

## Oppose Proposals 44 and 61-68

Madam Chairman and board members, thanks for your time today. For the record, my name is Fritz Johnson, I've lived in Dillingham since 1979 on the ancestral land of the Chogging people, and I haven't missed a salmon season in 46 years. I also sat where you are for a couple of terms so I have an genuine appreciation for the work you have to do.

I strongly oppose any changes to the Nushagak King salmon SOC management plan, in particular proposals 44 and 61 - 68, for reasons that have already been spoken to, but are important enough to merit a quick review.

The management plan, kick started by this board in 2018, was the work of sport, commercial and subsistence stakeholders led by veteran fisheries scientists who spent decades in the service of ADF&G. Developing the plan took 5 years and was adopted in 2023.

No one involved believed the plan would rebuild king stocks overnight. Kings spend four to seven years at sea and the authors of proposal 61-68 and 44 would change the management plan before it's barely begun. These proposals ignore the plan's intent — a well-crafted compromise among user groups to provide protection for kings and fishing opportunity for stakeholders. The proposals are in fact. a remarkably blatant attempt to increase the fortunes of one user group at the expense of another, -- and this by a user group that doesn't have a great history of king conservation in its home waters. Yes I'm talking about the Kenai, and those who've been on the board for a while know that volatile history.

To be clear, I am not blaming the sport fishing industry for the demise of kings.

Their decline is widespread throughout the state, and despite a tendency to point blame, it's reasonable to believe there are multiple factors, from a pathogen triggered by climate change in the Yukon, fishing on spawning beds, and interception by industrial fisheries in Bristol Bay and the Bering Sea trawl fleet. And there's another factor that rarely gets any attention.

I never saw orcas — killer whales — in the Nushagak until about 20 years ago. Since then sightings have become relatively common, and evidence of their predation on kings is playing out in textbook fashion according to research by Dr. Dan Schindler with the University of Washington. I've attached two citations on marine mammal predation to my testimony that I've submitted as RC \_\_\_\_C. I've anecdotes to share too if the board is interested.

Whatever the factors, the scarcity of king salmon is a statewide problem, one that's prompted one biologist to describe the plan now in effect is "an effort to save kings that may not be there." Hopefully that's not the case, but for now the existing management plan is the best collectively agreed upon strategy we have, and we need to give it time to play out.

You've heard virtually unanimous testimony from watershed residents, and others too supporting the existing Nushagak king salmon plan. Equally important to the region's small rural communities, where year-round jobs are few, is access to Bristol Bay's commercial sockeye fishery, which here is a matter of economic survival, not a luxury entertainment. I urge you reject Proposals 44 and 61-68. Thank you.

# Resurgence of an apex marine predator and the decline in prey body size

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## Significance

Recent recoveries of marine mammal populations worldwide have heightened concerns for their potential impacts on global fisheries. While predator-induced reductions in prey abundance have been documented, trait-mediated changes in life-history characteristics are rarely considered. Here we provide a striking example of the impact of a resurging apex marine predator on a commercially important fish species through changes in prey life-history traits. We find that widespread declines in the body size of Chinook salmon over the past 50 y can be explained by intensified predation by growing populations of resident killer whales that selectively feed on large Chinook salmon, thus revealing a potential conflict between salmon fisheries and marine mammal conservation objectives.

## Abstract

In light of recent recoveries of marine mammal populations worldwide and heightened concern about their impacts on marine food webs and global fisheries, it has become increasingly important to understand the potential impacts of large marine mammal predators on prey populations and their life-history traits. In coastal waters of the northeast Pacific Ocean, marine mammals have increased in abundance over the past 40 to 50 y, including fish-eating killer whales that feed primarily on Chinook salmon. Chinook salmon, a species of high cultural and economic value, have exhibited marked declines in average size and age throughout most of their North American range. This raises the question of whether size-selective predation by marine mammals is generating these trends in life-history characteristics. Here we show that increased predation since the 1970s, but not fishery selection alone, can explain the changes in age and size structure observed for Chinook salmon populations along the west coast of North America. Simulations suggest that the decline in mean size results from the selective removal of large fish and an evolutionary shift toward faster growth and earlier maturation caused by selection. Our conclusion that intensifying predation by fish-eating killer whales contributes to the continuing decline in Chinook salmon body size points to conflicting management and conservation objectives for these two iconic species.

# **In the king salmon debate, we're ignoring the 8,000-pound orca in the room**

*Anchorage Daily News*

Oct. 26, 2023

<https://www.adn.com/opinions/2023/10/26/opinion-in-the-king-salmon-debate-were-ignoring-the-8000-pound-orca-in-the-room>

As we all know, chinook salmon abundance and fish size have been trending downward across Alaska for many years now. The Alaska Department of Fish and Game (ADF&G) has studied the issue intently as part of the Chinook Salmon Research Initiative. Regarding the key question of “what is causing low runs of chinook salmon in Alaska,” the initiative concludes the following:

“Research has shown that during the recent period of poor production, marine survival has dipped below one percent. This decrease in marine survival, even in the face of some very good freshwater production in several systems, has been driving the downturn in overall adult production.

Fishermen and climate change aren't the only challenges Chinook salmon face in their quest to survive and multiply. They are preferred prey for several marine mammal species. Given the existing research and trends witnessed over the past decade, we believe more investigation and consideration ought to be given to marine mammal predation — and this approach is strongly supported by available research.”

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