Mathew J. Waskey
P.O. Box 32355

Mt. Village, AK 99632
My Name Is Mathew J. Waskey from Mt. Village. As far back as I can remember we take salmon for food- Chinook, Chum, \& Coho; our Staple Diet. And each year taking salmon for ourselves been regulated and this last summer my family did not taste Chinook because we had to release 6(six) Chinooks back into the water from our nets while commercial fishing for summer chums because conservation measures being in place to protect the Chinooks in our region only.

I am truly saddened to see many families denied on food they relied for generations especially with $\$ 8.00$ a gallon of gasoline and sky rocketed food prices in the stores and without doubt driving those families in hardship and depressing situations that may drive them into substance abuse \& suicides.

This last summer, 2013, we were on mandatory closure for catching any Chinook for even ourselves in our region only while out in deep seas Pollock Fisheries throw over side all salmon species and in other parts of the Yukon River and across the Alaskan Border are allowed to harvest those salmons even for their animals.

In our region salmon fishing both Commercial \& Subsistence is our only Resource. We have no oil-timber and mining.

Fuel Prices and food costs on the rise also with subsistence harvest being reduced to windows caused the migration of people going to their fish camp and Commercial Fisheries down to nothing all due to Chinook Low counts. Traveling on the Lower Yukon is like traveling thru ghost town with most of the fish camps deserted.

We have in our Region made sacrifices to make sure the Chinooks Be sustainable for future so other areas should make efforts they make sacrifices as well.

Like our C.D.Q. groups logo says; and I quote we are "Living to Fish. Fishing to Live"


## Individual within-year vessel Chinook bycatch rate rankings

The tables below are one way of evaluating individual vessel performance in the EBS pollock fishery regarding efforts to reduce Chinook bycatch since amendment 91 went into effect in 2011. Each vessel is ranked within each sector and year based on their average annual bycatch rate (Chinook salmon per $t$ of pollock) relative to other vessels in the same year and sector. In order to avoid biasing the results by vessels that did not fish in some years, these data have been screened to remove vessels that caught less than 40,000 tons of pollock over the period (2003-2012). After screening, vessels are ordered (e.g., 1-49 for CVs) based on their overall ranking (2003-2012) with within-year numbers representing their ranking in that year relative to the other vessels (within-year ranking rank low to high, e.g. 1 is lowest bycatch rate in year). Looking across years for the same vessel gives an indication of how a vessel's ranking within their sector changes. This ranking is intended to provide some measure of behavioral changes from year-to-year and particularly since the program's inception in 2011 (noting that fleet-wide, rates have declined in recent years as shown in previous figures). For example, if poorer performers were making concerted efforts to improve, you would expect that the rankings would become more variable. Here, the ranking demonstrates some consistency in the highest bycatch vessels across all years. There is clearly interannual variability such that the poorest performing vessels in general are relatively better in some years. during the short period of the program (2011 and 2012).

Shoreside Catcher Vessels:


0

## Catcher Processors:

| CPs | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 15 | 13 | 15 | 16 | 12 | 16 | 13 | 11 | 13 | 14 |
| 2 | 14 | 14 | 12 | 15 | 16 | 15 | 9 | 9 | 8 | 16 |
| 3 | 5 | 8 | 5 | 6 | 10 | 5 | 15 | 1 | 16 | 1 |
| 4 | 13 | 2 | 9 | 8 | 14 | 9 | 10 | 16 | 15 | 15 |
| 5 | 16 | 16 | 16 | 14 | 13 | 14 | 1 | 14 | 10 | 4 |
| 6 | 9 | 12 | 14 | 10 | 8 | 11 | 6 | 5 | 6 | 13 |
| 7 | 3 | 11 | 11 | 13 | 11 | 6 | 12 | 8 | 11 | 12 |
| 8 | 11 | 10 | 13 | 4 | 4 | 10 | 14 | 15 | 7 | 8 |
| 9 | 4 | 9 | 7 | 11 | 15 | 3 | 11 | 10 | 2 | 3 |
| 10 | 10 | 1 | 2 | 1 | 1 | 7 | 1 | 1 | 1 | 1 |
| 11 | 6 | 15 | 10 | 7 | 9 | 12 | 5 | 7 | 12 | 10 |
| 12 | 7 | 3 | 6 | 12 | 6 | 1 | 4 | 4 | 5 | 5 |
| 13 | 8 | 5 | 8 | 9 | 5 | 2 | 8 | 6 | 14 | 7 |
| 14 | 1 | 6 | 4 | 3 | 2 | 13 | 16 | 3 | 3 | 11 |
| 15 | 12 | 7 | 1 | 2 | 7 | 8 | 7 | 12 | 9 | 6 |
| 16 | 2 | 4 | 3 | 5 | 3 | 4 | 3 | 13 | 4 | 9 |

Mothership:

| MS | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 6 | 14 | 16 | 15 | 16 | 15 | 15 | 12 | 5 | 10 |
| 2 | 14 | 8 | 11 | 5 | 14 | 12 | 12 | 14 | 14 | 15 |
| 3 | 13 | 5 | 10 | 12 | 15 | 8 | 10 | 15 | 16 | 16 |
| 4 | 15 | 15 | 14 | 16 | 7 | 13 | 11 | 4 | 6 | 5 |
| 5 | 11 | 2 | 7 | 11 | 8 | 16 | 16 | 3 | 15 | 14 |
| 6 | 16 | 16 | 13 | 8 | 3 | 4 | 9 | 8 | 3 | 2 |
| 7 | 5 | 9 | 15 | 13 | 11 | 14 | 6 | 6 | 13 | 11 |
| 8 | 10 | 3 | 3 | 14 | 13 | 11 | 3 | 13 | 10 | 6 |
| 9 | 9 | 7 | 6 | 9 | 12 | 2 | 2 | 16 | 4 | 9 |
| 10 | 8 | 6 | 9 | 10 | 10 | 9 | 1 | 5 | 11 | 8 |
| 11 | 3 | 13 | 8 | 6 | 9 | 10 | 13 | 10 | 9 | 13 |
| 12 | 12 | 11 | 12 | 7 | 6 | 6 | 7 | 9 | 7 | 7 |
| 13 | 2 | 4 | 5 | 4 | 2 | 5 | 14 | 1 | 1 | 1 |
| 14 | 7 | 12 | 2 | 3 | 4 | 7 | 4 | 11 | 8 | 12 |
| 15 | 4 | 10 | 4 | 2 | 5 | 3 | 5 | 7 | 12 | 4 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 8 | 1 | 1 | 3 |

October 4, 2013

North Pacific Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501

## Mr. Chairman and Council Members:

My name is Jim Richardson, and I am testifying to you as an individual on issues of personal concern. Some of you may know me from two tours as staff economist to the Council, as the first economist back in 1980 and again for several years in 2004. I have addressed the Council many times, but only one other time - about 15 years ago - as an individual.

My main concern today is Chinook salmon prohibited species catch in trawl fisheries in the Bering Sea and Gulf of Alaska. Again, this is a matter of personal concern and experience. I am a property owner along the Kenai River, and sport fish for Chinook salmon (not as frequently as I would like). I was a six-year Board member and President of the Kenai River Special Management Area Advisory board that manages uses and users within the Kenai River Special Management Area.
(1) Starting specifically, I would like to refer to Report C-6 (a)(1). If you look at Table 1, page 3, and Table 2, page 5, you would not recognize that Chinook salmon are at extremely low levels in all Cook Inlet streams and rivers. This situation is not unique, and Chinook are at low abundance levels throughout Alaska, but I would like to focus on Cook Inlet, as an example.

On the Kenai River, sport harvests of Chinook salmon have been declining since 2006, and there draconian closures have been necessary to try to achieve minimum in-river escapement. The past couple of years, there have been total closures in the Kenai River early and late run Chinook sport fisheries. In addition, there have also been major closures to the Upper Cook Inlet Setnet commercial fishery for sockeye, to avoid bycatch of Chinook salmon bound for the Kenai River.

Other major Chinook sport fisheries in Cook Inlet have been similarly affected. For example, the Anchor River was closed to sport angling this spring, after Chinook failed to show up.

Please note that you could not glean any of this information from the report cited. Table 2, does not have data for 2010, 2011, 2012 or 2013 to illustrate the decline in Chinook abundance.

To help resolve these deficiencies, I request the following:

- Ask ADF\&G to update data and information on the recent decline of Chinook salmon on the Kenai River, throughout Cook Inlet, and other watersheds of Alaska.
- Ask ADF\&G to provide the Council with information on management measures that have been in sport and commercial fisheries to close or constrain them due to poor Chinook salmon returns
(2) I am of the opinion that Chinook trawl prohibited species catch in the Bering Sea and Gulf of Alaska is not the cause of the major declines in overall abundance. However, I am of the opinion that PSC catch numbers become even more important when populations are at low or extremely low levels. Before the Council can fully manage PSC Chinook bycatch, I believe you need to know:
- What is the actual (PSC) harvest numbers ?
- What is the river/area of origin for the Chinook PSC bycatch?
- What is the current economic impact on anglers, sport fishing businesses and commercial salmon fishermen from depressed levels of Chinook salmon abundance?
- Is the PSC trawl catch of Chinook contributing to the current economic impacts to the groups shown above?
(3) On Monday, I listened with concern to discussions in the SSC meeting of setting up means, such as rollovers, for 'unused' Chinook PSC below the limit.

I believe this discussion is a substantial departure of the concept of a PSC limit, which should be a maximum catch number above which the impacts are so dire as to require the fishery to close down.

If you make PSC limits into a tradable commodity, you will help ensure that the entire limit will almost always be taken. It takes the concept from notice to avoid, with a maximum penalty for violation, to an allocation to be harvested. I am concerned that in a few years will have a new mini-industry of attorneys, lobbyists and others, centered around full utilization of the Chinook PSC 'allocation'.

And this concern is exacerbated by my opinion that PSC recorded catches are less than complete, and will always tend to underestimate the true harvest.
(4) My final issue is that I believe that steelhead should be a species of concern to the NPRMC. Steelhead abundance in Cook Inlet and other areas of Alaska are at very low levels, similar to Chinook salmon. Both species tend to migrate through and feed in the same nearshore areas, based on work done by University of Washington researchers some time ago.

Steelhead (the anadromous - seagoing) version of the rainbow trout is (in my opinion) the very pinnacle of desirability for sport anglers.

In November of 1980, I brought data to the attention of the Council members, showing significant bycatch of steelhead discovered in the foreign high-seas fishery harvests off Alaska. I have not heard steelhead mentioned in the NPFMC process since that time, but the Council should evaluate whether or not steelhead is being taken in the Bering Sea and Gulf of Alaska.

So my request for steelhead is for the Council to investigate the bycatch in the Bering Sea and Gulf of Alaska fisheries.

Thank you for the opportunity to bring this information to your attention. I would be pleased to respond to any questions.

Sincerely

and
1015 Angler Drive
Kenai, Alaska 99611

August 1, 2013
Leona Jobuson
P.O. Box 32352

Mun. Village, 1 K 99632

To: Alaska Department of Fish \& Game Yukon Delta Fisheries Development Association Mountain Village Working Group- paul Bears

My name is Leona Johnson and I am a subsistence and commercial fisher from the lower Yukon area. The controversial fishing issue over the Yukon King and chum salmon has grown significautly these past years and great conservation measures are being implemented to prolect the King.

Where do I begin, and what can I say that hasn't alrcady been said. We are in a predicament, from every scope imaginablc. Kanging from the misleading tactics where the Yukon begins all the way down to the wanton waste at sea and of all the areus of this great and mighty river the people of districts Y1 and Y2 have experienced a large number of changes and regulations in fishing since management began.

I understand that thesc regulations were made to protect the King and I am in support. of conservation for the Chinook salmon because I want the fish to return, but at what cost do we allow these restrictions and for how long?

The restrictions and regulations for the 2013 scason in the Y 1 and Y 2 districts were by far the most unbelicvable that I have seen, heard, and experienced. This is the first scason where there was absolutely no King salmon opening on the first pulse even for subsistence. This is also the first season that I have had the unremarkable privilege to dip net for my subsistence chum harvest.

Now, when these restrictions werc taking place I was willing to cooperate knowing that ube Alaska Department of Fish and Game was mandating full closures of Chinook salmon harvest in other arcas of the State only to find out later that people from the upper Yukon areas were allowed to catch and harvest Chinook.

I was greatly troubled by this news because the levels of regulations that were set for the people of Y1 and Y2 districts were not equally demonstrated throughout the Yukon. I have been saving an cdition of the "Xukon Drifter" printed by the Yukon Delta Fisheries Development Association in February of 2013 and often reread a passage from that newsletter.

It states under, "Viewpoint: The Future of Fishing", first paragraph, "Through passage of several proposals the Board clcarly demonstrated escapement needs have priority above all else. Conservation and protection are now the order of the day. The Board made it very clear that these king runs will be strictly managed and that they are committed to
conscrving and rebuilding the runs back to their historic levels." I think YOFDA should avoid saying statements like this, otherwise their purpose will begin to seem crmpty to those who were affected by their "strict management".

This fight to save the Chinook has been going on for so long it's beginaing to sound like a tradition, instead of a real conscrvation issuc. This is my opinion on how it all stanted. Sce, this tradition began from a treaty that is traditionally managed by AUF\&G, and it is traditionally ADF\&G who inform us of the historically low levels of Chinook, and traditionally they want to imposc stricter regulations on districts YI. and Y2 fisherman because traditionally that is where the fish seem to disappear. All the while, year after ycar, giving an unfair advantage to upriver: stakeholders and their RICIIT to fish untegulated and unrestricted.
If the YDFDA Board's commitment is real then I would like to challenge them to think outside the "traditional" box and have them wrestle with thiss idea. If the lower Yukon stakeloolder's can subject themselves' to the mandatory regulation closure of the Chinook salmon for 2013; then the upriver stakeholder's need to subject themselves' to a future closure as well, regardless of run size or strength. To really prove their concern for theendangerment of these species. I strongly bclieve that if all districts, even those beyond the border of Alaska, participated in a regulated closure consccutively, a brighter, morc peaceful "Futurc of Fishing" will develop.

When the people of districts Y1 and Y2 werc subjected to the mandatory closure we sacrificed our right to harvest for the sake of the Chinonk and their return to our civer. We cooperated with these regulations to prove that our concern is real, and that we do not pillage our land of its reseruces. Sadly, many people in the lower Yukon region will suffer hardship as a result, but the upside to this disaster is that no one can argue or blame these two districts for next year's "traditionally" low counts.

I don't know if everyone is familiar with an Alaskan based reality show called "Yukon Men", but I walched an episnde of that show this winter and it was very troubling. In that episode I saw a man harvest 1600 salmon for "subsistence". I understand that owning a dog kemel is a lot of work and fish is probably the easiest resource to harvest for animal consumption, bul I can't come to lerms with that person's definition of "subsistence".

I am from a region, where and when, people refer to the word "subsistence", it usually mcans to harvest a resource for human use or consumption. I know that people can harvest for their pets but not at that level of extreme, 1600 salmon is a huge amount to harvest. That amount of fish could most likely feed 8 to 10 household's in this region and I don't think I ever heard of anyone harvesting that much until I witnessed it on that show. But the thing that bothers me the most, is this man bred his pets, and thern sold them for monetary gain, and cusually called his harvest "subsistence"

I have also heard stories of penple who live beyond the border of Alaska who only subsist for the roe of the salmon. This documentary viden showed one person hoarding eggs by columns and rows and they were preparing the eggs for their dogs as well. I would very like to watch this video and sce cxaclly how much eggs are being harvested for animal
consumption.
Owning a dog team was once a way of life for people all over Alaska, but now it's more of a sport activity that is losing its edge to 4 stroke cngines. The principle behind subsisting for a dog kennel seems so ridiculous to me, especially when I see so many PEOPLE being denied to subsist this specics for human consumption in Y1 and Y2. My sister, Deb Jobnson, made a great point, dog kenuel owners should help aid the conservation of the salmon by harvesting farmed fish rather than wild fish so that more escapement will be met.

I and going to put this plainly, the PEOPLE, not dogs or cats, but PEOPLE including myself, rely on this resource to feed our families, especially with food prices rising. There is no doubt that hardship will be met but I know that the pcople of the lower Yukon are strong people and resilient to change, many will substitute this resource with another, but I refusc to kecp my mouth shut when I see PEOPLE denied the right to feed their families only to find out later that people somewhere else arc floutishing to feed their dogs bellies. How privileged they are.

I ara not going to leave any objective stone unturned. Deep sea fisheries have more than contributed to the decline of these species with their permit's that allow them to waste 50,000 salmon or more per season. I know that leaders in our region have been fighting for stricter regulations on by-catch and I applaud their efforts. Stricter regulations need to be met like shortening their nets and less by-catch. Maybe they should try dip net for a season.

While I am on the subject of commercial fishing 1 would like to try alleviating the disapproval and criticism of the commercial fisherman in districts Y1 and Y2. Yes, we do catch lish and sell them for monetary gain but that's why it's called commercial fishing and not subsistence. See, commercial fisherman in this region amnually renew theit permits and vessel registration with the State of Alaska, who then set limits of where, when, and how loog an opening will be. The fish is then sold to a fish buyer who counts and weighs the fish. Then, in turn pays the fisherman for their labor. This monetary gain, which isn't a wholc lot, is then reported to the government and rightfully taxed. Every penny earned is accounted for.

How is it diflerent from deep sea fisheries? Well, for onc, no commercial fisherman in districts Y1 aud Y2 throws out by-catch, our nets catch salmon. Secondly, no commercial fisherman in Y1 and Y2 area uses hydraulic machines to pull in the nets. We have small boal and small nets and all the labor is done by man power other than the motor that powers the boal. It's a hard, risky busincss, and we don't catch a whole lot.

This small fishing industry that we have doesn't provide very much but every little bit helps, especially in a region that lacks in so many other resources that the rest of the State bencfits from. We don't have logging because there are no trees, wo farming, no oil and gas production, and mining is a divided issue. Fishing in this districts Y1 and Y2 is most definitely a critical and central factor for the PEOPLLE of the lower Yukon region, both economically and culturally. When either is taken it poses a detrimental impact to our

Jivelihood.
The Alaska Department of Fish \& Gume needs to make improvements on the restrictions and regulations of fishing so that cach district shares responsibility for the Chinook fish conservation and they definitely necd to prioritize the inportance of human consumption vs. animal consumption.

I have heard people in our region advocating for federal control over our fisheries and I am beginning to understand their campaign. Federal aid has helped our people during scasons of fishing disaster and $I$ often wonder how much longer it will be before they take over.

I would like to thank you all for taking time to read my petitions on this issuce and wish cveryone a safe and sensible fishing season.

Sincercly,


Paul Beans<br>P.O. Box 173<br>Mountain Village, Alaska 99632

Phone: 907-591-2992
Cell: 907-591-6005
Email: pbeans2003@yahoo.com
I am Paul Beans a commercial and subsistence fisherman. I have fished commercially and for subsistence since I was very young. I would like to make a comment on what has happened this year and the past few years. The taking of Chinook has reduced so much that I did not get to save not even one King Salmon for the table this past summer. Me and my daughter has seen six Chinook and had to throw them back to the river. I do not know if any of them made the long trek up to the spawning grounds. I really hope so. We have not fished commercially since 2007 for Chinook either. This gesture is suppose to increase the fish escapement into Canada. Instead the escapement of fish seems to be reducing every year or never enough to take them for our own winter supply. This is the worst year ever that I can remember. That is why I would like to address it since the local people depended on it for the long winter for many years back to our ancestors. I am not the only one that sacrificed taking of the Chinook this year. There are many that did the same thing as myself.

I would like to emphasis the Pollock Fishery continues to take Chinook and chum salmon as bycatch with no reduction in fishing time or use other measures to reduce the bycatch. I know that the bycatch is getting less and less each year, but does it mean that more fish are able to enter the terminal river the Yukon River. I have been told that some fish is donated to the villages upriver, but are not fit for human consumption. The Chinook salmon bycatch is saved but not taken care of so it is a loss. Subsistence as we all know has priority over commercial fishing, the pollock fishery is a commercial fishery. The North Pacific Fisheries Management Council needs to address the situation properly so that we do get our escapement and able to do our subsistence every summer for Chinook salmon. All entities MPFMC, Alaska Department of Fish and Game, and Fish and Wildlife Service must remember that Subsistence is the number one priority in Alaska over Commercial Fishing.

I brought in a copy of a letter written to Fish and Game and North Pacific Fisheries Management council from a local person in Mountain Village. She expressed her unhappy experience as a subsistence fisherman this past summer 2013. It is too long to read so we made 25 copies for the Board to read. It is well written and is not edited by anyone.


Appendix A3.-Round weight and value of commercially caught salmon by species, Norton Sound district, 1961-2007.

a Does not include canned salmon cases (48\#) 1962: 29 Chinook, 883 coho, 927 pink, and 12,459 chum. 1963: 604 Chinook, 808 coho, 1,918 pink, and 13,308 chum. 1964: 75 Chinook, 452 pink, and 9,357 chum.
b Information not available.
Includes about $48,000 \mathrm{lbs}$. of salted coho, about $150,000 \mathrm{lbs}$ of salted pink, and $150,000 \mathrm{lbs}$. of salted chum.
d Includes about 598 lbs . of salted Chinook, about $48,092 \mathrm{lbs}$. of salted pink, and about 117,664 lbs. of salted chum.

# MSSIP Performance Projections 

## Worst Case Scenario: Hard Cap Taken Twice In Two Years



Mothership Sector Hard Cap 4,674 Chinook

## But First, In Prior Years Credits Must Be Earned



Hard Cap Can Only Be Taken Twice In 7 Years


Abundant Salmon Scenario 9-Year Average $=3,429$ Chinook 92.5\% of Performance Standard

## Real World Performance



Real World Performance 4-Year Average $=1,107$ Chinook 29.9\% of Performance Standard

## Real World Performance Plus Return To Abundance



Real World Plus WCS 9-Year Average $=2,766$ Chinook
$74.6 \%$ of Performance Standard

## Preparation For Future Abundance Drive Incentives To Save Salmon Now



Projected Average During Low Abundance $=1,107$ Chinook

## 29.9\% of Performance Standard

## Conclusions

- Incentives Matter
- Under the MSSIP, fishermen are motivated to reduce bycatch below the Performance Standard
- $4,674 \neq 4,674$
- The Hard Cap can only be achieved in 2 of 7 years
- 3,707 $\neq 3,707$
- In fact, since rates must be achieved below the Performance Standard in order to access any of the Hard Cap, mathematically, the long term average bycatch must be well below the Performance Standard
- Credits Are Gold
- These limits in and and the structure of the MSSIP establish the incentives to keep bycatch low


# Reducing Chinook Salmon Bycatch through an Amendment 91 Incentive Plan Agreement 

Report to the NPFMC<br>October, 2013

## Presentation Outline

- Goal of the CP IPA
- IPA incentives
- Features of the CP IPA
- Allocating the Chinook cap
- The RHS program
- $A$ and $B$ seasonal closure areas
- Evidence of success
- Avoiding hotspots
- Effect of vessel-level incentives
- Development of salmon excluders


## CP IPA Goal

Create vessel-level incentives to avoid Chinook salmon bycatch at all levels of Chinook and pollock abundance.

At the vessel level, the goal is to catch their pollock allocation while avoiding Chinook bycatch to the extent practicable.

## IPA incentives

The IPA provides incentives to avoid Chinook in two ways:

1. Identifying areas with higher than average Chinook bycatch that vessels avoid in order to reduce Chinook bycatch.
2. Encouraging the use of salmon excluders and clean fishing techniques in order to avoid being closed out of good pollock fishing areas.

## Allocating the Chinook cap

CP Chinook PSC allocation is divided up among companies and vessels after subtraction of buffers established to keep Chinook bycatch below the cap.

Vessel 1

Vessel 2


## Allocating the Chinook cap



## The RHS program

## The RHS program creates incentives to avoid salmon bycatch at low and moderate levels of abundance of Chinook on the grounds.

Program activities:

- Identify bycatch avoidance areas.
- Determine vessels prohibited inside the areas.
- Determine closure duration.


## The RHS Program Identifying bycatch avoidance areas

Bycatch avoidance areas are identified by comparing pollockfishery bycatch performance to a base rate of Chinook bycatch (number per ton pollock catch).



## The RHS program Vessel rates and closures (Test 1)

Vessels with a higher Chinook bycatch rate (number of Chinook per ton of pollock) than $75 \%$ of the base rate must fish outside the avoidance areas for a given week.

Example: CP Vessel 1

| Week | Base rate $(\mathrm{n} / \mathrm{MT})^{*}$ | Vessel rate $(\mathrm{n} / \mathrm{MT})^{* *}$ | Do the closures apply? |
| :---: | :---: | :---: | :---: |
| 5 | 0.05 | 0.03 | No |
| 8 | 0.035 | 0.027 | Yes |
| *Base rate calculated on a 3-week moving average <br> $9^{* *}$ Vessel rate calculated on a 2-week moving average |  |  |  |



## The RHS program

Extended closures (Test 2; cumulative)

- Tracks vessel cumulative salmon bycatch throughout the season and compares against a precautionary vessel-level benchmark number (65\% of the CP cap).
- If this benchmark number is exceeded, vessels with weekly closures are instead subject to extended, 2week long closures.
Example: CP Vessel 1

| Week | Base <br> rate $(\mathbf{n} /$ <br> MT)* | Vessel rate <br> $(n / M T)^{* *}$ | Do weekly <br> closures <br> apply? | Cumulative <br> Chinook <br> caught $(\mathbf{n})$ | Extended <br> closure <br> benchmark <br> $(n)$ | Do <br> extended <br> closures <br> apply? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 0.04 | 0.032 | Yes | 85 | 342 | No |
| $11^{8}$ | 0.35 | 0.027 | Yes | 382 | 342 | Yes |

## The RHS program--summary

- Test 1 relies on vessel Chinook bycatch rate (Chinook per ton pollock), calculated on a 2 week rolling basis. Vessel rate must be less than $75 \%$ of base rate to avoid closures.
- Test 2 relies on vessel accumulated Chinook bycatch (number of Chinook), added up throughout the year. Once Test 2 is failed, all closures for that vessel for the rest of the year are two-week closures.
- Since 2011, there have been 58 vessel-fishing-week closures under the RHS program.


## Chinook Salmon Conservation Areas

- A-season $735 \mathrm{mi}^{2}$ Chinook Conservation Area is closed to all pollock fishing $100 \%$ of the time during A season.
- B-season Chinook Conservation Areas totaling $1295 \mathrm{mi}^{2}$ are closed to CP pollock fishing Oct 15-Oct 31 if the CP Chinook bycatch rate for September exceeds 1.5 Chinook per 100 tons of pollock.


## A-season Chinook Conservation Area

735 square mile area closed to all pollock fishing $100 \%$ of the time during A season


## B-season Chinook Conservation Areas



## Evidence of success-avoiding Chinook hotspots



## Evidence of success-avoiding Chinook hotspots

CP trawl locations 9/1-2/28

+ CP trawl locations 2011-2013
Darkest blue: CP trawl locations 2000-2010 with 50+ Chinook
Lightest blue: CP trawl locations 2000-2010 with 0 Chinook




## Evidence of success-vessel level incentives



Chinook bycatch rate distribution of CP vessels


If vessel-level incentives are working, we expect the distribution to shrink. Vessels are accountable for their own Chinook bycatch, and better performers cannot shelter less well performing vessels.


## Evidence of success-vessel level incentives



## Evidence of success-development of salmon excluder

Salmon excluder design development and testing by industry is ongoing.

Activities include:

- Studies to better understand excluder performance in a variety of fishing conditions.
- Collection of video images (2013 B season) for use in excluder tuning and judging pollock escapement.
- Annual excluder use surveys (started in 2012).


## Evidence of success-development of salmon excluder



## Summary

The CP IPA is composed of three types of incentive measures:

- The Chinook cap, allocated at vessel level with buffers
- RHS avoidance areas
- Seasonal closures

There is evidence that these measures are working to change vessel behavior and improve avoidance of Chinook salmon bycatch:

- Movement of vessels to avoid higher risk areas.
- Better Chinook bycatch performance than previously
- Development of salmon excluders


Hello. I am Charlotte Weaver of Mountain Village. I am 100\% Yup'ik born and raised in Alaska. Raised along the mighty Yukon River. Along this river I grew up throwing rocks into, waded in on hot summer days, slid down from the top of the Asa'carsaq Hill to the frozen river, ice skated on the river, and most importantly...harvested fish and game. I grew up eating all kind of fish and game attracted to the majesty of the Yukon...eels, lush fish, white fish, pike fish, all kinds of migratory birds, and chum and Chinook salmon. Mother Nature tells us when the salmon are arriving. When the thunder rumbles is when the Chinook arrive. It has been this way forever, it is knowledge passed down to me by my ancestors. All the regulations set in place will not take the thunder away, will not weaken the current, will not change my tastebuds, will not stop the rain from pouring down, will not stop the sunshine. The regulations have stopped me from eating fresh Chinook Over the course of the time, we've been able to harvest our share, our lives have been nothing less of content. During recent years, we have been told by State Department of Fish and Game that we cannot fish for Chinook. As we were mandated to throw our king back into the river, my mouth watered, wishing I could keep the Chinook.

Imagine if you were told you cannot have your favorite food from the supermarket. The land is my supermarket. My freezer has but one Chinook salmon, usually we freeze approximately 5 to 6 whole king for winter. I have not tasted fresh Chinook.

There are many other households in my village who have identical stories to mine. When you analyze the Chinook salmon fishery, can you please include the impact on the people of the river? It's not only the fishery that is hurting, we are hurting too.

Thank you.

