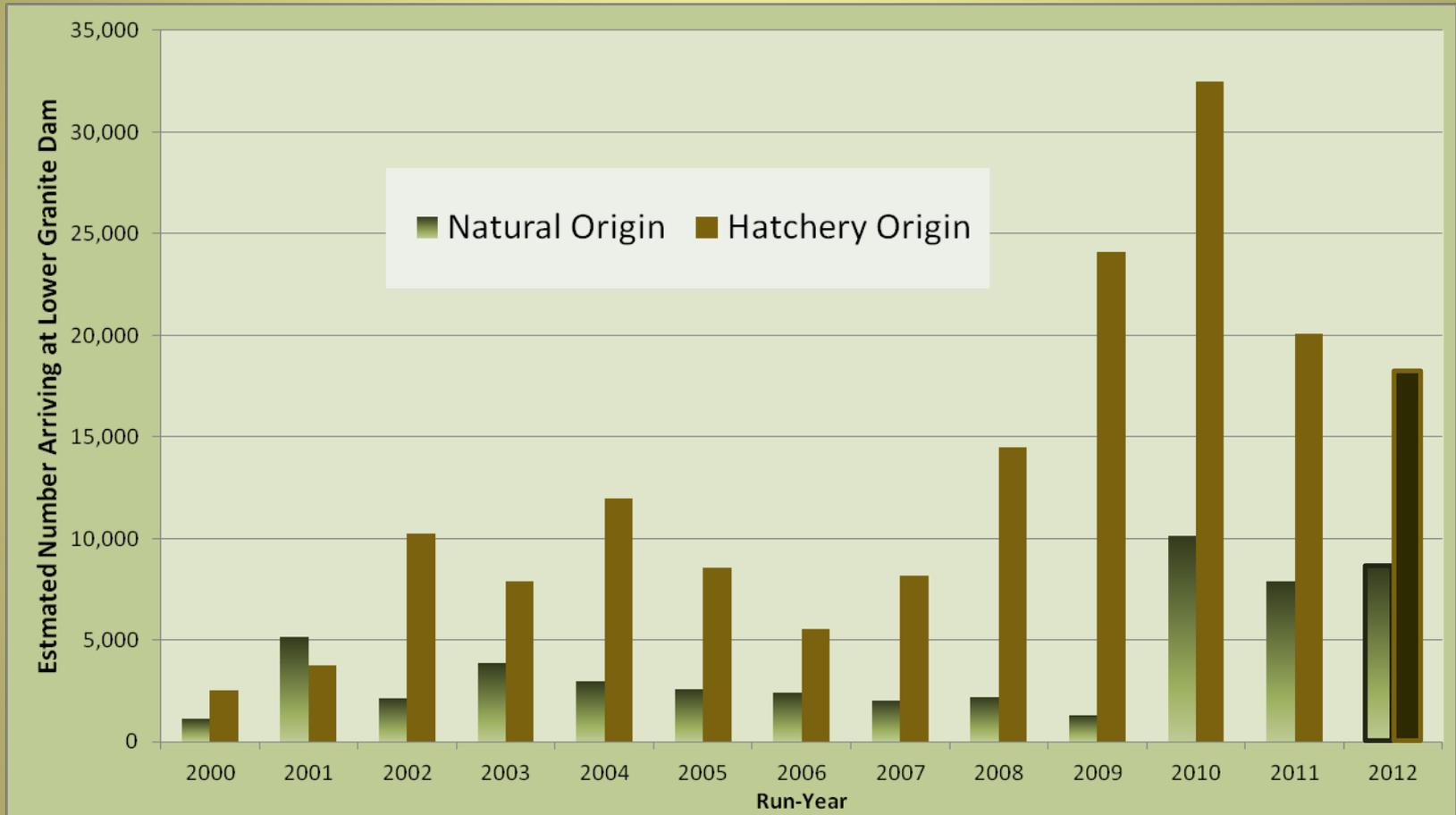
*Species:* Chinook Salmon  
*Run:* Fall  
*Origin:* Hatchery  
*Period:* 2000 – 2011



# Fall Chinook Salmon

## Estimated Return Of

*Species:* Chinook Salmon  
*Run:* Fall  
*Origin:* Hatchery  
*Period:* 2000 – 2011 and 2012 Forecast



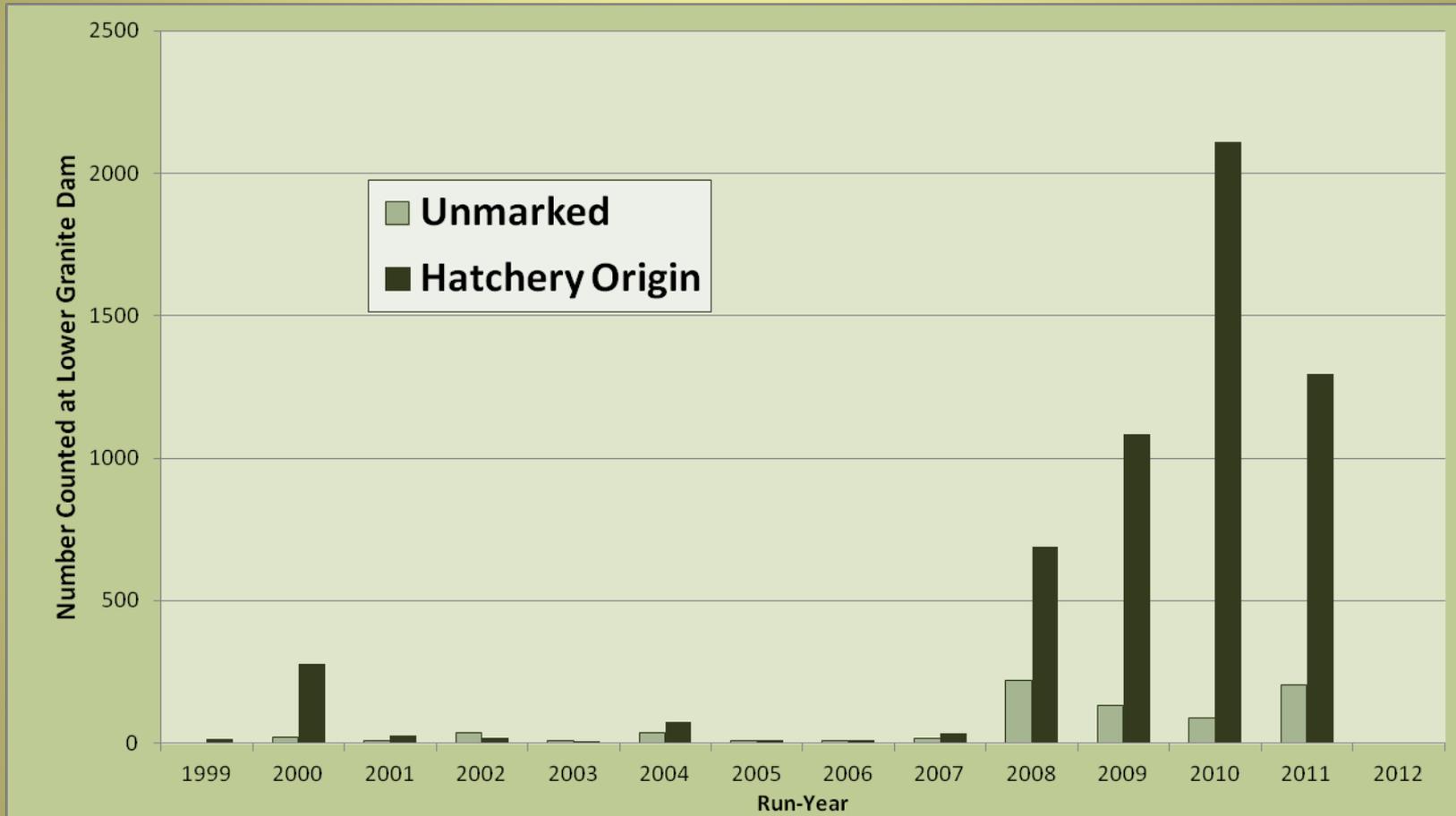
# Sockeye Salmon



# Sockeye Salmon

## Estimated Return Of

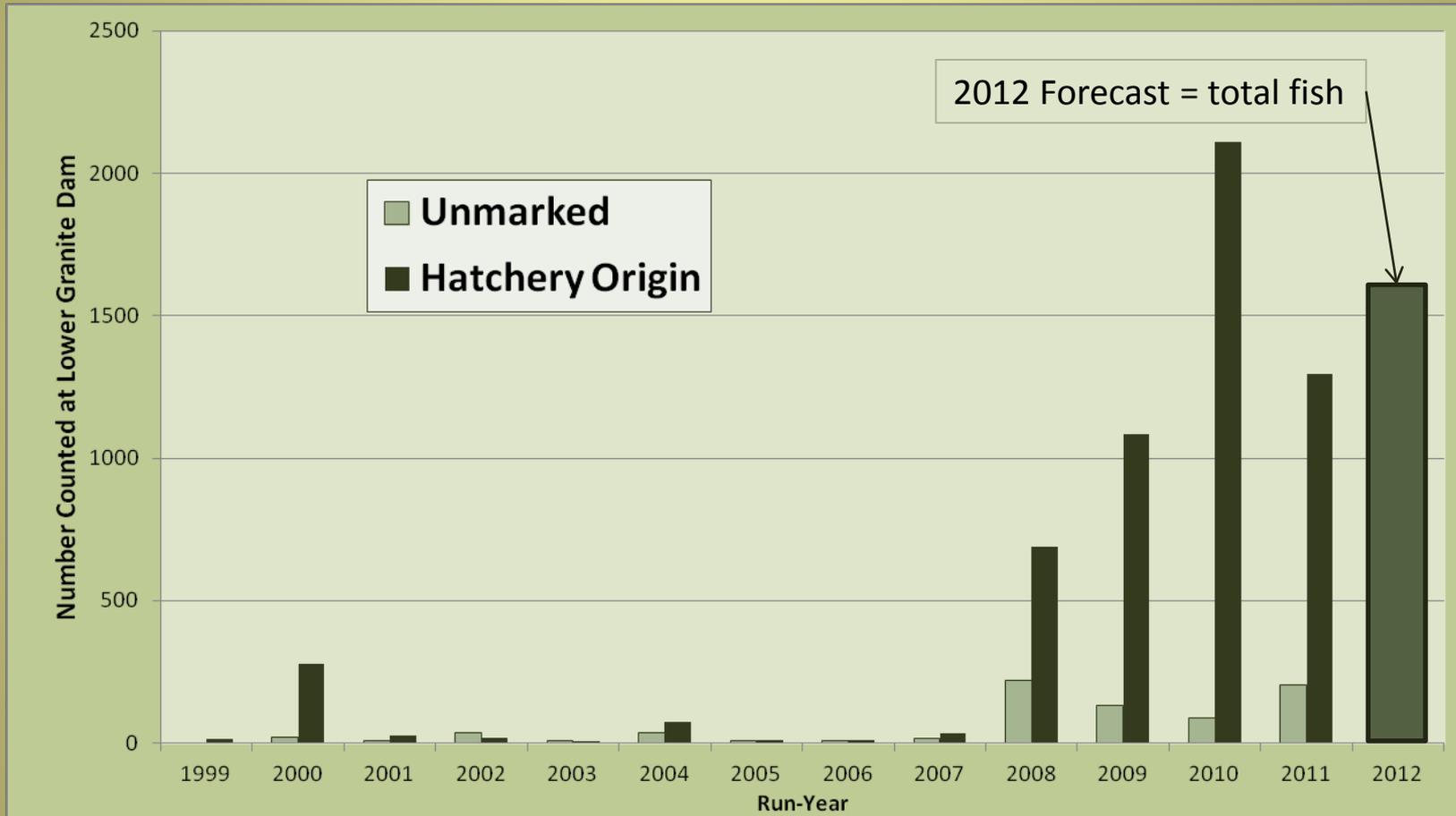
*Species:* Sockeye Salmon  
*Run:* Snake River  
*Origin:* Unmarked and Hatchery  
*Period:* 2000 – 2011



# Sockeye Salmon

## Estimated Return Of

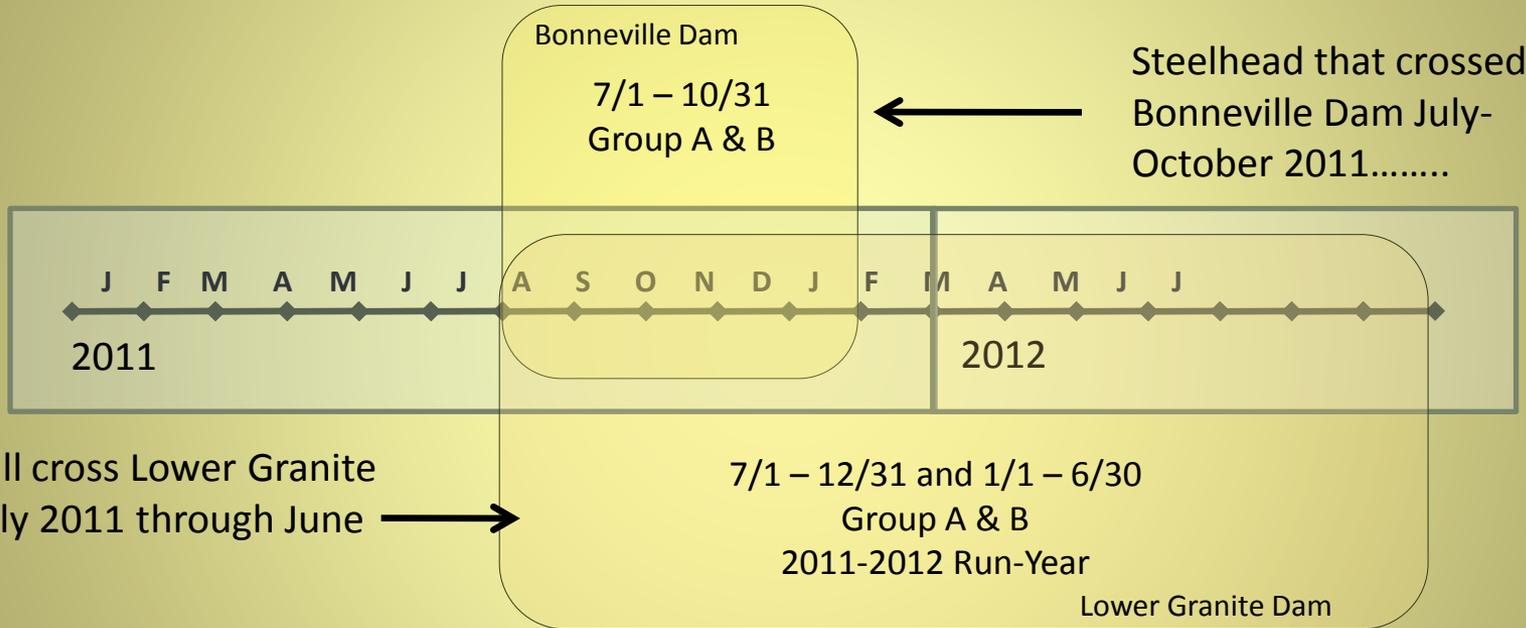
*Species:* Sockeye Salmon  
*Run:* Snake River  
*Origin:* Unmarked and Hatchery  
*Period:* 2000 – 2011 with 2012 Forecast



# Summer Steelhead



# Summer Steelhead Run-Years

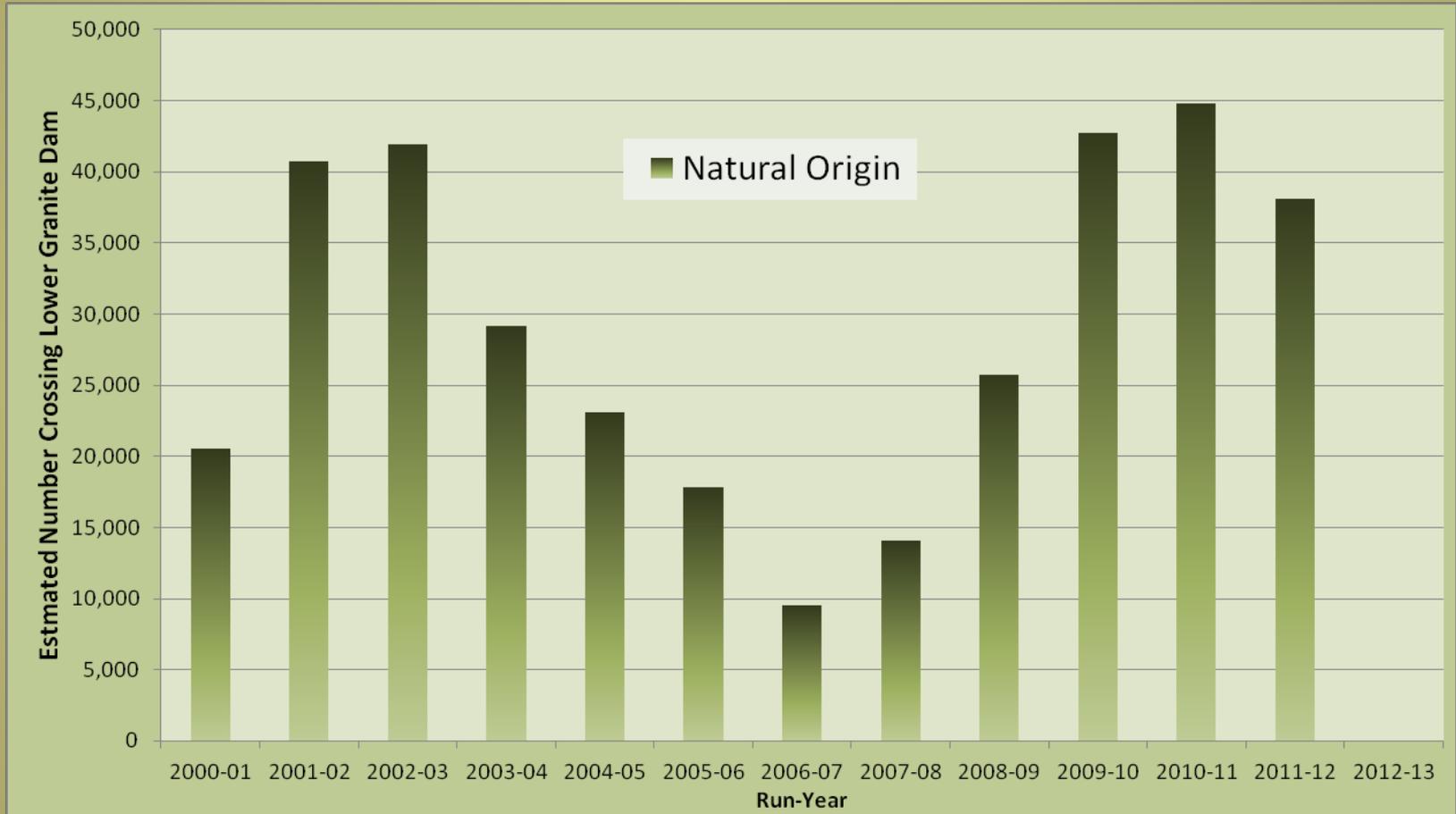




# Summer Steelhead

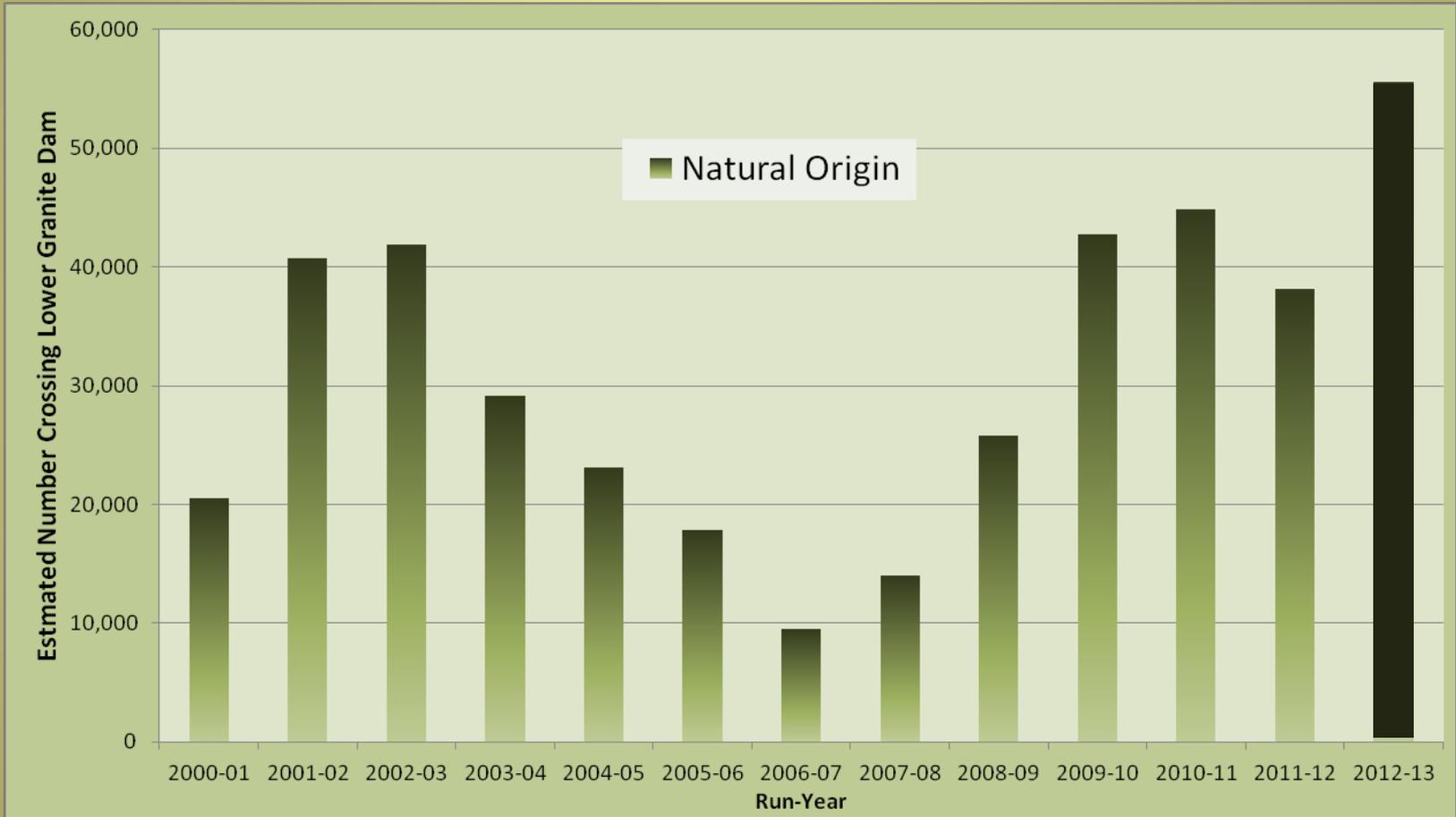
## Estimated Return Of

*Species:* Steelhead  
*Run:* Summer Run, A & B  
*Origin:* Natural & Wild  
*Period:* 2000 – 2012



# Summer Steelhead

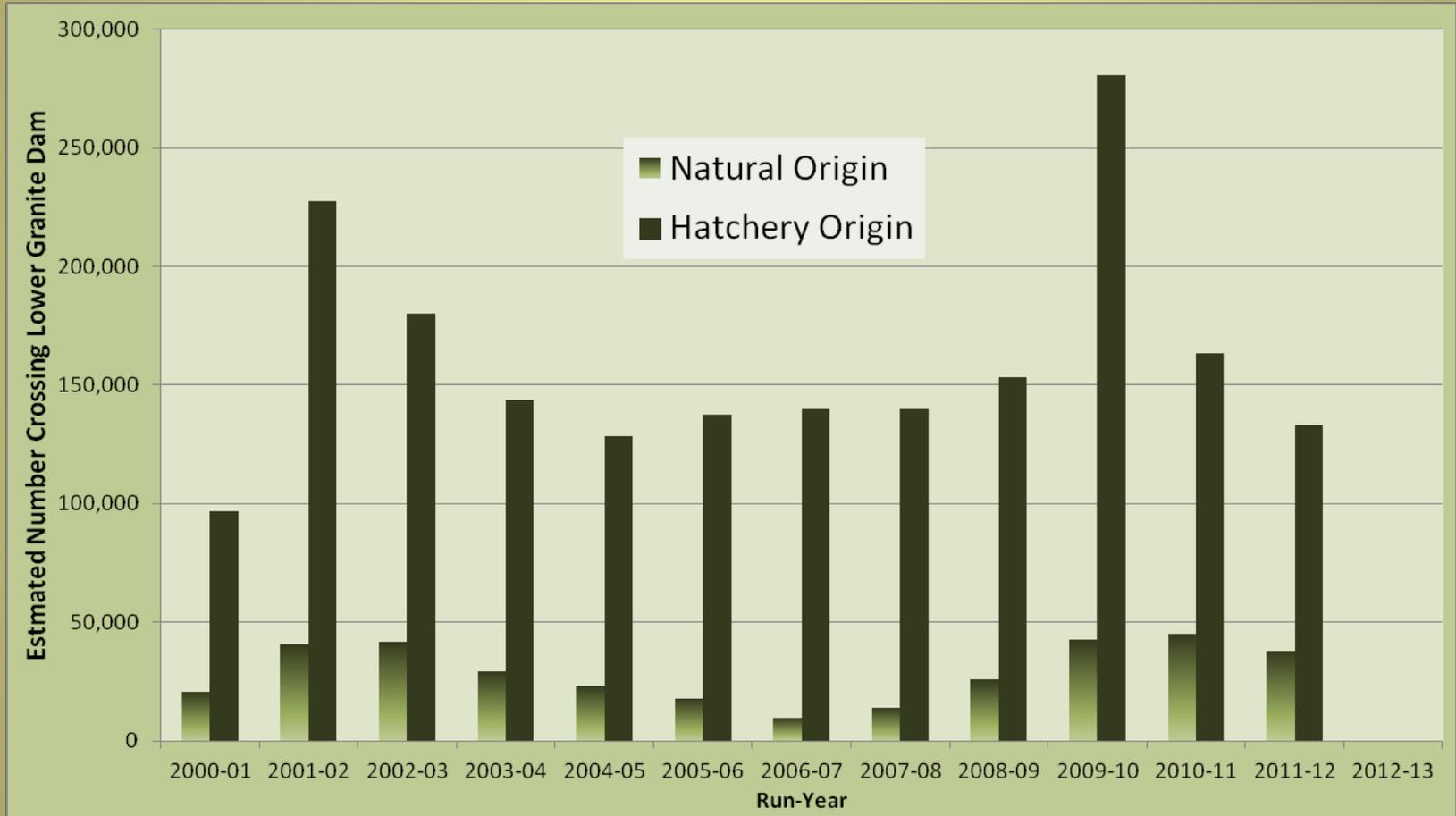
Estimated Return Of	
<i>Species:</i>	Steelhead
<i>Run:</i>	Summer Run, A & B
<i>Origin:</i>	Wild
<i>Period:</i>	2000 – 2012 with 2013 Forecast



# Summer Steelhead

## Estimated Return Of

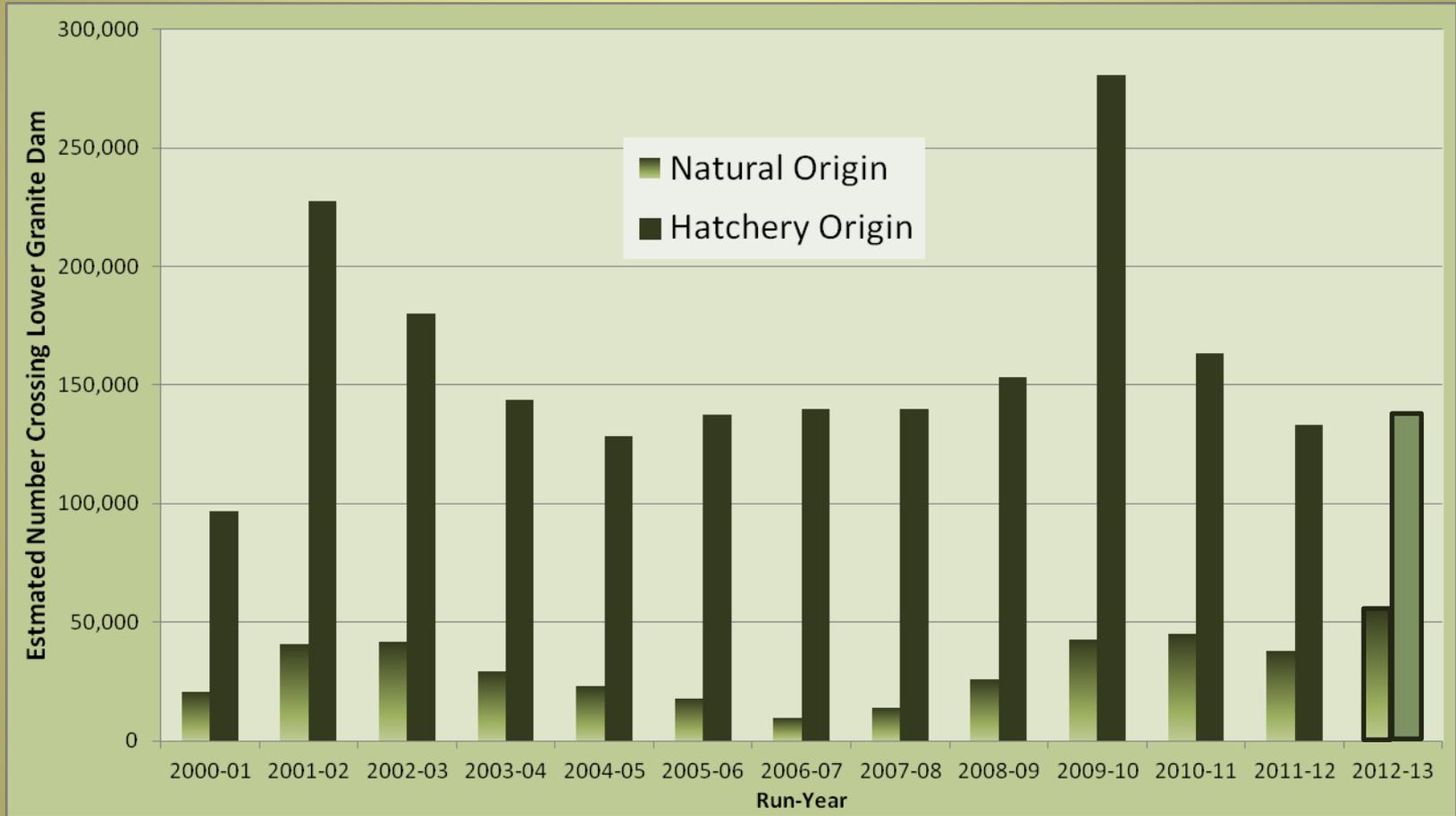
*Species:* Steelhead  
*Run:* Summer Run, A & B  
*Origin:* Wild and Hatchery  
*Period:* 2000 – 2012



# Summer Steelhead

## Estimated Return Of

*Species:* Steelhead  
*Run:* Summer Run, A & B  
*Origin:* Wild and Hatchery  
*Period:* 2000 – 2012 with 2013 Forecast



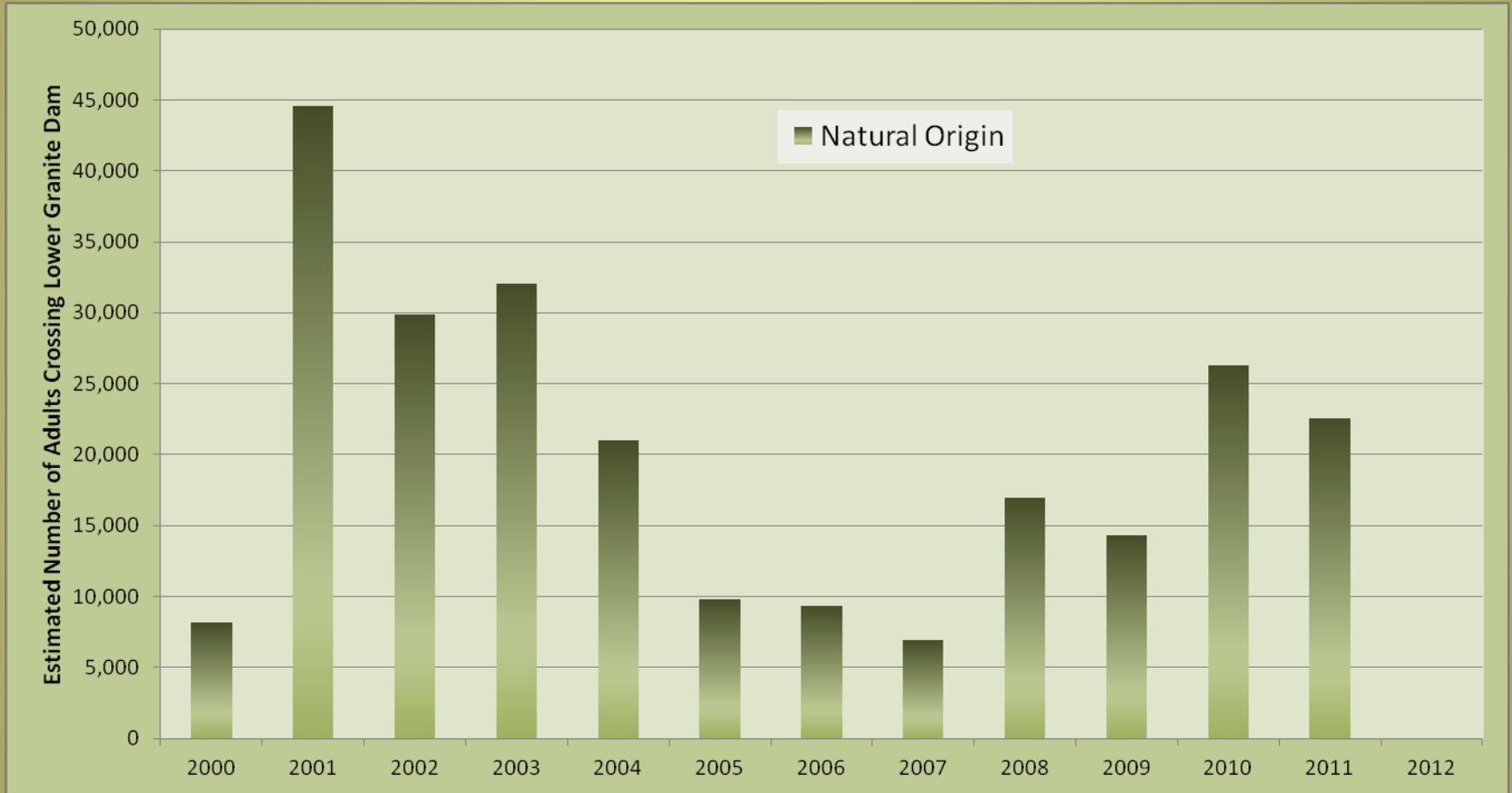
# Spring and Summer Chinook Salmon



# Chinook Salmon

## Estimated Return Of

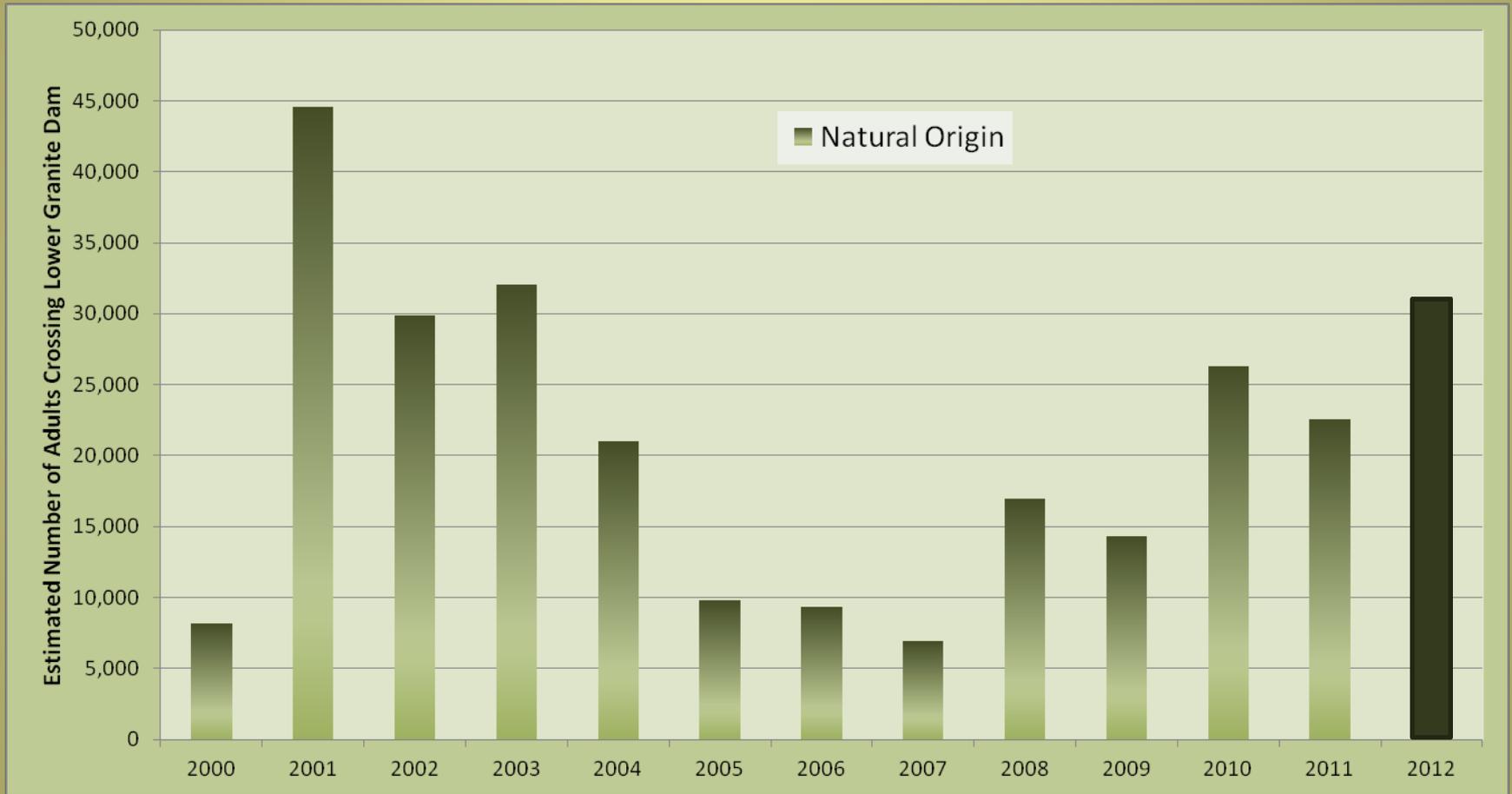
*Species:* Chinook Salmon, Snake River  
*Run:* Spring and Summer  
*Origin:* Natural & Wild  
*Period:* 2000 – 2011



# Chinook Salmon

## Estimated Return Of

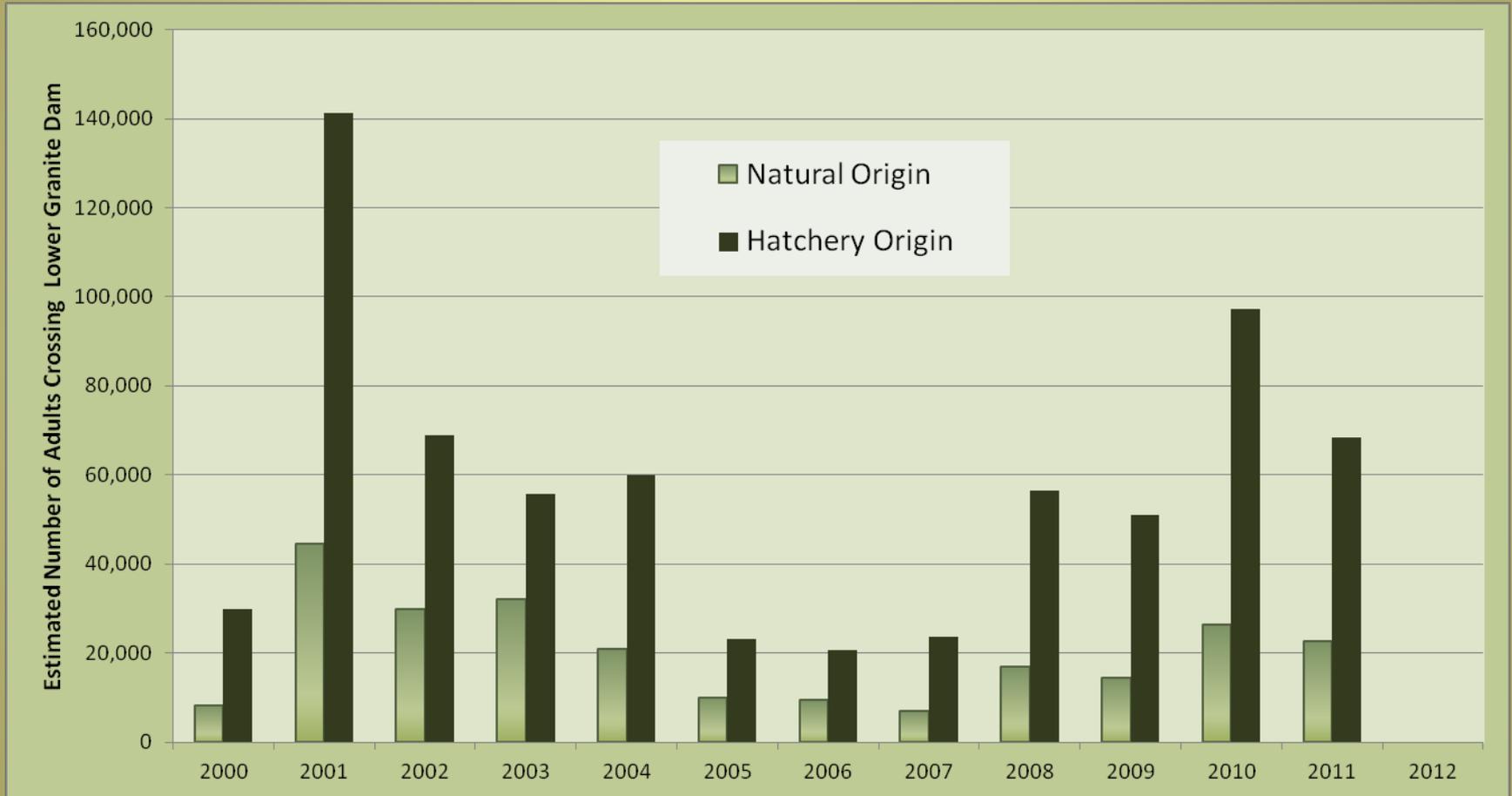
*Species:* Chinook Salmon, Snake River  
*Run:* Spring and Summer  
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# Chinook Salmon

## Estimated Return Of

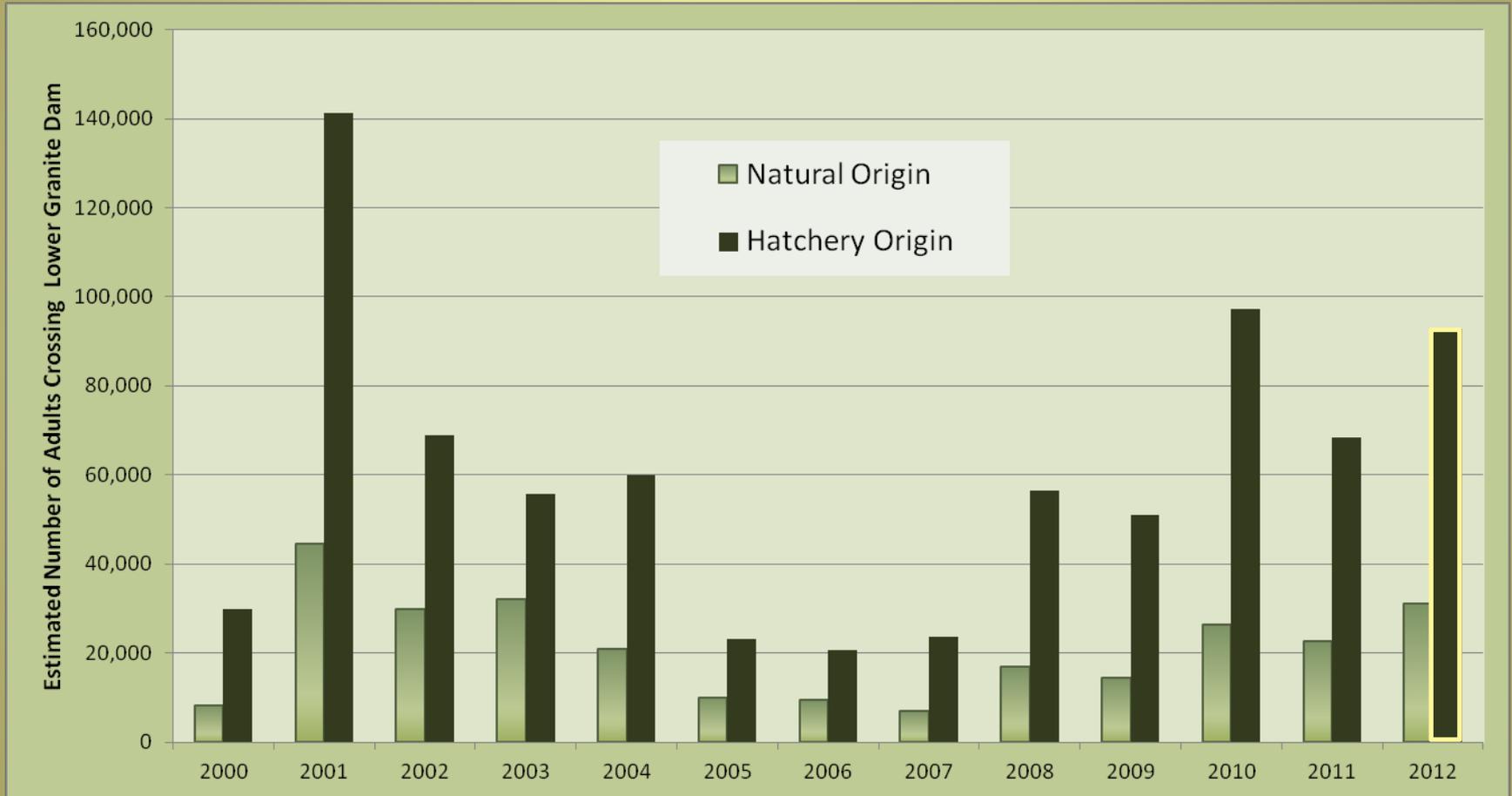
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# Chinook Salmon

## Estimated Return Of

*Species:* Chinook Salmon, Snake River  
*Run:* Spring and Summer  
*Origin:* Wild and Hatchery  
*Period:* 2000 – 2011 and 2012 Forecast



# Management Processes

**Pre-Season**

**2011 Estimated Returns**  
from monitoring, sampling, run reconstruction

**2012 Forecasted Returns**  
prior years' data and modeling



# Management Processes

Hatchery/Release Site	2012 Forecast		2011 Actual Return to Lower Granite
	Fish at Columbia River Mouth	Fish at Lower Granite Dam	
Rapid River			
Little Salmon River	39,800	26,300	20,500
Hells canyon	7,300	4,800	3,800
Sawtooth	12,600	11,300	500
Pahsimeroi	1,600	1,200	3,100
McCall	15,600	13,100	5,700
<b>Salmon Hatcheries Total</b>	<b>76,900</b>	<b>56,700</b>	<b>33,600</b>
Powell	6,400	4,400	1,600
SF Clearwater	10,400	6,900	3,100
Clear Creek	2,600	1,800	1,500
NPTH ad clipped	600	400	100
Selway ad clipped	4,200	2,900	2,600
Dworshak	10,600	6,900	2,700
Kooskia	5,600	3,600	1,400
<b>Clearwater Hatcheries Total</b>	<b>40,500</b>	<b>26,900</b>	<b>13,000</b>
<b>Salmon / Clearwater Hatcheries Total</b>	<b>117,400</b>	<b>83,600</b>	<b>46,600</b>



# Management Processes

## Pre-Season

**2011 Estimated Returns**  
from monitoring, sampling, run reconstruction

**2012 Forecasted Returns**  
prior years' data and modeling

## In-Season

**Biological and genetic sampling**  
run composition, e.g. wild and hatchery

**Fishery sampling**  
stock contribution, impact rates

**PIT Tag detections**  
stock abundance and brood stock management



# Management Processes

## Adults associated with PIT groups

Release Group	Bonneville Pre-Season Forecast	Current Bonneville Estimate	Broodstock Need	Estimated Harvestable Share Above LGD	Bonn Projection (avg. timing)	Bonn Projection (early timing)	Bonn Projection (late timing)
Dworshak	5,176	3,932	1,000	806	3,588	3,269	4,387
Kooskia	288	2,058	800	436	2,177	2,017	2,613
Selway	1,101	3,820	/	1,543	3,565	3,284	4,446
Powell	1,658	2,262	694	408	1,771	1,644	2,119
SF Clearwater	2,152	3,078	1,014	971	3,587	3,257	4,402
Clear Cr. (Clwr)	886	2,064	/	706	1,667	1,544	2,001
<b>Total Clearwater R.</b>	<b>11,261</b>	<b>17,214</b>	<b>3,508</b>	<b>4,870</b>	<b>16,354</b>	<b>15,014</b>	<b>19,968</b>
Rapid River	15,221	26,393	2,000	8,458	23,217	21,003	27,707
Sawtooth	589	112	700	-242	252	NA	NA
Pahsimeroi	4,594	155	600	2,246	6,365	NA	NA
McCall SFSR	9,302	29	1,300	737	499	197	3,341
<b>Total Salmon R.</b>	<b>29,706</b>	<b>26,690</b>	<b>4,600</b>	<b>11,199</b>	<b>30,334</b>	<b>21,200</b>	<b>31,048</b>
<b>TOTAL</b>	<b>40,967</b>	<b>43,904</b>	<b>8,108</b>	<b>16,069</b>	<b>46,688</b>	<b>36,214</b>	<b>51,015</b>

Projections from May 9, 2011



# Questions



# Columbia River Salmon and Steelhead Returns

NPPC – March 2012

Bill Tweit

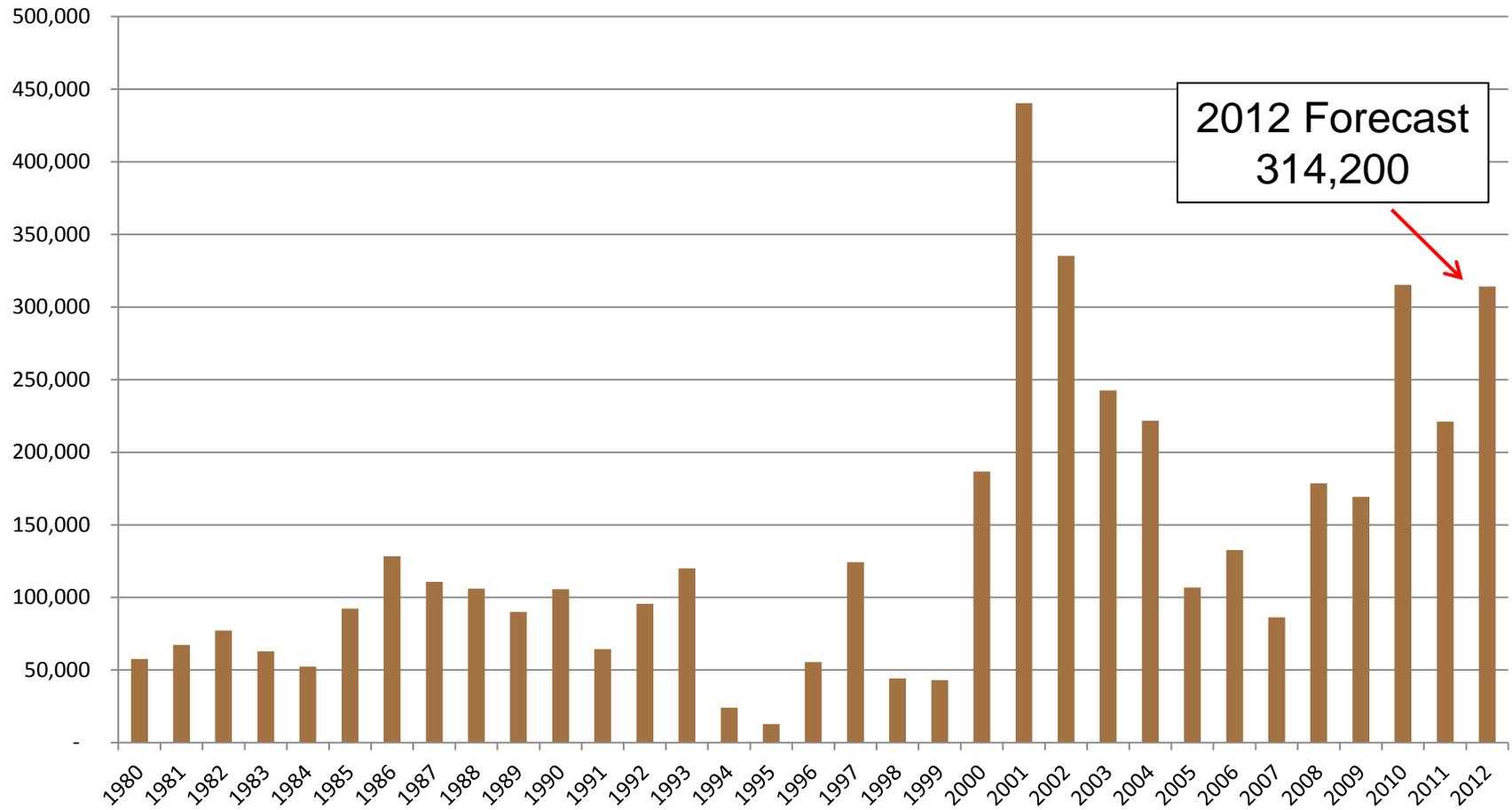
Washington Department of Fish and Wildlife



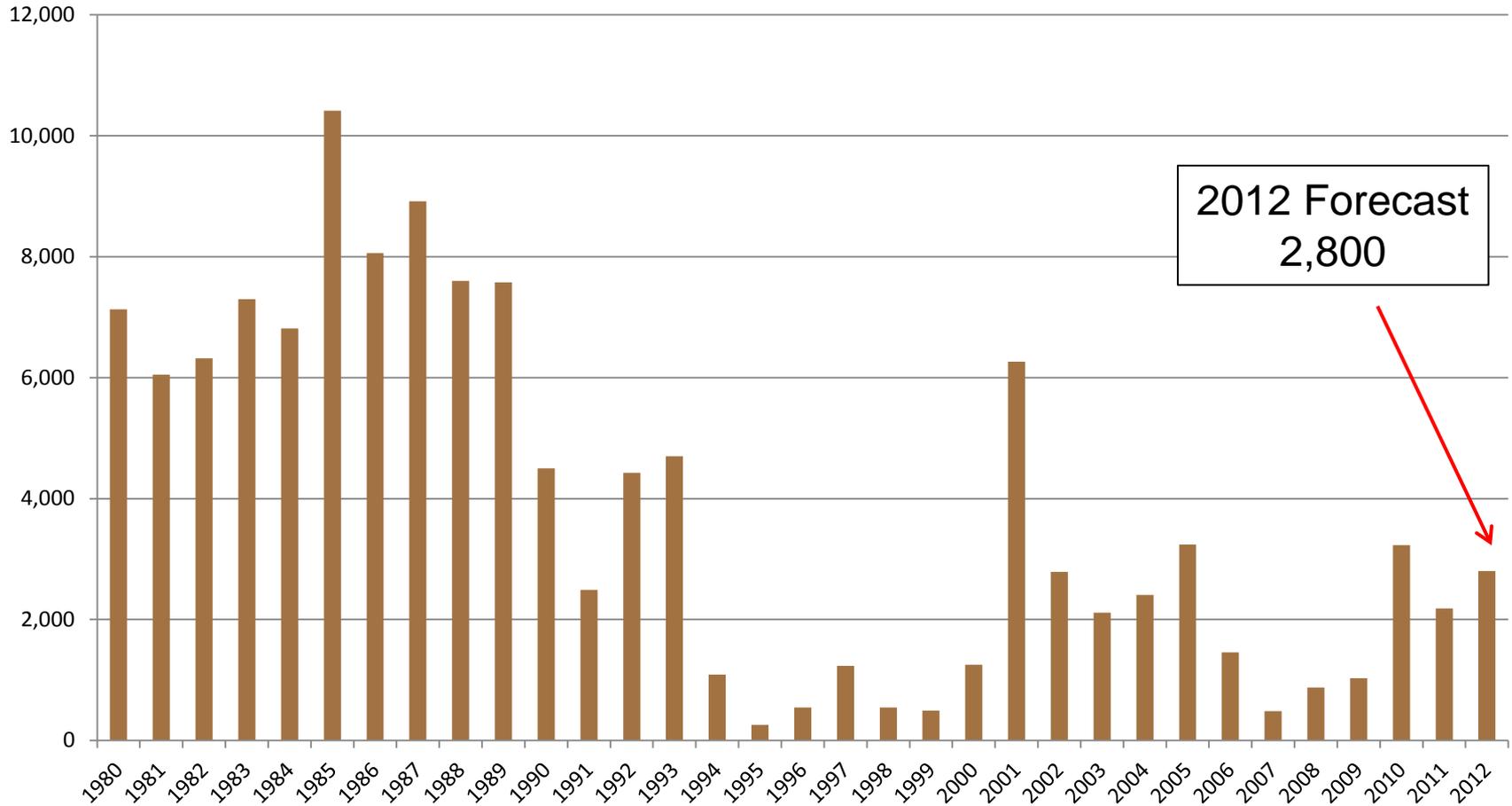
# *U.S. v Oregon* Technical Advisory Committee (TAC) Members

- ▶ Alan Byrne – IDFG
- ▶ Sam Sharr – IDFG
- ▶ Kathryn Kostow – ODFW
- ▶ John North – ODFW
- ▶ Stuart Ellis – CRITFC
- ▶ Lytle Denny – SBT
- ▶ Paul Kusnierz – SBT
- ▶ Roger Dick Jr. – YN
- ▶ Steve Parker – YN
- ▶ Joe Oatman – NPT
- ▶ Preston Bronson – CTUIR
- ▶ Mark Manion – CTWS
- ▶ Henry Yuen – USFWS
- ▶ Tim Roth – USFWS
- ▶ Enrique Patino – NMFS
- ▶ Peter Dygert – NMFS
- ▶ Robin Ehlke – WDFW
- ▶ Cindy LeFleur – WDFW

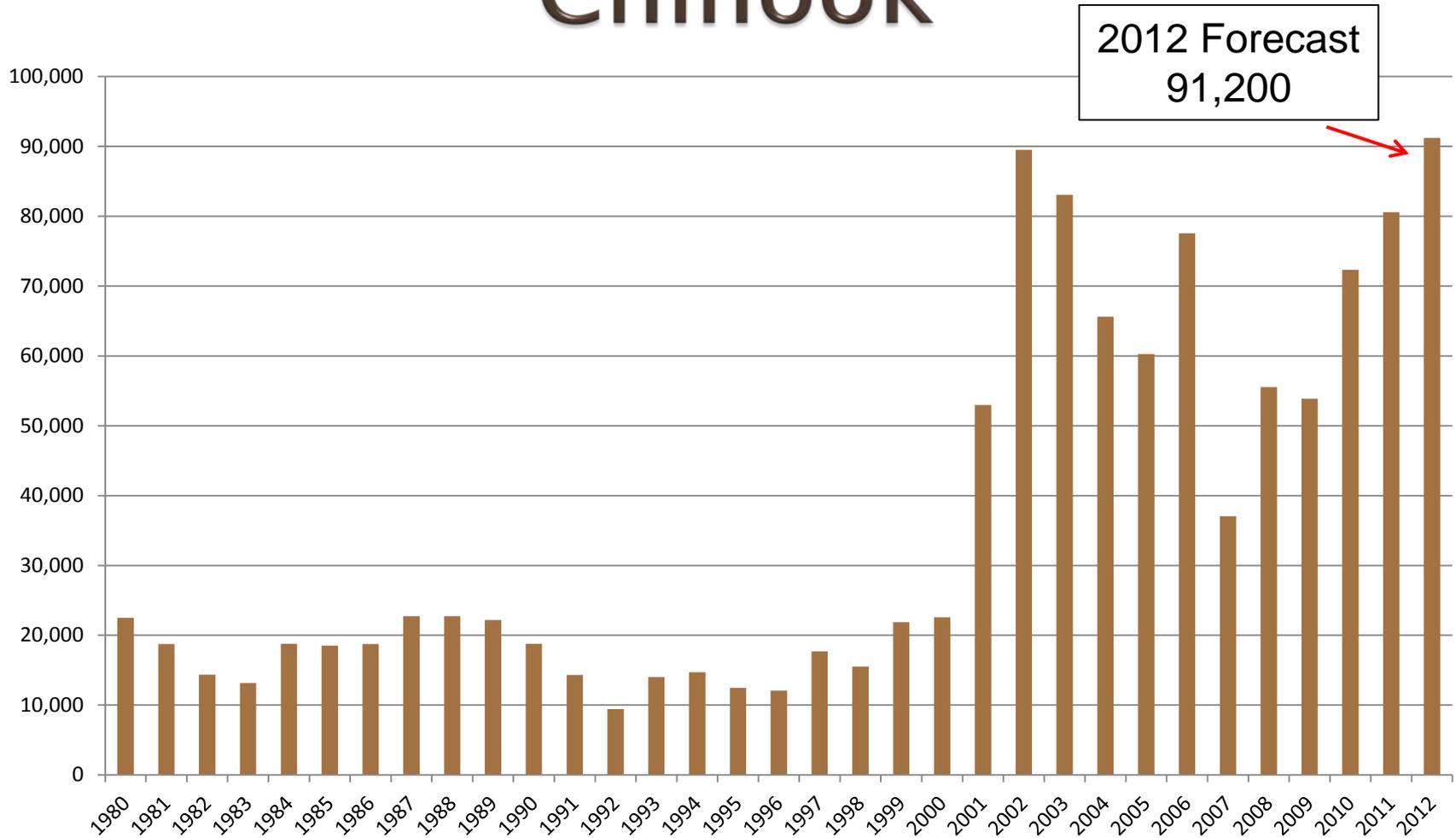
# Upriver Spring Chinook



# Upper Columbia Wild Spring Chinook

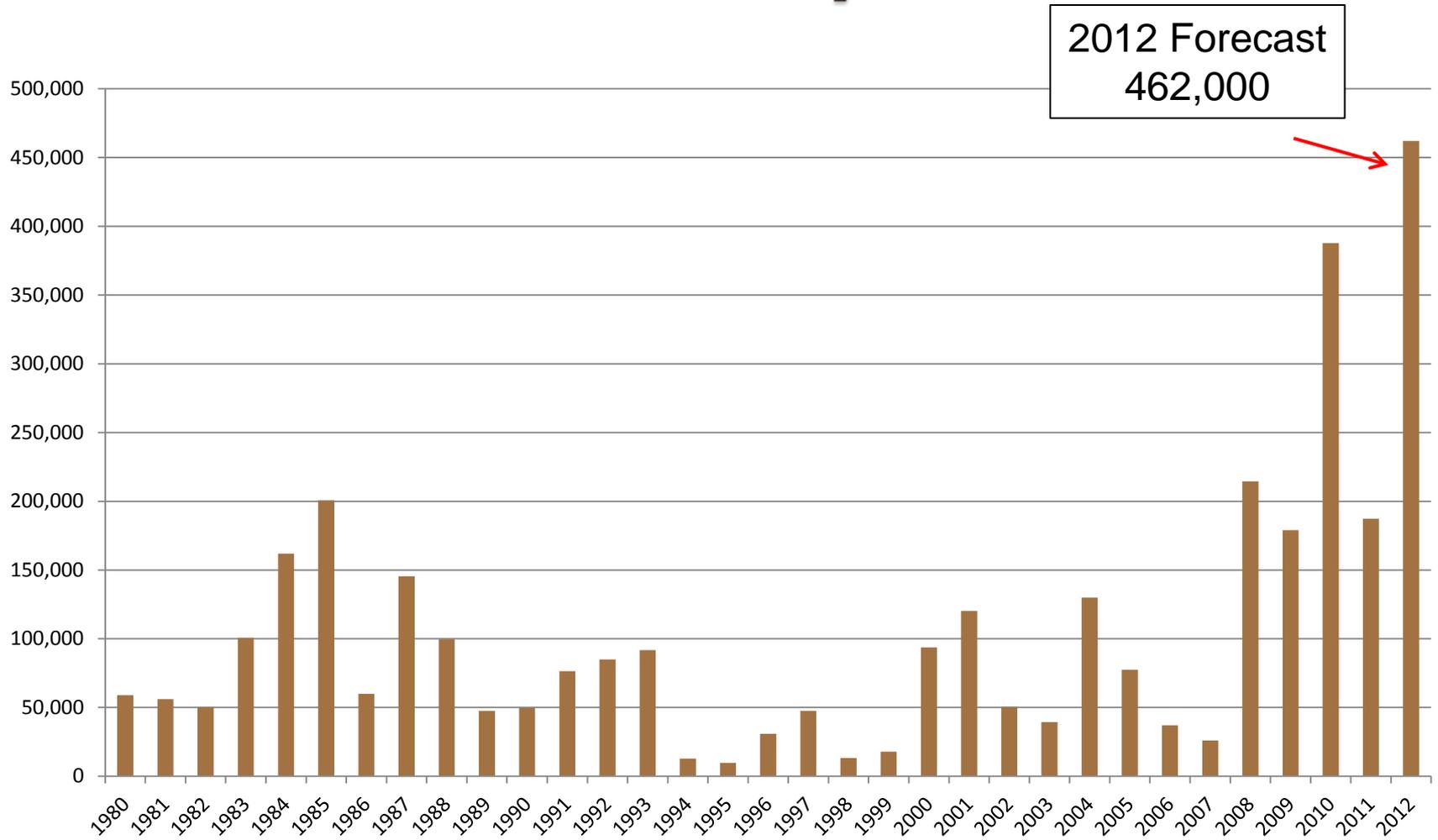


# Upper Columbia Summer Chinook

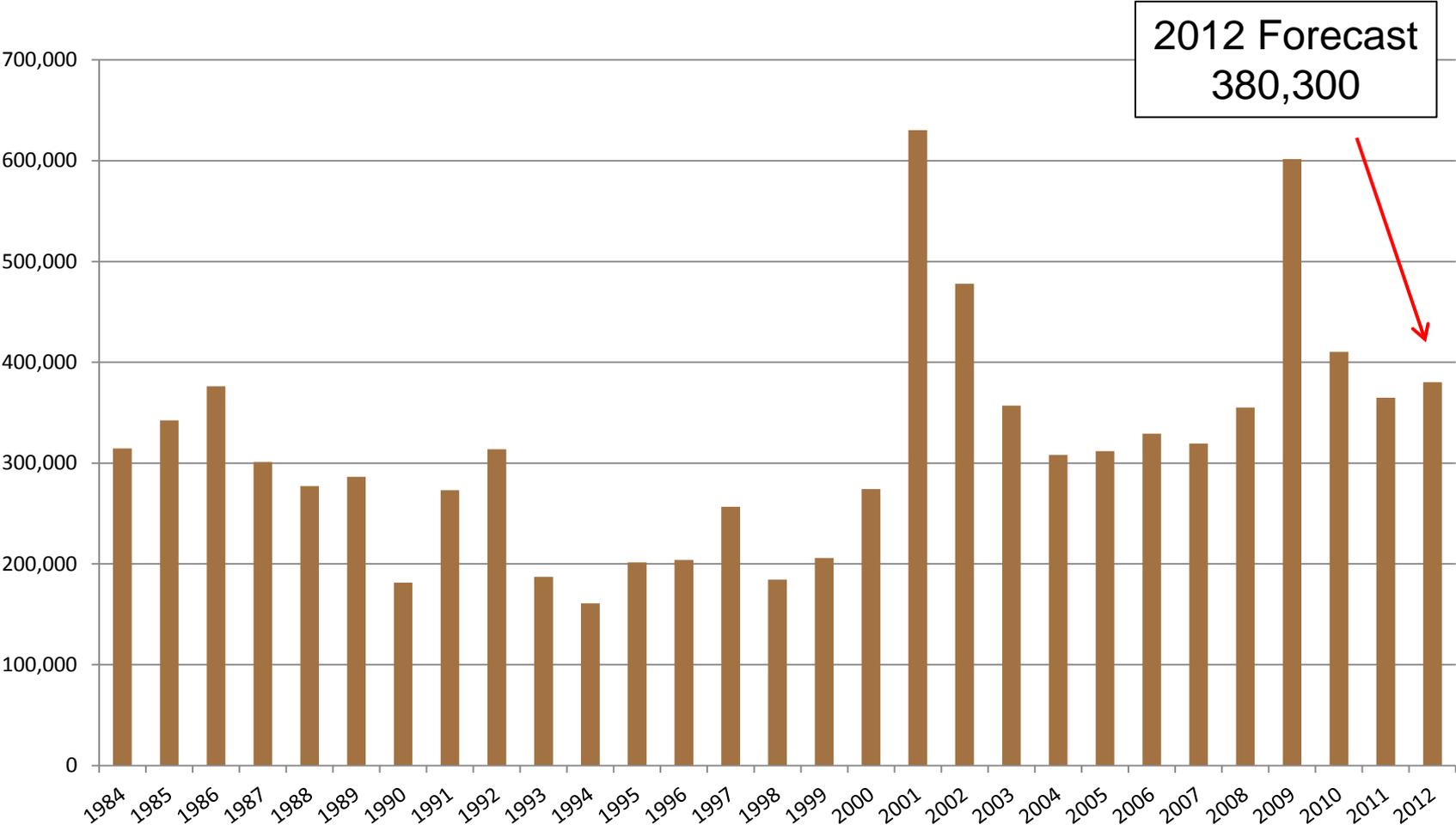




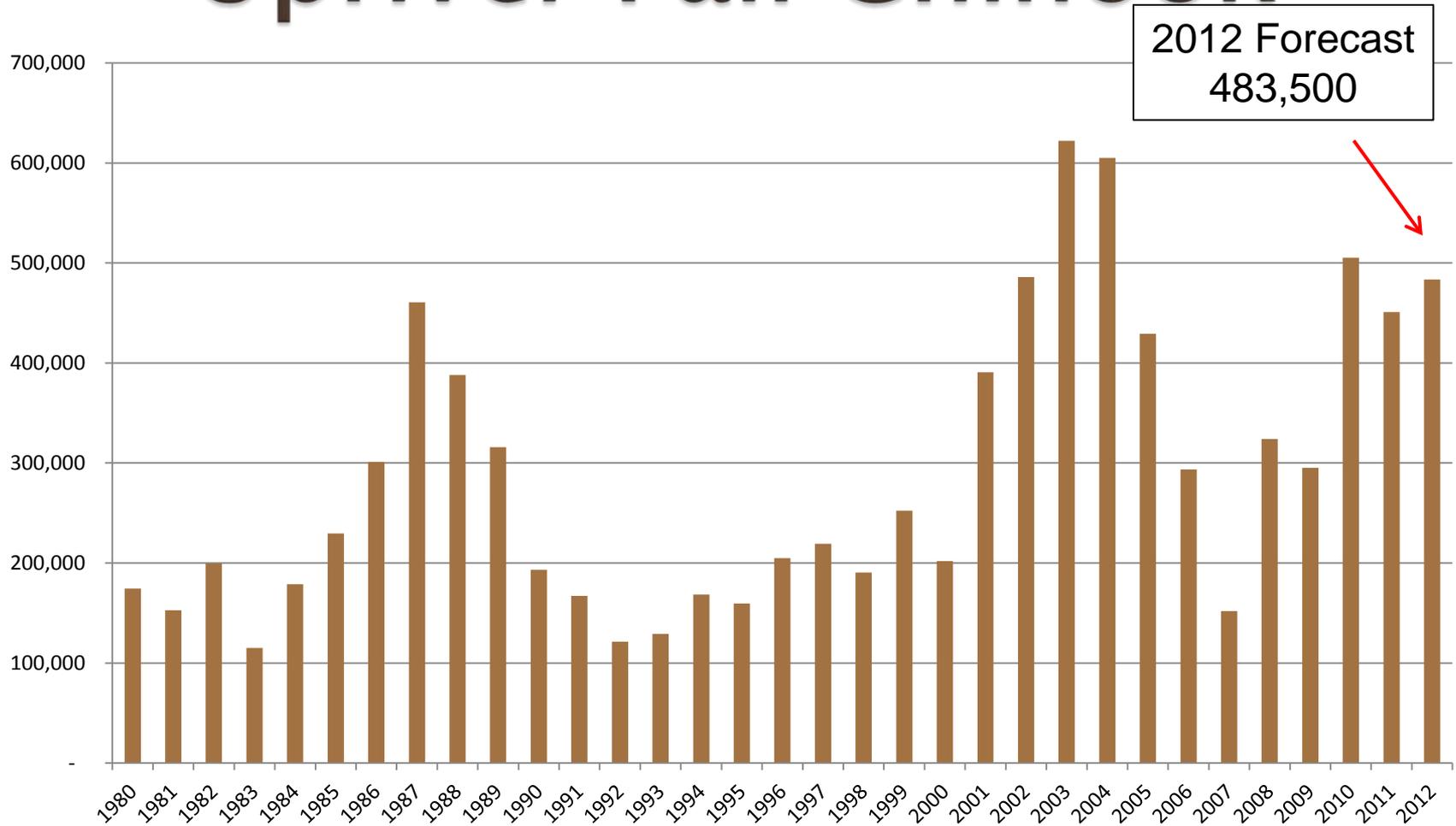
# Sockeye



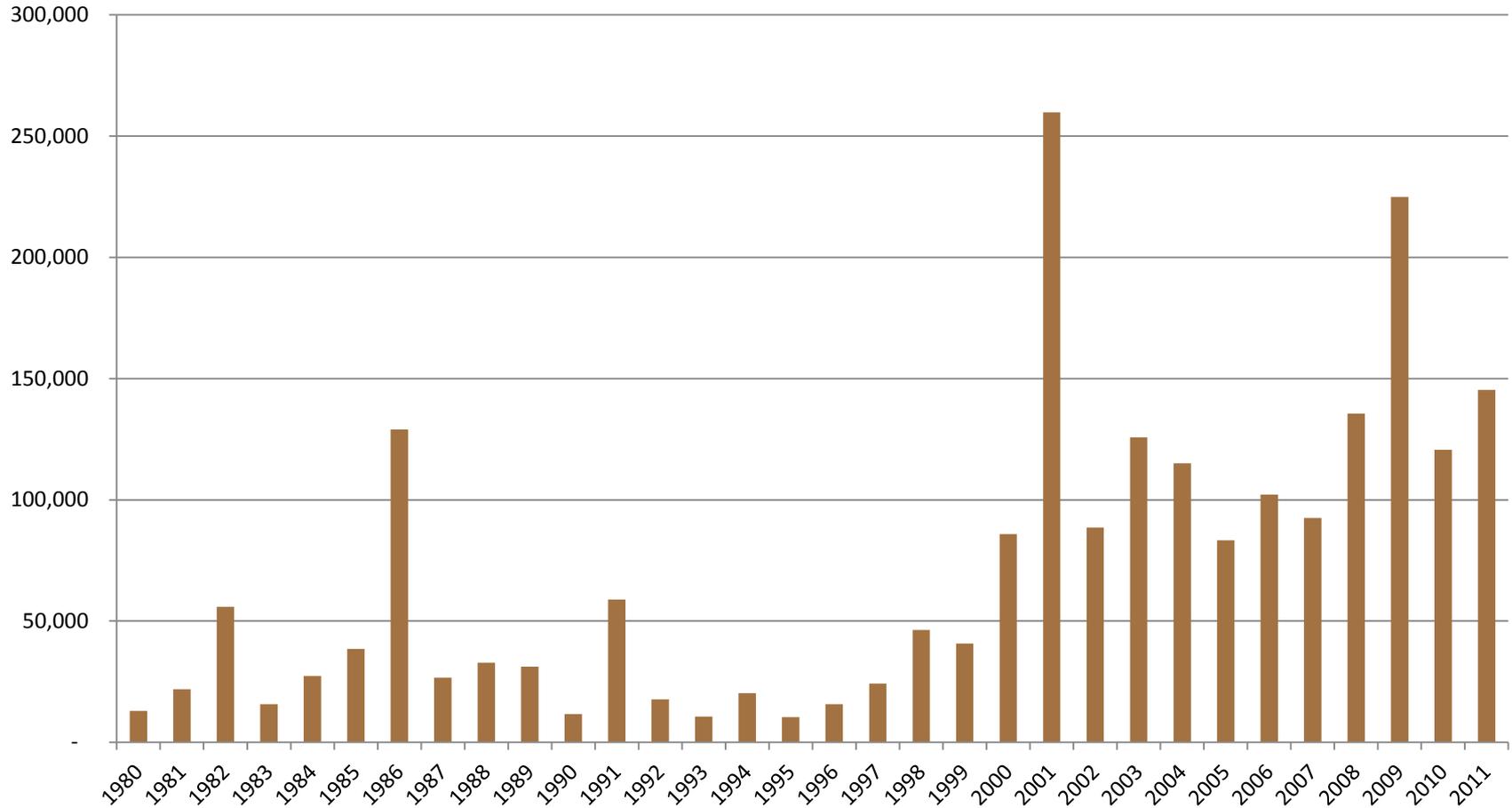
# Upriver Summer Steelhead



# Upriver Fall Chinook



# Coho Counts at Bonneville Dam



# 2011 Non-Indian Sport Fisheries

- Spring Chinook
  - 154,900 angler trips below Bonneville, 11,700 fish kept
  - 2,300 fish kept Bonneville to McNary
  - 1,900 fish kept Snake River
- Summer Season
  - 75,800 angler trips below Bonneville – 5,200 summer Chinook kept
  - 1,420 sockeye kept, 12,900 steelhead kept
- Fall Season
  - Buoy 10 – 49,300 angler trips, 11,100 Chin, 7,300 coho
  - Mainstem below Bonneville – 150,000 angler trips, 29,500 Chin, 2,000 coho
  - Hanford Reach – 10,100 Chinook

# 2011 Non-Indian Commercial Fisheries

- Spring Chinook – 4,500 fish
- Summer Chinook – 5,000 fish
- Fall Chinook – 52,500 fish
- Coho – 20,600 fish
- SAFE
  - 11,100 Spring Chinook
  - 21,800 Fall Chinook
  - 44,700 Coho

# 2011 Treaty Indian Fisheries

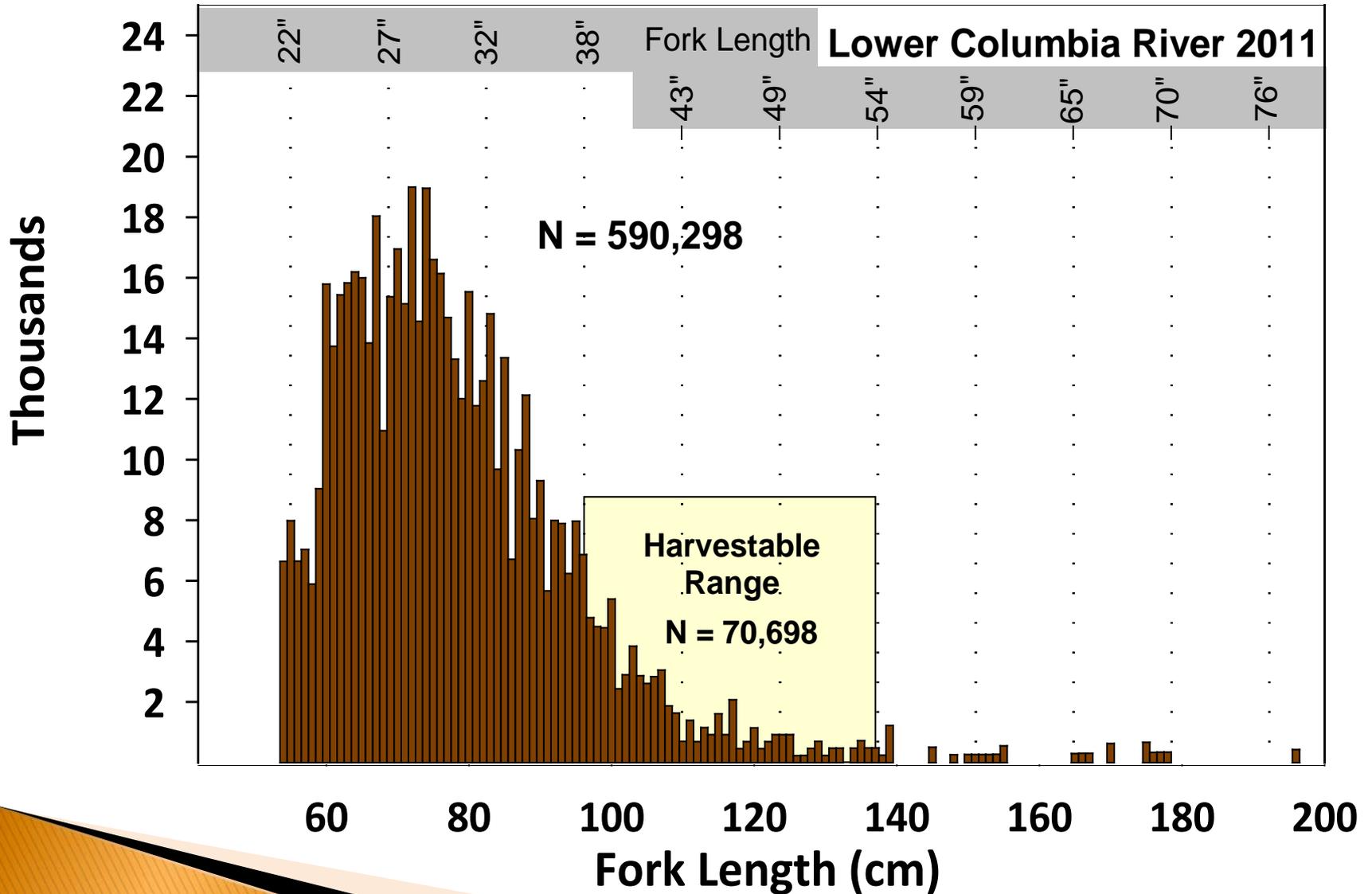
- ▶ Spring Chinook – 13,200 fish
- ▶ Summer Chinook – 20,600 fish
- ▶ Sockeye – 12,800 fish
- ▶ Steelhead –
  - 27,200 fish in fall fisheries

# White Sturgeon Below Bonneville Dam

- ▶ Recent declining abundance of legal-sized fish
  - ▶ Harvest reductions implemented
  - ▶ Increased predation by marine mammals
  - ▶ ODFW produced comprehensive white sturgeon conservation plan
  - ▶ WDFW policy consistent with conservation plan
  - ▶ Harvest goals reflect population trends and support long-term objectives
- 

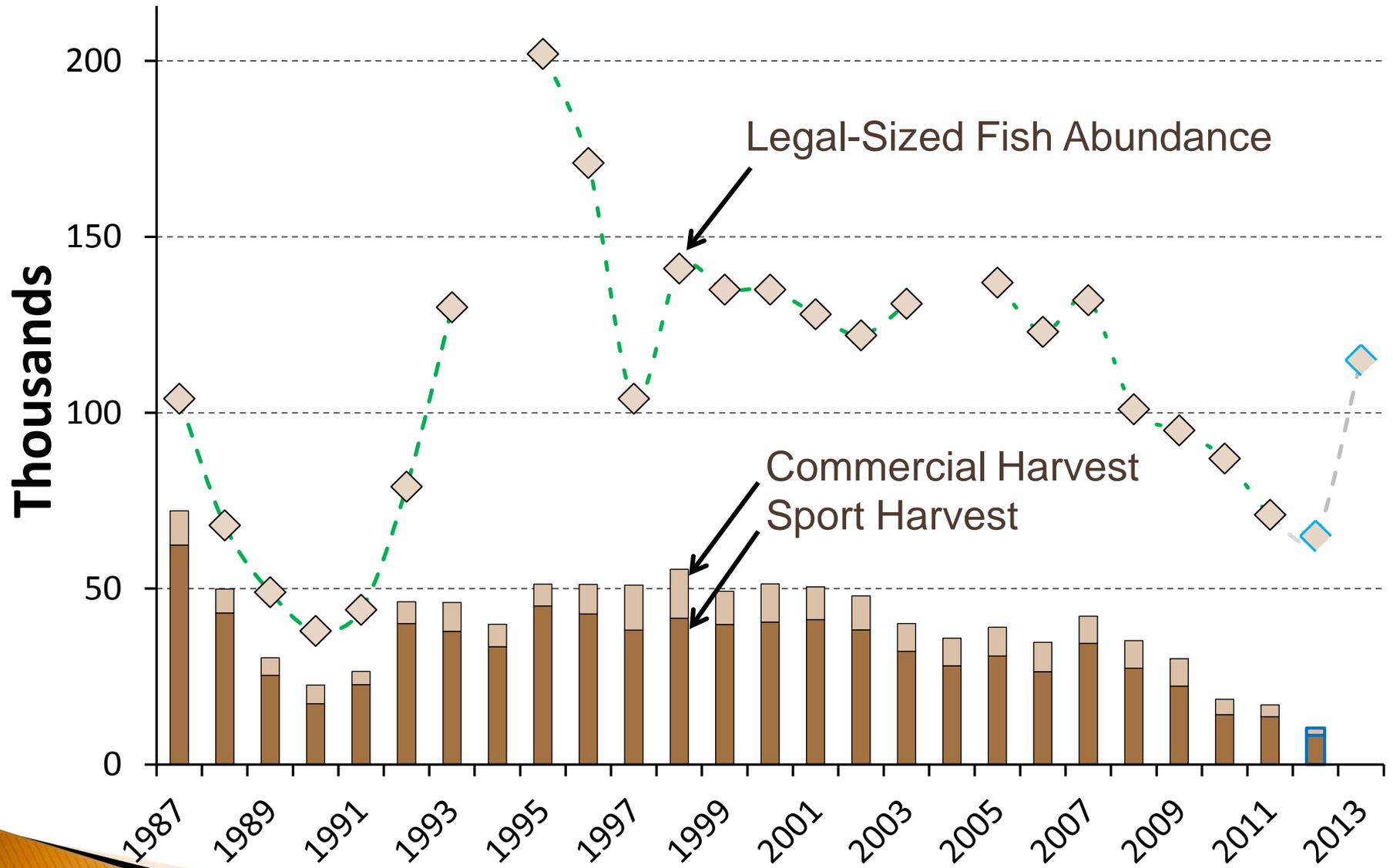


# White Sturgeon Below Bonneville Dam





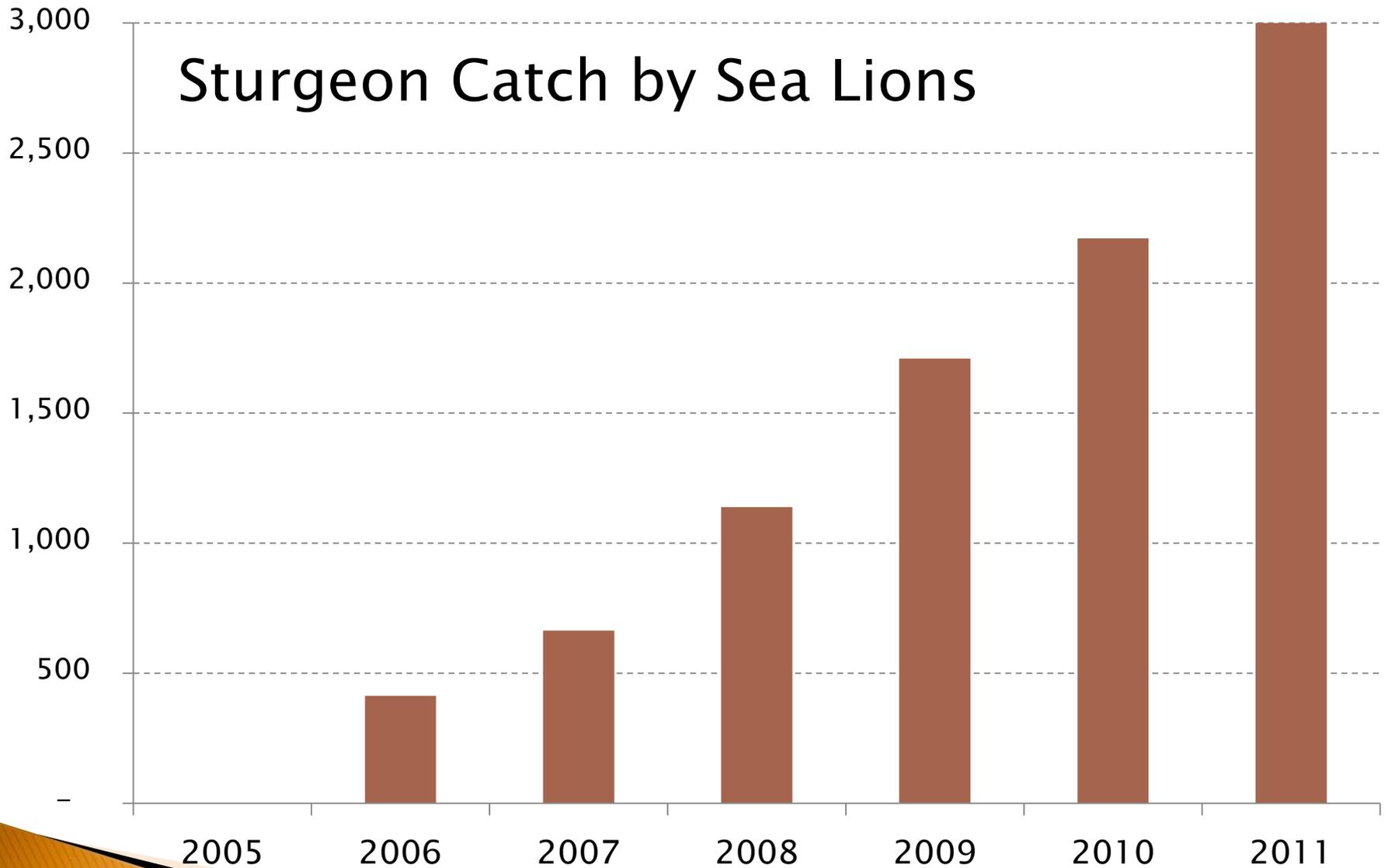
# White Sturgeon Below Bonneville Dam





# Predation:

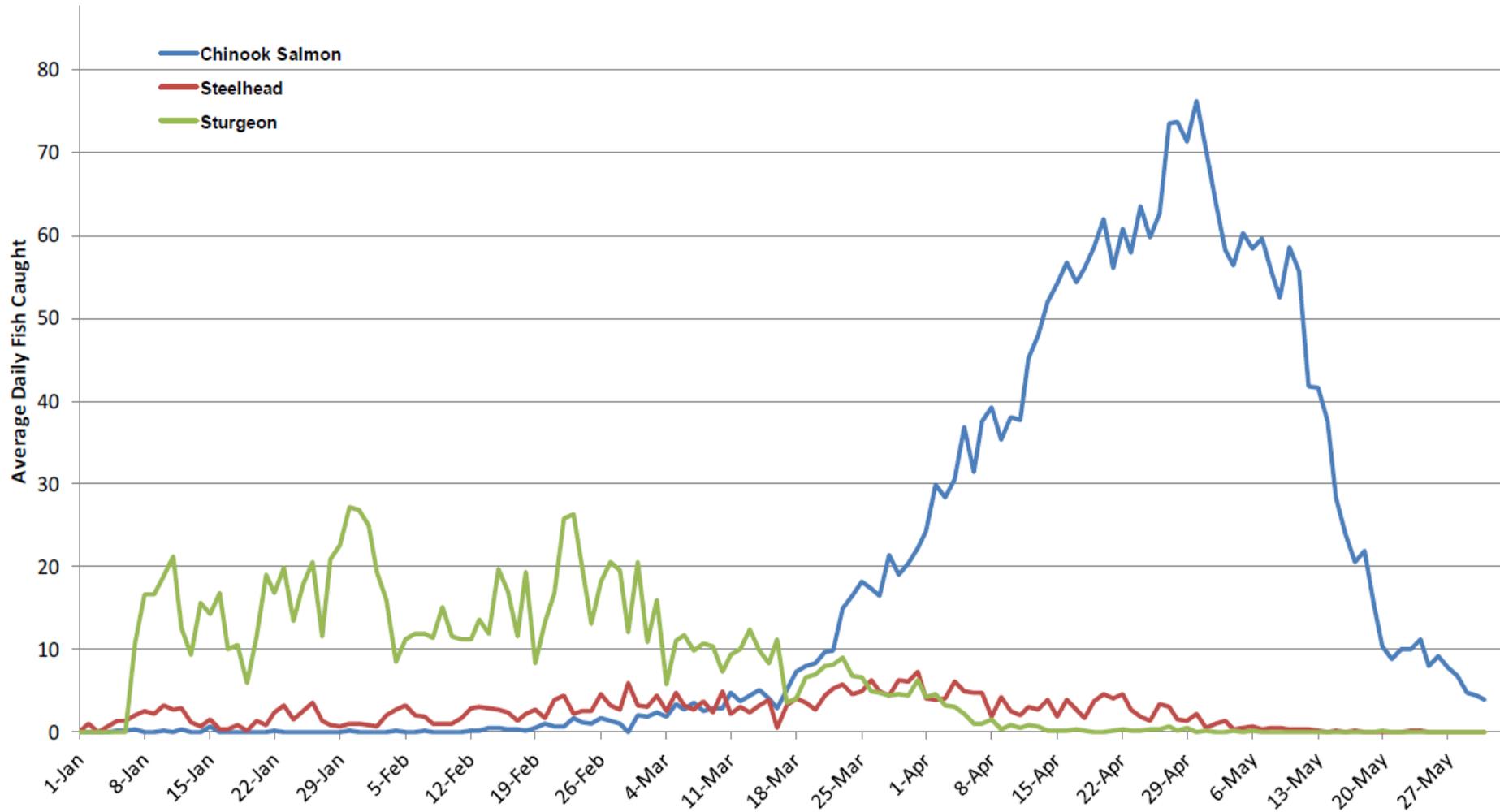
## Sturgeon Catch by Sea Lions





# Predation:

Chinook salmon, steelhead, & white sturgeon caught by sea lions.  
Bonneville Dam, Jan – May, 2006 to 2011





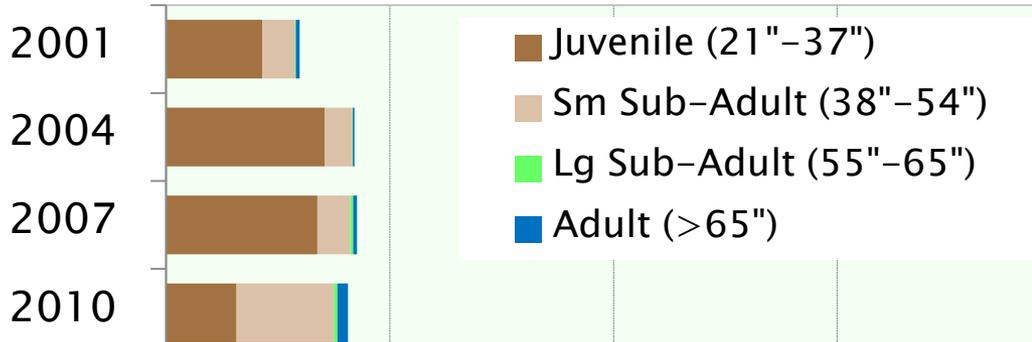
# White Sturgeon Above Bonneville Dam

- ▶ Populations in all three reservoirs increasing
- ▶ Joint research activities by tribes and states
- ▶ Tribes moving forward with hatchery
- ▶ Increased allowed harvest by both treaty Indians and sport anglers
- ▶ Developing a Mitigation Plan for populations between Bonneville and McNary dams
- ▶ Annual workshops with basin-wide participation
- ▶ Developing a comprehensive Basin-wide Sturgeon Management Framework



# White Sturgeon Abundance Above Bonneville Dam

John Day



## John Day Harvest Guidelines

2002 = 1,720  
 2005 = 500  
 2008 = 500  
 2011 = 1,500

The Dalles



## The Dalles Harvest Guidelines

2003 = 1,300  
 2006 = 650  
 2009 = 1,300  
 2012 = 1,300

Bonneville

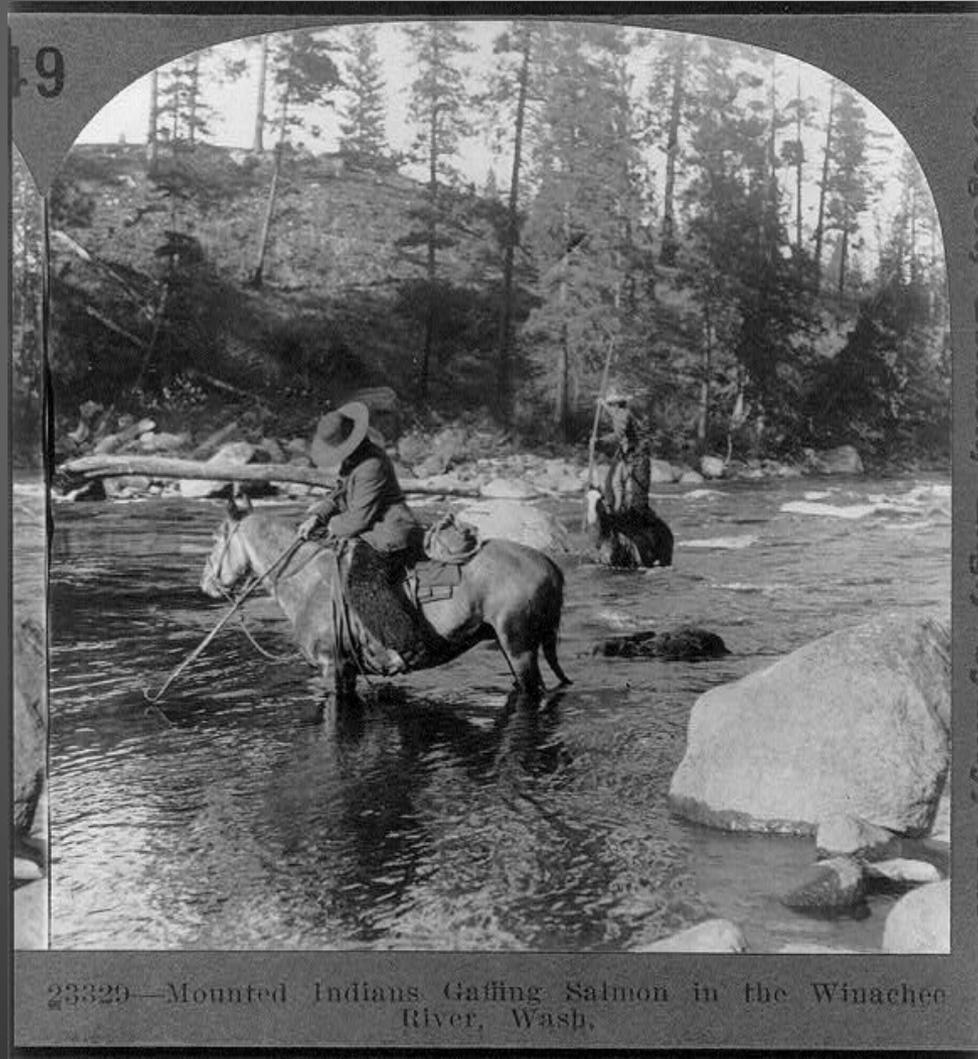


## Bonneville Harvest Guidelines

2000 = 2,820  
 2004 = 1,100  
 2007 = 1,100  
 2010 = 2,800  
 2011 = 4,000

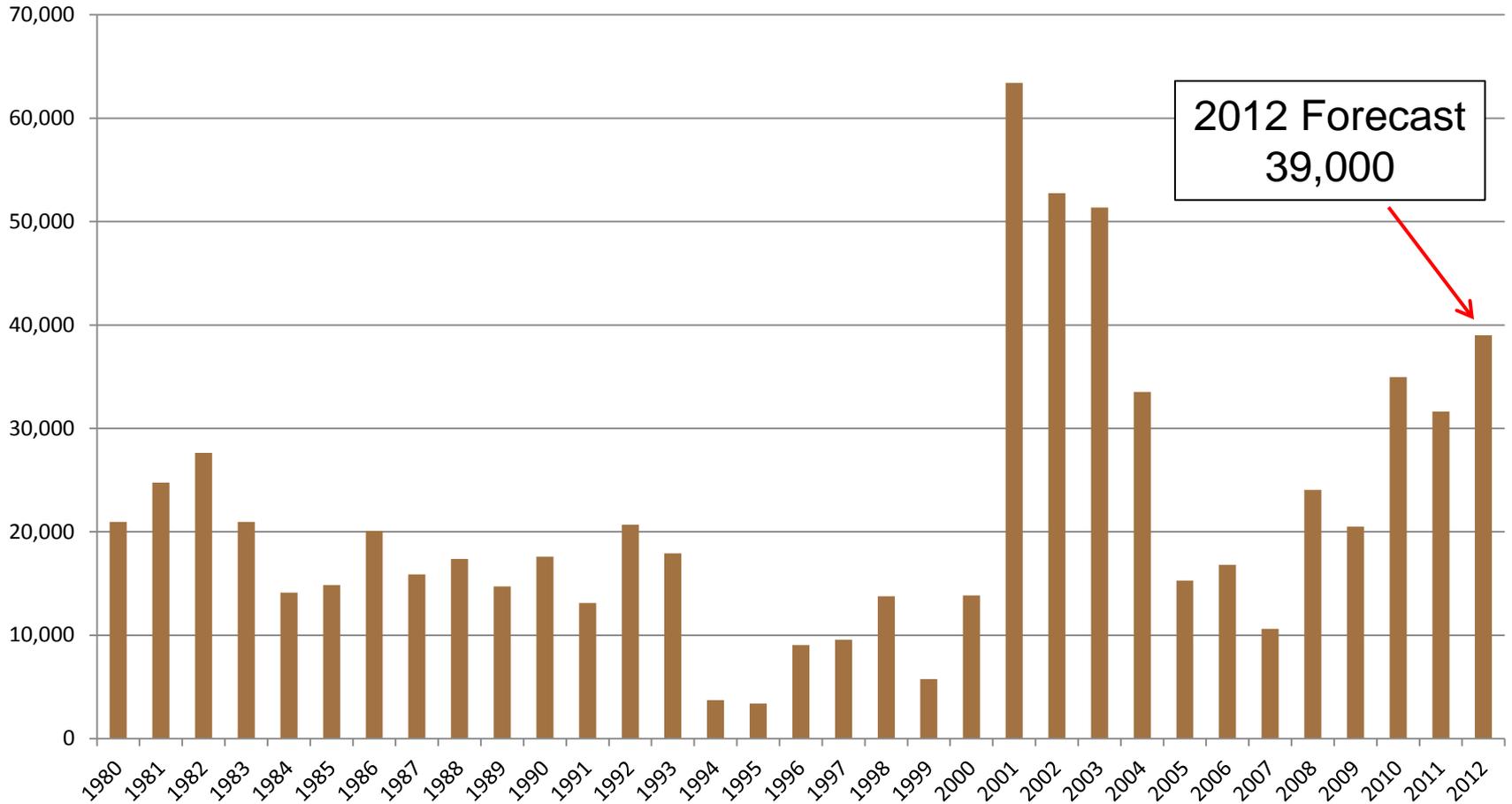
Abundance

# Questions?

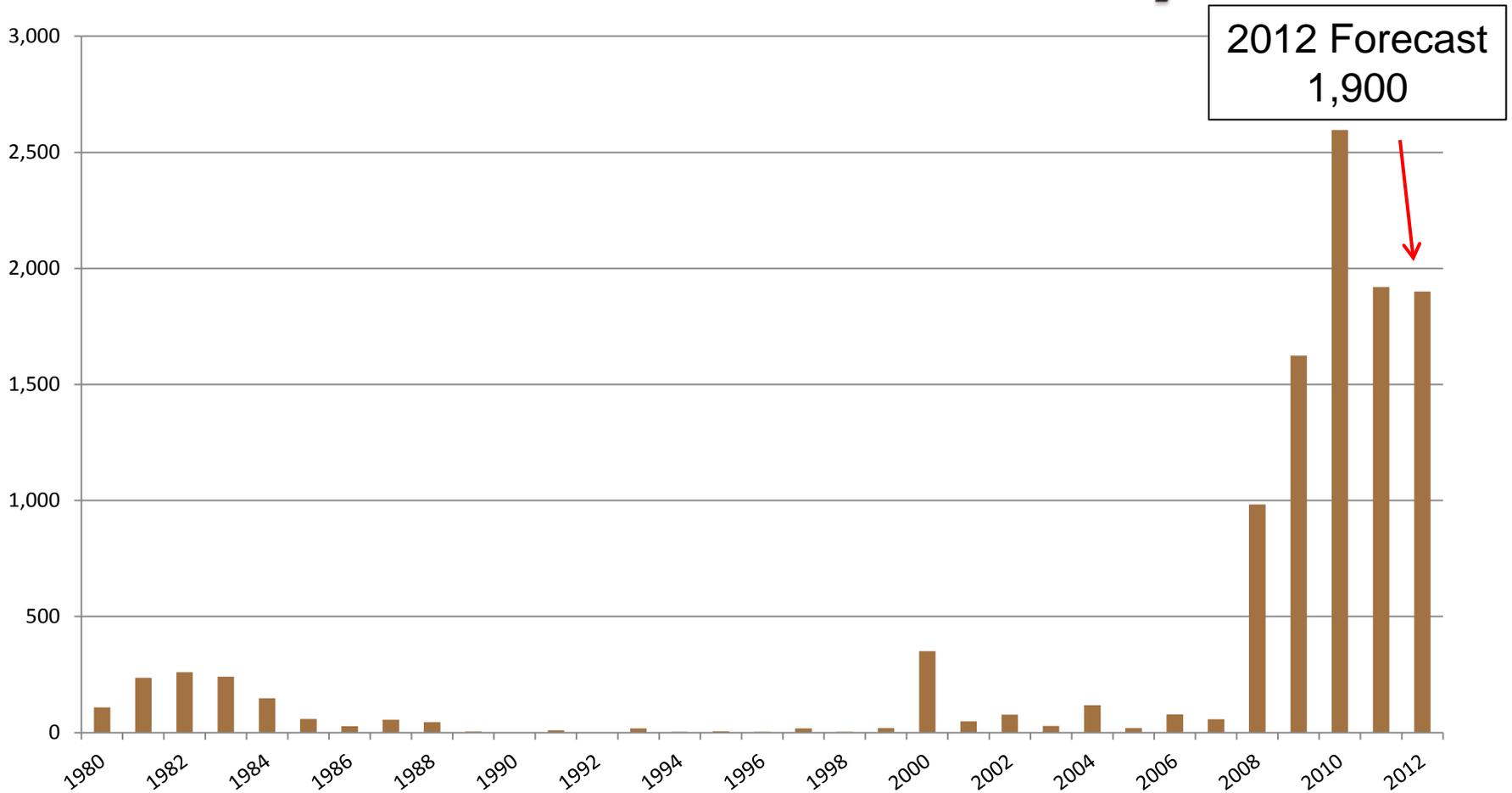


23329—Mounted Indians Gaffing Salmon in the Winachee River, Wash.

# Snake River Wild Spring/Summer Chinook



# Snake River Sockeye



# Snake River Wild Fall Chinook

