

2009 Columbia River Returns and 2010 Columbia River Forecasts



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Columbia River

- 2009 returns and 2010 forecasts
 - Upriver Spring Chinook
 - Upper Columbia Summer Chinook
 - Sockeye
 - Upriver Summer Steelhead
 - Fall Chinook and coho
- 2009 fisheries - treaty and non-treaty
- 2010 fishery expectations

2009 Summary

- Nearly 2.2 million adult salmonids entered the Columbia River in 2009
- 60% destined for areas above Bonneville Dam
 - Upriver Spring Chinook slightly less than average
 - Upper Columbia Summer Chinook average return
 - Sockeye – 2 times average, strong SR component
 - Upriver Summer Steelhead – 2 times average
 - Upriver Fall Chinook – strong bright component
 - Coho – Strong return, 3 times average @ BON
- Record setting jack returns for some stocks
- Strong returns to Snake River

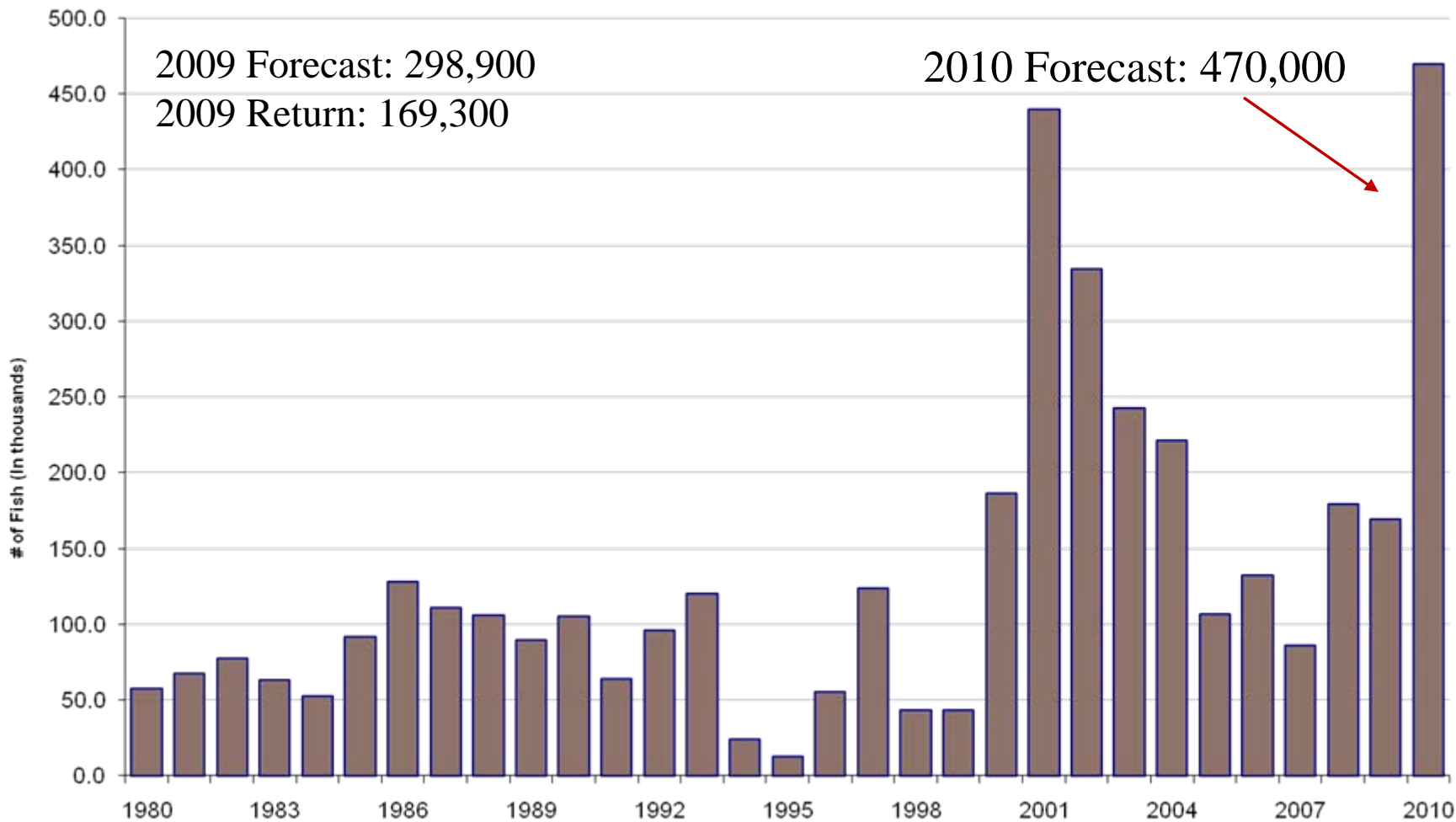
2010 Columbia River Forecasts

- Over 2.2 million adult salmonids forecasted
- 75% destined for areas above Bonneville Dam
- Record upriver spring Chinook
- Strong forecasts for wild SR and UPC spring Chinook
- Strong upper Columbia Summer Chinook return
- Strong Sockeye return
- Average (~400K) upriver Summer Steelhead return?
- Strong fall Chinook, especially upriver components
- Average coho abundance

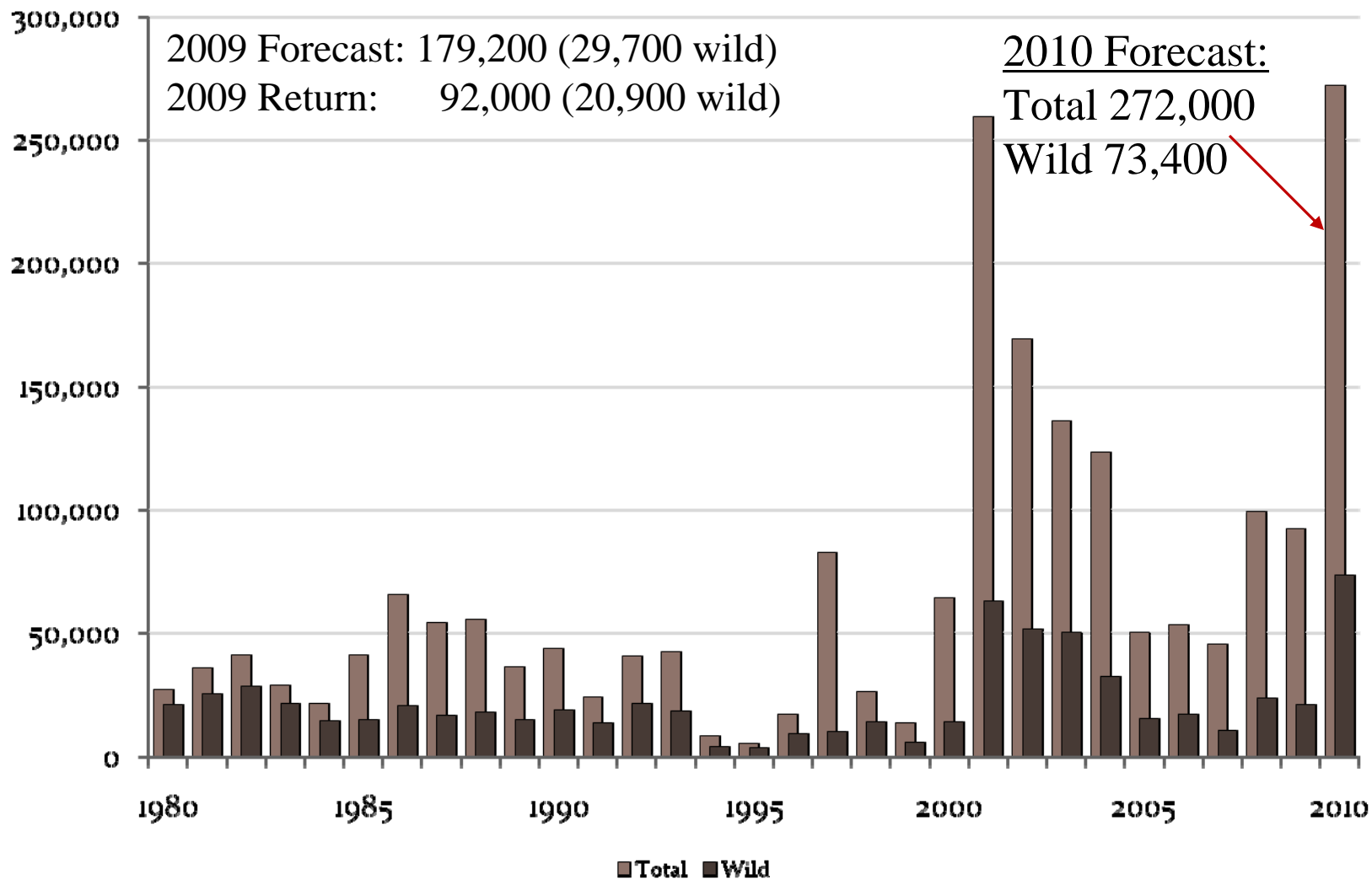
Forecast Methodology

- Upriver spring Chinook forecast typically derived from cohort analysis
- High jack counts in 2009 and a large margin of forecast error in 2008 and 2009
- TAC reviewed several alternative models, including those that considered ocean conditions, cohort ratios, even sablefish survival.
- No one model clearly proved to be the heir apparent
 - TAC averaged the output of the seven most reasonable models (range 366,000 to 528,000 age 4 fish)

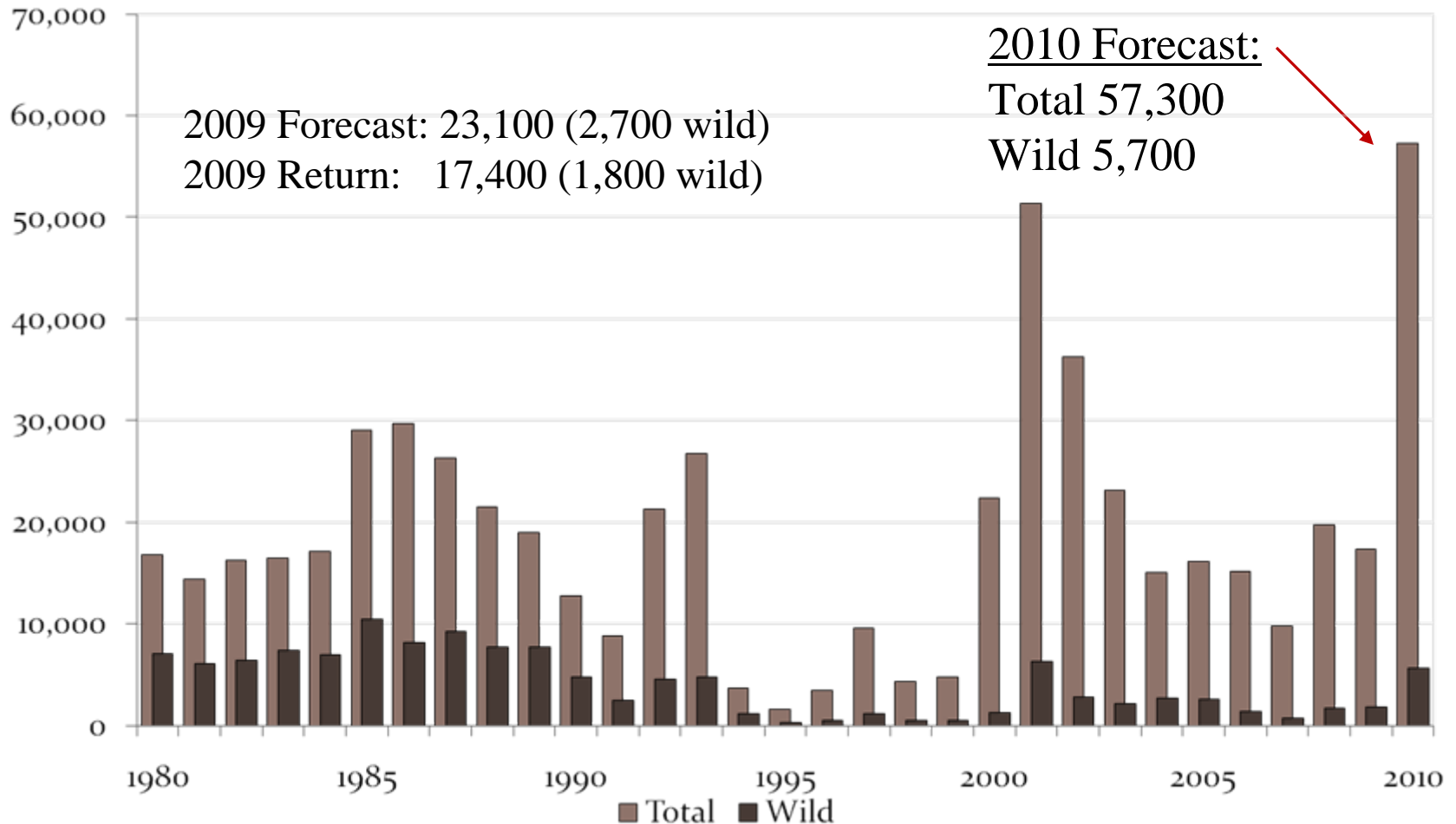
Upriver Spring Chinook



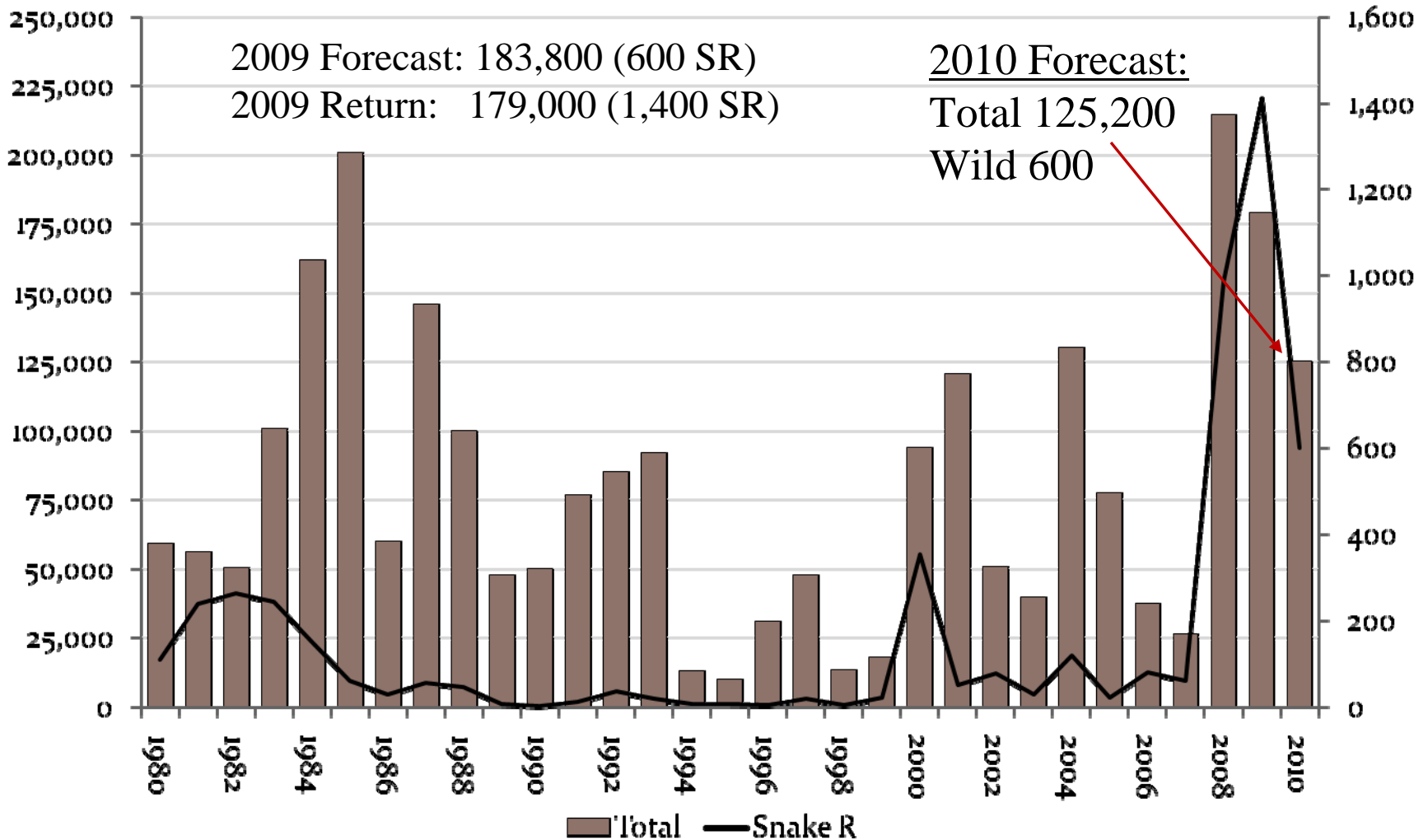
Snake River Spring/Summer



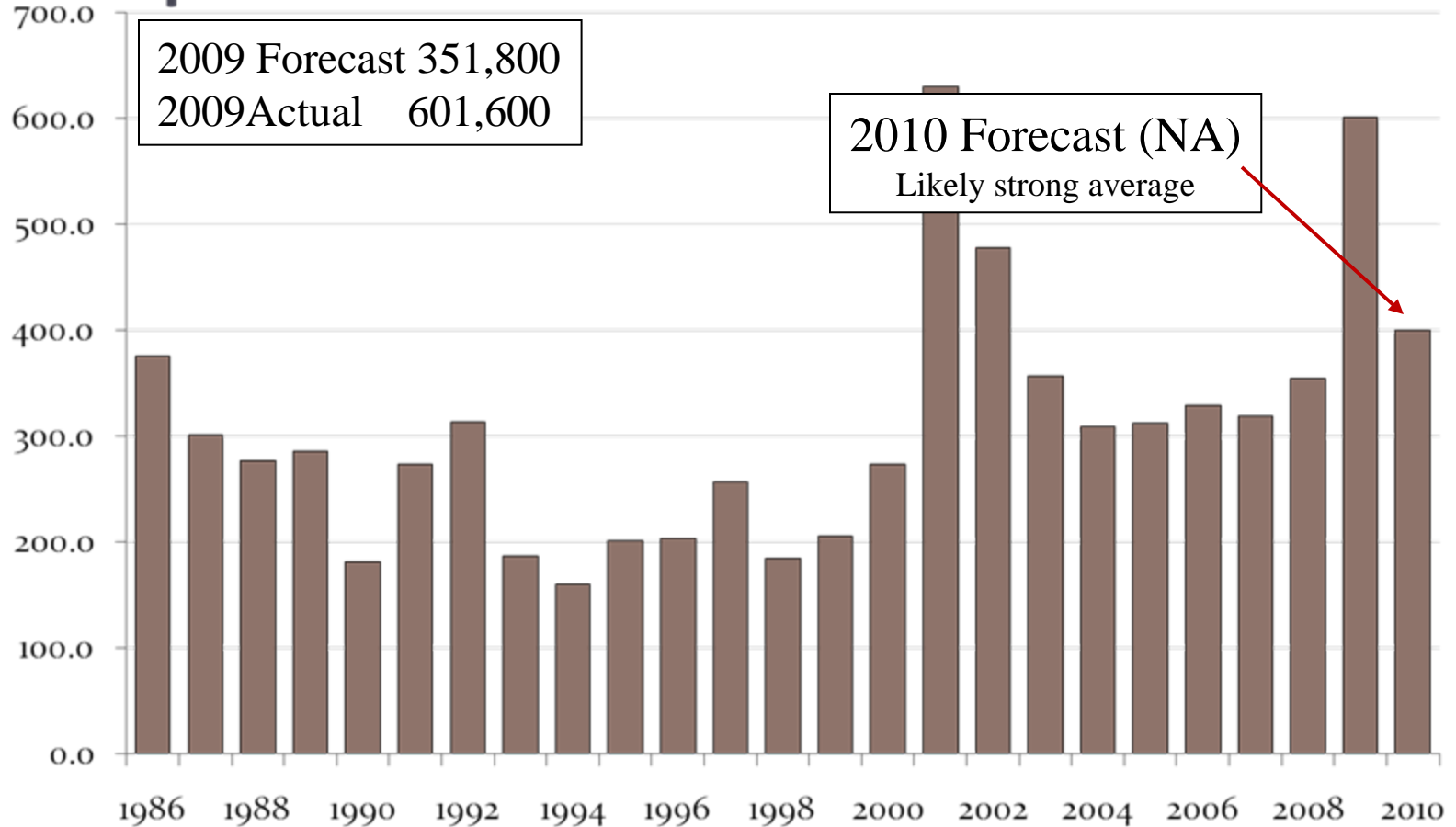
Upper Columbia Spring Chinook



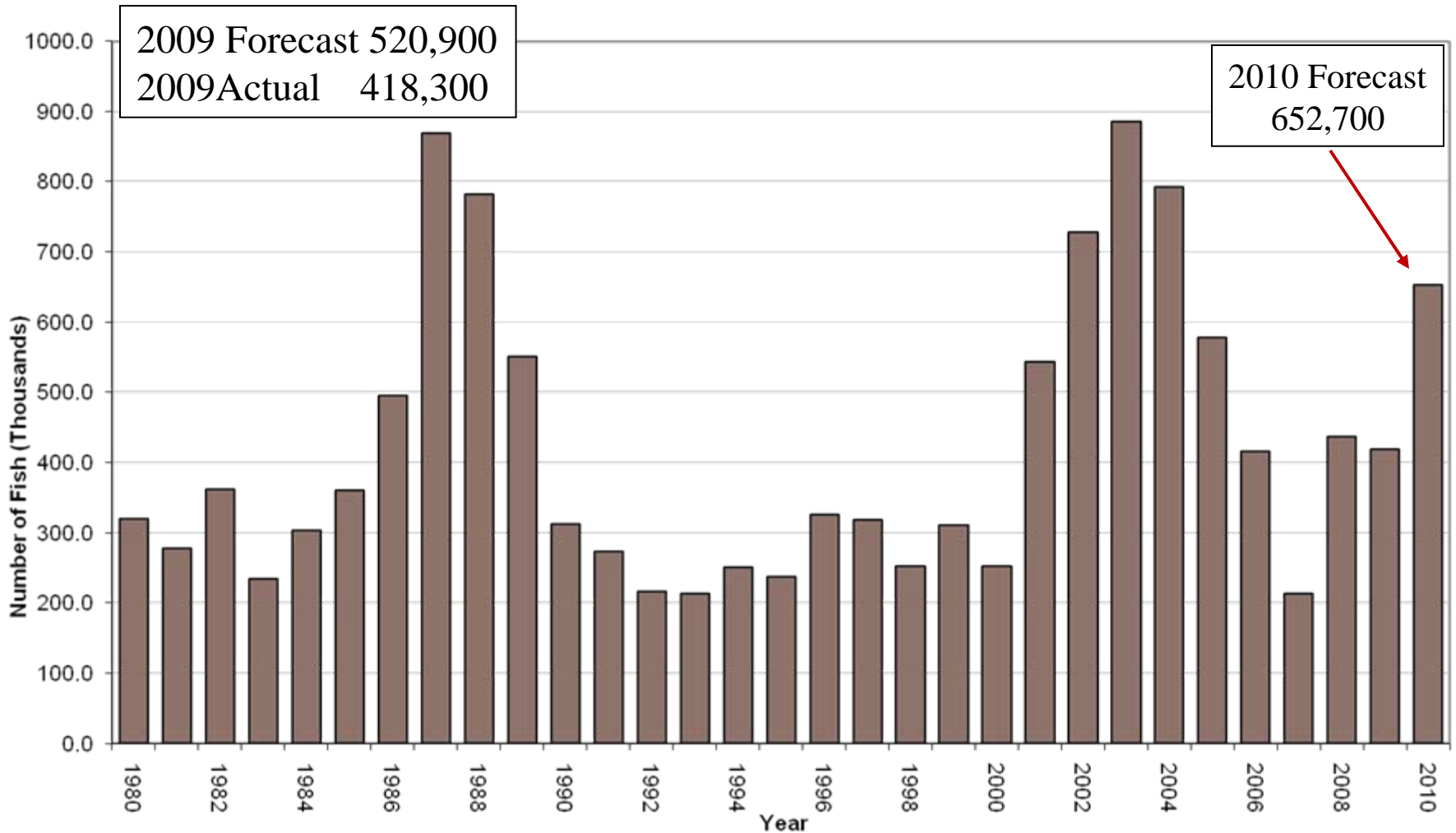
Sockeye



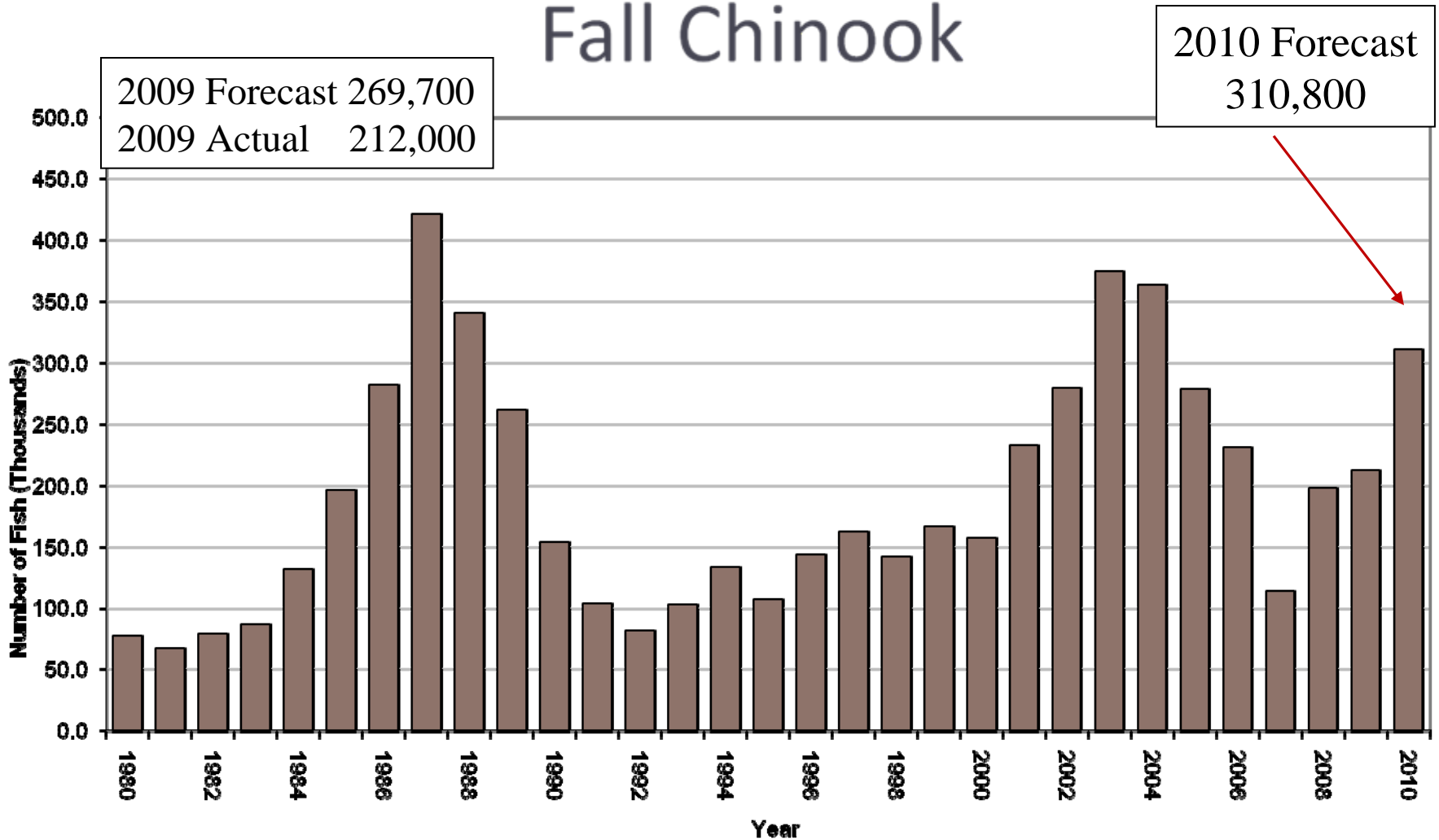
Upriver Summer Steelhead



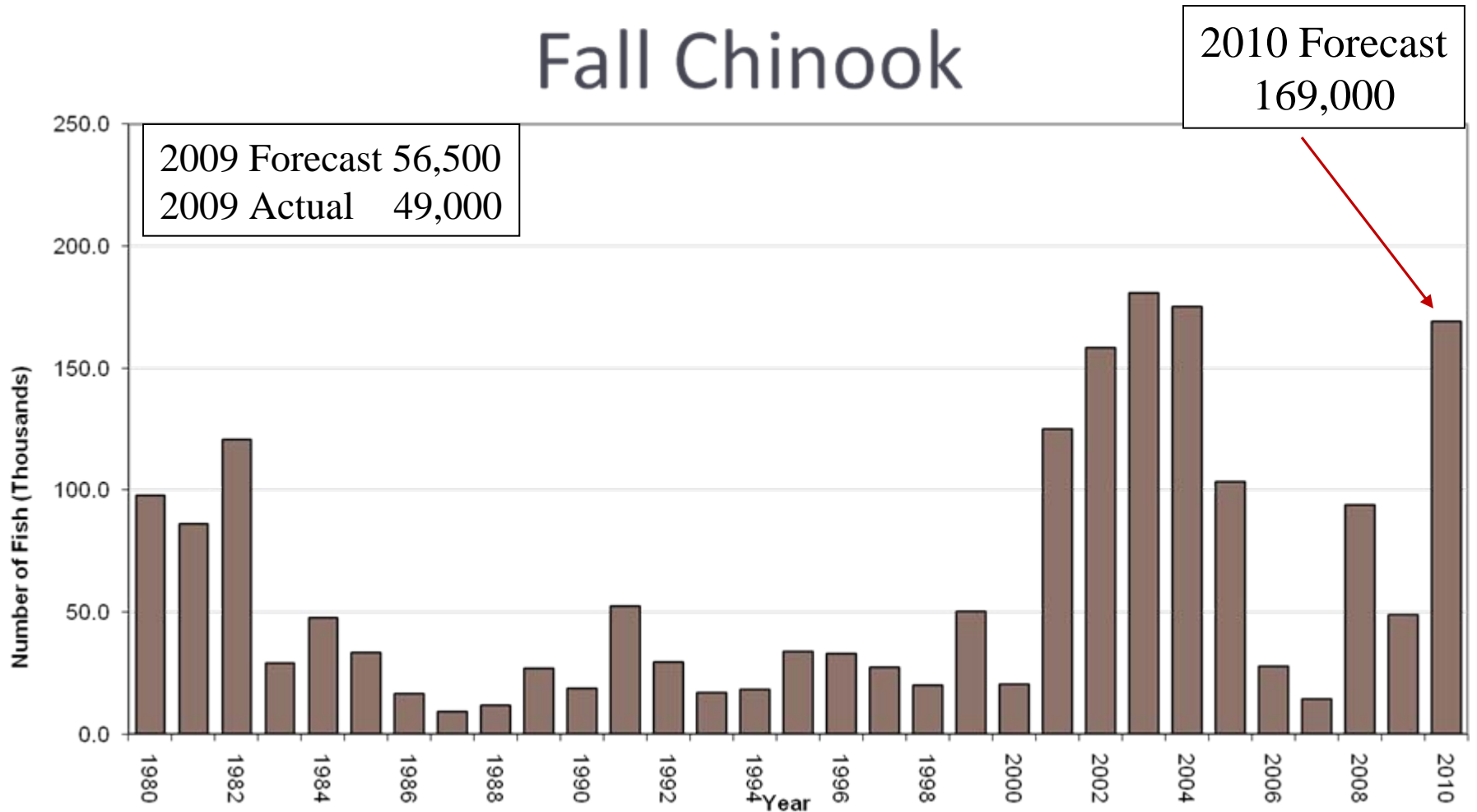
Total Fall Chinook



Upriver Bright (URB) Fall Chinook

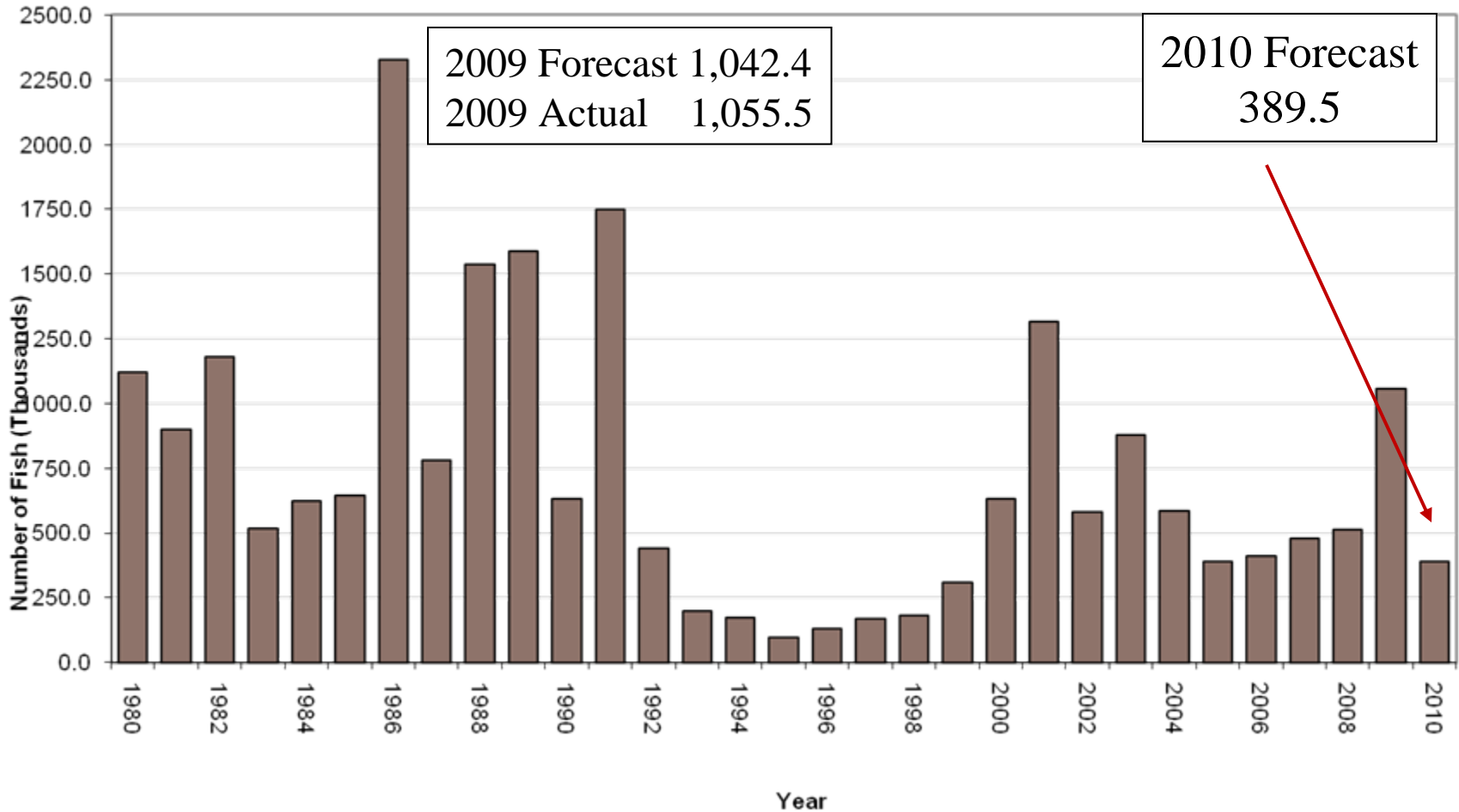


Bonneville Pool Hatchery (BPH) Fall Chinook



Columbia River Coho

Ocean Abundance



2009 Non-Treaty Fisheries

- Upriver spring Chinook – 21,000 hatchery fish kept
 - ESA mortalities: 371 wild Upper Columbia or Snake River
 - Impact 1.7% compared to 2.0% ESA limit
- Sockeye – No direct fisheries
 - 1,100 fish harvested, 9 fish Snake river origin
 - Impact 0.6%, compared to 1% ESA limit
- Upriver Summer Steelhead- 26,000 hatchery fish kept
 - ESA mortalities: <200 Group B fish
 - Impacts estimated at 1.23% compared to 2% ESA limit
 - Estimates preliminary
- Summer Chinook – 9,500 fish kept
 - Harvest 80% of allocation

2009 Non Treaty Fisheries

- Recreational fisheries above Bonneville Dam
 - Zone 6/ Ringold area spring Chinook - 300 kept
 - Snake River- spring/summer Chinook - 500 kept
 - BON-PRD summer Chinook – 200 kept
 - > PRD summer Chinook - 3,200 kept
- Colville tribal – 1,000 summer Chinook
- Wanapum tribal – 185 summer Chinook

2009 Treaty Fisheries

- Spring Chinook – 13,100 from C&S permit/platform
 - No commercial gillnet season
- Summer Chinook – 11,400 from commercial and C&S
- Sockeye – 10,400 fish from commercial and C&S
- Steelhead – 1,100 from winter/spring. No fall data yet
- US v Oregon obligation met. Impacts within ESA limit

2010 Fishery Expectations

- Non-Treaty Spring Chinook
 - Fisheries operating under 40% buffered runsize
 - Recreational fisheries underway in Columbia River
 - Commercial fisheries anticipated in March
- Treaty Spring Chinook
 - C&S permit likely begin earlier than normal
 - High likelihood of commercial gillnet fishing periods
- Summer Chinook – harvestable fish available
- Fall Chinook – NOF underway, positive forecasts

