



Chinook Salmon Bycatch Management in the Bering Sea Pollock Fishery

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Who are we?



- North Pacific Fishery Management Council (NPFMC) and the National Marine Fisheries Service (NMFS) work together to manage Federal fisheries off Alaska (3-200 miles)
- NPFMC makes recommendations to the NMFS, and NMFS approves and implements them
- NPFMC and NMFS manage the Bering Sea pollock fisheries including management measures that control salmon bycatch

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Chinook salmon bycatch in the pollock fisheries: the problem

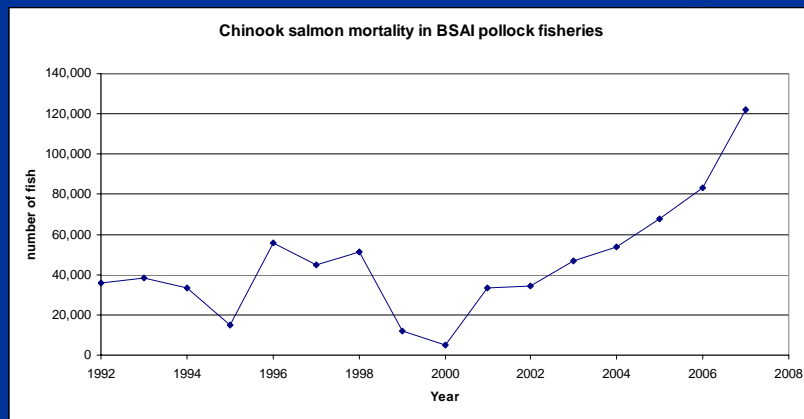
- Bering Sea pollock fishery catches Chinook salmon as bycatch
- Bycatch, by law, is counted but cannot be retained or sold
 - Some salmon is donated to food banks



Bycatch trends



- Five year average of 82,311 Chinook salmon
- A high of 122,000 Chinook salmon in 2007
- 2008 numbers low to date: 17,217



Chinook salmon measures

- Previous time/area closures were not flexible
 - Unable to respond to changes in abundance or location of salmon or pollock in the Bering Sea.
- Council responding to concerns about bycatch
 - potential impacts on Western AK salmon runs
 - international treaty obligations
- Council is considering absolute limits (caps) on the pollock fishery's catch of Chinook salmon
 - Reaching cap would close pollock fishery
- Analysis of appropriate caps considers:
 - bycatch stock of origin (genetics)
 - Adult equivalents returning to river systems
 - Assessments of run strengths by rivers

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Alternatives



- Alternative 1: No Action
 - Existing management measures
 - Voluntary time/area closure management
- Alternative 2: Hard caps
 - Range of hard caps: 29,323 to 87,500 Chinook salmon
 - Based on historical bycatch averages
 - Divides cap between A (winter) and B (fall) seasons
- Alternative 3: Triggered Closures
 - Revised time/area closures based on updated bycatch information
- Alternative 4: Preliminary Preferred Alternative
 - Variation of alternative 2

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Alternative 4 – Preliminary Preferred Alternative



- High Cap of 68,392 Chinook salmon
 - Cap of 32,482 Chinook salmon for vessels that do not participate in program
- => If participation in industry incentive-based program.
- Council objective = to reduce salmon bycatch regardless of annual abundance
- OR**
- Low Cap of 47,591 Chinook salmon in absence of an approved incentive program.

Alternative 4 – preliminary preferred alternative



- High and low cap management:
 - Divided between A (70%) and B (30%) seasons
 - 80% of caps could be 'rolled over' from the A season (winter) to the B season (fall) in the same calendar year
 - Caps allocated to the 4 pollock fishing sectors (CDQ, inshore catcher vessels, mothership sector, offshore catcher processors)
 - Sectors could transfer caps among sectors in a given season

The analysis evaluates impacts of the alternatives on:



- Chinook and chum salmon
- Pollock
- Other marine resources
 - Other groundfish, crab, herring, halibut, marine mammals, seabirds, habitat, & ecosystem
- Environmental Justice
 - are there disproportional impacts on low income or minority populations?
- Economic impacts
 - Pollock fishery
 - Salmon: commercial and subsistence fisheries

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How are impacts of the alternatives evaluated?



- Looking backwards at 2003-2007: if the caps had been in place, when would the pollock fishery have had to stop fishing?
 - Hypothetical closure dates by year and season
- If they had stopped fishing, how many salmon would not have been caught?
 - Chinook salmon savings
- If they had stopped fishing, how much pollock would not have been caught?
 - foregone pollock catch

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Salmon saved and foregone pollock (examples)

Year	Bycatch Cap level (results for specific sector and seasonal allocations)	% salmon reduction (compared to actual)	% pollock catch foregone (compared to actual)
2007 (highest) Actual bycatch= 122,000	87,500	37%	22%
	68,392 Council Pref. Alt (high)	46%	23%
	47,591 Council Pref. Alt (low)	62%	32%
	29,300	92%	46%
2003 (lowest) Actual bycatch= 47,000	87,500	0%	0%
	68,392 Council Pref. Alt (high)	1%	0%
	47,591 Council Pref. Alt (low)	5%	4%
	29,300	52%	22% ¹¹

How do bycatch numbers translate to salmon returning to the rivers?

- Not all salmon caught as bycatch would have survived to return to the river systems as adults
- To understand impacts, we need to know how many salmon *would have* returned
 - Consider estimated ocean mortality
 - Take into account the age of the salmon, and what year they would have returned to spawn
 - Result = "Adult equivalents" (AEQ)

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River of origin



- The rivers of origin that are represented in the bycatch vary depending on which season it is, and where in the Bering Sea the pollock fleet is fishing
- AEQ estimates are approximated to river of origin based on recent genetic data from bycatch samples
- Uncertainty in data – NMFS and ADF&G are working to improve genetic data for salmon caught in pollock fishery

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Estimated impacts on Western Alaska Chinook salmon returns

- Overall bycatch reduction under the alternatives:
 - 37-92% reduction overall in highest year (2007)
 - 0%-52% in lowest year (2003)
- Specific impacts on Western AK Rivers (under assumptions of ~54% to aggregated Western AK)
 - **Yukon** (40% of Western AK)
 - ~0-15,000 salmon 'saved'
 - **Kuskokwim** (26% of Western AK)
 - ~0-9,000 salmon 'saved'
 - **Bristol Bay** (Nushagak) (34% of Western AK)
 - ~0-13,000 salmon 'saved'
 - **Other Western AK** river systems may be affected

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Where are we in the process?



- ➔ Council is conducting outreach meetings
 - Draft analysis will be released for public review on December 5, 2008 (ETA)
 - 60-day public comment period: December 5 -February 3, 2009
 - Council scheduled to take final action in April 2009
 - NMFS scheduled to implement new program by January 2011

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Council outreach meetings



Juneau	Sept 24	Southeast Federal Subsistence Regional Advisory Council meeting
Dillingham	Oct 7	Bristol Bay Federal Subsistence Regional Advisory Council meeting
Bethel	Oct 8	Association of Village Council Presidents meeting
Nenana	Oct 15	Eastern Interior Federal Subsistence Regional Advisory Council meeting
Kotzebue	Oct 16	Northwest Arctic Federal Subsistence Regional Advisory Council meeting
McGrath	Oct 28	Western Interior Federal Subsistence Regional Advisory Council meeting
Nome	Feb 2009	To be announced

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Council and NMFS are seeking public input



- From local residents, communities, agencies, organizations, and the general public
- Ways to provide input:
 - Write a letter to the Council or NMFS
 - Talk to Council and staff members at a regional meeting
 - Testify at the April 2009 Council meeting
- Comments may address:
 - the scope, content, and adequacy of the document
 - the analysis of impacts (environmental, social, economic)
 - the merits of the alternatives
 - your recommendation for a preferred alternative

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When and where can I get the analysis?

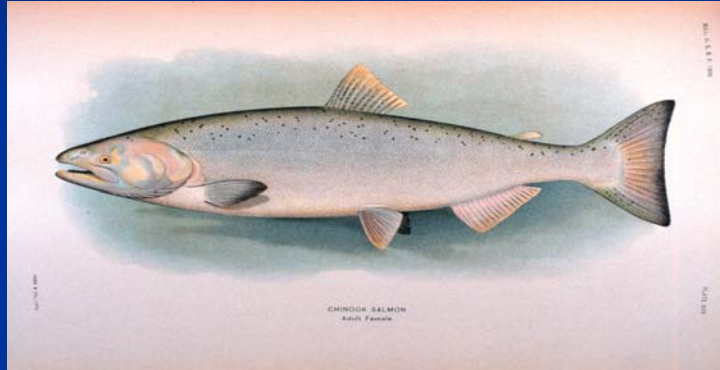


- EIS will be available on December 5, 2008
- Download from the NMFS Alaska website <http://alaskafisheries.noaa.gov/>
- Request a printed copy from the web site
- Call NMFS at 586-7228 to request a copy

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Thank You!

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Council website: www.fakr.noaa.gov/npfmc

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