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Adam Barker

Oct 2nd 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

Re: UCIDA Agenda Change Request and
Genetic Stock Composition of Sockeye Salmon
in the Kodiak Management Area

As a third generation Alaskan fisherman; I adamantly oppose the UCIDA agenda change request, there is nothing in the Kodiak Management Area that needs correcting by this bureaucratic ramrodding (forcing a measure to be accepted quickly.)

I grew up purse seining Kodiak with my Dad, Mom and two brothers as a family operation. I purchased my own permit, boat, and operation in 2000 and have been participating in the Kodiak Salmon fishery ever since. This year I had the privilege to fish with my son who is 9. My daughter who is 6, cannot wait till she can work out on the boat! I depend on fishing the Kodiak area for salmon as my sole income, and any time or area lost in this fishery would be completely detrimental to my family.

Kodiak is a stormy, tough, long, grind fishery. Not a quick home run fishery like Bristol Bay or PWS, for these reasons our permits are the cheapest seine permit in the State of Alaska.

If we start pointing fingers on who is allotted all the salmon in all the areas leading up to and beyond Kodiak it will only screw everybody participating in any salmon fishery in the surrounding area.

Remember when the Kodiak seiners got seaward zone restrictions in the North Shelikof due to pressure from the Cook Inlet drift fishery? Then the Cook Inlet drift fishery was in turn restricted to corridors by the Cook Inlet Sport Fisherman So see how the chain of greed ruined the prospects of the original protesters, do we have to play this out over and over when we should be uniting to make a better market for everyone? Are we going to have countless treaties with each other? Each place pointing the finger on up the ocean, Chignik, Area M, Bristol Bay? We all know its hard to get the salmon to stay in their little lines they are allotted to.

Science has proven that the Kodiak Management plan WORKS! Kodiak has an abundance of wild runs both on the Island and the Mainland. If we are restricted from traditional fishing areas, over-escapement could be very detrimental to the environment.

Allocating is favoritism, for you to consider this agenda change seem against your values and puts the board's character in question.

The UCIDA agenda change does not meet the Board of Fisheries agenda change request criteria. There is no error in regulation that needed correcting.

Thank you for your time and attention,

Adam Barker, Jessie James, Maxwell & Allie Barker



Submitted By
Adelia B Myrick
Submitted On
9/29/2017 2:55:08 PM
Affiliation

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September 28, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition in the Kodiak Management Area

Dear Board of Fish members:

I am writing in opposition of the UCIDA agenda change request for several reasons. Most immediately, it does not meet your agenda change request criteria, which state that there must be a conservation concern, an error in regulation, or a need to correct an effect on a fishery that was unforeseen when a regulation was adapted. In addition, if UCIDA's proposal were to be adopted, it would set a difficult and dangerous precedent about mixed stock management statewide, it would severely damage ADF&G's ability to manage all of Kodiak's salmon species for sustainability, and it would impose drastic economic hardship to Kodiak's salmon fishermen.

I am a second-generation Kodiak fisherman. My father started salmon fishing here in 1967, and I have setnetted since I was a toddler with my family, for my whole life. I took over the permit from my dad several years ago, but just in 2016 finally bought the setnet operation from my parents outright. It was a monumental business decision allowing me to quit teaching at the college (where I had benefits and retirement), but one that I made with the historic nature and rhythms of the fishery in mind. Knowing that there are always bound to be cycles of horrible years mixed in with good ones, I determined that, through careful financial management and planning, I could make it work – setnetting in Kodiak could provide for me. As a young fisherman entering the industry, I am in a particularly precarious financial position. If the UCIDA proposal were to go into effect, it would change everything. Having five weeks of severely curtailed fishing time – losing what I had known to be the historic average, what I had planned for when making my business decisions – would be catastrophic.

My opposition to the agenda change request is not only about my circumstances, or me, however. The change request simply doesn't make any sense. I know you consider and deliberate about what precedents you set, and if you allow this agenda change request, I see that it will go against the criteria you have already established to guide your decision making.



A.

Your first listed criteria is conservation concern. What is the new conservation concern here? Kodiak salmon fisheries have proceeded historically in the same manner for decades. There is no new fishery or targeted catch of Cook Inlet bound sockeye, so the conservation concern should not be considered new. There are no new fishing patterns. In terms of sustainability, according to the "Sustainable Salmon Fisheries Policy Checklist" of 2008, there is nothing happening in Kodiak that causes a concern about sustainability. This document does, however, indicate in item 9 that habitat concerns should be considered. I argue that the Kenai peninsula is where habitat degradation is occurring, not Kodiak, particularly not the west side of the island, which is virtually all National Wildlife Refuge land. Kodiak should not bear the conservation burden for the peninsula's habitat destruction.

B. The second criteria, to correct an error in regulation, makes no sense. What is the error in regulation? The Kodiak and Cook Inlet management plans have been developed carefully with input from many stakeholders over the years, and this one genetic study of only 3 years, while perhaps interesting and worthy of discussion during a regular board cycle, does NOT indicate that there has been an error in regulation.

C. The third criteria is to correct an effect on a fishery that was unforeseen when a regulation was adopted. While at first glance, the genetic stock composition study does seem to shed new light on the mixed stock nature of Kodiak's salmon fishery, analysis into historical information and records shows this is not the case. This study clearly does not represent any new information that wasn't present when the Kodiak and Cook Inlet management plans were established, nor is it even enough information to establish any trends. Independent third party reviews of the study indicates that finding mixed stock in KMA is not surprising given the historical information on file. According to the third party report, "Barrett and Swanton (1991) report that sockeye harvests in the North Shelikof Strait in the 1940s, 1970s and 1980s ranged from 30% to 100% Kodiak fish and 0% to 59% Cook Inlet origin fish." This historical information is supported, not contradicted, by the latest science. In addition, as any scientist will tell you, a small-scale 3-year study is not enough to understand a pattern or trend. Kodiak's managers had the information available when developing our current management plans, and there is no reason to believe that this information was unforeseen when the plans were developed.

It is also important to consider the implications of UCIDA's request in a broader sense. Of grave concern is the precedent that this would set regarding mixed stock management, statewide. We have never believed that Kodiak catches only Kodiak fish, due to its location. This was taken into account when developing management plans. What's key here is that Kodiak is not unique. Would you manage Chignik because they stand in the path of some Kodiak-bound fish? How about Area M management? I've heard many argue that fish from False Pass are headed to Kodiak, just to give one example. And I'm sure on the North side of the peninsula, Bristol Bay fishermen assume Area M fishermen can be affecting their returns. Your 1993 finding, "Alaska Board of Fisheries Findings on Policy For Mixed Stock Salmon Fisheries" (93-145-FB), provides guidance. Particularly relevant are the following points:

(2) "...Most mixed stock fisheries are long standing and have been scrutinized many times by past boards. Consequently, existing regulatory management plans are understood to incorporate conservation burden and allocation...."

(3) "The policy should recognize that salmon resources are generally fully utilized and that stability is an important aspect of the fishery."

(5) "The policy should not be a tool to be used for allocating outside of the Board's allocation criteria."

I urge you to consider the larger picture when deciding whether to accept UCIDA's agenda change request, because what they are proposing would certainly promote the practice of other groups requesting changes to management plans throughout the state.

Sustainability of all salmon stocks is, of course, in the best interest of everyone in the state of Alaska. However, UCIDA's proposal hamstring Kodiak's salmon managers, taking away the tools they need to effectively manage a complex, multi-species salmon fishery. Although I am a new site owner, I have been fishing my whole life and have been steeped in the history of Kodiak's salmon fishery. I know that Kodiak's management plans have been developed carefully to manage the complex nature of our fishery; they are not just about sockeye. The plans also take into account chum, coho, and pink salmon. If our fishing time is to be curtailed, how will that affect the health and sustainability of ALL of our species? What will stop over-escapement? In the Northwest Kodiak District, we have seen first-hand the effects of over escapement at Karluk, which caused a huge crash of the system and basically created "disaster fishing" for sockeyes from (2008 to 2012) for many of us. UCIDA supporters will argue that we can fish the inner bays. This is not a solution for several reasons. Setnetting is not allowed in the inner bays, so only part of the users of Kodiak would be able to access those fish; the fish are of lower quality and that is the last thing we want to put on the market; and most alarmingly, weather and other events of nature and run timing can



more easily allow over-escapement to occur. We must allow Kodiak's fisheries managers the tools to manage the different KMA areas for long-term sustainability, and this UCIDA proposal basically erases those tools by mandating closures not based on science but on arbitrarily chosen numbers.

The proposal would have severe economic repercussions, as well. Kodiak has been managed in the same manner for decades, and has a whole economy built on the stability of the commercial salmon fishery. This proposal ignores the other species we rely on in Kodiak – pinks are my bread and butter – and would significantly hurt my bottom line. If the UCIDA proposal had been in effect, in 2014 62% of my fish were caught during their 5-week timeframe, in 2015 35% of my fish were caught then, and in 2016 37% of my fish were caught then. Losing out on that significant poundage would be extremely detrimental to my ability to continue making it work to be a fisherman. It isn't just a matter of a few fishermen's livelihoods being torn apart, though – it's a matter of the whole community struggling to stay afloat. We are talking about a loss of between \$3.9 and \$8.3 million dollars per year for the community, money that generates stable jobs not just for the fishermen, but also for cannery workers and fish processors, as well as the marine service industry. Losing those tax dollars would have a significant negative effect on Kodiak's overall health as a community.

Quite simply, we have a new genetic study with more detailed and up to date scientific analysis and methods, but the information it contains regarding the mixed stock nature of Kodiak's fisheries is NOT new and WAS taken into account when the management plans were set up. I'm old enough to remember my parents writing letters to the BOF regarding the Kodiak/Cook Inlet conflicts and discussions that took place in the early 90's over the exact same issue. The agenda change request by UCIDA does not present a conservation concern, nor does it address an error in regulation. In addition, it would set a dangerous precedent about mixed stock management statewide, would derail ADF&G's ability to manage Kodiak's salmon runs for sustainability, and would have a terrible impact on the entire economy of Kodiak Island. For these reasons, I oppose UCIDA's agenda change request.

Thank you for your work and deliberation on this important issue.

Sincerely,

Adelia B. Myrick

Uganik Bay Setnetter



**BOARD OF DIRECTORS
RESOLUTION #2017-24**

**A RESOLUTION TO THE ALASKA BOARD OF FISHERIES OPPOSING
OUT OF CYCLE SCHEDULING OF KODIAK MANAGEMENT AREA
FINFISH ISSUES**

WHEREAS, Afognak Native Corporation is an ANCSA village corporation headquartered in Kodiak, Alaska with the majority of our Shareholders residing in Port Lions, Kodiak, and the Anchorage area; and

WHEREAS, fisheries and access to marine resources have always been a foundational resource for these island communities and we rely on strong fisheries and resident fishermen to thrive; and

WHEREAS, the Alaska Board of Fisheries has established a 3-year cycle for their agenda schedule in addressing finfish issues in each of Alaska's fisheries management areas; and

WHEREAS, the Alaska Board of Fisheries just completed the Kodiak finfish cycle meeting in Kodiak to discuss Kodiak finfish issues in January of 2017; and

WHEREAS, exceptions to the Alaska Board of Fisheries 3-year cycle for addressing area finfish issues are narrowly outlined in the Board's "Policy for Changing Board of Fisheries Agenda" and such "Agenda Change Requests" (ACRs) are only heard by the Board during their "first meeting in the fall"; and

WHEREAS, United Cook Inlet Drift Association (UCIDA) has submitted an Agenda Change Request (#11) to have the Board schedule Kodiak finfish issues out of cycle during the Board's 2017-18 meeting schedule to "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

WHEREAS, the UCIDA Agenda Change Request does not meet the Alaska Board of Fisheries' criteria for approval in that it is not; a. for a fishery conservation purpose or reason, b. to correct an error in a regulation or c. to correct an effect on a fishery that was unforeseen when a regulation was adopted; and

WHEREAS, the UCIDA Agenda Change Request states on its face that it is "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and



WHEREAS, the Alaska Board of Fisheries Policy for Changing Board of Fisheries Agenda clearly states that “the board will not accept an agenda change request that is predominately allocative in nature absent new information found by the board to be compelling”; and

WHEREAS, the UCIDA Agenda Change Request is entirely allocative in nature and information about the opportunistic harvest of Cook Inlet bound sockeye in the Kodiak Management Area while fishing for local stocks has been known for more than 70 years and was documented before the Alaska Board of Fisheries 25 years ago with research reaching back to the 1940s with estimates of the presence of Cook Inlet sockeye in the Kodiak Management Area ranging from 0 to 60%; and

WHEREAS, the 2016 report on the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016 merely provides additional detail to information already known by the Alaska Board of Fisheries about the opportunist harvest of Cook Inlet bound sockeye in the Kodiak Management Area and was not an assessment for allocative purposes;

THEREFORE BE IT RESOLVED that the Alaska Board of Fisheries reject the UCIDA agenda change proposal to address, out of cycle, the harvest of Cook Inlet stocks in the Kodiak area;

AND THEREFORE BE IT FURTHER RESOLVED that the Board of Fisheries leave the issue of the harvest of Cook Inlet bound sockeye caught in the Kodiak Management Area to be thoroughly vetted through the normal Board of Fisheries process during the 2019-2020 Kodiak finfish meeting.


Gerad Godfrey, Board Chair

Certification: I hereby certify that the foregoing resolution was duly adopted by the Board of Directors of Afognak Native Corporation in accordance with its organic documents on September 29, 2017.



Kristy Clement, Board Secretary



Submitted By
Alan Otness
Submitted On
10/2/2017 10:21:11 AM
Affiliation
Sitka sac roe permit holder

Phone
9077723458
Email
adotness@gmail.com
Address
696 Mitkof hwy box 317
Petersburg, Alaska 998330

Dear Chairman Jensen:

I am writing to give my support for proposal EF-F17-067. There are many good reasons why this proposal , open pound spawn on kelp as an alternative to seining , makes sense.

I was involved with the experiment to test the open pound idea in Sitka and came away from that experience enthusiastic about the possibilities. Let's make this happen.

Sincerely, Alan Otness. Sitka Sac Roe Permit Holder

September 21, 2017

Alaska Department of Fish and Game
Boards Support Section – Alaska Board of Fisheries
P.O. Box 115526
Juneau, AK 99811-5526

Attn: Alaska Board of Fisheries

John Jensen, Chair
Orville Huntington
Fritz Johnson

Israel Payton
Alan Cain

Robert Ruffner
Reed Morisky

Re: Requesting the Board of Fisheries Reject Agenda Change Request 12

Dear Chair Jensen,

The Aleut Corporation urges the Alaska Board of Fisheries to reject ACR 12 that will be discussed at the October 17-19, 2017 Work Session. The Aleut Corporation believes that ACR 12 does not meet the guidelines listed under 5 AAC 39.999 for accepting the ACR.

1. There are no fishery conservation concerns.

Current regulations in place are sufficient to manage the Dolgoi fishery. Harvests of sockeye salmon in this area has not lead to a conservation concern of Chignik sockeye salmon.

- a. In 2016 Chignik early run and late run sockeye salmon escapement goals were met, with the late run exceeding the escapement goal.
- b. The In River Run Goal (IRRG) for subsistence harvest of 25,000 sockeye in August and 50,000 sockeye in September were also exceeded for both months.
- c. Further Chignik commercial harvests of sockeye salmon were similar to the 10- and 20-year average harvest and only slightly lower to that of the 5-year harvest.
- d. The 2017 data is preliminary and the 2017 Annual Management Report has not been published yet.

2. There is no error in regulation.

In 2016, at the Alaska Peninsula/ Aleutian Island/ Chignik Finfish meeting, the Board amended regulations for the *South Unimak and Shumagin Islands June Salmon Management Plan* (5AAC 09.365) and the *Post-June Salmon Management Plan for the South Alaska Peninsula* (5AAC 09.366). The regulations were amended to reflect the agreement made by the two user groups



and the Department has been careful to enact the rules as written during the fishing season.

- a. As stated in the 2016 AMR the fishery was closed as stated in Regulations. *"On June 21, the harvest limit of 191,000 sockeye salmon, based on fish ticket information, was reached in the "Dolgoi Island Area". After a 12-hour notice was given to the fleet, the portion of West Pavlof Bay Section south of Black Point and waters of the Volcano Bay Section closed to commercial salmon fishing through July 25."*
- b. The 2017 data is preliminary and the 2017 Annual Management Report has not been published yet.

3. There were no unforeseen effects from the current regulations.

The regulations that were adopted at the February 2016 Board meeting and amended at the 2016 BOF meeting are working as intended. These regulations have been in place for two fishing seasons and only the 2016 seasons data and Annual Management Report is finalized and published.

With only one years' worth of data it is not enough to see a trend in the Dolgoi fishery. In fact, in 2016 all escapement goals were met and exceeded and the Chignik Commercial Fishery was healthy and similar to that of the 10- and 20-year average. At the February 2019 meeting the Board will have three years of data under the new regulations to better inform the next decision on this issue.

4. This ACR is allocative in nature.

For the proposals regarding the Dolgoi Fishery at the 2016 Alaska Peninsula/ Aleutian Island/ Chignik Finfish proposals regarding the Alaska Department of Fish and Game remained neutral on the allocative aspects of those proposals. This proposal is similar to those proposals in that there is no conservation concern and no unforeseen effects from the 2016 regulation change and it is one user group trying to limit another.

Therefore, we respectfully request the Alaska Board of Fisheries reject ACR 12 at the October 17-19, 2017 Work Session. Thank you for the opportunity to provide written comment.

Sincerely,

Thomas Mack
President
Aleut Corporation



Alaska Board of Fisheries
P.O Box 115526
Juneau, Alaska 99811-5526

Board of Fisheries Members:

The Aleutian King Crab Research Foundation submitted Agenda Change Request (ACR) 02, which seeks to have the Board consider the Aleutian Islands golden king crab fishery harvest caps out of cycle. The Board is asked to schedule consideration of repealing the existing harvest caps and adopting a management strategy being developed by the Alaska Department of Fish and Game (ADF&G) using the outputs of a newly adopted golden king crab population model.

Briefly, these harvest caps, or Total Allowable Catch levels (TACs), were set in about 1996 based on fishery and stock conditions at that time. The Board subsequently made minor adjustments on two occasions, increasing the caps by 5% each time. The department is allowed to reduce the harvest below the caps, but may not increase the harvest over the caps. The harvest caps are a single number and do not take other characteristics of the stock, such as mature and legal male biomass, into consideration. The Board also specified that the caps would stay in place until the golden king crab population model was adopted and ADF&G developed a harvest strategy based on that model.

The North Pacific Fishery Management Council's (NPFMC) Crab Plan Team (CPT) and Scientific and Statistical Committee (SSC) have now adopted the golden king crab model developed by ADF&G and have used that model to set the Overfishing Limit (OFL) and the Allowable Biological Catch (ABC). The model was accepted at the September 2016 CPT and October 2016 SSC meetings for use in setting OFL and ABC at the May 2017 CPT and June 2017 SSC meetings. Unfortunately, this was too late to allow this issue to be considered at the regular King and Tanner crab meeting in March 2017.

ADF&G staff are now developing a harvest strategy, based on similar strategies for other Bering Sea Aleutian Island crab stocks, which uses the outputs of this model to set harvest levels and management triggers that better ensure conservation of Aleutian Islands golden king crab. This harvest strategy could be considered and implemented during the upcoming Board cycle. Waiting until the next regular Board meeting would mean two additional years of management under outdated harvest caps.

I encourage you to accept this ACR. It fits your criteria for acceptance under both criteria one and two. That, is the ACR serves a conservation purpose (criterion 1) and it deals with what is now essentially an error in regulation (criterion 2).

Criterion 1: The current harvest caps were set based on the best available information at the time they were implemented for the 1996/97 season. Since that time, the stock status and nature of the fishery have changed dramatically. Additionally, ADF&G, the CPT, and the SSC have put significant effort over many years into developing a useful model. With the acceptance of the golden king crab model and setting of OFL and ABC through the NPFMC process, the regulatory harvest caps no longer represent the best available information for managing the stock. Only through acceptance of the ADF&G developed harvest strategy based on model outputs can the board ensure management based on the best available



information. Waiting until the next regular King and Tanner Crab meeting will delay implementation of this improved management system by two years and delay the improvements in conservation that go with it.

Criterion 2: The harvest caps adopted in the mid-1990s and only modestly updated since then, worked surprisingly well for many years. But they are now so out of date as to be considered in error. Outputs of the model confirm that these caps no longer represent the best available information for management of the fishery. Additionally, they do not contain important management triggers that will help protect the stock. Continuing to use them for two additional years only delays improvement of management and potentially impacts the fishery and the industry.

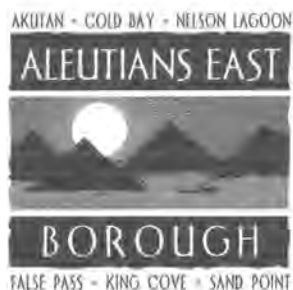
The final issue to be considered is whether the proposed ACR is allocative and the answer is no. This fishery was rationalized in 2005. Therefore, each vessel operates under a quota share that will not change relative to other vessels if this ACR is accepted.

I appreciate your consideration of this issue and hope you will agree that this ACR meets your criteria and is worthy of acceptance.

Sincerely,

A handwritten signature in blue ink, appearing to read "E. Poulsen".

Edward Poulsen
Vice President for Research
Aleutian King Crab Research Foundation



September 26, 2017

Chairman John Jensen, Alaska Board of Fisheries
Board Support, P.O. Box 115526
Juneau, AK, 99811-5526

Re: In support of Board of Fisheries ACR policy found in 5 AAC 39.999

Dear Chairman Jensen,

The Aleutians East Borough Natural Resources Department works with local fishermen, processors and the communities of King Cove, Sand Point, Cold Bay, False Pass, Nelson Lagoon and Akutan to navigate local fishery management issues, including Board of Fisheries proposals and agenda change requests.

We urge the Board of Fisheries to closely follow your policy for considering agenda change requests, found in 5 AAC 39.999, when you consider ACRs at your October 17-19, 2017 Work Session.

In particular, we believe ACR 12 does not meet the Board criteria for approving an ACR:

This is predominantly an allocative issue and the ACR should be denied. There is no new information that warrants this issue be addressed out of cycle. The new Dolgoi Island Area salmon fishery regulations were initiated by the Board just last year, at the February 2016 meeting. The original Proposal 186 was substituted with language in RC 192, as a compromise between Chignik & South Peninsula fishermen. When the number of sockeye salmon harvested in the season reached 191,000 based on fish ticket information, a portion of the area was closed. These regulations have only been in place for the 2016 & 2017 salmon seasons, implemented by ADFG salmon managers as written by the Board.

There is no fishery conservation issue to be resolved. Chignik escapement goals are being met and Chignik fishermen are able to harvest salmon.

There is no error in the regulation. The new Dolgoi Island Area regulations were vetted by staff to be without error and carefully crafted by the Board, based on an agreement between the two stakeholder groups.

There has been no unforeseen effect on the fishery. The Dolgoi Island Area regulations have limited the amount of sockeye salmon harvest in the Dolgoi Island Area as intended. The fishing areas were closed when the trigger was reached based on fish ticket information.

We believe the Board should only accept agenda change requests that meet the Board criteria found in 5 AAC 39.999. ACR 12 does not meet those criteria. Thank you for opportunity to comment.

Sincerely,

Ernie Weiss, Natural Resources Director



RESOLUTION 18-03

A RESOLUTION OF THE ALEUTIANS EAST BOROUGH ASSEMBLY IN SUPPORT OF NO CHANGES TO THE ALASKA BOARD OF FISHERIES 2017/2018 MEETING CYCLE AGENDA.

WHEREAS, the Aleutians East Borough communities rely on continued North & South Alaska Peninsula local salmon fishery harvests for our culture, economy and livelihood; and,

WHEREAS, most of Alaska salmon stocks are mixed and many regions of the State benefit from the Alaska Board of Fisheries' Mixed Stock Fishery/Sustainable Salmon policies, including Chignik fishermen, known interceptors of South Alaska Peninsula bound salmon; and

WHEREAS, the Board adopted new regulations in 2016 intending to limit sockeye harvest in the 'Dolgoi Island area', ADFG statistical areas 283-15 through 283-26 and 284-36 through 284-42, by imposing a 191,000 sockeye limit in the area that would trigger a fishing closure in statistical areas 284-37 through 284-39, and area 283-26; and

WHEREAS, the ADFG data in 2016 indicated that the 191,000 limit would have been reached only 4 of 10 years, had the policy been in place from 2006 to 2015; and

WHEREAS, the 191,000 sockeye limit and resulting fishing closures have occurred in both salmon seasons, 2016 & 2017, since the regulations have been in place; and

WHEREAS, the Board published 18 agenda change requests (ACRs) this month to be considered at the October 2017 Board Work Session, including ACR 12 submitted by the Chignik Regional Aquaculture Association ; and,

WHEREAS, if adopted, ACR 12 would further restrict sockeye harvest in the Dolgoi Island area; and

WHEREAS, the Dolgoi Island area is at the heart of the Aleutians East Borough South Alaska Peninsula salmon fishing area, between the fishing communities of King Cove and Sand Point; and

WHEREAS, ACR 12 does not meet the Board criteria for approving an agenda change request in 5 AAC 39.999.



NOW THEREFORE BE IT RESOLVED, the Aleutians East Borough Assembly supports no changes to the Alaska Board of Fisheries 2017/2018 meeting cycle agenda; and

PASSED AND APPROVED by the Aleutians East Borough on this 22 day of September, 2017.


Stanley Mack, Mayor

ATTEST: 
Tina Anderson, Clerk



AK Board of Fish
Boards Support
PO Box 115526
Juneau, Ak 99811-5526

Sept 27th, 2017

Opposed UCIDA ACR & Genetic Stock Composition of Sockeye in Kodiak Area

Chairman John Jensen/ Alaska Board of Fish,

My name is Amanda Floyd. I grew up in Kodiak and now work at a retail shop that sells ATV's, motorcycles, outboards, and does maintenance & repairs. I'm opposed to this ACR as it represents a 30% loss of catch for Kodiak's fishermen. Kodiak's salmon fishery has a large influence on sales in the store that I work in. Salmon fishermen are the ones that buy outboards for their skiffs. At the end of salmon, it's the skippers and crewmembers that are in purchasing bikes and the gear for them.

Adopting measures that create a 30% reduction in catch for Kodiak would cut into crew shares and would make a lot of the boats unprofitable. It would mean less customers in the store I work in. It might even mean that my position would be cut due to less sales.

Kodiak is my hometown and it is facing a local sales tax hike, a lack of affordable housing, and uncertain revenue funding for the City & Borough Governments. We certainly can't afford a cut of this magnitude to our fish landings and raw fish tax during a time when state and federal funds are drying up.

Please say no to ACR 11. It causes economic hardship and uncertainty throughout the Kodiak community.

Amanda Floyd
1418 Mission Rd
Kodiak Alaska 99615

A handwritten signature in black ink that reads "Amanda Floyd". The signature is written in a cursive, flowing style.



Submitted By
Anitra Winkler
Submitted On
10/3/2017 8:53:34 PM
Affiliation
commercial fisherman

Phone
907 355 3933
Email
anitrawinkler@gmail.com
Address
Box KWP
Kodiak , Alaska 99697

To whom it may concern;

I am writing in regards to the UCIDA's agenda change request as it clearly does not fit the criteria for an ACR. Further I am very concerned by the ACR and how it or something like it would impact my fishery.

I am 24 years old and I am a life long Alaskan. I grew up in the interior near Cantwell and dog mushed through high school. I was first introduced to commercial fishing when I was 16 when I got a job fishing salmon on Kodiak and immediately decided I wanted to see more of coastal Alaska. I have fished ever since, through college and then last winter I purchased my own site. This summer was my first season as owner/operator and I did fairly well mostly because we had a lot of fishing time. Salmon money has funded a significant portion of what I do; it paid for most of my college (I have a bachelor's degree from UAS in Juneau) and also for the down payment on my site.

As a young person investing in the salmon industry it is frightening anyway with all of the potential problems climate change, development, salmon farms etc. could cause over my life time. I had not thought the issue would be another part of the state trying to narrowly if at all increase their profit margin at another fisheries expense. If I could not fish during the times that this ACR would have us closed my fishery would not be viable. The margins are very thin to begin with and to lose 30% of our income would be catastrophic, the Kodiak set net fishery would be over. As a 24 year owes with big payments to make this is a scary thought.

Historically Kodiak has always caught some percentage of Cook Inlet reds, just like nearly every other area of the state is catching some percentage of another areas fish. It seems ridiculous to me to shut down the Kodiak island salmon fishery so that another area can get a negligible amount more fish. Further if we were closed during those times all of our local streams would over escape and our runs would fail so that even when we did have time to fish there wouldn't be any. Currently our runs seem to be managed quite well and all of that hard work would be wasted.

I disagree with this ACR first of all on the basis that it should not have been accepted as an ACR. There is nothing new introduced by this study, there is no basis for an ACR. Secondly the contents of this ACR would end my fishery and leave me with two hundred thousand dollars of now not useful equipment and permits that I couldn't pay off. I hope that we can all agree that just because Cook Inlet has the higher population it doesn't mean other fisheries should be crippled for it's slight advantage. Thank you for your time.

Sincerely,

Anitra Winkler



AK Board of Fish

Boards Support

PO Box 115526

Juneau, Ak 99811-5526

Oct 1, 2017

UCIDA ACR & Genetic Stock Composition of Red Salmon in Area K

OPPOSED

Chairman John Jensen,

My name is Beau Mann. I was born and raised in Kodiak. I graduated in January of 2016. After graduation, I got a job on a local combination 58 ft seiner for pot fishing P Cod. I fished Kodiak area and out west for 5 months returning back home- where I found a job on a 50 ft salmon seiner. At 19 years old, I have found a job that pays my bills. I also know that if I am going to become a skipper and own a boat, I will need to pay attention to regulations that affect the fisheries I participate in.

It's hard for me to believe that ACR 11 will do anything to help with conservation concerns in Cook Inlet. It seems to me that it gives a bit more fish to one area (Cook Inlet), wreaks havoc for Kodiak's west side, and solves nothing. Also, the proposer states that the ACR is allocative. If you combine the chaos created for salmon runs in Kodiak, the intention to re allocate fish, and the zero proof that the this would have measurable results- The Board of Fish should not consider ACR 11, and especially not out of cycle. I don't think the Board should ignore the fact that Kodiak's local salmon would most likely suffer over escapement if this action is taken.

I'd respectfully ask the Board of Fish to take no action on ACR 11 for all the above-mentioned reasons.

A handwritten signature in cursive script that reads "Beau Mann".

Beau Mann

3454 Spruce Cape Rd

Kodiak Alaska 99615



October 1, 2017

Alaska Board of Fisheries,

My name is Bill Menish and I have been a Sitka Sound sac roe permit holder and participant since before limited entry. I also am a permit holder in the Northern closed pound fishery and participated in that fishery for 8 years until it was shut down for lack of herring. In that fishery, I believe we, as fisherman, are responsible for the demise of the Northern closed pound fishery.

I am in full support of Proposal EF-F-17-06 to allow open pounding in the Sitka sac roe fishery as an alternative to seining. The open pounding has proven to work well in the past experimental fishery in 1998-1999 in Sitka Sound which I was involved in. It is truly a green fishery with no dead loss unlike closed pounding where I have seen a lot of dead loss. You cannot keep stuffing more and more herring into a small enclosure and not have major fatalities.

This proposal gives fisherman a chance to increase the value of the fishery and more herring would swim off, helping the biomass remain strong.

I urge the Board to act on this proposal to help maintain a healthy biomass. Killing less herring and yet increasing the value of the fishery is a very positive thing. Open pounding will achieve this.

Thank you.

Bill Menish



Brad Marden
FV Omega Centauri
PO Box 2856
Homer, AK 99603

October 1, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

Mr. Jensen and Members of the Alaska Board of Fish,

I am an Alaska resident, a Kenai Peninsula Borough resident, and a Kodiak seiner, and would like to comment on the proposed UCIDA Agenda Change Request (ACR 11) and the Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area (KMA).

I strongly oppose the UCIDA's agenda change request (ACR 11). This is an attempt by UCIDA to make an allocative fish grab, concealed behind a thin veil of "new science". While genetic stock composition studies may offer ADF&G fisheries managers new tools to help with management, it would be dangerous and irresponsible to cherry-pick these studies for major allocation decisions. The breadth and scope of these genetic studies is inadequate for use in any management decisions at this time. ACR 11 fails to meet the Board's agenda change request criteria because it does not present any new information that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted".

I have been living in Alaska on the Kenai peninsula for 12 years, am married to a lifelong Alaska resident, and our two children were born and raised here in Alaska. I have fished for a living since moving to Alaska. Fishing is my sole occupation and is our family's primary income. I have deckhanded in both Cook Inlet and Kodiak waters, but deliberately chose to invest in a Kodiak seine operation and have fished Kodiak waters exclusively for the past 5 years. I intend to remain in this fishery. Setting rigid constrictions on sockeye harvest in June and July would negatively affect my ability to earn a living for my family.

Claims by UCIDA that call for a reallocation due to socioeconomic hardships on the Kenai Peninsula shouldn't be given serious consideration. In today's world, fishermen do not always reside where they fish. Many upper Cook Inlet fishermen do reside far away from Cook Inlet or even out of state, and many Kodiak fishermen live on the Kenai Peninsula, and proudly support local peninsula businesses, pay city and borough taxes, etc. Many of us spend our fishing dollars in the same stores as UCIDA fishermen. My point is that both Cook Inlet and Kodiak fishing fleets are mobile, modern, and



diversified, and that there is no justification for major reallocation based on regional hardships on the Kenai Peninsula.

I disagree allocative nature of UCIDA's proposal, but furthermore the mechanism for fisheries management proposed in ACR 11 is profoundly flawed. New management plans may consider genetic studies, but should not be centered around a relatively small genetic study. With regard to genetic composition research, we should be aware and wary of the limitations of this expensive, labor-intensive, fine-scale tool which only provides a momentary glimpse of the genetic makeup of one region's harvest. If we can't use genetic stock studies consistently and throughout the state, it is inappropriate to cherry-pick these studies to conclude about rates of salmon interception. New management plans should allow ADF&G to have maximum flexibility, both spatially and temporally. ACR 11 allows for much less flexibility in management and attempts to lock in rigid harvest allowances that would serve more to dramatically hinder the Kodiak fleet's efficient harvest of local fish than to aid the Cook Inlet fleet.

ACR 11 seeks to ignore the historical precedent that some component of every fishery is intercept in nature. Area M fishermen intercept some Kodiak-bound fish and this has always occurred. Kasilof fishermen intercept some Susitna-bound fish and this has always occurred. Kodiak fishermen have a strong historical precedent of intercept being a component of their overall harvest, and this has long been recognized by the BOF.

Fisheries management for the KMA is, and should continue to be, based on protection and sustainable harvest of local watersheds and regional KMA stocks. Significantly altering the management plan to prioritize the avoidance of "outside" fish (specifically upper Cook Inlet fish) at the expense of all other local considerations will result in poor management of local Kodiak streams. Biologists should be given the freedom to make in-season management decisions, rather than be locked in by hard dates and harvest allowances. Foregone harvest of pink and chum salmon, as well as overescapment of sockeye in the Karluk and other watersheds, would likely result from ACR 11.

The UCIDA agenda change request, ACR 11, simply does not meet the Board of Fisheries Agenda Change Request criteria. While an interesting tool, genetic stock studies provide no profoundly new information with regard to KMA harvest; they are simply a momentary glimpse of the makeup of harvest in one spot at one time. The UCIDA proposal is allocative in nature, and there is no compelling economic case for a reallocation. New management plans should be created when there is a specific, urgent, new need: this is not the case here.

Sincerely,
Brad Marden
FV Omega Centauri
Homer, AK



Brian McWethy
PO Box 8552
Kodiak AK 99615
907 942-5583

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
PO Box 115526
Juneau, AK 99811

RE: UCIDA Agenda Change Request and Genetic Stock
Composition of Sockeye Salmon in the Kodiak
Management Area

I am opposed to the UCIDA agenda change request because it does not meet the board's agenda change criteria. There is no error in regulation that needs correcting.

I'm a second generation salmon seine skipper, I'm 30 years old and have been running my own boat since 2009. I recently purchased a larger boat and have based my business plan on the fact I can fish where we have traditionally fished in Kodiak. I make 100% of my income salmon seining in the Kodiak area.

Any change needs much more scientific data. Please take into consideration the limits of this study and gather more information before you make any changes to the agenda.

Please don't disrupt our fishery for short sighted goals, incomplete studies, and pressure from competing fishing groups.

Sincerely,

Brian McWethy

A handwritten signature in black ink, appearing to read "Brian McWethy", written in a cursive style.



Bryan Horn
1776 Mission Rd
Kodiak, AK 99615
10/3/2017

Chairman John Jensen
Alaska Board of Fisheries
Board Support Section
Po Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda change request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area.

I Bryan Horn, oppose the UCIDA agenda change request. This request does not meet the Boards agenda change request criteria. The stock composition study did not provide any new information into fish caught in the Kodiak area. It did however, provide an anomaly in which Kodiak seiners harvested Cook Inlet sockeye in the Igvak section of the Kodiak Area. There have not been any errors in regulations and Cook Inlet sockeye caught in the Kodiak area do not create a conservation concern.

I am a third generation Kodiak salmon seine fisherman I am 35 years old. Salmon fishing in Kodiak has sustained my family for generations. My grandfather began salmon seining in 1947, at this time he fished Cook Inlet, Kodiak and Chignik. This was prior to area registration. My father has been involved in the salmon fishery on Kodiak for 50 years. I have been on the boat my entire life. At the age of 13 I began doing full share fill in trips as a crew member. When I was 14 I completed my first full share season as a crew member. I purchased my Kodiak salmon seine permit when I was 16 years of age. This summer was my 16th year as captain of a seine boat in Kodiak. I now have five children in my household, three of which already have began making commercial salmon trips with me, while the other two can't wait until they are old enough.

This agenda change request does not make any sense because it derives from an anomaly of Cook Inlet sockeye caught in the Igvak section of the Kodiak area. However, their request does not address the Igvak section at all, they are targeting the fishery around Kodiak Island itself by tying the openings and closures to the North Mainland fishery. Kodiak salmon fishermen already have limited fishing time in the North Mainland section of the Kodiak area. The reason is for Cook Inlet sockeye to pass through the Kodiak area unabated. If this agenda change request were to pass it would create a major gear conflict in the Kodiak area between gillnetters and seiners. This would also create a reallocation of the salmon caught in Kodiak.

The Cook Inlet sockeye caught in the Igvak section of the Kodiak area were traveling south when harvested. This leads me to believe they probably have traveled or will travel through the Chignik area as well. If the UCIDA request were to pass it would create a precedence for management plan changes all over the state. Which in itself could be



detrimental to the sustainability of salmon statewide. Look at Chigniks Pink salmon harvest for this last summer, a record catch by far. Were all those pinks traveling through the Chignik area destined for a Chignik area river system? Seems highly unlikely by looking at their historic catch numbers for pink salmon, these fish were most likely trying to return to Area M or Kodiak when they got caught. The Kodiak area Pink salmon came in historically late this year, as well as the Coho returning to Cook Inlet came in late. These are things we cannot control, we cannot control where and when fish swim. What we do know is that all of these fisheries have been around for 100 years, these fisheries have sustained quite remarkably with the current well thought out fishery management strategies.

This proposal does nothing to address the economical effects to the City of Kodiak. Not for just the fishermen and processors involved in the Kodiak Salmon Season, but the trickle down effect to the entire town. The diesel mechanics, local welders, marine gear stores, all the way down to the local four wheeler shops. Everyone in Kodiak feels it when there is a bad salmon season. We had a perfect example of this last winter after the disastrous salmon season in 2016. Kodiak is different than other Areas of the state in that fifty-three percent (53%) of Kodiak Salmon Seiners live in Kodiak year round, so if the salmon season is poor the entire town feels the effect.

The Kodiak Area management plan is in effect to manage local stocks of salmon and to keep everything in balance around the state. Such as the Cape Igvak management plan to keep Chignik in mind and the North Shelikof management plan to keep Cook Inlet in mind. Because the North Shelikof management plan already exists proves that no new information has been provided from the stock composition study. There are no plans in place that keep the local Kodiak stocks in mind except for the Kodiak area management plan. If this plan was to be overhauled for the benefit of another area in the state it will create multiple unforeseen problems in and around the local Kodiak salmon stocks. It will make it impossible for the Alaska Department of Fish and Game to manage our local stocks efficiently. Which would be detrimental to the Community of Kodiak.

The UCIDA agenda change request does not meet the Boards criteria for an agenda change request. There has been no new information provided, there has not been any errors in regulation and there are no conservation concerns with Cook Inlet sockeye harvested in the Kodiak area.

Sincerely yours,

Bryan Horn
Abby Brown
Madden Horn
Haven Horn
Ganyon Nelson
Raylan Brown
Julianne Horn



Submitted By
Celeste Beck-Goodell
Submitted On
10/2/2017 12:24:21 PM
Affiliation

Phone
9079427771
Email
cbgoodell@gmail.com
Address
P.O. Box 3108
Kodiak, Alaska 99615

I am writing in opposition of the UCIDA agenda change request brought against the Kodiak Management Plan, for multiple reasons. These reasons include the genetic stock composition study did not produce ground breaking information and the Cook Inlet sockeye caught around Kodiak does not pose a threat to the strength of the Cook Inlet sockeye run. Overall there is no change in the Kodiak Management Plan that needs to occur.

As the daughter of a family that owns two set net permits in the Northwest Kodiak section I have been involved in this fishery since birth. For going on 24 years my family has depended on salmon to produce more than 90% of our annual income. The fish caught between June 23rd to July 31st are a large portion of our season, during that time frame we catch all salmon species: sockeye, coho, chum, and pinks. As my parent's age up it would be impossible for a young person to make a living from salmon if the becomes harvest more restricted.

The agenda change request is completely one-sided and is not rational. The residents of Kodiak were not taken into consideration when this ACR was written. The natural variability of sockeye runs, financial impact for Kodiak and the impact on Kodiak sockeye stocks were not taken into account. Sockeye travel all over in the Pacific Ocean feeding in their adult life before returning home to their river systems, tracking every fish would be an unimaginable feat. The size of sockeye runs change between years in river systems all along the west coast, small and big years are natural. In Kodiak every summer there is an influx of people coming to crew for salmon operations; between 2014 to 2016 20 million dollars were made from salmon between June 23rd to July 31st. Those 20 million dollars makes up on average 29% of Kodiak's salmon revenue. The final reason the ACR is one-sided is that the continued health of the Kodiak sockeye systems were not taken into deliberation. The forgone catch of local sockeye and pink salmon would cause over-escapement leading to stock depletion in the Kodiak Management Area.

The Kodiak Management Area is a historical fishery that has been occurring in the same areas for hundreds of years. The Kodiak Management Plans are working because they focus on the health of local stocks and only allow harvest based on availability.

The UCIDA agenda change request does not meet the criteria for a Board of Fisheries Agenda Change Request, because the impact on Kodiak residents and sockeye stocks were not taken into account. Cook Inlet sockeye caught around Kodiak has not posed a threat to the strength of the Cook Inlet sockeye run over the years. There is no new information being presented in the agenda change request and no regulations need to be corrected or changed.

Sincerely,

Celeste Beck-Goodell



Charles W. Treinen
2054 Arlington Drive
Anchorage, Alaska 99517
Phone: (907) 345-2414 ♦ Cell: (907) 229-2478
E-mail: cwtreinen@aol.com

October 2, 2017

John Jensen, Chairman
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

Mr. Jensen and Members of the Board:

As a Kodiak salmon seine permit holder, I urge you to refrain from considering alteration of any Kodiak salmon management plans until the in-cycle meeting in 2020. I have not participated in the fishery in recent years, but I have retained the permit in anticipation of returning to fish the area in the future. Since S01K permit values--like all other limited entry permits--are based on the opportunities afforded a permit-holder, any change in those opportunities is crucially important and should only be done under the strict guidelines of the ACR policy. ACR 11 does not fit the ACR criteria of providing new information and is ridiculously complex and unworkable.

I was actively fishing the Kodiak Area during the last wave of Cook Inlet hysteria that resulted in the 1989 North Shelikof Management Plan. Board action on that plan was primarily related to sockeye catches that occurred on a record return to Upper Cook Inlet in 1989 and restricted the fishery primarily based on one year's catch. Fallout from that 1989 board action was partially responsible for adoption of the Mixed stock policy 5AAC 39.220 (d) that—for practical reasons--states "...Natural fluctuations in abundance of stocks harvested in a fishery will not be the single factor that identifies a fishery as expanding or new." Although many advocates of 'weak stock' management had hoped to use the mixed stock policy to restrict perceived harvest on their 'pet' stock, ADF&G staff realized that relative abundances of stocks needed consideration in order to comply with constitutional mandates of MSY.

It should also be noted that at the 1989 meeting the three-mile territorial waters limit would be subsequently be enforced limiting the previous area fished by the Kodiak fleet. That action alone should have been sufficient to ensure that Cook Inlet could not be 'corked off' by the Kodiak fleet—if that was ever a realistic concern.



ACR 11 is an unworkable solution to a problem that only exists as a political expedient to the more acute problems facing the proposer and should be rejected for a variety of reasons. It is difficult to accept that there is anything new or time-critical enough to consider changes to Kodiak Management Plans out of cycle especially since 28 years has passed since the last action on the same subject. Please reject ACR 11.

Sincerely,

Charles W. Treinen



Submitted By

charlie johnson

Submitted On

10/3/2017 2:07:20 PM

Affiliation

kodiak commercial salmon fisherman

I am writing to state my opposition to the UCIDA agenda change request. I do not know if this request even meets the boards criteria for a change request. There has not been a conservation concern, the board knew that there were some cook inlet sockeye in the kodiak area when the kodiak management plan was adopted and there is no error in regulation. I have been a seiner in kodiak for 23 years and this would have huge effect on the kodiak fleet in a negiteve way. I don't believe a three year study should change the kodiak management plan when it has been working for almost 30 years. Cook inlet fish can show up any where when different storms and tides combine, chignik, area m, kodiak. What about kodiak fish getting intercepted? are we going to start studies to see who we have to shut down. Lets keep the kodiak management plan. Please do not totally distrust one fishery for minimal gain to another. thank you.



Submitted By
Christopher Johnson
Submitted On
10/2/2017 3:10:57 PM
Affiliation

Christopher Johnson
P.O. Box 151
Kodiak, AK 99615

October 2, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area.

Dear Chairman Jensen and Board Members,

I'm a second-generation Kodiak fisherman. I purchased my vessel in 2012 and I'm one of the younger fishermen in the Kodiak fleet and I rely entirely on fishing for my income. I'm greatly concerned that the UCIDA agenda change request would put me and my family out of business. It's no exaggeration to say that if I were shut down during the 5 weeks as suggested in late June and July I wouldn't make my boat and permit payments, not to mention living expenses. It's particularly important for younger fishermen at the lower end of the production curve to have fishing time to pay our debt services in order to continue being rural fishermen. These closures will disproportionately impact the next generation of Kodiak salmon fishermen, and it's been well documented that barriers to entry and upward mobility are already challenging enough.

I know from experience that the presence of Cook Inlet bound sockeye in the Kodiak Management Area varies substantially from year to year and it is not predictable. This whole issue in the ACR and the genetic study seems to ignore or gloss over our local sockeye runs and the fact that our management plans are based on our local sockeye, and it's not just Karluk as Cook Inlet fishermen seem to think! Here in Kodiak we rely on early run sockeye into Ayakulik on the South end of the Island, Little River as well as Karluk on the West side, Little Kitoi, Litnik, Pauls Bay, little Waterfal, Foul Bay, Thorsheim, and Malina Creek on Afognak Island, Saltry on the East side of Kodiak island and then Kaffia Bay, Swishshak, Missak on the Mainland --- and that's just the early run. It's critical for the Board to understand that the Kodiak fishery is a fishery focused on local stocks **NOT** Cook Inlet sockeye.

I can't see how the Board can approve an agenda change request that is primarily an allocative proposal. It doesn't meet the Board's agenda change request criteria. I think that Cook Inlet fishermen, like fishermen in Kodiak or elsewhere, should wait until the regular Kodiak Board cycle in 2020 to have any allocative discussions.

Fishermen I know in Cook Inlet keep talking about increased efficiency of the Kodiak seine fleet and all of the new "super 8s". The Board needs to know two facts. First, we have fewer seine vessels fishing in Kodiak today than 10 years ago and significantly fewer vessels than 20 years ago. Second, I've looked at the active vessels and there is only one new "super 8" that actually fishes Kodiak salmon. Consequently, both the efficiency and the "super 8" assumptions by so many in Cook Inlet are simply false.

I hope to have a future as a salmon fisherman in Kodiak and I hope that my family has a future here. I worked hard to get and finance my 38-foot boat and permit and I continue to work hard each salmon season to provide for my family and future. I know that the UCIDA proposal will be the end of that dream. Please see the Kodiak sockeye genetic study in context of the full complexities of our Kodiak salmon fishery and let the issue follow the normal Board cycle.

Sincerely yours,

Christopher Johnson

Owner/Operator of the F/V North Star



Submitted By
Chrystal Freerksen
Submitted On
9/23/2017 10:29:51 PM
Affiliation

Phone
8015565831

Email
Chrystaljack@hotmail.com

Address
1112 Malutin Lane
Kodiak , Alaska 99615

I am against this in every way possible. The livelihoods of a majority of kodiak residents rely on commercial fishing. This will our such an economic strain on our entire community.



Chuck McWethy
PO Box 8552
Kodiak AK 99615
907 942-5541

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
PO Box 115526
Juneau, AK 99811

RE: UCIDA Agenda Change Request and Genetic Stock
Composition of Sockeye Salmon in the Kodiak
Management Area

Fish Board,

I am opposed to the UCIDA agenda change.

I'm the owner/operator of the F/V Shining Sea. I've seined since 1986 when I bought a seine permit. I've fished every except 1989 when the Exxon Valdez Oil Spill closed the salmon season. 90% of my family's income comes from salmon seining in Kodiak. My two sons (25 and 30) were raised fishing with me and have bought boats and Kodiak seine permits. 100% of their income comes from Kodiak seining.

Changing allocation from a 3 year study is a knee jerk reaction to a short study, taken during anomalous climatic conditions, run timing and migration patterns and water temperatures. These were all especially anomalous in 2016. These years were not "typical" years.

Proposed changes will alter fishing pressure-affecting all salmon fisherman and our bottom lines.

Any change needs much more scientific data. This is a big deal for Kodiak and will have serious effect on our livelihoods. Please don't react to an anomalous studies and pressure from other user groups.

Please get more information from more years in order to make a more realistic decision. This is our livelihood and any change will have far reaching effects which will be felt for generations

Sincerely,

Chuck McWethy

A handwritten signature in black ink, appearing to read "Chuck McWethy", written over a light blue horizontal line.



Clint Johnson

P.O. Box 909
Kodiak AK 99615

Oct 3, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P. O. Box 115526
Juneau, AK. 99811-5526

As a Kodiak fisherman I oppose the UCIDA Agenda change as it does not meet agenda change criteria, it does not present any new information or correct unforeseeable effects of the existing management plan, there is not a conservation issue or error in regulation. It seems to be a political grab to allocate more fish to a specific group at our expense. Do we restrict area M for kodiak fish next? Or just go back to terminal harvest fisheries and fish traps?

I have been fishing salmon for 50 years already, and primarily a west side kodiak fisherman, the natural variability if our runs and direction they come in from does not lend itself to management from another District, closing areas for fish that may come by can cause local conservation/management issues.

Salmon are common property in our state, as such do not belong to their destination, sometimes our fish don't show up. Economic costs to individuals and the community can be severe if these runs are not managed for local harvest.

We have 57 management areas for local stocks in Kodiak, all historically fished, no new areas, and are seeing adequate returns with our current management, No new targeting of cook inlet fish occurs, since addressed by 1989 changes.

This UCIDA agenda change does not meet the request criteria, it is not a conservation issue and current regulations are working.

Sincerely

Clint Johnson
F/V Kaiwik



**Concerned Area M Fishermen
35717 Walkabout Rd.
Homer, AK 99603**

**Alaska Board of Fisheries
John Jensen, Chairman
Board Support, P.O. Box 115526
Juneau, AK, 99811-5526**

Re: Agenda Change Request (ACR) #12

Dear Mr. Jensen and Board of Fisheries members:

Concerned Area M Fishermen (CAMF) is requesting that the Board not support ACR #12, which you will be considering at your October 17 work session. CAMF represents salmon drift fishermen who fish the Alaska Peninsula and, though we don't participate in the fishery affected by this ACR, CAMF has always supported a sound, consistent process by which the Board considers requests such as this one.

In our view, none of the Board's established criteria for adoption of an ACR is met by this request. This ACR is predominately allocative in nature, and therefore not an issue that should be considered at an out-of-cycle meeting. Allocative issues, such as this one, should be vetted and debated with a proposal submitted for consideration at a regular meeting during the normal Board of Fisheries cycle.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Steve Brown". The signature is fluid and cursive, with a long horizontal stroke at the end.

Steve Brown, president



Conrad Peterson
P.O. Box 29
Old Harbor, AK 99643

September 25, 2017

John Jenson, Chairman
Alaska Board of Fisheries
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request #11 and
Genetic Report.

Dear Fisheries Board and Chairman Jenson,

The UCIDA agenda change request should not be approved by the Board. The proposal is just an attempt to reallocate fish and is not based on a biological concern or an emergency situation. The Board should just rely on the normal board cycle to address proposed changes to Kodiak Management Area finfish fisheries.

I've am a commercial fisherman and sportfish guide living in Old Harbor. I serve on the Old Harbor City Council and have been a Koniag Inc. board member for 10 years. I travel frequently to advocate for my community and our region. I know how critical the salmon fishery is to Kodiak and especially to Old Harbor. I also know how an issue can develop that seems more important than it actually is. This "new" genetic stock study on sockeye in the Kodiak management area may seem like a new thing but I see it more as providing additional information about what we already know. It's sort of like seeing a Bear with your eyes and then looking at it with binoculars. It's still a bear but you just see it with more detail. That's what the genetic study does. The added detail may seem important but it's simply more information about what has been occurring for as long as Cook Inlet bound salmon have been traveling in the Gulf of Alaska.

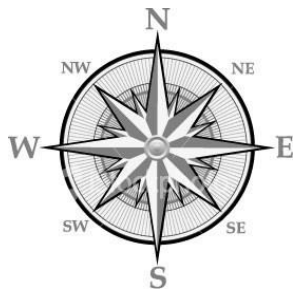
In my role as a Koniag board member, we have shifted some of Koniag's resources to work toward protecting our shareholder's fishery interests. We see substantial erosion of fishing opportunities for Kodiak's native people, especially in the rural communities. Further reduction of salmon fishing opportunities will push our native people to seek alternatives, perhaps through federal legislation, to continue access to salmon available locally.

In summary, this isn't the time to take up changing Kodiak's Finfish Management Plans. Let the respective stakeholders look to the regular Board cycle to address concerns. This is fair and will provide time to give perspective and, perhaps, additional information.

Very truly yours,

A handwritten signature in black ink, appearing to be "Conrad Peterson", written over a horizontal line.

Conrad Peterson



COOK INLET FISHERMAN'S FUND

Non-Profit Advocate for all Commercial Gear Types in Area H
PO Box 39408 / Ninilchik, AK 99639 / Phone 907-252-2752 / Fax 907- 567-3306

ALASKA BOARD OF FISH, BOARD SUPPORT SECTION
P.O. Box 115526
JUNEAU, ALASKA 99811-5526

RE: AGENDA CHANGE REQUEST 11
ATTN: JOHN JENSEN, CHAIR / BOARD MEMBERS

OCTOBER 3, 2017

CHAIRMAN JENSEN AND BOARD MEMBERS,

COOK INLET FISHERMAN'S FUND (BOARD OF DIRECTORS) SUPPORTS ACR 11 FOR THE BOARD OF FISH TO ADDRESS THE ANNUAL IN-SEASON INTERCEPTION/HARVEST LEVELS OF COOK INLET BOUND SOCKEYE SALMON BY THE SEINE FLEET WITHIN THE KODIAK MANAGEMENT AREA. THE BOARD OF FISHERIES RECOGNIZED THE ALLOCATION ISSUE IN 1989 AND DIRECTED THE DEPARTMENT TO LIMIT COOK INLET BOUND HARVEST LEVELS TO A 50,000 FISH CAP (5AAC 18.363 NORTH SHELIKOF STRAIT / SW AFOGNAK) ALONG WITH A 15,000 SOCKEYE CAP PROVISION WITHIN AFOGNAK/SHUYAK/MAINLAND.

SOCKEYE SALMON MANAGEMENT IN KODIAK DIRECTS THE DEPARTMENT TO MANAGE FOR LOCAL STOCKS AND EXPLICIT; I.E., STATED WITHIN EVERY PREAMBLE BY DISTRICT IN THE KODIAK MANAGEMENT AREA. THE BOARD'S INTENT HAS BEEN HISTORICALLY CLEAR ON THIS SUBJECT (LOCAL STOCKS VS. NON-LOCAL) AND MINIMIZE HARVEST OF COOK INLET SOCKEYE SALMON.

IT IS NOW DOCUMENTED BY GENETIC ANALYSIS (G.S.I) AND STOCK IDENTIFICATION OVER THE LEVELS OF COOK INLET BOUND SOCKEYE HARVEST IN-SEASON WITHIN THE KODIAK MANAGEMENT AREA - GROSSLY EXCEEDS THE BOARD'S DIRECTIVES. THESE LEVELS RANGE FROM HUNDREDS OF THOUSANDS OF COOK INLET ORIGIN SOCKEYE TO OVER A MILLION HARVESTED ANNUALLY AND TO THE DETRIMENT OF COOK INLET FISHERIES. TIME AND AREA MANAGEMENT CONSTRAINTS ARE UNDULY PLACED ON COOK INLET COMMERCIAL FISHERIES WHILE KODIAK EARLY JUNE SEASON OPENINGS OCCUR WITH COUPLED CONTINUOUS OPENINGS PER WEEK IN DISTRICTS OUTSIDE THE CAPES. THE LINES NEED TO BE REDRAWN BACK TO WITHIN THE CAPES - HEADLAND TO HEADLANDS AND MANAGE ESTABLISHED TERMINAL HARVEST AREAS MORE EFFECTIVELY ON LOCAL KODIAK SALMON STOCKS.

THE G.S.I. SUB-STOCK ANALYSIS CONFIRMS THE VARIABLE RUN TIMING EFFECT ON COOK INLET STOCKS (PRIMARILY IDENTIFIED FROM KASILOF AND KENAI BOUND STOCKS) AND COMPLETELY SKEWS THE STOCK RECRUITMENT DATA / BROOD TABLES ON THESE STOCKS.

FURTHERMORE, USE OF THE SIBLING MODELS ON THESE STOCKS ARE COMPROMISED BY KODIAK INTERCEPTION AND CAUSED UNCERTAINTY IN THE FORECAST MODELS ON THESE STOCKS; E.G., KENAI SOCKEYE MANAGEMENT IS PRIMARILY BASED ON FORECASTED RUN SIZE THROUGH THE MID-POINT OF THE RUN (JULY 19TH IN-SEASON) AND RARELY CHANGED IN-SEASON OR AFTER JULY 24TH - WHICH



FURTHER COMPLICATES BOTH BIOLOGICAL AND RESOURCE MANAGEMENT ISSUES IN THE COOK INLET BASIN (UPPER COOK INLET MANAGEMENT PLANS). SIMPLY PUT; 50,000 FISH AGE- 4 KASLOF SOCKEYE SALMON OR 100,000 KENAI AGE- 4 (LESS NUMBERS OF SOCKEYE WITHIN THE RETURN YEAR) CAN FORECAST LESS AGE-5 THE FOLLOWING YEAR BY RETURNS AND PREDICT POOR RECRUITMENT / PARENT YEAR AFFECTS AS A CAUSATION EVEN THOUGH THOSE FISH WERE PLACED IN KODIAK FREEZERS AND UNACCOUNTED FOR BUT PRIMARY AFFECT WAS ATTRIBUTED TO KODIAK INTERCEPTION (G.S.I. DATA).

IN CLOSING, BASED ON "NEW INFORMATION" (G.S.I) THE BOARD SHOULD TAKE UP ACR 11 AND COMPORT KODIAK MANAGEMENT PLANS TO THE BOARD'S INTENT ON "LOCAL STOCKS" CONSISTENT WITH DIRECTIVES AND TO THE DEPARTMENT WITH CONSISTENT APPLICATION (THE STATEWIDE SALMON FISHERIES POLICY AND MIXED STOCK SALMON POLICY). THIS IS THE THIRD ATTEMPT TO THE BOARD TO ADDRESS THIS ISSUE (KODIAK MEETING, UCI BOF MEETING, AND NOW AN ACR. PLEASE CONSIDER THE ABOVE AND ACCEPT THIS ACR WITH ACTION DESCRIBED ABOVE. AFTER ALL, THE G.S.I RESEARCH OBJECTIVE WAS FOR THE BOARD TO MAKE TIMELY AND INFORMED DECISIONS. THANK YOU.

MARK DUCKER,
VICE-PRESIDENT, ON BEHALF OF THE C.I.F.F. BOARD



October 1, 2017

Dear Alaska Department of Fish and Game Board –

Please accept this request on behalf of the F/V Taurus, Dan, Jane and Brett Veerhusen and Mark Recalma. Our family has participated in the Dutch Harbor food and bait herring fishery for over two decades. Over the past decade, our Alaska-based vessel and crew has been one of three vessels that harvest this premium bait product for the entire fishery. Yet, during this same period, we have witnessed drastic changes in the patterns of the herring, and during the 2017 season we requested the ADF&G Commissioner to issue an emergency order for our fishery. We write to the ADF&G Board to generate a proposal to task ADF&G staff to create a policy that, based on evidence provided below, changes the management of the Dutch Harbor food and bait herring fishery to account for the following:

- Change the soonest possible opening for the Dutch Harbor food and bait fishery to be July 1st – instead of the currently written regulation of July 15th
- Combine the 14% gillnet quota harvest within the 86% seine quota harvest. The current structure of rolling the gillnet quota over to the seine quota is inadequate for the current fishery and the lack of any effort from the gillnet fleet.
- Increase the GHL for the Dutch Harbor food and bait herring fishery from 7% to 10% of the allocation to the Togiak district sac roe fishery.

During the 2016 fishery, it was reported that the herring returned to the area earlier than ever before. Unbeknownst to our vessel and the two other vessels that harvest herring for various processors, we were too late to harvest much of the quota as the herring had already left the fishing grounds. This caused negative consequences not only to our fishing family's bottom-line, but greatly affected the availability of local, Alaska-caught bait that is widely used in Alaskan fisheries such as crab, cod, halibut and black cod. Fishermen throughout the state of Alaska depend on the Dutch Harbor herring fishery for premium, local, high-quality bait product. Last year, roughly 200 out of the 2,000 tonne quota was harvested, leaving fishermen and processors scrambling for other bait products, much imported from other states and countries. For example, the summer brown crab fishery was dramatically affected due to the unavailability of our Dutch Harbor herring. Moreover, we were not able to harvest additional quota purchased from the State that would have provided much needed income for the State of Alaska.

During the 2017 fishery, we received reports from Trident Seafoods in Akutan and local Dutch Harbor fishermen that the biomass of herring returned near-shore in the Dutch Harbor area. We requested (along with the Alaska Bering Sea Crabbers and Pacific Seafood Processors Association) to the ADF&G Commissioner to issue an emergency order and open the fishery on July 13th, the soonest possible date the fleet could mobilize and be on the grounds. We stopped fishing salmon in Chignik,



rushed down to Dutch Harbor and the fleet caught almost half of the herring quota in the two days early the fishery opened. In addition to these events, we've received time-stamped video footage of large schools of herring in Unalaska Bay dated June 26th, 2017. However, the current regulations state the initial purse seine herring fishing period may occur as early as noon July 15 (5 AAC 27.610(e)(2)(B)). For these reasons, we are compelled to request the regulations be changed so that the fishery can be opened as soon as July 1st of each calendar year. This is in the public's best interest to maintain a viable food and bait herring fishery for Dutch Harbor, the surrounding communities and the various fisheries who depend our bait.

As written, the *Dutch Harbor Food and Bait Herring Fishery Allocation Plan* (5 AAC 27.655) divides the allocation by gear type: 86% for the purse seine fishery and 14% for the gillnet fishery and that the gillnet quota to roll over to the seine quota should no gillnet quota be harvested by July 20th. There has been no harvest or effort by gillnetters for over a decade. The current regulations are inadequate and negatively affect the seine fishermen's efforts, as seiners must wait until this date to harvest additional quota. We request that there be no separation of gear types or quota allocations.

Because of how poor the 2016 harvest was, many of our markets relied on buying bait from other sources because of the lack of certainty the 2016 fishery created. The fleet did not harvest a couple hundred tonne of the 2017 quota because (prior to the season) many markets felt it was in their best interest to create certainty for their fishermen and sourced what would otherwise be Dutch Harbor herring from other species including saury, which is imported from Africa. These baits are not local and the State of Alaska and local communities have little to benefit from importing these bait products. The 2017 fishery allowed the fleet to rebuild our lost markets and generate continued and growing demand for the Dutch Harbor herring. Demand is also increasing for local herring from the newly created small-boat state-water Pacific Cod fishery. What better way to support a new and vibrant state-water fishery than to also support and grow a vibrant and local bait herring fishery. Moreover, a "rollover" provision was adopted during the 2001 BOF meeting (5 AAC 27.655(b)); during years when herring harvest exceeds the allocation, the amount of harvest over the allocation shall be deducted from the next year's allocation, by gear group. This provision is one-sided and there is no management structure that accounts for years of loss of harvest be available for future years, such as in 2016 and 2017. In order to grow the viability and meet market demands, we request the *Bristol Bay Herring Management Plan* (5 AAC 27.865) be adjusted from the current 7% allocation of the Togiak Districts sac roe herring harvest to the Dutch Harbor food and bait fishery to 10% allocation of the Togiak Districts sac roe herring harvest.

We are compelled to reiterate to the ADF&G Board that Article 08, Section 8.1 of the Alaska Constitution states "It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest," and Section 8.4 states "Fish,



forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses." Much of the Togiak herring fishery's harvest is shipped internationally, used for food product or fishmeal product. The Dutch Harbor food and bait herring fishery stays local and is purchased by local processors and fishermen. By moving our three requests forward, the ADF&G Board will strengthen the Board's commitment to maximizing the sustained yield and use of local bait products to be used throughout many Alaska federal and state water fisheries.

It is imperative that fishermen and processors who depend on the herring we harvest get earlier access to harvest, to combine the gillnet quota harvest within the seine quota harvest and increase the TAC of the fishery.

Thank you for your consideration.

Dan, Jane & Brett Veerhusen
Mark Recalma

****Below, please see an article published on July 21st, 2017 in the *Dutch Harbor Fisherman*. The author corrected the statement in paragraph three in a later article (http://www.thedutchharborfisherman.com/article/1731seiners_leave_herring_to_chase_salmon) noting that the earlier opening made a major difference since over 700 tonne was harvested.**

http://www.thebristolbaytimes.com/article/1729herring_return_much_to_delight_of_fishermen

**Herring return, much to delight of fishermen
July 21st | Jim Paulin**

The herring have returned at a convenient time, after what seemed like a biomass boycott last year.

Last year's Dutch Harbor food and bait herring fishery was a bust, with a harvest of just 208 tons, out of a quota of 2,166 tons.

The fishermen worried that because the season opened on the same day as usual, July 1st, maybe that was too late, that the herring had come and gone. So this year, they won an earlier opener by two days, on July 13, although it probably didn't make much difference.

This year, they're catching the fish at a good pace, with just 200 tons left in the 1,485 ton purse seine quota after five days of fishing, said Area Management Biologist Lisa Fox of the Alaska Department of Fish and Game in Sand Point.



The 242-ton gillnet quota becomes available to the seiners on July 20, if the gillnetters don't take it, and as of Tuesday, no gillnet boats were registered, she said.

"All of us laugh because years ago, the fleet used to complain when we needed to travel to Cape Cheerful. Now, we're fishing six or seven hours away from Dutch Harbor in unprotected waters, often heavy swell and sketchy weather. It get's pretty dicey handling a couple hundred ton and a 100-foot tender alongside," said Brett Veerhusen, who fishes with his family on the F/V Taurus, a 58-foot purse seiner. He said the F/V Taurus was one of three boats rounding up the herring, which is sold for bait to crab fishermen.

The F/V Taurus was taking a "break in the middle" from fishing salmon in Chignik, and after then it will return to the south Alaska Peninsula fishing area for more salmon, and then return to Homer, he said.

"With the herring changing their patterns, we're extremely thankful for our cooperative relationship with ADF&G in Sand Point (which manages this fishery) and the commissioner's office. The department was quick to make sure the fleet capitalized on the early return of herring. We've been doing this fishery for decades and the fish are constantly changing their behavior and migratory patterns. It's very helpful to adapt alongside decision-makers. The 2017 season is off to an excellent start and so long as the herring stay local and near the surface, we'll be able to harvest bait herring for all the other fishermen who use this high-quality, local product," he said.

Unlike in 2015, the whales haven't gotten in the way of the fishing vessels, though there's the normal amount of humpbacks which are evenly spread out, he said. This year, it's the seabird numbers that are astounding, with what looks like "hundreds of thousands of murre everywhere," Veerhusen said.



Submitted By
Danielle Ringer
Submitted On
10/3/2017 5:29:06 PM
Affiliation

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seaglass.ringer@gmail.com
Address
PO Box 151
Kodiak, Alaska 99615

Danielle Ringer
PO Box 151
Kodiak, AK 99615

October 2, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in The Kodiak Management Area

Dear Chairman Jensen and Board Members,

I am writing to vehemently oppose the UCIDA agenda change request (ACR) and its foundational arguments that will be addressed at this Work Session.

My husband is a second-generation Kodiak salmon fisherman and I grew up in a Homer fishing family. We financially borrowed heavily to get into the salmon seine fishery here in 2013 and continue to work hard each summer to weather the ups and downs of fishing. Due to barriers to entry into other fisheries, our operation and overall livelihood chiefly relies on salmon fishing in Kodiak. I work on land as a fisheries anthropologist and graduated last year from the University of Alaska Fairbanks with my Master's degree in Political Ecology of Fisheries. My graduate work focused on the "graying of the fleet" and next generation of Alaskan fishermen. My comments on this issue are therefore informed by both personal and professional perspectives on the overall sociocultural and economic importance of the Kodiak salmon fishery and the systematic analysis of the recent genetic stock composition study.

I am extremely concerned that UCIDA's ACR and foundational arguments would put our family operation out of business. Part of our strategic plan to buy into the Kodiak salmon fishery was the historic nature of it. We expect feast or famine cycles due to ecological or market changes and built some variability into our business plan. However, we cannot accommodate a loss of five weeks of fishing time as proposed by UCIDA for arbitrary and political reasons. This ACR and any foundational arguments stemming from it are inappropriate on multiple levels and have no place moving forward. In addition to having Kodiak region wide negative sociocultural and economic impacts, on a personal level I believe it could cut us out of the fishery. These closures will disproportionately impact the next generation of Kodiak fishermen and my research has documented that barriers to entry and upward mobility are already challenging enough in this region of Alaska.



This ACR clearly does not meet the Board's policy and criteria for changing the Board agenda. Furthermore, the policy states that the Board will not accept an ACR that is predominantly allocative in nature, which this ACR is. History shows the Cook Inlet region trying to reduce the viability of Kodiak's salmon fishery for its gain and this latest attempt to use the Kodiak Management Area genetic stock composition study is another example of their relentless efforts. The KMA genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in the Kodiak create a conservation concern or have conservation purpose or reason. Additionally, there is no error in regulation that needs correcting. I think it is important to address what kind of precedent accepting this ACR would set. Salmon are a complicated and valuable fishery resource, but thankfully we have a mixed stock policy to guide management throughout Alaska. Please do not set precedent with this ACR that could change how salmon are fundamentally managed statewide.

As stated above, ADF&G's genetic study of the stock composition of the commercial harvest of sockeye salmon in the KMA 2014-2016 does not provide new information to fishermen or managers, it merely provides further specifics on what stakeholders have always known. As salmon are migratory creatures their presence or absence in certain areas of the ocean environment are expected to have interannual variability and are managed as such. Though I do not wish in any way to attack the scientific method utilized in this study, it is clear that the study is highly focused at the micro level and does NOT contextualize the macro view of the complexities involved in the KMA. Furthermore, I understand that this study was not designed nor intended to be the basis for allocative changes and to use it in such a way would be inappropriate. I believe that accepting UCIDA's ACR or moving forward with any changes to the KMA plan based on their foundational arguments would result in a highly disproportional negative impact on the Kodiak region.

This ACR also simply ignores the natural variability of both Kodiak and Cook Inlet sockeye runs. Foregone harvests of local sockeye in Kodiak that would occur under this ACR proposal would cause disastrous over-escapement of Kodiak stocks. This would also put pink and Chum harvests in the KMA at risk and overall fishery closures would drastically restructure the fleet's geographical character and further disenfranchise young and new fishermen. Furthermore, UCIDA's ACR would undeniably tie the hands of Kodiak's fisheries managers by removing their tools to manage the KMA, threatening the long-term viability of the region's socioculturally and economically important salmon resource.

Commercial salmon fishing in the Kodiak region is inherently linked to cultural identity, intergenerational values and coastal fishing livelihoods. Motivations to fish among Kodiak fishermen include valuing independence and tradition, knowledge transmission and pride in harvesting wild food. Traditional and cultural values surrounding salmon fishing activities demonstrate the importance of embedded place-based fishing livelihoods. Fishing activities are also a cultural keystone practice in the Kodiak region, particularly so for Alaska Native Alutiiq people with thousands of years of ancestral ties to ocean resources. Furthermore, fishing serves as a context within our rural communities for socializing youth and newcomers to the archipelago and commercial and subsistence salmon fishing activities are also often linked, which provide for maintaining food security. The economic impact of UCIDA's ACR on Kodiak would be devastating but I hope you see that so much more is actually at stake here. I believe this ACR would severely negatively impact the sociocultural ties that hold together our unique and complex archipelago. I urge you to fully consider what this ACR is threatening for the Kodiak region.

In closing, I cannot see how the Board could accept UCIDA's ACR, as it is primarily allocative in nature and it does not meet the Board's agenda change request criteria. My family relies on the Kodiak salmon fishery as it is currently managed as we develop our fishing business and I hope that we have a future in the Kodiak region. Please do not pull the rug out from under us by severely depressing the KMA salmon fishery in an effort to appease Cook Inlet. My family, like other young Kodiak region fishermen, is working hard to move up in this industry and we look to the Board of Fisheries for support as we do so. I urge you to reject UCIDA's ACR, to see the Kodiak sockeye genetic study in context of KMA's full complexities and to let this issue follow the regular Board cycle.

Thank you for your work and deliberation on this important issue.

Sincerely,

Danielle Ringer

Fishing Family, F/V North Star

UAF Master's, Political Ecology of Fisheries



Danny Stihl
P.O. Box 3373
Kodiak, AK 99615

Oct. 2nd 2017

Chairman John Jensen
Alaska Board of Fisheries
Board Support Station
P.O. Box 115526
Juneau, AK 99811

RE: UCIDA Agenda change request
Kodiak Management Area

Dear Board of Fish members,

I encourage you to oppose the UCIDA agenda change request. Far reaching proposals with possible drastic consequences should not be rushed but given ample time for everybody impacted to assemble all the facts.

I am not aware of any changes in Kodiak's harvest of Cook Inlet salmon that warrants agenda change, not a correction of the existing management plan. Our harvests were already restricted to 300 meshes in 1988 and we have operated under the North Shelikof Plan since then.



The noticeable difference since 1988 is a huge reduction of our fleet from around 330 boats to around 160 for 2017.

I have part taken in Kodiak Salmon sein fishing since 1983; first as crewmember and running my own operation for 31 seasons.

As committed fair weather fisherman, favoring the inner bays, I have contributed my share of local catches that have counted against the cap of the Shelikof Plan.

I still fail to understand the merit of Reds caught at the terminus of minor systems, generally miles away from outside bays, triggering the Shelikof Plan with its closures. I am aware of at least seven minor Red salmon systems within the area of the North Shelikof plan.

Studying ACR II I learn that more of the same misguided logic is prepared to mark or less the end of the Kodiak management area. For example:

East side: weekly cap 5000

5 week cap 20000

Ugok Bay produces an average of 16000 fish for that period alone



Westside: Weekly 12500
5. Weekly 50000
Uganuk, Telrod, Little
River, not to mention
Karluk, approach those
numbers in days

This approach convinces me that
ACR II is an unwarrantable and unwise
proposal for changing a generally
working 25-year management plan
that has provided balance and
stability.

To please deal with this issue
at the proper Board Cycle in 2020

Thank you very much
for your work and
dedication

Denny Stahl
F/V New Song



Attn: Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section

Dear Mr. Jensen and Board members,

I'm Darius Kasprzak, a Kodiak homeport commercial fisherman for the past 34 years. I have participated as a stakeholder for approximately 20 salmon seasons in the Kodiak area, harvesting salmon in both seine and setnet operations. The Kodiak salmon fishery is very important to me (even more so since the decline of the Gulf cod fisheries) and my colleagues and community.

I oppose the UCIDA agenda change. It doesn't meet the Board's agenda change request criteria, as the Kodiak Management Area genetic stock composition study does not present any " new information " that " corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted." Cook Inlet sockeye caught in the Kodiak area does not create a conservation concern. There is no error in regulation requiring correction.

The Kodiak Area Management Area genetic stock composition study was conducted during a freakishly warm water event (2014-2016) influencing the Gulf of AK, reflective of an extremely intense El Niño event coinciding with the "Blob" warm water phenomenon that occurred throughout the North Pacific during this time period.

Thusly, this study is by no means indicative of usual Cook Inlet sockeye migration behavior and patterns during average summer Gulf of AK conditions, as would be quantified by data representing multiple seasons that occur outside of extreme, and anomalous water temperature conditions.

In conclusion: for UCIDA to use a limited study taken during such abnormal conditions, as grounds to justify an Agenda Change Request, is at best frivolous.

Please deny the UCIDA agenda change request.
Thank you for your consideration of these concerns.

Sincerely,

Darius Kasprzak

(907)654-5863
jjgluvr@gmail.com



Darren Platt
10708 Birch Cir
Kodiak, AK 99615

Chairman John Jensen
Alaska Board of Fisheries
Board Support Section

RE: Agenda change request concerning genetic stock analysis in the Kodiak Management Area

Dear Chairman Jensen,

My name is Darren Platt and I'm a Kodiak seiner and resident. I'm writing in respectful opposition to the agenda change request, ACR 11, proposed by UCIDA. The resurrection of a longstanding allocative dispute does not satisfy any of the strict criteria in place for initiating an agenda change. Cook Inlet fishermen had an opportunity to propose allocative changes to Kodiak management during the January board meeting, and they will be provided with the same opportunity during the next cycle.

1) Fisheries conservation purpose or reason

There are currently no conservation concerns to justify the acceptance of ACR 11. Although UCIDA proposes that current management practices make it difficult to generate perfectly accurate brood tables, it is unclear how that equates to a critical conservation problem. Nevertheless, if we must address this argument then it should be considered that the only major Cook Inlet system that qualifies as a *stock of concern* is the Susitna (which technically isn't even a stock of conservation concern), for which ADFG has conceded that escapement "is not well known," making the creation of accurate brood tables for this particular watershed impossible. Ultimately, however, salmon fisheries are managed for sustainability and beneficent yield, not optimum brood table production.

2) Correct an error in regulation

Kodiak bears a considerable conservation burden by not being allowed any directed fisheries for Cook Inlet bound sockeye salmon. If it were a goal of the KMA management to optimize harvest of Cook Inlet sockeye, then Kodiak fishermen would be able to harvest much larger volumes of these fish. Unlike most conservation measures that limit harvest only during times of scarcity, Kodiak Seinners and setnetters also bear this conservation burden during times of great abundance of Cook Inlet salmon, resulting in massive volumes of foregone harvest, even when there exists no conservation concern. Similarly, the North Shelikof Strait Sockeye Management Plan, designed to further limit the harvest of Cook Inlet



bound sockeye in the KMA, is most restrictive on years of abundance when the Seaward Zones close earliest due to higher harvest rates, resulting in excessive volumes of foregone harvest by Kodiak fishermen. Our current conservation burden deprives us of fishing opportunities especially during times of abundance so that our resultant foregone harvest likely exceeds our traditional share of the fishery. Ultimately, Kodiak fishermen bear a substantial conservation burden while being deprived of much of the conservation benefits.

Ultimately, although UCIDA may be dissatisfied with Kodiak's current management plan, that dissatisfaction is not derived from errors or oversights in Kodiak's well refined management plan, which has been crafted through a deliberative process for decades and carefully accounts for our traditional and incidental harvest of Cook Inlet stocks. Although they may consider Alaska's mixed stock policy to be a mistake by allowing for harvest of non-local stocks along the entire Alaska Peninsula, this policy is in place due to the realistic nature of salmon migrations so that as a state we may adequately extract the optimum benefits from this great public resource. It should be a matter of pride that we have in place a sustainable salmon policy that has clearly allowed for the benefits of individual runs to be conveyed many hundreds of miles from the streams for many decades.

3) To Correct an effect on a fishery that was unforeseen when a regulation was adopted

UCIDA is mistaken when they assume that the North Shelikof Strait Sockeye Management Plan (NSSSMP) was designed solely to "minimize the harvest of Upper Cook Inlet Salmon stocks." The first passage of the management plan directly states the purpose:

The purpose of the North Shelikof Strait Sockeye Salmon Management Plan is to allow traditional fisheries in the area to be conducted on Kodiak Area salmon stocks, while minimizing the directed harvest of Cook Inlet sockeye salmon stocks. The board recognizes that some incidental harvest of other stocks has and will occur in this area while the seine fishery is managed for Kodiak Area salmon stocks. The board intends, however, to prevent a repetition of the non-traditional harvest pattern which occurred during 1988.

It is critical to note that the plan is designed to minimize "directed harvest" not *all* harvest of Cook Inlet stocks. There is currently no directed harvest of Cook Inlet stocks in Kodiak. The NSSSMP was adopted to avoid a harvest pattern that occurred during 1988, that for some reason the board deemed "non-traditional," while allowing for traditional harvest of local fisheries in the area along with the inevitable incidental harvest of non-local stocks. When one considers the genetic stock analysis in the KMA, with the exception of a single, highly anomalous harvest event in 2015, the majority of Sockeye harvested in all areas and all times are of local origins. When one further accounts for the local chum, pink, and silver salmon that also constitute a large portion of the harvest, it is clear that the harvest of Cook Inlet salmon is incidental, unpredictable and inevitable. The traditional harvest of Cook Inlet sockeye in Kodiak has clearly been known for decades, and has been the subject of multiple allocative disputes between the regions.



Submitted By
Dave Kubiak
Submitted On
10/3/2017 12:02:12 PM
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818 Tagura Street
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Chairman John Jensen

Alaska Board of Fisheries

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

I strongly oppose UCIDA's agenda change because it does not meet the Board's agenda change request criteria. There is no new information that effects Cook Inlet conservation nor is there unforeseen new information requiring changes to regulation.

I have been engaged in the Kodiak salmon fishery since the late 1960s, as setnet and seine crew and then as a permit holder, primarily in the seine fishery. Kodiak salmon seining is my primary means of income and I am dependent upon it. I have substantial investment in Kodiak salmon seining and that investment stands at risk to these unnecessary suggested changes to the Kodiak Area Management Plan.

Kodiak salmon fishing has always been a mixed stock fishery. Oceanic wind and current variabilities effect the mixes of salmon we catch. Each and every season the conditions change and so too do the mixes of fish. UCIDA's suggested management scenarios fail to take into account these seasonal and yearly variabilities and would severely impact our ability to catch our island fish, while having no credible impact on Cook Inlet sockeye return. Frankly, Cook Inlet sockeye fishermen have much bigger problems with their sockeye than the small percentages of incidental catches in the Kodiak District. While I feel their pain, shaking up the Kodiak Management Plan with these ill conceived proposals will not address the Cook Inlet's underlying problematic issues and will only cause financial hardship and disruption here.

To say it once again, UCIDA's requested agenda change does not meet Board of Fisheries required criteria. There is no error in regulation that requires correcting.

Dave Kubiak

F/V Lara Lee



David Little

P.O. Box KWP

Kodiak, AK 99697

October 3, 2017

Chair John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition in the Kodiak Management Area

Dear Board of Fisheries Members,

I am a salmon set net fisherman from a remote community on Kodiak Island. For the past 35 years most of my income has come from salmon fishing. Most of my community's livelihood comes from salmon fishing. Generally I have young Alaskans, mostly from interior Alaska, who work as crew with me in my salmon operation.

Our fishery has been managed with great care since I first started fishing in 1982, and I expect the same for our future generations. The Alaska Department of Fish and Game here has managed carefully for sustainability of local stocks combined with maintaining product quality.

To modify the board's agenda in an attempt to address mixed stock management would be "opening a can of worms" with no end in sight. There is little new information and no conservation concern.

If we're going to approach micro-management of mixed stocks we need to do so with an overall plan for the state, while being conscious of local management consequences.

As always, thank you for your hard work and consideration of these issues.

Sincerely,

David Little
Kodiak Island Set Net Salmon Fisherperson



United Cook Inlet Drift Association

43961 K-Beach Road, Suite E • Soldotna, Alaska 99669 • (907) 260-9436 • fax (907) 260-9438
• info@ucida.org •

Date: September 20, 2017

Addressee: John Jensen, Chairman, AK Board of Fisheries
AK Board of Fisheries Members
PO Box 115526
Juneau, AK 99811-5526

RE: ACR 11 Comments

Mr. John Jensen,

United Cook Inlet Drift Association (UCIDA) makes the following comments concerning ACR 11.

Introduction

ACR 11 was submitted in order to have a regulatory review of some of the Kodiak Management Area (KMA) salmon management plans. UCIDA expects the Board of Fisheries (BOF), ADF&G, and the stakeholders in Cook Inlet, KMA and Chignik areas to have the opportunity to discuss the harvests of local and non-local salmon species within the KMA. This dialog must ultimately cover all five species of salmon, however, Sockeye and Chinook salmon require immediate attention.

Historically, average weights and scale pattern methods were used by ADF&G, the BOF and the stakeholders as a means of identifying local and non-local salmon stocks.

The Genetic Stock Identification (GSI) studies, utilizing the best science available, have provided a new level of identifying non-local stocks. GSI has also provided a new tool that improves upon previous ADF&G estimates of the natal origins of the salmon harvested in the KMA. The new GSI methodology has demonstrated that the historical average weight, tagging studies and scale pattern analyses are inadequate and misleading when determining the natal origins of salmon in KMA harvests.



In the past, the BOF has communicated a clear intent to harvest local stocks in the KMA while avoiding and minimizing the harvests of non-local salmon. Currently, rather large harvest of non-local sockeye and Chinook salmon in the KMA is generating management problems and significant economic losses in other regions of Alaska.

UCIDA requests that the BOF accept and schedule a special hearing on ACR 11 for the spring of 2018. This will provide time for all user groups, ADF&G and the BOF to review the new GSI information and KMA harvest patterns involving non-local salmon stocks.

Regulatory History

The harvest of non-local stocks has been the subject of two previous out-of-cycle BOF regulatory hearings held in Kodiak. The first was in December of 1989 and the second was in March of 1995. In the 1989 BOF hearing, three significant decisions were made:

1. The intent of the BOF was to prevent any increased harvest of **Cook Inlet or other non-local stocks**. The following sections and language was added to the KMA regulations and quoted as follows:
 - A. **“5 AAC 18.363. North Shelikof Strait Sockeye Salmon Management Plan.** (a) The purpose of the North Shelikof Strait Sockeye Salmon Management Plan is to allow traditional fisheries in the area to be conducted on Kodiak Area salmon stocks, **while minimizing the directed harvest of Cook Inlet sockeye salmon stocks**. The board recognizes that some incidental harvest of other stocks has and will occur in this area while the seine fishery is managed for Kodiak Area salmon stocks. **The board intends, however, to prevent a repetition of the nontraditional harvest pattern which occurred during [1987 and] 1988.**
 - (b) From July 6 through July 25 in the Dakavak Bay, Outer Kakuk Bay, Inner Kakuk Bay, Hallo Bay, and Big River sections of the Mainland District, and in the Shuyak Island of Northwest Afognak Sections of the Afognak District, the department shall manage the fishery as follows:
 - (1) **The management of the fishery must be based on local stocks;**
 - (2) **The fishery may remain open during normal fishing periods until the harvest exceeds 15,000 sockeye salmon...**
 - (c) From July 6 through July 25 in the Southwest Afognak Section of the Afognak District, the department shall manage the fisheries as follows:
 - (1) **management of the fishery must be based of local stocks consistent with 5 AAC 18.362(d)(3);**
 - (2) **the fishery may remain open during normal fishing periods until the harvest exceeds 50,000 sockeye salmon;**



(3) when the harvest exceeds 50,000 sockeye salmon, the commissioner shall restrict, by emergency order, the fishery to waters of the Southwest Afognak Section...

(d) from approximately July 6 through August 15, based on pink salmon returning to the major pink salmon systems in the Southwest Afognak Section and the Northwest Kodiak District; from July 6 through July 25, the section must also be managed according to 5 AAC 18.363(c), the North Shelikof Management Plan;”

2. New harvest limits, boundaries and effective dates. There were two harvest limits of 15,000 and 50,000 sockeye established. See 5 AAC 18.363. North Shelikof Strait Sockeye Salmon Management Plan. **New boundaries** and effective dates were also established.
3. No new or expanding harvest efforts. UCIDA has purchased an archived audio file from the 1989 out-of-cycle BOF hearing held in Kodiak. In listening to these audio files, members of the BOF were concerned that by restricting the harvest of **Cook Inlet salmon stocks (harvest limits, fishing areas and effective dates) in the North Shelikof area, the seine fishery would then move to other areas of the KMA and continue harvesting non-local and Cook Inlet sockeye salmon.** These areas identified were south along the east and west sides of Kodiak Island and across Shelikof Strait to the Mainland District. Some of these areas were also previously closed as they were known interception areas.

The 1989 BOF discussions clearly stated that the new outer boundaries, harvest limits and effective dates were each to be used by ADF&G to achieve two objectives:

- a) **Minimize the directed harvest of Cook Inlet sockeye salmon stocks;**
- b) **Prevent the repetition of the non-traditional harvest pattern of [1987 and] 1988.**

In spite of this, in the ensuing years, regulatory harvest caps have been routinely exceeded, harvest boundary lines have been adjusted seaward and previously recognized interception areas have been reopened to fishing.

New Biological and Scientific Reports released since November 2016

Within the last year, three ADF&G reports containing GSI information on the sockeye harvests in KMA and Cook Inlet have been published. The BOF specifically requested the Addendum that redefines (defines) the **Cook Inlet sockeyes that were harvested in the KMA for 2014, 2015 and 2016.**

1. Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016. FMS 16-10, December 2016.



2. Annual Genetic Stock Composition Estimates for the **Upper Cook Inlet Sockeye Salmon Commercial Fishery**, 2005–2016. RIR 5J17-05, July 2017.
3. Addendum to FMS 16-10: Redefinition of Reporting Groups to Separate **Cook Inlet** into Four Groups for the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016. FM No. 17-07, September 2017.

These newly applied GSI analyses are much more accurate and reliable than ADF&G's past use of average weight and scale pattern analyses. In 2015, average weights would not have detected **Cook Inlet sockeye** in the KMA. That year all sockeye salmon across Alaska were at least a pound less than the historical average. It was the GSI work that correctly identified that there were **nearly one million Cook Inlet sockeyes** harvested in KMA in 2015. **The new GSI scientific work has reported much higher harvests of Cook Inlet sockeyes** than the older, less accurate average weight and scale pattern analyses.

In Adjustments for Cook Inlet Reporting Groups to the Addendum to FMS 16-10: Redefinition of Reporting Groups to Separate Cook Inlet into Four Groups for Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016. (UCIDA 2017) there is GSI data specifically on the harvest of the four Cook Inlet reporting groups: Other Cook Inlet (OCI), Susitna, Kenai and Kasilof. The table below summarizes the harvests of these four reporting groups for the years 2014 through 2016. Page 13 of that report is reproduced below.

Table 11. Kodiak Management Area 2014-2016. Estimated Cook Inlet Harvests

Reporting Group	2014	2015	2016	Total	Average
Other Cook Inlet (OCI)	11,908	80,698	49,536	142,142	47,381
Susitna	4,466	75,989	39,440	119,895	39,965
Kenai	60,973	365,335	272,160	698,468	232,823
Kasilof	36,019	103,539	22,501	162,059	54,020
Total	113,366	625,561	383,637	1,122,564	374,188

* All data taken from FMS 16-10, Shedd, et al., 2016

Table 11A (Adjusted for Cook Inlet). Kodiak Management Area 2014-2016. Estimated Cook Inlet Harvests

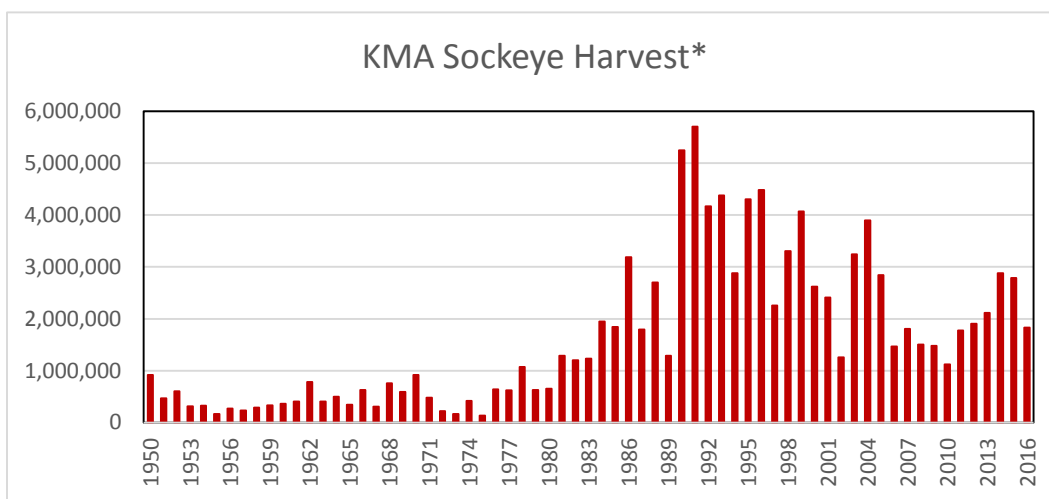
Reporting Group	2014	2015	2016	Total	Average
Other Cook Inlet (OCI)	20,266	117,683	79,332	217,281	72,427
Susitna	8,175	105,726	64,573	178,474	59,491
Kenai	113,025	513,013	453,985	1,080,023	360,008
Kasilof	62,829	154,647	33,995	251,471	83,824
Total	204,295	891,069	631,885	1,727,249	575,750

See UCIDA, 2017, page 13 for a discussion of Tables 11 and 11A.

Historic Kodiak Management Area Sockeye Harvests 1950-2017

Figure 1. KMA Sockeye Harvest

*KMA sockeye data does not include the harvest of Kodiak Regional Aquaculture Association sockeye. All data from UCI and KMA 2016 Annual Management Reports



In Figure 1, the total KMA sockeye harvest is displayed from 1950 through 2016. It must be noted that from 1950 through 1978 (28 years), the KMA harvest never reached one million sockeye annually. From 1979 through 1985 (6 years), KMA did not achieve a harvest of two million sockeye annually. Beginning in 1986, most KMA sockeye harvests were above two million. Beginning in 1986, several changes occurred. First, the average size, length and width of seine vessels started increasing; second, the average length, width and horsepower of seine skiffs increased; third, seine fishing on capes and headlands increased; fourth, new fishing areas were opened; fifth, existing boundaries were expanded seaward; sixth, previously known interception areas were reopened. In 1988 there was such a large harvest of non-local stocks that in 1989 the BOF took action to prevent that from reoccurring. In 1990 and 1991, over 5 million sockeyes are harvested. In KMA during 1992, 1993, 1995, 1996 and 1999, over 4 million sockeyes were harvested. Since 2000, the KMA sockeye harvests have ranged from nearly 4 million in 2004, to about 2.4 million in 2016. Clearly, the KMA harvests of non-local sockeye salmon have seen dramatic increases since the 1989 BOF hearing. We will never know the exact numbers, but Cook Inlet and Chignik stocks have been a major contributor to these increased and non-traditional KMA sockeye harvests.



Consequences of KMA Harvest of Cook Inlet Sockeye

Management

The science of sustaining salmon stocks and sustainable salmon management relies on accurate assessment and analysis of brood tables, spawner/recruit ratios, stock production models and escapement goals. Management plans and allocations depend on decisions being made with data derived from the best available science. Clearly, the management of both KMA and Cook Inlet salmon stocks are not scientifically valid if this new GSI data is ignored.

Stocks of Concern

ACR 11 gives the BOF, ADF&G and the stakeholders a new and expanded opportunity to review the Stocks of Concern (SOC) designation for certain salmon stocks. This new information should help to inform the BOF regarding the validity of some SOC designations. This GSI information could improve recovery and rebuilding plans. ACR 11 provides an opportunity to reconsider some stocks of concern and act accordingly.

Since 2008, the Susitna Sockeye Salmon Stocks have been designated as a “Stock of Yield Concern” by the BOF. At that time, the ADF&G recommended that Susitna sockeye not be declared a Stock of Yield Concern. This SOC designation was based on faulty sonar data from the Susitna River. UCIDA has never agreed with the harvest restrictions placed on the drift fleet as a result. In retrospect, the yield concern designation is a self-fulfilling prediction. The harvest restrictions based on the designation have caused reduced yields which in turn provide a positive feed-back loop that only demonstrates reduced yields. Harvest restrictions have not led to increased yields of Susitna sockeye and they never will. Now, the GSI data has revealed significant harvest of Susitna sockeye stocks in the KMA (Tables 11 and 11A). No one in ADF&G or on the BOF were aware of these large harvests of Susitna sockeye in the KMA and have not factored those harvests in the review of this SOC designation.

From the 2008 season through the 2017 season (10 years), the KMA has had average annual harvests range of 39,965 to 59,491, which equates to a total harvest of 399,650 to 594,910 Susitna-bound sockeye salmon. During the last 10 years, the KMA has benefitted from this harvest of nearly 400,000 to 600,000 Susitna sockeyes **without sharing any of the conservation burden.**

Summary of the sockeye harvest data in the Kodiak genetic stock composition report*.

Sampled area was only a portion of the entire Kodiak Management Area, see report for details.

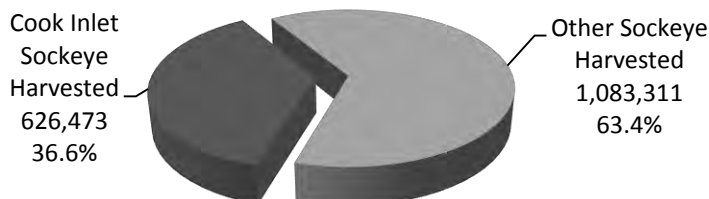
Harvest numbers do not include catch data from previously identified intercept areas like North Shelikof and the Mainland district.

2014 Sockeye Harvest in Sampled Area



Total sampled area harvest: 1,523,042 = 47% of total Kodiak sockeye harvest

2015 Sockeye Harvest in Sampled Area



Total sampled area harvest: 1,709,784 = 55.2% of total Kodiak sockeye harvest

2016 Sockeye Harvest in Sampled Area



Total sampled area harvest: 1,296,193 = 62.4% of total Kodiak sockeye harvest

* FMS 16-10, Shedd, et al, 2016. Page 22.



Economics

Without question, there will be some economic issues with those that may lose and those that may gain from harvesting these salmon stocks from the area in which they originate. There is nothing new about rebalancing the economic scales. Any Cook Inlet salmon harvested in the KMA is an economic loss to the Kenai Peninsula Borough economy. However; all Kodiak salmon stocks may continue to be harvested in the KMA and it is quite unlikely that Upper Cook Inlet commercial fisheries will harvest any Kodiak salmon stocks.

During 2014, 2015 and 2016, there were over 1,700,000 Cook Inlet sockeye salmon harvested in the KMA (Tables 11 and 11A). At an average of \$10 per sockeye, the ex-vessel value of these salmon is \$17,000,000. The first wholesale value for these salmon would be about \$34,000,000 and the economic value to the Kenai Peninsula Borough economy would be 3-5 times that value. However; for the 2014, 2015 and 2016 salmon seasons, Cook Inlet Drift Fishermen averaged about \$20,000 for the entire season, some of our worst years ever, (CFEC Report No. 16-5N, page 31, reproduced on page 9). The loss to Cook Inlet commercial fisheries, the seafood processors and our entire economy is unacceptable. ACR 11 provides an opportunity to readjust the economic balance.

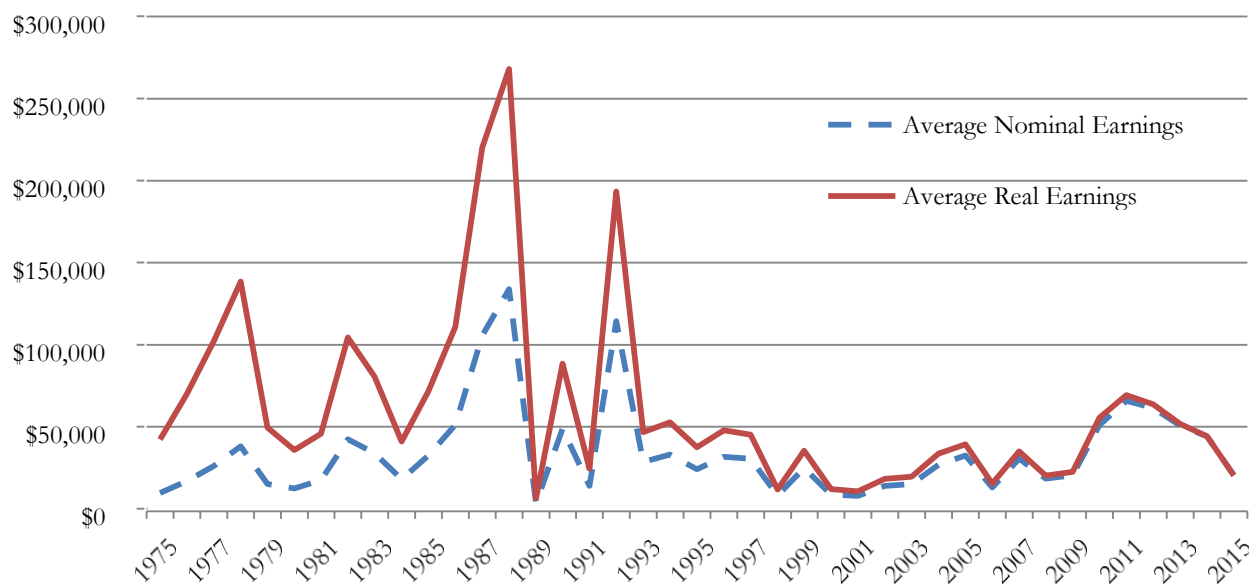
Participation and Earnings

Figure 9

CFEC reports the nominal and average gross earnings per Cook Inlet Salmon Drift Gillnet Permits from 1975-2015. In 2015, the drift gillnet permit average was \$21,542.00. Cook Inlet Drift CFEC 16-5N, July 2106.

Table 29 reports the number of permits, permits and vessels with landings, and estimated gross earnings in the Cook Inlet salmon drift gillnet fishery from 1975 to 2015. Note that the figures by permit or vessel in this table span the entire year, regardless of who held the permit or however many times the permit was transferred.

Figure 9. Estimated Nominal and Real Average Gross Earnings Per Cook Inlet Salmon Drift Gillnet Permit



- Real earnings are adjusted for inflation using the 2015 U.S. Bureau of Labor Statistics Consumer Price Index.

**Table 29. Estimated Total Gross Earnings (Real and Nominal) for the Cook Inlet Salmon Drift Gillnet Fishery, With Average Gross (Real) Earnings by Permit and Vessel, 1975-2015**

Year	Viable Permits	Gross Earnings		Permits With Landings	Average Real Earnings	Vessels With Landings	Average Real Vessel Earnings
		Nominal	Real				
1975	636	\$4,461,123	\$19,653,571	466	\$42,175	534	\$36,804
1976	584	\$8,569,607	\$35,696,704	511	\$69,857	563	\$63,404
1977	572	\$13,853,810	\$54,184,629	531	\$102,043	685	\$79,102
1978	589	\$22,033,557	\$80,097,048	578	\$138,576	605	\$132,392
1979	599	\$8,954,115	\$29,232,473	592	\$49,379	622	\$46,998
1980	598	\$6,894,765	\$19,832,239	553	\$35,863	578	\$34,312
1981	599	\$10,227,361	\$26,667,310	584	\$45,663	605	\$44,078
1982	592	\$24,514,672	\$60,211,337	577	\$104,352	588	\$102,400
1983	588	\$19,592,016	\$46,622,900	580	\$80,384	598	\$77,965
1984	588	\$10,381,576	\$23,682,484	578	\$40,973	609	\$38,887
1985	591	\$18,975,346	\$41,798,138	584	\$71,572	684	\$61,108
1986	588	\$29,948,905	\$64,766,420	584	\$110,901	658	\$98,429
1987	586	\$61,784,789	\$128,908,849	585	\$220,357	652	\$197,713
1988	585	\$78,128,882	\$156,533,164	584	\$268,036	657	\$238,254
1989	585	\$33,363	\$63,770	10	\$6,377	10	\$6,377
1990	585	\$28,384,895	\$51,474,390	582	\$88,444	625	\$82,359
1991	584	\$8,099,133	\$14,094,216	578	\$24,384	615	\$22,917
1992	583	\$66,362,059	\$112,109,310	580	\$193,292	642	\$174,625
1993	583	\$16,537,133	\$27,125,132	580	\$46,767	632	\$42,920
1994	583	\$18,766,136	\$30,012,775	569	\$52,747	565	\$53,120
1995	582	\$13,912,083	\$21,636,484	577	\$37,498	583	\$37,112
1996	583	\$17,736,374	\$26,793,003	560	\$47,845	563	\$47,590
1997	581	\$17,448,194	\$25,766,470	572	\$45,046	575	\$44,811
1998	581	\$4,303,378	\$6,257,508	528	\$11,851	527	\$11,874
1999	576	\$12,134,809	\$17,263,841	487	\$35,449	487	\$35,449
2000	576	\$4,438,593	\$6,109,303	513	\$11,909	510	\$11,979
2001	574	\$3,711,269	\$4,966,877	467	\$10,636	466	\$10,659
2002	572	\$5,686,049	\$7,491,330	409	\$18,316	409	\$18,316
2003	572	\$6,329,162	\$8,152,820	418	\$19,504	412	\$19,788
2004	571	\$11,798,178	\$14,803,434	440	\$33,644	435	\$34,031
2005	571	\$15,251,702	\$18,509,538	471	\$39,298	468	\$39,550
2006	570	\$5,159,160	\$6,065,519	396	\$15,317	396	\$15,317
2007	571	\$12,759,634	\$14,585,806	417	\$34,978	415	\$35,147
2008	571	\$7,823,008	\$8,611,983	433	\$19,889	415	\$20,752
2009	570	\$8,202,181	\$9,061,637	416	\$21,783	388	\$23,355
2010	569	\$19,300,530	\$20,978,803	411	\$51,043	353	\$59,430
2011	569	\$30,378,044	\$32,009,179	493	\$64,927	426	\$75,139
2012	569	\$30,546,478	\$31,534,075	525	\$60,065	460	\$68,552
2013	569	\$25,230,345	\$25,670,063	538	\$47,714	473	\$54,271
2014	569	\$21,897,315	\$21,923,306	530	\$41,365	483	\$45,390
2015	569	\$10,060,160	\$10,060,160	518	\$19,421	467	\$21,542

- Adjusted for inflation to 2015 dollars using U.S. Bureau of Labor Statistics Consumer Price Index.
- Counts will differ from CFEC on-line Basic Information Tables where the on-line data does not account for the combination of interim-entry permits that were issued as permanent permits in the same year; figures will also differ where dual permit operations were used and landings were solely recorded on one of the two permits.
- The 1989 fishing season was cut short due to the Exxon Valdez oil spill that occurred that year.

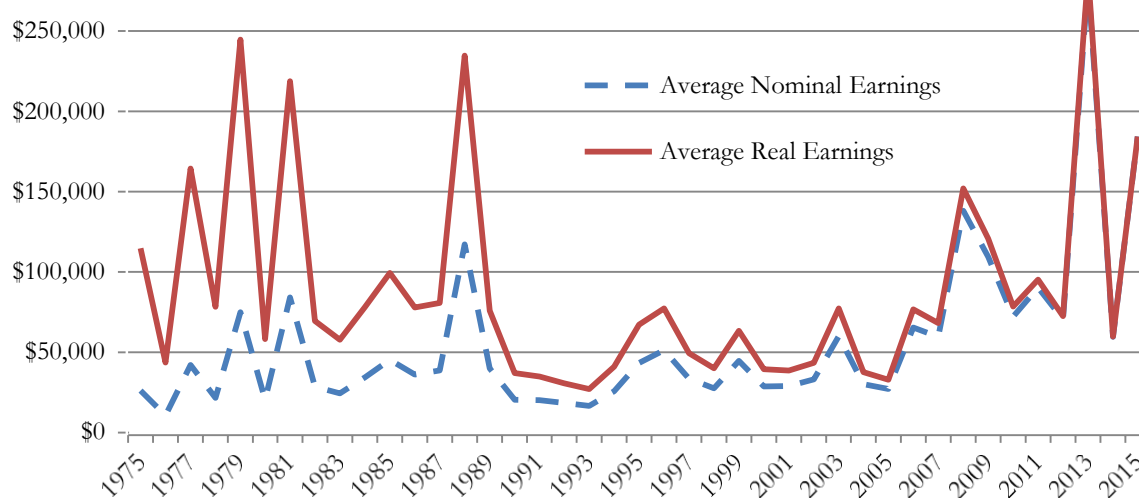
Participation and Earnings

Figure 4

CFEC reports the nominal and average gross earnings per Kodiak Purse Seine Fishery from 1975-2015. The 2015 average purse seine fishery vessel was \$182,326.00

Table 13 reports the number of permits, permits and vessels with landings, and estimated gross earnings in the Cook Inlet salmon purse seine fishery from 1975 to 2015. Note that the figures by permit in this table span the entire year, regardless of who held the permit or however many times the permit was transferred.

Figure 4. Estimated Nominal and Real Average Gross Earnings Per Cook Inlet Salmon Purse Seine Permit



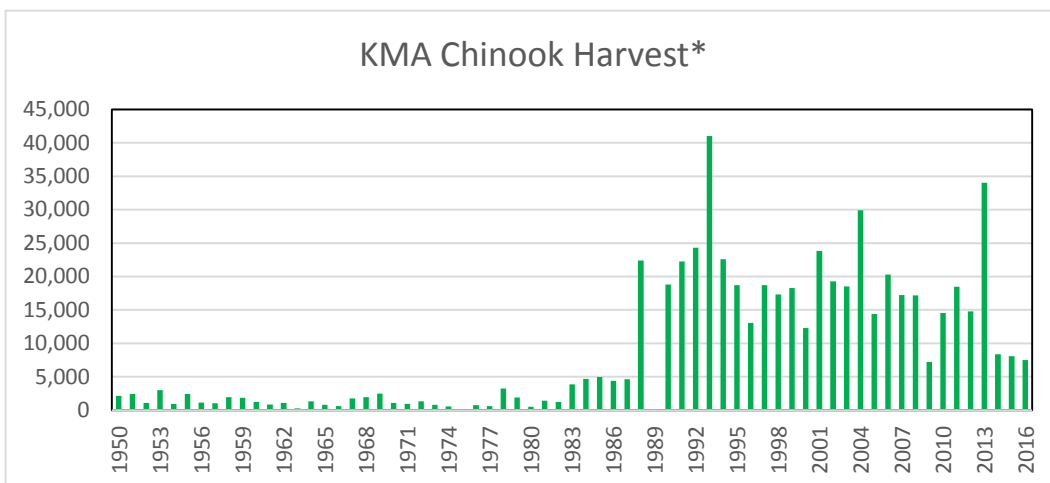
- Real earnings are adjusted for inflation using the 2015 U.S. Bureau of Labor Statistics Consumer Price Index.

**Table 13. Estimated Total Gross Earnings (Real and Nominal) for the Cook Inlet Salmon Purse Seine Fishery, With Average Earnings (Real) by Permit and Vessel, 1975-2015**

Year	Viable Permits	Gross Earnings		Permits With Landings	Average Real Earnings	Vessels With Landings	Average Real Vessel Earnings
		Nominal	Real				
1975	89	\$1,406,224	\$6,195,147	54	\$114,725	60	\$103,252
1976	78	\$513,502	\$2,138,994	49	\$43,653	56	\$38,196
1977	82	\$2,563,292	\$10,025,476	61	\$164,352	71	\$141,204
1978	83	\$1,419,533	\$5,160,330	66	\$78,187	66	\$78,187
1979	84	\$5,769,152	\$18,834,533	77	\$244,604	81	\$232,525
1980	84	\$1,434,609	\$4,126,539	71	\$58,120	71	\$58,120
1981	85	\$6,882,516	\$17,945,801	82	\$218,851	87	\$206,274
1982	84	\$1,784,216	\$4,382,275	63	\$69,560	62	\$70,682
1983	83	\$1,720,680	\$4,094,682	71	\$57,672	73	\$56,092
1984	81	\$1,847,067	\$4,213,535	54	\$78,028	56	\$75,242
1985	82	\$2,302,420	\$5,071,678	51	\$99,445	50	\$101,434
1986	83	\$2,196,680	\$4,750,461	61	\$77,876	61	\$77,876
1987	83	\$2,591,820	\$5,407,618	67	\$80,711	68	\$79,524
1988	83	\$8,437,869	\$16,905,481	72	\$234,798	75	\$225,406
1989	83	\$2,539,823	\$4,854,687	64	\$75,854	66	\$73,556
1990	83	\$1,444,426	\$2,619,383	71	\$36,893	73	\$35,882
1991	83	\$1,360,809	\$2,368,097	68	\$34,825	74	\$32,001
1992	83	\$1,107,528	\$1,871,012	61	\$30,672	61	\$30,672
1993	84	\$842,496	\$1,381,909	51	\$27,096	54	\$25,591
1994	84	\$768,850	\$1,229,626	30	\$40,988	31	\$39,665
1995	84	\$1,982,432	\$3,083,136	46	\$67,025	45	\$68,514
1996	85	\$1,740,062	\$2,628,580	34	\$77,311	37	\$71,043
1997	85	\$768,043	\$1,134,201	23	\$49,313	24	\$47,258
1998	83	\$1,069,729	\$1,555,485	39	\$39,884	44	\$35,352
1999	83	\$1,912,728	\$2,721,183	43	\$63,283	43	\$63,283
2000	83	\$1,029,272	\$1,416,695	36	\$39,353	37	\$38,289
2001	83	\$721,111	\$965,080	25	\$38,603	31	\$31,132
2002	82	\$823,726	\$1,085,253	25	\$43,410	24	\$45,219
2003	81	\$1,558,569	\$2,007,649	26	\$77,217	30	\$66,922
2004	81	\$719,238	\$902,444	24	\$37,602	27	\$33,424
2005	82	\$786,252	\$954,200	29	\$32,903	33	\$28,915
2006	82	\$1,564,895	\$1,839,815	24	\$76,659	24	\$76,659
2007	83	\$1,131,535	\$1,293,482	19	\$68,078	18	\$71,860
2008	82	\$3,451,830	\$3,799,958	25	\$151,998	23	\$165,216
2009	82	\$1,420,257	\$1,569,077	13	\$120,698	12	\$130,756
2010	82	\$1,010,051	\$1,097,879	14	\$78,420	16	\$68,617
2011	83	\$2,076,973	\$2,188,495	23	\$95,152	20	\$109,425
2012	83	\$1,123,214	\$1,159,529	16	\$72,471	17	\$68,208
2013	83	\$3,374,183	\$3,432,988	12	\$286,082	13	\$264,076
2014	84	\$1,191,240	\$1,192,654	20	\$59,633	20	\$59,633
2015	84	\$3,500,945	\$3,500,945	19	\$184,260	18	\$194,497

- Adjusted for inflation to 2015 dollars using U. S. Bureau of Labor Statistics Consumer Price Index.
- Counts will differ from CFEC on-line Basic Information Tables where the on-line data does not account for the combination of interim-entry permits that were issued as permanent permits in the same year.

Figure 2. KMA Chinook Harvest



*All data from UCI and KMA 2016 Annual Management Reports

KMA Chinook Harvests

In Figure 2, the KMA annual Chinook harvests are displayed from 1950 through 2017. As you examine the annual Chinook harvests from 1950 through 1983 (33 years), there were less than 2,000 Chinook harvested annually throughout the KMA. In the KMA, there are only two Chinook salmon systems with escapement goals: the Karluk escapement goal of 3,000 – 6,000, and Ayakulik escapement goal of 4,000 – 7,000. Beginning in 1984 and continuing for the next 30 years until 2013, Chinook harvests increased dramatically. In 1993 over 42,000 Chinook were harvested in the KMA. The December 2016 Escapement Goal Report for Kodiak by Shaberg, et al., Appendix A2 (page 37), indicates the 1993 commercial harvest from the Ayakulik system was 2,708 Chinook. Appendix B2, (page 45) indicates that the 1993 harvest from the Karluk system was 3,082 Chinook. Taken together, Ayakulik and Karluk total 5,790 commercially harvested Chinook salmon. Yet in 1993, there were over 42,000 Chinook commercially harvested in Kodiak, more than 36,000 are from other areas. Since 1984, these harvests of non-local Chinook have been repeated year after year.

This increased harvest of Chinook occurs at the same time as sockeye harvests increased. These increased harvests occurred simultaneously with the increased length and width of the seine vessels, the fishing on capes and headlands, the opening of increased fishing areas, the reopening of previously closed fishing areas, the extensive use of Emergency Order



authority to facilitate fishing 24 hours a day, 7 days a week for much of June, July and August. There is simply no biological possibility that the Karluk and Ayakulik systems can produce a harvest of over 42,000 Chinook, plus meet escapement needs, for a total run of over 50,000. **This inescapable reality is that most of the Chinook harvested in the KMA since 1984 are non-local stocks.**

After the 2012 season the BOF adopted **5 AAC 18.395. Retention of King Salmon taken in a commercial fishery.** This regulation states that King (Chinook) salmon 28 inches, or greater, in length taken incidentally must be returned to the water unharmed. This regulation has likely had no effect on the number of chinook caught in the KMA commercial fishery but appears to have reduced the reported harvest of Chinook salmon (See Figure 2, years 2014, 2015 and 2016). In 2017, the harvest of Chinook salmon in the KMA was about 6,500. From 2014 through 2016, a genetic stock identification research project was conducted. The purpose of this study was to use GSI tests to determine, if possible, the natal origins for Chinook harvested in the KMA. The results are reported by Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016 (Shedd, et al., December 2016).

There are three very important issues that must be placed in the public record regarding 5 AAC 18.395 and the Chinook Genetic Stock Identification study for the 2014-2016 time period.

1. First, the genetic samples were taken on tendering vessels or at the processing facilities. Genetic sampling did not occur at the time or point of harvest or capture.
2. Second, because of 5 AAC 18.395, all Chinook 28 inches or greater in length were never sampled. There is no information on: **how many** Chinook 28 inches or greater were incidentally caught and released; **when** these Chinook 28 inches or greater were incidentally caught and released; **where** these Chinook 28 inches or greater were caught and released, or the **mortality rate** of these Chinook 28 inches or greater that were incidentally caught and released.
3. Third, the reported natal origins (Shedd, et al., 2016) are only for the harvests of Chinook 28 inches or less.

This GSI determination has accurate natal determinations and assignments. The Shedd, et al., 2016 report makes no determinations, findings or conclusions on the Chinook 28 inches or greater that were incidentally caught and required to be released by regulation. Cook Inlet has numerous streams that Chinook return to and over 200,000 Chinook return there annually to spawn. Chinook salmon 28 inches or greater are often mature or are in pre-spawn developmental stages.



The effect that the harvest, capture and release of Chinook greater than 28 inches has on Cook Inlet and other areas of the state is an issue that ACR 11 addresses through the institution of harvest limits by week and by year. ACR 11 provides an opportunity to examine, discuss and resolve the Chinook harvesting issues in the KMA.

Policy Issues and Inconsistencies

ACR 11 provides a proposal to adjust regulatory management plans. There are several existing regulatory policies that should be applied to the KMA salmon management plans and harvests of non-local stocks. These are:

1. 5 AAC 39.222. Policy for the management of sustainable salmon fisheries.
2. 5 AAC 39.200. Application of fishery management plans.
3. 5 AAC 39.220. Policy for the management of mixed stock salmon fisheries.
4. 5 AAC 39.223. Policy for statewide salmon escapement goals.

The KMA management plans have numerous variances when compared to the above statewide policies. There are numerous instances where these referenced policies are not being followed, even ignored, and in some instances, misapplied. ACR 11 allows the BOF, ADF&G and the stakeholders to reexamine and adjust management plans and regulations.

Conclusion

Clearly, GSI has improved overall understanding about sockeye and Chinook salmon. Hopefully, future GSI projects will continue to improve our biological understanding on all species of salmon.

The BOF and ADF&G should, as a matter of public policy, incorporate the new and improved GSI biological information into their regulatory decisions and daily management. The BOF now has the opportunity to incorporate the new science into the regulatory process by scheduling ACR 11 for a regulatory hearing.

The Cook Inlet fishing community understands, but does not agree with the regulatory road and the new challenges ahead for many regions and communities. UCIDA asks that ACR 11 or something similar be scheduled for a regulatory hearing by the BOF before the 2018 salmon season. UCIDA further commits its resources and time to problem solving discussions. We



would hope that these discussions could occur in a timely fashion, prior to the 2018 salmon season.

Sincerely,

Original Signed Document

David Martin, President
United Cook Inlet Drift Association

cc:
Governor Bill Walker
Senate Resources Committee Members
House Fisheries Committee Members
Senator Majority Leader Peter Micciche
Senator Gary Stevens
House Speaker Bryce Edgmon
Representative Gary Knopp
Representative Paul Seaton
Kenai Peninsula Borough Mayor Mike Navarre
Kodiak Borough Mayor Dan Rohrer
Mat-Su Borough Mayor Vern Halter
City of Kenai Mayor Brian Gabriel



DJ Vinberg
3609 Sunset Drive, Kodiak AK 99615
PO Box 9032, Kodiak, AK 99615
F/V Family Pride
tel: 907-539-2667; email: fpride@Alaskan.com
October 1, 2017

Dear Chairman Jensen and Members of the Alaska Board of Fisheries,

I respectfully submit my opposition to ACR 11, and ask that you reject it outright.

It is widely accepted that the Kodiak salmon fishery is one of the most well-managed, complex, multidimensional and diversified salmon fisheries in Alaska. The management structure that is suggested in ACR 11 is unjustified, unnecessary and unrealistic. It would impose draconian impacts to the economics, profitability, operations, participation, tradition, diversity, fishing behavior and rationality of our current Kodiak salmon management regime. A management plan that caps the weekly and seasonal commercial sockeye salmon harvest in major areas of the Kodiak Management Area over the lengthy time frame that is suggested is simplistic, and makes little sense.

The philosophy of ACR 11 disrupts the ability of ADF&G to manage the fishery to the precision that currently exists. ACR 11 would impose unnecessary, and significant costs on the Kodiak seine and set net harvesters and their crews, on the quality of salmon delivered to the consumer, on the processing companies, processing workers, and transportation businesses, and be responsible for myriad other negative consequences. Our loss would be significant, and would not be offset by any measurable gain in Cook Inlet. The cost/benefit ratio is very unreasonable for Kodiak stocks, industry and community economics, product quality, and management efficiency and performance.

I own a 58' vessel that I operate with 4 other crew. I am 55 years old, and have a family. I began salmon fishing with my dad when I was 4 years old. Dad fished for 50 years. I have been fishing for 50 years, and running a vessel for 30 years. Our operation, and many others in Kodiak of similar size and operational pattern, need volume. The Kodiak economy does not provide many other opportunities for the crew and their families, and they are very dependent on our success. Dad mostly fished for salmon in Kodiak, contributed to the development of the Kodiak salmon fishery, and actively participated in the development of the Kodiak salmon management regime. He was one of the early advocates of the Kodiak Regional Aquaculture Association, and served as one of the founding members of the KRAA Board of Directors. He taught me enough to conclude that ACR 11 is not rational, reasonable or necessary, and that the Kodiak and Cook Inlet fisheries, and the natural environment that impacts these fisheries, are so variable that a



management plan such as is recommended in ACR 11 is neither workable, reasonable or valid.

I believe that several important and vibrant Kodiak salmon producing systems are likely to experience overescapement if the ACR 11-recommended management regime, or some likeness of such, were ever to be implemented. I believe that you have the responsibility to carefully and scientifically study, consider and clearly understand the detrimental impacts to salmon productivity that will certainly result in many important Kodiak systems. Karluk, a system of major importance, is a perfect example where overescapement would be detrimental to the productivity of this system. The managers are likely to tell you that overescapement is as big a problem as underescapement.

Kodiak, by virtue of its location, is bound to occasionally receive outside migrating non-local salmon. But you must understand that this occurs on an intermittent and variable basis. The vast majority of our sockeye catch is of local origin. The idea of managing our stocks based on outside stocks is opening pandora's box, and is a major policy issue. If you act to make an example of Kodiak, and begin to micromanage on any scale that approaches the scale that is recommended in ACR 11, you, or those Board members who follow you, will have to eventually introduce that philosophy across the whole state.

Do you plan to micromanage Area M based on the Bristol Bay return, or shutting down the outside areas of Chignik based on their regular interception of Bristol Bay, Kodiak and Cook Inlet sockeye and other species in those outside areas? Are you planning on putting caps on the Chignik harvest of Kodiak pink salmon based on their impacts to Kodiak pink salmon catch and escapement?

How will Chignik's harvest of their own sockeye stocks be impacted when you begin to adjust their sockeye harvest in the outside areas based on the objective of moderating the impacts of their harvest to Kodiak pink salmon and Upper Cook Inlet harvest and escapement?

I respectfully request that you do not adopt or accept any part of ACR 11. The underlying philosophy of this initiative is not plausible. I ask you to reject ACR 11 outright. Please do not carry over any part of ACR 11 to the discussion of the agenda items that are scheduled for consideration on Thursday, October 19. And please leave further consideration of Kodiak salmon management matters to the three-year cycle. Thank you.

Sincerely,

DJ Vinberg



Donald Lawhead Jr
3915 E Blue Sapphire Ct
Wasilla ,Ak 99654
9/28/17

Chairman John Jensen
Alaska Board of Fisheries
P.O. Box 115526
Juneau ,Ak 99811-5526

RE: UCIDA Agenda Change Request

I oppose the request by UCIDA for agenda change. There is no biological reason for this request. Cook Inlet sockeye stocks have meet or exceeded escapement goals. The request wants to create a whole new management plan for Kodiak based on genetics from only three sampling years and one year with almost no Cook Inlet fish being present. The request includes areas that had no samples of genetics or research. The economic cost for the community of Kodiak would be devastating. Reduced fishing time results in work loss for fisherman, processors, processing workers, Kodiak businesses and revenue for the city of Kodiak.
Thanks,

Donald Lawhead Jr
Kodiak salmon fisherman
Since 1992
Sent from my iPad



Duncan Fields
P.O. Box 25
Kodiak, AK 99615

October 3, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request #11 and the study of
the Genetic Stock Composition of Sockeye Salmon in the
Kodiak Management Area

Dear Chairman Jensen and Board Members:

My family and I have fished at the same setnet sites on Bear Island and Harvester Island in Uyak Bay on the west side of Kodiak Island for the past 57 seasons. Without question, the adoption of the RC #11 would put us out of business--- this is not advocacy or hyperbole. Clear water, open ocean setnetting like what occurs on the west side of Kodiak requires fishing time to be profitable. We're not in proximity to the stream terminus where fish school and we often experience weather days and slack fishing. Closing each of 5 weeks to our setnets would allow significant local stocks to pass our nets. We can't move to capture these fish elsewhere and this amount loss would be more than our profit margins.

As you are aware I've been working with the Kodiak Salmon Work Group and through the groups presentations have outlined many of the substantive arguments regarding why the Board of Fisheries should wait until the January 2020 meeting in Kodiak to address this issue. As I was writing the current Kodiak Salmon Work Group comments I was reminded of testimony I prepared for the Board in November of 1995. At that time, the Board allowed each side to provide a 15-minute presentation of the issue from their perspective at the start of public testimony.

I've read hundreds of pages of documents regarding the past iteration of the Kodiak/Cook Inlet issue that ran from 1989-1996. However, and I have a bias I know, I think the attached presentation from November 1995 is the most concise summary of the information and conclusions reached after 6 years of Board meetings, proposals and work groups. In short, if you are interested in reading one document regarding what happened before the Board the last time this issue was addressed, this is the document.

Very truly yours,
Duncan Fields



Kodiak Salmon Work Group Report

for submission to

The State of Alaska Board of Fisheries

convening

November 29-December 6, 1995

Kodiak, Alaska

**Issues and comments regarding the
Kodiak/Cook Inlet Commercial Salmon Proposals**



Kodiak Salmon Workgroup

11/29/95

Mr. Chairman, Board of Fish members, my name is Duncan Fields, I have commercial fished in the Kodiak Management Area for the past 35 years. My family and I operate a "set net" operation in Uyak Bay on the west side of Kodiak Island. As you know from my presentations to you last winter, I am a member of the Kodiak Salmon Task Force and one of Kodiak's representatives on the Kodiak\Cook Inlet inter-area work group that was formed by the Board last year.

I'm here today as spokesperson for the Kodiak Salmon Task Force to persuade you to reject the various proposals seeking to manage the Kodiak salmon fishery for non-local stocks. I will make my case by giving an overview of the issue -- as much as time permits -- from Kodiak's perspective. Your chairman, Mr. Engel, thought it would be helpful for Kodiak and Cook Inlet to present an overview of the issue to help tie together various arguments and thoughts presented in the limited time allocated to individual public testifiers. Hopefully, this will enable the Board to see the issue from a more cohesive perspective.

Much of what I say today will be similar to what I presented last March.



Perhaps I can refresh your memories as to the issues that were clarified at that time. I will also address the 1995 Kodiak season as well as the 5 Cook Inlet proposals currently before the Board. In addition I will outline the Ouzinkie Native Corporation's proposal related to the North Shelikof Management plan.

Before I start my presentation Kodiak would like to thank the Board for your review of this issue over the past 3 years. We would particularly like to thank Mr. Engel and Mr. Edfelt for their involvement in the inner-area work group. Thank You!

I'd like to direct your attention to three documents..... The first is the Book we presented to the Board last year. Although this is unchanged, it is still an encyclopedia of the Cook Inlet bycatch issue up through 1994 --- we simply didn't have time, after the staff reports were completed three weeks ago, to update the book. I trust our book will be helpful as a reference volume as you deliberate on the bycatch issue. The second is a volume created for the March 1994 Board meeting with letters, affidavits and correspondence regarding this issue. This volume reflects the entire community of Kodiak's -- fishermen, processors, crewmen, citizens and businesses --- concern about non-local stock management of the Kodiak salmon fishery. The thesis of both volumes is that Kodiak's fisheries should be managed as it is now managed, on the abundance of local stocks. The third document is the ring bound packet you should have received today. It includes the text of my presentation as well as specific



comments about the Cook Inlet Proposals.

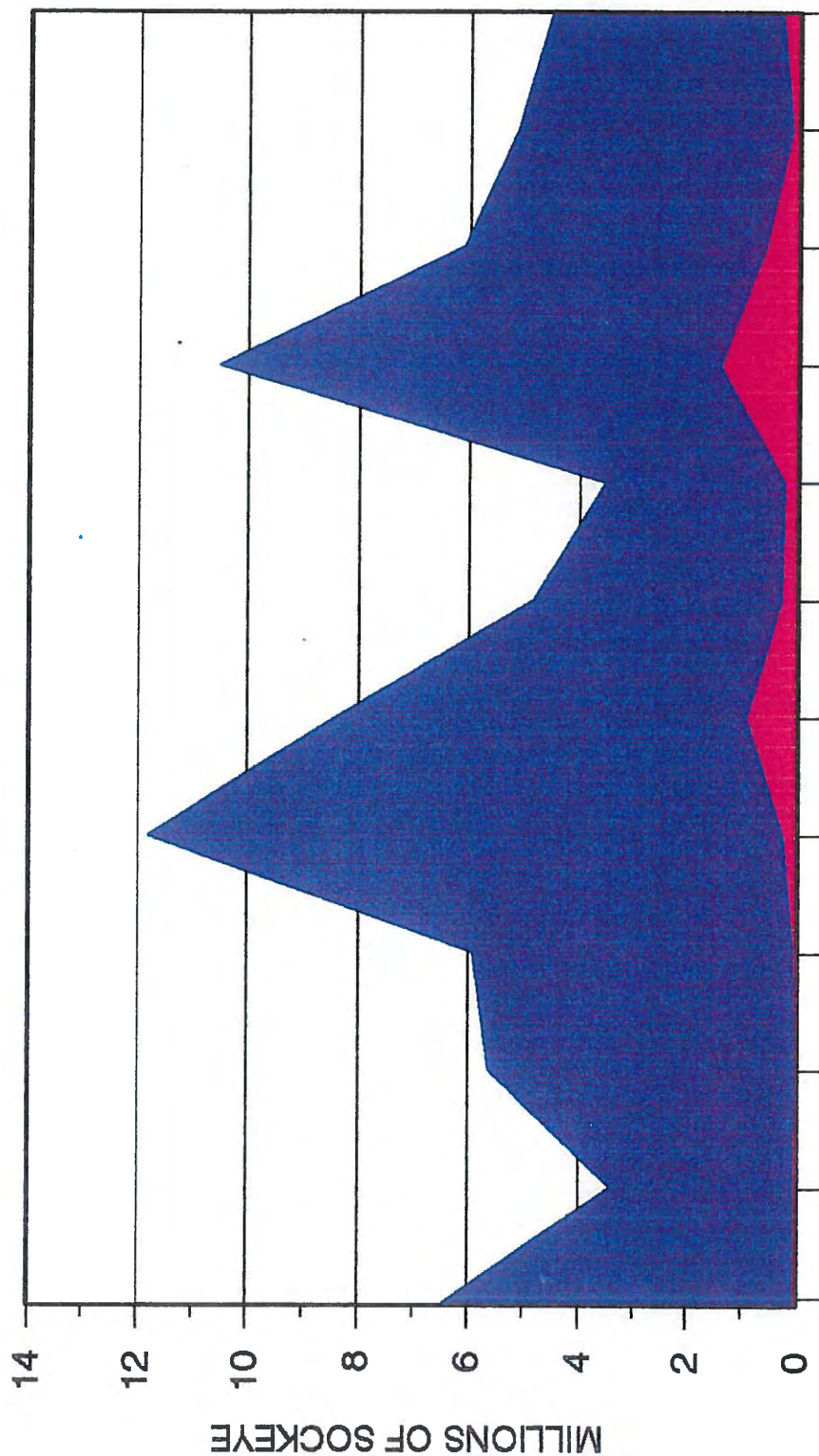
Defining the issue:

Fundamentally -- at its heart-- the Cook Inlet bycatch issue is a difference in perspective regarding the Kodiak salmon fishery. The Board is confronted with two thesis statements. Cook Inlet claims that Kodiak has a new and expanding fishery targeting Cook Inlet sockeye, a fishery that must be stopped. Or, the Kodiak thesis, Kodiak's incidental catch of Cook Inlet sockeye is primarily dependant on the size of Cook Inlet runs and under current board policy does not need additional regulation. Cook Inlet sees a Kodiak fleet with expanding catch capability and ever increasing knowledge moving to various capes intent on capturing Cook Inlet fish. In other words, Cook Inlet defines the problem as a Kodiak problem and Kodiak defines the issue in terms of what has happened with salmon returns in Cook Inlet.

The Kodiak thesis is best illustrated by our so called "Twin Peaks" chart. As the size of the Cook Inlet sockeye runs have increased, so too has the Kodiak bycatch of sockeye. Note particularly the large Cook Inlet runs in 1988 and 1992, you will see that these were years when Kodiak's bycatch also increased. If the Kodiak fishery were expanding, with more knowledge about how to target Cook Inlet fish and better equipment to fish new capes, you would expect the bycatch rates to remain fairly high or show an increasing trend. This is not the



UPPER COOK INLET TOTAL RUN KODIAK AREA INCIDENTAL CATCH



YEAR	1983	1984	1985	1986	1987	1988	1990	1991	1992	1993	1994	1995
U.C.I. RUN	6.5	3.4	5.6	5.9	11.8	8.4	4.8	3.5	10.5	6.1	5.1	4.5
INCIDENTAL CATCH	.082	.075	.051	.076	.267	.927	.303	.252	1.441	.625	.130	.327*

** KSWG estimate based on 1990,91,93,& 94 numbers.



case.

Just a quick note about the Kodiak Salmon Work Group's 1995 bycatch number. You have heard the staff indicate that an actual weight comparison has not been completed. Our bycatch number is an estimate -- nothing more. The estimate is based on the average from the 4 most recent years with Cook inlet runs similar in size to their 1995 return --- years 1990, 1991, 1993 and 1994. In three of these 4 years the Cook Inlet run was larger than the 1995 return so we would expect our estimate to be on the high side. Nevertheless, we wanted to give the board some sense of possible bycatch magnitude for the 1995 season.

You will observe that the line for Kodiak bycatch is slightly up on the Mountains and Valleys chart in 1995 --- again this is a "guesstimate". The upturned trend is just what you would expect in a year with maximum harvest opportunities on local Kodiak stocks. Much of the Kodiak Management Area was open to fishing in excess of 90 days during the 1995 season--- my own fishing operation, for example, had nets in the water 95 days and for 64 continuous days starting during the mid July cap period. What is surprising is that with the huge amount of fishing time in Kodiak, the incidental catch of non-local fish wasn't more noticeable. Non-local fish just weren't available, in any abundance, to Kodiak fishermen in 1995.

The second chart to confirm the Kodiak thesis of a density dependant

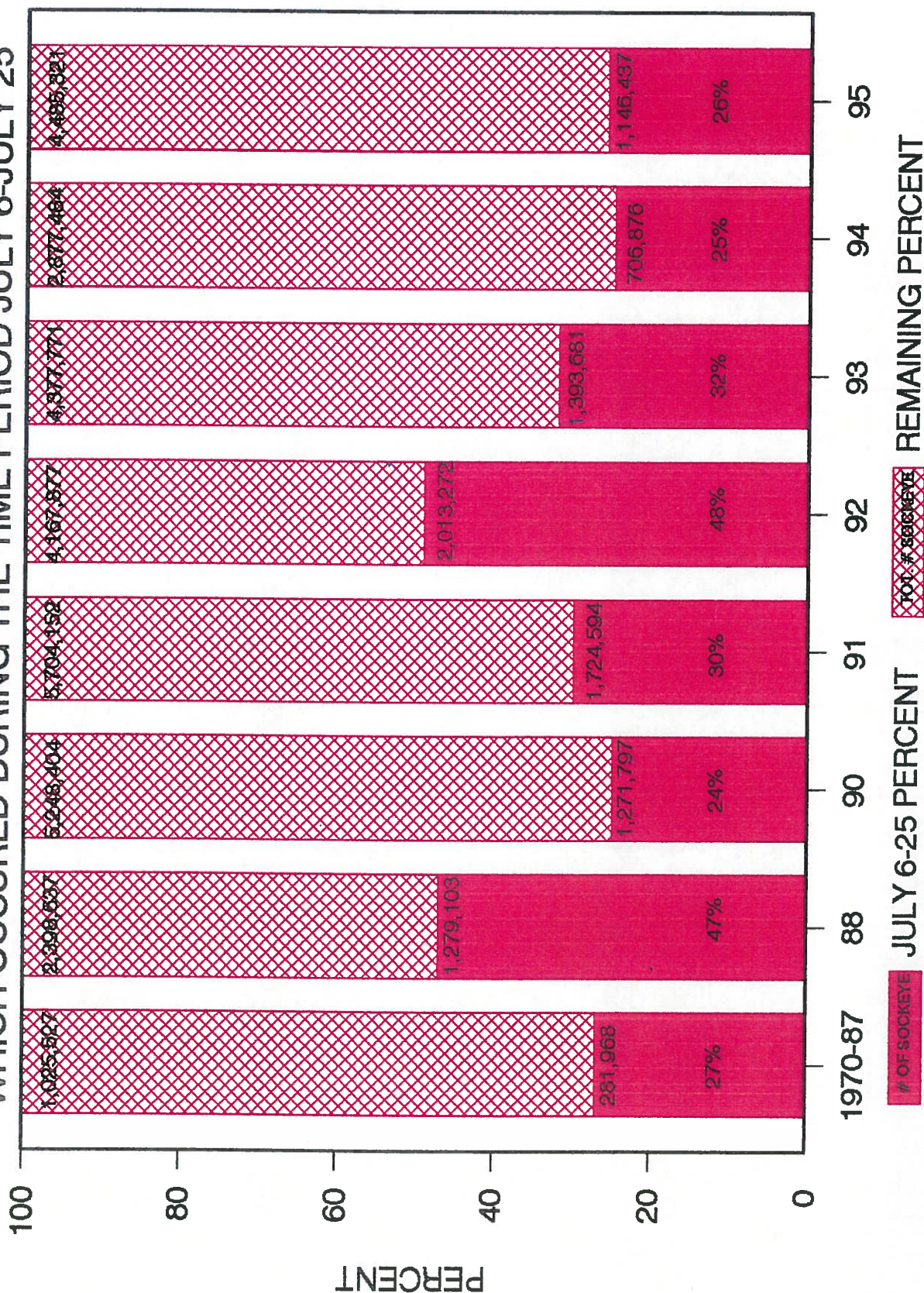


bycatch fishery is the so called "Larry Malloy Final Argument Graph". This is a blowup of one of the Department's graphs used by Dave Prokopowich in his presentation. The chart shows the percentage of the total Kodiak sockeye catch that is captured in the July 6th to July 25th period. With the exception of the two peak Cook Inlet seasons in 1988 and 1992, Kodiak's percentage of Sockeye caught during the Cap Period has remained stable at around 30 %. Again this shouldn't be surprising. Kodiak's sockeye season runs for about 3 months. The cap period is slightly less than one third of the sockeye season and during that time period we catch just less than a third of our fish. If the Cook Inlet thesis were correct, the percentage of sockeye captured during July 6th to 25th should be increasing. (As a footnote: this graph was named the "Larry Malloy Final Argument Graph" because during our work group meetings Larry would go back to this graph over and over again to verify the consistency, over time, of the Kodiak sockeye fishery.)

Let me direct the Board's attention to the size of the Cook inlet return in 1992. As you know, Cook Inlet never had a harvest that exceeded 3 million sockeye until 1982. The 100 year average of the fishery --- even including the recent huge years- is still only an annual catch of about 1.8 million sockeye. Cook Inlet's catches in 1992 exceeded this average by 5.46 times..... It is a Cook Inlet catch that is 5 times the norm that has brought this issue before the board continuously over the past three years. As I illustrated last year, just think about the 1992 Cook Inlet return in terms of the size of the Board of fish,



KODIAK MANAGEMENT AREA PERCENTAGE OF THE ANNUAL SOCKEYE SALMON HARVEST WHICH OCCURRED DURING THE TIME PERIOD JULY 6-JULY 25





you currently have 7 members, what would happen if the Board would suddenly be expanded to 35 members? I would guess some unexpected problems would occur.

You can work the math another way to support the "Mountains and Valleys" chart. If you take the proposed Kodiak bycatch rate in the Barrett/Vining stock separation model for the year closest to the Historical average catch of 1.8 million, you look at 1984, with a catch of 2.4 million sockeye and a bycatch rate of 2.1%. If you multiply the 2.1% by the 5.46 multiplier you have a rate of 11.5. This is very close to the actual 1992 bycatch rate of approximately 12.1%. As the graph shows, Kodiak's bycatch rate has risen and fallen in proportion to the increase in the Cook Inlet runs.

Sockeye Availability:

The probable explanation for Kodiak's density dependant bycatch fishery is the availability of Cook Inlet sockeye in the Kodiak management area. As you can see from our migratory chart -- again, this is material presented last year, most Cook Inlet sockeye are not even available to Kodiak fishermen--- not ever. This is a broad misconception --- some folks would have you believe that each and every Cook Inlet fish swims through a gauntlet of Kodiak fishermen before arriving at Cook Inlet. The fact is that most Cook Inlet fish pass through the Kennedy and Stevenson entrances North of Kodiak Island.



We don't know what the actual percentage breakdown is between those fish that travel out of the Alaska counter clockwise gyre into Cook Inlet and those fish that continue south along the east coast of Kodiak Island. However, we do know that the majority of Cook Inlet fish pass through the Kennedy and Stevenson entrances. As the NRC report regarding Kodiak's harvest rates of Cook Inlet sockeye indicated, the data "suggests that the majority of sockeye returning to UCI migrate through Kennedy and Stevenson Entrances rather than Shelikof Strait."

If the Cook Inlet thesis is Correct and the primary variable is fishing effort, not nature and the size of returning runs, Kodiak's bycatch rate should continue to climb -- or at the least-- remain above the 1992 10% range. We all know this hasn't happened. Kodiak fishermen -- even with their new boats, sophisticated equipment, knowledge of how to catch Cook Inlet sockeye, targeting and searching on the capes for Cook Inlet sockeye etc. etc. , in 1994, only captured about 2.5 % of the Cook Inlet run.

Again, this issue is defined by mother nature -- that is the size of Cook Inlet's runs. Not what is or has been happening in Kodiak.

Managing for Local Stocks:



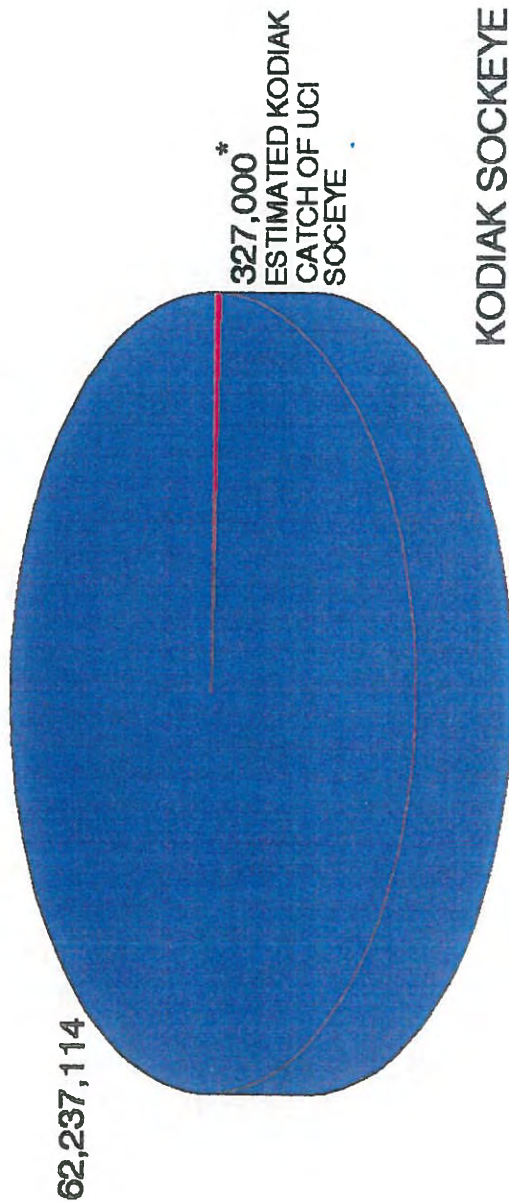
Our third chart, the so called "Pie Chart" graph illustrates the importance of managing the Kodiak fishery for local stocks. The graph should give the Board some idea of the order of magnitude of the Cook Inlet issue in 1995. You see that the big pie is the total 1995 Kodiak return, the estimated Cook Inlet portion of that return is less than 1/2 of one percent. If additional restrictions were imposed on the Kodiak Salmon fishery, you would be impacting 99.5% of the fishery to protect a portion of less than 1/2 of one percent.

The smaller pie also illustrates this point. In 1995 probably only about 5% of the total Kodiak sockeye return were non-local. Imposing regulatory restrictions to preserve a portion of 5% of a fishery while causing reallocation and displacement of a portion of 95% of a fishery simply could not be considered good biological management. This is why the Board should affirm the Department's current time honored approach of managing the Kodiak salmon fishery for local stocks.

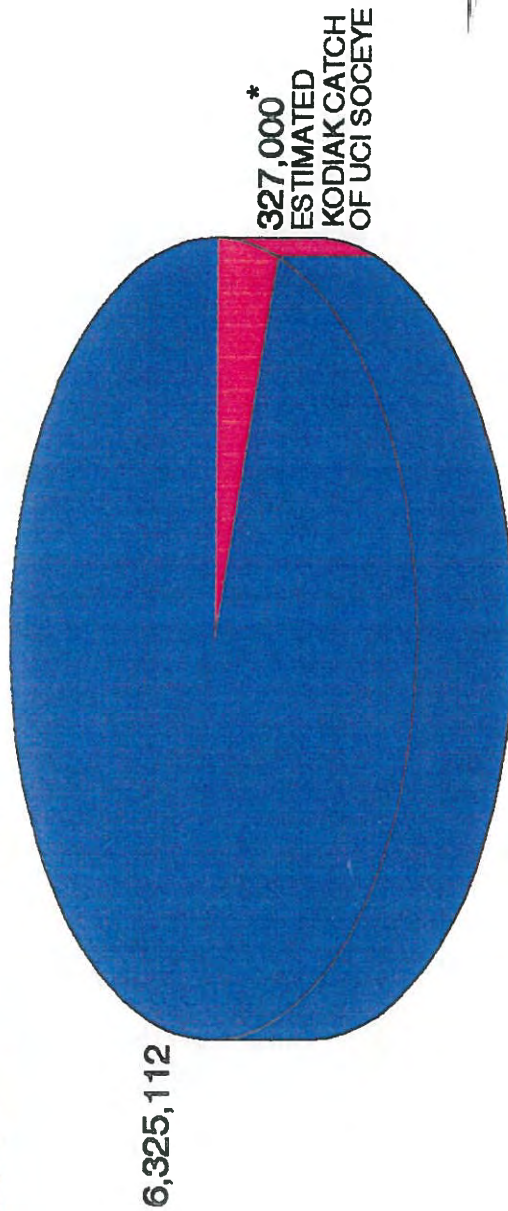
You can see the point about managing for local stocks once again in the smaller graph included in your packet with the heading Kodiak Management Area Salmon Fishery Chronology by Species. During the 1995 season, between July 6th and July 25th approximately 8 million pinks, chums and coho were harvested in Kodiak. Any restrictions in any part of the Kodiak management area on the harvest of these 8 million fish would have resulted in a loss of at least some of these fish.

1995 ESTIMATED KODIAK CATCH OF UCI SOCKEYE COMPARED TO KODIAK RETURNS

TOTAL KODIAK SALMON RETURN



KODIAK SOCKEYE RETURN

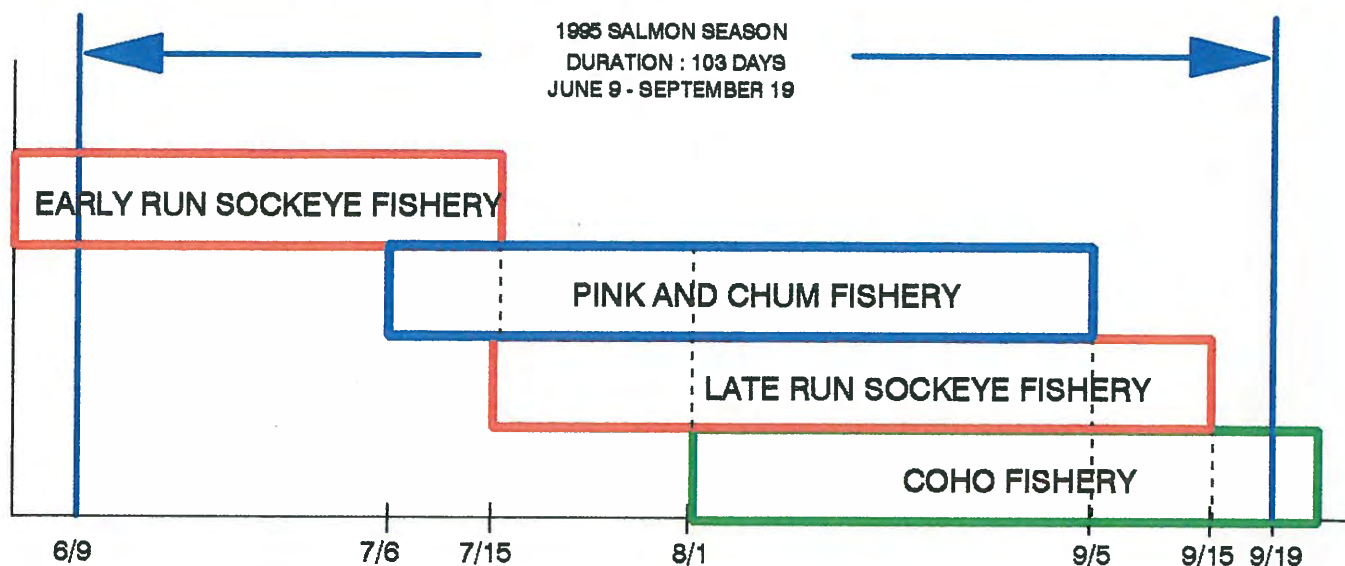


*** KSWG ESTIMATE BASED ON 1980,91,93, & 94 NUMBERS.

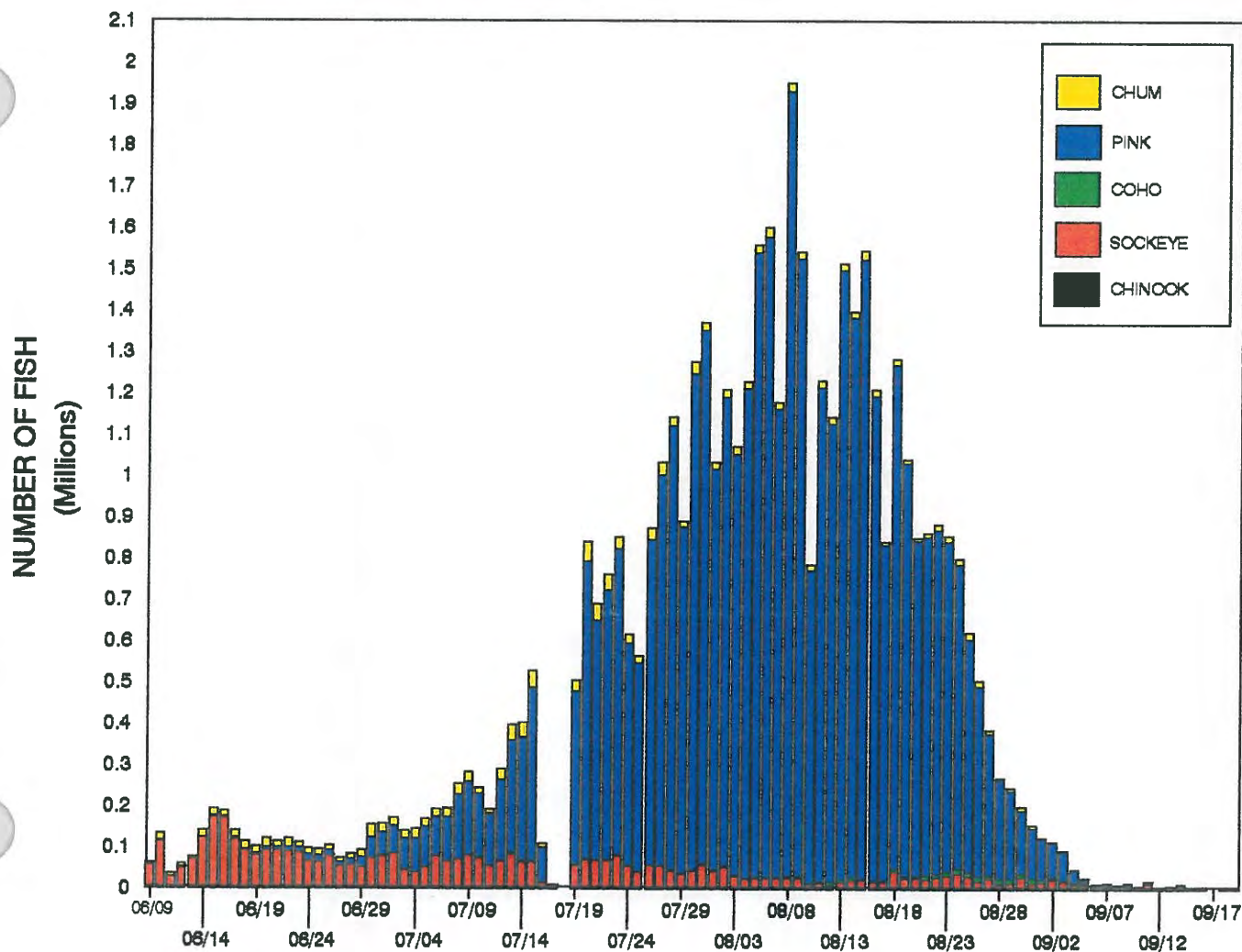




KODIAK MANAGEMENT AREA SALMON FISHERY CHRONOLOGY BY SPECIES



KODIAK MANAGEMENT AREA 1995 SALMON HARVEST BY SPECIES





From the middle of July through August, Kodiak processors were at or beyond maximum processing capacity and most processors had severe limits on the fish they would take. Escapement of Kodiak pink salmon in excess of escapement goals in 1995 probably exceeded 5 million fish. Apart from the argument about reduced quality -- a very important argument ---, in a year like 1995, limitations on the opportunity for the Kodiak fleet to catch every possible fish out on the capes as early in the season as possible will always result in overescapement. Even in a year when 1/2 the 1995 pinks are available, overescapement is likely.

North Shelikof Management Plan:

I want to move now the regulations imposed by the N. Shelikof management plan -- this is chapter 5 in the Book. (Show chart of area.) You will remember that this management plan was imposed by the Board in 1989 after what had occurred in the N. Shelikof in 1988. The Board, at that time, didn't have the benefit of seeing the 1988 run in the context of subsequent large and smaller Cook Inlet runs. They were concerned about Kodiak fishermen "targeting" Cook Inlet fish in the North Shelikof. The management plan uses "cap" amounts as a trigger mechanism for closures, restricting fishing to a cap in the larger part of the area, when 15,000 sockeye are captured. As Kevin Brennan indicated yesterday, the North Shelikof Management plan was not intended to be an absolute cap of the number of sockeye caught in the area.



In concept and practice, the plan set forth a catch number as a trigger mechanism for area closures --- nothing more or less. Several of Cook Inlets' current proposals seem to confuse this basic concept of the North Shelikof plan.

I want to make three points with regard to the N. Shelikof management plan. First, The North Shelikof plan is a regulation on the Kodiak fishery which limits the harvest of Cook Inlet Sockeye. You will hear that there is nothing the Department can do to control Kodiak's incidental catch of Cook Inlet sockeye. Remember. Something already has been done. Second the North Shelikof regulation is substantial and has resulted in significant savings of Cook Inlet sockeye. And third, the N. Shelikof management plan has impacted the remaining Kodiak fishery.

The North Shelikof management plan has closed most of the area on or before July 15th in 5 out of the last 6 years. A high of 89 vessels participated in 1993 and a low of 42 vessels in 1991 with 77 vessels present when the fishery closed in 1995. The plan imposes closures on an area that is equal to a 3 mile line along both sides of the Cook Inlet management area --- see map. When this area is closed, most of the vessel effort is forced to fish elsewhere.

During the 1988 season most of the sockeye catch in the North Shelikof occurred after July 15th. The closures imposed in North Shelikof were implemented on or before this date during the last 5 years. Consequently, given



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run timing, these closures have significantly limited the amount of Cook Inlet sockeye captured. If the percentage of the overall Kodiak bycatch in the North Shelikof catch in 1988 would have remained constant through 1995, the North Shelikof management plan has restricted Kodiak's fishery to save in excess of 1 million Cook Inlet sockeye over the past 6 years. (I believe Mr. Angasan made this point yesterday regarding the success of the North Shelikof Management plan.)

What happens when the N. Shelikof management plan closes most of the fishery? The primary effect is that the vessels in this area move elsewhere--- and remember this is 60 or 70 vessels. Vessel movement from the North Shelikof has created, in part, what Cook Inlet calls "targeting."

1992 clearly illustrates the problem. Cook Inlet looked at the number of vessels operating the Sitkalidak area and claimed that the Kodiak fleet was targeting Cook Inlet fish. The number of vessels involved in the 1992 fishery in the Sitkalidak section was well within historic fleet levels until July 14 and July 15. At this time the number of vessels jumped from 44 to 50 and then to 65. Where did the new vessels come from?

The N. Shelikof management plan closed the S.W. Afognak section on July 14th at 1:00 p.m. with a fleet of 84 vessels present. Approximately 20 of these vessels traveled to Outer Sitkalidak. This wasn't "targeting", rather this



was a shift in the Kodiak fleet due to regulation to protect Cook Inlet sockeye in the North Shelikof.

A similar circumstance has frequently occurred in the Katmai/Alinchak area. Cook inlet shows the unit effort in this area to indicate a new and expanding fishery. However, the expansion of effort in this area correlates closely with the North Shelikof closures. For example, in 1992 on July 21st. effort jumped from 6 to 12 permits on the first opening after the N. Shelikof closures on July 14th and again in 1994 effort jumped on July 13th and 14th in anticipation of the North Shelikof closures on July 14th.

The problem the North Shelikof plan creates is the so called "domino effect". Once the N. Shelikof management plan was imposed, shifts in the Kodiak fishery were to be expected --- the vessels in the North Shelikof had to fish somewhere. The Board's North Shelikof plan was to limit fishing in the area considered highest in the incidental catch of Cook Inlet Sockeye. Now this Board has been left with the responsibility to review the effects of that management plan. If the board views regulation imposed vessel movement as needing additional regulation, eventually the entirety of Kodiak Island be entangled in ever increasing fishing restrictions. Every regulation will have an effect that will then have to be re regulated.... The entire Cook Inlet debate needs to be viewed through the lens of the effects of North Shelikof Management plan.



In this regard the board should note proposal 134 submitted by the Ouzinkie Native Corporation. The proposal seeks a modest modification of the North Shelikof management plan. Rather than a Headland to Headland closure when the 15,000 sockeye trigger mechanism is attained, the proposal would leave a 1/2 mile strip along Afognak up to Black Cape for fishing. This would contain some of the vessel shift from the area when the cap is reached and limit the so called targeting in other areas. In addition, it will allow for the traditional capture of an increasing amount of local sockeye. While it is true that these sockeye can be captured in the small bays on west Afognak, it is equally true that the exclusive "bay fishery" excludes a number of the larger Kodiak cape seining vessels. Finally, and of great importance to the Ouzinkie fleet, proposal 134 will return their historic fishing area.

Note also what proposal 134 does not do. The half mile line only goes up to Black Cape because this was the extent of the historical fishery --- this will leave more than 1/2 of the coast line in the North Shelikof management area closed cape to cape. Second, the 1/2 mile generally only allows 1 set off the cape. A single set off of less than 5 hook haul spots could not be viewed as "targeting" Cook Inlet fish. Then third, the 1/2 mile is similar to what was opened up in the Southwest Afognak area during the 1993 Board meeting. Our experience during the past three years in the S.W. Afognak area is that no bycatch problems have occurred within the 1/2 mile zone.



Proposal 134 is the type of limited, area specific, time specific, purpose specific, " minor surgery" regulation that the Board should seriously consider. It is a regulation that will enable a small number of local fishermen to continue fishing as they did before 1988. It is also recognition that data points since 1988 point to a density dependant incidental fishery here in Kodiak and not to a new and expanding Kodiak fishery.

Cook Inlet Proposals:

I have provided you with a detailed analysis of Cook Inlet's proposal 138. The remaining 4 proposals, 135, 136, 137 & 139 are really subsumed in proposal 138. These four proposals, advocating 24 hour fishing periods, headland to headland closures, half mile zones around Kodiak Island and terminal harvests by Emergency Order are all aggressive and interesting concepts but they are neither new nor are they justified. Proposal 138 is more sophisticated but equally overbroad and unsupported by the available data. Please review the Kodiak work Group's comments regarding this proposal --- I believe there are about 30 pages of point specific criticisms.

In short, any proposal considered by the Board should be tailor fit to meet a defined problem. It should be area, time and species specific. Such a proposal should not create greater problems than it solves. All of the Cook Inlet proposals fail to meet these standards. As I said last March, the Board should



not consider using a meat ax to solve a problem that can be solved by a scalpel.

Sitkalidak:

Let me briefly remind the board of the unique problems associated with the inclusion of the Sitkalidak section and Halibut Bay in any Cook Inlet proposal. Any way you cut it, regulating the Sitkalidak area is going to place a disproportionate burden on the village of Old Harbor. (Show map.) Before imposing any restrictions in the Sitkalidak area the board must ask a question about equity --- is it fair, or right, for a particular village to shoulder an economic burden because Cook Inlet has produced more fish?

Halibut Bay is part of an existing, finely tuned management plan between two important local sockeye systems, Karluk and Ayakulik. Halibut Bay serves as a safety valve for large runs to either of these systems and allows for an orderly harvest of sockeye away from the stream terminus. Limiting fishing opportunities in Halibut Bay would substantially compromise the existing management plan.

Let me conclude by agreeing with you that Kodiak's incidental catch of Cook Inlet sockeye is a complex issue. Not something that can really be covered in 15 minutes of summary material. You have the book we produced ---



over the past three years I've accumulated 3 file boxes of paper on the issue. Nevertheless, several of you have spent considerable time working on this issue and others of you have read much of what has been produced. I can't think of a Board better qualified to make a decision and put this issue to rest.

I believe that Mother Nature, more than any other variable, controls the bycatch around Kodiak Island. If this is true --- and I believe the evidence supports this thesis --- than the Board shouldn't further regulate the Kodiak Management Area to limit the catch of Cook Inlet sockeye. However, even if you don't agree with this thesis and conclude that regulation is necessary, I must emphatically advocate that the 5 Cook Inlet proposals are not the appropriate management tools for the modification of Kodiak's local stocks management policy.

Thank You.



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PROPOSAL 138

(11/29/95 Board Meeting)

The Board has reviewed this proposal, in essentially the same form, on two prior occasions. The proposal first circulated at the January 1993 Board of Fish meeting in Kodiak. It was then accepted for review by the Board at their March 1994 Board meeting in Anchorage and designated as Proposal 528. Rather than reject Proposal 528, in March, 1994, the Board established an inter-area work group. The proposal was then listed as proposal 333 for the March, 1995 Board meeting in Kodiak. As a result of the work group exchanges, Cook Inlet modified the proposal slightly in December, 1994 and presented the modified proposal at the March meeting. Proposal 138 is essentially the same as prior proposals 528, 333 and the December 1994 proposal --- the proposal that was rejected by the Board last March, here in Kodiak.

I have outlined the three proposals for the Board to compare. The original proposal 528 is in regular text. The December, 1994 revisions are underlined and italicized and changes incorporated in the current proposal are of a different type face and in bold. The substantive analysis follows the proposal comparisons.

PROPOSAL 528

Paragraph 1:

The purpose of this management plan is to provide direction to the Department in the management of the seine fishery during the July 1-25 period when Cook Inlet Bound sockeye salmon are migrating through the Kodiak Management Area. It is the intent of the Board to allow fisheries throughout the management area to be conducted on Kodiak Area salmon stocks while minimizing the harvest of Cook Inlet sockeye salmon stocks.



12/94 Proposal

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11/95 Proposal 138

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Paragraph 2:

Proposal 528

The Board recognizes that some incidental catch of Cook Inlet sockeye and other stocks has and will occur in this area while the seine fishery is managed for Kodiak Area Salmon stocks. The Board intends, however, to prevent a repetition of the non-traditional harvest patterns that have occurred since 1986. Therefore, the Board establishes the following direction to the Department for management of salmon stocks during the July 1-25 period:

12/94 Proposal

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Paragraph 3:

Proposal 528

The board intends to minimize the interception of Cook Inlet sockeye salmon in the Kodiak management Area to not exceed 5% of the total Cook Inlet Sockeye salmon returns. An annual post season analysis will be conducted to determine if the goal of the Board is met.

12/94 Proposal

The Board intends to minimize the interception of Cook Inlet sockeye salmon in the Kodiak Management Area to not exceed 5% of the total Cook Inlet sockeye salmon return. An annual post season adjustment will be conducted to determine if the goal of the Board is met. Management adjustments in succeeding years will be made to meet this goal.



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The Board intends to minimize the interception of Cook Inlet sockeye salmon in the Kodiak Management Area to not exceed 5% of the total Cook Inlet sockeye salmon return. An annual post season adjustment will be conducted to determine if the goal of the Board is met. Management adjustments in succeeding years will be made to meet this goal.

Paragraph 4:

(With subparagraphs (1), (2) and (3).

Proposal 528

Therefore, the Board establishes the following direction to the Department for management of salmon stocks during the July 1 - 25 period:

- (1) When predominately local Kodiak stocks are present within any management district, emergency orders will be given consistent with the management plan for that district;
- (2) When predominately Cook Inlet sockeye or other non-local stocks are present within any management district, the Department shall use emergency order authority to minimize the interception of these stocks;
- (3) The Department shall attempt to minimize the interception of Cook Inlet Sockeye and other non-local stocks during the July 1-25 period by the following means:
 - (A) Restrict fishing time: Emergency orders extending fishing time will not be given when it is apparent to the Department that based on fish size, species composition, harvest patterns, or other information available that the predominate salmon stocks harvested within any district or section of the Kodiak Management Area are of non-local origin;
 - (B) Restrict fishing area: The Department shall restrict the seine fishery in any district or section of the management area from fishing seaward of lines drawn from headland to headland when predominately Cook Inlet sockeye and other non-local stocks are present in offshore waters. Lines drawn closing offshore areas will be based on the Kodiak Area staffs knowledge of the fishery that takes place in the area and the best information available at the time;

12/94 Proposal

Therefore, the Board establishes the following direction to the Department for management of salmon stocks during the July 6 - 25 period:

- (1) When predominately local Kodiak stocks are present within any management district, emergency orders will be given consistent with the management plan for that district;
- (2) When predominately Cook Inlet sockeye or other non-local stocks are present within any management district, the Department shall use emergency order authority to minimize the interception of these stocks;
- (3) The Department shall attempt to minimize the interception of Cook Inlet Sockeye and other non-local stocks during the July 6-25 period by the following means:



(A) Restrict fishing time: Emergency orders extending fishing time will not be given when it is apparent to the Department that based on fish size, species composition, harvest patterns, or other information available that the predominate salmon stocks harvested within any district or section of the Kodiak Management Area are of non-local origin;

(B) Restrict fishing area: The Department shall restrict the seine fishery in any district or section of the management area from fishing seaward of lines drawn from headland to headland when predominately Cook Inlet sockeye and other non-local stocks are present in offshore waters. Lines drawn closing offshore areas will be based on the Kodiak Area staffs knowledge of the fishery that takes place in the area and the best information available at the time:

Proposal 138

Therefore, the Board establishes the following direction to the Department for management of salmon stocks during the July 6-25 period:

(1) When predominately local Kodiak stocks are present within any management district, emergency orders will be given consistent with the management plan for that district;

(2) When predominately Cook Inlet sockeye or other non-local stocks are present within any management district, the Department shall use emergency order authority to minimize the interception of these stocks;

(3) The Department shall attempt to minimize the interception of Cook Inlet Sockeye and other non-local stocks during the July 6 -25 period by the following means:

(A) Restrict fishing time: Emergency orders extending fishing time will not be given when it is apparent to the Department that based on fish size, species composition, harvest patterns, or other information available that the predominate salmon stocks harvested within any district or section of the Kodiak Management Area are of non-local origin;

(B) Restrict fishing area: The Department shall restrict the seine fishery in any district or section of the management area from fishing seaward of lines drawn from headland to headland when predominately Cook Inlet sockeye and other non-local stocks are present in offshore waters:

Paragraph 5:

Proposal 528

In addition to the above in-season management actions the following areas are closed to seine fishing to protect migrating Cook Inlet sockeye salmon and other non-local stocks during the July 6-25 period.

(A) The Halibut Bay section of the Southwest Kodiak District;

(B) The outer statistical areas 258-10 and 258-40 of the Sitkalidak Section of the Eastside Kodiak District; and

(C) The Katmai and Alinchak Bay Sections of the Mainland District.

12/94 Proposal



In addition to the above actions seine fishing in the following areas will be restricted as follows to protect migrating Cook Inlet sockeye salmon and other non-local stocks during the July 6-25 period;

(A) From July 6-25 in the Halibut Bay Section of the Southwest Kodiak District the department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 39,000 sockeye salmon;
- (3) when the harvest reaches 39,000 sockeye salmon the department shall close the fishery by emergency order until the first regularly scheduled period that follows July 26.

(B) From July 6-25 in the Sitkalidak Section of the Eastside Kodiak District the department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 17,500 sockeye salmon;
- (3) when the harvest reaches 17,500 sockeye salmon, the department shall restrict the fishery by emergency order to the inside waters on the Sitkalidak Section (statistical areas 258-20; 30; 51; and 52)
- (4) terminal harvest areas may be opened by emergency order based on local stock abundance within the outside waters of the Sitkalidak section (statistical area 258-40) once the 17,500 sockeye cap is reached.

(C) From July 6-25 in the Katmai/Alinchak Section of the Mainland District the department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 6,900 sockeye salmon;
- (3) when the harvest reaches 6,900 sockeye salmon, the department shall restrict the fishery by emergency order to waters inside (shoreward) of lines drawn from headland to headland.

Proposal 138

In addition to the above actions seine fishing in the following areas will be restricted as follows to protect migrating Cook Inlet sockeye salmon and other non-local stocks during the July 6-25 period;

(A) From July 6-25 in the Halibut Bay Section of the Southwest Kodiak District the department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 39,000 sockeye salmon;



(3) when the harvest reaches 39,000 sockeye salmon the department shall manage the fishery by emergency order until the first regularly scheduled period that follows July 26.

(B) From July 6-25 in the Sitkalidak Section of the Eastside Kodiak District the department shall manage the fishery as follows:

(1) the management of the fishery shall be based on local stocks;

(2) the fishery shall remain open during normal fishing periods until the harvest reaches 17,500 sockeye salmon;

(3) when the harvest reaches 17,500 sockeye salmon, the department shall close that portion of the section seaward of a line 1/2 mile offshore extending along the east side of Sitkalidak Island from the longitude of Rolling Bay to Cape Barnabas until the first regularly scheduled period that follows July 26.

(C) From July 6-25 in the Katmai/Alinchak Section of the Mainland District the department shall manage the fishery as follows;

(1) the management of the fishery shall be based on local stocks;

(2) the fishery shall remain open during normal fishing periods until the harvest reaches 6,900 sockeye salmon;

(3) when the harvest reaches 6,900 sockeye salmon, the department shall close that portion of the section seaward of the line from Cape Ilktugitak to Cape Kubugakli to Cape Kerkurnoi to Cape Aklek until the first regularly scheduled period that follows July 26th.

It is clear from the above comparison that proposal 138 is like a leopard that has tried to shed its spots --- small changes in form have not changed the substance of the proposal. Despite the March 1995 revelations that the average wt. analysis is suspect, 1993, 1994 and 1995 data points showing that 1992 was a density dependant anomaly and testimony regarding the reallocation, displacement, and chaos this proposal would have, Cook Inlet has not altered its basic 1992 position.. If the Board were to determine that a problem existed, the solution to such a problem should be much more refined.

The fundamental problem with proposal 138, as well as Cook Inlet's other proposals, is that it moves beyond regulation of what may be "new and expanding" and tries to wrestle a larger market share from Kodiak by reducing the Kodiak fishery to a level

far below what has historically occurred.

Kodiak's response to proposal 138 is as follows:





Response

1. The proposal will have substantial impact on all gear types in Kodiak. If the intent was to manage the Kodiak seine fishery, the proposal is far too broad.
2. The July 6-25 time period is also too broad. Catch records show that during many seasons, substantial numbers of Cook Inlet fish are not present in the Kodiak Management area, eg. 1994. Moreover, these catch records also show that during years when there is a presence of Cook Inlet fish, these fish are not present in any given statistical area for more than 7 -10 days, ie. 1992.
3. If it is the intent of the Board to allow fisheries to be conducted on Kodiak Area salmon stocks, complete closures in any area should not be imposed. Complete closures eliminate or reduce local stock fisheries.
4. "Minimizing" is a vague and ambiguous term and an



inadequate directive for fish management. Moreover, there is no statutory or regulatory basis for the "minimize" language. The issue is whether or not there is a new and expanding fishery, not how many fish are taken.

5. Finally, nothing in the first paragraph of the proposal acknowledges the tremendous growth of the Cook Inlet runs. Kodiak's bycatch percentage of Cook Inlet fish is a mirror image of the size of Cook Inlet returns -- with larger runs we tend to catch a larger percentage of Cook Inlet fish. THE SIZE OF COOK INLET'S RUNS IS THE SINGLE GREATEST VARIABLE IN THIS DEBATE.
6. The use of 1987 as a watershed year gives short shrift to the 100 plus year history of Kodiak's bycatch of Cook Inlet fish. Once again, nothing is mentioned about the growth of Cook Inlet stocks and nothing ties this proposal to what is happening with the fishery in Cook Inlet.
7. The Kodiak management area is already managed for local



stocks, any changes in current management will alter the present system -- which is management for local stocks -- and create a system that is, at least in part, no longer management for local stocks.

8. The base years used by Cook Inlet to establish "non-traditional" reflect an inaccurate and selective bias. Cook Inlet uses base years of low Kodiak sockeye and low Cook Inlet sockeye abundance to establish what was traditional and then compares these base years to years of large sockeye abundance in both areas to claim "non-traditional" harvests.. This is an apples and oranges comparison.
9. Cook Inlet acknowledges that Kodiak's cape fishery is an historical fishery and that Kodiak has always had "some incidental catch of Cook Inlet sockeye", we believe the base for determining what is traditional should go back at least 50 years. Sockeye catches in Kodiak in the 1940's and 1950's clearly reflect a Cook Inlet component to the catch and a substantial cape fishery. The changes occurring in 1988 and 1992 were primarily due to the size of the Cook Inlet runs.



10. Cook Inlet cannot support the "non-traditional" harvest pattern thesis for more than a year or two in any given statistical area. There are some shifts in Kodiak harvest patterns in years of high Cook Inlet sockeye returns. The shifts, however, do not show a continuing pattern and thus do not support the idea of a new and expanding fishery. For example, in the Sitkalidak section in 1992, (during the large Cook Inlet return), the permit and landing data shows some shift in Kodiak fishing effort for about 4 days. However, this is not seen in 1993 or 1994. And, at least 5 times from 1959 to 1987, fishing effort in the Sitkalidak section exceeded what occurred in 1992.
11. The Cook Inlet thesis of "non-traditional" harvest patterns does not account for the changes in Kodiak fishing patterns that necessarily occurred with the imposition of the North Shelikof management plan. The fleet displaced by the North Shelikof management plan has been forced to find other capes to fish on. While it is true that this is "new", it does not represent an expansion of the Kodiak fishery -- these vessels have always been fishing the capes. In 1992, for example, the day after the North Shelikof was closed, approximately the same number of



vessels that had been fishing in the North Shelikof appeared in the Sitkalidak area.

12. The "minimize" language in paragraph 1 is now attached to a percentage. This is more concrete but does not appear to actually allocate 5% of the run to Kodiak. The goal is still to minimize, and anything less than 5% is acceptable. The proposal, as written, does not actually allocate 5% to Kodiak, it just doesn't want the bycatch to exceed 5%. If the concept of the proposal is caps and closures, it would be better to eliminate the "minimize", "manage for local stocks" and "historical fishery" language and simply state that Kodiak is allocated 5% of the Cook Inlet run. This is clearer but still problematic because of the basis for a 5% figure.
13. Caps are crude management tools that, in this situation, will eliminate local harvest opportunities and could, in some cases, eliminate necessary local harvest options -- thereby creating overescapement. The Kodiak fishery is distinct from the Chignik/Igvak conflict or the Area M issue. Seven (7) districts and fifty two (52) sections are being managed simultaneously



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based on local stocks. One third of the local sockeye and up to half of other local non-sockeye are captured when the Cook Inlet fish come through the Kodiak Management Area. For example, in the Sitkalidak Section, even in 1992, 54% of the fish captured were local stocks.

14. Identifying, in-season, the number of Cook Inlet sockeye harvested in Kodiak is exceedingly difficult or simply not possible.. All methods conceived thus far are not particularly accurate, (weight analysis, scale analysis, catch patterns) and genetic stock identification is neither available nor would it be timely in season. What is the proposed method for determining the 5%? Current fishery managers are unwilling to consider in-season stock identification.
15. A Kodiak allocation of a percentage of Cook Inlet's preseason projected return, based on the experience of the past 10 years, would be highly inaccurate. For example, in 1994 with a preseason forecast of two million, their actual catch was three million seven hundred thousand. Cook Inlet's forecast error rate in 1993 was @ 90% and in 1992 it exceeded 150%.



16. Caps don't reflect the dynamic variables of the fishery. For example, the Cook Inlet returns for 1990 and 1994 were approximately the same. A cap would assume a fixed bycatch rate, however, the Kodiak bycatch rate declined from 5.5% in 1990 to 1.8% in 1994. **Note: what is actually happening in the fishery indicates that Kodiak's fishery, over the past two years, is constricting rather than expanding.**
17. The current range of Cook Inlet preseason forecast limits accurate approximation of what Kodiak's allocation would be. For example, the 1995 preseason forecast was between 1.3 and 11.9 million fish, what amount would be allocated to Kodiak?
18. "Management adjustments in succeeding years" is vague and will cause problems. If managers underestimate the 5 % one year does that mean Kodiak gets more than 5% another year what about if there is a conservation concern? Or, what about value, if the underestimate is on a year of higher value, wouldn't Kodiak be entitled to more fish in years of lower value.



19. Post season adjustments also lock the Department into a yearly post season stock separation analysis for all of Kodiak Island. This is expensive, time consuming, and presumes funding which may not be available.
20. The "other non-local" stocks language is unnecessary. Kodiak has historically fished "non-local" stocks other than the Cook Inlet fish. The issue remains, does Kodiak have a "new and expanding" fishery with regard to Cook Inlet stocks.
21. The "any district" language is much too broad and lacks substantive support or justification. For example, why should the S.E. Afognak section be subject to management for Cook Inlet sockeye?
22. Invasive management as envisioned by this proposal would interfere with existing management plans, harvest of local stocks and traditional fishing patterns as well as the allocation between gear types. There is currently an uneasy balance in the allocation between Kodiak setnet and seine fisheries.



Changing this balance will create havoc in the Kodiak salmon fishery. There are numerous examples of allocation shift with the imposition of the headland closures. One illustration is the Northwest Kodiak District. If closure to headlands would occur, what would happen with the setnetters between Long Beach and Broken Point?

23. Subparagraphs (2) and (3), as written, still use the "minimize" language. This would be internally inconsistent with the 5% allocation mentioned in paragraph 3.
24. Parts (A) and (B) of subparagraph 3 are cumulative. Emergency orders, extending fishing, are always based on the abundance of local stocks and current local escapement. Fishing time in Kodiak is not extended because of the occasional presence of Cook Inlet stocks. (Cook Inlet has yet to furnish an example of when and where this may have occurred.) Consequently, limiting extension of fishing time has a direct and detrimental effect on the harvest of local stocks --- especially if we are talking about "any management district".



25. Headland to headland restrictions are cannot be factually supported and would be contrary to Board policy. The Board is directed to regulate only if they determine that there is a new and expanding fishery. If a "new and expanding" determination is made, the regulation should be tailor fit to reduce the fishery back to its level prior to expansion. Kodiak's historical fishery has always been out on the capes -- even if the Board determines that the fishery has expanded, the regulation should be limited to the expansion. Any reduction of fishing to headlands would restrict Kodiak beyond what all parties agree is Kodiak's historical fishery.

HALIBUT BAY

1. The regulations in paragraph 5 should be separated from the rest of the proposal. The proposal, as written, is cumulative. These last three area specific regulations come on top of the "minimize" directive, the not to exceed 5% language, the island wide restrictions on extended openings and the headland to headland closures. Now, in addition to all of this, the regulation presents three sets of section specific additional restrictions. Enough!



2. Halibut Bay is part of an existing, Board approved, management plan. The Halibut Bay fishery is now over 100 years old. When Kodiak has strong local sockeye runs, it is a major sockeye harvest area. Halibut Bay is currently only open when two local sockeye systems have healthy returns. It is always regulated based on local stock abundance and the local fishery. Subpart (A)(1) doesn't need to affirm local stock management.
3. Changing how Halibut Bay is managed, will alter the existing Ayakulik and Karluk management plans. It will further reallocated fish between gear types on Kodiak and it will dislocate a portion of the Kodiak fleet to other capes. The mixed stock fish policy wisely counsels, "Existing regulatory management plans are understood to incorporate conservation burden and allocation."
4. Justification for regulation of Halibut Bay is based on what occurred in 1992, a year of large sockeye returns to Cook Inlet. The mixed stock fish policy cautions, "New and Expanding fisheries will not be gaged against single year anomalies in



distribution or effort, or against natural fluctuations in the abundance of fish."

5. Subparagraph (A) dealing with Halibut Bay is a clear cap and closure proposal. Closures, when a cap is reached, do not provide for the harvest of local stocks. Overescapement is possible and harvest quality quickly diminishes. This is not a theoretical concern. Currently, Kodiak fishermen are suffering from the oil spill imposed overescapement to the Ayakulik system. The system is not expected to recover until 1997, eight years after the oil spill!
6. The closure proposed is for whatever time remains in the July 6 to 25 time period. Catch records show that Cook Inlet fish would only be in the Halibut Bay area for a few (3-5) days after the cap is reached. The Closure is too broad.
7. The 39,000 number is some combination of "base years" prior to the large Cook Inlet runs. If a cap is to be determined, Halibut Bay catches should be analyzed for years when there has been maximum local fishing opportunities. Any cap



amount should be based on those years. Otherwise, in years of local abundance, the cap will be reached with local fish.

(Note: Any cap calculations would exclude strike years or years of complete closures. Neither of these types of seasons reflect a "historical" catch amount in the Halibut Bay area.)

8. As a practical matter, the Department will be unable to accurately monitor caps and impose regulatory restrictions. The Department's only vessel is already employed to the North Shelikof Management Area. Without additional funding and resources, caps will be very difficult to manage in season.

- SITKALIDAK:
1. The Sitkalidak Section of the Eastside Kodiak District is one of the oldest fisheries on Kodiak Island. There is no question that Kodiak salmon fishermen have been fishing off the capes Sitkalidak Island since before recorded history. Since commercial fishing started, the Sitkalidak fishery has consistently been a cape fishery. This is not a "new" fishery.



2. The Sitkalidak fishery is the primary area for Old Harbor residents to fish. Reductions in this fishery will place a disproportionate burden on Old Harbor.
3. Justification for regulation in Sitkalidak is also based primarily on what occurred in 1992. As indicated above, "New and Expanding fisheries will not be gaged against single year anomalies in distribution or effort, or against natural fluctuations in the abundance of fish."
4. The Sitkalidak proposal (unlike the Halibut Bay regulation) recognizes the importance of the harvest of local stocks -- but just barely. The proposal allows for a 1/2 mile fishing zone and limited harvests of local stocks by emergency order. This is an improvement but does not appreciate the abundance of local stocks in the area. For example, even in 1992, when approximately 300,000 Cook Inlet sockeye were harvested, local stocks consisted of almost 400,000 fish. In 1991, almost 1 million local fish were harvested in this area during the July 6 - July 25 time period and in 1995 the local pinks and chums exceeded 500,000 fish. The Department is suppose to



provide for this magnitude of harvest by "emergency order"?

5. Necessarily related to the local harvest issue is the allocation issue. If Sitkalidak is restricted, substantial salmon will be reallocated to the setnetters in the Olea\Maser Bay area. Again, such a regulation will unnecessarily create conflict in Kodiak between gear types. As the mixed stock fish policy states, "Most mixed stock fisheries are long standing and have been scrutinized many times by past boards." The allocation between purse seine and setnet gear on Kodiak Island is one of these fisheries.
6. The cap restriction moving the fleet into a 1/2 mile zone of the Sitkalidak section is better than a closure but, as indicated above, does not account for the historical fishery, restricts local harvests and reallocates fish. The Cap, in general, does not reflect changes in the abundance of Cook Inlet sockeye.
7. As a practical matter, the Department will be unable to accurately monitor caps and impose regulatory restrictions. The Department's only vessel is already employed to the



North Shelikof Management Area. Without additional funding and resources, caps will be very difficult to manage in season.

8. The closure proposed is for whatever time remains in the July 6 to 25 time period. Catch records from past years show that this is overbroad. Cook Inlet fish will only remain in the area for another 3 to 5 days.
9. The 17, 500 sockeye number is so low it cannot be taken seriously. It does not reflect that in each of the last 4 years, including 1994 when very few Cook Inlet sockeye were captured, the catch of local sockeye exceeded twice this amount. In short, local sockeye would have triggered the cap in each of the last four years even if not a single Cook Inlet sockeye were present! Any cap number must be based on the availability of local sockeye as well as the abundance of Cook Inlet sockeye. Note that the cap should include the "historical" catch component of the Cook Inlet run as well as whatever local fish could be available.
10. Kodiak's 1983-1994 analysis, submitted to the work group on



Kodiak Response to 12/15/94
Cook Inlet Proposal
February 9, 1995
Page 24

12\15\94 , applies this portion of the Cook Inlet proposal on a year by year, day by day basis to the Sitkalidak area. This analysis shows that there was not a single year when the catch of Cook Inlet sockeye exceeded the catch of local stocks.

KATMAI\ALINCHAK

1. Katmai\Alinchak and all of the Alaska Peninsula in the Kodiak Management area is subject to wide variations in local stock availability and consequently, has had wide variations in fishing effort and fishing time. Comparisons of yearly statistical data must be done with care. The Cook Inlet approach is to ignore strikes, closures, and local abundance and "just take an average" from a few select years. This is not a fair or accurate way to determine a cap.
2. The Cook Inlet proposal does not account for the displacement of the Kodiak fleet that occurred when the N. Shelikof plan was implemented. Regulatory displacement of an existing fleet does not create a new and expanding fishery.



3. The Katmai\Alinchak proposal (unlike the Halibut Bay regulation) recognizes the importance of the harvest of local stocks. It allows for limited harvests of local stocks within the headlands of the area. Such a fishery may have the appearance of allowing for the harvest of local stocks, however, because of the geography of the area and the shallow beaches and tide flats, a cape to cape fishery is almost no fishery at all. There is substantial possibility of loss of local stocks, overescapement and poor quality catches. For example, back in 1984 almost 50,000 local fish were caught in this area. The current proposal would have eliminated the catch of many of these fish.
4. Also at issue in Katmai\Alinchak is how much restriction is justified in the proportional sharing of the allocation burden -- especially given the historical fishing opportunities on the mainland for the Kodiak fleet. The N. Shelikof management plan has already restricted fishing along more than 2/3 of the Mainland management area. Additional closures would restrict fishing by Kodiak fishermen for a strip 3 miles wide by 42 miles long, this is an area of 126 square miles!



5. The proposed fishing limitations in Katmai/ Alinchak are for whatever time remains in the July 6-25 time-period after the cap is reached. Catch records from past years show that this is overbroad. Cook Inlet fish will only remain in the area for another 3 to 5 days.
6. The 6,900 sockeye cap for this area before fishing restrictions are imposed is not a fair or accurate calculation of what a cap should be. As indicated above, the individual yearly circumstances of local stock availability and fishing time, as well as strikes, has greatly impacted the catches in the Katmai Alinchak area. If a cap is set, it should reflect the unique yearly circumstances of the area and non-Cook Inlet catch potential as well as the availability of local stocks and the size of Cook Inlet's returns.

In many years, catches of non-Cook Inlet sockeye have exceeded Cook Inlet sockeye and also the proposed cap. For example, in 1987, 1990, and 1993, the cap would have been reached even if not a single Cook Inlet sockeye was captured.



8. Kodiak's 1983-1994 analysis, submitted to the work group on 12/15/94, applies this portion of the Cook Inlet proposal on a year by year, day by day basis to the Katmai\Alinchak area..
This analysis shows that only twice in the last 11 years has the catch of Cook Inlet sockeye exceeded the catch of local stocks in the Katmai\Alinchak area.
9. As a practical matter, the Department will be unable to accurately monitor caps and impose regulatory restrictions. The Department's only vessel is already employed to the North Shelikof Management Area. Without additional funding and resources, caps will be very difficult to manage in season.



CONCLUSION:

The Cook Inlet proposal seeks to create a restricted Kodiak salmon fishery --- one that never existed in the past. The proposal is not tailored to fit a specific new and expanding fishery. The final section of the proposal, when separated from the first four paragraphs, is more of an attempt to regulate for possible expanded fisheries. Nevertheless, this section is also far too broad and invasive. The final section further affirms that Cook Inlet's position has not substantially changed despite new and important information regarding the issue. Cook Inlet cannot ignore the 1993, 1994 and 1995 data points.

If the Board determines that regulation is necessary, Kodiak's proposal for dynamic caps and restrictions tailored to our historic fishery is substantively superior to the above proposition. The Kodiak proposal will reduce opportunities for "targeting" Cook Inlet fish, allow for responsible harvesting of local stocks and maintain established allocations between Kodiak gear groups. Last, and perhaps most important, Kodiak's proposal can be implemented by the Department without additional funding or personnel.



Board members.

As you are all aware Kodiak Island has problems with their own Natural Salmon runs! We have been trying to get the attention of the Board, ADFG, and other local fishermen to understand the interception and low escapement situation of the Alitak Sockeye runs.

Our group has been speaking out for some time now and we are the main the reason why the Genetic study was conducted on Kodiak. The results of this test show significant interception of Alitak bound sockeye harvested all over the Island. (see info below). We are at the end of the road, our runs get caught before they reach us. Our runs continue to fail. No relief or support from other Kodiak fishermen. Convincing other (profitable) Kodiak fishermen that they should help conserve the fish that they are catching is nearly impossible! They are on the receiving end of the benefits of wild Salmon while others are stuck carrying the burden for future returns. The regulation book has verbiage in place to level the playing field for Salmon and all fishermen in the fleet. -Time to act on the salmon sustainability policy!

I was the one who proposed to have a pulse fishery on Kodiak. -Protect the migratory pathway and share the burden of conservation. -Pretty simple.

Here is what took place this past summer. The west side of Kodiak fished continuous for 45 days in June and July, within that time frame the Alitak area was closed for 24 days straight waiting for escapement. Classic story of NO shared burden of conservation from fishermen who are harvesting Alitak fish in their migratory pathway on the West side of Kodiak.

Are we ever going to do anything about the rebuilding of these weak runs, making the fishery an equitable distribution on the Island, and protect the migratory pathways? A few management changes, compromise, and we could have a working solution for everyone involved.

Take another look at the charts below and see that Kodiak has major problems because ADFG refuses to acknowledge their ongoing mistakes. Reduction of escapement into Alitak systems and extended fishing periods for the rest of the Island has led to a total economic failure for the setnet fleet in the Alitak district. Kodiak is being totally mismanaged. Return per spawner information is not correctly being applied to their respective systems because the fish are being harvested outside of our district. The problems keep stacking up but the solution is simple, pulse the fishery and or limit harvest in migratory pathways!

Now is a great time to figure out a modern way to manage this intercept Island fishery. Non-stop fishing is not a way to promote healthy ecosystems state wide!

The time is now. The information is all there. Take a progressive approach to letting the fish make it back to their spawning grounds in the numbers we need for robust future returns!

Thank you.

Eric Dieters

Alitiak Fisherman, Kodiak. Family business 43 seasons. - going out of business.



Genetic Stock Composition Information for Alitak Sockeye

Upper Station/Akalura Sockeye Harvest

	2014	2015	2016
Uganik-Kupreanof	8,203	966	-
Uyak	13,411	-	2,006
Karluk-Sturgeon	13,723	4,045	3,810
Ayakulik-Halibut Bay	20,529	11,691	4,142
W & SW COMBINED HARVEST	55,866	16,702	9,958

Alitak District Seiners Harvest	8,829	12,665	17,264
Estimated Alitak Setnet Harvest	14,224	26,152	28,991
Total Alitak District Harvest	23,053	38,817	46,255

Escapement Total ER+ LR	218,234	187,337	193,060
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TOTAL RUN Escapement + Harvest	297,153	242,874	249,273
W & SW COMBINED HARVEST	18.80%	6.88%	3.99%
Total Alitak District Harvest	7.81%	15.98%	18.55%

Data in this document was used from the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016 and Kodiak Management Area Salmon Escapement and Catch Sampling Results, 2014 -2016



Ayakulik/Frazer Sockeye Harvest

	2014	2015	2016
Uganik-Kupreanof	17,431	3,715	1,380
Uyak	29,466	2,258	7,264
Karluk-Sturgeon	45,406	15,081	5,115
Ayakulik-Halibut Bay	236,602	252,727	62,295
W & SW COMBINED HARVEST	328,905	273,781	76,054
70% Ayakulik /30 % Frazer	230,234 / 98,671	191,647 / 82,134	53,238 / 22,816

Alitak District Seiners Harvest	66,942	55,537	24,579
70% Frazer / 30% Ayakulik	46,859 / 20,083	38,875 / 16,662	17,205 / 7,374

Estimated Alitak Setnet Harvest	112,031	89,556	49,636
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Escapement Total Frazer Lake	200,296	219,093	122,585
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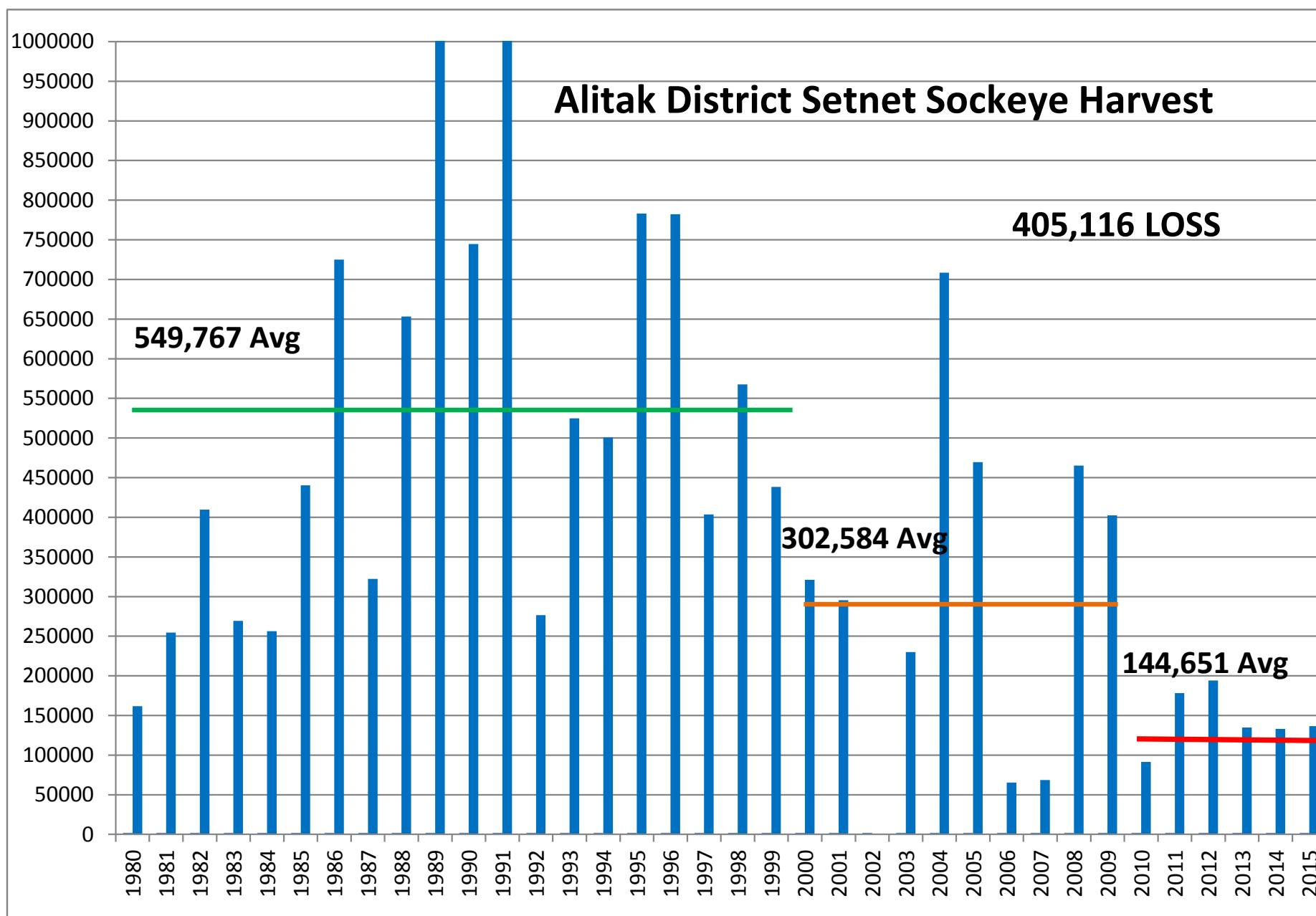
TOTAL RUN Escapement + Harvest	457,857	429,658	212,242
W & SW COMBINED HARVEST	21.5% at 30% ratio	19.1% at 30% ratio	10.7% at 30% ratio
Alitak Setnet + Seiner(70%) Harvest	34.7% at 70% ratio	29.8% at 70% ratio	31.4% at 70% ratio

Numbers below show hypothetical mixed percentages of Frazer and Ayakulik sockeye

	2014	2015	2016
W & SW COMBINED HARVEST	328,905	273,781	76,054
50% Frazer/ 50% Ayakulik Sockeye	164,452/164,452	136,890/136,890	38,027/38,027
40% Frazer/ 60% Ayakulik Sockeye	131,562/197,343	109,512/164,269	30,421/45,633
30% Frazer/ 70% Ayakulik Sockeye	98,671/230,234	82,134/191,647	22,816/53,238

Alitak District Seiners Harvest	66,942	55,537	24,579
50% Frazer/ 50% Ayakulik Sockeye	33,471/33,471	27,768/27,768	12,289/12,289
60% Frazer/ 40% Ayakulik Sockeye	40,165/26,777	33,322/22,215	14,747/9,832
70% Frazer/ 30% Ayakulik Sockeye	46,859/20,083	38,875/166,62	17,205/7,374

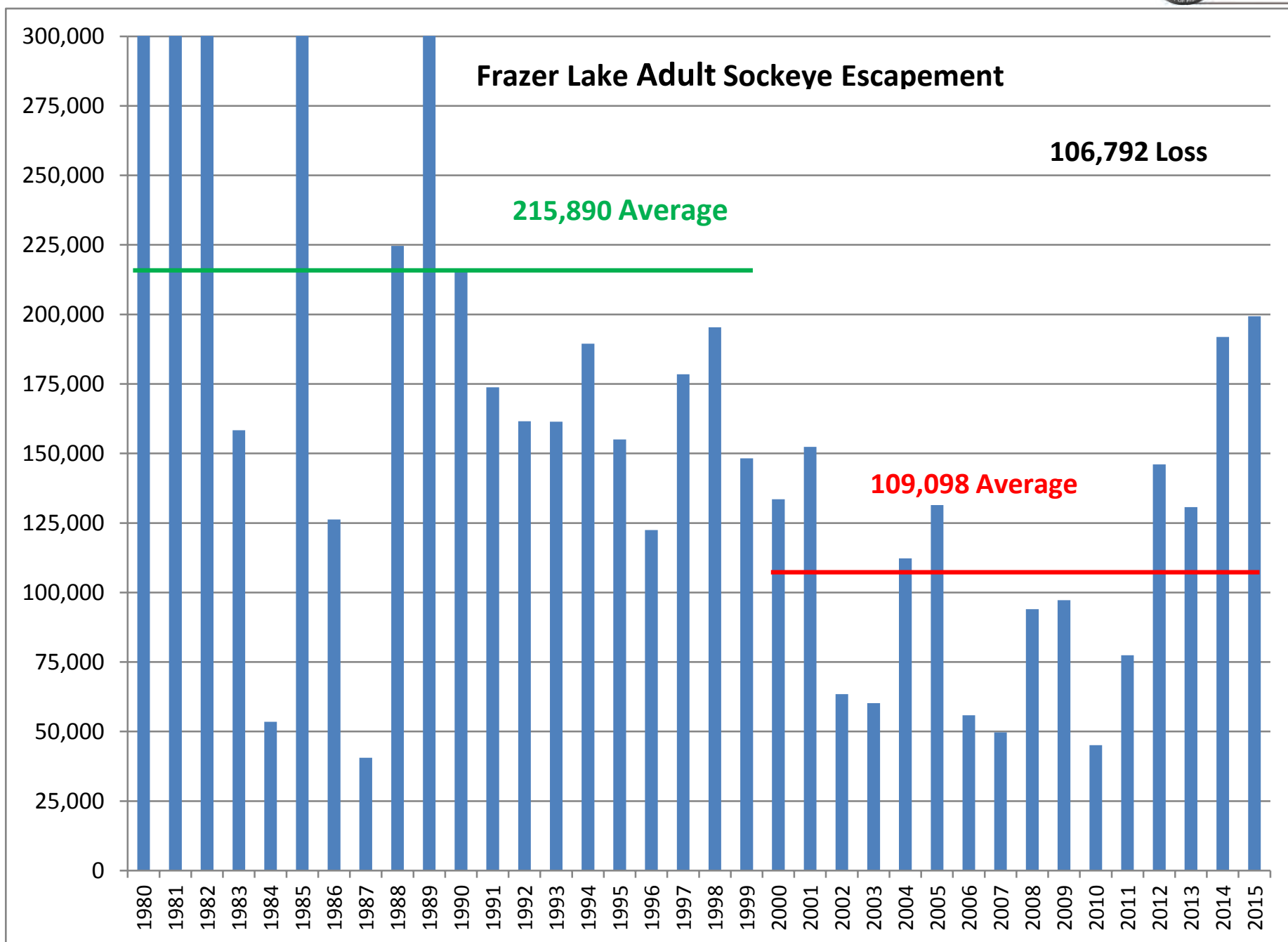
Data in this document was used from the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016 and Kodiak Management Area Salmon Escapement and Catch Sampling Results, 2014 - 2016

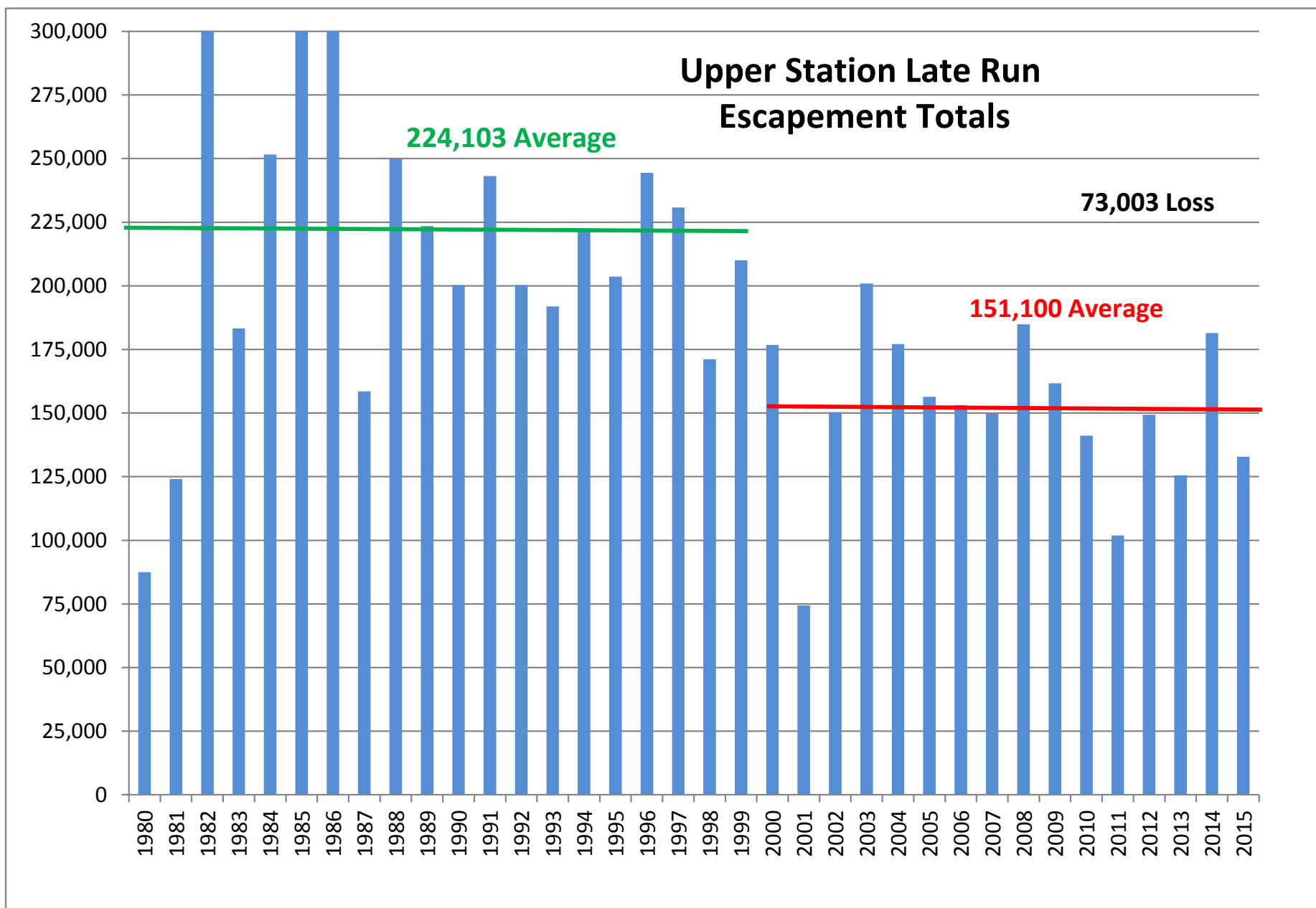




Exvessel Value. 5 Year Average

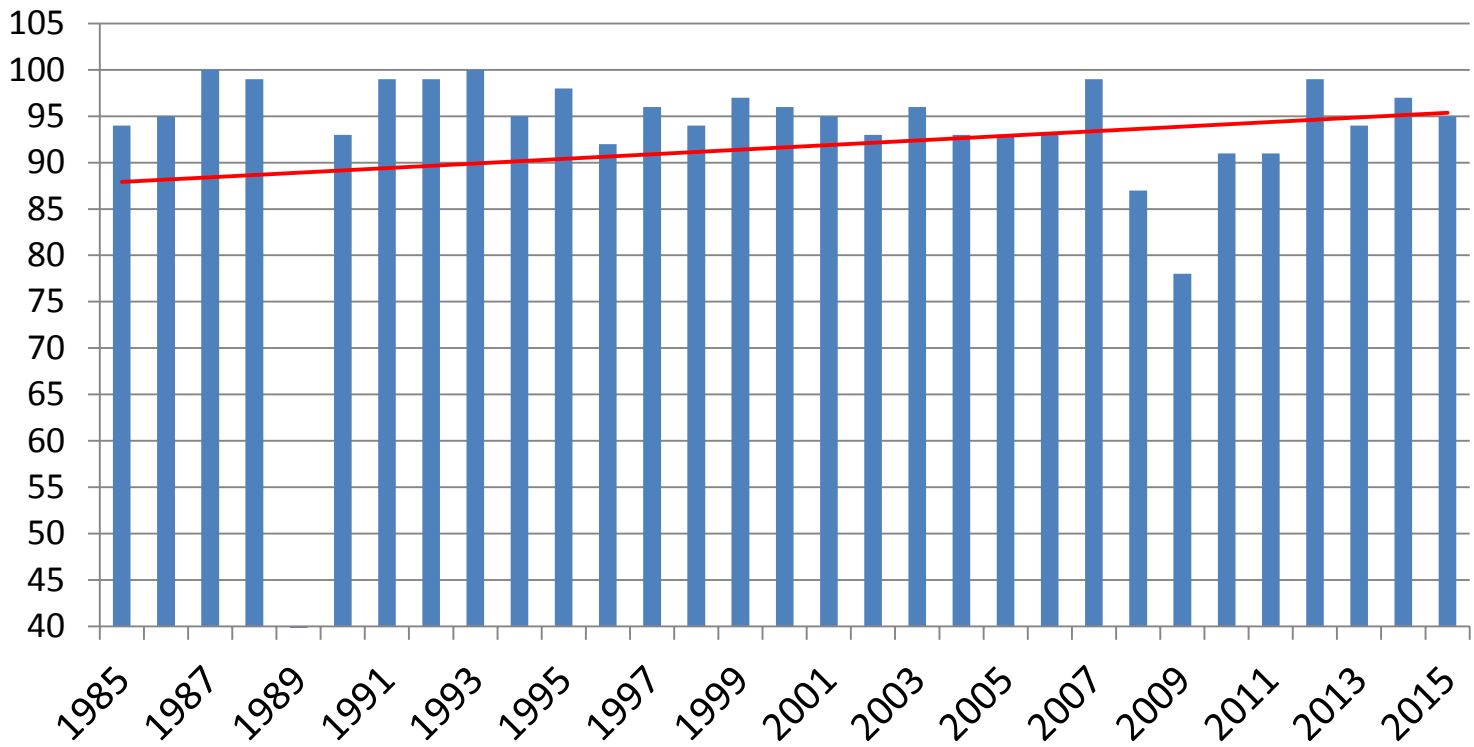
	Purse Seine	Alitak Gillnet	Westside Gillnet
1985	\$57,782	\$39,538	\$21,273
1986	\$92,693	\$81,320	\$48,721
1987	\$79,812	\$46,115	\$31,068
1988	\$252,388	\$106,415	\$67,383
1989 ^b	\$10,555	\$149,702	\$0
Average	\$98,646	\$84,618	\$33,689
1990	\$111,524	\$65,168	\$58,062
1991	\$65,445	\$57,728	\$36,596
1992	\$97,917	\$27,009	\$48,791
1993	\$95,375	\$28,164	\$51,052
1994	\$67,701	\$45,739	\$43,971
Average	\$87,592	\$44,762	\$47,694
1995	\$135,605	\$60,102	\$70,204
1996	\$70,737	\$52,270	\$51,769
1997	\$55,390	\$28,989	\$44,839
1998	\$119,512	\$49,120	\$52,706
1999	\$109,243	\$35,730	\$72,482
Average	\$98,097	\$45,242	\$58,400
2000	\$71,536	\$21,989	\$47,500
2001	\$78,114	\$15,356	\$35,445
2002	\$68,552	\$0	\$26,158
2003	\$79,869	\$10,927	\$43,006
2004	\$93,942	\$29,814	\$43,211
Average	\$78,403	\$15,617	\$39,064
2005	\$129,181	\$26,468	\$50,395
2006	\$150,318	\$6,100	\$51,895
2007	\$148,355	\$7,896	\$60,347
2008	\$148,605	\$50,286	\$38,234
2009	\$174,661	\$48,660	\$46,854
Average	\$150,224	\$27,882	\$49,545
2010	\$130,009	\$11,955	\$35,424
2011	\$224,349	\$24,637	\$35,883
2012	\$219,164	\$28,193	\$67,771
2013	\$304,105	\$21,827	\$75,751
2014	\$198,521	\$27,920	\$78,672
Average	\$215,230	\$22,907	\$58,700



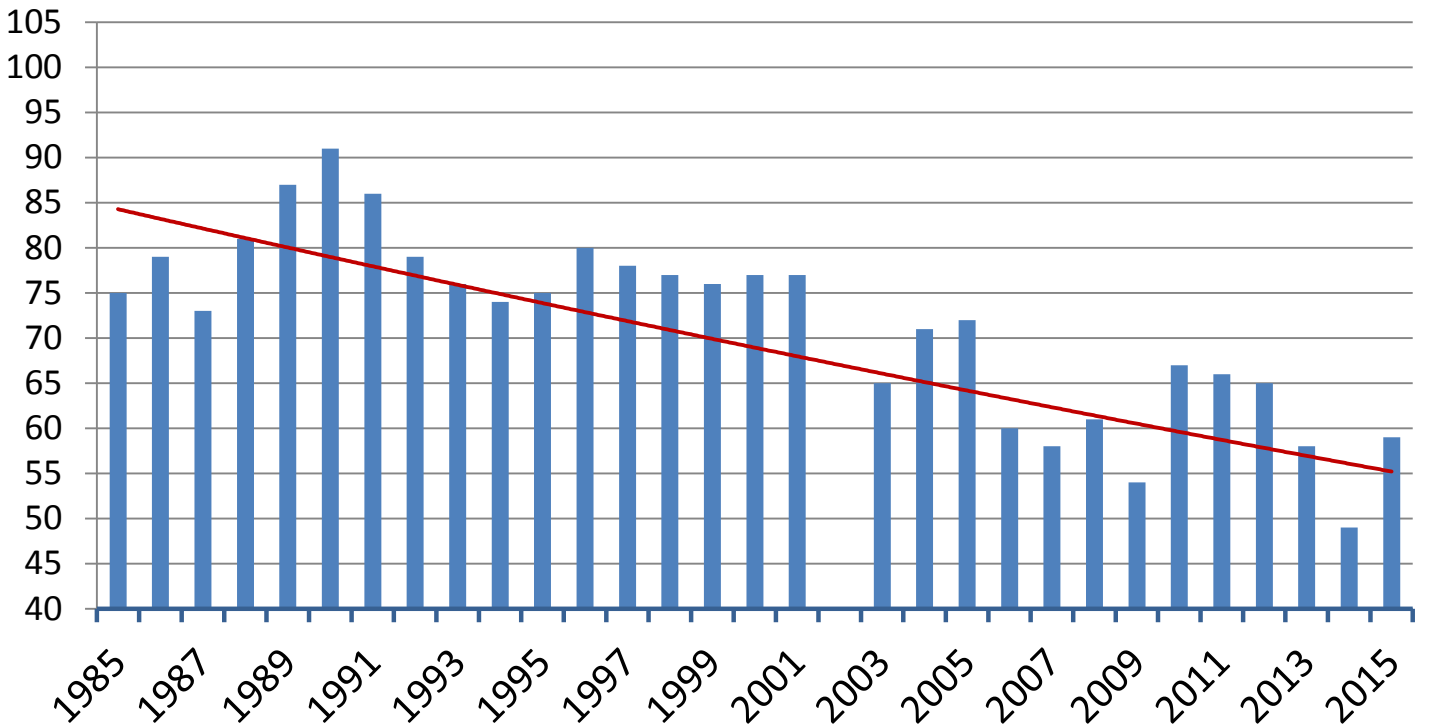




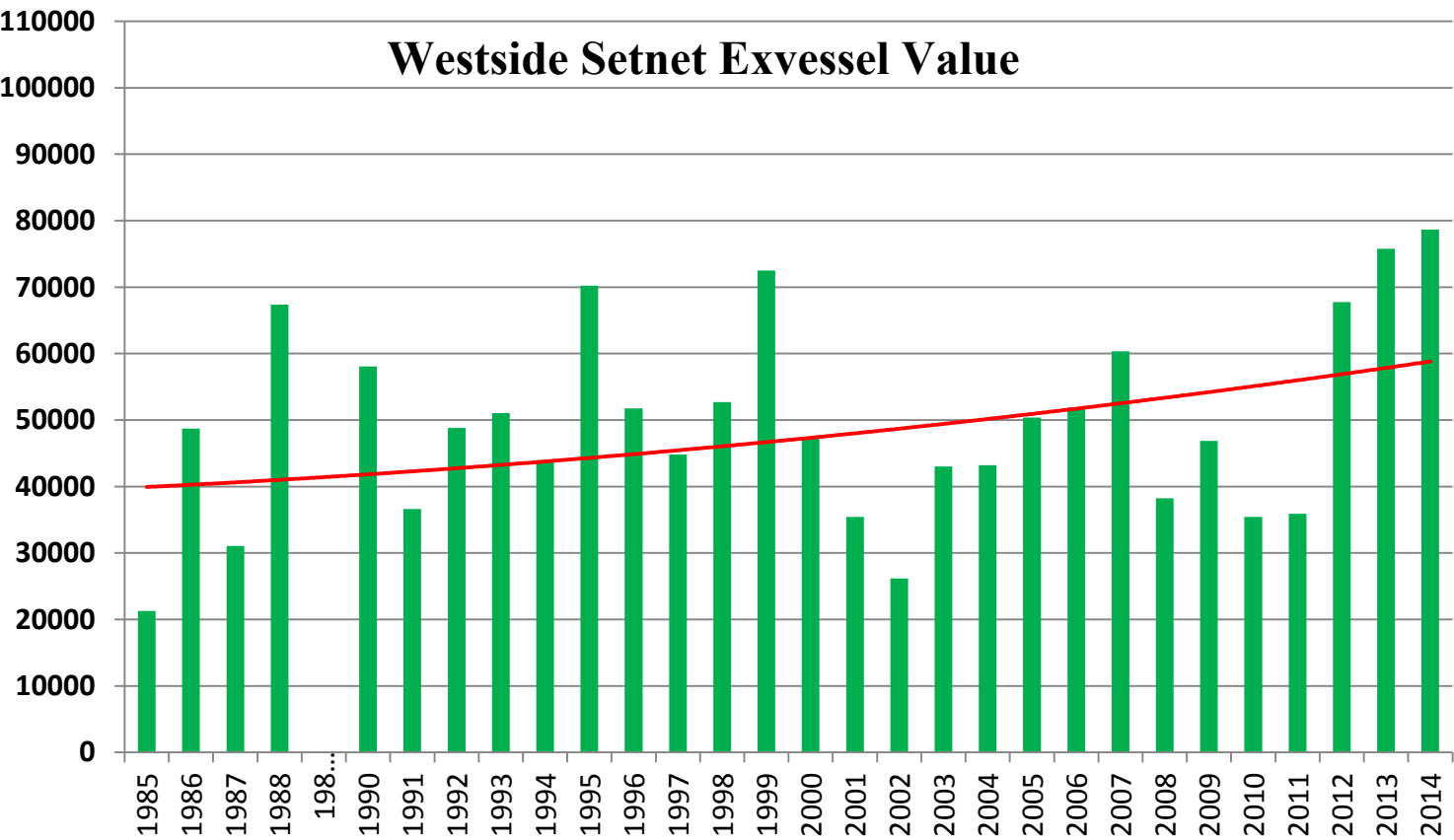
Westside Setnet Permits Fished



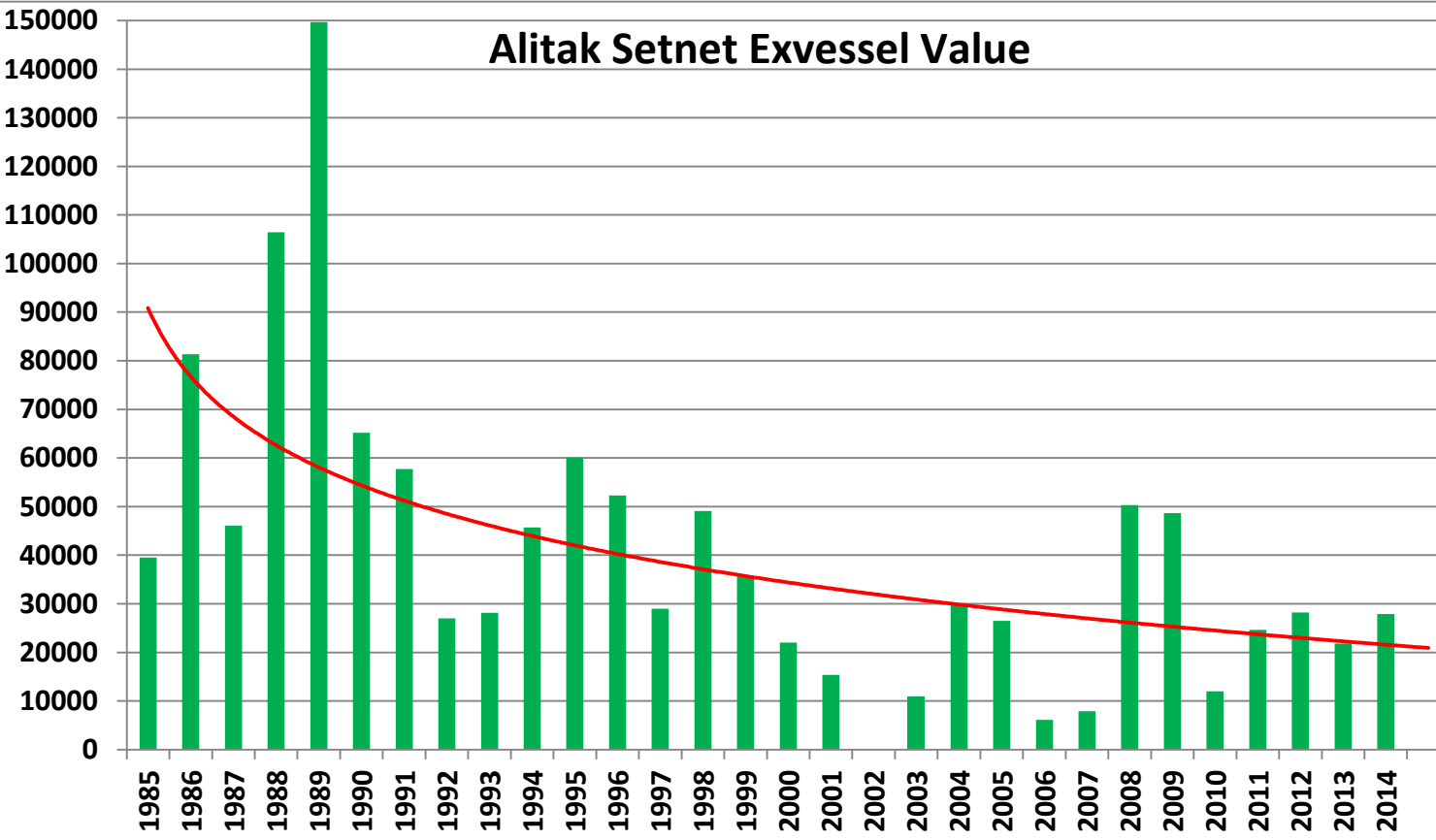
Alitak Setnet Permits Fished



Westside Setnet Exvessel Value

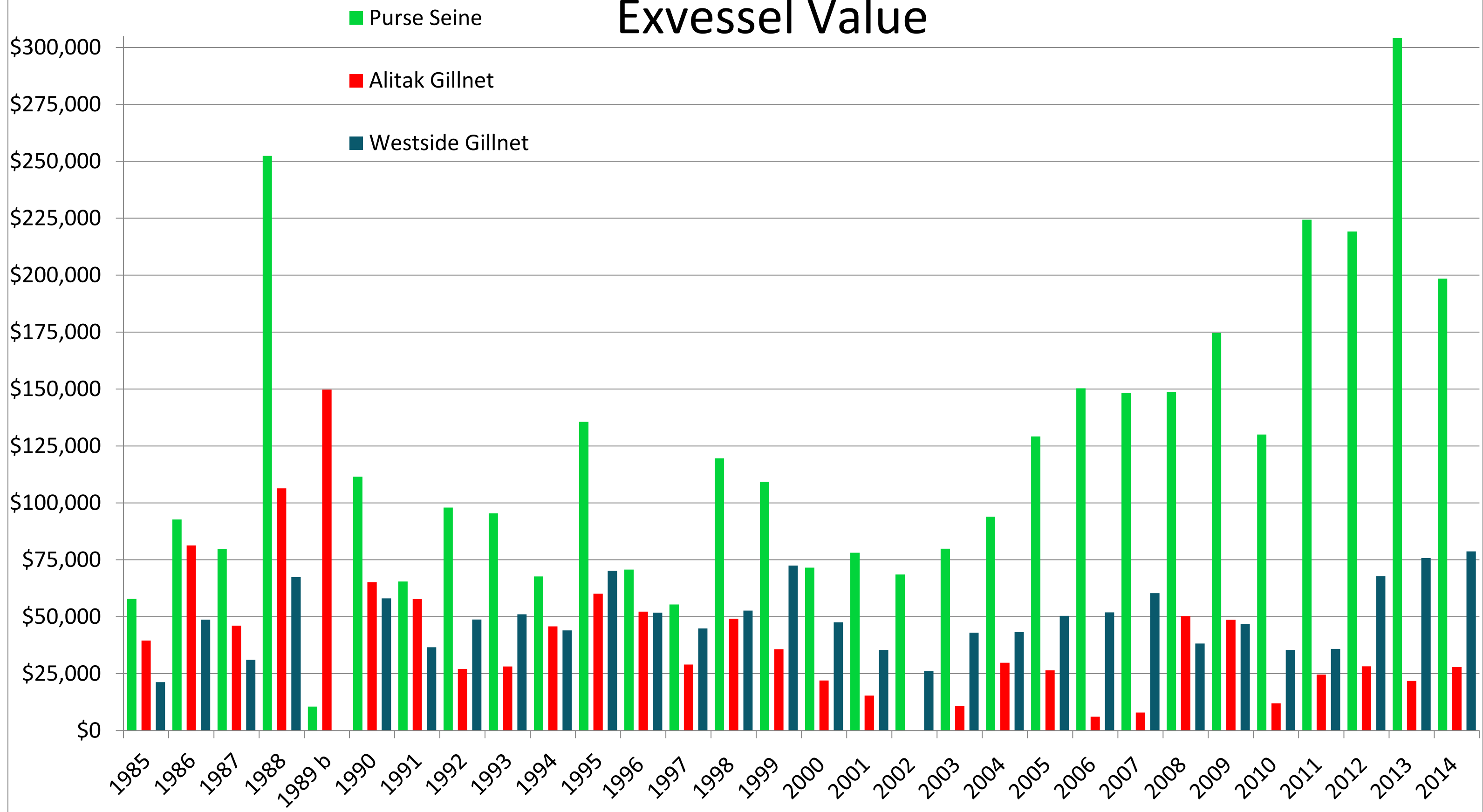


Alitak Setnet Exvessel Value



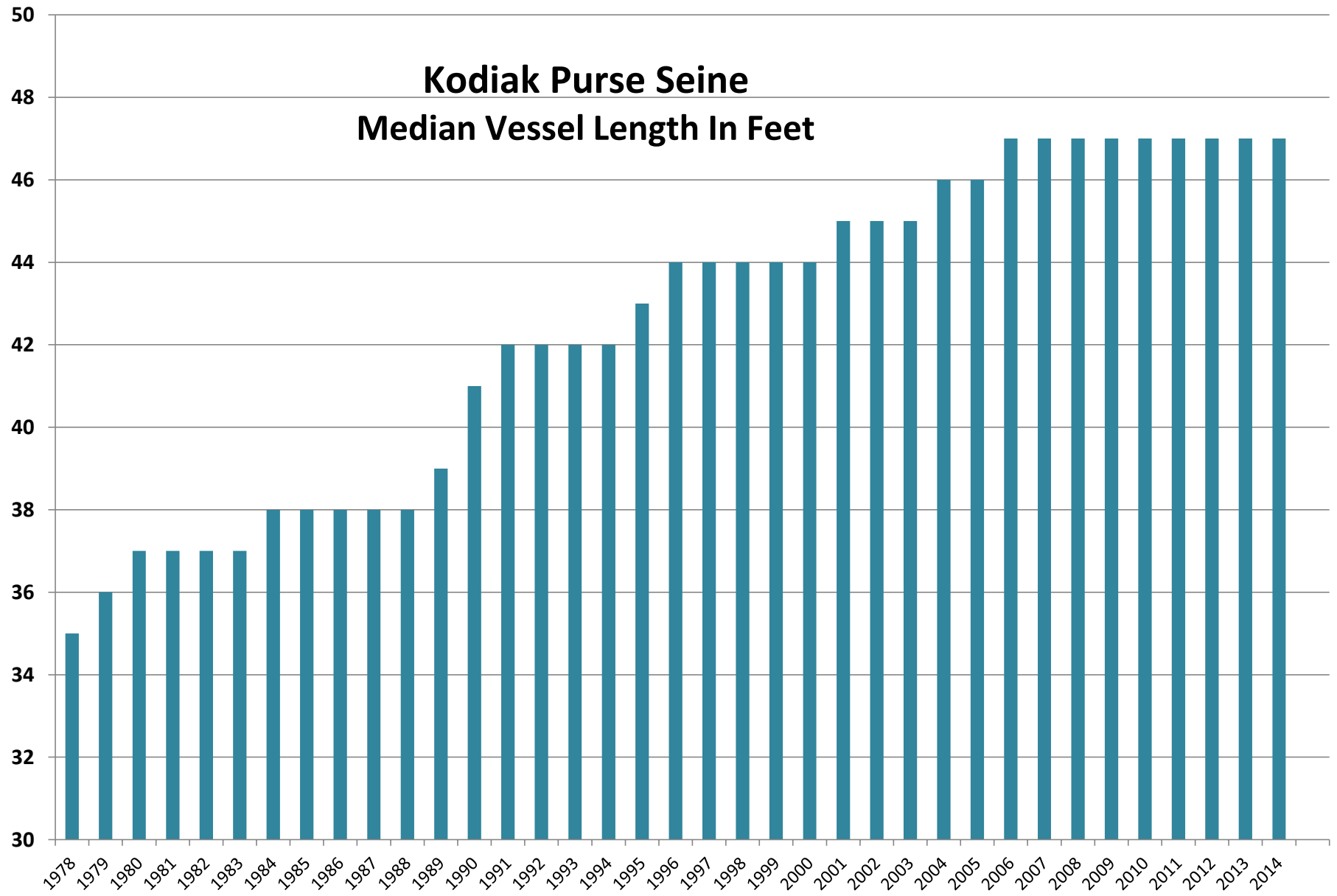


Exvessel Value





Kodiak Purse Seine Median Vessel Length In Feet





Frazer 1975-2009

Escapemen	Total return	R/S	Theoretical yield
0	0	0	0
25,000	105,944	4.24	80,944
50,000	182,151	3.64	132,151
75,000	234,883	3.13	159,883
100,000	269,226	2.69	169,226
125,000	289,304	2.31	164,304
150,000	298,444	1.99	148,444
175,000	299,320	1.71	124,320
200,000	294,073	1.47	94,073
225,000	284,403	1.26	59,403
250,000	271,656	1.09	21,656
275,000	256,885	0.93	-18,115
300,000	240,910	0.80	-59,090
325,000	224,359	0.69	-100,641
350,000	207,709	0.59	-142,291
375,000	191,314	0.51	-183,686
400,000	175,429	0.44	-224,571
425,000	160,235	0.38	-264,765
450,000	145,851	0.32	-304,149
475,000	132,348	0.28	-342,652

Upper Station early run 1975-2009

Escapemen	Total return	R/S	Theoretical yield
0	0	0	0
10,000	35,660	3.57	25,660
20,000	65,554	3.28	45,554
30,000	90,382	3.01	60,382
40,000	110,768	2.77	70,768
50,000	127,267	2.55	77,267
60,000	140,375	2.34	80,375
70,000	150,531	2.15	80,531
80,000	158,128	1.98	78,128
90,000	163,514	1.82	73,514
100,000	166,995	1.67	66,995
110,000	168,845	1.53	58,845
120,000	169,304	1.41	49,304
130,000	168,586	1.30	38,586
140,000	166,877	1.19	26,877
150,000	164,343	1.10	14,343
160,000	161,128	1.01	1,128
170,000	157,359	0.93	-12,641
180,000	153,146	0.85	-26,854



Upper Station late run 1975-2009

Escapemen	Total return	R/S	Theoretical yield
0	0	0	0
20,000	94,696	4.73	74,696
40,000	180,136	4.50	140,136
60,000	256,996	4.28	196,996
80,000	325,913	4.07	245,913
100,000	387,480	3.87	287,480
120,000	442,249	3.69	322,249
140,000	490,738	3.51	350,738
160,000	533,431	3.33	373,431
180,000	570,778	3.17	390,778
200,000	603,199	3.02	403,199
220,000	631,088	2.87	411,088
240,000	654,810	2.73	414,810
260,000	674,705	2.60	414,705
280,000	691,090	2.47	411,090
300,000	704,262	2.35	404,262
320,000	714,496	2.23	394,496
340,000	722,046	2.12	382,046
360,000	727,152	2.02	367,152
380,000	730,033	1.92	350,033



2017 Preliminary Westward Salmon Forecasts (SECURED) - Adobe Reader

		harvest estimate	131	
Early-run Karluk	BEG: 110-250	Early-run forecast	294	200-387
		Early-run escapement	180	
		Early-run harvest estimate	114	
Late-run Karluk	BEG: 170-380	Late-run forecast	814	618-1,011
		Late-run escapement	275	
		Late-run harvest estimate	539	
Total Karluk		Total Karluk run forecast	1,108	818-1,399
		Total Karluk escapement	455	
		Total Karluk harvest estimate	653	
Early-run Upper Station	BEG: 43-93	Early-run forecast	125	69-182
		Early-run escapement ^a	65	
		Early-run harvest estimate	60	
Late-run Upper Station	BEG: 120-265	Late-run forecast	215	101-328
		Late-run escapement	186	
		Late-run harvest estimate	29	
Frazer Lake	BEG: 75-170	Forecast	237	113-361
		Escapement ^b	137	
		Harvest estimate	100	
Total Alitak District		Total Alitak run forecast	577	283-870
		Total Alitak escapement	388	
		Total Alitak harvest estimate	189	

-continued-

2

2017 Total Alitak District Harvest estimate is 189,000 for 3 sockeye runs →

Why is this preseason harvest prediction so far off from the return per spawner theoretical yield information for the Alitak District??

As you can see from the R/S chart I have supplied we should be getting a Harvest of 575,424 sockeye in the Alitak District for the season.

The difference between their R/S predictions and their Season Forecast is 386,424 sockeye.

Every season there is a huge difference between the harvest information on these two documents that Kodiak ADFG supplies to the fishermen.

At what point are they going to realize that their science is bad and their escapement goals are to low, or there is a major interception issue taking place?

At what point is ADFG going to take some responsibility and do something about the issue?

385,000 sockeye missing every year? Wouldn't you say this should raise a red flag?

This just goes to show the lack of concern the department has for their management of the fishery and their stewardship of the runs.

-Eric Dieters



Erik Obrien
1518 Hidden Lane
Anchorage AK 99501
907-317-0428

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
PO Box 115526
Juneau, AK 99811-5526

October 3, 2017


Re: Oppose UCIDA AJR to Manage KMA for Cook Inlet Interests

Chairman Jensen:

Factors of success: in business require managing uncertainty; for cultural sustainability require protection from external interests; for participation in commercial fisheries requires access to resources; for sustained salmon returns requires data driven science. The UCIDA request to base Kodiak Management Area decisions on the special interests of external stakeholders, in a politically driven and allocative grab at resources, compromises each of the above considerations and livelihoods of Kodiak fishermen.

Our long history of marine dependence led my parents to Kodiak before my arrival, where they bought into setnet fishing on Kodiak's Westside. The stories that came with setnet fishing in Uyak bay, and the old fish processing cannery still operating in Larsen Bay, go back more than 100 years, and a cultural connection to salmon much longer. Some of the earliest commercial fishing businesses in Alaska were established here based on the reliability of salmon returning to Westside Kodiak in volume and regularity. This sustainability was temporarily interrupted when outside interests and common pool resource strain nearly led to the collapse of salmon runs prior to Alaska Statehood; however, with State control bestowed on local managers, salmon runs to Kodiak are as robust and strong as ever. The local management team has perfected this science over the 50 plus years it has been under their, and the Kodiak community's reliance to protect that resource, in good years and bad.

I urge you to consider everything at stake, and all that could be lost if the local ability to manage salmon systems is politicized, and science gives way to greed. Kodiak needs to maintain management of our fish stocks, and Cook Inlet needs to manage their own resources independent of where salmon travel in the open ocean before returning home. The precedence of breaking this trust could reverberate to fisheries around the state, upending many more lives than just those living in Kodiak.


Erik Obrien



Greetings Ms Pilcher,

I am writing to express my opposition to ACR01 which seeks to undo the 3-mile restriction on subsistence Northern Pike fishing in the Chatanika River near the mouth of Goldstream Creek which was recently expanded by the Board of Fisheries. The closed area was expanded to 3-miles in order to protect larger fecund female Northern Pike that overwinter in this area of Goldstream Creek and the Chatanika River. It seems prudent to leave the approved 3-mile restriction in effect long enough so that any effects on the Northern Pike population could be measured by the ADF&G. The larger closed area has only been in effect for one year and I believe that it would take several more years for beneficial effects of the closure to be observed in the affected population.

I would therefore ask that the Alaska Board of Fisheries not approve ACR01.

Sincerely,

Fred DeCicco
Fisheries Biologist retired
1171 Albro Gregory Lane
Faribanks, Alaska 99712



Chair John Jensen

AK Board of Fish

Boards Support

PO Box 115526

Juneau, Ak 99811-5526

Sept 29,2017

ACR #11- OPPOSED

My name is Garrett Kavanaugh. I am 19 years old and have lived in Kodiak my entire life. I have worked as a crewmember on a Kodiak Salmon boat since 2001. For the past two and half years, I've crewed year-round fishing P cod from Fall to early Spring and salmon during the Summers. For the past 12 months, I have been actively seeking to purchase a S01K salmon permit & seiner to operate in Kodiak waters. The UCIDA agenda change request (ACR 11) has created drastic uncertainty for Kodiak Salmon Fisherman. I have decided to pause my intent to purchase a boat or permit. I am now looking into leasing a Washington Coast Dungeness permit and using our family's salmon seiner the Sylvia Star for that purpose. All I hear about is the support for young fishermen in Alaska. Kodiak, with the lowest valued permit, makes it the only truly entry level salmon fishery in the State. It is a long scratch fishery and is suited for smaller vessels more financially accessible to young fisherman. This proposal creates such uncertainty that I am unable to write a business plan for salmon fishing in Kodiak that would be acceptable to a financial institution. We are currently rigging the boat for P-cod fishing and would happy to answer any questions on how ACR 11 has and will negatively affect me personally.

A handwritten signature in black ink, appearing to read "Garrett Kavanaugh".

Garrett Kavanaugh

Kodiak Alaska 99615

(907)942-0056



GOLDEN KING CRAB COALITION

Linda Kozak – Consultant

P. O. Box 2684 – Kodiak, Alaska 99615

Office 907-486-8824 – Cell 907-539-5585

Date: October 2, 2017

To: Mr. John Jensen, Chairman
Alaska Board of Fisheries

From: Linda Kozak

Subject: Agenda Change Request #2

The members of the Golden King Crab Coalition would like to support Agenda Change Request #2, which was submitted by the Aleutian King Crab Research Foundation.

This ACR requests the Board to consider an issue out of cycle which pertains to the development and adoption of a fishery management strategy for the Aleutian Islands golden king crab fishery. This management strategy is only possible now that a stock assessment model has been adopted for use in setting overfishing limits and allowable biological catch rates for this fishery.

The brief history of this issue is that a total allowable catch (TAC) was set by the Department in 1996 and was adjusted twice by Board action in previous years. These harvest limits are not based on a stock assessment model, as one had not been accepted for use in the fishery until this year. The model has been under development for many years and, unfortunately, was not adopted in time for a harvest strategy to be considered by the Board during the regular cycle.

We believe the ACR meets the criteria. Only by having a harvest strategy based on the stock assessment model and other considerations, will the department have the ability to truly manage the fishery based on conservation. This will allow the best available information to be used in setting the TAC, rather than a Board adopted catch limit. This issue should be addressed as soon as possible, rather than waiting for the normal cycle for this fishery.

Thank you for reviewing our comments.



Submitted By
Greg Johnson
Submitted On
9/24/2017 11:41:38 AM
Affiliation

Phone
907-399-6236

Email
Steadfastgreg@gmail.com

Address
Po box 52
50910 mountain glacier ct
Homer, Alaska 99603

I have been a seiner in kodiak for the last 25 years. Before that I spent my youth on a set net site in the northern district of Cook Inlet. I feel that the kodiak management plan should be left alone. First of all you can not create a solid management plan off only several years of data. For example I was in the cape igvak section in 2016 when a large percentage of Cook Inlet fish where harvested. That has never happened before. There was a 45 - 60 knot storm and large tides that happened to move fish into our area like no one had ever seen in the history of our fishery. It can never be predicted in any given year exactly where Cook Inlet bound fish will show up. That is left to Mother Nature and some years they do not show at all. Salmon are a public resource. They do not belong to one user group. Should we shut down Cook Inlet because they intercept Susitna river fish? Let's make reasonable management decisions and not open a can of worms with this whole genetic study. What will we do, over escape kodiak rivers because of the chance a Cook Inlet bound fish may be caught? Sounds like a management nightmare for fish and game and will have huge economic impact on us kodiak fishermen who will loose more fishing time and areas. Thank you , Greg Johnson.



Submitted By
Harvey Goodell
Submitted On
9/30/2017 8:31:54 AM
Affiliation

Chairman John Jensen and Board Members,

Alaska Board of Fisheries

RE: ACR 11 UCIDA Request to change Kodiak Salmon Management Plan.

I Harvey Goodell oppose the Board of Fisheries taking up ACR 11 out of cycle. I do not believe the new genetic stock study offers any new information. And changing the management plan for Kodiak Salmon would have considerable negative effects to the fleet and local Kodiak community.

My family and I just finished are 18th season setnetting salmon in Uganik Bay on the west side of Kodiak Island. We rely on harvesting salmon during the time frame June 23rd - July 31st. Are fishing periods are based on the preseason forecast of are local stocks. If ACR 11 was implemented it would re allocate salmon to the seine fleet. The fleet would be forced to the inner bays where the setnet fleet is resticked.

Having lived in Alaska and on Kodiak Island for 37 years and been involved in the fishing business for all those years. First in the processing industry and for the past 35 years in the fishing industry. The importance for Kodiak Salmon Fisherman to harvest the historic salmon catch is very important to the Kodiak Island community.

ACR 11 does not meet the criteria that warrants a change for an out of cycle board meeting.

Sincerely yours,

Harvey Goodell



Chairman John Jensen
Alaska Board of Fisheries
Board Support Section
PO Box 115526
Juneau, Alaska 99811-5526

Chairman Jensen and Board Members:

I am opposed to the UCIFA agenda change request.

I am a second generation Kodiak Area Salmon seiner. My first trip was 50 years ago with my Dad as an 11-year-old. Prior to area registration my Dad fished salmon in Kodiak, Chignik and Cook Inlet.

I began operating my own seiner in 1980. Salmon fishing accounts for 80% of my income.

Salmon are considered "COMMON PROPERTY" and do not belong to the users of a specific management area. Purchasing a permit for a given area allows the permit holder to harvest fish in that area. It does not "guarantee" the permit holder will catch fish and does not give "ownership" of the fish returning to the area to the permit holder. Catching fish, in compliance with state regulation, gives the permit holder the right to sell the catch (ownership) and hopefully make a profit.

Salmon bound for Cook Inlet rivers have, and always will travel thru the Kodiak management area just as fish bound Kodiak travel thru areas L and M.

Before the BOF alters an historical management plan based on a singular genetic study it is only equitable that the State of Alaska conduct statewide genetic studies.

Respectfully,

James R Horn
F/V Venturess
1776 Mission Rd Kodiak, AK 99615



Submitted By
james monroe
Submitted On
10/3/2017 11:29:09 PM
Affiliation
fisherman/vessel owner

Phone
9074863656
Email
whitnecreek@gci.net
Address
p.o. box 1202
Kodiak, Alaska 99615

October 3,2017

RE: UCIDA AGENDA CHANGE REQUEST AND GENTIC STOCK COMPOSITION OF SOCKEYE SALMON IN THE KODIAK MANAGEMENT AREA.

CHAIRMAN JOHN JENSEN

As a fisherman, boat owner I oppose the UCIDA agenda change request because it does not meet the Board's agenda change criteria because Kodiak Management Area gentic stock composition study does not present any new information that corrects an effect on the fishery that was unforeseen when the regulation or management plan was adopted nor does Cook Inlet sockeye caught in the Kodiak Area create a conservation concern or have conservation purpose or reason. Therefore, there is no error in regulation that needs correcting.

As a fisherman, boat owner, I primarily fish Salmon on the West Side of Kodiak Island, and the Mainland in Shelikof Straits for the past 47 years.

I believe a more rigorous survey along with much more discussion should be done before any changes are made to any regulations or Management Plan.

All regulations should stay the same, until more research and a complete genetic stock composition over a longer period of time can be made. UCIDA agenda change request does not meet the Board of Fisheries Agenda Change Request Criteria..

Sincerely yours

James D. Monroe



Submitted By
James Pryor
Submitted On
10/3/2017 2:47:07 PM
Affiliation
Alitak Set Net Association

ACR 11 Comments on a new management plan for sockeye management in the Kodiak Management Area. Our family has a set net operation in Olga Bay on the south end of Kodiak Island. We have fished in Olga Bay since 1994 and have seen a steady deterioration of sockeye returns to both the South Olga Lakes (Upper Station) and Fraser Lake. The current salmon management plan in the Kodiak area bears the responsibility for the decline in sockeye production and escapement. The Alitak District set net families have borne the entire burden of stock conservation with drastic curtailment of fishing opportunities and poor returns resulting extreme financial distress. We cannot support a status quo of the Kodiak Area Management plan. ACR 11 addresses the concern of Cook Inlet sockeye returns being intercepted in the Kodiak Management area. We also have concerns with interception of south bound sockeye headed to the Olga Bay terminal areas which the current management plan does very little to address. The interception of sockeye that are not Karluk bound in the Kodiak Management is larger than just Cook Inlet fish. ACR 11 addresses the interception of Cook Inlet sockeye with a cap proposal on catches. We feel this is probably not the best way to address the issue of sockeye interception as there is a traditional catch of migratory fish on Kodiak Island. There are less invasive ways to address the interception problem without a total shut down of Kodiak salmon fisheries. A more fair and equitable solution would be to institute a near shore fishery in the Northwest and Southwest management districts to relieve some of the pressure that 24-7 cape fisheries put on returning salmon traveling the migratory pathways of Kodiak. Another possible solution would be a pulse fishery for the entire island to insure that the full spectrum of sockeye runs that use the migratory pathways that are known to run along the shores of the Kodiak Management Area will have the opportunity to escape and the burden of conservation will be equally shared by all stakeholders.

In summation we are opposed to a status quo of the Kodiak Area Management plan as currently written. We are a Kodiak Island sockeye fishery that has been greatly harmed by the current management plan and would like to see changes that address the migratory pathways and share the burden of conservation of stocks that are not Karluk bound. The current management plan has made the sockeye fishery a monoculture based almost entirely on Karluk escapement with little relief from long openings that do harm to stocks on the south end of Kodiak. We do not support ACR11 as written but feel the Board of Fish can find a compromise position that will address the concerns of both the Cook Inlet stakeholders and the Alitak District fishermen. Status quo of the Kodiak Area Management plan is not a solution.



Jamin Price-Hall
PO Box 1662
Kodiak, AK 99615

Chairman John Jensen
Alaska Board of fisheries
Boards Support Section
PO Box 115526
Juneau, AK 99811-5526

Re: UCIDA Agenda Change Request and
Genetic Stock Composition of Sockeye Salmon in
The Kodiak Management area

I am writing to state my opposition to the request of agenda change b UCIDA. It clearly does not meet the criteria for taking this issue up out of cycle because there is no new information that "corrects an effect on the fishery that was unforeseen when the regulation was adopted" Also, there is no particular conservation issue at stake; the incidental interception of sockeye bound for cook inlet by Kodiak fishermen does not put the entire system at risk. The request is purely motivated by the desire for more money on the part of UCIDA, at the expens of the entire Kodiak economy.

I first started fishing in Kodiak in 2005 as crew at a set gill net site in Uganik Bay, on the west side of the island. I continued to return in the summer for salmon season until 2011 when I got a job fishing pot cod around Kodiak and out the peninsula. I became an Alaska resident then and have made Kodiak my home ever since. I have fished in a number of other fisheries including crab and halibut. I 2014 I bought a setnet site in Uganik, less than a mile from where I spent my first summer and have been salmon fishing there ever since. My fiancé grew up fishing with her parents in Uganik and now fishes with me at what is now our site. We now have a son who will grow up fishing with us. As Kodiak setnetters we do not, by in large have heavy fast fishing; we rely on a sustained fishery that lasts from the beginnin of June into September. Taking over a month of fishing time away from June 23rd to July 31st would have an enormous impact on us. Not only for sockeye, but for all the pinks and chum that we would be unable to fish for during that time. My family' livelihood depends on being able to fish as we do throughout the summer.

The agenda change request is not reasonable on a number of levels. First, as stated earlier, it does not meet the boards agenda change criteria. It is motivated b the findings of a study that was undertaken for other reasons, and furthermore the study did not reveal any new information on a qualitative level. The study was ver small is scope and is not linked to any assessment of percentage of catch in any of the three areas targeted. Also, the request does not take into account the potentially disastrous effects on local stocks if fishing time was not being managed on local systems. Over escapement is a very real possibility and can have a huge negative



impact on the strength of future local runs. And finally, if the board decides to take up the issue, it sets a precedent in which any management area can be targeted for the incidental take of another area's fish. For instance, will the Chignik and Area M management areas be regulated for the harvest of Kodiak Sockeye and pinks?

The Kodiak Management area has not changed, it is an historical fishery that has not changed in physical area. Therefore, with the absence of any information indicating that there is an imminent threat or conservation concern on Cook Inlet stocks, the management plan must continue to be based on local stocks.

The UCIDA agenda change request should be thrown out because it does not meet the Board of Fisheries Agenda Change Request criteria. Quite simply, the genetic stock composition study does not bring to light any new information, and the incidental take of Cook Inlet sockeye does not present a conservation concern for Cook Inlet stocks. Thank you for your thoughtful consideration of the matter;

Respectfully,
Jamin Price-Hall
Naomi Beck-Goodell
Corwyn Goodell Hall



Jane Petrich
PO Box 52
Larsen Bay, Alaska 99624

October 3, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
PO Box 115526
Juneau, AK 99811-5526

Re: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

To Whom It May Concern:

My name is Jane Petrich and I oppose the UCIDA agenda change request. The request does not meet the Board's Agenda Change Request Criteria because the Kodiak Management Area genetic stock composition study does not present any **new information** that **corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted**. Cook Inlet sockeye caught in Kodiak do not create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation and or management that needs correcting.

I have fished the west side of Kodiak Island in Uyak and Larsen Bays since the late 1970's. Over the years as my family grew so did our fishing operation. Today my three children, two grandchildren and two daughter-in-laws all participate in our family operation. We have grown from a single permit operation in 1970 to a 6 permit operation in the 2017 season. We fish traditional sites which have been fished by the local people for many years. We rely heavily on strong salmon runs to provide for our families and crew, especially during the June 23 to July 31 portion of the Kodiak salmon fishery. There is no new information to consider. The fishery is well managed and the seasons ebb and fall as they always have.

I am deeply opposed to the agenda change request. The request infringes on a well managed and functioning area I believe it to be a terrible model which could completely disrupt one area's fishery to slightly advantage another area's harvest. Salmon are considered "common property" and do not "belong to" the management area where they were born. Further, if Kodiak is regulated for the presence of Cook Inlet sockeye, will the board also move to regulate Chignik and Area M for the take of Kodiak sockeye and pinks? Lastly, I do not believe the information gathered from the genetic testing done in a short three-year time period holds enough merit to move forward with changing the management for the pertaining areas permanently.



The Kodiak fishery is a historical fishery which has not moved into new areas. The Kodiak Management Plan is focused on the availability and harvest of local stocks and does not target Cook Inlet fish. The management plans are working based on the continued success of Kodiak fishermen and the salmon runs seen around the island.

In conclusion, I feel it important to restate that the UCIDA agenda change request does not meet the Board of Fisheries Agenda Change Request criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Sincerely,

Jane Petrich
jpetrich@gci.net
907 942-2724



Good Morning,

I would like to express my comments on the Regulation Change on The Minto Flats Northern Pike Management plan. The Proposed Regulation change is not acceptable as that area is a Critical Over wintering Spot for Female Northern Pike of That are capable of spawning. As a Guide and A business owner that operates in Minto Flats. This would be detrimental to many businesses as well as a other that is dependent on those spawning female to reproduce. I believe that the Data that the gentleman submits is limited and skewed to look like that this area is the only area to fish. Whereas there are many areas to fish this Subsistence fishery without endangering those spawning females. This is just the easiest to area to catch fish. This area has a Significant impact on the health of the whole of the Minto Fishery. Allowing the area to be reduce to one mile without proper enforcement would have a impact on the pike population. This is a State subsistence fishery area and Not a Traditional use area. This area has only been subsistence since the Mid 90's.

Jason Rivers



Jeff & Lauri Bassett
5000 East 98th Avenue
Anchorage, AK 99507

September 30, 2017

Chairman John Jensen
Alaska Board of Fisheries
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic
Stock Composition of Sockeye Salmon in the
Kodiak Management Area

We oppose ACR 11 which has been put forward by UCIDA. ACR 11 does not meet the criteria for an agenda change request and should not be considered at this time. The genetic stock composition study on which the ACR is based, while being comprehensive, does not provide new information which has not already been addressed in previous board cycles. Secondly, Cook Inlet sockeye caught in the Kodiak Management Area is not a conservation concern. It is our contention that there is no error in the way Kodiak Management Area is currently managed.

We have been set netting on the west side of Kodiak since 2006 and this provides a large portion of our families' income. A majority of our fishing income is obtained in the period of time between June 23 and July 31 making this proposal a serious threat to our business and way of life.

We take issue with several aspects of this proposal. First, the data produced by the genetic stock composition study shows extreme variability, making it impossible to identify useful management trends. As pointed out by the third-party assessment of the report: "it is really impossible to establish a trend with only three years of data." They went on to say that when time is brought into the discussion, the situation "appears murky" and concluded that "this observed variation shows the danger in looking at just three years and thinking that one sees a trend. Further sampling and study is warranted to understand patterns of temporal variation." Our view is that it would be unconscionable to change the way the west side fishery has been managed based on an unrecognizable trends. Second, we have concern that this proposal does not take into account the management of the Karluk River. Kodiak management biologist would be unable to manage for over-escapement in the Karluk River. Third, the proposal does not take into account that the set net fishery is a non-mobile fishery. The allocation of the set net fleet will certainly drop at a greater rate than the seine fishery, as we are unable to move to another district if the west side Kodiak fishery is closed. Unlike the seine fleet which will seek fishing opportunities in other districts, we simply will not be able to fish. This will result in a disproportional drop in the set net allocation.

The current Kodiak Management Plan has developed over many years and focuses on the capture of local stocks while maintaining desired escapement numbers. We are fearful that changes to the plan will result in detrimental consequence to our local stocks. Further, in no way does the current management plan intend to target non-local fish.



In conclusion, ACR 11 should not be considered at this time as it does not meet the criteria for an agenda change request. Also, the data produced from the genetic stock composition study does not provide new information. Finally, the data has high variability; therefore making changes to the current plan would simply be guess work.



Submitted By
Jeffrey Fuller
Submitted On
8/25/2017 2:55:27 PM
Affiliation

Phone
907-414-0156
Email
polarvend@hotmail.com
Address
p.o. Box 197
Willow, Alaska 99688

I'm concerned about our sport fishing in the Matsu Borough I moved here around year 2000 and started sport fishing, fishing wasn't great when I moved here, and continued to worsen.

around 2005 I quit fishing in matsu borough and focused on dipnetting in kenai or snagging in seaward or sport fishing in the kenai peninsula.

This is lost revenue for my borough and its a great loss financially for me as I have to spend hundreds of dollars just to get to the peninsula. Lets make sport fishing great again in the matsu, bring back the fishing tourism to our borough, and stop giving commercial fishermen particularly out of state commercial fishermen all of our fish.

My brother just recently graduated and I am sad to say he never got a chance to make a connection to sport fishing here in the matsu valley due to poor returns of fish and the endless restrictions.

I think the publications book is great however there are so many regulations for sport fishing you almost need to call adfg in advance tell them where your going to fish and find out what the regulations are, as I have done several times.

I think the board of fisheries is doing Alaska a terrible injustice by allowing as much commercial fishing as they do, sport fishermen spend way more to catch the fish locally than commercial fishermen do and I plan to cast ballot in elections to come for people that hold Alaskans values and concerns highly.



From: Joe Lindholm
To: spawn on kelp--SE ALASKA
Subject: Friday, September 29, 2017 9:44:50 AM
Date:

I am in favor of an alternate style of fishery for the SE roe herring fishery. The existing permit holders would have the option of either participating in the existing herring for roe fishery, or convert to the proposed spawn on kelp fishery.

The pluses to this are: A) The fishers that elected to stay in the herring fishery would have a much better chance to "make" a season because the fleet would be smaller

B) The fishers that elected to pursue the roe on kelp fishery would not hurt the existing fishery in any way because there would be no killing of fish...

C) The permit would generate more revenue to the state (thru higher grosses) and permit values would go up

D) Additional employment would be enjoyed (most likely by the community of Sitka)

The minuses are: There is some belief that this fishery would dilute the existing roe on kelp market. The open pond method of harvesting kelp produces a much thinner product, therefore the product is not the same.

Arguments there will be, but substantiation of this is available. It can be likened to frozen salmon versus canned salmon - both salmon but different markets.

John Nevin
P.O. Box 2125
Kodiak AK 99615
9-30-17



PC053
1 of 2

Chairman John Jensen
Alaska Board of Fisheries
Board Support Section
P.O. Box 115526
Juneau AK 99811-5526

RE: UCIDA Agenda Change Request
and genetic stock composition
in the Kodiak Management Area

Dear Board Members,

I understand there is a proposal to change the management of a large portion of the Kodiak salmon season based on Cook Inlets reds passing by our area. I am against this proposal.

I have seined salmon in Kodiak as a permit holder every year since 1979. A few years as a beach seiner the rest purse seiner. I ~~hardly~~ write letters to your board but in this case I worry you could badly damage Kodiak fishery by managing it by ~~and~~ where and when Cook Inlets fish may be passing Kodiak and how many of those fish may be caught by Kodiak fishermen and how that may effect another areas management.

There will always be a mixture of stocks from different management areas. Different from day today, year to year, where the fish are going to bounce off the shores of the different areas. It seems the most reliable, effective way to manage salmon stock is in the area they are going to. Trying to manage Cook inlets red fishery by shutting down Kodiaks fishery could greatly effect Kodiaks management plan, cause over escapement and a loss of income to its fishermen. There are already caps put on red fishing in the Shelikof



to allow fish to pass by. We fish a long season in Kodiak. I'll bet more days than any other area. and it takes all those days to put in a decent season.

Thanks for reading this and for all the work you do. Please do not vote to change the management of Kodiak's stocks this way.

Sincerely,

John Nevin
SOIK 56445G



Submitted By
Jonathon Brandal
Submitted On
9/23/2017 10:33:55 PM
Affiliation
Akcreepy666@gmail.com

Phone
9076545806

Email
Akcreepy666@gmail.com

Address
1112 Malutin Lane
Kodiak , Alaska 99615

I am Jonathon Brandal, a commercial fisherman. This is in response to ACR 11, I am against this! My livelihood relies on being able to fish as well as the backbone of our economy!



Submitted By
Julie Kavanugh
Submitted On
9/23/2017 9:03:53 PM
Affiliation
self

Phone
907-486-5061
Email
sylstar@acsalaska.net
Address
1533 sawmill circle
Kodiak , Alaska 99615

I am testifying in opposition of ACR #11. This agenda change request is acutely allocative in nature. The proposer attempts to limit the gravity of this by indicating it's justification is due to an inter-regional aspect. The fish in Alaska are held in trust for all Alaskans and discounting one regions dependancy over anothers is wrong economically and ethically. Note that the proposer states that ACR #11 is "**regionally allocative**". If the Board adopts this proposal even with good intentions, it will harm the Kodiak Area Salmon fishery through mangement concerns such as over escapement, create gear conflicts, cause plausible harm to fishers not equipped with vessels or gear for bay fishing, interrupt processing, reduce work hours for processing employees, insert extreme uncertainty into fishing opportunity, and literally wreck havoc throughout Kodiak's economy. In 1989, the Board of Fish addressed the interception of Cook Inlet Salmon. Kodiak's salmon fleet has historically and rightfully caught salmon on it's capes while adhering to the adjustments made in 1989. The genetics study only shows a brief snap shot of interception with anomallys well documented. I would argue that a reactionary proposal such as ACR #11 is dangerous and the 3 year cycle is in place to prevent the harm that such action would cause. My family participates in the area K salmon fishery with a 58 ft limit seiner, the Sylvia Star. Our vessel and gear are built for cape seining. If forced into bays we are at an extreme disadvantage. We would be forced to compete for fish in areas that generally have gill nets and small boats. I respectfully ask the Board to reject this ACR for; a lack of careful study and depth of data needed for analysis; the heavy handed allocative measures this ACR is lifting; the certainty in regards to negative economic effects; and the biological harm it could cause to the area K salmon stocks.



Ken Christiansen
1849 Marmot Drive
Kodiak AK 99615
~~~~~

October 2, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

Via email: [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

I oppose the UCIDA agenda change request because it does not meet the Board's agenda change request criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted," nor does Cook Inlet sockeye caught in the Kodiak Management Area create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

I have been fishing for salmon in Kodiak waters for fifty years. I have owned and run a boat for 40 years and have owned a Kodiak Salmon Seine permit since limited entry began. I have participated in other fisheries as well however salmon fishing is my primary source of income, it is my livelihood and I work very hard to make every season successful enough to pay the bills and put food on the table through the winter.

It has long been known that Cook Inlet bound salmon may be "intercepted" in Kodiak waters; however it is dependent upon tides, wind direction and other uncontrollable and unpredictable factors. It is also known that the Kodiak Salmon Management Plan and current regulations take this possibility into consideration. Given that these are known facts, the recent genetic study does not provide any truly new information.

Further, there is no information provided about how changes in the current regulations to accommodate the Cook Inlet fishermen would affect the local Kodiak runs should fishing be closed during June and July. It is my understanding that the primary concern of the



Kodiak Salmon Management Plan is to manage local salmon stocks. If there are regulated closures to accommodate the possible passage of Cook Inlet bound salmon, then Kodiak's stocks could be threatened by over-escapement, insufficient food sources, etc.

There is also no information provided about the potential economic effects of June and July closures or destroyed local salmon runs to the Kodiak area, including Kodiak fisherman with various gear types, the local processors, and the local workforce. Should there be significant changes to the Kodiak salmon fishery, there will undoubtedly be significant effects to the whole community.

I feel that the ICIDA Agenda Change Request is inappropriate for many reasons but particularly that it does not meet the Board of Fisheries Agenda Change Request criteria and I urge you to decline it.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Ken Christiansen".

Ken Christiansen  
f/v Mary Ann



Submitted By  
Dwight Kramer, Secretary  
Submitted On  
9/21/2017 12:30:38 PM  
Affiliation  
Kenai Area Fisherman's Coalition  
  
Phone  
907-283-1054  
Email  
[dwimar@gci.net](mailto:dwimar@gci.net)  
Address  
PO Box 375  
Kenai, Alaska 99611

Sept. 20, 2017

Dear BOF Board Members,

We would like to take this opportunity to provide comment on your upcoming discussions and decision on the location for the 2020 UCI BOF meeting.

Throughout the 2017 UCI BOF meeting we continually requested various board members to evaluate the attending audience to get a sense of where the attending participants were from. It was very obvious that after the public testimony portion of the meeting almost all in attendance were from the Kenai Peninsula area. This only makes sense because 85% of the nearly 300 proposals are for the Kenai and Kasilof rivers or immediate offshore waters. These are the people that have the most involvement in the issues at hand in UCI fishery decisions.

What doesn't make any sense is that none of these meetings have been held in the Kenai / Soldotna area for nearly 20 years. Please ask yourself how you would like it if meetings for Kodiak, Bristol Bay, Fairbanks or the AYK were always held in Anchorage because a minority of power players want it that way so that they can have a better chance at controlling the outcome if local participation is minimized by time and travel expenses necessary to attend.

The BOF has a mandate to try to hold their meetings closest to the fisheries involved in these critical meetings. By the sheer volume of proposals related to the Kenai Peninsula waters it would infer that the Kenai / Soldotna area should be an obvious location for this meeting.

Our organization, Kenai Area Fisherman's coalition (KAFC), represents private, mom and pop, anglers. Private anglers do not have any commercial interest or concerns in the outcome of these meetings so the financial burdens to attend an Anchorage meeting makes it financially impossible to attend. At the 2014 meeting, Chairman Johnstone, eluded to the fact that people who filed proposals should be present to defend them. That is financially impractical for most from the Kenai area when the meeting is held in Anchorage.

I hope all of you will understand that a private angler is different from a guide or a commercial fisherman in that they do not have any financial gain in the outcome of their proposals, so for them to come to Anchorage to give 3 minutes of testimony and stay around for 4-5 days to serve in the committee process would cost them between 500 – 1,000 dollars. I hope you can see by this example why private anglers from the Kenai area are largely excluded from the process when the meeting is held in Anchorage.

Last year it cost our organization about \$3,200 for three of us to attend the meeting in its entirety. Roughly 95% of the attending audience on any given day after public testimony was from the Kenai area so you can imagine the total financial burden on Kenai area individuals and organizations. It has been mentioned in the past that Anchorage is a good central location but central for who? It's a simple fact that Anchorage and MATSU folks simply don't attend these meetings very much.

KAFC has offered a solution to this problem and that is to have alternating meetings between the Kenai / Soldotna area and the Anchorage / MATSU area. We think this is a fair and equitable solution for all concerned with UCI Fishery issues and one that should be adopted by the board.

There is also a stigma, that because of one isolated incident at the 1999 Soldotna meeting, this area is not a safe place to hold these meetings. I hope that concern has been put to rest over the years. The BOF recently held the 2013 King Salmon Task Force meetings here over several timeframes, as well as the 2016 Oct. work session without incident. Throughout these meetings the panel and the audience conducted themselves in a friendly and respectful manner. It should be considered that a UCI BOF meeting in this area would be no different.

Thank you for your time and consideration in this matter.

Respectfully Submitted,

Ed Schmitt, Chairman  
Kenai Area Fisherman's Coalition





**SOLDOTNA**  
City of Soldotna, Alaska



September 27, 2017

The Alaska Board of Fisheries  
Alaska Department of Fish & Game  
PO Box 115526  
Juneau, AK 99811

Reed J. Morisky  
John E. Jensen

Orville H. Huntington  
Alan Cain  
Israel Payton

Robert Ruffner  
Fritz Johnson

*RE: Alaska Board of Fisheries 2020 Upper Cook Inlet Finfish Meeting*

Dear Board Members:

On behalf of the Kenai Peninsula Borough and the cities of Kenai and Soldotna, we are writing to respectfully request that the Board of Fisheries (BOF) hold the 2020 Upper Cook Inlet Finfish (UCI) Regulatory Meeting in the Kenai-Soldotna area. Many local residents and businesses of the Kenai Peninsula are affected by decisions made by the BOF. Holding the 2020 BOF UCI meeting on the central Kenai Peninsula would allow much needed opportunities for input from our residents and businesses. The Kenai Peninsula Borough and the cities of Soldotna and Kenai appreciate the board's willingness to consider this request.

The last BOF UCI meeting held on the Kenai Peninsula was in 1999, over six full cycles ago. Since that time, Alaskans living on the Kenai Peninsula have not enjoyed reasonable access to the Board of Fisheries meetings. A significant portion of the proposals considered at the BOF UCI meeting concern watersheds of the Kenai Peninsula. Rotating BOF meetings between the central Kenai Peninsula area and the Anchorage area is a cost-effective method of allowing reasonable access for all Alaska residents. The Kenai Peninsula Borough and the cities of Soldotna and Kenai are prepared to provide resources and assistance to the State in order to assure that meetings on the peninsula are run successfully and efficiently.

### **Fairness & Process**

Holding the two-week BOF UCI meetings solely in Anchorage leads to disproportionate representation of the special-interest groups that have the resources to attend the meetings, and underrepresentation of individual residents of the Kenai Peninsula. Government officials and representatives of special-interest groups are able to attend UCI meetings, because costs



associated with attendance are borne by the organizations and not the individuals. This is not the circumstance for the vast majority of residents on the Kenai Peninsula.

As you know, the daily schedule for the BOF UCI meetings is somewhat fluid, therefore it is difficult for residents from the Kenai Peninsula to effectively know when to travel to Anchorage in order to provide testimony and participate in committees. This often requires burdensome costs associated with multiple days of lodging and subsistence, in addition to transportation costs. Not having reasonable, periodic access to the BOF process is simply unfair to the large population of Alaskans residing on the Kenai Peninsula.

Additionally, by not holding the UCI meeting on the Kenai Peninsula on a periodic basis, the BOF process itself is rendered less comprehensive and effective. By minimizing or eliminating input and testimony from residents of the Kenai Peninsula, the BOF is denied the knowledge of individuals who are closest to, and most directly affected by, the fisheries and decisions made by the BOF.

### **Cost Savings**

There are cost savings that will be realized by holding the 2020 UCI meeting in the Kenai-Soldotna area. The Kenai Peninsula Borough, and the cities of Kenai and Soldotna commit to providing a venue for the meeting and providing coffee, tea and water, at no cost to the State of Alaska.

The venues which are available and capable of hosting the meeting are the Soldotna Regional Sports Center and the Kenai Central High School Auditorium, and the Kenai Challenger Learning Center.

The Kenai Municipal Airport is a full-service airport offering over 20 scheduled flights per day to and from Anchorage. The Soldotna-Kenai area is served by hotels and motels with approximately 500 rooms. During the February and March time period, vacancy levels are generally high, so availability of lodging for the BOF, staff, and other meeting participants is easily accommodated. The Kenai-Soldotna area also hosts a wide range of support services including over 30 restaurants and cafes within a short distance from either of the three available venues. Ground transportation for the Board and staff to and from local hotels for the meeting will be provided at no cost to the State.

The borough and cities will establish a point of contact for BOF and staff to assist in identifying resources and cost savings for the State. We believe that additional savings will be realized subsequent to a decision to locate the meeting in the Soldotna-Kenai area and specific needs/services are identified.

### **Security**

The central peninsula area is a safe location to hold the BOF UCI meeting. The state has held numerous public meetings, including a 2016 BOF work session in the area without issues. The cities of Soldotna and Kenai have committed to providing a police officer to be present at the 2020 UCI BOF meeting at no cost to the State.



### Information Technology (IT) Support

The Kenai Peninsula Borough and the cities of Soldotna and Kenai will provide IT support as requested by the BOF.

### Support from Individuals, Organizations and Political Subdivisions

There has been consistent strong support from local government, businesses, and residents for the BOF to hold UCI Meetings on the Kenai Peninsula. In 2014, the Kenai Peninsula Borough and the cities of Homer, Kenai, Seldovia, Seward, and Soldotna passed a joint resolution requesting that the 2017 BOF UCI meeting be held on the Peninsula (see attached). The Kenai Peninsula Borough Assembly and the cities of Soldotna and Kenai will be considering resolutions requesting that the 2020 BOF UCI meeting be held in the central Kenai Peninsula at their next meetings, and these resolutions will also be forwarded to the BOF prior to the October 17-19 work session.

Thank you for your attention and deliberations regarding our request. The residents and governments of the Kenai Peninsula look forward to being your hosts for the 2020 Alaska Board of Fisheries Upper Cook Inlet Finfish Meeting.

Sincerely


KENAI PENINSULA  
BOROUGH

  
Mike Navarre  
Mayor

CITY OF SOLDOTNA

  
Pete Sprague  
Mayor

CITY OF KENAI

  
Brian Gabriel  
Mayor

### Attachments

cc: Governor Bill Walker  
Senator Peter Micciche  
Representative Mike Chenault  
Representative Gary Knopp  
Representative Paul Seaton  
Sam Cotten, Commissioner ADF&G  
Glenn Haight, Executive Director BOF





**KENAI PENINSULA BOROUGH  
CITY OF HOMER  
CITY OF KENAI  
CITY OF SELDOVIA  
CITY OF SEWARD  
CITY OF SOLDOTNA**

**JOINT RESOLUTION NO. 2014 - 01**

**A JOINT RESOLUTION OF THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH, COUNCILS OF THE CITY OF HOMER, CITY OF KENAI, CITY OF SELDOVIA, CITY OF SEWARD AND CITY OF SOLDOTNA, REQUESTING THE ALASKA BOARD OF FISHERIES HOLD ITS 2017 UPPER COOK INLET FINFISH MEETING ON THE KENAI PENINSULA.**

WHEREAS, Upper Cook Inlet Finfish issues are vitally important to, and directly impact residents, municipal governments and communities on the Kenai Peninsula; and

WHEREAS, many local residents and businesses of the Kenai Peninsula depend on, participate in, and are otherwise affected by decisions made by the Board of Fisheries with regard to subsistence fisheries, sport fisheries, commercial fisheries, personal use fisheries and conservation measures in Upper Cook Inlet; and

WHEREAS, when making informed decisions regarding finfish issues in Upper Cook Inlet, the Board of Fisheries should consider the comments and interests from residents of the Kenai Peninsula; and

WHEREAS, the costs and travel time to attend meetings outside the Kenai Peninsula pose a significant burden to local residents, limiting participation and the Board of Fisheries' ability to benefit from local knowledge; and

WHEREAS, the Alaska Board of Fisheries has not held its Upper Cook Inlet Finfish meeting on the Peninsula since 1999 despite numerous requests that it do so; and

WHEREAS, holding the meeting on the Kenai Peninsula would show local residents, businesses and communities that the Board of Fisheries listens, cares about and understands the local impacts of its decisions; and

WHEREAS, there are local quality venues of sufficient size with advanced technologic capabilities to host public meetings, as well as exceptional lodging and dining opportunities on the Kenai Peninsula;

NOW, THEREFORE, BE IT RESOLVED BY THE KENAI PENINSULA BOROUGH ASSEMBLY, AND THE COUNCILS FOR THE CITY OF HOMER, CITY OF KENAI, CITY OF SELDOVIA, CITY OF SEWARD AND CITY OF SOLDOTNA;

Section 1. That the Alaska Board of Fisheries is respectfully and strongly urged by the Kenai Peninsula municipal governments representing their constituents to hold the 2017 Upper Cook Inlet Finfish meeting on the Kenai Peninsula.

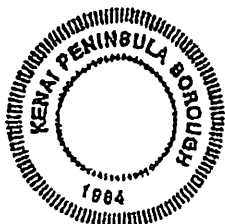


Kenai Peninsula Joint Resolution  
Page 2 of 3

Section 2. That this Joint Resolution be forwarded to Governor Sean Parnell, Senator Peter Micciche, Senator Gary Stevens, Speaker Mike Chanault, Representative Kurt Olson, Representative Paul Seaton, Governor's Chief of Staff Mike Nizich, Department of Fish & Game Commissioner Cora Campbell, Alaska Board of Fisheries Members - Karl Johnstone, Orville Huntington, Susan Jeffrey, John Jensen, Fritz Johnson, Thomas Kluberton, Reed Moriskay, Alaska Board of Fisheries Executive Director Glean Haight

Section 3. That this resolution takes effect immediately upon approval by the participating city councils.

APPROVED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH THIS 2nd  
DAY OF September 2014.



ATTEST:

Johni Blankenship  
Johni Blankenship, Borough Clerk

Hal Smalley  
HAL SMAILEY,  
ASSEMBLY PRESIDENT

Mike Navarre  
MIKE NAVARRE,  
KENAI PENINSULA BOROUGH MAYOR

APPROVED BY THE COUNCIL OF THE CITY OF HOMER this 8th day of  
September 2014.

ATTEST:

Fritz Johnson  
Fritz Johnson, City Clerk

Mary E. Wythe  
MARY E. WYTHE, HOMER MAYOR



Kenai Peninsula Joint Resolution  
Page 3 of 3

APPROVED BY THE COUNCIL OF THE CITY OF KENAI this 8<sup>th</sup> day of  
September, 2014.

ATTEST:

Pat Porter  
PAT PORTER, KENAI MAYOR

Sandra Modigh  
for Sandra Modigh, City Clerk

APPROVED BY THE COUNCIL OF THE CITY OF SELDOVIA THIS 10 DAY OF  
September, 2014.

ATTEST:

Keith Gain  
KEITH GAIN, SELDOVIA MAYOR

Mary Klingler  
for Mary Klingler, City Clerk Deputy Clerk

APPROVED BY THE COUNCIL OF THE CITY OF SEWARD, THIS 11<sup>th</sup> DAY OF  
September, 2014.

ATTEST:

Jean Bardarson  
JEAN BARDARSON, SEWARD MAYOR

Johanna Kinney  
Johanna Kinney, City Clerk



APPROVED BY THE COUNCIL OF THE CITY OF SOLDOTNA, this 10<sup>th</sup> day of  
September, 2014.

ATTEST:

Nels Anderson  
NELS ANDERSON, SOLDOTNA MAYOR

Michelle M. Sanner  
Michelle M. Sanner, City Clerk



Submitted By  
Ricky Gease  
Submitted On  
10/2/2017 11:15:50 AM  
Affiliation  
KRSA

Phone  
907-262-8588  
Email  
[ricky@krsa.com](mailto:ricky@krsa.com)  
Address  
224 Kenai Avenue, Suite 102  
Soldotna, , Alaska 99669

Monday, October 02, 2017

TO: Alaska Board of Fisheries  
BOF Work Session, October 17 – 19, 2017  
Anchorage, Alaska

FROM: Kenai River Sportfishing Association  
224 Kenai Avenue, Suite 102  
Soldotna, Alaska, 99669

**KRSA comments on Agenda Change Requests to be considered by the Alaska Board of Fisheries  
at the 2017 Work Session, October 17-19, Anchorage, Alaska.**

Kenai River Sportfishing Association (KRSA) strongly recommends that the Alaska Board of Fisheries (BOF) fail, in each case, the following three Agenda Change Requests (ACRs) as they fail to meet any criteria for accepting ACRs.

- ACR #8
- ACR #9
- ACR #10

Discussion: In accordance with 5 AAC 39.999 Policy for changing board agenda.

*The Board of Fisheries will accept an agenda change request only:*

- 1) *For a fishery conservation purpose or reason; or*
- 2) *To correct an error in regulation; or*
- 3) *To correct an effect on a fishery that was unforeseen when a regulation was adopted.*

*The Board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the Board to be compelling.*

A thorough review of the current codified regulations, fishery statistics from each of the previous five salmon fishing seasons in Upper

Cook Inlet (2013-2017), and a review of the documents archived from the 2011, 2014 and 2017 Upper Cook Inlet (UCI) meetings of the BOF makes it perfectly clear that the criteria set forth for acceptance of an ACR are not satisfied by any of the three put before the BOF at this time.



Acceptance of any one of these ACRs particularly ACR # 10 which seeks to open and address key aspects of the major fishery management plans that govern the complicated mixed stock, mixed species UCI salmon fisheries, would result in a piecemeal, out-of-cycle meeting of the BOF in one of the most complex, contentious areas of the State. In spite of the authors' erroneous claim that the changes they suggest would not result in the reallocation of salmon fishery resources, this claim flies in the face of facts.

The BOF met for a fourteen day long regularly scheduled meeting in February and March of this year. It is not persuasive that it was unforeseen that regulatory actions taken by the BOF at the UCI 2017 meeting somehow failed to address known conservation concerns are in error or failed to foresee the situations described in the three ACR's.

Specific comments:

ACR #8 This ACR seeks to "Close a portion of the Big River to sport fishing and reduce the bag limit for salmon, other than king salmon in the South Fork and tributaries of Otter Lake (5 AAC 62.122)." The author of this ACR makes the case that a critical conservation situation exists. This argument is not supported by the most recent data and observations by the Alaska Department of Fish and Game. For this reason, this ACR request clearly fails to meet the criteria

ACR #9 This ACR seeks to "Reduce the bag limit for salmon, other than king salmon, from three to two fish in Otter Lake and its tributaries (5 AAC 62.122)." The author of this ACR makes the case that a critical conservation situation exists. This argument is not supported by the most recent data and observations by the Alaska Department of Fish and Game. For this reason, this ACR clearly fails to meet the criteria for acceptance.

ACR #10 This ACR seeks "to close and open all commercial, personal use and sport fisheries concurrently when salmon escapement goals are not going to be achieved in Upper Cook Inlet (5 AAC 21.363 Upper Cook Inlet Salmon Management Plan, 5 AAC 56.122 Special provisions for the seasons, bag, possession, annual and size limits and methods and means for the Kenai Peninsula Area, 5 AAC 57.121 Special provisions for the seasons, bag, possession, annual and size limits and methods and means for the Lower Kenai River Drainage Area, 5 AAC 57.122 Special provisions for the seasons, bag, possession, annual and size limits and methods and means for the Middle Kenai River Drainage Area, 5 AAC 57.123 Special provisions for the seasons, bag, possession, annual and size limits and methods and means for the Upper Kenai River Drainage Area and 5 AAC 77.540 Upper Cook Inlet Personal Use Fishery Management Plan."

A careful review of the transcripts of the 2017 regularly scheduled Upper Cook Inlet meeting of the BOF makes it clear that this ACR fails to meet any of the three criteria for acceptance. In addition, no new information, variation in run timing for Kenai River sockeye is not new information, is offered by the author of this ACR. And, of necessity, implementation of a strategy such as that suggested by this ACR would be predominantly allocative in nature.

In summary, KRSA recommends that the BOF fail all three of these ACR's in that they fail to meet the established criteria for acceptance.



PO BOX 37  
KING COVE, AK 99612  
P (907) 497-2340 F (907) 497-2594  
[hmackmayor@gmail.com](mailto:hmackmayor@gmail.com)

*Office of the Mayor*

September 8, 2017

Chairman John Jensen, Alaska Board of Fisheries

Board Support, P.O. Box 115526

Juneau, AK, 99811-5526

Emailed via pdf attachment to [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

**Re: Requesting the Board of Fisheries Reject Agenda Change Request 12**

Dear Chairman Jensen,

We urge the Alaska Board of Fisheries to reject ACR 12 at your October 17-19, 2017 Work Session. This ACR does not meet Board criteria found in 5 AAC 39.999, for approving an agenda change Request.

Last year at the February 2016 Board meeting, the Board encouraged salmon fishery stakeholder groups from the South Alaska Peninsula area and Chignik area to find a compromise solution that would restrict commercial fishing in the Dolgoi Island Area to allow additional sockeye salmon to potentially travel to Chignik, while still allowing harvest opportunity for South Alaska Peninsula fishermen. The new regulations were in place for the 2016 & 2017 salmon seasons.

ACR 12 proposes to radically change the mutually agreed upon Doloi Island Area regulations. ACR 12 is predominately allocative and therefore should not be approved at this time. We believe this ACR does not meet the Board's criteria for accepting an ACR:

- There is no fishery conservation concern. This new regulation established only last year is working as conceived. Dolgoi fishing is restricted and Chignik escapement goals have been met.
- There is no error in the regulation – the Board was diligent in promulgating the compromise proposal into regulations, and the Department has been careful to enact the rules as written.
- There were no unforeseen effects on the salmon fisheries from this regulation. Both the 2016 & 2017 salmon seasons were unique and surprising, but not as a result of these regulations.

There are plenty of problems with this ACR, however we would prefer to debate the merits of the proposal during the next meeting cycle, when it would regularly come up. At the February 2019 Alaska Peninsula/Chignik Fishfish meeting, the Board will have three years of data under the new regulations to better inform the next decision on this issue.

We respectfully request the Alaska Board of Fisheries reject ACR 12 at the 2017 Work Session. Thank you for the opportunity to provide written comment.

Sincerely,

Henry Mack  
Mayor





Submitted By  
kip thomet  
Submitted On  
9/30/2017 1:12:43 PM  
Affiliation  
  
Phone  
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[kipandleigh@yahoo.com](mailto:kipandleigh@yahoo.com)  
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po box 3258  
kodiak, Alaska 99615

Kip homet  
  
Holiday Island  
  
Kodiak, AK. 99615  
  
907-539-8822  
  
Sept. 27, 2017

Chairman John Jensen  
  
Alaska Board of Fish  
  
Board Support Section  
  
P.O. Box115526  
  
Juneau, AK. 99811-5526

RE: UCIDA Agenda Change request and  
  
Genetic Stock Composition of Sockeye  
  
Salmon in the Kodiak Management Area

Dear members of the Alaska Board of Fish:

My name is Kip homet. I'm a long time Alaskan fisherman living in Kodiak. My wife Leigh and I have owned and operated a salmon Set-Net site on Kodiaks' West side for the last 27 years and derive the majority of our income from it. We employ 2 to 3 crewmembers each year depending on ADF&G run strength forecasts. Currently I have the privilege of serving on the Kodiak A.C. I also sit on the board of the Kodiak Regional Aquaculture Association.

I'm writing to you today in the hope of dissuading you from granting UCIDA's request for an agenda change for the Board to take up UCIDA's proposal to change the Kodiak Area Salmon Management Plan. I also respectfully request that the Board refrain from authoring a Board generated proposal pertaining to Kodiaks' management plan for the following reason;

- he proposed changes are drastic with such far-reaching consequences. Salmon is a huge part of the economic picture here in Kodiak and a large part of the social fabric. o have the proposal taken up anywhere other than Kodiak would disenfranchise the vast majority of the Kodiak community. he effected people, not only the fisherman and their families, but also the processor workers, the business owners, the support industry.... In short, everyone in this Island community is connected to salmon in some way. For the Board to take this up out of cycle, without the opportunity for most of Kodiak to be involved in the process, would be in my opinion, unfair and just plain wrong.

I'll leave it to others to argue whether the UCIDA ACR meets the Boards criteria for granting the request . Personally, I don't think that it does but the bigger question to me is whether you, the Board, without any Kodiak representation, is willing to deprive Kodiak its' entire voice in such an important matter.



Thank you for your time, sincerely,

Kip Homet



## **KODIAK ARCHIPELAGO RURAL REGIONAL LEADERSHIP FORUM**

### **RESOLUTION 2017-8**

#### **A RESOLUTION TO THE ALASKA BOARD OF FISHERIES OPPOSING OUT OF CYCLE SCHEDULING OF KODIAK MANAGEMENT AREA FINFISH ISSUES**

**WHEREAS**, the Kodiak Archipelago Rural Regional Leadership Forum is a consortium of tribal, municipal, Alaska native corporation and other leaders who support the coastal communities of Akhiok, Karluk, Larsen Bay, Ouzinkie and Port Lions, and

**WHEREAS**, fisheries and access to marine resources have always been a foundational resource for these island communities and we rely on strong fisheries and resident fishermen to thrive; and

**WHEREAS**, the Alaska Board of Fisheries has established a 3-year cycle for their agenda schedule in addressing finfish issues in each of Alaska's fisheries management areas; and

**WHEREAS**, the Alaska Board of Fisheries just completed the Kodiak finfish cycle meeting in Kodiak to discuss Kodiak finfish issues in January of 2017; and

**WHEREAS**, exceptions to the Alaska Board of Fisheries 3-year cycle for addressing area finfish issues are narrowly outlined in the Board's "Policy for Changing Board of Fisheries Agenda" and such "Agenda Change Requests" (ACRs) are only heard by the Board during their "first meeting in the fall"; and

**WHEREAS**, United Cook Inlet Drift Association (UCIDA) has submitted an Agenda Change Request (#11) to have the Board schedule Kodiak finfish issues out of cycle during the Board's 2017-18 meeting schedule to "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the UCIDA Agenda Change Request does not meet the Alaska Board of Fisheries' criteria for approval in that it is not; a. for a fishery conservation purpose or reason, b. to correct an error in a regulation or c. to correct an effect on a fishery that was unforeseen when a regulation was adopted; and

**WHEREAS**, the UCIDA Agenda Change Request states on its face that it is "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the Alaska Board of Fisheries Policy for Changing Board of Fisheries Agenda clearly states that "the board will not accept an agenda change request that is predominately allocative in nature absent new information found by the board to be compelling"; and



**WHEREAS**, the UCIDA Agenda Change Request is entirely allocative in nature and information about the opportunistic harvest of Cook Inlet bound sockeye in the Kodiak Management Area while fishing for local stocks has been known for more than 70 years and was documented before the Alaska Board of Fisheries 25 years ago with research reaching back to the 1940s with estimates of the presence of Cook Inlet sockeye in the Kodiak Management Area ranging from 0 to 60%; and


**WHEREAS**, the 2016 report on the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016 merely provides additional detail to information already known by the Alaska Board of Fisheries about the opportunist harvest of Cook Inlet bound sockeye in the Kodiak Management Area and was not an assessment for allocative purposes;

**THEREFORE BE IT RESOLVED** that the Alaska Board of Fisheries reject the UCIDA agenda change proposal to address, out of cycle, the harvest of Cook Inlet stocks in the Kodiak area; and

**AND THEREFORE BE IT FURTHER RESOLVED** that the Board of Fisheries leave the issue of the harvest of Cook Inlet bound sockeye caught in the Kodiak Management Area to be thoroughly vetted through the normal Board of Fisheries process during the 2019-2020 Kodiak finfish meeting.

**PASSED AND ADOPTED THIS 21<sup>ST</sup> DAY OF SEPTEMBER, 2017 BY THE FIFTY-SEVEN (57) COMMUNITY, ALASKA NATIVE CORPORATION AND TRIBAL LEADERS PARTICIPATING IN REVIEW OF THIS RESOLUTION AT THE KODIAK ARCHIPELAGO LEADERSHIP FORUM.**

IN WITNESS THEREOF:

  
\_\_\_\_\_  
Roberta Townsend Vennel, Forum Facilitator





**Kodiak Island Borough**  
710 Mill Bay Road, Rm. 101  
Kodiak, AK 99615  
907.486.9310



**City of Kodiak**  
710 Mill Bay Road, Rm. 220  
Kodiak, AK 99615  
907.486.8636

September 22, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

Submitted electronically to: [dfg.bofcomments@alaska.gov](mailto:dfg.bofcomments@alaska.gov)

Re: Comments regarding Agenda Change Request #11

Dear Chairman Jensen and Members of the Board of Fisheries:

The Kodiak Management Area (KMA) salmon fisheries, with over a one hundred year history, are the oldest mixed stock fisheries in Alaska. The harvests in the KMA are not new nor expanding, and harvest patterns have not recently changed.

Therefore, both the Kodiak Island Borough and the City of Kodiak strongly oppose all aspects of Agenda Change Request #11, and join Kodiak salmon fishery stakeholders and supporters in urging the Board of Fisheries to deny the request to consider this proposal out of cycle.

The requirements that must be met for the Board of Fisheries to accept Agenda Change Requests are restricted to three key criteria: meaningful new information; conservation concerns; and errors or mistakes in regulations.

Finfish managers in the Alaska Department of Fish and Game (ADF&G) have for decades known that sockeye bound for Cook Inlet have been a component of salmon harvests in the KMA. Therefore, ADF&G managers have incorporated this biological fact into the KMA's management plans, and the existing, historic, and traditional harvest of sockeye in the KMA reflect this established precedent. Furthermore, recent genetic studies do not reflect new knowledge; rather, they corroborate this well-known facet of salmon management in Kodiak. Therefore, the information presented in January within the Genetic Stock Composition report (FMS 16-10) should not trigger abrupt consideration of management changes nor be permissible for acceptable Agenda Change Requests.



Any sudden change to the KMA's management plan based on information that has been readily available for many years would be disruptive, and potentially catastrophic to the thousands of individuals and families whose livelihood depends on responsible and stable salmon management in the KMA. The economies of the City of Kodiak as well as the rural, urban, and village communities of the Kodiak Island Borough are already struggling with downturns in fisheries markets as well as general and acute uncertainties with local, State, and Federal budgets. Any curtailment of KMA salmon harvests would have a direct and negative impact to our entire Borough in this tenuous economic climate.

At the recent meeting of the City and Borough's Kodiak Fisheries Work Group, harvesters asked for our support to respectfully request the Board of Fisheries to not take up any hasty reactions stemming from this recent genetic study, and instead work towards the continuation of balanced and science-driven approaches.

Agenda Change Request #11 will completely disrupt the well-established and well-managed allocative balance between the Kodiak Archipelago's purse seiners and gillnetters by eliminating fishing opportunities for the seine fleet and drastically reducing opportunities for gillnetters. Consequently, the entire KMA and its decades of fine-tuned management will be overturned. Changes in one management district will impact all other parts of the Kodiak area. The Board should avoid creating management chaos because of incomplete genetic assessments that are not new information and do not indicate any conservation concerns.

It is important and a matter of public policy that the Board of Fisheries maintains its 3-year schedule, and we in Kodiak's communities look forward to discussing this issue and other salmon fisheries topics at the Board's already-scheduled meeting in January 2020. As such, we are adamantly opposed to arbitrarily changing publicly noticed and established meeting cycles to take up an issue not based on scientific nor management merit.

All of our communities in Kodiak are salmon-dependent communities, and decades of effective State management have maintained healthy returns that contribute to the backbone of our Archipelago's economy. Please remember these comments as you consider this issue, and thank you for your continued support of the people of Kodiak and your public service.

Sincerely,

Daniel A. Rohrer, Mayor  
Kodiak Island Borough

Pat Branson, Mayor  
City of Kodiak





10/2/2017



Kodiak Salmon Work Group  
c/o Kodiak Regional Aquaculture Association  
104 Center Ave., Suite 205  
Kodiak, Alaska 99615

October 3, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request (#11) and  
Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

Dear Chairman Jensen and Board Members:

The Kodiak Salmon Work Group (KSW) is an ad hoc committee created to address the issue of Cook Inlet bound sockeye captured in the Kodiak Management Area. Membership is open and encompasses seiners from both Kodiak seine organizations, setnetters from both Kodiak setnet organizations, beach seine permit holders and processors. In other words, all of Kodiak's salmon fishing community. The group is supported by voluntary stakeholder contributions including those from the City of Kodiak and the Kodiak Island Borough.

KSWG is herewith submitting several critical documents for the Board's review. The Kodiak Seinners Association, United Fisherman's Marketing Association and the Northwest setnetters are supplementing these documents by providing detailed historical fishery information that supports and dovetails with the Salmon Workgroup's submissions. In addition, important documents outlining the history of the issue and the fishery have been submitted by Larry Malloy, Bruce Schactler, Chris Berns and myself. Together these documents construct an integrated thesis that Status Quo is, by far, the most reasoned and appropriate decision for the Alaska Board of Fisheries regarding possible presence of Cook Inlet Bound sockeye in the Kodiak Management Area.

## Process:

Any organization whether a family or a fishing crew or a deliberative body like the Alaska Board of Fisheries has to develop rules or protocols for decision making. Having everyone involved follow the rules is recognized as fair and equitable. Often the rules for process at a fish camp or on a vessel are unwritten but the Alaska Board of Fisheries had taken the time and effort to codify its rules. One of the fundamental first rules is that the Alaska Board of Fisheries will only take up issues regarding an area and fishery every three years. This is a "Bold Black Letter" rule for the Alaska Board of Fisheries. All stakeholders everywhere in Alaska rely on this rule. If you lose at the Board of Fish on your proposal you have 3 years to



retool and try again. If the Board implements regulatory change, you have 3 years to see if it works out. The rule is clear, it's known and it's fair.

Nevertheless, because mistakes are sometimes made and the Board isn't omniscient regarding future events, two exceptions to the hard and fast 3-year rule have developed. The first is the Agenda Change Request (ACR) and the second is the Board Generated Proposal (BGP). Each exception has clear criteria. However, some advocates try to shoehorn their economic interests into one of these two process exceptions by redefining the Board's criteria. It's up to the Board to apply the plain English understanding of the criteria for the exceptions while recognizing that exceptions are rare and that it's important, on the basis of fairness and equity, to support the primary rule of the 3-year cycle.

Agenda Change Request 11 submitted by the United Cook Inlet Drift Association must be seen in the context on the Board's strong process policy of the 3-year cycle. The request, on the basis of text itself, simply fails to meet the Board's ACR criteria.

- 1. "For a fishery conservation or reason". The ACR responds that "best management practices may not be followed." The UCIDA answer does not address the conservation question.
- 2. "To correct an error in Regulation". UCIDA responds, "the burden of conservation will be accurately applied". No error in regulation is presented.
- 3. "To correct an effect on a fishery that was unforeseen when a regulation was adopted". The UCIDA response: "The Board in December 1989 intended to minimize the harvests of Upper Cook Inlet stocks. It was only recently, as the result of genetic testing and analysis, that the real magnitude of the harvest of Cook Inlet.... Stocks in the Kodiak Management Area became apparent." UCIDA is vague about an unforeseen effect on a fishery when a regulation was adopted but perhaps an effect could be inferred from an apparent unknown magnitude of harvest in the Kodiak area.

Assuming the inference, the facts are incorrect. First, the assertion that the Board of Fisheries intended, in 1989, to minimize the harvests of Upper Cook Inlet stocks is false. The Board's intent at the time was to limit Kodiak's targeting of Cook Inlet stocks and to focus Kodiak's fishermen on the harvest of local stocks. Second, the assertion ignores the next 7 years of Board of Fisheries actions on the issue as well as the subsequent modification of the North Shelikof management plan based on the need to harvest local stocks. Third, the genetic testing simply provided finer detail to what was already known and had been presented to the Alaska Board of Fisheries by in 1991. (a range of 0-59% Cook Inlet fish). Consequently, the UCIDA Agenda Change request fails the 3<sup>rd</sup> criteria.

**In summary, the Alaska Board of Fisheries does not have a basis for accepting ACR #11.**



## The Board Generated Proposal:

Four criteria are listed to support a Board generated proposal. It is uncertain if the Board is empowered to generate a proposal based on just one of the criteria or if two or more criteria would be required. Criteria for Board Generated Proposals are broader than the ACR exceptions and require substantive information to inform what are likely more subjective assessments. Issues of “the public’s best interests” and “urgency in considering an issue” may be viewed differently by each Board member. However, assessment of “processes insufficient to bring the subject to the Board’s attention” and “reasonable and adequate opportunity for public comment” are more objective and assessed on a factual basis.

The latter criteria first: The 3-year Board cycle is SUFFICIENT to bring the subject to the Board’s attention. Cook Inlet stakeholders are expected to submit these types of regulatory proposals for the next Kodiak meeting in 2020. Process sufficiency is not the issue here.

Also of great importance is the opportunity for public comment. The current format for public input is written comments in response to an ACR. This does not give the public notice of what a Board Generated Proposal might be and whether or not it would be appropriate to generate such a proposal. In short, the public has no notice at this point whether or not the Board may consider a Board Generated Proposal and consequently, very limited opportunity to comment. Moreover, once a proposal would be generated, it’s uncertain if Kodiak stakeholders would have adequate opportunity for public testimony. Taking the Kodiak/Cook Inlet issue out of cycle would substantially disadvantage Kodiak stakeholders in that off-island travel would be required.

## Urgency for Consideration?

Given that Cook Inlet systems are meeting or exceeding their sockeye escapement goals and that the Kodiak fisheries are constrained by management plans that have been in place for more than 20 years, it’s hard to see an urgency for the Board to generate a proposal on the Kodiak/Cook Inlet issue. Once again, the Board’s overarching policy of a 3-year cycle should be considered when assessing “urgency”. In this context, the equities associated with the 3-year cycle far outweigh any immediate concerns some stakeholders may have.

## The Public’s Best Interest(s)?

Whether or not a Board Generated Proposal is the “public’s best interest” or there is an “urgency” to the Kodiak/Cook Inlet issue requires knowledge about the fisheries, contextualizing the recent genetic analysis, a framework for the historical development of the fisheries, familiarity with management structures and an understanding of inter-annual variability – of near shore survival, of run strength, of migration patterns, of the weather and oceanographic conditions and a host of other factors that impact the availability of Cook Inlet sockeye in the Kodiak Area. With this in mind, the Kodiak Salmon workgroup is presenting the Alaska Board of Fisheries with the following attached documents:



## The Elephant in the Room:

An assessment by marine biologist, Mike Litzow, Ph.D., in his paper “Unusual Gulf of Alaska Climate Conditions during the 2014-2016 Time Frame”, is **startling**. Temperatures in the Gulf of Alaska and in Cook Inlet streams were at an all-time high in 2015 and 2016 --- by huge margins. This document affirms the critical limitations outlined by the authors of “The Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area” when they state .... **“caution must be exercised when extrapolating the results to years, areas, and temporal periods not analyzed because changes in... migratory behavior due to ocean conditions very likely affect distribution of stock specific harvests among fisheries.”** The magnitude of ocean temperature changes in the Gulf of Alaska in 2015 and 2016 as correlated to Cook Inlet run timing as well as bird and marine mammal die offs indicates that the genetic study primarily shows that 2015 and 2016 were not representative of the long-term availability of Cook Inlet sockeye in the Kodiak Management Area.

## Pebble in a Pond:

Two papers show the ripple effect of the proposed UCIDA Agenda Change Request or similar regulatory changes. These demonstrate that it would NOT be in the public’s interest to make these types of regulatory changes. First, “The Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area” is a study with a narrow focus on **sockeye only** and NOT on other local stocks. Moreover, it was limited to sockeye during a specific period and area did not include sockeye caught outside of September 1<sup>st</sup> and on the East Side of Kodiak Island and on parts of Afognak. When the genetic study is viewed in the context of the entire Kodiak fishery, with all species included, Cook Inlet bound sockeye make up a very small percentage of fish caught in the Kodiak area during the timeframe of the study.

Second, regulating Kodiak because of the possibility of Cook Inlet bound stocks being present in the KMA would be not be in the public’s interest because of the respective economics of the two fisheries. Economic losses in Kodiak do not equal comparable economic gains in Cook Inlet. As one major processor has stated, “I cannot keep my plant open if the fishery is closed for several days during each of 5 weeks in late June or July. My fixed costs are too high and my processing workers can’t afford to stay here.” Kodiak is a volume fishery that relies on fishing time. In contrast, Cook Inlet is a high value fishery that relies on spatial opportunity. Regulations that may work in Cook Inlet will have devastating impacts in Kodiak. The economics impacts paper should give the Board pause regarding unintended consequences from management changes.

## Reflections in the Mirror:

The report by Harold Geiger and Terrance Quinn is important for contextualizing “The Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area”. When assessing “the public’s interest” it is critical to understand the





foundation for decision making. It does NOT appear that the genetic stock composition report could justify a public policy reassessment. Although Geiger & Quinn affirm that the genetic report is reliable, its application is limited to questions it directly addressed. The report was intended to assess the mixing of Kodiak sockeye in the Kodiak Management Area, particularly the Frazer and Upper Station stocks (see selected spatial strata). For that purpose, the report is reliable --- the mirror reflects the objects put in front of it.

However, Geiger & Quinn conclude that with “.... substantial variability in stock composition across years, among spatial strata, and among temporal strata. Further study ... would thus be desirable.” And again “this observed variation shows the danger in looking at just three years and thinking that one sees a trend.” Then finally, “with only three years of measurements, with a large fraction of the catch not sampled, and with large annual variation in these measurements...., **it is very hard to conclude that these results bracket the range of what to expect if the study were to be repeated, or to conclude that these results represent what would happen in a ‘typical year’.**”

## Conclusion:

The UCIDA Agenda Change Request must fail on its face. In addition, the only possible basis for a Board generated proposal regarding the Kodiak/Cook Inlet issue would be an assessment that such a proposal would be in the public’s “best interest”. However, the facts of the issue support the status quo.

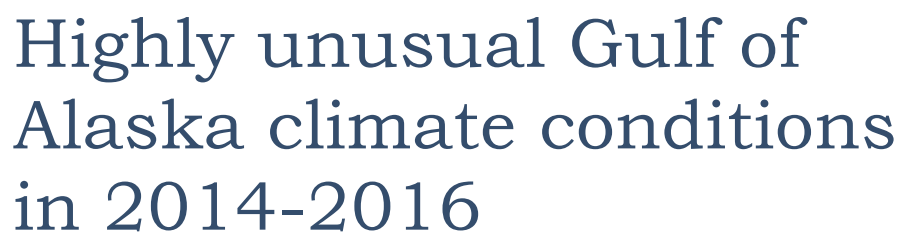
1. The Genetic Study likely primarily reflects anomalous ocean conditions in 2015 & 2016.
2. Kodiak’s fisheries are focused on local stocks and the Cook Inlet bound portion of the overall Kodiak catch is relatively small.
3. Economic harm in Kodiak is not balanced by economic gain in Cook Inlet.
4. The genetic study shows large variability and is not a predictor of when and where Cook Inlet bound sockeye may be available in the Kodiak Management Area. Consequently, without a “public interest” basis, a Board Generated Proposal must also fail.

It is the position of the Kodiak Salmon Workgroup that the Alaska Board of Fisheries defer the Kodiak/Cook Inlet issue to your regularly scheduled Kodiak meeting in January of 2020.

Very truly yours,

Duncan Fields, Chairman



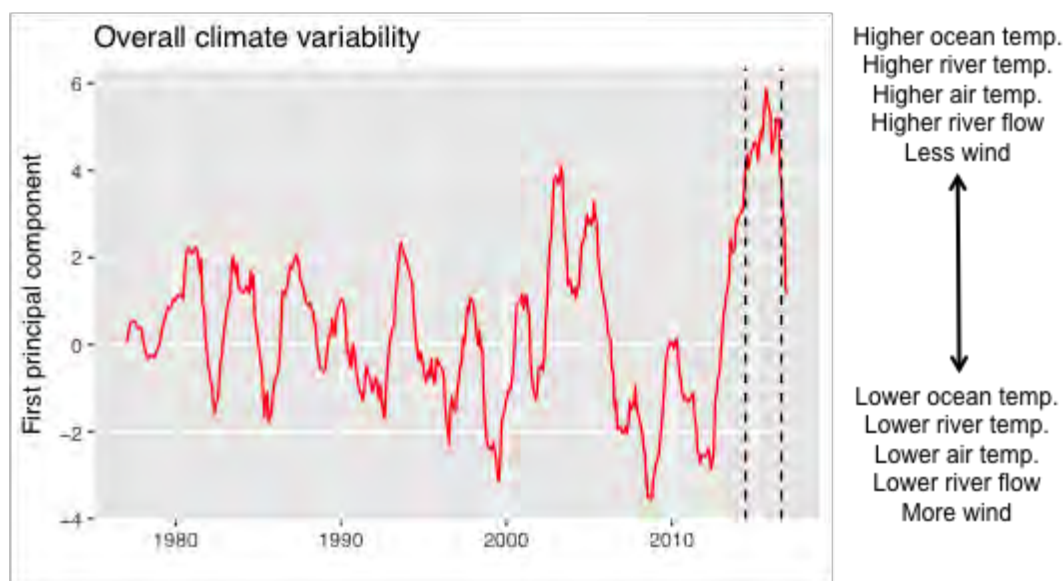


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## Highly unusual Gulf of Alaska climate conditions in 2014-2016\*

### Summary

The extremely unusual climate conditions that existed in the Gulf of Alaska during 2014-2016 make it very unlikely that these years were representative for understanding normal patterns of sockeye salmon migration and stock mixing.



**Fig. 1.** First principal component of climate conditions in the Gulf of Alaska. Labels at the right interpret the meaning of positive and negative values in the time series. Dashed vertical lines indicate 2014-16, when the genetics study occurred.

### Background

Completely unprecedented atmospheric conditions that developed over the North Pacific in winter 2013-14 led to the “Warm Blob” – an event of unprecedented warm temperatures across the Gulf of Alaska. The Warm Blob peaked in 2014-2015, and was followed by an El Niño event. As a result, the ADF&G genetics study of Kodiak sockeye catches (Shedd et al. 2016) took place at exactly the same time (2014-2016) that the Gulf of Alaska was being exposed to the *strongest “marine heat wave” ever observed* (Bond et al. 2015, Di Lorenzo and Mantua 2016).

Salmon migration patterns are highly sensitive to physical factors such as ocean temperature, ocean currents, and river volume and temperature. Sockeye runs in Cook Inlet are particularly prone to shared patterns of variability in run timing – in other words, unusual migration behavior tends to affect runs across Cook Inlet as a group (Hodgson et al. 2006).

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\*Compiled for the Kodiak Salmon Working Group by Mike Litzow.

The authors of the ADF&G genetics study note that their research represents environmental conditions only during 2014-2016, and that “...caution must be exercised when extrapolating the results to years, areas, and temporal periods not analyzed because changes in...migratory behavior due to ocean conditions very likely affect distribution of stock-specific harvests among fisheries” (Shedd et al. 2016, p. 23). Because climate conditions were so unusual in 2014-2016, it appears likely that the Shedd et al. study was not representative of migration and stock mixing patterns around Kodiak during more normal climate conditions.

### **Effects of the marine heat wave on Gulf of Alaska climate**

During the marine heat wave, a suite of climate factors that affect salmon migration – both for marine habitat in the Gulf of Alaska, and for freshwater habitat in Cook Inlet – were at either record levels, or at the outside edge of normal variability. The effects of all of these unusual climate conditions can be combined with a simple Principal Components Analysis, which clearly shows how unrepresentative climate conditions were during the genetics study (Fig. 1).

Highly unusual conditions were found in both marine and river habitats. Cook Inlet sea surface temperatures were at record-high levels (Fig. 2). Comparative data on ocean currents are difficult to access. However, winds, a primary driver of currents, showed a prolonged period of unusually low levels during 2014-2016 (Fig. 3). Only limited temperature data are available for Cook Inlet rivers, but the available information shows very unusual temperatures during 2014-2016 (Fig. 4). Air temperature is a good proxy for river temperatures, and the longer air temperature time series that are available clearly show the unusual heat of 2014-2016 (Fig. 5). Finally, during 2014-2016 Cook Inlet river flow was at high, though not record, levels (Fig. 6).

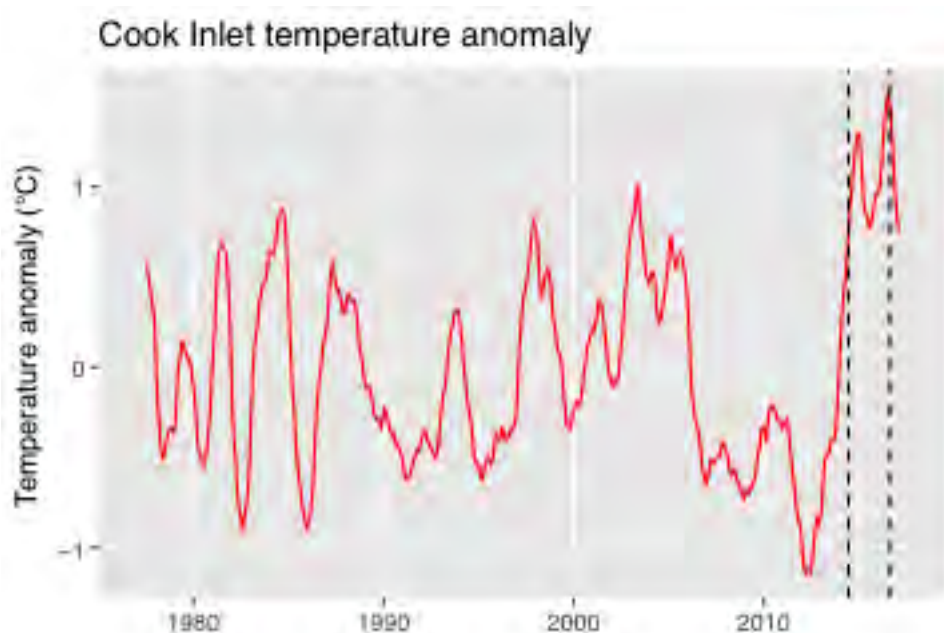
### **Effects on Cook Inlet sockeye migration**

No at-sea distribution data are available for understanding the effects of these severe climate anomalies on sockeye migration patterns during 2014-2016. However, escapement data indicate that 2014-2016 was a period of very unusual run timing for Cook Inlet runs. Kasilof River runs in 2014-2016 had a significantly higher proportion of early returns than the 2002-2011 mean (Fig. 7). Kenai River runs showed mixed patterns of unusually early and late runs during the same period (Fig. 8). The 2014 and 2015 runs both showed an unusual proportion of late returns, while the 2016 run had a significantly higher proportion of early returns than normal. These patterns of unusual run timing demonstrate how the unrepresentative climate conditions of 2014-2016 resulted in unusual run dynamics for Cook Inlet sockeyes, and strongly suggest the possibility of similarly unusual behavior in at-sea migration and distribution.

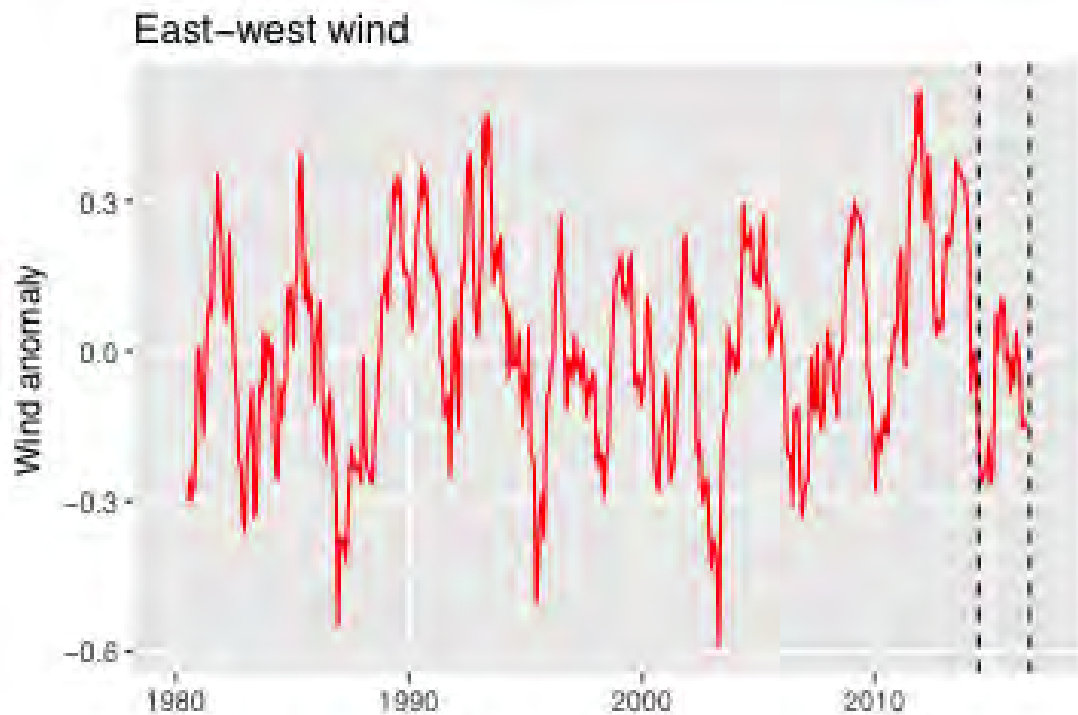
### **Other ecosystem effects**

A number of other extremely unusual events attest to just how unrepresentative the 2014-2016 period was in the Gulf of Alaska. Mass starvation of common murres in the Gulf in 2015-2016 led to the largest seabird die-off ever observed in Alaska (Fig. 9). Unusually high rates of stranding were also observed for whales (Fig. 10) and sea otters (Fig. 11).

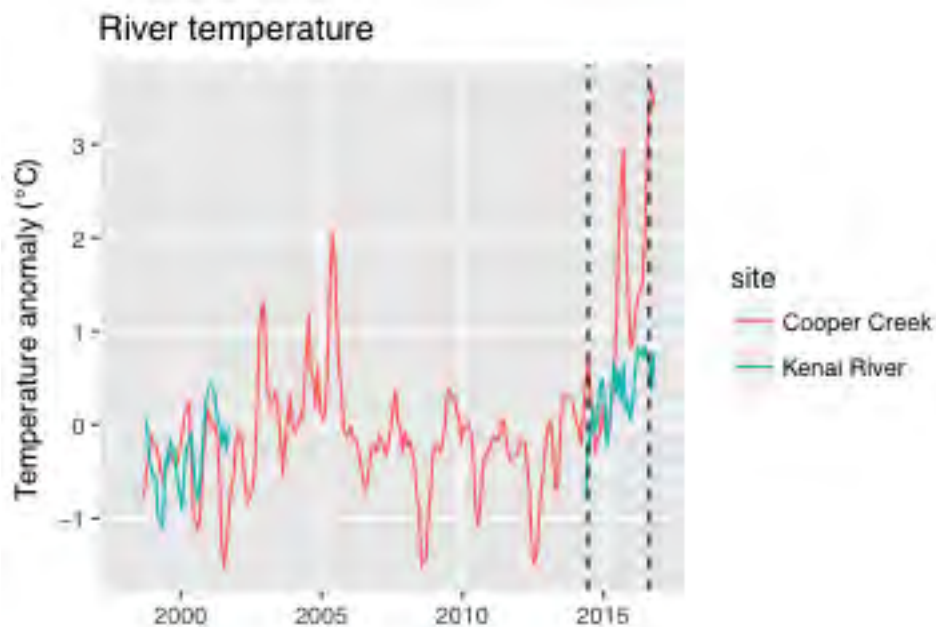
Whale strandings in the Gulf of Alaska have been linked with a massive harmful algal bloom (red tide) that stretched from Baja California to the Alaska Peninsula in 2015 (McCabe et al. 2016). The co-occurrence of such unusual disruptions to the ecosystem offers further confirmation of the completely unprecedented state of the Gulf of Alaska ecosystem during 2014-2016, and the difficulties in using data from this period for making inferences about normal ecosystem dynamics.



**Fig. 2.** Cook Inlet sea surface temperatures. Data are plotted as temperatures averaged over 13-month windows. Dashed vertical lines indicate 2014-16, when the genetics study occurred.

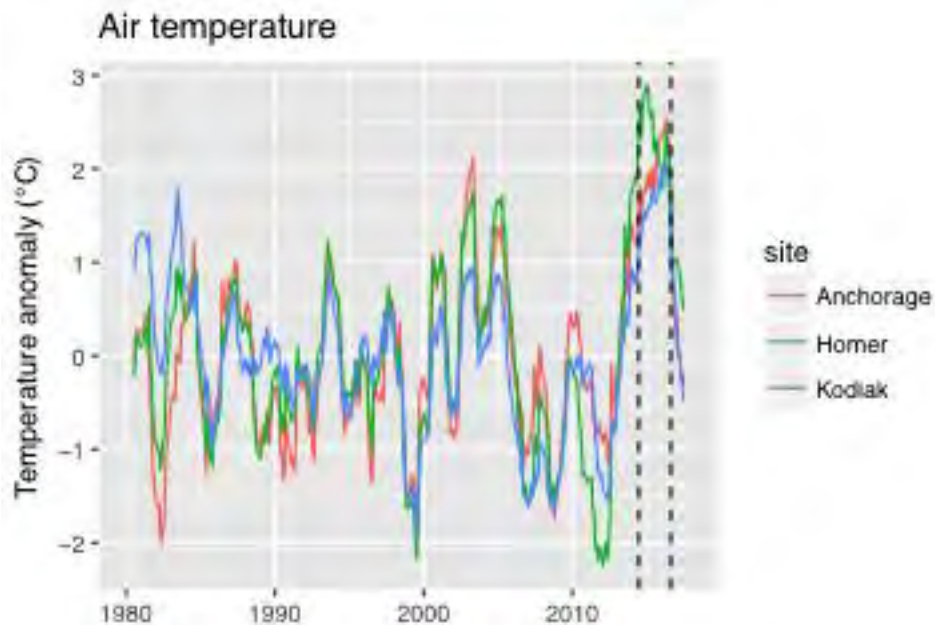


**Fig. 3.** Wind speeds in the east-west direction along the Gulf of Alaska coast. Data are plotted as anomalies averaged over 13-month windows. Dashed vertical lines indicate the 2014-16 sampling period for the genetics study.

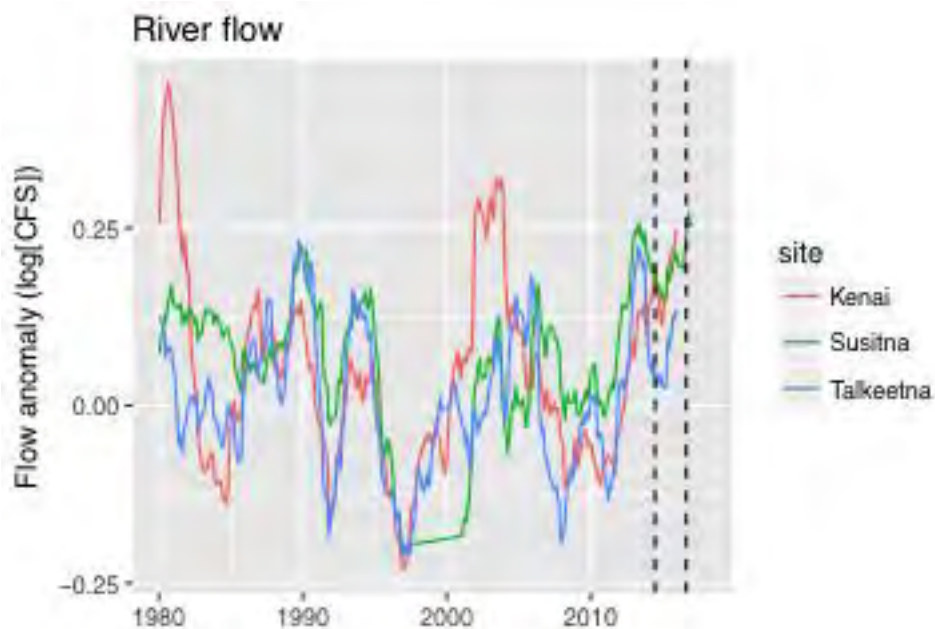


**Fig. 4.** Water temperatures for Cooper Creek and the Kenai River. Data are plotted as 3-month rolling averages. Dashed vertical lines indicate 2014-16.



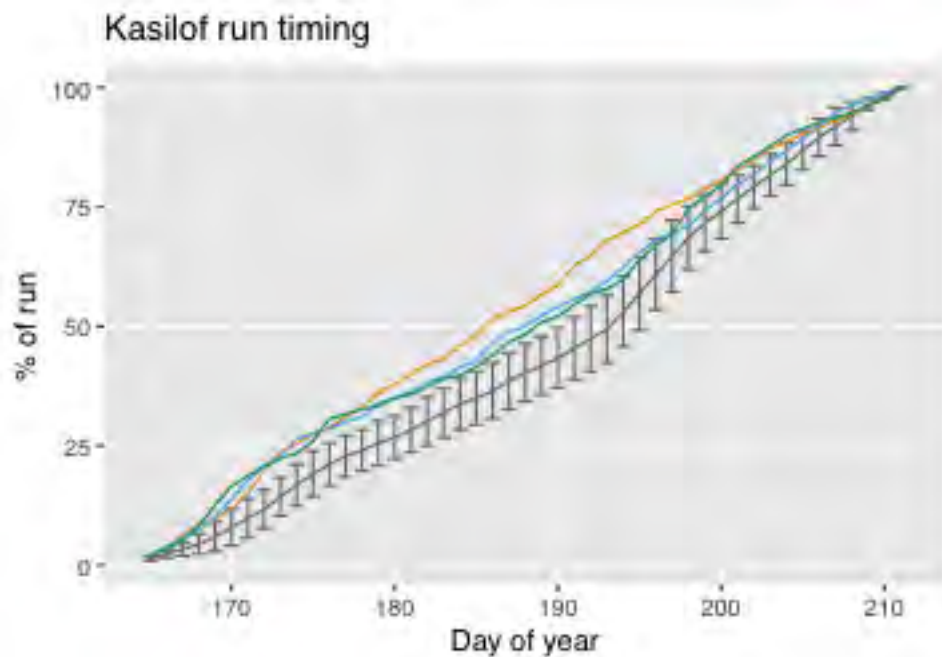


**Fig. 5.** Air temperature for three sites in the Gulf of Alaska and Cook Inlet. Data are plotted as 13-month rolling averages, with 2014-2016 indicated by vertical dashed lines.

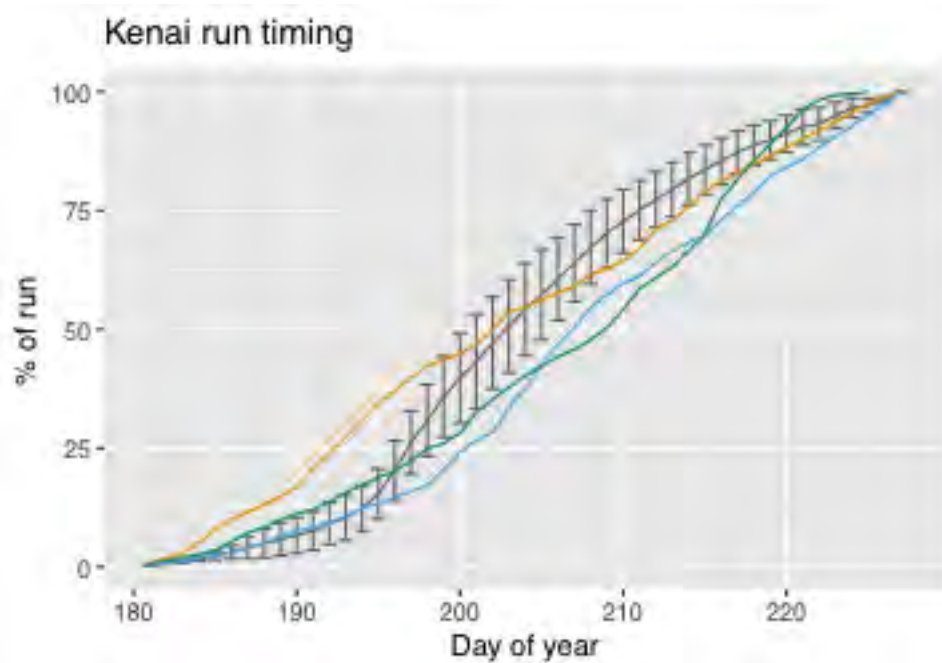


**Fig. 6.** Flow (volume) time series for three Cook Inlet rivers, with 2014-2016 indicated by dashed vertical lines. Data plotted as 25-month rolling averages.

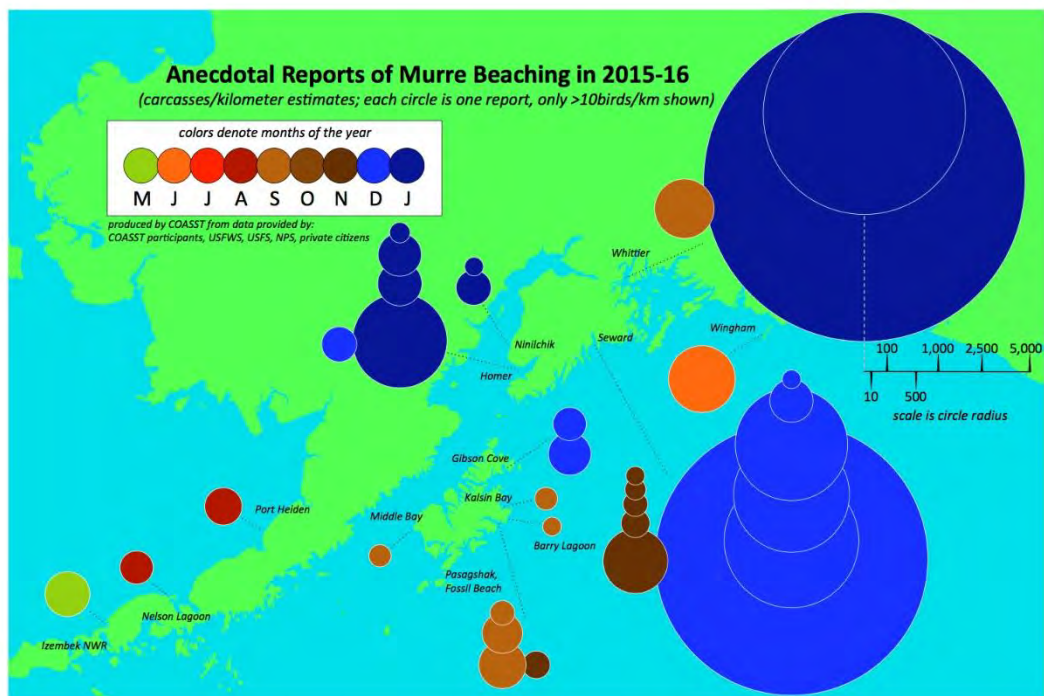




**Fig. 7.** Kasilof River run timing during the June 15-July 31 period for 2014 (green), 2015 (blue), and 2016 (orange), relative to the 2002-2011 mean (gray). Values on the y-axis are the % of the June 15-July 31 run that has returned by a given day of the year. Error bars on the 2002-2011 data are 95% confidence intervals.

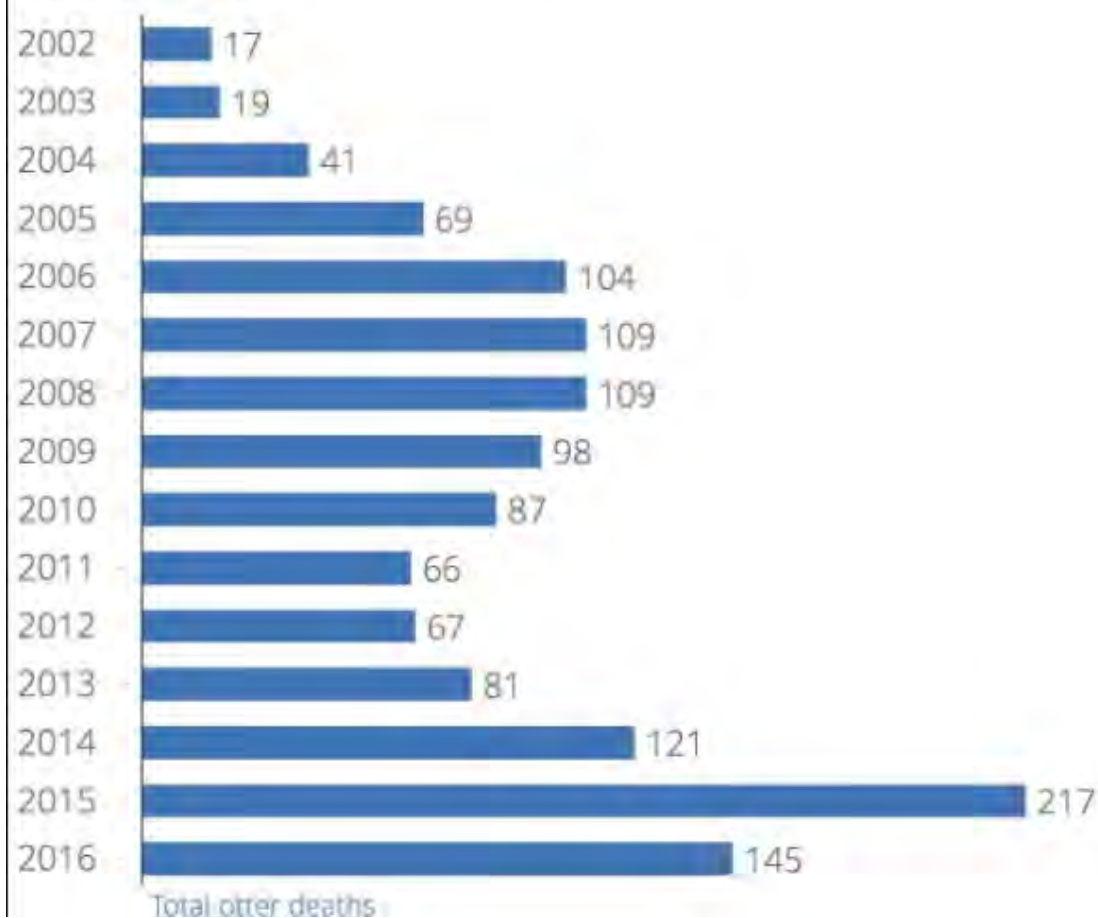


**Fig. 8.** Kenai River run timing for the July 1-August 16 period during 2014 (green), 2015 (blue), and 2016 (orange), relative to the 2002-2011 mean (gray). Values on the y-axis are the % of the July 1-August 16 run that has returned by a given day of the year. Error bars on the 2002-2011 data are 95% confidence intervals.

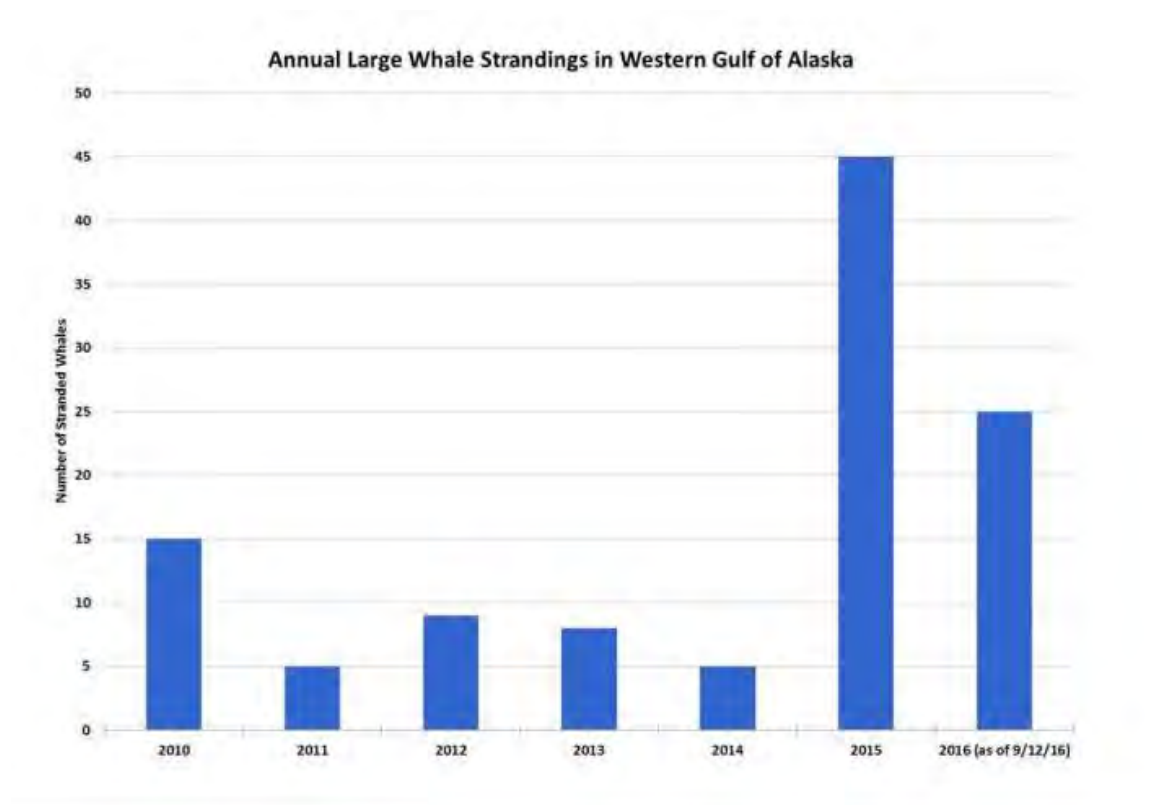


**Fig. 9.** Common murre carcasses recovered in the Gulf of Alaska, 2015-2016. Figure from University of Washington Coastal Observation and Seabird Survey Team.

### All Sea Otter Deaths Recorded in Alaska (2002 to Nov. 2016)



**Fig. 10.** Unusual sea otter mortality in 2015. Figure from [alaskapublic.org](http://alaskapublic.org), data from US Fish and Wildlife Service.



**Fig. 11.** Unusual numbers of whale strandings in the Gulf of Alaska in 2015-2016. Figure and data from National Marine Fisheries Service.

### Data sources

Sea surface temperature data were extracted from the NOAA Extended Reconstructed Sea Surface Temperature data set ([ncdc.noaa.gov](http://ncdc.noaa.gov)). Wind data come from the NCEP/NCAR Reanalysis ([esrl.noaa.gov](http://esrl.noaa.gov)). River temperature and river flow data come from the US Geological Survey ([waterdata.usgs.gov](http://waterdata.usgs.gov)). Air temperature data come from the Alaska Climate Research Center ([climate.gi.alaska.edu](http://climate.gi.alaska.edu)). As noted in each figure legend, climate data were averaged across moving windows to separate the lower-frequency signal relevant to salmon dynamics from the higher-frequency noise.

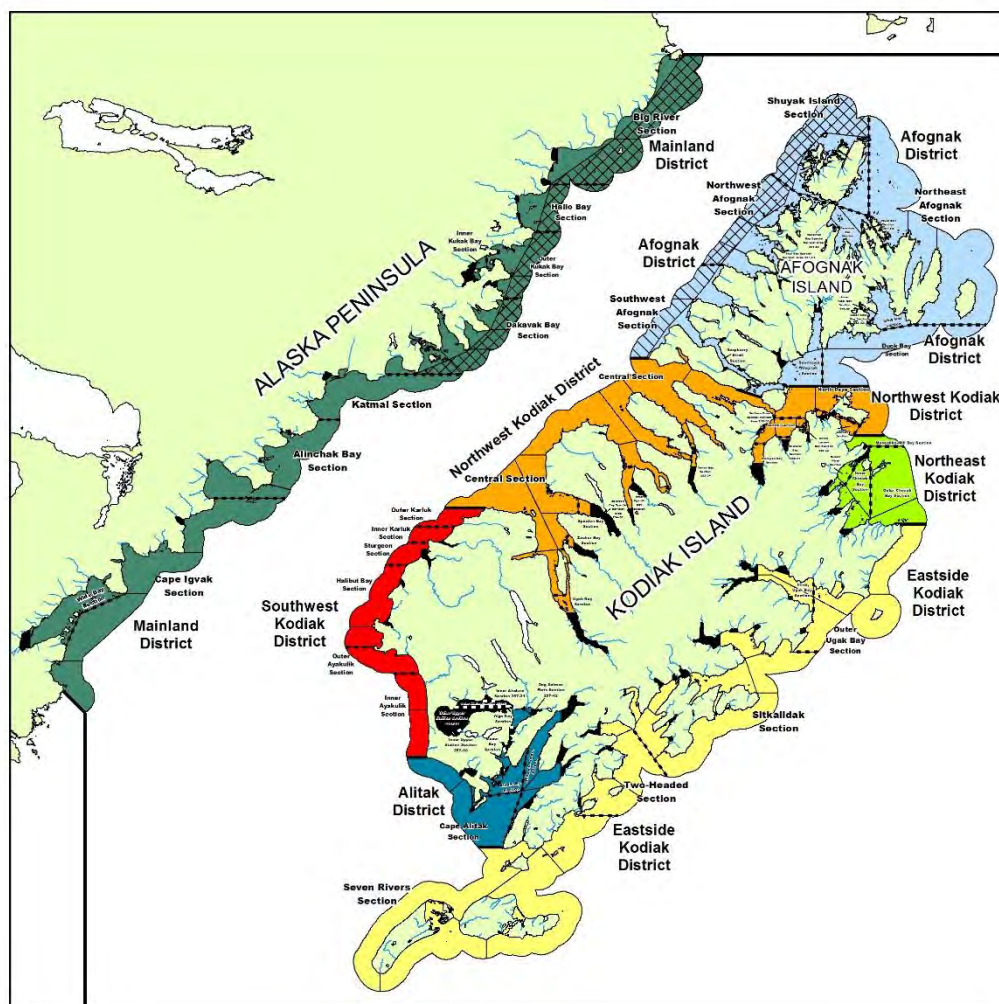
Data on sockeye run timing for the Kenai and Kasilof Rivers come from ADF&G ([adfg.alaska.gov](http://adfg.alaska.gov)). For each year, these data were plotted as the cumulative percentage of total fish returning by a given day, considering only the period for which ADF&G presents historical (2002-2011) data (June 15 – July 31 for the Kasilof, July 1 – August 16 for the Kenai).

### Biography

Mike Litzow has authored more than twenty scientific papers, many of them focusing on climate effects on Alaskan fisheries. He holds a Ph.D. in Marine Science from the University of Tasmania, a M.S. in Marine Science from the University of California, Santa Cruz, and a B.S. in Biology from the University of Alaska Fairbanks.

## References

- Bond, N. A., M. F. Cronin, H. Freeland, and N. Mantua. 2015. Causes and impacts of the 2014 warm anomaly in the NE Pacific. *Geophysical Research Letters* 42:3414-3420.
- Di Lorenzo, E. and N. Mantua. 2016. Multi-year persistence of the 2014/15 North Pacific marine heatwave. *Nature Climate Change* 6:1042-1047.
- Hodgson, S., T. P. Quinn, R. Hilborn, R. C. Francis, and D. E. Rogers. 2006. Marine and freshwater climatic factors affecting interannual variation in the timing of return migration to fresh water of sockeye salmon (*Oncorhynchus nerka*). *Fisheries Oceanography* 15:1-24.
- Shedd, K. R., M. B. Foster, T. H. Dann, H. A. Hoyt, M. L. Wattum, et al. 2016. Genetic stock composition of the commercial harvest of sockeye salmon in Kodiak Management Area, 2014-2016. Alaska Department of Fish and Game.



## Comparing the Salmon Fisheries of Kodiak and Cook Inlet

Kodiak Salmon Work Group

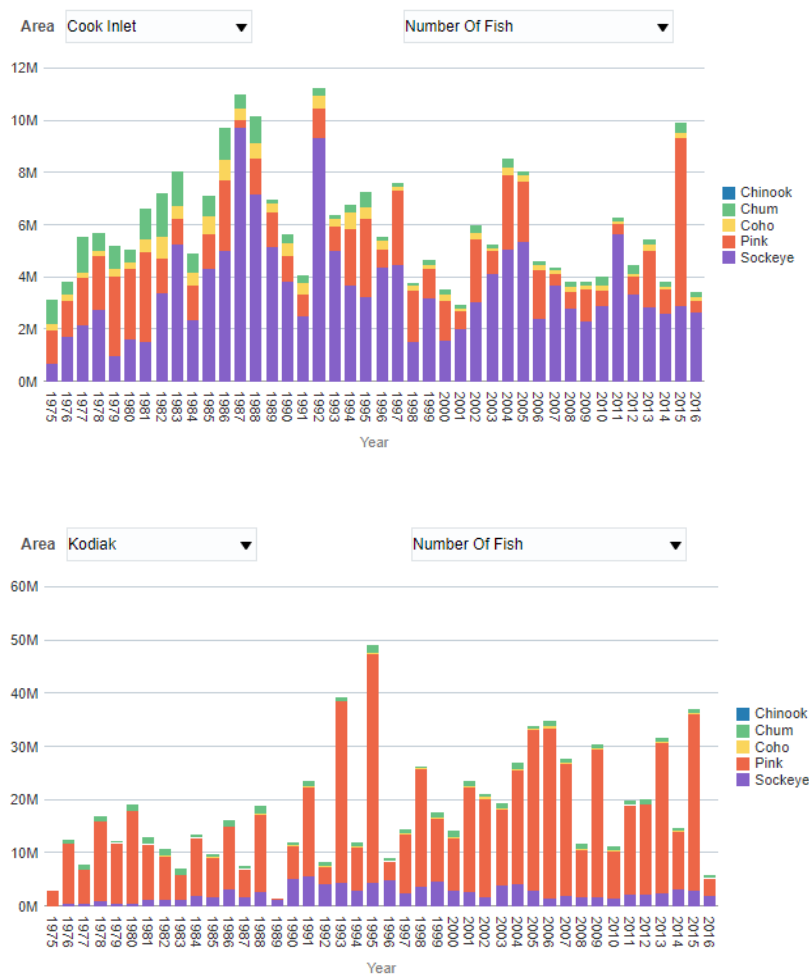
10/2/2017



# COMPARING THE SALMON FISHERIES OF KODIAK AND COOK INLET

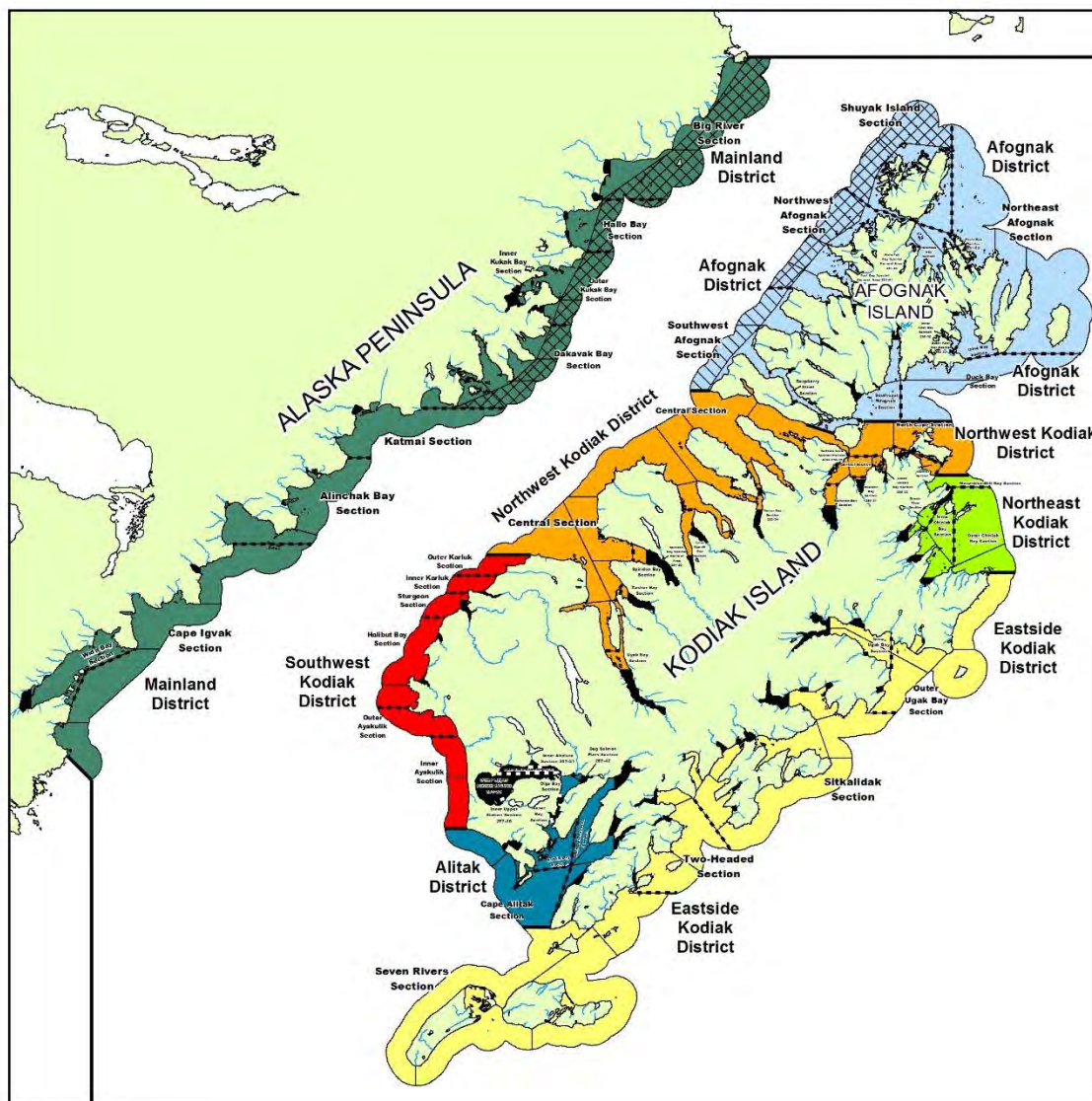
## Kodiak vs. Upper Cook Inlet salmon fisheries

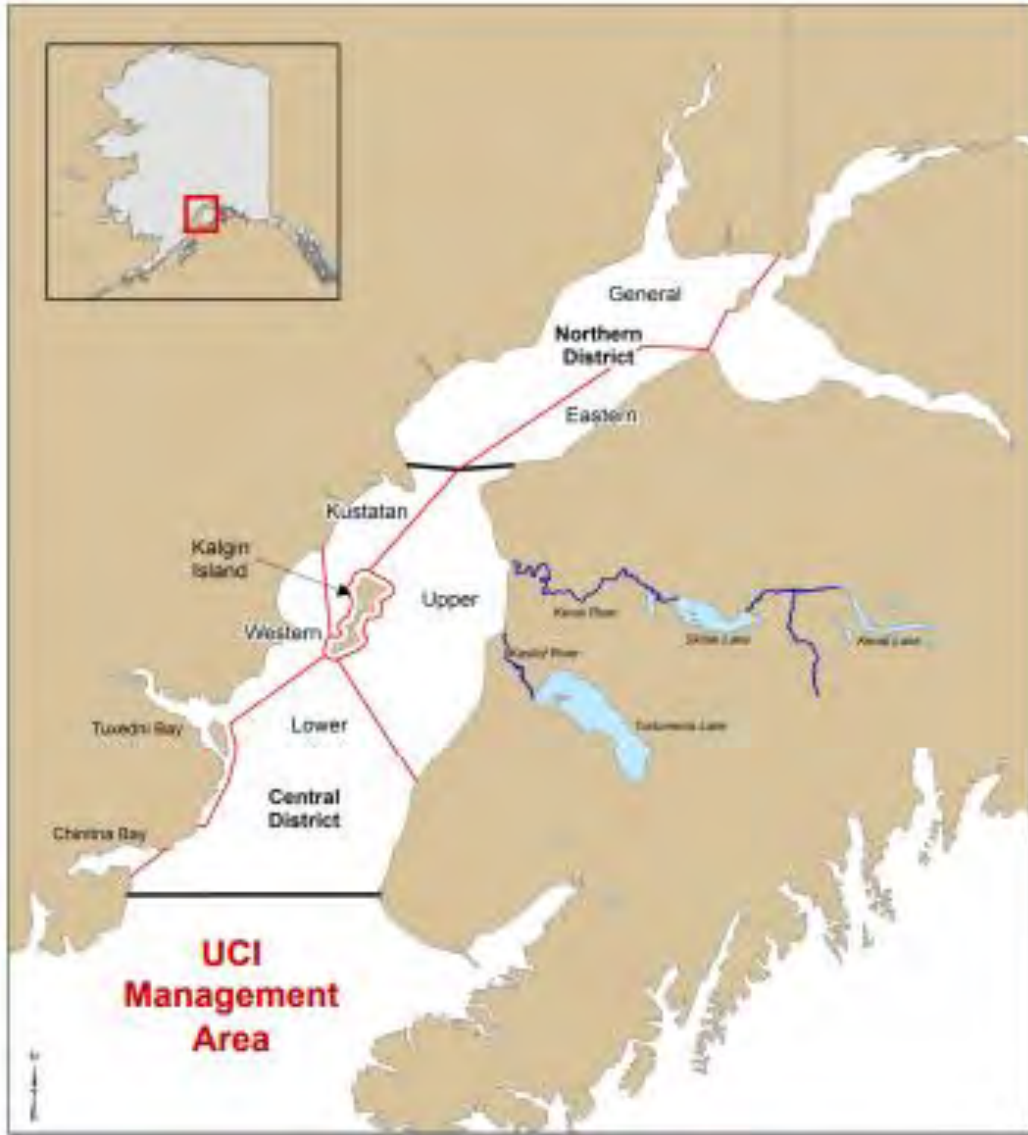
When discussing the relationship between the Kodiak and the Cook Inlet salmon fisheries, it's essential to understand the comparative magnitude and complexity of the two fisheries.



Area salmon harvests in Cook Inlet and Kodiak. Note the difference in scale.

Kodiak and Upper Cook Inlet salmon fisheries have fundamentally different properties. Cook Inlet catches approximately 3 million salmon a year, most of which are sockeye. Kodiak catches approximately 15 million fish, most of which are pinks. Of note, 2016 was the smallest number of fish caught in Kodiak since 1975.





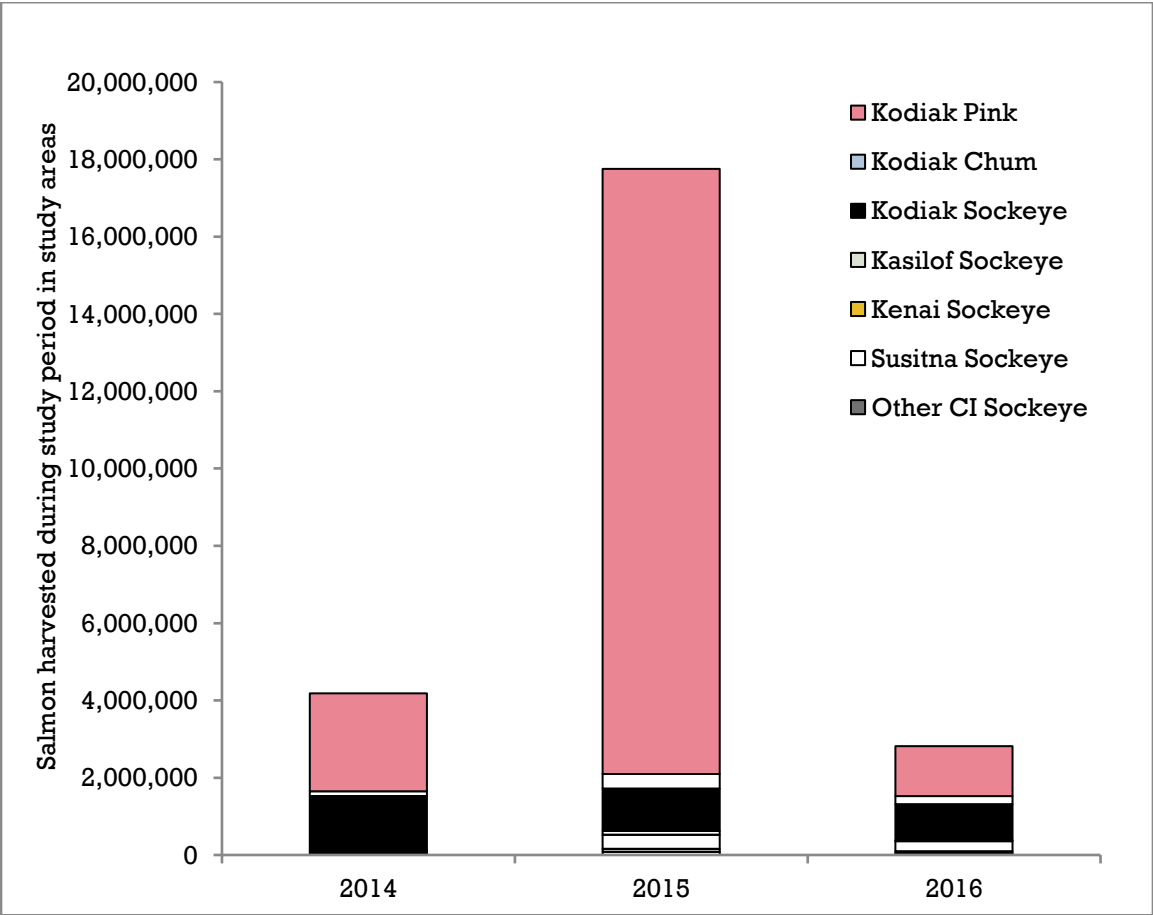
## Geographic contrasts between areas

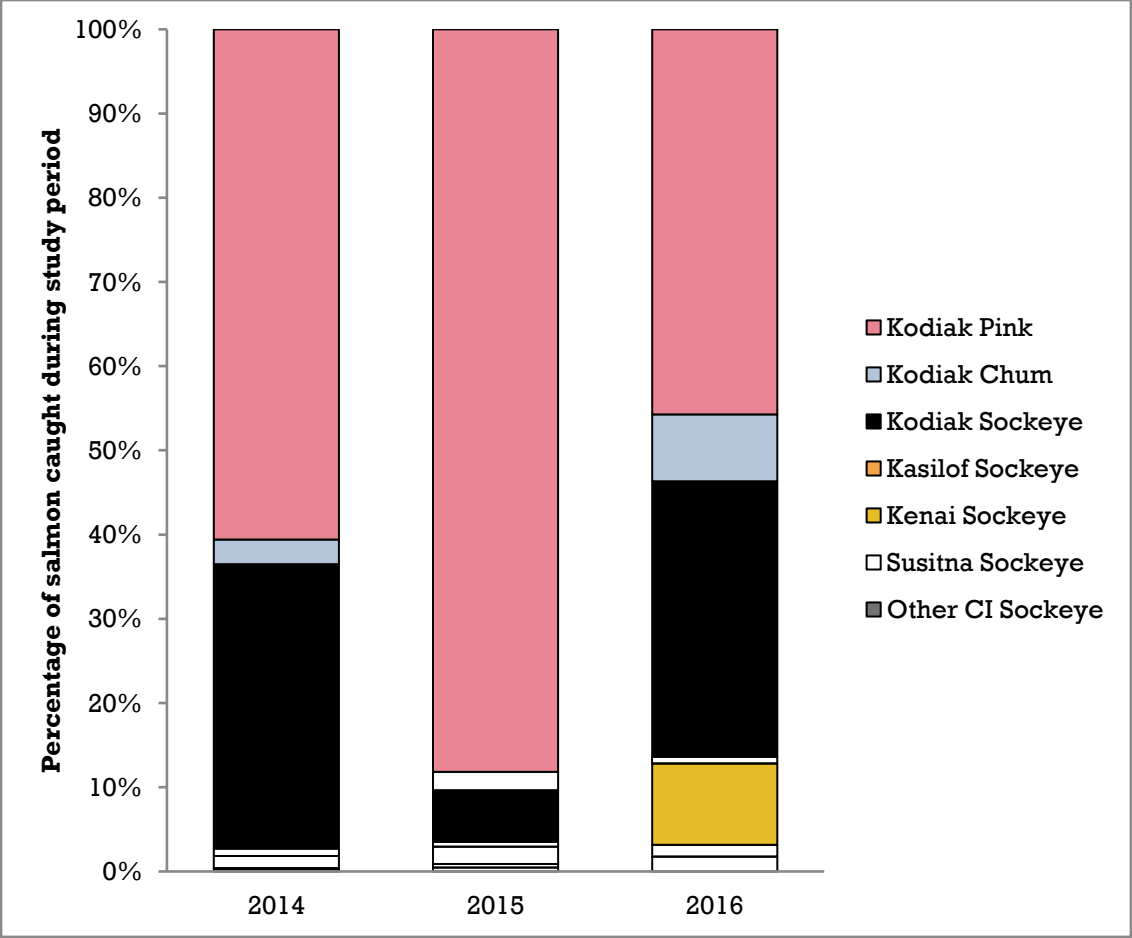
Kodiak has almost 20 sockeye producing systems and more than 150 pink and chum streams. Run timing stretches over three months. The east and west sides of the island as well as the mainland often differ in run strength in any given year and throughout the year. In contrast, the Cook Inlet management area has far fewer salmon producing streams and less variability within the district.

Geographically, the Upper Cook Inlet salmon fisheries are prosecuted in the upper reaches of Cook Inlet while Kodiak fisheries take place in the Gulf of Alaska. Many of Kodiak's major sockeye and pink salmon producing systems are located on outer

shorelines rather than at the heads of bays. The Karluk, Ayakulik, and Little River systems are all on outer shorelines of the Westside of Kodiak.

Except for the Cape Igvak fishery, all salmon fisheries in Kodiak are managed for and directed at local stocks. There is a certain degree of mixed stock fishing and incidental harvest of non-local stocks in almost all areas and time periods of the Kodiak salmon season, but the clear focus of our fisheries, as mandated by the 7 regulatory management plans, is on local harvest. Lower Cook Inlet is also likely to have some mixed stock fisheries but the upper Inlet and Northern District are believed to be harvesting almost entirely local stocks.





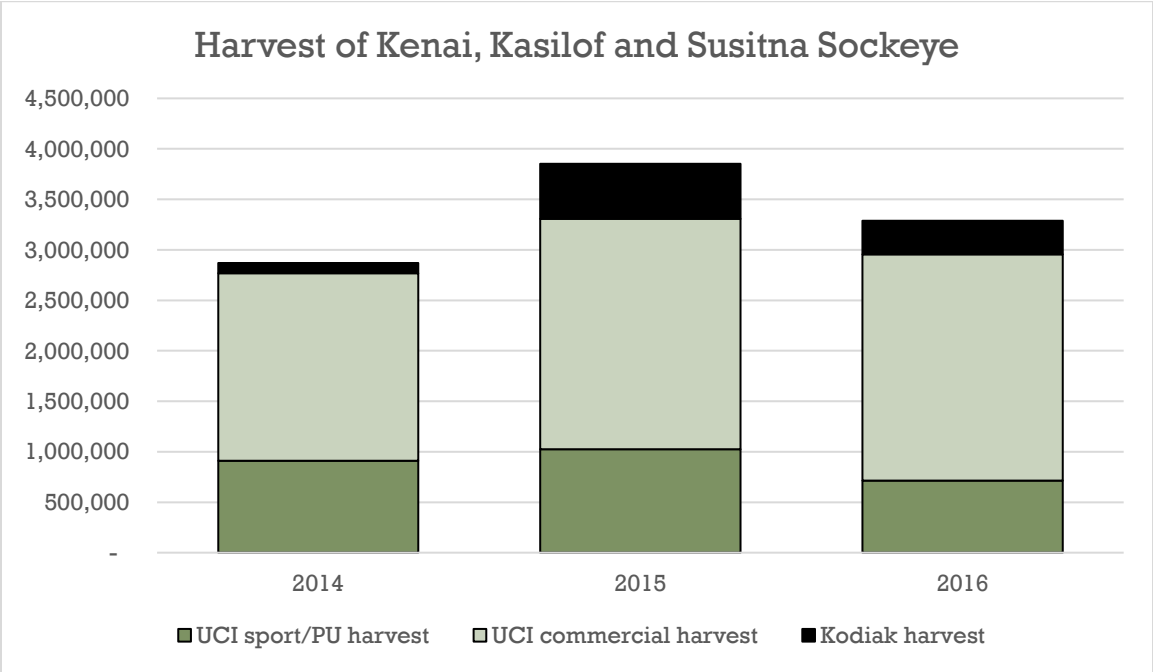
Kodiak sockeye genetic stock assessment 2014 – 2016

These figures show the magnitude of the incidental harvest of Cook Inlet bound sockeye compared to the Kodiak salmon fishery. In 2014-2016, the harvest of Cook Inlet bound sockeye was 2.7%, 3.5%, and 13.6% respectively, of the total salmon harvest in Kodiak. The number of fish reflects only the time periods and spatial areas covered in the genetic stock separation study. The first figure reflects numbers of fish caught. The second figure represents the percentage of each stock or species harvested. Again, note that the Kodiak salmon harvest in 2016 was the smallest on record. This makes the relative harvest of Cook Inlet bound sockeye appear larger than in a more typical year.

The Shedd et al. genetic reports clarifies that the degree of inter-annual variability in Upper Cook Inlet bound sockeye is astonishing. For example, in 2014 zero Cook Inlet bound sockeye were caught at Cape Igvak and less than 1% of the Cook Inlet bound incidental harvest was caught there in 2015. But in 2016, 45% of Kodiak’s harvest of Cook Inlet bound sockeye was captured at Cape Igvak. The 2014 harvest

of Cook Inlet bound sockeye is only 18% of the 2015 harvest. In many areas and time periods, the catch varies by more than an order of magnitude. For example, in both 2014 and 2016, the harvest of Cook Inlet bound sockeye in Uyak Bay was negligible, but was more than 5 times greater in 2015. There is no predictability to the location or magnitude of the Kodiak’s incidental harvest.

Cook Inlet bound sockeye are harvested incidentally all along the coast of Kodiak Island and the mainland district. As was experienced with the North Shelikof plan, closing any one area to conserve Cook Inlet bound sockeye does not inhibit those sockeye from being caught elsewhere, and the closed areas would likely intensify fishing effort in the remaining open areas. Consequently, when Cook Inlet fish become available, more will be caught in the areas that remain open. In short, given the magnitude of inner-annual variability of availability and random migration patterns of Cook Inlet sockeye in the Kodiak Management Area, the entire area would have to be closed to have an impact on Cook Inlet’s sockeye availability.

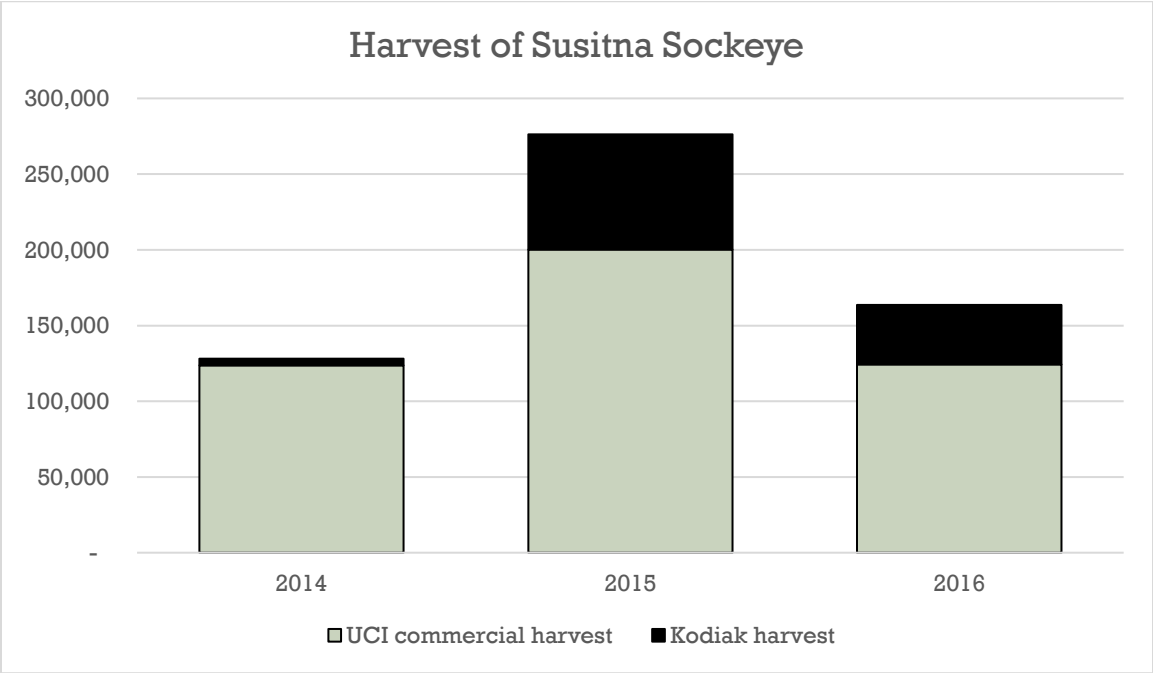


### Cook Inlet bound sockeye: Kodiak harvests vs. Cook Inlet

Although the magnitude of the harvest of Cook Inlet bound sockeye in Kodiak has caused concern among some stakeholders, it can be seen that Kodiak’s harvest is dwarfed by the harvest in Upper Cook Inlet. In 2014, when Kodiak incidental harvest was smallest, Kodiak caught 101,000 Upper Cook Inlet bound sockeye, representing



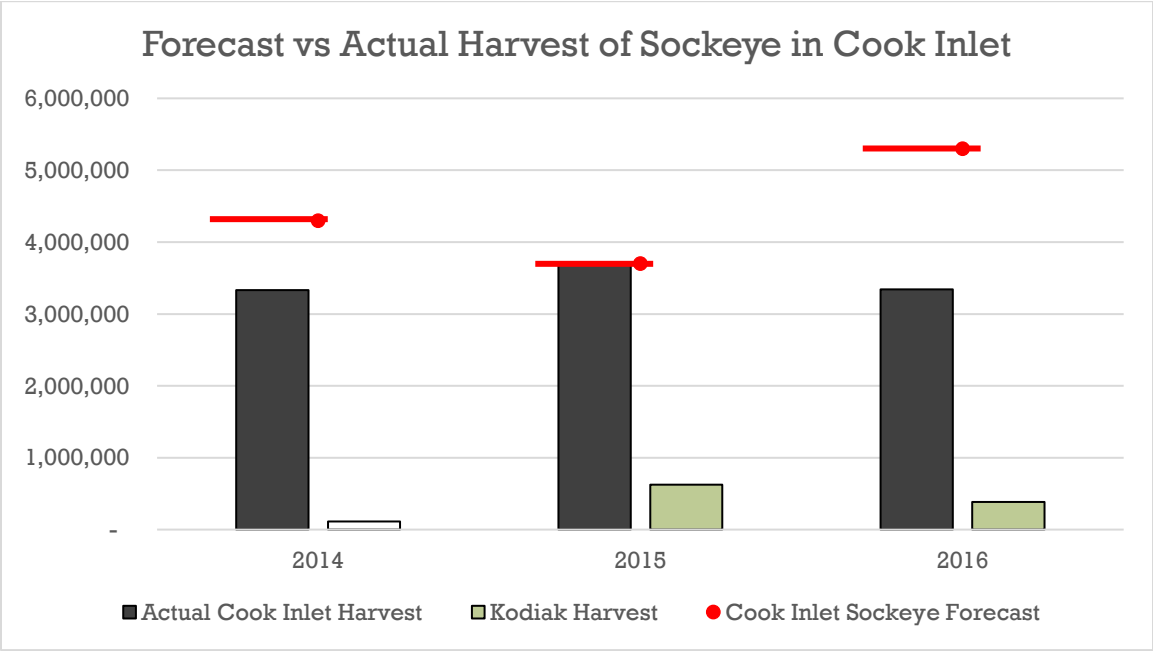
2% of the total runs to the Kenai, Kasilof and Susitna/Yentna systems. In comparison, the Upper Cook Inlet commercial, sport and personal use harvest was 2.8 million sockeye, or 56% of the runs. In 2015, when Kodiak incidental harvest was largest, Kodiak caught 545,000 Upper Cook Inlet bound sockeye, representing 9% of the total runs to the Kenai, Kasilof and Susitna/Yentna systems. In comparison, the Upper Cook Inlet commercial, sport and personal use harvest was 3.3 million sockeye, or 52% of the runs.



### Susitna bound sockeye: Kodiak harvests vs. Cook Inlet

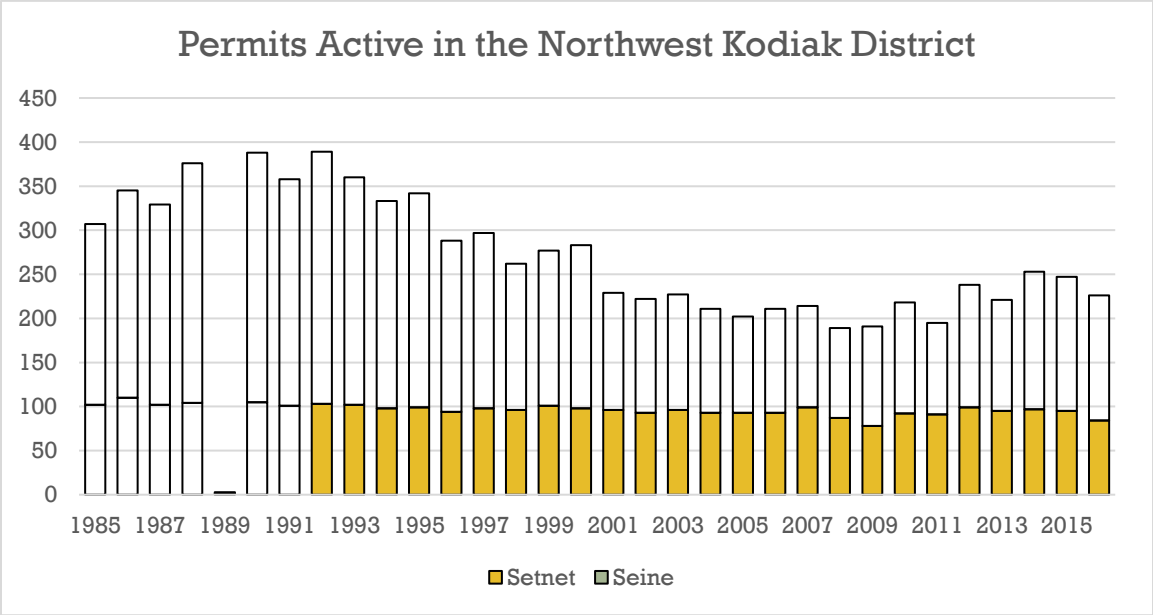
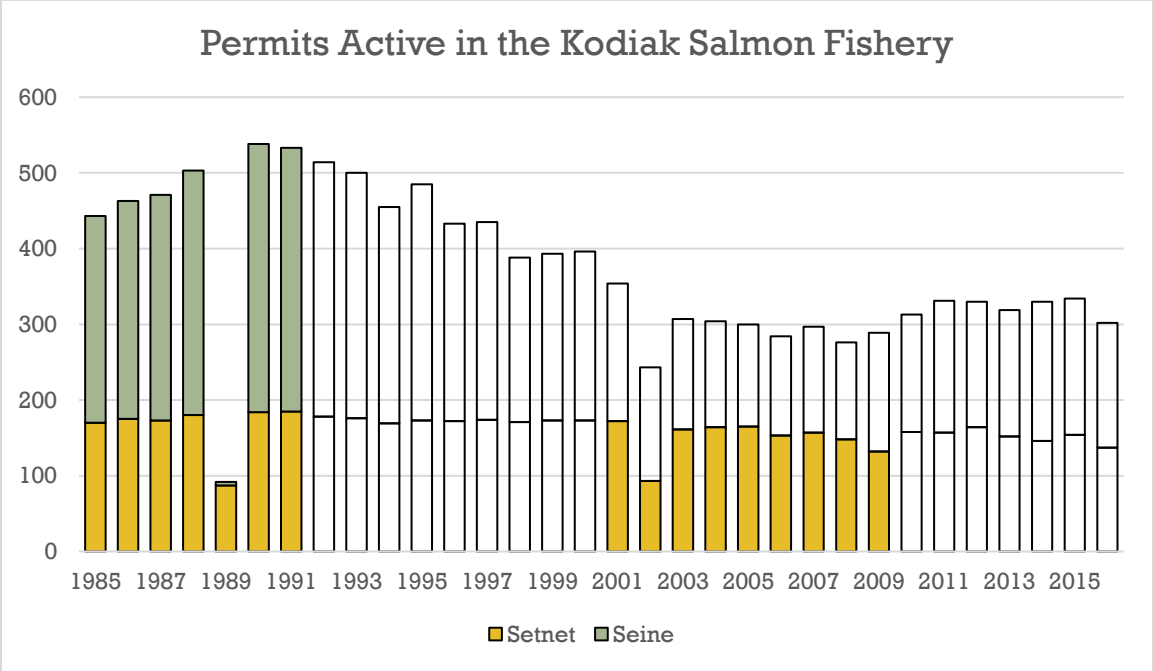
The Susitna/Yentna system represents a particular concern for some people. Again, Kodiak’s harvest of Susitna bound sockeye is dwarfed by the harvest in Upper Cook Inlet. In 2014, when Kodiak incidental harvest was smallest, Kodiak caught 4,000 Susitna/Yentna bound sockeye, representing 2% of the total run. In comparison, the Upper Cook Inlet commercial harvest was 124,000 sockeye, or 49% of the run. In 2015, when Kodiak incidental harvest was largest, Kodiak caught 76,000 Susitna/Yentna bound sockeye, representing 13% of the total run. In comparison, the Upper Cook Inlet commercial harvest was 200,000 sockeye, or 34% of the run. It is likely that a large percentage, perhaps as much as 90% of Susitna bound sockeye “saved” from being caught in the Kodiak Management Area are will be caught in the

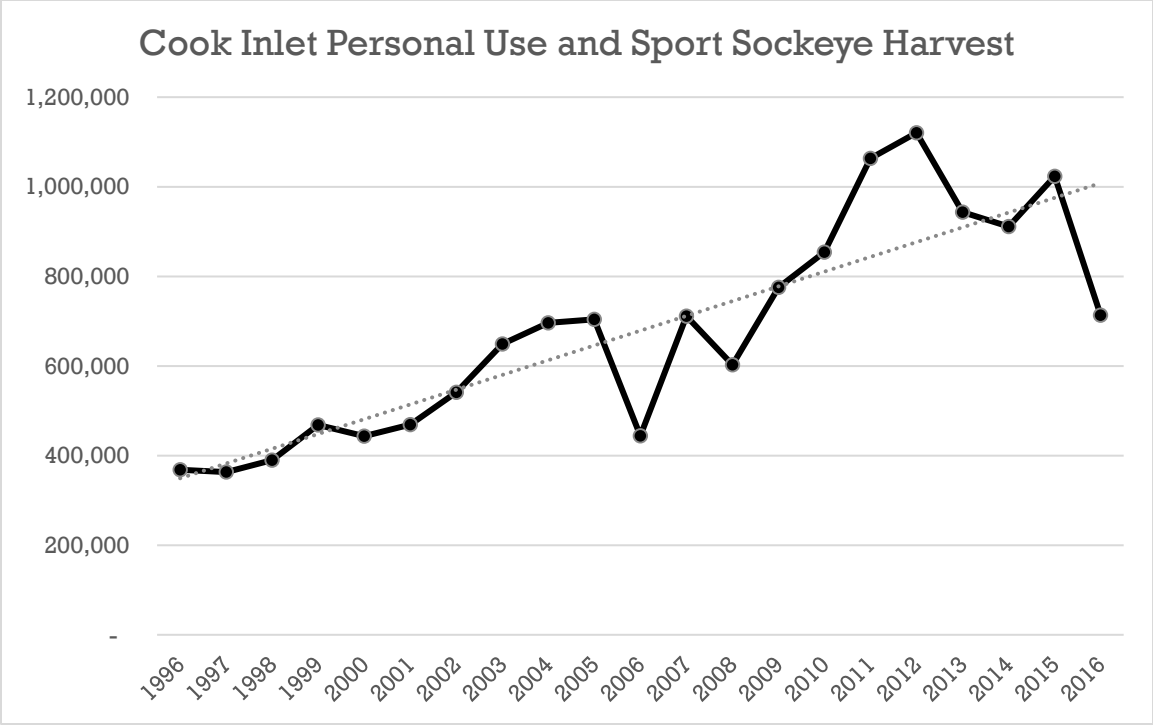
Cook inlet commercial, personal use and recreational fisheries and NOT be available for spawning.



### Kodiak’s impact on Cook Inlet fisheries

If incidental harvest of Cook Inlet bound sockeye was adversely affecting Cook Inlet sockeye runs, there should be a relationship between underperformance of Cook Inlet harvest and high incidental harvest of Cook Inlet bound sockeye in Kodiak. There is no evidence of such a relationship. In fact, in 2014, when Kodiak’s incidental harvest of Cook Inlet bound sockeye was the lowest of the study period, Cook Inlet’s commercial sockeye fishery underperformed the forecast by 23%, or 970,000 fish. In 2015, when Kodiak’s incidental harvest of Cook Inlet bound sockeye was the highest of the study period, Cook Inlet’s sockeye harvest performed exactly as forecast, coming in at 3.7 million fish. In 2016, when Kodiak’s incidental harvest of Cook Inlet bound sockeye was between the 2014 and 2015 levels, the Cook Inlet sockeye fishery underperformed the forecast by 37% or 1.9 million fish. This total lack of correlation between Kodiak harvest and the performance of the Cook Inlet fishery tells us that other factors, such as lake rearing conditions, spawning habitat, ocean feeding conditions, and marine predation are the driving forces behind returns to Cook Inlet.





Expanding fisheries

One consideration when creating fishery policy is the examination of new and expanding fisheries. Looking at the pattern of actively fished permits in both the entire Kodiak Management Area and in just the Northwest District, we see that there is no evidence of an expanding salmon fishery in Kodiak. The number of actively fished permits is based on local management of salmon stocks and price fluctuations. A very similar pattern of permit participation can be seen in the Upper Cook Inlet commercial salmon fishery. On the other hand, there has been dramatically increasing usage in the sport and personal use salmon fisheries in Upper Cook Inlet.

Summary:

Kodiak’s salmon fishery is multifaceted and complex. The seven regulatory management plans, approved by the Alaska Board of Fisheries more than 20 years ago insure that the Kodiak fishery is focused on the harvest of local salmon stocks. Moreover, Kodiak annually catches about 400% more salmon than are captured by Cook Inlet fishermen. Consequently, regulatory changes to the Kodiak Management Area potentially have orders of magnitude more impact because of the amount of fish at stake.

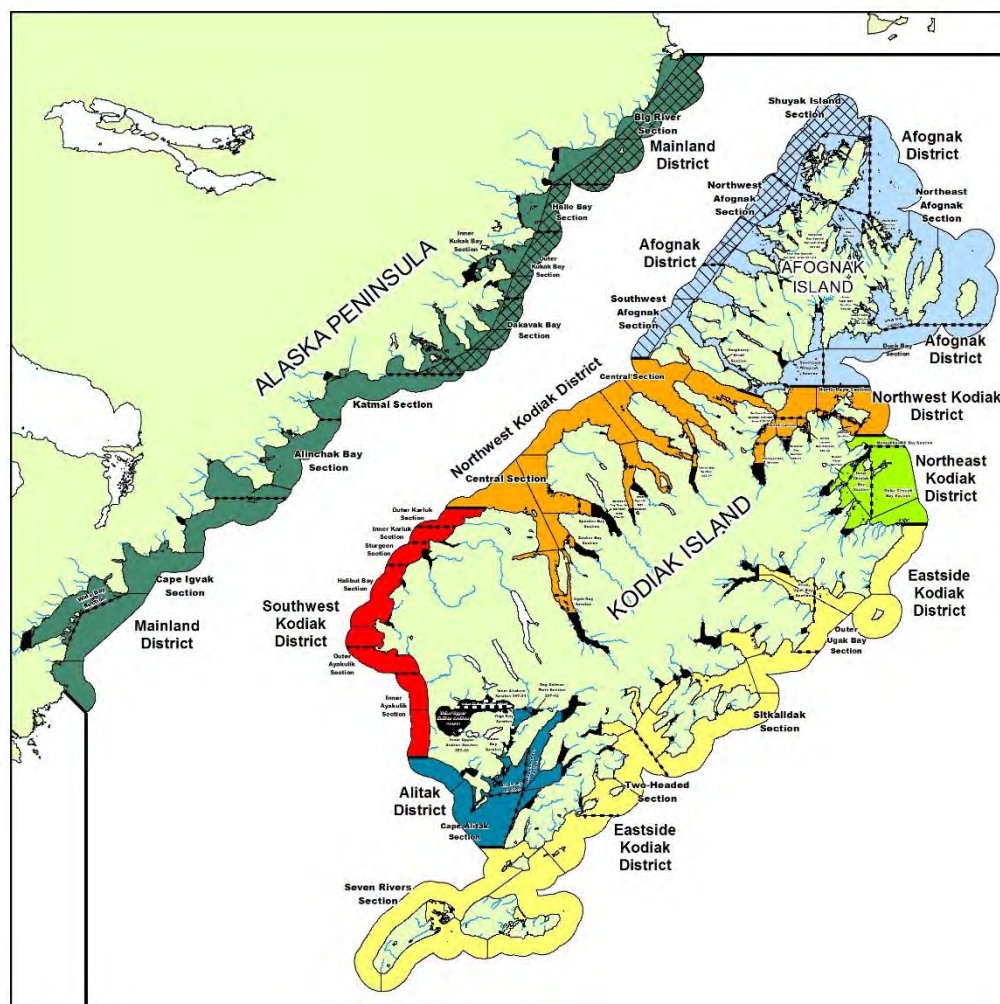
Although Cook Inlet bound sockeye are captured incidentally in the Kodiak Management Area, the recent genetic information confirms that patterns are hard to find and that there is substantial year-to-year variability in amount of Cook Inlet sockeye in the Kodiak area. Moreover, there is no correlation between the genetic information regarding incidental catch of Cook Inlet sockeye and the realization of the annual Cook Inlet run prediction. Cook Inlet was very close to their prediction in a year with relatively high incidental catches in the Kodiak area.

The magnitude of the impact of Kodiak's incidental catch of Cook Inlet sockeye on Susitna stocks has been established for the three study years. However, the study itself indicates that these years may not be representational of a longer time sequence and a comparison of impacts illustrates that Kodiak's impacts on Susitna socks are substantially less than the other user groups.

If closures or fishing restrictions were enacted in the Southwest District, East Side or NW Kodiak Districts as UCIDA has proposed, those fish would very likely be caught in the Northwest District and the Afognak District. There is no single or predictable Cook Inlet bound sockeye "hot spot" that could be closed without pushing the harvest of those same fish further up the coast or around the east side of the island. Therefore, to truly be certain of conserving Cook Inlet bound sockeye for harvest by Cook Inlet users, the entire Kodiak Management Area would need to be closed.

And what would be the tradeoff for gutting Kodiak's salmon fishery and devastating the economies of our 8 island communities? Would all 5,000 or 75,000 or 40,000 sockeye return to the Susitna? How many would be harvested in the fisheries of Lower Cook Inlet? What would be the natural mortality due to predation and other factors? The sockeye would have to pass 13 sea lion haul outs and two major rookeries on Marmot and the Barren Islands. They would have to escape pods of orcas and porpoise and the notorious legion of seals in Cook Inlet. Let's assume a 20% natural mortality. That leaves 3,500 or 62,000 or 32,000 arriving in Cook Inlet, depending on the year. If we apply the same harvest rate to those fish as to the fish that were actually caught in the Upper Cook Inlet commercial fishery (49%-33%), we arrive at 1,800, 24,000 and 10,000 sockeye arriving to the Susitna/Yentna area in 2014-2016, respectively. In addition, recreational harvests in Upper Cook Inlet as well as the Susitna drainage will further reduce Susitna River spawners.

The North Shelikof Salmon Management Plan already places a proportional share of the conservation burden for Cook Inlet stocks on the Kodiak fishery. Should further restrictions or closures be enacted, the magnitude of impacts to Kodiak will far outweigh incremental gains to Cook Inlet fishermen and conservation concerns. Under the standards of either the Alaska Board of Fisheries' Mixed Stock Policy or their Allocation Criteria, balancing of gains and impacts must occur. The information above indicates clearly that the balance weighs heavily in favor of continuing Kodiak's current management plans.



# Economic Impact of ACR

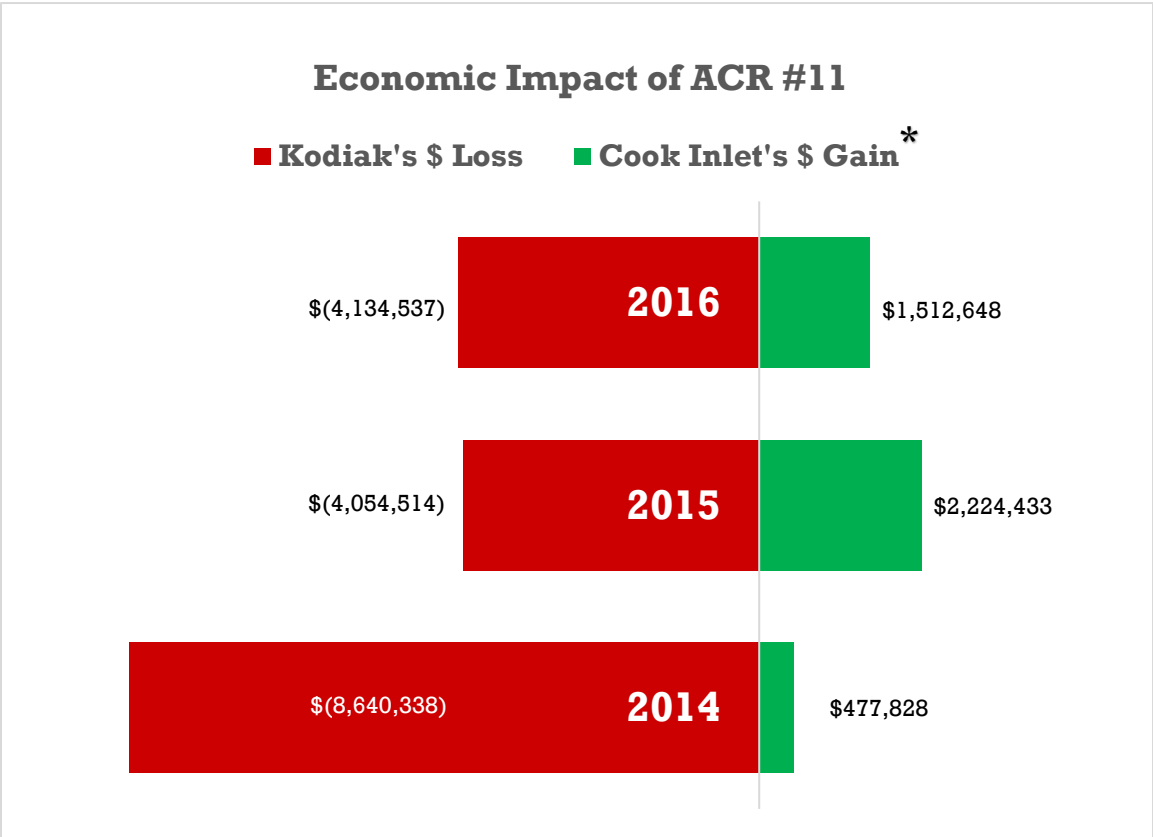
## #11

Kodiak Salmon Work Group

10/2/2017



# ECONOMIC IMPACT OF ACR #11



\*based on assumption of NO ocean mortality and that 100% of Cook Inlet fish survive to enter that fishery

Although it is difficult to accurately assess the economic tradeoffs that occur as a consequence of allocative policy, ACR #11 provides us with a draft policy to examine. It is important to understand that any allocative policy the Board may choose to enact would have similar far-reaching consequences to ACR #11. It is simply impossible to successfully forego incidental harvest of Upper Cook Inlet bound sockeye without dramatically restricting much of Kodiak’s salmon fishery.

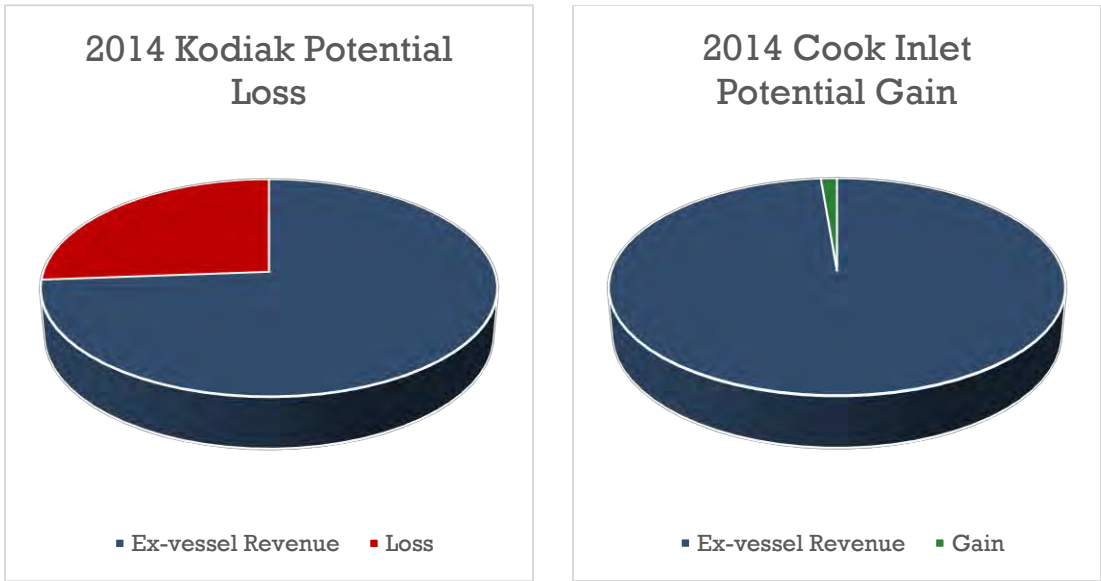
Kodiak Salmon Work Group analyzed the economic effects that UCIDA’s proposed umbrella plan would have both on Kodiak and Cook Inlet’s salmon fisheries. Simply put, the effect on Kodiak’s salmon fishermen would be devastating. Applying the policies proposed in ACR #11 to the Kodiak area fisheries in 2014, 2015 and 2016 would have caused tremendous costs to Kodiak. These losses are not balanced by potential gains in Cook Inlet.

2014

Total Effect of the Umbrella Plan in 2014

If enacted, the weekly and seasonal caps of the umbrella plan could cost Kodiak \$8.6 million. We could lose 23% of the annual, island-wide sockeye harvest and 15% of the pink salmon harvest, or 2.4 million fish.

On the other hand, if none of the Upper Cook Inlet bound sockeye were caught in Kodiak, those fish would then have to run a gauntlet of Lower Cook Inlet commercial fishing and heavy predation by sea lions, porpoise, and seals. If every fish survived that gauntlet and arrived in Upper Cook Inlet, approximately 44% might be caught in the Cook Inlet commercial fisheries. That 44% represents 43,000 sockeye valued at approximately \$480,000. **So, in 2014 Kodiak would lose \$8.6 million and 2.4 million fish for Cook Inlet’s gain of \$480,000 and 43,000 fish. Kodiak would lose 26% of our annual ex-vessel salmon revenue, while Cook Inlet would increase theirs by 1%.**



Westside

In 2014 the Westside of Kodiak was open for 24 days between June 26<sup>th</sup> and July 23<sup>rd</sup> in the Northwest District and the Southwest District. The total salmon harvest was 2 million fish, 626,000 of which were sockeye. The value of the harvest of all species was \$7.2 million.

The total effect of the weekly and seasonal caps would have been 22 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 485,000 sockeye, 665,000 pink

salmon, and 63,000 chum salmon. The value of this potential loss is \$5.3 million or 19% of the annual Westside revenue. During the umbrella plan period, Westside fisherman would forego 77% of their sockeye catch, 54% of their pink salmon catch and 74% of their revenue.

### ***Eastside***

In 2014 the Eastside District of Kodiak was open for 22 days between June 26<sup>th</sup> and July 30<sup>th</sup>. The total salmon harvest was 480,000 fish, 91,000 of which were sockeye. The value of the harvest of all species was \$1.3 million.

The total effect of the weekly and seasonal caps would have been 19 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 89,000 sockeye, 317,000 pink salmon, and 48,000 chum salmon. The value of this potential loss is \$1.3 million or 95% of the annual Eastside revenue. During the umbrella plan period, Eastside fisherman would forego 99% of their sockeye catch, 100% of their pink salmon catch and 99% of their revenue.

### ***Alitak***

In 2014 the Alitak District of Kodiak was open for 24 days between June 26<sup>th</sup> and July 23<sup>rd</sup>. The total salmon harvest was 880,000 fish, 226,000 of which were sockeye. The value of the harvest of all species was \$2.7 million.

The total effect of the weekly and seasonal caps would have been 20 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 177,000 sockeye, 483,000 pink salmon, and 10,000 chum salmon. The value of this potential loss is \$2 million or 74% of the annual Alitak revenue. During the umbrella plan period, Alitak fisherman would forego 78% of their sockeye catch, 76% of their pink salmon catch and 77% of their revenue.

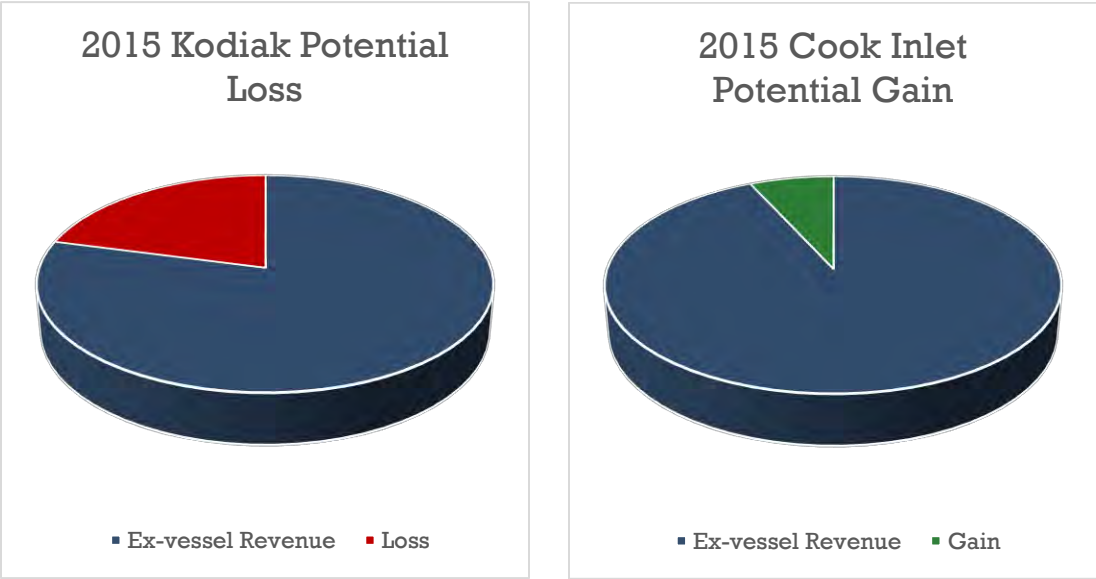
## **2015**

### ***Total Effect of the Umbrella Plan in 2015***

If enacted, the weekly and seasonal caps of the umbrella plan could cost Kodiak \$4 million. We could lose 17% of the annual, island-wide sockeye harvest and 9% of the pink salmon harvest, or 3 million fish.

On the other hand, if none of the Upper Cook Inlet bound sockeye were caught in Kodiak, those fish would then have to run a gauntlet of Lower Cook Inlet commercial fishing and heavy predation by sea lions, porpoise, and seals. If every fish survived that gauntlet and arrived in Upper Cook Inlet, approximately 43% might be caught in the Cook Inlet commercial fisheries. That 43% represents 266,000 sockeye valued at approximately \$2.2 million. **So, in 2015 Kodiak would lose \$4 million and 3**

million fish for Cook Inlet’s gain of \$2.2 million and 266,000 fish. Kodiak would lose 21% of our annual ex-vessel salmon revenue, while Cook Inlet would increase theirs by 7%.



Westside

In 2015 the Westside of Kodiak was open for 22 days between June 26<sup>th</sup> and July 23<sup>rd</sup> in the Northwest District and the Southwest District. The total salmon harvest was 2.9 million fish, 507,000 of which were sockeye. The value of the harvest of all species was \$4.4 million.

The total effect of the weekly and seasonal caps would have been 13 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 268,000 sockeye, 1.3 million pink salmon, and 146,000 chum salmon. The value of this potential loss is \$2.4 million or 19% of the annual Westside revenue. During the umbrella plan period, Westside fisherman would forego 53% of their sockeye catch, 64% of their pink salmon catch and 56% of their revenue.

Eastside

In 2015 the Eastside District of Kodiak was open for 17 days between June 26<sup>th</sup> and July 30<sup>th</sup>. The total salmon harvest was 297,000 fish, 20,000 of which were sockeye. The value of the harvest of all species was \$311,000.

The total effect of the weekly and seasonal caps would have been 3 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 7,000 sockeye, 121,000 pink salmon, and 13,000

chum salmon. The value of this potential loss is \$125,000 or 13% of the annual Eastside revenue. During the umbrella plan period, Eastside fisherman would forego 35% of their sockeye catch, 52% of their pink salmon catch and 40% of their revenue.

### ***Alitak***

In 2015 the Alitak District of Kodiak was open for 18 days between June 26<sup>th</sup> and July 23<sup>rd</sup>. The total salmon harvest was 1.7 million fish, 275,000 of which were sockeye. The value of the harvest of all species was \$2.2 million.

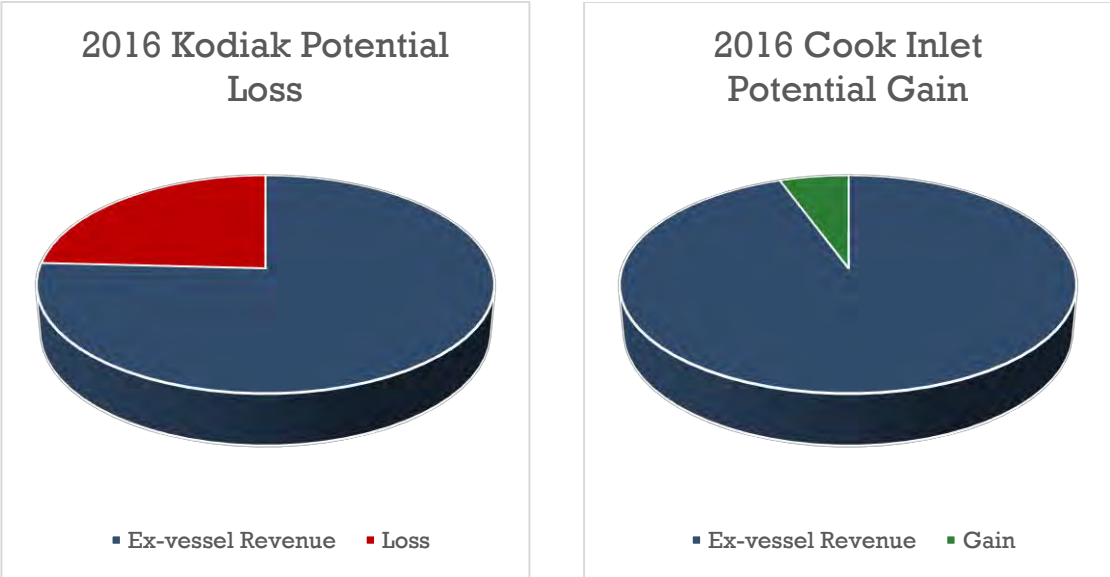
The total effect of the weekly and seasonal caps would have been 16 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 189,000 sockeye, 906,000 pink salmon, and 15,000 chum salmon. The value of this potential loss is \$1.5 million or 63% of the annual Alitak revenue. During the umbrella plan period, Alitak fisherman would forego 69% of their sockeye catch, 67% of their pink salmon catch and 68% of their revenue.

## **2016**

### ***Total Effect of the Umbrella Plan in 2016***

If enacted, the weekly and seasonal caps of the umbrella plan could cost Kodiak \$4.1 million. We could lose 22% of the annual, island-wide sockeye harvest and 14% of the pink salmon harvest, or 930,000 fish.

On the other hand, if none of the Upper Cook Inlet bound sockeye were caught in Kodiak, those fish would then have to run a gauntlet of Lower Cook Inlet commercial fishing and heavy predation by sea lions, porpoise, and seals. If every fish survived that gauntlet and arrived in Upper Cook Inlet, approximately 46% might be caught in the Cook Inlet commercial fisheries. That 46% represents 174,000 sockeye valued at approximately \$1.5 million. **So, in 2016 Kodiak would lose \$4.1 million and 930,000 fish for Cook Inlet's gain of \$1.5 million and 174,000 fish. Kodiak would lose 24% of our annual ex-vessel salmon revenue, while Cook Inlet would increase theirs by 6%.**



**Westside**

In 2016 the Westside of Kodiak was open for 28 days between June 26<sup>th</sup> and July 23<sup>rd</sup> in the Northwest District and the Southwest District. The total salmon harvest was 1.1 million fish, 426,000 of which were sockeye. The value of the harvest of all species was \$4 million.

The total effect of the weekly and seasonal caps would have been 12 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 274,000 sockeye, 261,000 pink salmon, and 65,000 chum salmon. The value of this potential loss is \$2.5 million or 28% of the annual Westside revenue. During the umbrella plan period, Westside fisherman would forego 64% of their sockeye catch, 47% of their pink salmon catch and 63% of their revenue.

**Eastside**

In 2016 the Eastside District of Kodiak was open for 22 days between June 26<sup>th</sup> and July 30<sup>th</sup>. The total salmon harvest was 235,000 fish, 134,000 of which were sockeye. The value of the harvest of all species was \$1.2 million.

The total effect of the weekly and seasonal caps would have been 15 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 104,000 sockeye, 64,000 pink salmon, and 13,000 chum salmon. The value of this potential loss is \$1 million or 73% of the annual Eastside revenue. During the umbrella plan period, Eastside fisherman would forego 78% of their sockeye catch, 94% of their pink salmon catch and 80% of their revenue.



### **Alitak**

In 2016 the Alitak District of Kodiak was open for 12 days between June 26<sup>th</sup> and July 23<sup>rd</sup>. The total salmon harvest was 192,000 fish, 117,000 of which were sockeye. The value of the harvest of all species was \$1 million.

The total effect of the weekly and seasonal caps would have been 9 days of restricted fishing when the fishery would have been open based on normal local management. This represents forgoing as many as 82,000 sockeye, 37,000 pink salmon, and 4,000 chum salmon. The value of this potential loss is \$665,000 or 50% of the annual Alitak revenue. During the umbrella plan period, Alitak fisherman would forego 70% of their sockeye catch, 54% of their pink salmon catch and 69% of their revenue.

### **Summary**

The policies proposed in UCIDA's ACR would be devastating to Kodiak's salmon fishery and economy. **Over the three year period, 2014-2016, the net loss to state salmon fisheries would be \$12.6 million.** That represents about \$440,000 in lost tax dollars for the State. Additionally, the Kodiak Island Borough would lose about \$136,000 in tax revenue.

This policy would have far-reaching effects beyond the direct loss in ex-vessel revenue. In many of the weekly periods covered by the proposal, the cap would be achieved in just a day or two of fishing. The proposed closures would gut our salmon fisheries at the end of June and throughout July. Without that fishing opportunity, many vessels, setnet sites and processors would find it economically unmanageable to operate at all. Permit prices would plummet, permits would go unfished, businesses would close and Kodiak communities would suffer. The small gains realized by Cook Inlet fishermen could not offset the economic devastation in Kodiak. You'll find below a concise summary of the impacts of ACR 11 on Kodiak's fisheries.

Additionally, it must be understood that by foregoing the harvest of large numbers of local salmon stocks, those systems will experience dramatic, sudden overescapement. The consequence of that overescapement would be a complete collapse of Kodiak's natural salmon runs and the fisheries that depend on them. The economic impact of that collapse would dwarf any direct impact from foregone harvest.

**If the Cook Inlet proposal had been in effect  
in 2014, 2015 and 2016, Kodiak fishermen  
could have lost:**

**2014**

**\$8.6 million**

**26% of all of Kodiak's  
salmon revenue**

**2.4 million fish**

**23% of Kodiak's annual  
sockeye harvest**

**15% of Kodiak's annual  
pink harvest**

**2015**

**\$4.1 million**

**21% of all of Kodiak's  
salmon revenue**

**3 million fish**

**17% of Kodiak's annual  
sockeye harvest**

**9% of Kodiak's annual  
pink harvest**

**2016**

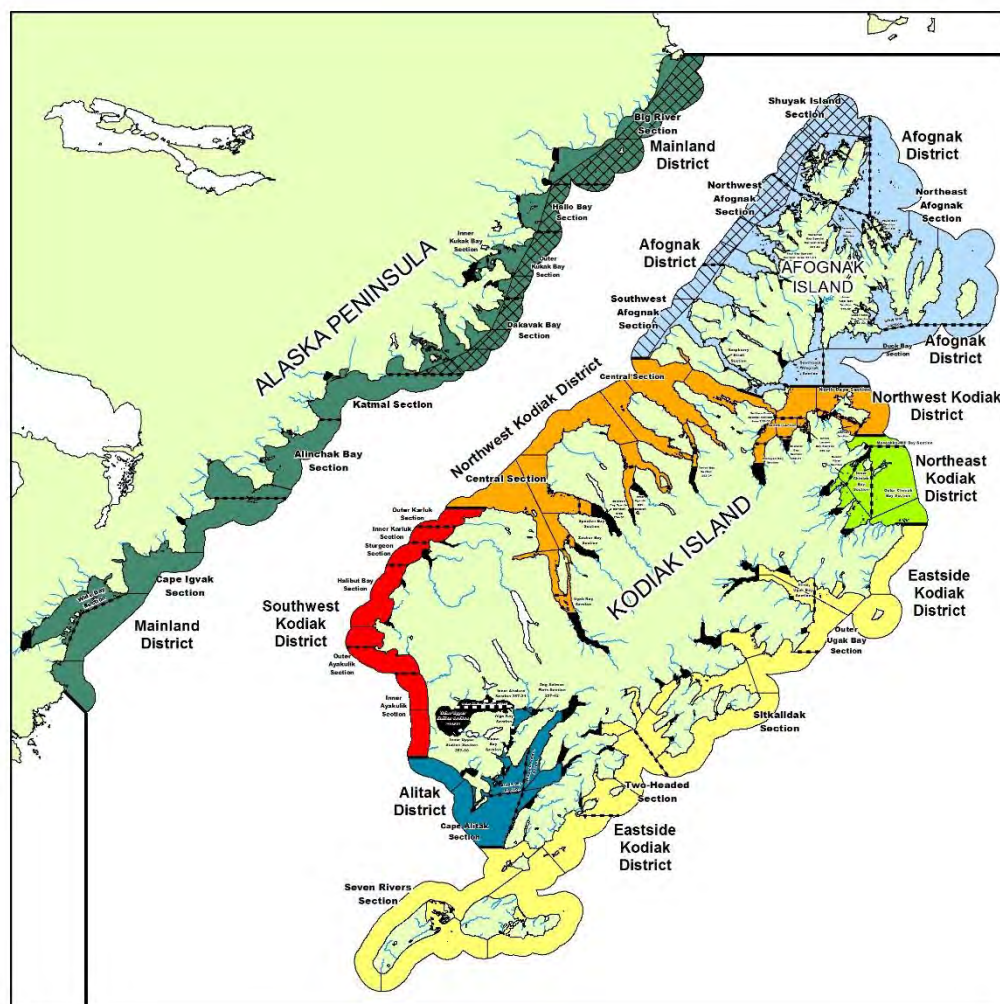
**\$4.1 million**

**24% of all of Kodiak's  
salmon revenue**

**930,000 fish**

**22% of Kodiak's annual  
sockeye harvest**

**14% of Kodiak's annual  
pink harvest**



## Review of Shedd et al. (2016): Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014-2016

Harold J. Geiger and Terrance J. Quinn II

9/11/2017



# Review of Shedd et al. (2016): Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014-2016

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Harold Geiger, Ph.D. and Terrance Quinn, Ph.D. prepared a scientific review of the report by Shedd et al. (2016) which follows this summary. Additionally, a letter from James Seeb, Ph.D. commenting on the ADF&G genetic lab is attached.

## KSWG's summary of the review of the MSA study by Hal Geiger and Terry Quinn

1. Speaking to policy issues and stated goals of the study, the authors confirm, "This report did not have the express purpose of making arguments regarding allocation decisions by the Alaska Board of Fisheries."

Regardless, the study does conclusively demonstrate that sockeye salmon bound for Cook Inlet were caught in some times and in some areas in the fishing years studied. **"In the case of the Kodiak Area, there really was no reason to believe that the commercial harvest was made up of only single stocks that originated in the Kodiak Management Area."**

Further, the authors note: "Summarizing historical tagging studies, Barrett and Swanton (1991) report that sockeye harvests in the North Shelikof Strait in the 1940s, 1970s, and 1980s ranged from 30% to 100% Kodiak fish and 0% to 59% Cook Inlet-origin fish. Moreover, Barrett and Swanton concluded there were large numbers of Cook Inlet bound fish in the North Shelikof Strait fishery in July of 1990."

2. "From the point of view of fishery policy, the most important statistic is the *stock-specific harvest rate*, which is not reported in the Shedd et al. (2016) document for stocks outside the Kodiak Management Area. What is reported is the *stock-specific contribution rate*. Stock composition estimates represent the proportions of a catch that was made by various stocks in a particular spatial and temporal stratum or groups of strata. In contrast, the harvest rate describes the proportion of an annual return that

was harvested in a fishery or group of fisheries. **Consequently, a fishery may show a large contribution rate for a stock, but the total effect on that stock may be quite small.**"

The authors note: "when summing over time and area, in all study years fish of Kodiak area origin dominate the catch, although catches of Cook Inlet-origin fish increased in 2015, and to a lesser extent, remained high in 2016, when compared to 2014 (Figure 20 in Shedd et al. (2016))."

And: "Another important question: were the harvests of Cook Inlet-bound sockeye salmon excessive? Though this is a policy judgment, rather than a scientific question, we note that in the years 2014-2016, **the estimated harvest rate ranged from 2% to 9%, and did not reach or exceed 10% in any year in the study (Table 1).**"

The authors conclude, "We note that the estimated harvest rate on Cook Inlet-bound sockeye salmon were below 10% in each year, and substantially below 10% in one year. **These harvest rates generally agree with what previous, less accurate studies, have suggested.** However, with only three years of measurements, with a large fraction of the catch not sampled, and with large annual variation in those measurements (much larger than the error obtained from the credible intervals), it is very hard to conclude that these results bracket the range of what to expect if the study were to be repeated, or to conclude that these results represent what would happen in a "typical year" (if there ever is such a thing)."

3. "The new genetic stock composition approach used in this study is superior to other approaches used in the past, because the real stock composition is estimated rather than inferred from less reliable measurements (e.g., length composition)."

4. "The stratified sampling design used is appropriate with respect to accuracy and precision of stock composition (relative and absolute). It is clear that the authors devoted substantial attention to implementing the sampling design with the intent of obtaining a random or representative sample within combinations of major regional and temporal strata. Further information would be desirable about how the implementation was conducted on finer spatial and temporal scales to justify the assumption of a random or representative sample. For example, how was an individual fish selected for genetic sampling and were there protocols established to prevent selecting fish with particular physical characteristics, such as size?"

The authors further note: "We could not determine if sampling was representative within spatial strata, although the intent of the authors appears to be sampling proportional to harvest, a reasonable goal. It would be helpful to have a brief description elaborating the protocol used to achieve this goal."

5. **“Similar to past studies, results from the study revealed substantial variability in stock composition across years, among spatial strata, and among temporal strata.** Further study may be desirable to determine if there are consistent patterns in this variability across years, spatial strata, and temporal strata. Continued genetic sampling and analysis in the future would thus be desirable.”





**Review of Shedd et al. (2016): *Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014-2016***

***Report to the Kodiak Salmon Workgroup***

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September 11, 2017



## Executive Summary

The Kodiak Salmon Workgroup contracted us<sup>1</sup> to provide a scientific review of the report by Shedd et al. (2016) entitled *Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014-2016*. This review consists of an examination of the scientific merit of the study, its utility compared to previous studies, an interpretation of how the results should be viewed in terms of the magnitude of interceptions of Cook Inlet sockeye salmon in the Kodiak Management Area's commercial fisheries, and thoughts about further investigations that may shed additional insight into Kodiak and Cook Inlet stock compositions of sockeye salmon.

Our primary findings:

1. From the point of view of fishery policy, the most important statistic is the *stock-specific harvest rate*, which is not reported in the Shedd et al. (2016) document for stocks outside the Kodiak Management Area. What is reported is the *stock-specific contribution rate*. Stock composition estimates represent the proportions of a catch that was made by various stocks in a particular spatial and temporal stratum or groups of strata. In contrast, the harvest rate describes the proportion of an annual return that was harvested in a fishery or group of fisheries. Consequently, a fishery may show a large contribution rate for a stock, but the total effect on that stock may be quite small. We illustrate this phenomenon below.
2. The new genetic stock composition approach used in this study is superior to other approaches used in the past, because the real stock composition is estimated rather than inferred from less reliable measurements (e.g., length composition). The use of a Bayesian modeling approach to estimate stock composition is state-of-the-art and allows for the appropriate treatment of random variability due to both random error caused by sampling the fishery mixture and also from the sampling of the contributing stocks.
3. The stratified sampling design used is appropriate with respect to accuracy and precision of stock composition (relative and absolute). It is clear that the authors devoted substantial attention to implementing the sampling design with the intent of obtaining a random or representative sample within combinations of major regional and temporal strata. Further information would be desirable about how the implementation was conducted on finer spatial and temporal scales to justify the assumption of a random or representative sample. For example, how was an individual fish selected for genetic sampling and were there protocols

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<sup>1</sup> See brief biographical statement in Appendix A

established to prevent selecting fish with particular physical characteristics, such as size?

4. Similar to past studies, results from the study revealed substantial variability in stock composition across years, among spatial strata, and among temporal strata. Further study may be desirable to determine if there are consistent patterns in this variability across years, spatial strata, and temporal strata. Continued genetic sampling and analysis in the future would thus be desirable.

## Introduction and Overview

We were asked to provide a scientific review of the Shedd et al. (2016) titled *Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area*. This complex 154-page report describes an extensive genetic analysis followed by a statistical analysis of the genetic data for Kodiak area fisheries in catch years 2014, 2015, and 2016. The principal genetic tools that were used for this study were the single nucleotide polymorphism, or SNP, approach. Here we will comment on scientific criticisms of the study that appear relevant, we will briefly comment on the various methods and techniques that were used, and we will offer a broad assessment of the significance of the major findings. As we will explain in more detail below, the study appears to have been carefully conducted and the numerical estimates appear to be well crafted and reliable.

The Alaska Department of Fish and Game had previously tried to use scale pattern analysis and an analysis of fish size to estimate the proportion of non-local stocks in the Kodiak Management Area. For various technical reasons neither of these techniques were very successful. In one of the last reports on the attempts to use fish size for this purpose, Vining (1996) wrote, “As the 1995 analysis indicates, this methodology continues to generate only rough estimates, some with little confidence.” It is the opinion of Vining that “other techniques, such as genetic stock identification, tagging or scale pattern analysis should be evaluated for use in the future, if more precise estimates of stock composition for sockeye salmon caught within the [Kodiak Management Area] are desired.” This leads us to the present genetic study by Shedd et al. (2016).

The genetic analysis of stock mixtures rests on several assumptions. The analysis starts with the definition of a *catch mixture*, because the catch is presumably made up of a mix of stocks. Importantly, the number of contributing stocks must be known, they all must be sampled, and the genetic character of each stock must be established. Next, a representative sample of the catch mixture must be drawn and the genetic character of each specimen in the catch sample must also be established. Finally, a complicated statistical algorithm can then be used to produce an estimate of the proportion of each of the stocks in the mixture by comparing the genetic characterizations of each fish in the catch mixture to the previously established genetic characterization of the contributing stocks.

A complete analysis must include a study of both the accuracy and the precision of the estimates. In this context, *accuracy* refers to the absence of any statistical bias or other kinds of systematic errors that would consistently cause specific stock estimates to be too high or low. Here *precision* refers to errors that are caused by using only a sample from the stock of origin and the catch mixture, rather than an examination of every single fish in the fishery and every single fish in the spawning stocks. Generally, accuracy is harder to study, detect, and control, while precision can generally be controlled by increasing the sample size. Also, precision is usually studied by looking at the variation from one specimen to another in the samples. Precision measures are usually offered in the form of confidence intervals, standard errors, or coefficients of variations.

### Sampling Design

The goal of the study by Shedd et al. (2016) is to determine stock compositions of sockeye salmon within the Kodiak Management Area. Consequently, sampling was restricted to the Kodiak Management Area, rather than to the overall range of sockeye salmon in the western Gulf of Alaska. The authors defined six Kodiak spatial strata of interest (called subregional sampling groups) for *sampling* genetic tissues, comprised of (1) Uganik-Kupreanof, (2) Uyak, (3) Karluk-Sturgeon, (4) Ayakulik-Halibut Bay, (5) Alitak, and (6) Igvak. The first five are located around Kodiak Island, while Igvak is part of the mainland district. The Chignik regional reporting group had combined estimates from subregions Black Lake and Chignik Lake. Four other regional spatial strata outside of Kodiak and Chignik were West of Chignik, Cook Inlet, Prince William Sound, and South of Cape Suckling. The report did not contain justification for this particular choice of spatial strata, but suggests that considerations included areas with active management and those that are used in run reconstructions to aid management.

One confusing area is that several spatial scales are referred to in the report. For *reporting* purposes (instead of *sampling*), there are a total of 14 subregional *reporting groups* listed on page 2 that constitute the entire western Alaska area. The report designates ten of these groups as *subregional reporting groups* within the Kodiak (8 subregions) or Chignik (2 subregions) *regional reporting groups*. Six regional reporting groups including those outside of Kodiak and Chignik are listed in the tables, with subregional breakdowns for the 8 Kodiak subregions and the 2 Chignik subregions. In the end the system does seem to be consistent; however, we recommend a simpler and clearer description of spatial divisions. *These definitions of spatial strata must be understood to understand the tables and figures of results, which include both regional reporting groups and subregional reporting groups.*

The report indicates that temporal strata are also considered in combination with the spatial subregional strata: Early, Middle, and Late (see page 3 in the Shedd et al.

(2016) report. The temporal strata are consistent with patterns that have been observed in past studies.

The sample size goal was to extract 380 tissue samples from each time-area stratum; no reference was provided for this number. The sampling within temporal strata was intended to be proportional to daily abundance. When this was not possible, the total sample size was obtained by sampling days with sufficient additional samples at random until the total of 380 was achieved, a reasonable approach.

We could not determine if sampling was representative within spatial strata, although the intent of the authors appears to be sampling proportional to harvest, a reasonable goal. It would be helpful to have a brief description elaborating the protocol used to achieve this goal.

The sampling design most appropriate for multiple strata with high variation among strata, to obtain high precision and accuracy, is stratified random sampling (Thompson 2016). In the future it would be desirable to show that high variation is present and the improvement in precision by using stratification over simple random sampling. One advantage to using a proportional allocation of sample size with respect to within stratum variation is that different choices for strata are not likely to produce inaccurate estimates. Nevertheless, it is not necessary to use proportional sampling to justify the use of stratified sampling in terms of accuracy, as long as a representative sample is obtained within each stratum. In particular, the use of a fixed sample size of 380 for all spatio-temporal strata is completely acceptable. (Although it may not be the most efficient allocation scheme, it does not induce estimation bias.)

The use of stratified random sampling also has a desirable product in that both relative and absolute stock compositions can be estimated both for individual strata and for combinations of strata, including that portion of the entire Kodiak Management Area that was sampled (not every single fishery was sampled). The main reason for this ability is that catches are known for all spatio-temporal strata. This is one fundamental principle that makes estimation across strata intuitive, accurate, and precise, because relative stock compositions are projected to the total catch to get absolute stock compositions by strata that can then simply be summed across a set of strata of interest.

An additional feature of the sampling design is a set of data quality control procedures regarding the genetic data to avoid the inclusion of erroneous data into the analysis (pages 8–9). Thus, we were unable to uncover any appreciable flaws in sampling, genetic data processing, or genetic analyses in the study.

In summary, we believe that the overall sampling design of using stratified random sampling is appropriate for the genetic analysis of estimating stock composition of sockeye salmon in the Kodiak Management Area. Further studies should be done to

consider alternative stratification choices both within space and time and to justify the sample size goal of 380 samples per stratum.

### Policy Issues and Stated Goals for the Study

In the introduction of the Shedd et al. (2016) report, the reader finds that the stated purpose of the study was to “sample the major sockeye salmon commercial fisheries in marine waters of [the Kodiak Management Area] from June through the end of August and use genetic mixed stock analysis (MSA) to estimate stock compositions and stock-specific harvests.” Later in the report, the reader finds this statement about the goal of the project: “The overall goal of this project is to provide information that will be useful for reconstructing runs, building accurate brood tables to define escapement goals, and refining management by identifying spatial and temporal harvest patterns of *local* and *nonlocal* stocks (emphasis in the original).” Later, the reader finds four stated objectives, including “report [genetic mixed stock analysis] results of stock-specific harvests of sockeye salmon sampled from *selected* commercial fisheries in [the Kodiak Management Area], 2014—2016 (emphasis added),” and “characterize where stocks were harvested from *select* commercial fisheries (again, emphasis added).” This report did not have the express purpose of making arguments regarding allocation decisions by the Alaska Board of Fisheries.

Regardless, the study does conclusively demonstrate that sockeye salmon bound for Cook Inlet were caught in some times and in some areas in the fishing years studied. In the case of the Kodiak Area, there really was no reason to believe that the commercial harvest was made up of only single stocks that originated in the Kodiak Management Area. That is, a finding of rich stock mixtures in at least some times and areas should not have been surprising. There have been many long-standing questions about the degree to which stocks are mixed in the Kodiak Management Area. Summarizing historical tagging studies, Barrett and Swanton (1991) report that sockeye harvests in the North Shelikof Strait in the 1940s, 1970s, and 1980s ranged from 30% to 100% Kodiak fish and 0% to 59% Cook Inlet-origin fish. Moreover, Barrett and Swanton concluded there were large numbers of Cook Inlet bound fish in the North Shelikof Strait fishery in July of 1990.

### Contribution Rate Versus Harvest Rate

There are two important rates or proportions that can be derived from stock composition analysis and discussed before policy-making bodies, such as the Alaska Board of Fisheries: the *contribution rate* and the *harvest rate*. These two statistics have very different significance to management. These two rates have often been confused in conversations among fishermen, in testimony before the Alaska Board of Fisheries, and in conversations with members of the press. The percentage that each stock makes up in a mixture of stocks is called the *contribution rate* (or



sometimes the *stock proportion*). For example a fishery may have harvested 50 fish, and 40 of those fish might be from Stock A, with 10 fish from Stock B. Then the *contribution rate* of Stock A is  $80\% = (40/50)100\%$ . For the purposes of management that could be either high or low. But if the contribution rate was 80%, then this does *not* mean that 80% of the stock was harvested; a harvest rate can be estimated only with abundance or run-size information for the stock of interest.

A large number for the contribution rate is not necessarily important to management, but it could be. If the original size of Stock A was 10,000 fish before this harvest, then the *harvest rate* on Stock A in the catch mixture would be  $40/10,000 = 0.4\%$ —which may be considered insignificant. Alternatively, if the original size of stock A was only 150 fish before the harvest, then the harvest rate would be  $40/150 = 27\%$ —which would usually be considered significant from a management perspective. Although moderate-to-large contribution rate statistics can lead to misplaced anxiety or even outrage, the most important statistic for management policy is the harvest rate, which is the rate that is most clearly related to the population dynamics of a stock.

### Technical Comments on Bayesian Analysis and Uncertainty Measures

The statistical analysis was carried out using the Bayesian method of Pella and Masuda (2001). We contend that this method is a reasonable approach with several advantages over the more traditional *maximum likelihood* approach. As this is a Bayesian approach, there are some differences between the interpretations of the measurements that may be confusing and unnecessarily tedious to some readers of the Shedd et al. (2016) report. In the method of Pella and Masuda (2001), the unknown contribution rates (or stock mixing proportions, as they call them) are treated as unknown random variables rather than constant and unknown parameters in the maximum likelihood approach. The analysis proceeds by simulating the probability distributions of these random quantities, with the genetic data used to help develop these distributions.

In a Bayesian analysis, uncertainty in stock contribution rates is frequently displayed by the use of *credible intervals* rather than *confidence intervals*. For example, in Table 3 of the Shedd et al. (2016) report, for the Kodiak reporting group the 90% credible interval runs from 80.9% to 88.1%. The correct interpretation of this interval is that given all of the stated assumptions, *the probability is* 90% that the true value is found between 80.9% and 88.1%, given a list of assumptions. Many people, incorrectly, think this is exactly what a 90% confidence interval is, but this is a mistake for some technical, statistical reasons. For the purposes of readers of this report, we note that the Bayesian results will often closely approximate the more traditional results (Pella and Masuda 2001), so that there should be no harm in simply interpreting the Shedd et al. (2016) credible intervals as the more familiar 90% confidence intervals to investigate uncertainty in the stock composition estimates. While every one of the assumptions that underpin the analysis is

probably not strictly true, these intervals do seem to be a very reasonable guide to the precision in the estimates. Based on the reported credible intervals and based on the assumptions stated in the report, the Shedd et al. (2016) estimates appear to be both accurate and precise enough for the purposes of the study.

## The Results

In trying to understand the results of the analysis, readers of the Shedd et al. (2016) report may find Figures 8 through 19 helpful, especially when paired with the maps provided in Figures 1–7. Figures 8, 10, 12, etc. (the even-numbered figures) show the estimated contribution rates (or stock mixing rates) for stocks using two levels of detail for the authors' *subregional* and *regional reporting groups* mentioned above. These estimates are then reported by specific time-area catch strata. At the highest level of aggregation there are six regional reporting groups, or what might be considered stocks in the broadest sense: (1) West of Chignik, (2) Chignik, (3) Kodiak, (4) Cook Inlet, (5) Prince William Sound, and (6) South of Cape Suckling. These groups may be the most useful for discussions about fishery management policy. Additionally there are estimates for 10 specific subregional reporting groups, or what might be considered stocks in a more narrow sense, in the Westward Region, and these estimates may be more useful for actual managers or to look at the reasonableness of some of the estimates. Similarly, the odd-numbered figures (Figures 9, 11, 13, etc. in Shedd et al. (2016)) have the stock contribution rates re-expressed as the stock-specific *number of fish harvested* (compared to rates in the previously mentioned figures) in the mixtures.

The usual pattern in these figures is that the majority of the fish harvested in each time-area grouping originated in the Kodiak management area. There are some notable exceptions, especially in 2015. For example, in the Ayakulik-Halibut Bay area, a large fraction of the fish were classified to be of Cook Inlet origin, especially in 2015 during the July 4 to August 1 period (Figure 14 in the report by Shedd et al. (2016)). When viewed in terms of numbers of fish, rather than proportions, the effect looks even stronger (Figure 15). In the Alitak district the catches of fish classified to Cook Inlet exceed the number of fish classified to the Kodiak area in two years: 2015 and 2016. Here too, the effect looks even stronger when views as the number of fish harvested 2015 (Figure 17). However, when summing over time and area, in all study years fish of Kodiak area origin dominate the catch, although catches of Cook Inlet-origin fish increased in 2015, and to a lesser extent, remained high in 2016, when compared to 2014 (Figure 20 in Shedd et al. (2016)).

Questions about why the harvest of Cook Inlet fish might be higher or lower in specific times or areas are beyond the scope of this review. One obvious question is could this variation in the proportion of Cook Inlet-origin fish be due to variation in the sizes of sockeye salmon runs in Cook Inlet?

To get at this question we simply ignored Lower Cook Inlet and brought together run size estimates for Upper Cook Inlet (Alaska Department of Fish and Game, retrieved August 17, 2017), together with the Shedd et al. (2016) estimates of the harvest of Cook Inlet bound fish in the Kodiak Management Area (taken by eye from Figure 20 or from Tables 67–69). As a point of reference, Stopha (2017) projected that approximately 0.3 million sockeye salmon would be returning to hatcheries in Lower Cook Inlet 2017. We assume that the times and areas sampled by Shedd et al. (2016) represent areas where interceptions of Cook Inlet fish would have been considered to be most likely, although we do not know that is true. Here again, as a point of reference, the total fish accounted for by the six Regional Reporting Groups in Tables 67–69 was about 50%–60% of the total reported harvest for the Kodiak Management Area for the three study years (catch numbers from Munro 2015 and later reports in this series). Even though not all times and areas in Kodiak Management Area were sampled and even though there was some sockeye salmon production in Lower Cook Inlet, we expect that the Shedd et al. sockeye salmon catch estimates of Cook Inlet bound fish caught in the Kodiak Management Area divided by the estimated Upper Cook Inlet run size to provide a crudely reasonable—even if slightly too low—approximation to the harvest rate on Cook Inlet-origin fish harvested in the Kodiak Management Area (Table 1).

Although there are only three years available for comparison, it does not appear that changes in run size explain the difference in harvest rates on the Cook Inlet stocks. The highest harvest rate on Cook Inlet stocks was in 2015, the year with the highest in-Inlet run size among the three study years, but the second highest harvest rate is on the year with the lowest run size (Table 1 below).

Table 1. Upper Cook Inlet run size in millions of sockeye salmon **(A)** (from ADF&G), the estimated harvest of Cook Inlet-origin sockeye salmon caught in the Kodiak Management area in millions of fish **(B)** (From 67–69 in the Shedd et al. (2016) report), and the approximate harvest rate (estimated harvest in the Kodiak Management Area divided by the in-Inlet run size plus the harvest in the Kodiak Management Area) on Cook Inlet-origin sockeye salmon in the Kodiak Management Area **(C)**.

|      | <b>(A)</b> | <b>(B)</b>   | <b>(C)</b>   |
|------|------------|--------------|--------------|
|      | Cook Inlet | Cook Inlet   | Approximate  |
|      | run size   | catch in KMA | harvest rate |
| Year | (millions) | (millions)   | in KMA       |
| 2010 | 5.71       |              |              |
| 2011 | 8.68       |              |              |
| 2012 | 6.46       |              |              |
| 2013 | 5.74       |              |              |
| 2014 | 5.54       | 0.1          | 2%           |
| 2015 | 6.29       | 0.6          | 9%           |
| 2016 | 5.04       | 0.4          | 7%           |



Another important question: were the harvests of Cook Inlet-bound sockeye salmon excessive? Though this is a policy judgment, rather than a scientific question, we note that in the years 2014-2016, the estimated *harvest rate* ranged from 2% to 9%, and did not reach or exceed 10% in any year in the study (Table 1). Some might point out that the way we calculated the harvest rate under-represents its true magnitude—and the estimates in Table 1 very well may be too low. Even so, it would be highly unlikely we have underestimated it by a factor of 2, meaning that the median harvest rate over the three study years would have been almost surely less than 15%, and probably considerably less.

Are there areas where the proportion or numbers of Cook Inlet-origin sockeye salmon are higher than in other areas? Figures 22, 23, and 24 in the Shedd et al. (2016) report are useful for speculating about this question—although it is really impossible to establish a trend with only three years of data. Notice that the area with the highest number of Cook Inlet-origin fish was Ayakulik-Halibut Bay in 2014 and again in 2015. However, in 2016 the number of Cook Inlet-origin fish in this district was much reduced from the previous year, and a larger number of Cook Inlet-bound sockeye salmon was caught in the Igvak area—which had previously been an area with very few Cook Inlet-origin fish harvested.

When time is brought into the discussion the situation also appears murky. The proportion of Cook Inlet-origin fish caught in the Uyak area is relatively low in all sampling periods in 2014 (Tables 15, 16, and 17 in the Shedd et al. (2016) report, yet the proportion rises to relatively high levels (54% and 32%) in the second and third sampling periods in 2015 (Tables 20 and 21). Then in 2016, the proportion was much reduced, with over 80% of the fish harvested in each period in this catch area belonging to the Kodiak reporting group (Tables 23, 24, and 25). This observed variation shows the danger in looking at just three years and thinking that one sees a trend. Further sampling and study is warranted to understand patterns of temporal variation.

The proportion of Cook Inlet-origin fish in the Ayakulik-Halibut Bay area is relatively low (less than 8%) in the first sampling period (June 1 to June 27) in 2014, but that this rises to 24% in the second period (June 28 – July 25) of that year, and then falls to about 5% in the last sampling period of that year (Tables 39, 40, and 41). However, in the next year this proportion starts high in the first period (28%), rises to 48% in the second period, and then drops to less than 10% in the last period (Tables 43, 44, and 45). In 2016, the first period contains essentially all fish originating from the Kodiak Management Area (>99%; Table 47), but the proportion of Cook Inlet-origin fish again rises in the second period to nearly 42%, and remains high at 28% in the third period (Tables 47, 48, and 49). A person focusing on the similarities would note that the second sampling period for this district was consistently high in all three sampled years, and that is correct. However, someone focusing on the large year-to-year variation in the proportion of Cook Inlet-origin fish would correctly point out that with three data points it is premature to speculate that this pattern will continue into the future.

## Final Comments

The Shedd et al. (2016) report is generally well written, organized, and it offers a reasonable amount of specific details about the actual genetic and statistical analyses. While it is impossible to judge the care, attention to detail, and technical skill that actually went into actual genetic analysis from the written page, the report demonstrates a great deal of technical sophistication. The sections on “Laboratory Quality Control” appears to demonstrate that the authors did take reasonable care to detect and report on obvious mistakes. The Alaska Department of Fish and Game’s Gene Conservation Lab has an excellent reputation for this kind of work. It would be extremely surprising to find that many, if any, outright mistakes were made in either the genetic or the statistical analyses.

The estimates in the Shedd et al. (2016) report seem quite reasonable. Catches were generally dominated by fish that originated within the Kodiak Management Area. Although there are some exceptions, a finer-scale examination shows catches were generally dominated by stocks that originated near the area of harvest. The Shedd et al. (2016) report is technically sophisticated and it contains features that we have found are indicative of a study that is carefully conducted. We found no reason to think that there were any large inaccuracies in the study, and the reported measures of precision provide evidence that the reported estimates are trustworthy and suitable for their intended purposes.

Finally, we note that the estimated harvest rate on Cook Inlet-bound sockeye salmon were below 10% in each year, and substantially below 10% in one year. These harvest rates generally agree with what previous, less accurate studies, have suggested. However, with only three years of measurements, with a large fraction of the catch not sampled, and with large annual variation in those measurements (much larger than the error obtained from the credible intervals), it is very hard to conclude that these results bracket the range of what to expect if the study were to be repeated, or to conclude that these results represent what would happen in a “typical year” (if there ever is such a thing). We recommend that the genetic analyses in this study be conducted to better understand the apparently real variation in stock contribution estimates (both rates and harvests).

These estimates in Shedd et al. would have been more useful for policy discussions if they could be recast in terms of harvest rate rather than contribution rate. In fairness, we note that this was not one of the stated goals for the study, but this appears to be a subject that needs to be addressed in the future. We have tried to crudely approximate the harvest rate using information that was easily accessible to us. While our specific harvest rate estimates can be easily criticized, it is clear that the harvest rate was probably much less than 10% in most study years and almost surely less than about 15% in each year of the study. In the future, we recommend sampling in some of the time and area strata that were not sampled in 2014–2016, or else we recommend some discussion of why specific time-area strata can be





assumed to have very low contribution rates for stocks outside the Kodiak Management Area.

### **Acknowledgments**

We thank Heather McCarty for her help in proposing this review and guidance into the scientific and management issues involved.

### **References**

Barrett, B.M. and C.O. Swanton. 1991. Origins of sockeye salmon in the Kodiak Management Area North Shelikof Fishery, 6 July through 25 July, 1990. Regional Information Report 4K91-3. Alaska Department of Fish and Game, Kodiak, Alaska.

Munro, A. R., editor. 2015. Run forecasts and harvest projections for 2015 Alaska salmon fisheries and review of the 2014 season. Alaska Department of Fish and Game, Special Publication No. 15-04, Anchorage.

Pella, J. and M. Masuda. 2001. Bayesian methods for analysis of stock mixtures from genetic characters. Fishery Bulletin 99:151–167.

Stopha, M. 2017. Alaska fisheries enhancement annual report 2016. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 5J17-04, Anchorage.

Vining, I. 1996. The use of average weight to estimate the level of harvest of non-local sockeye salmon within the Kodiak Management Area during July 6–25, 1983–1995. Regional Information Report 4K96-28. Alaska Department of Fish and Game, Kodiak, Alaska.



## **Appendix A – Biographical Statements for the Authors**

Harold J. Geiger is the chief scientist for the St. Hubert Research Group, a small consulting company in Juneau, Alaska. He previously worked for the Alaska Department of Fish and Game, holding several positions on the salmon research staff of the Division of Commercial Fisheries before retiring in 2007. He held the position of Chief Biometrician in the late 1990s and was the Salmon Research Supervisor for the Southeast Region in the early 2000s. He holds a Master's degree in Statistics from Oregon State University and a PhD from the College of Fisheries and Ocean Sciences at the University of Alaska Fairbanks.

Terrance J. Quinn II, Ph.D. has been Professor of Fish Population Dynamics in the Fisheries Department, College of Fisheries and Ocean Sciences, University of Alaska Fairbanks for 32 years. He obtained his Ph.D. in Biomathematics from the University of Washington in 1980. Dr. Quinn's research focuses on fish population dynamics; estimation of fish and whale abundance; sampling theory; and renewable resource management systems. He is the co-author or co-editor of 4 books and over 100 scientific publications and has shepherded about 40 students through their post-graduate careers. He has been a member of the Statistical and Scientific Committee of the North Pacific Fishery Management Council since 1986 and was a former chair of that body. He is a former member of the Ocean Studies Board of the National Academy of Sciences and served on five of their committees, including two as chair or co-chair. He is an Associate Editor of the Canadian Journal of Fisheries and Aquatic Sciences.

## Appendix B: Some Comments on Stock Mixture Analysis

The earliest techniques for developing these estimates were based on simply capturing migrating salmon, tagging them with a visible tag, and then looking for the tags on spawning fish. By comparison, this is a crude technique as it is hard or even impossible to control for how much effort went into looking for tags. That is, a stock with a small contribution to the mixture could result in a large fraction of the recovered tags if, for example, there was a counting weir on the spawning stream of that stock.

A technique that is somewhat more sophisticated is based on an analysis of scale patterns, and this technique was used extensively in the 1980s and 1990s. The technique was based on the assumption that fish originating from different systems had different growth patterns, which would be represented on the scales of the fish. A large sample of scales needed to be collected for each stock, each year. Then a very large (often over 100 measurements) can be used to characterize the scale pattern for that stock, as the growing conditions that affect the scale patterns change from year to year. A complex statistical algorithm (called a linear discriminate function) is used to look for the specific measurements that show the most differences among stocks. The results from this discriminate function can then be used to classify fish in the fishery mixture to the stock that most likely produced it.

In Lynn Canal in Southeast Alaska, scale patterns were used to estimate the proportions of Chilkat and Chilkoot Lake sockeye salmon in a mixture to both actively manage a gillnet fishery during the fishing season and to study the productivity of the stocks after the fishing season. This was an ideal situation as the number of stocks was small and the patterns were quite different. As the number of stock in the mixture increased beyond just a few, or as the growing conditions among the stocks were more similar, scale pattern analysis estimates become uncontrollably imprecise, and the accuracy of the estimates would also degrade.

In the 1990s, genetic tools showed obvious advantages over other techniques. The first genetic techniques are sometimes called the allozyme techniques. Although these were time consuming and expensive, one of the main advantages was the individual stocks no longer needed to be characterized each year, as the genetic character of the stock changed slowly, if at all. Later, microsatellite techniques replaced allozyme techniques for a number of technical reasons. Finally, the SNP (Seeb et al. 2011) approach, used in this study, is usually thought of as the current state of the art and most cost-effective method of conducting a complex stock mixture analysis.



## Reference

Seeb, J. E., G. Carvalho, L. Hauser, K. Naish, S. Roberts, and L.W. Seeb. 2011. Single-nucleotide polymorphism (SNP) discovery and applications of SNP genotyping in nonmodel organisms. *Molecular Ecology Resources*, 11: 1–8. doi:10.1111/j.1755-0998.2010.02979.x

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*International Program for the study of Salmon Ecological Genetics*

Kodiak Salmon Work Group  
Kodiak Regional Aquaculture Association  
104 Center Avenue  
Kodiak, Alaska 99615

September 8, 2017

Attention: Heather McCarty

To whom this may concern,

Thank you of the offer of a contract to conduct a detailed evaluation of the recent ADFG report on the stock composition of sockeye harvested in the KMA. I decided not to accept the offer, partially because the questions asked were slightly outside of my area, but I'm happy to provide my thoughts on the genetics aspects of research.

First I'll comment on the veracity of the ADFG lab and the analyses used in the report. The ADFG lab continues to be the lead scientific entity doing this sort of applied research in North America and probably the world. This is an unbiased statement that I can make after working with similar agencies in other NPAFC and European nations as well as with (and sometimes against) numerous other state and federal labs in the USA. ADFG publishes more papers through the public peer review process than do other agencies (especially federal agencies in Alaska), demonstrates leadership in quantitative and laboratory analyses, and goes to more effort than other labs to incorporate spatio/temporal standardization in sample selection as well as a blind QC through paired sample reruns.

There are reasons for this veracity that date back to spread sheet errors made by ADFG scientists decades ago; these errors brought agony to various stakeholders during the BOF process. Also, the ADFG geneticists developed experience by successfully working with ten or more diverse-thinking stakeholders during the contentious WASSIP process (that probably took a decade). The ADFG geneticists prefer to work doubly hard to get things right the first time rather than to spend efforts to explain spreadsheet errors later.

As a result, and after a scan of methods and results, I have no doubt that the genetics results faithfully report the stock composition of the samples analyzed. The samples analyzed appear to be reasonably selected to best represent the samples taken during prosecution of the fisheries.

However, all salmon fisheries like this have annual and seasonable variables that can change stock composition of the harvest: tides, temperatures, and/ or relative abundance and migration routes of the contributing stocks. The KMA fisheries appear to have these and other variables including the timing and duration of pink salmon opportunities. ADFG has generally adopted a three year acceptable minimum timespan for studies like this in order to best document trends. But this report estimates



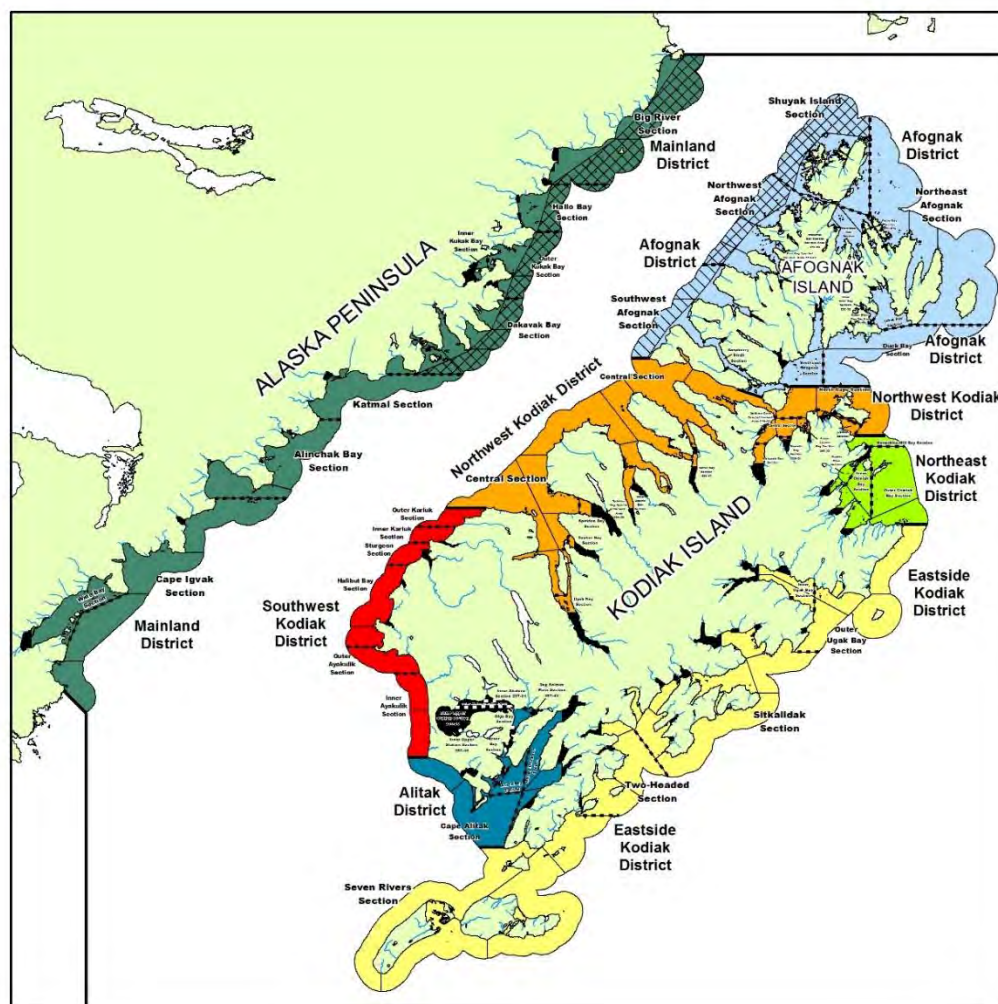
substantially variable interception of out-of-area stocks during the years 2014-2016. No trend is apparent, and more years of study are needed to distinguish factors that might explain the low interception of Cook Inlet stocks observed in 2014 compared to the high interception of Cook Inlet stocks in 2015.

I'll leave it to others to evaluate the best possible sampling strategies and evaluate the need for further study. But I have no doubt that these genetics results faithfully characterize the composition of the samples.

Sincerely,

*James E. Seeb, PhD  
Research Professor  
School of Aquatic and Fishery Science  
University of Washington  
206 685 2097*





## Kodiak's Salmon Fishery and ACR #11

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Kodiak Seine Association in conjunction with the Kodiak Salmon  
Work Group

10/2/2017



Kodiak Seiners Association  
P.O. Box 8835  
Kodiak, AK 99615

October 2, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

Dear Chairman Jensen and Board Members:

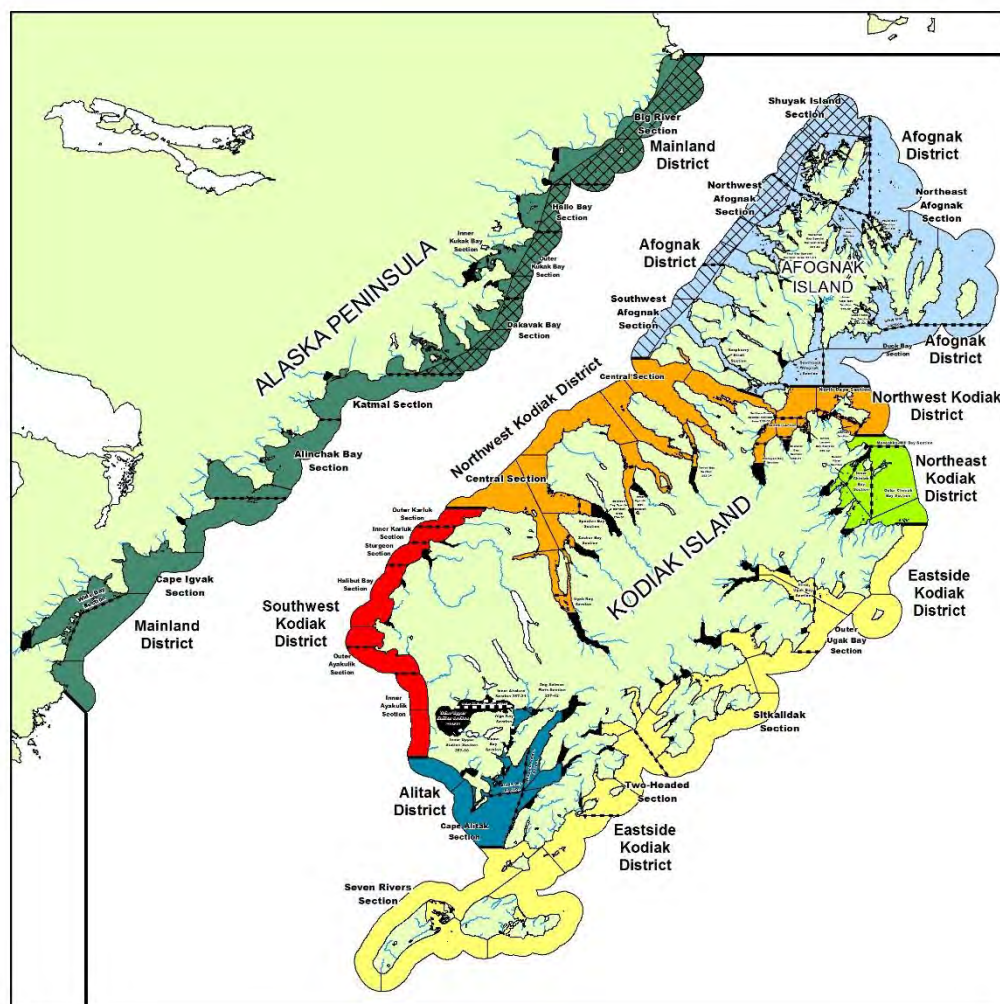
In conjunction with the Kodiak Salmon Workgroup's efforts to provide context and information about the recent Genetic Composition of Sockeye in the Kodiak Management Area report, the Kodiak Seiners Association is submitting the executive summary and primary text of a comprehensive review of the historical development of Kodiak's commercial fisheries, the implementation of area management plans and the complications of managing Kodiak's multitude of salmon producing streams and 5 species. The review is written by former Kodiak Area management biologist Kevin Brennan. (We understand that the appendix to Brennan paper will be submitted by the Northwest Setnetters Association.)

The Brennan paper is lengthy and detailed. Nevertheless, the paper illustrates how complicated management of the Kodiak area can be and it establishes three overarching facts for the Board's consideration. Kodiak fishermen have captured Cook Inlet bound sockeye since the beginnings of the fishery and the yearly history shows that the catches of Cook Inlet bound sockeye vary substantially in magnitude, location and time. Kodiak's management plans are based on the availability of local stocks and work well together to provide both escapement and fishing opportunity. And finally, Kodiak salmon fisheries are not expanding and they are not targeting Cook Inlet fish.

It is apparent, based on the ACR 11 submission and informal conversations, that many Cook Inlet fishermen and advocates simply don't understand the Kodiak fishery. For those that want to constructively assess the issue at hand, the Brennan paper is the foundation for developing a working knowledge of how salmon management works in Kodiak.

Sincerely yours,

Nathaniel Rose, President



## A Review of Agenda Change Request #11 and the ADF&G Kodiak 2014-2016 Sockeye Genetic Mixed Stock Analysis technical Fishery Manuscript, with recommendations to the BOF.

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Kevin Brennan, Dave Prokopowich, and Larry Malloy

9/25/2017

# Summary of Brennan et al. by the Kodiak Salmon Work Group

## Conclusions

- The new Mixed Stock Analysis for Kodiak sockeye salmon fisheries has limited applicability, and is not sufficient reason to change current KMA management. The salmon fisheries in the KMA are long-standing Mixed Stock Fisheries, with an unpredictable component of nonlocal salmon.
- There are no conservation emergencies for salmon fisheries within the KMA, including nonlocal fish bound for Cook Inlet or Chignik.
- The 2014-2016 KMA sockeye genetic MSA report does not provide sufficient cause to accept ACR#11 and schedule an out-of-cycle regulatory meeting for the KMA. ACR#11 does not meet any of the three BOF criteria for acceptance.
- The BOF deliberation of any action pertaining to the KMA salmon fisheries should next occur during the regular BOF Kodiak Finfish meeting cycle. Sufficient time is required for complete evaluation of the data and findings in the report, and for continued research and discussion.

**The mixed stock nature of KMA salmon fisheries and the KMA harvest of nonlocal Cook Inlet sockeye salmon are well known, not new.**

## Part 1: Mixed Stock Fishery (Page 8)

Based on location and oceanography, mixed Pacific salmon migrate through the Kodiak Management Area, and are harvested in KMA salmon fisheries. The mixed stock nature of KMA salmon fisheries and the KMA harvest of nonlocal Cook Inlet sockeye salmon are well known, not new.

## Part 2: Development of Kodiak Salmon Management of a Mixed Stock Fishery (Page 13)

Allocation issues have at times dominated Kodiak finfish BOF actions. Current management plans for the KMA were formed within this allocative crucible.

KMA commercial salmon fishery management plans are complex and were developed with the potential for harvest of nonlocal sockeye as a known issue. With early-run sockeye, pink and chum, late-run sockeye and coho salmon runs showing at different systems at different times through a long fishing season, a blended management approach was formed. Targeting of nonlocal salmon was minimized by focusing fishing opportunity only on the abundance of local salmon.

**Targeting of nonlocal salmon was minimized by focusing fishing opportunity only on the abundance of local salmon.**

In **1978**, the Board of Fisheries passed the first Kodiak salmon management plan, the allocative *Cape Igvak Salmon Management Plan* (5 AAC 18.361). In **1987**, based on increasing allocative disputes among set gillnet fishermen in the Alitak District, the Kodiak area management team wrote up and brought to the BOF a local stock management plan for the Alitak District.

In March **1990**, the BOF considered two main Kodiak management plans. The first was the *Westside Kodiak Salmon Management Plan* (5 AAC 18.362); adopted into regulation was the blended management chronology of the major salmon fisheries in the Northwest Kodiak and Southwest Kodiak Districts. The *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363) is an allocative plan meant to contain KMA salmon fisheries in the North Shelikof yet still provide for traditional opportunities to harvest high quality local pink and chum salmon.

Mixed Stock Analysis continued on the July North Shelikof sockeye harvest and, in **1993**, MSA was expanded to include the entire KMA except for the Cape Igvak fishery. The result was estimates of extremely variable numbers of nonlocal Cook Inlet sockeye stocks to KMA sockeye harvests.

Between **1990** and **1999**, five more Regulatory Management plans were developed by the Kodiak area management team and adopted by the BOF. **During those deliberations, the mixed stock nature of KMA sockeye harvests and the potentially large harvest of Cook Inlet sockeye in various places around the KMA were known facts and often discussed.**



### Part 3: Agenda Change Request Criteria and ACR#11 (Page 23)

#### *Criteria 1(A): The BOF may accept an ACR for a fishery conservation purpose or reason.*

There isn't a Conservation Concern for any sockeye salmon stock in the Cook Inlet or Kodiak Management Areas. Harvestable surplus for Upper Cook Inlet (UCI) sockeye stocks are consistently forecast.

#### *Criteria 1 (B): The BOF may accept an ACR to correct an error in a regulation.*

There are no errors in current regulations governing the KMA salmon fisheries.

#### *Criteria 1 (C): The BOF may accept an ACR to correct an effect on a fishery that was unforeseen when a regulation was adopted.*

There hasn't been any 'effect on a fishery' demonstrated by ADF&G's new MSA study. The KMA harvest of nonlocal sockeye is not new or unknown. It has not been demonstrated that KMA harvest of nonlocal sockeye has in any negative way affected or endangered any UCI sockeye stocks.

#### *Criteria (2): The board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the board to be compelling.*

UCIDA states in ACR #11 that "This ACR is regionally allocative." Is there compelling new information? The new genetic MSA contains recent nonlocal sockeye harvest estimates, yet they are very similar to estimates provided to the Board in 1994, 1995 and 1996.

The negative effects of adopting the UCIDA umbrella plan are not discussed, in the ACR or the new genetic MSA report. These would include extensive KMA fishery closures from late June through July and resulting lost harvest opportunity, reduced salmon product quality, increased gear conflicts, and ultra-conservative management in the face of loss of traditional fishing patterns. **The economy of Kodiak would be severely, negatively impacted.**

### Part 4: Concerns for Upper Cook Inlet Sockeye (Page 30)

Susitna is a Stock of YIELD concern, and is not a conservation concern under present day management of Cook Inlet and KMA fisheries. The Action Plan for Susitna sockeye has not included reducing the harvest from Lower Cook Inlet or KMA fisheries, though it does identify many other sources of concern, such as invasive



species (Northern Pike), loss or alteration of freshwater habitat, change in water quality and quantity, pathogens and freshwater fisheries.

### **Part 5: Limitations of the Genetic Study** (Page 36)

The genetic MSA report shows a snapshot of events, with some significant limitations. The limits are suggested by the authors of the report, and should be heeded. Limited funding limited the scope of the study.

### **Part 6: An Imperfect Design** (Page 41)

The study design was 'imperfect' to answer many biological and allocative questions regarding KMA bycatch of nonlocal sockeye.

Temporal strata failed to recognize important dates within KMA fisheries management; three temporal strata were too few since monthly estimates of stock compositions may not be representative and stock composition is not static as salmon migrate through the KMA. In addition, changing time strata among the three study years confounds the results.

**Temporal strata failed to recognize important dates within KMA fisheries management and the geospatial strata used are overly broad**

Similarly, the geospatial strata used are overly broad. The way data was pooled may also obscure important or essential information. The manner in which samples were later subsampled and data was pooled to fit temporal strata will affect how the sample data can be used.

### **Part 7: More Uncertainty** (Page 44)

The information provided by the new KMA sockeye genetic MSA may be misused, and it may create more uncertainty rather than less.

Some may believe that KMA local salmon stocks could all be harvested within 'terminal' fishing areas or 'inside the capes'. Long experience has shown that allowing salmon to enter the fresher (less saline), warmer, inside waters of the KMA will very quickly lead to loss of quality, or to complete loss to the fishery as the fish home-in and refuse to move out of closed water sanctuaries.

## Part 8: Evaluation of Application of BOF Policies and Criteria (Page 45)

Considering the *Policy for Management of Mixed Stock Salmon Fisheries*:

- The stated goal of the policy include not only conservation of salmon and habitat, it also seeks to ensure “the sustained economic health of Alaska’s fishing communities”. **The proposed UCIDA umbrella plan would devastate the Kodiak economy.**
- KMA commercial salmon fishermen already bear a disproportionate Conservation Burden for Cook Inlet sockeye stocks through the regulations for the *North Shelikof Strait Sockeye Salmon Management Plan*. The burden of conservation for relatively ‘healthy’ Cook Inlet salmon stocks should not be prioritized above that of KMA local salmon stocks.

**KMA commercial salmon fishermen already bear a disproportionate Conservation Burden for Cook Inlet sockeye stocks through the regulations for the *North Shelikof Strait Sockeye Salmon Management Plan*.**

- The KMA incidental harvest of nonlocal sockeye is neither new nor expanding. In fact, the **participation by gear groups has decreased substantially.**
- BOF findings regarding the Mixed Stock Policy states that Alaska's salmon industry appropriately relies upon stable existing fisheries, most of which harvest mixed stocks. **Kodiak's established management program for the harvest and conservation of mixed stocks has been successful in sustaining and promoting Kodiak's century-old industry.**

Considering the *Policy for the Management of Sustainable Fisheries*:

- The stated goals of the policy include not only conservation of salmon and habitat, but it also seeks to ensure “the sustained economic health of Alaska’s fishing communities.” **There is little doubt that significant changes to KMA’s long-standing salmon management plans would negatively change the economic health of Kodiak communities.**
- Definitions of Stocks of Concern and associated Action Plans inform our conclusion that **there is no concern for the health of Susitna sockeye based on nonlocal harvest.**



## **A Review of Agenda Change Request #11 and the ADF&G Kodiak 2014-2016 Sockeye Genetic Mixed Stock Analysis technical Fishery Manuscript, with recommendations to the BOF.**

### **EXECUTIVE SUMMARY:**

Introduction: This report is written in response to the December 2016 publication of the report *Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016* (Shedd, et al, 2016), and to the UCIDA Agenda Change Request (ACR #11) and proposed umbrella management plan for Kodiak Management Area (KMA) salmon fisheries. Additional restrictions are being sought, to further limit the potential incidental harvest of Cook Inlet sockeye stocks in KMA salmon fisheries.

This review was authored by former ADF&G Kodiak salmon Area Management Biologists Kevin Brennan, Dave Prokopowich and Larry Malloy, who were part of the Kodiak Area management team for commercial and subsistence salmon fisheries from about 1972 through 2005. In those 34 years, in addition to the duties that accompany management of an Alaska commercial salmon fishery, we consistently participated in Advisory Committee meetings, Board of Fisheries (BOF) regular and special meetings, BOF committee work, BOF approved Work Group or Task Force meetings, etc. We were actively involved in Kodiak salmon management from before Limited Entry, and we witnessed or participated in the development of many important BOF Policies and Criteria. We witnessed first-hand many allocative disputes, including the fish fight between Upper Cook Inlet and Kodiak salmon fishery stakeholders.

We were tasked with reviewing both the new KMA sockeye genetic Mixed Stock Analysis (MSA) and the subsequent ACR from UCIDA. We were asked to provide a historical look at the development of current KMA salmon management plans, issues regarding directed or incidental nonlocal salmon harvests in KMA salmon fisheries, the issues or subjects discussed in the new MSA report and in ACR #11, our perspective on the MSA report and ACR, and our suggestions for research, management and BOF actions. This review is not intended to be comprehensive or statistically robust. Our review is not written as a scientific report. We offer a review with insights on the past and ideas for the future.

For the reader's ease, we begin with brief conclusions and reasons; we then discuss ACR #11 both generally and specifically, and then provide additional discussion of the new Kodiak sockeye genetic Mixed Stock Analysis (Shedd, et al, 2016a) and relevant topics.

### **CONCLUSIONS OF OUR REVIEW**

The new MSA for Kodiak sockeye salmon fisheries has limited applicability, and is not sufficient reason to change current KMA management. The salmon fisheries in the KMA are long-standing Mixed Stock Fisheries, with an unpredictable component of nonlocal salmon. There are no conservation emergencies for sockeye salmon fisheries within the Cook Inlet Management Area (CIMA), including nonlocal harvest of sockeye bound for Cook Inlet. There is limited new data.

Sufficient time is required for complete evaluation of the data and findings in the report, for the Department to use the report finding as the study planners intended, and for continued or

additional research, study and discussion as needed to clarify issues, background, problems, goals and objectives or possible regulatory or non-regulatory solutions.

Sufficient time is required to fully and fairly address any stakeholder concerns that have arisen based on the new MSA study. The BOF deliberation of any action pertaining to the KMA salmon fisheries should next occur during the regular BOF Kodiak Finfish meeting cycle (fall/winter 2019/2020). We encourage additional use of these and new genetic studies to further inform the BOF and ADF&G.

We recommend and encourage the BOF to give stakeholders the opportunity to meet, get educated, ask questions, define information needs, discuss and thereby inform ADF&G and the BOF, at the regular meeting cycle as they have in the past. We feel it is most appropriate to shortstop three years of ACRs by conforming with previous BOF action to deny the consideration of ACR #11 at a special out-of-cycle BOF meeting. Instead all such ACRs with allocative proposals for KMA salmon fisheries should be deferred for further study and reporting during the regular BOF Kodiak Finfish meeting cycle.

Additional points:

- The 2014-2016 KMA sockeye genetic MSA report does not provide sufficient cause to accept ACRs and schedule an Out-of-Cycle regulatory meeting for the KMA. ACR #11 does not meet any of the three BOF criteria for acceptance. BOF movement toward immediate regulatory action to limit KMA commercial salmon fisheries based on this report would be hasty and unfounded.
- We believe that the BOF should authorize additional analysis and study of all Mixed Stock Analyses that have been conducted in the KMA. A focused report concerning nonlocal salmon in the KMA should be available to the BOF and stakeholders prior to consideration of possible regulatory action on KMA commercial salmon fisheries.
- We feel the State of Alaska and stakeholders will be best served by allowing sufficient time for a thorough review and analyses of the issue by ADF&G and the BOF. The issue of nonlocal harvest of salmon is a statewide concern, and any actions regarding the Kodiak incidental harvest of nonlocal salmon will reflect on ALL salmon fisheries within the State. ADF&G could report on their progress and problems to the Board at scheduled fall work sessions.
- We believe that this issue, along with any allocatively-based ACRs that may be submitted during the BOF's 2017-2019 fall Work Sessions, should be tabled by the BOF for consideration during the regularly scheduled BOF cycle for consideration of Kodiak Finfish issues and proposed regulatory changes.

Nature has 'allocated' nonlocal salmon to Kodiak salmon fisheries. It is known that nonlocal sockeye migrate through the KMA. The location, timing, and magnitude of KMA incidental harvest of nonlocal Cook Inlet-bound sockeye salmon can't be forecast. It currently can't be identified or tracked inseason. The positive effects for Cook Inlet sockeye stocks escapement or harvest from restricting KMA fisheries to limit nonlocal sockeye harvests cannot be identified or quantified.

**Part 1 - KMA salmon fisheries are Mixed Stock Fisheries, with nonlocal sockeye as an expected component of KMA sockeye harvests.**

Based on location and oceanography, mixed Pacific salmon must migrate through the Kodiak Area. The KMA is juxtaposed between the Prince William Sound, Cook Inlet, and Chignik management areas. Predominant ocean currents bring Pacific salmon to the KMA annually during their juvenile migrations and during their inshore, spawning migrations. The Shelikof Strait is a major migratory pathway.

Nonlocal salmon swim around and through KMA waters, and are harvested in KMA salmon fisheries. And Kodiak-bound salmon are undoubtedly harvested in fisheries within other Management Areas.

Limited migratory information can be gleaned from the new genetic MSA. During the study, more Cook Inlet salmon than perhaps expected bypassed the more northern Kennedy Entrance to Cook Inlet, instead swimming south along the eastside of Kodiak and rounding the southern tip of Kodiak Island to be found in south Shelikof area salmon fishery harvests. There is no answer to why, how many, or when nonlocal stocks will appear in KMA fishery locations.

The mixed stock nature of KMA salmon fisheries and the KMA harvest of nonlocal Cook Inlet sockeye salmon are known, not new. Determining Stock of Origin was a goal of early tagging studies and research. It was observed in the 1920s that commercial sockeye harvests attributed to Karluk were strong throughout July but there was a definite lull between early escapement (June) and late escapement (August and September) of sockeye (or bimodality). For many years, a group of Federal researchers and managers believed that the Karluk sockeye run was actually uni- or trimodal, with a large Karluk middle run (or large portion of the single run) in mid-season (July). Since the 1970s, local salmon managers have known that the harvest of nonlocal Cook Inlet sockeye near Karluk was the likely explanation for the 'lost middle run' to Karluk.

## **Part 2 - Development of Kodiak Salmon Management: The Allocative Crucible**

Nonlocal salmon harvest is an allocative issue, intensified by Limited Entry and Area Registration for Alaska salmon fisheries. Both caused a "them against us" attitude. Allocation issues have at times dominated, and have been a dominant feature of Kodiak finfish BOF actions. Current management plans for the KMA were formed within this allocative crucible. KMA commercial salmon fishery management plans are complex and were developed with the potential for harvest of nonlocal sockeye as a known issue. Harvest strategies employed since the 1970s became more complicated. Limited Entry permits were based on restricting the holder to fishing within a geographic area, not to fishing only on salmon stocks local to that area. In 1980 Limited Entry permits for Kodiak salmon fisheries stabilized to near the present numbers: 375 purse seine, 188 set gillnet, and 31 beach seine permits are available. Participation varies; not all permits are fished each year.

With early-run sockeye, pink and chum, late-run sockeye and coho salmon runs showing at different systems at different times through a long fishing season, a blended management approach was formed. Certain locations were fished to target certain local salmon species at certain times of the year. Targeting of nonlocal salmon was minimized by focusing fishing opportunity only on the abundance of local salmon. An area-wide pink salmon harvest strategy was developed through the 1970s and 1980s. It utilized an early pink salmon fishery period from July 6 to 25. Mixed early returns are found in outside waters and they are high quality, ocean-bright salmon. Early pink salmon returns build quickly, almost exponentially, through July.

Pink salmon fisheries in the KMA are weekly ‘pulse’ style fisheries. Based on the preseason forecast for pink salmon run strength, weekly fishing periods of 2½ to 4½ days duration are pre-announced. After July 25, there is escapement and buildup estimates along with harvest data to determine if weekly fisheries in various locations require more or less fishing time. Pulse fishery management for KMA pink salmon during the mid-season time period reduces potential bycatch of nonlocal sockeye. We feel that is an important consideration.

In 1978, the Board of Fisheries adopted the first Kodiak salmon management plan, the allocative *Cape Igvak Salmon Management Plan* (5 AAC 18.361). The Cape Igvak area was historically used by Kodiak and Chignik fishermen prior to limited entry. After Chignik fishermen were not allowed to cross Area boundaries, they complained to the BOF that Cape Igvak fish were likely Chignik-bound sockeye salmon. Because of the long tradition of fishing Cape Igvak, the BOF did not close the fishery. Instead an allocation plan was developed, based first on the size of forecasted sockeye runs to Chignik. Defined biological (escapement at Chignik) and allocative (Chignik sockeye harvests) requirements must be achieved before Kodiak fishermen are allowed opportunity to fish at Cape Igvak. Escapement must be assured, then minimum Chignik harvests must be assured, then Cape Igvak can open. The Cape Igvak management plan covers only a small portion of the KMA and is only in effect from June through July 25 (after, fishing time is only allowed on local pink, chum or coho stocks). The Cape Igvak plan was unpopular with Chignik fishermen and change or abolishment of the plan has been the subject of proposals and discussion at nearly every Kodiak finfish BOF meeting since 1978, though with few, relatively minor changes occurring.

In 1987, based on increasing allocative disputes among set gillnet fishermen in the Alitak District, the Kodiak area management team wrote up and brought to the BOF a local stock management plan for the Alitak District. Thus began the process of ‘institutionalizing’ current KMA salmon harvest strategies and management plans for each District and Section of the KMA, by identifying the dominant (targeted) local salmon stock that can drive salmon fishery management throughout the fishing season. These plans provide transparency as to why a section may open during any time period during the season, so that processors and fishermen might better understand the complicated management schemes that had developed over the prior 20 to 30 years. The important ‘general’ weekly pink salmon openings between July 6 and 25 were incorporated into these blended management plans.

In 1988 there was an unusual fishery that developed in the northern half of Shelikof Strait. KMA purse seiners were able to see north-bound sockeye salmon jumping and moving far offshore. Weather along the Shelikof Strait was good enough for long enough that purse seiners operated far offshore. In a period of 2-3 weeks in July, hundreds of thousands of large size sockeye salmon were caught and delivered to Kodiak processors. Stock of Origin quickly became an issue, and there was a call for Mixed Stock Analysis and potential KMA fishery restrictions if the harvest proved to be of nonlocal, Cook Inlet origin. 1989 was a lost year because of the Exxon Valdez oil spill. There were no salmon fisheries allowed in the oil polluted waters of the Shelikof, so there was no repeat of the unusual fishing pattern of July 1988.

In March 1990, the BOF had two main Kodiak management plans to consider. The first was the *Westside Kodiak Salmon Management Plan* (5 AAC 18.362). The blended management chronology of the major salmon fisheries in the Northwest Kodiak and Southwest Kodiak Districts was adopted into regulation. There are multiple strong salmon stocks in 17





management units (Sections), with some sections designated seine only and some mixed seine/set gillnet fishing sections. Again, clarity was desired and the plan provides a management framework for the various local stocks within these large, complicated fisheries.

The *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363) was also created in March 1990. Through the North Shelikof SMP, KMA fishermen bear a substantial burden of conservation concerning UCI sockeye stocks. This allocative plan, in effect from July 6-25, was meant to contain KMA salmon fisheries in the North Shelikof yet still provide for traditional opportunities to harvest high quality local pink and chum salmon. The plan was created with sockeye harvest ‘triggers’ for eight sections bordering North Shelikof Strait; when managers determine that the sockeye harvest trigger would be exceeded, then further salmon fisheries in that management unit would be restricted to inshore “Shoreward Zones” and the offshore “Seaward Zone” would remain closed through July 25. In contrast to the Cape Igvak plan, there is no consideration of Cook Inlet run strength. Based on Mixed Stock Analysis using run timing, age composition markers and fish lengths, 90-95% of the 1988 North Shelikof harvest of sockeye was assigned as Cook Inlet sockeye. When determining if sockeye harvest triggers will be achieved, all sockeye are counted, as if the entire North Shelikof sockeye harvest are Cook Inlet fish.

Cook Inlet-Kodiak allocative squabbles continued, despite the passage of a restrictive, allocative management plan. The Board discussed the North Shelikof fishery at every regular and some special meetings through at least 1996, and ever since at most regular Kodiak finfish BOF meetings. Mixed Stock Analysis continued to be conducted on the July North Shelikof sockeye harvest and, in 1993, MSA was expanded to include the entire KMA except for the Cape Igvak fishery. Various methods were used for the 1990-1993 MSA and, with agreement by ADF&G staff at Headquarters, Kodiak and Cook Inlet, analyses using comparative Average Weights was chosen. There are significant differences in average weights of Kodiak, Cook Inlet and Chignik. This method allowed ADF&G to look back at past KMA harvests and estimate the proportions and numbers of nonlocal sockeye in KMA commercial harvests. ADF&G could also deduct the exact stock of origin, based on weights, timing, etc. It was the best science available and multiple studies were presented to the BOF between 1993 and 1996. And the common result was estimates of sometimes substantial but extremely variable numbers of nonlocal Cook Inlet sockeye stocks in KMA sockeye harvests.

Between 1990 and 1999, five more Regulatory Management plans were developed by the Kodiak area management team, and deliberated upon and adopted by the BOF. During those deliberations, the mixed stock nature of KMA sockeye harvests and the potentially large harvest of Cook Inlet sockeye in various places around the KMA were known facts and often discussed. However, the management plans dictate that only LOCAL salmon stocks will drive possible KMA fishing time (except in the Cape Igvak and the North Shelikof fisheries). KMA salmon management recognizes but doesn’t focus on incidental nonlocal salmon harvests.

### **Part 3 – Agenda Change Request Criteria and ACR #11**

United Cook Inlet Drift Association has submitted an Agenda Change Request (ACR #11), based on the ‘new’ information in the recent KMA genetic MSA. ACR #11 asks the BOF to consider an out-of-cycle proposal for a new salmon management plan in the Kodiak Management Area, to

limit nontraditional harvest of nonlocal sockeye in KMA commercial salmon fisheries. There are criteria for changing the Board of Fisheries agenda (5 AAC 39.999):

Criteria 1(A): The BOF may accept an ACR for a fishery conservation purpose or reason.

- There isn't a Conservation Concern for any sockeye salmon stock in the Cook Inlet or Kodiak Management Areas. Harvestable surplus for Upper Cook Inlet (UCI) sockeye stocks are consistently forecast. Commercial fisheries have been annually prosecuted in Lower and Upper Cook Inlet. There is no chronic inability to meet UCI sockeye escapement goals.

Criteria 1 (B): The BOF may accept an ACR to correct an error in a regulation.

- We feel there are no errors in current regulations governing the KMA salmon fisheries. The KMA salmon fishery has been identified as a Mixed Stock Fishery, and past studies have revealed similar numbers/percentages of CI sockeye present in KMA harvests, as did the new Kodiak sockeye genetic MSA study. KMA regulatory Salmon Management Plans (SMP) were written, discussed, and passed by the BOF with that knowledge. An error in regulation is more likely with hasty, ill-prepared, unjustified or politically-motivated proposed regulation changes. An issue of this importance and complexity deserves adequate consideration prior to changes to traditional and historical fisheries, changes which would also bring severe economic consequences to the Kodiak salmon fishery

Criteria 1 (C): The BOF may accept an ACR to correct an effect on a fishery that was unforeseen when a regulation was adopted.

- There hasn't been any 'effect on a fishery' demonstrated by ADF&G's new MSA study or report. There was a lot of data, yet little to no analyses. The KMA harvest of nonlocal sockeye is not new or unknown. The presence of relatively large numbers of Cook Inlet salmon within KMA commercial salmon harvests during any year cannot be categorized as "unforeseen", for the reasons stated throughout this review. It has not been demonstrated that such harvests have in any negative way affected or endangered any UCI sockeye stocks. In the absence of any KMA fishery, the actual effect on UCI stocks is unknown and in our opinion is undeterminable.

Criteria (2): The board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the board to be compelling. (emphasis added).

- UCIDA states in ACR #11 that "This ACR is regionally allocative." So, is there compelling new information? The new genetic MSA contains recent nonlocal sockeye harvest estimates, yet they are very similar to estimates provided to the Board in 1994, 1995 and 1996. We do not believe that the use of a different method for an MSA is compelling enough to consider this allocative ACR out of the regular BOF meeting cycle.

We have issues with the issues presented by UCIDA in ACR #11. Additional questions are asked on the official Board of Fisheries Agenda Change Request Form, and there are misstatements and untruths contained in the given explanations and descriptions.

- The "problem" stated appears to be "the harvest of Cook Inlet or other non-local salmon stocks in the Kodiak Area" (from ACR #11, question 2). Yet, in no way was there evidence given of an actual problem. It appears the problem is that there's never enough salmon.

A defined purpose for a restrictive management plan is given by UCIDA, "allowing traditional fisheries on local stocks while minimizing directed harvest of Cook Inlet or other



nonlocal salmon stocks” (ACR #11, question 3; emphasis added). There are no directed harvests on nonlocal salmon in the KMA, except for the long-standing Cape Igvak fishery. All other KMA salmon fisheries are directed toward the harvest of local salmon runs.

UCIDA recognizes that “incidental harvest” will occur during fisheries managed for local KMA stocks. However UCIDA also seeks to “prevent a repetition of nontraditional harvest patterns which occurred during 1988, and during the past few years” (emphasis added).

The ACR seeks to prevent the repetition of something that has not occurred since 1988. There is no evidence of any repetition of 1988 fishing patterns, nor is there any evidence of nontraditional harvest patterns in KMA salmon fisheries in the past few years.

- The fishery Conservation purpose or reason appears to be that currently ADF&G does not use precise genetic stock estimates in development of escapement goals, management plans or brood tables (ACR #11, question 4a). However, the KMA genetic MSA was just finished and published. TIME is needed to attempt to use data from the recent MSA.
- The error in regulation seems to be ‘the inaccurate or unfair burden of conservation’ (ACR #11, question 4b). UCI sockeye escapements are being met, Cook Inlet salmon fisheries are allowed, so the conservation burden is minimal. There is not a known conservation problem; Susitna sockeye are a Stock of Yield Concern only.

There is already a very LARGE conservation burden on KMA fishermen, the *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363), for which no positive net effect on UCI stocks has ever been demonstrated. Over half of the Mainland and Afognak Districts are subject to fishery closures in July based on the 1988 KMA harvest of nonlocal Cook Inlet salmon. Many KMA stakeholders would say that the conservation burden is currently unfairly slanted against KMA fishermen.

- As an effect that was unforeseen, UCIDA states that “It was only recently, as a result of genetic testing and analysis, that the real magnitude of the harvest of Cook Inlet and other non-local salmon stocks in the Kodiak Management Area became known” (ACR #11, question 4c). Just because they may have forgotten about, or were too young to know about, the Mixed Stock Analyses of KMA sockeye harvests in the 1990s, doesn’t mean that that information doesn’t exist. The magnitude of nonlocal salmon harvests was known and was before the Board when KMA management plans were deliberated and adopted, but a new MSA has inspired a new round in the ongoing Cook Inlet-Kodiak fish fight.
- ACR #11 states that, should this issue not be solved prior to the 2019/2010 regular BOF meeting cycle (the next in-cycle BOF meeting to consider Kodiak finfish issues) then the issue will lead to “increased conflicts, inappropriate biological assessments (escapement goals), economic stress, perhaps inappropriate management plans and inappropriate use of Emergency Order authority” (ACR #11, question 5). Solving the issue of nonlocal salmon harvest within an area may be a completely different thing than massive area-wide restrictions and complete change to KMA’s traditional salmon fishery management and harvest opportunities, which would result from adoption of the proposed UCIDA umbrella plan. Should the proposed UCIDA ‘Solution’ be adopted, there would still be increasing conflict, increased economic stress and the potential for inappropriate assessments, management plans, or fishery actions (EOs).

- This was not a ‘first opportunity to look’ at KMA incidental harvests of nonlocal, Cook Inlet sockeye, as suggested by UCIDA (ACR #11, question 7). MSA estimates were conducted and reported to the BOF and public. We do not know much more about the timing, location, extent and magnitude of the harvests of Cook Inlet origin salmon stocks. There’s just not enough information. The current MSA study and report has provided limited results from a limited sampling plan that was NOT intended to provide nonlocal salmon harvest rates, but rather the sockeye stock components of selected KMA fisheries during limited time periods. The study cannot infer an absolute or precise harvest rate of nonlocal sockeye in KMA fisheries.
- UCIDA clearly states that theirs is NEW proposal, “not previously... before the board” and that it was “modeled after existing portions of both the Kodiak and Cook Inlet Alaska Administrative Code themes and regulations” (ACR #11, question 9). The proposed UCIDA restrictive umbrella plan from ACR #11 is not a new proposal. It is modeled after proposals from the November 1995 Kodiak Finfish BOF meeting and prior BOF meetings (Appendix E).

At the November 1995 Kodiak Finfish meeting, there were several such proposed changes to KMA fisheries based on the Average weight MSA conducted by ADF&G. And the Board did not adopt any further restrictions. In the Summary of Actions taken at that meeting (Appendix E), it clearly states that “the past Board had pretty much resolved the issue in 1989 utilizing the best information available. And that information has not changed to this point. The effort and catch has increased in the disputed areas due to local management practices in other areas of Kodiak. And it is difficult to determine if this (is) a new and expanding fishery when both this area and Cook Inlet fisheries are at an all-time high. The overriding reason for apparent increase in intercept of Cook Inlet stocks seems to be directly related to the density and strength of that run” (emphasis added).

The results of the 2014-2016 Kodiak GSI could be misused to try to determine specific harvest rates or trends in improperly determined temporal or spatial fishery strata harvests.

The negative effects of adopting the UCIDA umbrella plan are not discussed in the ACR or the new genetic MSA report. The negatives would include extensive KMA fishery closures from late June through July and resulting lost harvest opportunity, reduced salmon product quality, increased gear conflicts, increased likelihood that Kodiak sockeye and pink salmon escapements would exceed the appropriate levels that have been determined by ADF&G and the BOF, and ultra-conservative management in the face of loss of traditional fishing patterns. The economy of Kodiak would be severely, negatively impacted.

#### **Part 4 - Concerns for Upper Cook Inlet Sockeye?**

The KMA harvest of nonlocal salmon has not created a biological problem with Cook Inlet sockeye production. It is most likely that there is a variable and unpredictable ‘background’ level of nonlocal sockeye in KMA waters that has occurred since salmon returned to Kodiak following the last ice age. The incidental mortality of Cook Inlet stocks that migrate through the southern Shelikof has been included in KMA commercial salmon fisheries since they began at Karluk Spit in 1882. There is some new data, but not new information compelling enough to force BOF out-of-cycle action.

There is no chronic inability to achieve UCI sockeye escapement goals, and there have been commercial salmon fisheries and sockeye salmon harvest in recent (2014-2017) years. Average UCI salmon runs have increased over time.

There is one Stock of Concern among Upper Cook Inlet Sockeye salmon, Susitna sockeye... Susitna is a Stock of YIELD concern, and is not a conservation concern under present day management of Cook Inlet and KMA fisheries. The Action Plan for Susitna sockeye has not included reducing the harvest from Lower Cook Inlet or KMA fisheries, though it does identify many other sources of concern, such as invasive species (Northern Pike), loss or alteration of freshwater habitat, change in water quality and quantity, pathogens and freshwater fisheries.

Neither ACR #11 nor the 2014-16 Kodiak genetic MSA report present significantly or substantially new information, previously unknown to the BOF. There were many previous stock separation studies the KMA, specifically focused on nonlocal, Cook Inlet sockeye incidental harvests. The report does not fully discuss prior MSA of KMA salmon harvests, which could lead some to think this recent genetic MSA is the first quantification of nonlocal salmon within KMA fisheries, and a new issue. The magnitude of estimated nonlocal harvests is similar, while perhaps much more accurate (using GSI) than prior MSA studies.

With the genetic MSA nonlocal harvest estimate, one can estimate a rough ‘harvest rate’ or percentage of UCI sockeye runs harvested in KMA fisheries, which may be more helpful in determining “effects” on UCI sockeye stocks. However the new genetic MSA was not planned or conducted to determine specific time or area harvest rates. The genetic MSA is not finely discriminating, by area or timing, for determination of trends or accurate harvest rates for specific temporal or spatial strata. Using an overall estimate, it appears that less than 15% of Cook Inlet sockeye runs are harvested in KMA fisheries. It is interesting to note that the other KMA allocative plan, the Cape Igvak plan, allows KMA fishermen to harvest up to 15% of the Chignik sockeye runs.

## **Part 5 - Limitations of the Genetic Study**

The genetic MSA report shows a ‘snapshot’ of events, with some significant limitations. The limits are suggested by the authors of the genetic MSA report, and should be recognized and heeded. Limited funding in turn limited the scope of the genetic MSA. For example, the North Shelikof fisheries were not included despite the fact that this fishery represents the conservation burden that KMA salmon fishermen must bear, with 100% of the sockeye harvested during the SMP time period counted against harvest triggers, as if all were known to be of Cook Inlet origin.

In addition, critical dates and time periods for current management were ignored, and some stocks are so closely genetically ‘related’ that GSI can’t separate the stocks (engendering concern for all the stock distinctions).

The report is long on data and short on analyses, by design. It is a technical writing summarizing methods and results of three years of data collection and genetic MSA. It includes only very limited discussion or conclusions, and we feel that it may suggest erroneous conclusions. The genetic MSA results alone are not sufficient for restricting KMA fisheries to potentially re-allocate sockeye salmon harvests. A much more comprehensive report on the issues should be generated for BOF review, to educate and inform stakeholders, and begin discussions prior to Board action.



It is beyond the intent and focus of the study and the report to force the data toward one-sided conclusions or bigger issues. The intent was to use newly provided funding to address a knowledge gap, which was defined as the use of 'modern' genetic MSA method in selected major, directed KMA sockeye commercial fisheries. It was hoped that the study would provide information that was useful. ADF&G felt that such precise genetic stock-specific KMA harvest estimates were lacking for KMA fisheries, which is certain. This was the first time genetics were used for stock identification of KMA sockeye; however, it was not the first sockeye stock identification work in the KMA. Interestingly, there were specific 'reporting objectives' also given (basically, to describe sampling and subsampling, report stock proportions and stock-specific harvests, and to characterize where stocks were harvested. For the limited data collected, we feel the authors' report objectives were met.

The stated goal in the genetic MSA was to provide information useful for run reconstruction, accurate brood tables, escapement goal determination and 'refined' management. MSA data can be used to test run-reconstruction and prior run forecast models, though with such wide annual variability it may be difficult to do so. Sufficient time should be given for ADF&G to use the results of this MSA toward completion of the stated goals and objectives. ADF&G may then be able to refine pre-season management by providing better predictors of stock productivity and anticipated run strengths (forecast). Inseason fishery management will not be improved.

It truly seems that there is a desire to reverse the order and to change management based on a limited study, rather than explore the statistics to see if solid, scientifically valid results point to needed changes in established, stable management. The possibility exists for future analysis and study, additional research, discussions between stakeholders and managers, researchers, and the BOF. We encourage the BOF to take this opportunity, and to use this study as intended. We fear a hasty, knee jerk reaction to an emotional issue.

## **Part 6 - An Imperfect Design**

The new MSA and report may have been proper for the overall goal of the study but, surprisingly, it left many pertinent questions unanswered and many data needs unmet... the study design was 'imperfect' to answer many biological and allocative questions regarding KMA bycatch of nonlocal sockeye.

At the beginning of the Board's Cook Inlet-Kodiak Inter-Area Work Group in 1994, members (including ADF&G researchers and managers, stakeholders, and the BOF members) mutually agreed upon several key 'facts' (Appendix E):

- The bycatch of Cook Inlet-bound sockeye in KMA fisheries is directly proportional to Cook Inlet sockeye run strength;
- The incidence of Cook Inlet sockeye in KMA fisheries varies widely. It is inconsistent as to area, annual timing, and between years;
- The incidence of Cook Inlet salmon in KMA fisheries is 'insignificant' if the Cook Inlet sockeye run is less than 4 million;
- The July 6-25 period is not only an important time period in KMA salmon fisheries management, it is the period of PEAK abundance of Cook Inlet-bound sockeye salmon in KMA waters;
- Within that period, the majority of bycatch occurs within a narrower, 7-10 day period.



Does the new genetic MSA data prove or disprove any of these ‘facts’? We feel these kinds of questions should be answered, and it will take time and cooperation between ADF&G staff and fishermen from Cook Inlet and Kodiak, ADF&G headquarters, and the BOF to guide further use of the genetic MSA.

Within two significant geospatial strata, Uganik/Kupreanof and Uyak, though both seine and set gillnet gear fish the same areas. However, the genetic MSA used only set gillnet harvested sockeye for the genetic stock separation. Gillnet gear is inherently biased for size, selecting for larger (nonlocal?) sockeye.

Temporal strata failed to recognize important dates within KMA fisheries management and we feel that three temporal strata were too few; monthly estimates of stock compositions may not be representative since stock composition is not static as salmon migrate through the KMA. And changing time strata among the three study years confounds the results.

Similarly, we feel the geospatial strata used are overly broad. The ability to determine potential offshore or cape fishery “hot spots” was lost, which could lead to misrepresentation. Even limited information about more specific harvest location is of interest and could be important in understanding stock composition, timing and migratory patterns in KMA mixed stock fisheries.

The way that data was pooled may also obscure important or essential information. The manner in which samples were later subsampled and data was pooled to fit temporal strata will affect how the sample data can be used.

## **Part 7 – More Uncertainty**

The information provided by the new KMA sockeye genetic MSA may be misused, and it may create more uncertainty rather than less. There are many additional considerations when attempting to explain harvest levels or rates or numbers, which we point out throughout our review. The data should be analyzed to try to answer pertinent questions. For example; is it possible to discern if there were any targeted interception fisheries or unusual environmental factors that were in play during the study years?

Some may believe that KMA local salmon stocks could all be harvested within ‘terminal’ fishing areas or ‘inside the capes’. Long experience has shown that allowing salmon to enter the fresher (less saline), warmer, inside-waters of the KMA will very quickly lead to loss of quality, or to complete loss to the fishery as the fish home-in and refuse to move out of closed water sanctuaries. Major Kodiak systems, Karluk and Ayakulik, empty directly into Shelikof Strait.

Without consideration of all factors that all users think may be important, we may miss or ignore possible solutions. The depth and complexity of the issues involved require extensive analyses and discussions between ADF&G authors and managers and interested stakeholders, just to set the ground rules for further review and evaluation of proposed restrictive BOF actions. We feel this cannot occur in a few months, but will require additional time for all parties to become apprised of important considerations which may not be apparent to someone not intimately familiar with both KMA and Cook Inlet fisheries and the issues at hand. With no biological emergency facing the KMA or CIMA, there is no need for immediate BOF actions. And, there are many considerations that the new MSA and report did not address, which may require combining the new MSA data with existing fishery factors or additional review or research.



KMA is a mixed stock fishery with some level of nonlocal sockeye salmon harvests. This is an annual part of the KMA salmon fishery harvest, not an aberration, nor an unanticipated consequence, nor a new and expanding targeted 'interception' fishery. If 'reallocation' of some portion of the KMA salmon fishery harvest is to occur (restricting KMA fisheries with the HOPE to positively influence the sockeye harvest in Cook Inlet) then new and old questions need to be clearly stated and answered in a comprehensive report to the BOF. We suggest some such questions and data needs.

## **Part 8 - Evaluation of Application of the Policies of the Alaska BOF**

Deferral of ACR #11 and potential BOF regulatory action until the next regularly scheduled, on-cycle KMA Finfish BOF meeting is supported by our analysis of application of other BOF policies and criteria.

Considering the *Policy for Management of Mixed Stock Salmon Fisheries*:

- The stated goal of the policy include not only conservation of salmon and habitat, and protection of subsistence and other customary and traditional uses, it also seeks to ensure "the sustained economic health of Alaska's fishing communities". The proposed UCIDA umbrella plan would devastate the Kodiak economy.
- As previously discussed, KMA commercial salmon fishermen already bear a disproportionate Conservation Burden for Cook Inlet sockeye stocks through the regulations for the *North Shelikof Strait Sockeye Salmon Management Plan*. The burden of conservation for relatively 'healthy' Cook Inlet salmon stocks should not be prioritized above that of KMA local salmon stocks.
- The KMA incidental harvest of nonlocal sockeye is neither new nor expanding. In fact, the participation by gear groups has decreased substantially. For the 2014-2016 MSA study period, KMA set gillnet permit participation was down 22.5%, KMA purse seine participation was down 52.6%, and KMA beach seine participation was down 92.4% from the number of available permits to fish during those same three years.
- BOF finding regarding the Mixed Stock Policy states that Alaska's salmon industry appropriately relies upon stable existing fisheries, most of which harvest mixed stocks. Kodiak's established management program for the harvest and conservation of mixed stocks has been successful in sustaining and promoting Kodiak's century-old industry. The findings also speak to harvest of many mixed stocks with an eye towards QUALITY of the harvest, and management of KMA fisheries has promoted protection, rebuilding and high-quality harvests of a large number of stocks of salmon.

Considering the *Policy for the Management of Sustainable Fisheries*:

- The stated goals of the policy include not only conservation of salmon and habitat and protection of subsistence and other customary and traditional uses, it also seeks to ensure "the sustained economic health of Alaska's fishing communities." There is little doubt that significant changes to KMA's long-standing salmon management plans would negatively change the economic health of Kodiak communities.
- Definitions of Stocks of Concern and associated Action Plans inform our conclusion that there is no concern for the health of Susitna sockeye based on nonlocal harvest.

**Final thoughts:**

- The incidental harvest of KMA sockeye salmon in Cook Inlet or Chignik salmon fisheries must be estimated, to help balance any allocative decision or actions.
- KMA management plans were developed by stakeholders, Management Biologists at ADF&G, concerned representatives of government and scientific agencies, and many prior Alaska Board of Fisheries, over the course of many years. Discussions and decisions were made with full knowledge that KMA was a mixed stock fishery and that significant numbers of both Chignik and Cook Inlet sockeye will be found and may be harvested in KMA fisheries.
- The establishment of BOF findings may be needed, clarifying the extent to which Inter-Area allocative disputes may be used to modify long standing regulatory structure.
- It is impossible to maintain the economic success of a fishery that is subject to capricious reduction based on limited information or colloquial opinion. A Board finding that historic KMA harvest may contain, for example 15% of salmon from Cook Inlet and 15% of Chignik salmon will allow determination of new or expanded fisheries and sound allocative decisions.
- Nature has ‘allocated’ nonlocal salmon to Kodiak salmon fisheries. It occurs but it can’t be predicted. It currently can’t be identified inseason or postseason, without a recurring annual genetic MSA of KMA harvests. The positive effects for Cook Inlet sockeye stocks of restricting KMA fisheries to limit nonlocal sockeye harvests on CIMA sockeye escapement or harvest cannot be identified or quantified.



**A Review of Agenda Change Request #11 and the ADF&G Kodiak 2014-2016  
Sockeye Genetic Mixed Stock Analysis technical Fishery Manuscript, with  
recommendations to the BOF.**

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## **A Review of Agenda Change Request #11 and the ADF&G Kodiak 2014-2016 Sockeye Genetic Mixed Stock Analysis technical Fishery Manuscript, with recommendations to the BOF.**

*“A little learning is a dangerous thing; drink deep, or taste not...” (Alexander Pope, From ‘An Essay on Criticism’, 1709).*

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In December 2016, the Alaska Department of Fish and Game (ADF&G) released the report *Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in Kodiak Management Area, 2014–2016* (Shedd, et al, 2016a)<sup>1</sup>. This report documents a three year salmon stock separation study, or Mixed Stock Analysis (MSA) of Kodiak Management Area (KMA, or Kodiak) salmon harvests.

This report was presented to the Alaska Board of Fisheries (BOF, or Board) at both the regular scheduled Kodiak Finfish meeting (January 2017) and the Upper Cook Inlet (UCI) Finfish meeting (February 2017). At the UCI 2017 BOF meeting, there were several public comments arguing for further restriction of the salmon fisheries within the KMA. The Central Peninsula Fish and Game Advisory Committee submitted a resolution asking for a “special regulatory meeting” to discuss the recent studies and Chignik, Kodiak and Cook Inlet management to reduce this “interception”; that resolution was in turn adopted and supported by the Homer Fish and Game Advisory Committee.

The Board of Fisheries responded. Further discussion of this issue was placed on the agenda for the BOF October 2017 Work Session. And, the Board has asked ADF&G staff to attempt to re-analyze some of the Kodiak sockeye GSI samples and /or raw data, to distinguish (if possible) if Susitna sockeye salmon were found within the 2014-2016 Kodiak genetic samples, and at what level (Susitna sockeye were designated by the BOF as a Stock of Concern in 2008; more in subsequent parts of this review).

There was an Agenda Change Request submitted to the Board of Fisheries on August 17, 2017 (ACR #11), by concerned the United Cool Inlet Drift Association (UCIDA), based on the 2014-2016 MSA and report. This ACR proposes an entirely different management strategy for the KMA salmon fisheries. We believe that the UCIDA Agenda Change Request and the 2014-2016 KMA sockeye genetic MSA report should be reviewed and that any potential shortcoming in the study planning or execution, the data and its presentation, or any analyses therein, will be helpful and necessary for BOF deliberations and discussion of possible future BOF actions.

The Kodiak Salmon Workgroup (KSW), a committee of KMA salmon fisheries stakeholders, also wanted further review of ACR #11 and the 2014-2016 KMA sockeye genetics MSA for the upcoming Work Session. They’ve asked three retired ADF&G employees, all former Kodiak Area Management Biologists (AMBs) who reside in Kodiak, to review the report, compile pertinent and background information, describe the evolution of salmon fisheries management (especially as it pertains to nonlocal salmon harvests), and provide recommendations. Former

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<sup>1</sup> Other reports were presented to the Board of Fisheries, including *Genetic Baseline of North American Sockeye Salmon for Mixed Stock Analyses of Kodiak Management Area Commercial Fisheries, 2014–2016* (Shedd, et al, 2016b), and *Genetic Stock Composition of the Commercial and Sport Harvest of Chinook Salmon in Westward Region, 2014–2016* (Shedd, et al, 2016c). We do not comment on the Chinook MSA.



ADF&G fishery biologists Kevin Brennan, Larry Malloy and Dave Prokopowich are the primary compilers of the following informational review and discussion.

As ADF&G salmon fishery biologist-managers and part of the Kodiak salmon area management team, we were actively involved in managing KMA salmon fisheries from 1972, before Limited Entry into the new millennium, to 2005, and we've worked extensively with previous BOFs. During our tenure, many significant policies of the BOF were formulated and placed into regulations, including *Changing the Board of Fisheries Agenda* (5 AAC 39.999, effective 7-25-1982), the *Allocation Criteria* (AS 16.05.251; effective 6-10-1987), the *Policy for the Management of Mixed Stock Salmon Fisheries* (5 AAC 39.220; effective 5-29-1993), and the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222; effective 9-30-2000). During our 'watch', regulatory Salmon Management Plans (SMPs) for the salmon fisheries of the KMA, specific to all Kodiak commercial salmon areas and fisheries throughout the entire salmon fishing season (June 1 through October 31), were developed, drafted, reviewed, deliberated upon by the BOF and passed into regulation.

Unfortunately, we've also witnessed many prior allocative disputes between KMA salmon fishermen (Intra-Area) and between KMA fishermen and those from the Cook Inlet and Chignik salmon management areas (Inter-Area), and participated in resulting meetings of the BOF or BOF committees and work groups.

Based on our education, background and experiences, we hope to provide credible review and analysis, give insights into past fishery management development and implementation, and will offer sound options, for BOF review.

We know that in the past there has been a tremendous amount of study, discussion and Board deliberation on the subject of nonlocal sockeye harvested in KMA commercial salmon fisheries. There was a tremendous amount of data presented in the 2014-16 KMA sockeye genetic MSA report. Integrating any pertinent new information with previous studies, findings and facts, is essential. This document will attempt to do so, though only briefly.

In this document, we will review ACR #11 and the new KMA sockeye GSI report, and we'll discuss the potential application of some Board of Fisheries policies. As one reads through this review, it shall become apparent that this issue is long-standing and very complex, and is not an unexpected discovery of new information that the BOF must act upon. This is an old issue with limited new information.

Ours was not a robust scientific or statistical analysis of the new 2014-2016 KMA sockeye genetic MSA report. Rather, we looked at this through the lenses of management biologists that have been involved with Alaska salmon fisheries, and particularly KMA fisheries, for 35 years. Since we are no longer limited by the reporting policies of ADF&G, this review will be more informal and hopefully more easily digested and understood.

In the interest of readability and brevity, for this review we prefer to begin with a summary of our conclusions and brief reasoning, and then we will provide more explanations and justification for our opinions in the discussion that follows. In this manner we'll cover the points we feel are most pertinent to BOF deliberations, right up front in this review. Finally, we'll look briefly at how some existing BOF criteria and policies may or may not be applicable to the issue of nonlocal sockeye harvests in the KMA commercial salmon fishery (for this review, often abbreviated as 'KMA fisheries'; referral to other fisheries will be clearly defined).





As stated, this review is not intended to be comprehensive. At this stage, only basic information, simple assertions and logical conclusions are given. This review is more descriptive than comprehensive. This is a complex issue, with many varied and staggeringly different viewpoints. BOF actions could range from NO ACTION to massive changes to long-standing, stable management with significant, negative economic repercussions from the ‘re-allocation’ of KMA sockeye salmon harvests.

Much of this review will represent our opinions... and we shall try to clearly show when we are presenting the findings or opinions of others. We include direct quotes from the 2014-16 KMA sockeye genetic MSA report, followed by the page number on which it was found. Quotes from other sources will be cited to author, date and publication. Since the 2014-16 KMA sockeye genetic MSA report is the subject of this review, we’ll often refer to preparation and data collection as ‘the study’ or the ‘new MSA’, and we may refer to the actual publication or the results as ‘the report’ or ‘the 2014-16 report’ or the ‘new MSA’; reference to other studies or reports will be more specifically cited.

Also, this review focuses on specific issues and is intended for a specific audience. Therefore, there is less explanation and more expectation that readers have a familiarity with the subjects discussed.

#### SUMMARY of CONCLUSIONS of our REVIEW:

We feel that the 2014-16 report is not a comprehensive evaluation of any biological or allocative issues; the authors report data from a specific and limited study. It will take time and discussion to identify and more clearly define issues, problems, goals and objectives. The 2014-16 KMA sockeye genetics report is long on data and short on analyses, which we will show throughout this review.

The new MSA for Kodiak sockeye salmon fisheries has limited applicability, and is not sufficient reason to change current KMA management. The salmon fisheries in the KMA are long-standing Mixed Stock Fisheries, with an unpredictable component of nonlocal salmon. There is virtually no new information, nor any biological or conservation emergencies for sockeye salmon fisheries within the Cook Inlet Management Area (CIMA), including nonlocal harvest of sockeye bound for Cook Inlet. There may be increase or decreases in nonlocal sockeye harvest in KMA fisheries, which are based on the natural fluctuation of abundance for such stocks. Abundances, migratory patterns, and incidental harvest are all variable and unpredictable. There have been no new or expanded intercept fisheries in the KMA.

Sufficient time is required for complete evaluation of the data and findings in the report, for the Department to use the report finding as the study planners intended, and for continued or additional research, study and discussion as needed to clarify issues, background, problems, goals and objectives or possible regulatory or non-regulatory solutions. Sufficient time is required to fully and fairly address any stakeholder concerns that have arisen based on the new MSA study.

The BOF deliberation of any action pertaining to the KMA salmon fisheries should next occur during the regular BOF Kodiak Finfish meeting cycle. We encourage additional use of these and new genetic studies to further inform the BOF and ADF&G. We recommend and encourage the BOF to give stakeholders the opportunity to meet, get educated, ask questions, define information needs, discuss and thereby inform ADF&G and the BOF, at the regular meeting



cycle, as they have in the past. We feel it is most appropriate to shortstop three years of ACRs by conforming with previous BOF action to deny the consideration of ACR #11 at a special out-of-cycle BOF meeting. Instead all such ACRs with allocative proposals for KMA salmon fisheries should be deferred for further study and reporting during the regular BOF Kodiak Finfish meeting cycle.

- The 2014-2016 KMA sockeye genetic MSA report does not provide sufficient cause to accept ACRs and schedule an Out-of-Cycle regulatory meeting for the KMA. BOF movement toward immediate regulatory action to limit KMA commercial salmon fisheries based on this report would be hasty and unfounded.
- We believe that the BOF should authorize additional analysis and study of all Mixed Stock Analyses that have been conducted in the KMA. A focused report concerning nonlocal salmon in the KMA should be available to the BOF and stakeholders prior to consideration of possible regulatory action on KMA commercial salmon fisheries.
- We feel the State of Alaska and stakeholders will be best served by allowing sufficient time for a thorough review and analyses of the issue by ADF&G and the BOF. The issue of nonlocal harvest of salmon is a statewide concern, and any actions regarding the Kodiak incidental harvest of nonlocal salmon will reflect on ALL salmon fisheries within the State. ADF&G could report on their progress and problems to the Board at scheduled fall work sessions.
- We believe that this issue, along with any allocatively-based ACRs that may be submitted during the BOF's 2017-2019 fall Work Sessions, should be tabled by the BOF for consideration during the regularly scheduled BOF cycle for consideration of Kodiak Finfish issues and proposed regulatory changes.

It is a broad truth that "Nature has allocated nonlocal salmon to Kodiak salmon fisheries." It is known that nonlocal sockeye migrate through the KMA. The location, timing, or magnitude of KMA incidental harvest of nonlocal Cook Inlet-bound sockeye salmon can't be forecast. The number or movement of nonlocal salmon in the KMA currently can't be identified or tracked inseason. We cannot identify or quantify the effects of restricting KMA fisheries to limit nonlocal sockeye harvests on Cook Inlet sockeye escapement or harvest.

While it is within the BOF's purview to use any information, even poor information, to make decisions, the thoughtful and thorough Policies and Criteria of the BOF show that its intent is usually otherwise, instead drawing information from many sources, including stakeholders and others concerned, ADF&G, past and present research studies, et cetera.

In general, we feel that there were some positive results from the new MSA study... we believe the researchers used what they felt were the best genetics sampling, processing procedures, and techniques. While not a stated objective, it has also perhaps begun the task of identifying 'natural', background levels of nonlocal harvests within the KMA. Once established, unusual or new harvest patterns can then be determined.

However, there were also limitations to the Kodiak sockeye genetic MSA study and report that should be known, understood and emphasized when determining the potential for BOF action on ACRs or proposed changes to KMA regulatory Salmon Management Plans, which are or will be based on results of this genetic MSA study.

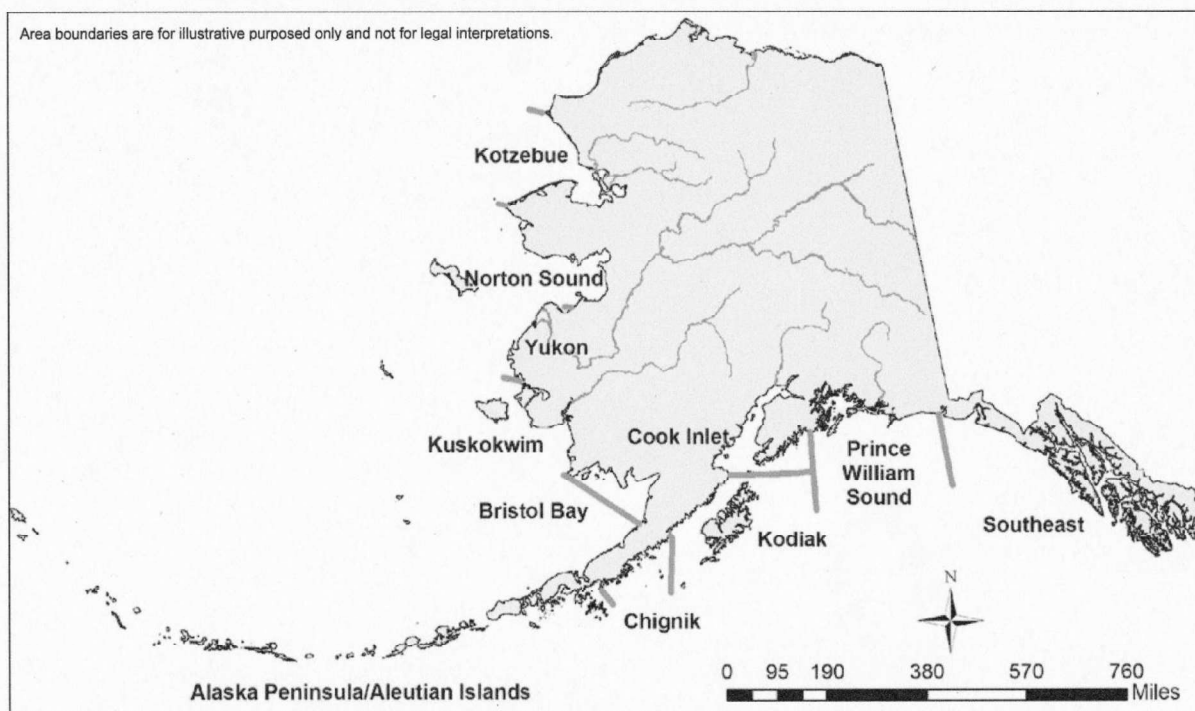


Figure 1. Map of Alaska showing the location and approximate boundaries of 11 Alaska salmon fisheries. *Figure taken from Clark, et al, 2006.*

Brief reasoning (and the location of additional discussion within this review):

1. Based on its location and the oceanography of the North Gulf of Alaska and waters surrounding the Kodiak archipelago, Pacific salmon migrate through the KMA (see Maps in Appendix A). It may be controversial, but it's well-known that nonlocal salmon swim around and through KMA waters, and are harvested in KMA salmon fisheries. The mixed stock nature of KMA salmon fisheries and the KMA harvest of nonlocal Cook Inlet sockeye salmon are known, not new. And Kodiak-bound salmon are undoubtedly harvested in fisheries within other Management Areas. Kodiak salmon fisheries are well known to be Mixed Stock Fisheries.
2. The harvest of nonlocal salmon is an allocative issue, intensified by the imposition of Limited Entry on Alaska salmon fisheries. Further, KMA commercial salmon fishery management plans are complex and were developed with the potential for harvest of nonlocal sockeye as a known issue. Modern KMA management was forged over time and placed in regulation within the BOF allocative crucible (pages x-xx).
3. United Cook Inlet Drift Association submitted an Agenda Change Request on August 17, 2017, asking the BOF to consider an out-of-cycle proposal for a new salmon management plan in the Kodiak Management Area, to limit nontraditional harvest of nonlocal sockeye in KMA commercial salmon fisheries. The guidelines for Changing Board of Fisheries Agenda have not been met, so the UCIDA Agenda Change Request (ACR #11) should be denied. Based on Alaska Board of Fisheries policies and criteria, allocative concerns



should be addressed during the regular Board meeting schedule, not at special meetings (pages x-xx).

We have issues with the issues presented by UCIDA in ACR #11. There are misstatements and untruths contained in the ACR explanations and descriptions. This type of proposal is not new, and the KMA genetic MSA was not a ‘first look’ at KMA incidental harvests of nonlocal, Cook Inlet sockeye. Also, the negative effects of adopting the UCIDA umbrella plan include extensive fishery closures from late June through July and resulting lost harvest opportunity, reduced salmon product quality, increased gear conflicts, and ultra-conservative management in the face of loss of traditional fisheries. The economy of Kodiak salmon fisheries would be devastated. The results of the 2014-2016 Kodiak GSI could be misused to try to determine absolutes or trends in nonlocal sockeye bycatch for specific areas during specific time periods, which is basically what the UCIDA ACR does (pages x-xx).

4. The KMA harvest of nonlocal salmon has not created a biological problem with Cook Inlet sockeye production. There is some new data, but the new information is not compelling enough to force out-of-cycle BOF action. There is no chronic inability to achieve UCI sockeye escapement goals, and there have been commercial salmon fisheries and sockeye salmon harvest in recent (2014-2017) years. There is one Stock of Concern among Upper Cook Inlet Sockeye salmon, Susitna sockeye... Susitna is a Stock of YIELD concern, and is not a conservation concern under present day management of Cook Inlet and KMA fisheries. Neither ACR #11 nor the 2014-16 Kodiak genetic MSA report have given significantly or substantially new information, previously unknown to the BOF. There were many previous stock separation studies of the KMA, specifically focused on nonlocal, Cook Inlet sockeye incidental harvests. The report does not fully discuss prior MSA of KMA salmon harvests, which could lead some to think this study is the first quantification of nonlocal salmon within KMA fisheries, and a new issue. The magnitude of estimated nonlocal harvests, while perhaps much more accurate (using GSI) than prior MSA studies, is similar. We feel that there is no biologically-based emergency, nor new information that compels the Board to consider this Allocative Proposal. Therefore, we see no reason for the BOF to take up this issue out of the regular BOF fishery-review meeting cycle (pages x-xx).
5. This report shows a ‘snapshot’ of events, with some significant limitations. The limits to the 2014-16 MSA study suggested by the authors of the report should be recognized and heeded. Limited funding in turn limited the scope of the genetic MSA; the North Shelikof and Eastside Kodiak fisheries were not included, critical dates and time periods for current management were ignored, and some stocks are so closely ‘related’ that GSI can’t separate the stocks (engendering concern for all the stock distinctions), to name a few. The report is long on data and short on analyses, by design. It is a technical writing summarizing methods and results of three years of data collection and genetic MSA; it’s a data dump. It includes only very limited discussion or conclusions, and we feel that it may suggest erroneous conclusions. The study results alone are not sufficient for restricting KMA fisheries to potentially re-allocate sockeye salmon harvests. A much more comprehensive report on this issue should be generated for BOF review, and to educate and inform stakeholders and begin discussions, prior to Board action (pages x-xx).



It is beyond the intent and focus of the study and the report to force the data toward one-sided conclusions or bigger issues. Goals and objectives were given in the report, some of which have not been realized. Time should be allowed for ADF&G to analyze the data toward completion of those goals. Sufficient time should be given for ADF&G to use the results of this MSA as the study planners and report authors intended (pages x-xx).

6. The new MSA and report may have been proper for the overall goal of the study, but the design of the study left many pertinent questions unanswered and many data needs unmet... the study design was 'imperfect' to answer biological and allocative questions regarding KMA bycatch of nonlocal sockeye. We suggest additional questions and factors that could have been considered or should be considered for future research, to more fully and accurately describe the occurrence of nonlocal salmon within KMA waters (pages x-xx).
7. A full picture of issues should be available to stakeholders, ADF&G and the BOF. The depth and complexity of the issues involved requires extensive analyses and discussions between ADF&G authors and managers and interested stakeholders. There are many considerations that the new MSA and report did not address, which may require combining the new MSA data with existing fishery factors or additional review or research (pages x-xx).

KMA is a mixed stock fishery with some level of nonlocal sockeye salmon harvests. This is an annual part of the KMA salmon fishery harvest, not an aberration, nor an unanticipated consequence, nor a new and expanding targeted 'interception' fishery. If 'reallocation' of some portion of the KMA salmon fishery harvest is to occur (restricting KMA fisheries with the HOPE to positively influence the sockeye harvest in Cook Inlet) then new and old questions need to be clearly stated and answered in a comprehensive report to the BOF (pages x-xx).

8. Deferral of ACRs and potential BOF regulatory action until the next regularly scheduled, on-cycle KMA Finfish BOF meeting is supported by our analysis of application of other BOF policies and criteria, such as the Policy for Management of Mixed Stock Salmon Fisheries, the Policy for the Management of Sustainable Fisheries, and the Allocation Criteria. This issue should be addressed within the BOF regular schedule for consideration of KMA salmon fisheries, during the 2019/2020 cycle. (pages x-xx)



## DISCUSSION

*“the harvest is always more fruitful in another man's fields” (Ovid, from Ars Amatoria, 2 AD)*

### **Part 1 – KMA salmon fisheries are Mixed Stock Fisheries, with nonlocal sockeye as an expected component of KMA sockeye harvests.**

There are several facts that, because of their importance, must be at the forefront of consideration and discussion of the harvest of nonlocal sockeye in the KMA fisheries.

Based on location, oceanography, and salmon migratory patterns, nonlocal salmon have always passed through Kodiak waters. Kodiak salmon fisheries are well known to be Mixed Stock Fisheries. And Kodiak-bound salmon are undoubtedly harvested in fisheries within Cook Inlet, Chignik, or Prince William Sound salmon management areas.

**The LOCATION of the KMA** is such that mixed stocks of Pacific salmon, at various stages of their life-cycle, must migrate through KMA waters (Figure 1; Appendix A.1 – A.8). The Kodiak Management Area (part of Westward Region) is composed of inland and State marine waters surrounding the Kodiak Archipelago and adjacent to the Alaska Peninsula between Kilokak Rocks and Cape Douglas (5 AAC 27.505). The largest portion of the Shelikof Strait falls outside the three-mile State waters limit, and so cannot open to Alaska commercial salmon fisheries.

The KMA is located in the northwest portion of the Gulf of Alaska (Figure 2). It is bounded to the north by the Cook Inlet Area (Central Region) and to the south by the Chignik Area (Westward Region). The western boundary of the Kodiak area is the Alaska Peninsula, and the eastern boundary lies within the Gulf of Alaska, at the 3-mile limit of State waters (Appendix A.9).

Of note: the Kodiak area also encompasses Shelikof Strait (a major migratory path between the Kodiak Archipelago and Alaska Peninsula) and Stephenson Entrance (fully half of the passage entering Cook Inlet, and also a major migratory path).

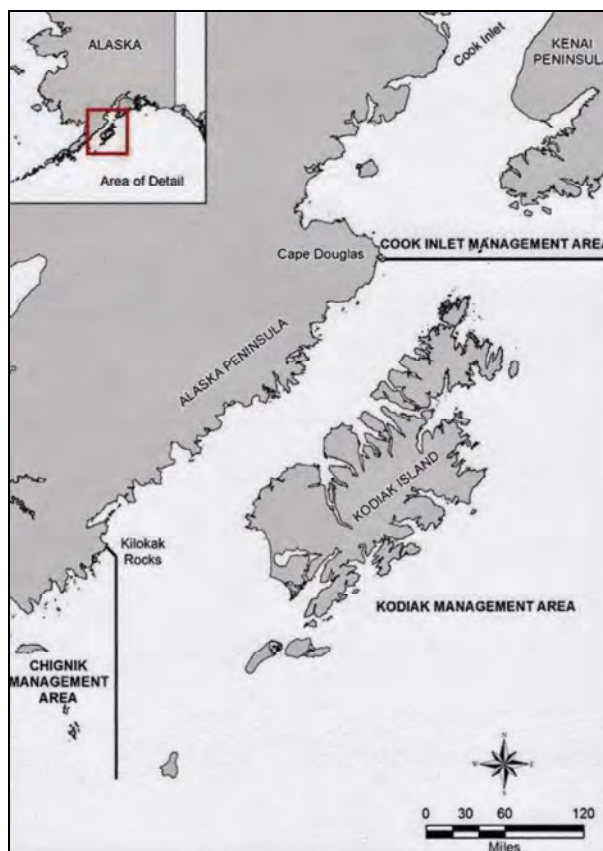


Figure 2. Juxtaposition of the Kodiak Management Area, between the Cook Inlet and Chignik management areas.  
*From Anderson, et al, 2016.*



**PHYSICAL PROCESSES and OCEANOGRAPHY** of the North Pacific Ocean affect salmon migration patterns and timing. The Alaska Current runs north along Southeast Alaska, swings west to pass Prince William Sound and becomes the Alaskan Stream, pushing southwest along the east side of the KMA and Alaska Peninsula (Figure 3). To the south, the Gulf of Alaska is 'enclosed' by the North Pacific Current as it moves west to east, back toward the continental US. In the North Gulf, the Alaska Gyre is formed, spinning counterclockwise. North of the Kodiak Archipelago, waters of the Alaska Current and Alaskan Stream push west and north through Kennedy and Stephenson Entrances to enter Cook Inlet, as well as through Shelikof Straits to enter the KMA. Currents also move waters from the Alaskan Stream through the Kodiak Archipelago between Raspberry/Afognak Islands and Kodiak Island (Whale Pass, Raspberry Strait), and push west and north around the southern end of the Archipelago into southern Shelikof Strait.

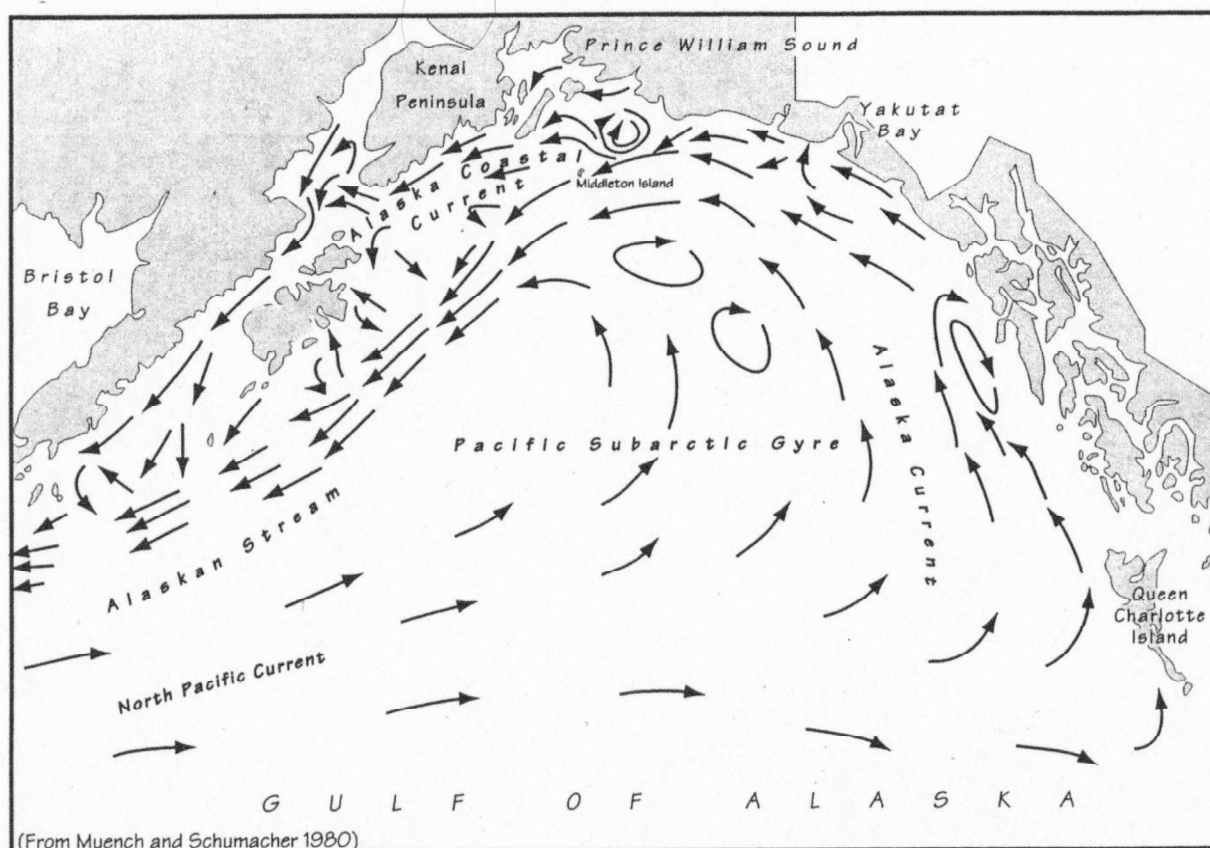


Figure 3. Net surface currents in the Gulf of Alaska. Taken from Muench, et al; 1980.

Within Cook Inlet, ocean currents are complex and tides also play a major role in marine water transport (Figure 4). The tidal change in Upper Cook Inlet is the fourth largest in the world. Incoming tides bring water from the Gulf of Alaska (through Shelikof Strait, and the Kennedy/Stephenson Entrances) into Cook Inlet, as well as Kodiak waters. Other climactic and weather process, primarily wind, will also affect marine transport.

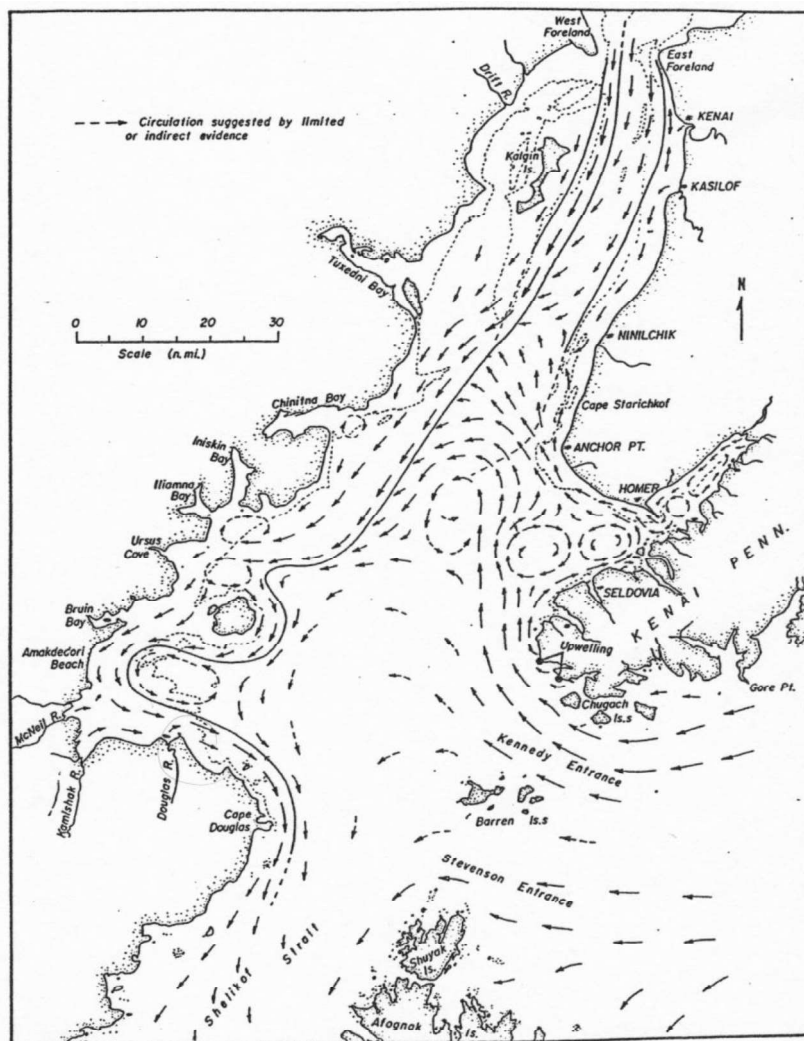


Figure 4. Net surface circulation in Lower Cook Inlet, based primarily on data collected during the spring and summer seasons. *Figure taken from Burbank, 1977*

**MIGRATORY PATTERNS** of salmon in the Gulf of Alaska, if following currents, are likely to swim through KMA waters. Even early studies have shown that Alaska salmon migrate in patterns very similar to the dominant North Gulf ocean currents (Appendix A.10). Generally, Kodiak and Cook Inlet juvenile Alaska salmon pass north to south along the western Gulf, by and through KMA waters, then annually travel east to west paralleling the North Pacific current to the US Mainland, swing north then west to migrate along Southeast Alaska, Icy Bay and Prince William Sound, and then, when mature, will swing out of the major currents as they approach the region of their natal streams. Lesser known processes likely greatly affect salmon migration patterns, and there is likely a lot of variability.

NOTE: An unknown number of Kodiak-bound sockeye salmon are very likely pushed by currents and tides into Kennedy or Stevenson Entrances. Predominant currents could push them further into Cook Inlet. These KMA sockeye may then be vulnerable to harvest in Cook Inlet salmon fisheries. The question remains, 'How should the burden of conservation be apportioned in any commercial fishery through which nonlocal salmon migrate?' Any 'fair' sharing of conservation burdens must take such balances into account. We feel additional genetic MSA of Cook Inlet commercial harvests of sockeye salmon for Kodiak sockeye stocks is required to appropriately address allocation questions.

Other factors that will affect salmon migrations and timing include, but are not limited to, climatic or weather changes, fresh water influx (from Southeast Alaska, Prince William Sound, Cook Inlet, and Kodiak) and salinity, water temperatures and thermoclines, and water chemistry (smell!).



Only limited migratory information was garnered from the 2014-2016 MSA study; this was not a robust analysis in this study. It affirmed the importance of the Shelikof Strait as a major migratory pathway for Cook Inlet sockeye salmon. It also demonstrated that migration of sockeye stocks occurs in both a clockwise and counterclockwise fashion around Kodiak Island. Perhaps more so than previously believed, the data also shows migrating Cook Inlet-bound sockeye may follow the Alaskan Stream past Kennedy and Stevenson Entrances, past Afognak and Kodiak Islands, and around the south end of Kodiak Island to move west into the southern reaches of Shelikof Strait before heading north again, toward their natal streams.

However, it is unknown what percentage of returning Cook Inlet sockeye salmon may bypass the northern route, through Kennedy/Stevenson Entrances for the southern, Lower Shelikof Strait route, or what factors may influence this migratory choice. It is unknown if those Cook Inlet sockeye are migrating juveniles or maturing spawners. It is unknown what the survival rate maybe, in the absence of KMA fisheries, for Cook Inlet-bound sockeye that choose the longer and more physically demanding southern route.

Migrating Cook Inlet sockeye haven't been forced across a fence into the KMA... there are no border walls for either Cook Inlet or Kodiak salmon to follow 'home'. And KMA fishermen are not 'rustlers', crossing into another's territory to steal fish. Nature has 'allocated' an unknown portion of Cook Inlet sockeye and other nonlocal salmon stocks to possible commercial fisheries pressures in the KMA. Fish swim and historically KMA salmon fisheries harvest some of those fish. The study and report cannot answer the crucial questions of 'When and Why' Cook Inlet sockeye appear in KMA waters at widely variable rates, nor 'Where' in any year or within any fishing season. Nonlocal salmon harvests may occur in widely varied locations.

**MIXED STOCKS** of Kodiak, Chignik and Cook Inlet sockeye were documented in early Kodiak salmon fishery observations, studies and research. KMA salmon fisheries are, and likely have always been, mixed stock fisheries with nonlocal salmon harvests. During July, when major sockeye producing streams in Kodiak are in a 'lull' between early and late runs, KMA fisheries may see a bump in sockeye harvests (not attributable to local production).

Though commercial salmon fisheries began in the KMA in or before 1882, the exact 'Stock of Origin', along with migratory routes and timing, were unknowns during those early years. Alaska salmon research was almost nonexistent before the 1920s and, as decades passed, research became more focused on localized natural production. As shown in the new MSA report, tagging studies that occurred within KMA waters, from before statehood through the 1980s (including many that demonstrate the general salmon migration patterns previously mentioned), have documented nonlocal sockeye salmon in Kodiak fisheries.

Tagging studies and early MSA also found that Kodiak-bound salmon were taken in Cook Inlet and Chignik salmon harvests. In 1957, one major tagging study found that almost 26% of sockeye tagged and released at Chisik Island (Upper Cook Inlet) were later caught south of Cape Douglas along the Alaska Peninsula. Releases from south of Anchor Point resulted in "substantial" returns from areas outside of Cook Inlet (Tarbox 1983).



Sockeye salmon stray and migrate in unpredictable manners. Any ‘Natural, Background Levels’ of nonlocal vs. local harvest in adjacent Management Areas should be determined to portray a full Inter-Area Mixed Stock salmon fishery picture. Genetic MSA is a valid method to actually study Inter-Area salmon migratory patterns and timing.

**The ‘MIDDLE RUN’** of KMA sockeye has intrigued scientist for many decades. In a very complete publication regarding the fisheries research on Kodiak’s Karluk River sockeye stock, regarding mixed stock analysis Gard and Bottorf wrote (2014): “Prior to 1889, sockeye were harvested in Karluk Lagoon and River, so their true origin was known. In 1889 commercial fishing moved to the ocean off Karluk Spit, and, gradually, harvests came from areas further removed from the Karluk River. Sockeye salmon homing to other Kodiak Island rivers and to Upper Cook Inlet are now known to pass through Shelikof Strait and along Kodiak Island’s west coast during midseason fishing periods. The true origins of these fish were not appreciated for many years (Rich and Morton, 1930; Bevan, 1959, 1962; Barrett, 1989; Malloy, 1988; Barrett and Nelson, 1994).”

There was a lot of early fisheries research that centered on stock identification of sockeye salmon harvested during July in ‘Karluk’ sockeye fisheries (westside Kodiak). Early harvest records showed a massive decline in the reported Karluk sockeye salmon catch, from 1888-1908 averages of over 2.5 million sockeye per year to less than a half million in 1945-1950 (Gard and Bottorf, 2014). In 1950, William F. Thompson, the founder and Director of the University of Washington’s Fisheries Research Institute (FRI), proposed that Karluk’s original sockeye run reached maximum abundance in the midseason (July). He felt that a ‘Middle Run’ to Karluk had been over-exploited and almost extirpated.

Thompson directed the Karluk field studies of other FRI biologists working on solving the problem of Karluk’s declining sockeye runs. He studied 1895-1899 sockeye salmon Case Pack information from one cannery and compared that to cannery records from 1900-1919. Commercial catches at Karluk from 1882 through 1920 remained stable or increased during July, but after escapement counts began at Karluk (1920), the actual escapement at Karluk showed a definite ‘bimodal’ pattern, with a peak in June (early run) followed by a significant decrease in Karluk escapements in July, followed by a rebound in August escapements (late run).

This was the case of the ‘lost Middle Run’ of sockeye salmon to the Karluk Lake system, an infamous case study to determine stock of origin of west side Kodiak sockeye harvests. Perhaps it was unfounded assumptions or inaccurate use of harvest data, but many researchers and Federal fishery managers believed in a lost middle run at Karluk for over twenty years..

In 1955, Thompson recommended an ‘alternative’ to then current Federal management, advocating for more restriction of July fisheries at Karluk to increase the Karluk return to historical levels (Thompson and Bevan, 1955). And Federal salmon fishery managers did restrict KMA mid-season Karluk salmon fisheries for many years to rebuild the lost middle run to Karluk. No mid-season escapement rebound occurred and escapements have continued to show that Karluk sockeye are bimodal, with early (June to mid-July) and late (mid-August through September) runs.





After Federal management of Alaska fisheries, salmon fishery managers and researchers conducted many westside Kodiak salmon tagging studies (as shown in Shedd et al, 2016). ADF&G researchers and managers now support a conclusion opposite from that of Thompson, FRI and federal managers; the hypothetical middle run at Karluk was actually sockeye harvested from other Kodiak systems (particularly Uganik, Ayakulik and Alitak) and nonlocal sockeye (Cook Inlet) that had been incorrectly thought to be Karluk-bound sockeye.

As fishery managers in Kodiak, we knew that the mid-season ‘bump’ of sockeye likely included a significant component of nonlocal sockeye as well as stocks bound for KMA sockeye systems. And because of this, it was even more important to demonstrate that KMA salmon fishery management was based on local stocks, and to clearly delineate this local stock management in KMA commercial salmon fishery harvest strategies and management plan regulations.

Harvest of nonlocal, Cook Inlet-bound sockeye in Kodiak salmon fisheries is a long-standing fact. Perhaps, genetic study of salmon remains found in Kodiak’s ‘prehistoric’ Alaska Native middens is needed to provide the proper historical context for nonlocal salmon harvests in the KMA.

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## **Part 2 - Development of KMA commercial salmon fishery management: The Allocative Crucible...**

**AREA REGISTRATION and LIMITED ENTRY** requirements have restricted fishermen’s movement among commercial fishery administrative areas and fisheries. Beginning in 1974, Limited Entry, while essential for the sustained yield management of Alaska’s fishery resource and the economic health and stability of commercial fishing in Alaska, completely divided fishing brethren of adjacent management areas, such as Chignik, Kodiak and Cook Inlet.

After the inception of Limited Entry, with a “Them against Us” mentality becoming institutionalized, allocative disputes and fish fights became more common for the Alaska BOF. It was within this early allocative crucible that KMA modern fishery management was discussed, developed, and placed into regulation by the BOF, with input from stakeholders and ADF&G.

By 1980, the number of individual limited entry participants in KMA commercial salmon fisheries had stabilized. Legal gear in the KMA fisheries includes Purse Seine, Set Gillnet, and Beach Seine. The past 10-year average numbers of available Limited Entry permits (2007-2016), by gear type, are: 375 purse seine, 188 set gillnet, and 31 beach seine permits.

It should be noted that the fishery restrictions mandated by the SOA and Limited Entry Commission and the Alaska BOF were geographic limits on where a permittee or vessel could participate in commercial fisheries for salmon. There was no separation of fisheries by Stock of Origin or mandates that any salmon stock must only be harvested by commercial fishermen of the Region or Management Area from which those salmon originated or to which they returned. Allocation disputes came as management stabilized, salmon fisheries rebounded statewide from record-low production during Federal management, and ADF&G rebuilt and enhanced salmon stocks within each region.

**KMA MANAGEMENT EVOLVED** from basic Harvest Strategies to Board-approved Salmon Management Plans (SMP), while allocative conflicts occurred. KMA fishermen have faced allocative battles at almost every BOF regular meeting and many out-of-cycle BOF meetings. Books could be written on KMA management plan development and Board of Fisheries actions; this review will focus on early years of management plan development, through the allocative conflicts between Cook Inlet and Kodiak salmon fisheries.

It is important to remember that after Federal management, the Kodiak sockeye stocks were very depressed and it was pink salmon that were the ‘bread and butter’ of KMA commercial salmon fisheries. During the 1960s, ADF&G developed area fishing patterns based on local, inseason experiences. Through the 1970s and 1980s, KMA salmon fisheries followed annual Harvest Strategies developed preseason by Kodiak Area salmon fishery managers.

**Blended Management:** With early-run sockeye, pink and chum, late-run sockeye and coho salmon runs showing at different systems at different times through a long fishing season, a blended management approach was formed, recognizing the overlap of early-run sockeye, pink and chum, late-run sockeye, and coho run timing (Figure 5). Certain locations were fished to target certain local salmon species at certain times of the year. These harvest strategies outlined the forecasted KMA salmon runs and the expected management actions that KMA managers would take to assure the desired escapement levels. Strategies were developed, by district or areas with common management, to target the dominant local stocks during various local salmon run timing (Appendix B). Targeting of nonlocal salmon was minimized by focusing fishing opportunity only on the abundance of local salmon.

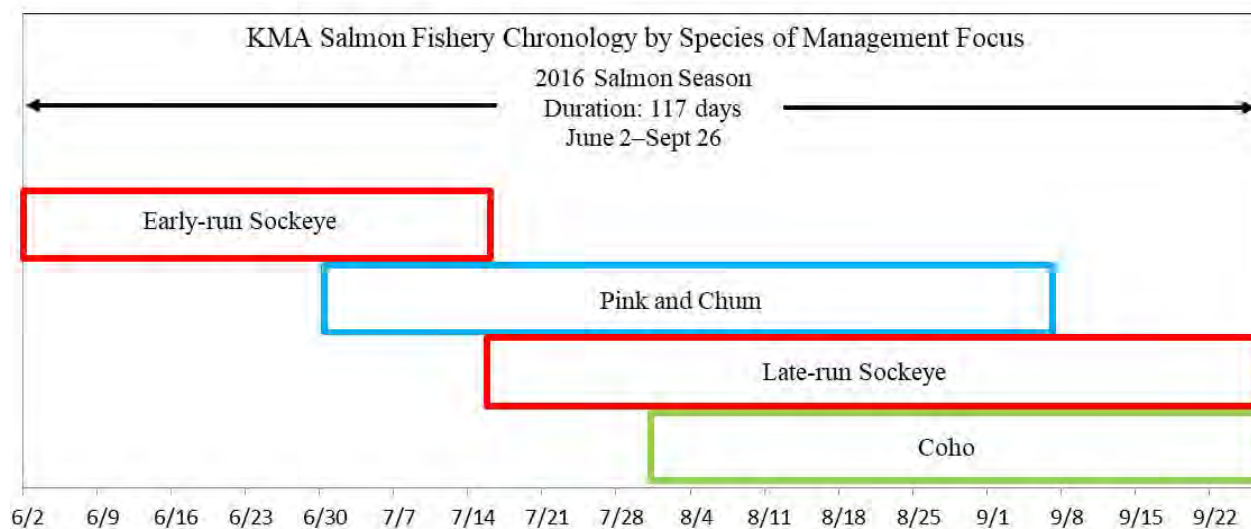


Figure 5. Kodiak Management Area salmon fishery chronology, by species of management focus, 2016.  
*From Anderson, et al, 2016.*

Several basic management criteria were formed for KMA fisheries. Management works to ensure that escapement occurs in the proper magnitude and distribution so that the potential for maximum production for subsequent returns is established (maximum sustained yield). Management wanted to provide for an orderly harvest while maximizing harvest opportunities on the highest quality salmon. And, KMA salmon managers worked to adhere to the biological and





allocative requirements of all Board of Fisheries Management Plans and to ensure that traditional fishing opportunities occur for all commercial gear types. These basic tenets of KMA salmon management have changed little and are still used today (Anderson and Jackson, 2017).

**GENERAL PINK SALMON HARVEST STRATEGY** developed in the early 1970s. At that time, there was a need to limit June fisheries in order to rebuild the Kodiak sockeye runs, and pink salmon became more important to KMA seine and set gillnet fishermen. An area-wide harvest strategy developed for KMA pink salmon fisheries. Within the KMA pink salmon harvest strategy, July 6-25 became an important time period. This period is near the end of early sockeye runs and Kodiak pink salmon returns are rapidly building. Initial pink salmon fishing time has to be allocated based on preseason assessments of run strength (Appendix C). Mixed early returns are found in outside waters and they are high quality, ocean-bright salmon.

Early pink salmon returns build quickly, almost exponentially, through July but fish QUALITY remains good. Unfished, pink salmon will begin to move in and out of the deep bays of the Kodiak Archipelago, will become unavailable to Westside set gillnet fishermen, and salmon product quality diminishes rapidly as fish begin to stage in river mouths and estuaries. After July 25, there is sufficient harvest data and early escapement estimates to allow for modification of fishing periods, based on actual pink salmon run strength. Aerial surveys and weir counts provide escapement data which is used to justify any additional fishing periods or extensions of weekly periods. As the season progresses after July 25, fishing time may be extended from the weekly fishing periods established preseason and shown in the Harvest Strategy (Appendix C).

Pink salmon fisheries in the KMA are weekly ‘pulse’ style fisheries with limited hours of fishing time allowed each week. Based on the preseason forecast for pink salmon run strength, weekly fishing periods of 2½ to 4½ days duration are pre-announced. Pulse fishery management for KMA pink salmon during the mid-season time period reduces potential bycatch of nonlocal sockeye. We feel that is an important consideration.

After July, there are local salmon escapement and buildup estimates, along with harvest data, to determine if the pink runs are coming in as forecast. After July, more or less fishing time may be allowed.

**The FIRST KODIAK SALMON MANAGEMENT PLAN** that was adopted into commercial salmon regulations by the BOF, in 1978, was an allocative management plan, the *Cape Igvak Salmon Management Plan* (5 AAC 18.360). In the late 1970s, the full effects of Area Registration and Limited Entry were being felt. Purse seine fishermen had targeted sockeye at Cape Igvak for decades, but it wasn’t until 1978 that this became an issue before the BOF. Because the Cape Igvak fishery was such an important part of Kodiak salmon fisheries and harvests, the Board did not close this sockeye fishery. The harvest of nonlocal sockeye salmon at Cape Igvak by Kodiak seine fishermen was acknowledged as a historical, traditional harvest of mixed stocks. An allocative salmon management plan was developed, based first on the size of forecasted sockeye runs to Chignik. Defined biological (escapement at Chignik) and allocative (Chignik sockeye harvests) requirements must be achieved before Kodiak fishermen are allowed opportunity to fish at Cape Igvak. The Cape Igvak SMP covers only a small portion of the KMA and is only in effect from June through July 25 (after, fishing time is only allowed on local pink,



chum or coho stocks). This BOF allocative plan has not been popular with Chignik fishermen; the Cape Igvak plan has been re-addressed at almost every BOF meeting since 1979, though very few changes have been made to the Cape Igvak SMP.

In the 1980s, the KMA Alitak District fisheries were expanding as Frazer Lake enhancement to support sockeye salmon was more successful. With more sockeye production from Alitak, there was more effort and, unfortunately, more conflict between KMA salmon fishermen. As ADF&G salmon fishery managers, we were often accused of bias and capriciousness as fishing time and patterns changed to harvest increased numbers of enhancement project sockeye salmon.

Thus began **the PROCESS OF 'INSTITUTIONALIZING' KMA SALMON HARVEST STRATEGIES**. To provide clarity and transparency, and to stabilize management, the Kodiak management team began to write up District-wide management plans that followed the basic Harvest Strategy by which we had been managing Kodiak salmon fisheries. For each District and Section of the KMA, we worked to identify the dominant (targeted) local salmon stock that can drive salmon fishery management throughout the June 1 to October 31 commercial salmon fishing season. Such plans provide transparency as to why a section may open during any time period during the season, so that processors and fishermen might better understand the complicated management schemes that had developed over the prior 20 to 30 years. The important 'general' weekly pink salmon openings between July 6 and 25 were incorporated into these blended management plans.

In 1987, based on increasing allocative disputes among set gillnet fishermen in the Alitak District, and after years of discussion by local fishermen, the local F&G Advisory Committee, ADF&G and the BOF, the Kodiak ADF&G management team presented a proposed Alitak regulatory management plan to the BOF. The annual Harvest Strategy for Alitak was adopted by the BOF. This plan was submitted as a proposed regulation to the Board of Fisheries by the Kodiak management staff in order to allow stakeholders and industry an opportunity to comment on existing harvest strategies and in order to clarify the BOF's intent.

Management affects traditional harvest opportunities between fixed (set gillnet) and mobile (seine) gear. The annual harvest strategies had traditionally invoked "blended management" of fishing time between local salmon stocks within the management units covered by this plan. At times this "blended management" was not totally understood by industry and resulted in enough allocative uneasiness that future management stability could be jeopardized. Guidelines for salmon fishery management needed to occur in regulatory form to clarify inseason harvest strategies and, hopefully, to dispel concern and confusion. Again, the previous regulatory structure did not seem transparent enough for stakeholders to evaluate inseason management decisions that influence allocation concerns of the three gear types affected.

Again, based on continuing allocative squabbles between KMA fishermen, the Alitak plan has been brought before the BOF for potential changes at almost every subsequent KMA finfish meeting, and at many out-of-cycle BOF meetings. Changes that have been made reflect desires to tweak the basic harvest strategy to affect allocation of opportunity among various groups of Alitak salmon fishermen on local Alitak District stocks.



After Alitak, we focused on a Westside Kodiak salmon management plan.

However, during the 1988 salmon season, there was an unusually calm, clear weather period in July, and Kodiak salmon seiners were able to safely fish further offshore than previously known. During mid-July, sockeye were found jumping further offshore and KMA seine fishermen targeted these offshore, north-bound sockeye salmon. At that time the State regulations stated that KMA fishing districts and sections along the Mainland and west side of the Kodiak Archipelago extended to mid-stream Shelikof.

After the 1988 season, there were complaints from Cook Inlet salmon fishermen regarding the harvest of offshore north-bound sockeye in the northern portion of Shelikof Strait. The United Cook Inlet Drift Association (UCIDA) submitted a proposed regulation change for Statewide regulations, to limit 'new interception fisheries' across the State, with the 1988 North Shelikof fishery as an example. However, the BOF did not choose to pass a Statewide regulation, preferring local area management plans.

Before the 1989 season, it was clarified by Emergency Order (EO) that all waters in Shelikof Strait outside the "3 mile" limit were Federal, not State waters and so never open to State commercial salmon fisheries. In 1989 and 1990, fisheries outside three miles were prohibited by EO and the Statistical chart was re-drawn to show that limit. Due to EVOS, the 1989 season was severely restricted in the KMA; there was no repeat of the July 1988 North Shelikof harvest pattern.

At a December 1989 meeting in Kodiak, the BOF adopted into regulation the management chronology for major Westside Kodiak salmon stocks, the *Westside Kodiak Salmon Management Plan* (5 AAC 18.362). The goal of this SMP was to achieve escapement and harvest objectives of sockeye salmon returning to the Karluk, Ayakulik, and other Westside minor systems, and of pink, chum, and coho salmon returning to systems in the Southwest Afognak Section, the Northwest Kodiak District and the Southwest Kodiak District (17 sections). It was the intent of the Board to insure that salmon bound to these systems is harvested to the extent possible by the traditional fisheries located in all 17 sections (ADF&G 1990).

The Westside Kodiak salmon SMP reflected the realization of long-term management goals and identified current management practices that were initially implemented in 1971. The basis for these goals and practices was primarily to rebuild depleted Karluk and depressed Ayakulik sockeye stocks. The new SMP provided a predictable management framework for these rebuilt stocks, as well as pertinent major pink, chum and coho stocks, and helped to stabilize fishing opportunities between the three gear types on the highest quality fish in these districts and sections.

Further, we worked with the BOF to delineate the current individual districts (7) and sections (52) by which intra-Area KMA salmon fisheries are controlled (Figure 6).



In December 1989, the BOF also created the *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363) in response to concern that the fishing patterns and quantities of sockeye harvested by Kodiak seiners in July 1988 represented the onset of a potentially expanding intercept fishery on Cook Inlet-bound sockeye in Kodiak Area waters. This plan, in effect from July 6-25, was meant to contain KMA salmon fisheries in the North Shelikof to the estimated historical (pre-1988) sockeye harvest levels, yet still provide for traditional opportunities to harvest high quality, local stocks of pink and chum salmon. The major impact of this plan was the creation of sockeye harvest triggers for eight Sections bordering North Shelikof Strait. When managers determine that the estimated ‘traditional’ sockeye harvest level would be exceeded,



then further salmon fisheries in that management unit would be restricted to inshore “Shoreward Zones” and the offshore “Seaward Zone” would remain closed through July 25.

**The KMA Conservation Burden:** The *North Shelikof Strait Sockeye Salmon Management Plan* (5 AAC 18.363) restricts fishing in these areas during a specific time period (July 6-25), based on concern that KMA fishermen had newly begun targeting nonlocal (Cook Inlet) sockeye in the northern portions of KMA fisheries bordering Shelikof Strait during a single year, 1988. It was considered a new and /or expanding fishery within the KMA.

Currently, KMA’s North Shelikof fisheries will be closed or restricted to within ½ mile of a baseline if, and only if, specific July 6-25 sockeye harvest levels occur (harvest triggers) in either of two defined locations, the Mainland/North Afognak management unit (the northern half of the Mainland District, from the Dakavak Section to Cape Douglas, plus the Northwest Afognak and Shuyak Island Sections of the Afognak District) and the Southwest Afognak Section management unit (Figure 7). These areas are managed based on KMA pink salmon returns.

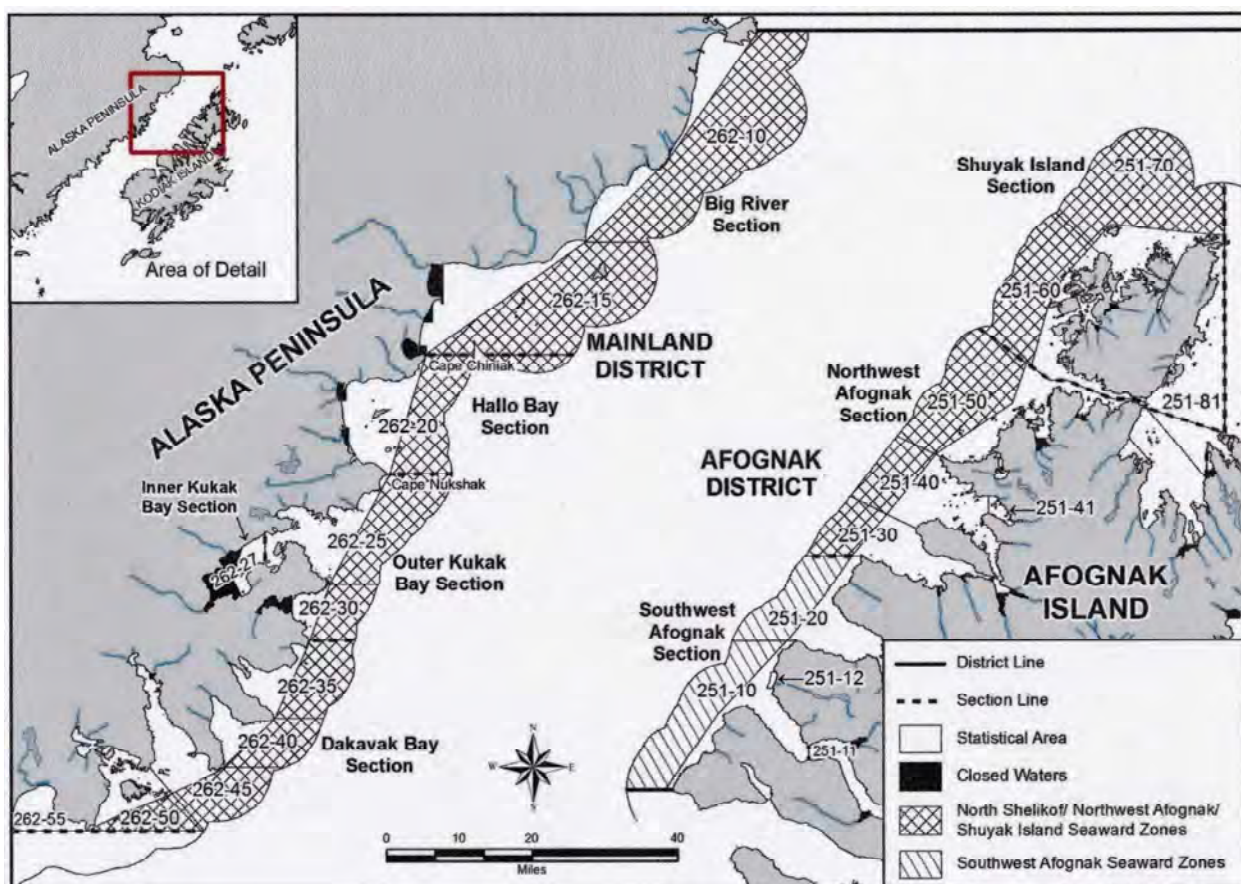


Figure 7. The location of the North Shelikof Sockeye Salmon Management Plan

Figure taken from ADF&G (Anderson, et al, 2016).

Pre-1988 KMA fishing patterns are no longer legal. Harvest triggers were based on some factor of pre-1988 July 6-25 sockeye harvests within the two management units (to allow some level of traditional and historic harvests). Should a harvest trigger be expected to be met, then further commercial fisheries are restricted to inside waters and “Seaward Zones” are closed until after



July 25. Please note that in most of the KMA, including the Mainland/North Afognak management unit, fisheries during the July 6-25 mid-season time period, commercial openings are ‘pulse’ fisheries, with limited 2½ to 4½ day fishing period per week, to allow movement of migrating mixed salmon stocks.

The westside of the Kodiak Archipelago is a known migratory pathway of south-bound KMA sockeye stocks and north-bound Cook Inlet sockeye stocks. While average weight studies found that a majority of the 1988 North Shelikof fishery sockeye harvest were likely of Cook Inlet origin, genetic MSA would have revealed much about this controversial allocative plan. The new MSA does not provide a genetic measure of the actual stock composition of any sockeye harvested at any part of the season in this ‘known’ area of KMA nonlocal bycatch. Undoubtedly, many KMA sockeye stocks are present and harvested and then are counted against the harvest triggers. After a Seaward Zone closure, many KMA salmon (primarily pink salmon but also local sockeye) and large areas of the KMA (hundreds of miles of coastline and thousands of square miles of KMA waters) are unavailable to KMA fishermen.

Based on results from all Kodiak MSA studies we know that levels of nonlocal sockeye are extremely variable in occurrence (time period), numbers and locations, as those fish migrate through KMA waters and fisheries. In contrast to the Cape Igvak plan, for the North Shelikof SMP, there is no consideration of Cook Inlet run strength. Based on Mixed Stock Analysis using run timing, age composition markers and fish lengths, 90-95% of the 1988 North Shelikof harvest of sockeye was assigned as Cook Inlet sockeye. When determining if sockeye harvest triggers will be achieved, all sockeye are counted, as if the entire North Shelikof sockeye harvest are Cook Inlet fish.

The adoption of the North Shelikof plan in 1990 had “unforeseen effects”. We know that, based on MSA conducted from 1990 to 1995, allocation battles continued. UCI stakeholders tried to justify additional closures throughout the KMA or in suspected ‘hot spots’ of KMA nonlocal sockeye harvest in other portions of the KMA (i.e. the Katmai/Alinchak, Halibut Bay, and the Sitkalidak Sections).

The passage of the North Shelikof SMP did not stop the concerns of Cook Inlet salmon fishermen and the Cook Inlet-Kodiak allocative dispute continued. Between 1990 and 1996, there were many proposed modifications or expansions of the North Shelikof plan, with few changes accepted. To support the efforts of the BOF to understand historical KMA salmon fisheries and the harvest of nonlocal salmon, ADF&G conducted Mixed Stock Analyses for stock identification of sockeye in KMA harvests (Barrett 1989; Barrett and Swanton 1991; Barrett and Swanton 1992; Vining and Barrett 1994; Vining and Barrett 1995; Vining 1996). We feel it is unfortunate that these MSA were downplayed by the UCIDA ACR and the new KMA sockeye genetic MSA.

The method developed by ADF&G and presented to the BOF involved comparison of average weights of local Kodiak salmon stocks with larger, nonlocal, primarily Kenai River sockeye salmon. Proportions of larger, nonlocal sockeye salmon were estimated in KMA sockeye salmon harvests. While many may have felt that average weight MSA was not a very robust methodology, it was the best science available at the time. There are significant differences in





average weights of Kodiak, Cook Inlet and Chignik. This method allowed ADF&G to look back at past KMA harvests and estimate the proportions and numbers of nonlocal sockeye in KMA commercial harvests. ADF&G could also deduct the exact stock of origin, based on weights, timing, etc. It was the best science available and multiple studies were presented to the BOF between 1990 and 1996. And the common result was estimates of sometimes substantial but extremely variable numbers of nonlocal Cook Inlet sockeye stocks in KMA sockeye harvests. The 1993-1996 MSA were not confined to the North Shelikof fishery but also included areas on the east and southwest sides of Kodiak, based on the regulatory restrictions proposed by Cook Inlet stakeholders (Vining 1996). More will be discussed concerning early Mixed Stock Analyses of KMA sockeye harvests in the subsequent portions of this review.

**TEN REGULATORY SALMON MANAGEMENT PLANS** (SMPs) for KMA salmon fisheries have been discussed, deliberated on, and approved by the BOF (Table 1). Between 1990 and 1999, an additional 5 Kodiak salmon fishery harvest strategies were taken to the BOF, deliberated, and then adopted into KMA commercial salmon fishery regulations. At all the associated BOF meetings, the variable incidental harvest of nonlocal sockeye salmon in KMA salmon fisheries was a known factor.

The KMA's 10 SMPs basically cover all districts and sections for the entire salmon season. Through the 1980s and 1990s when these SMPs were deliberated and adopted, as ADF&G managers we sought to explain more than determine the timing of traditional local stock salmon fisheries of the KMA. The majority of SMPs describe how KMA fisheries are prosecuted on local stocks.

Though nonlocal sockeye harvests likely always have occurred in the KMA, and do so in a seemingly unpredictable manner, Kodiak fisheries are prosecuted only when the abundance of LOCAL sockeye is sufficient.

Some people may expect that Cook Inlet-bound salmon should only be harvested in Cook Inlet salmon fisheries. And, the new scientific and technical MSA report freshly estimated KMA harvest levels of nonlocal, Cook Inlet sockeye salmon in commercial fisheries of the KMA. As has happened many times in the past, the reported harvest of nonlocal salmon within KMA commercial fisheries has re-ignited a long-running, Cook Inlet versus Kodiak, allocative 'fish fight'.

Table 1. Alaska Board of Fisheries-approved salmon management plans for the Kodiak Management Area, 2016. *From ADF&G, 2017*

| Regulatory Management Plan              | Year initiated | Management units affected                                                                                                                                                | Dates in effect |
|-----------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Cape Igvak Salmon                       | 1978           | Cape Igvak Section<br>Wide Bay Section                                                                                                                                   | 6/5–7/25        |
| Alitak District Salmon                  | 1987           | Alitak District                                                                                                                                                          | 6/1–10/31       |
| Westside Kodiak Salmon                  | 1990           | NW Kodiak District<br>SW Kodiak District<br>SW Afognak Section                                                                                                           | 6/1–10/31       |
| Crescent Lake Coho Salmon               | 1990           | Special Harvest Area<br>in the Central Section<br>near Port Lions                                                                                                        | 7/15–10/31      |
| North Shelikof Strait<br>Sockeye Salmon | 1990           | SW Afognak Section<br>NW Afognak Section<br>Shuyak Island Section<br>Big River Section<br>Hallo Bay Section<br>Inner and Outer Kukak Bay Sections<br>Dakavak Bay Section | 7/6–7/25        |
| Spiridon Bay<br>Sockeye Salmon          | 1993           | Special Harvest Area<br>in Spiridon Bay Section                                                                                                                          | 6/9–10/31       |
| Eastside Afognak Salmon                 | 1993           | SE Afognak Section<br>Kitoi Bay Section<br>Izhut Bay Section<br>Duck Bay Section<br>Raspberry Strait Section                                                             | 6/1–10/31       |
| Eastside Kodiak Salmon                  | 1995           | Eastside Kodiak District<br>NE Kodiak District                                                                                                                           | 6/14–10/31      |
| Afognak Shuyak Salmon                   | 1995           | Perenosa Bay Section<br>Shuyak Island Section<br>NW Afognak Section                                                                                                      | 6/1–10/31       |
| Mainland District Salmon                | 1999           | Mainland District                                                                                                                                                        | 6/14–10/31      |



### Part 3 – BOF Agenda Change Request Criteria and Consideration of ACR #11

United Cook Inlet Drift Association has submitted an Agenda Change Request (ACR #11), asking the BOF to consider an out-of-cycle proposal for a new salmon management plan in the Kodiak Management Area, to limit nontraditional harvest of nonlocal sockeye in KMA commercial salmon fisheries.

Normally, Kodiak Finfish issues are addressed during regularly scheduled (on-cycle) BOF meetings; only if the BOF accepts a properly submitted Agenda Change Request (ACR) will unscheduled (off-cycle) BOF consideration be approved. ACRs, reviewed at fall BOF work sessions, must meet the criteria for the BOF's *Policy for Changing Board of Fisheries Agenda* (5 AAC 39.999). Importantly, subsection (2) of that policy states that “the board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the board to be compelling”.

ACR consideration usually requires clear and concise biological concerns. Subsequent allocative considerations receive a lower priority. Application of BOF Criteria and Policies requires that unless there is compelling NEW information, then any allocatively-based ACRs would be denied. Such issues would then come up at the next on-cycle BOF meeting (for Kodiak Finfish that would be the 2019/2020 cycle).

**The Criteria for an Agenda Change Request** are found in the Alaska Administrative Code (regulations). For this discussion, the pertinent portions of that regulation are as follows:

5 AAC 39.999. POLICY FOR CHANGING BOARD AGENDA. (a) The Board of Fisheries (board) will, in its discretion, change its schedule for consideration of a proposed regulatory change in response to an agenda change request, submitted on a form provided by the board, in accordance with the following guidelines:

- (1) the board will accept an agenda change request only
  - (A) for a fishery conservation purpose or reason;
  - (B) to correct an error in a regulation; or
  - (C) to correct an effect on a fishery that was unforeseen when a regulation was adopted;
- (2) the board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the board to be compelling.

Based on our review of the new MSA report and ACR #11, our brief responses to these criteria are:

**Criteria 1(A):** The BOF may accept an ACR for a fishery conservation purpose or reason:

There isn't a Conservation Concern for any sockeye salmon stock in the Cook Inlet or Kodiak Management Areas. Published ADF&G forecasts for the 2014 to 2016 (GSI study years) and 2017 for Cook Inlet salmon fisheries predicted harvestable surplus for all sockeye stocks. Commercial fisheries were prosecuted in Upper Cook Inlet from 2014-2017, and there is no chronic inability to meet UCI sockeye escapement goals (more detail is given in Part 4, below). Susitna sockeye are a Stock of Yield Concern, not a Conservation Concern.



A BOF approved Action Plan was developed in 2008 and has been modified with BOF review (more detail is offered below).

Criteria 1 (B): The BOF may accept an ACR to correct an error in a regulation.

We feel there are no errors in current regulations governing the KMA salmon fisheries. This salmon fishery has been identified as a Mixed Stock Fishery, and past studies have revealed similar numbers and percentages of Cook Inlet sockeye present in KMA harvests, as did the new Kodiak sockeye genetic MSA study. KMA regulatory Salmon Management Plans (SMP) were written, discussed, and passed by the BOF with that knowledge.

Should that fact then dictate that nonlocal salmon in KMA harvests should never be discussed by the BOF? Not necessarily... if the allocation question is sufficient to interest the Board to further discussion of possible change to KMA commercial salmon fishing regulations, then the BOF may schedule the issue for the on-cycle, regularly scheduled Kodiak finfish meeting. That option also allows for continued study, education, discussion and potential agreement or acceptance by stakeholders. Options and possible courses of action could be discussed among ADF&G researchers and managers.

An error in regulation is more likely with hasty, ill-prepared, unjustified or politically motivated proposed regulation changes. An issue of this importance and complexity deserves adequate consideration prior to changes to traditional and historical fisheries, changes which would also bring severe economic consequences to the Kodiak salmon fishery.

Criteria 1 (C): The BOF may accept an ACR to correct an effect on a fishery that was unforeseen when a regulation was adopted.

There hasn't been any 'effect on a fishery' demonstrated by ADF&G's new MSA study or report. There was a lot of data, yet little to no analyses. The net 'effect' of the KMA harvest of nonlocal sockeye is not new nor has it been demonstrated that it is endangering any sockeye stocks. Perhaps an ADF&G evaluation of the 'effect' of KMA harvest of nonlocal sockeye is needed, and we suggest taking the time to ask the Department that, and other germane questions.

The presence of relatively large numbers of Cook Inlet salmon within KMA commercial salmon harvests during any year cannot be categorized as "unforeseen", for the reasons stated throughout this review. As previously shown, even a measure of the magnitude of the KMA commercial harvest of Cook Inlet sockeye estimated by the new MSA study was clearly demonstrated and reported to the BOF in the early to mid-1990s (over 20 years ago). No negative effects on the nonlocal sockeye stocks have been shown. Unfortunately, many UCI fishermen may hear of the NEW study and expect that the Mixed Stock nature of KMA salmon fisheries was an unforeseen effect.

Criteria (2): The board will not accept an agenda change request that is predominantly allocative in nature in the absence of new information found by the board to be compelling.

Does this new MSA study and report show that there should be new concern for the sustainability or conservation of any Cook Inlet sockeye stock? In the absence of a



Biological Concern, what remains are Allocative Concerns. Based on our experiences, we do not believe that the new MSA is new and compelling.

We feel that the BOF should not accept any ACRs regarding KMA nonlocal salmon harvest at fall Board of Fisheries work sessions. Board review of KMA commercial salmon fishery regulations should remain ON-CYCLE, to next occur during the BOF's 2019/2020 meeting cycle.

We have **ISSUES with the ISSUES PRESENTED** by UCIDA in ACR #11. There are misstatements and untruths contained in the ACR explanations and descriptions. For clarity, we comment on the UCIDA responses to the questions posed on the Agenda Change Request Form:

ACR #11 - Question 1: UCIDA asks for the adoption of a new regulatory management plan for the KMA.

As stated, we do not believe that the Criteria for an Agenda Change request have been met.

ACR #11 – Question 2: UCIDA states that the problem is “the harvest of Cook Inlet and other non-local salmon stocks in the Kodiak Area”.

No evidence of harm or any problem with UCI sockeye stocks is shown or postulated. It appears that UCIDA feels that ANY harvest of nonlocal salmon in the KMA is a ‘problem’, despite the fact that Cook Inlet salmon have historically been present in the KMA and were identified in KMA salmon harvests in virtually all KMA MSA studies. Nonlocal sockeye salmon are a natural occurrence in the KMA, the magnitude of which may be related to overall abundance. Many uncontrollable factors are involved such as weather, ocean conditions, and migratory patterns.

ACR #11 - Question 3: UCIDA seeks a new ‘umbrella’ KMA salmon management plan. Further, UCIDA seeks to provide ADF&G with long-term direction regarding management of the harvest of nonlocal and local salmon stocks, in this case within KMA commercial salmon fisheries, and asks the BOF to define the BOF's long-term management objectives for such mixed stock fisheries. The purpose for a restrictive management plan is defined by UCIDA as “allowing traditional fisheries on local stocks while minimizing directed harvest of Cook Inlet or other nonlocal salmon stocks” (emphasis added).

There are no directed harvests on nonlocal salmon in the KMA except for the long-standing Cape Igvak fishery. All other KMA salmon fisheries are directed toward the harvest of local salmon runs. Even the July North Shelikof fisheries are managed for local Kodiak salmon stocks (mainly based on KMA pink and chum salmon). There's been no new intercept fisheries or expansion of targeting nonlocal sockeye salmon in KMA fisheries.

Under Question 3, UCIDA recognizes that “incidental harvest” will occur during fisheries managed for local KMA stocks. However UCIDA also seeks to “prevent a repetition of nontraditional harvest patterns which occurred during 1988, and during the past few years” (emphasis added).

The ACR seeks to prevent the repetition of something that has not occurred since 1988. There is no evidence of any repetition of 1988 fishing patterns, nor is there any evidence of nontraditional harvest patterns in KMA salmon fisheries in the past few years.



The UCIDA proposal also seeks to modify the North Shelikof SMP to change the current harvest triggers into strict harvest limits, further limiting the ability of KMA salmon fishermen to use traditional fisheries to harvest local salmon stocks.

ACR #11 - Question 4A: The fishery conservation purpose or reason appears to be that currently ADF&G does not use precise genetic stock estimates in development of escapement goals, management plans or brood tables.

ADF&G will use the best science available, and has successfully managed UCI and Kodiak sockeye stocks without precise genetic stock composition estimates. The KMA genetic MSA was just finished and published. TIME is needed to attempt to use data from the recent MSA. The new Kodiak sockeye genetic MSA was not designed or analyzed to determine appropriate limits on nonlocal, Cook Inlet sockeye harvest in KMA fisheries. Additional genetic studies, such as that conducted annually in Upper Cook Inlet, would be necessary.

ACR #11 - Question 4B: The error in regulation given by UCIDA seems to be the inaccurate or unfairly applied burden of conservation.

The *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222), in subsection 4) D), states “in the absence of a regulatory management plan that otherwise allocates or restricts harvests, and when it is necessary to restrict fisheries on salmon stocks where there are known conservation problems, the burden of conservation shall be shared among all fisheries in close proportion to each fisheries' respective use...” (emphasis added). UCI sockeye escapements are met, Cook Inlet salmon fisheries are allowed, so the conservation burden is minimal. There is not a known conservation problem; Susitna sockeye are a Stock of Yield Concern only.

KMA already shares the burden of conservation with Cook Inlet. In December 1989, the Board passed a regulatory plan for the harvest of Cook Inlet sockeye salmon in the KMA, the North Shelikof Strait Sockeye SMP, which:

- is located to afford the most protection for UCI sockeye as they migrate through the KMA commercial salmon fisheries (the North Shelikof);
- is timed to cover the estimated peak timing of nonlocal sockeye presence in the KMA (July 6-25);
- provides for weekly ‘pulse’ fisheries based solely on local Kodiak salmon forecasts and run strength indicators, with designated 2½ to 4½ day fishery closures each week;
- has sockeye harvest ‘triggers’ based on estimated pre-1988 historical sockeye harvest levels in the affected areas; and,
- protects KMA’s traditional fishing opportunities when a sockeye harvest trigger is met by only allowing continued fishing in inshore waters (Shoreward Zones; offshore Seaward Zones, from the baseline to the 3 mile limit, are closed).

This is already a very large conservation burden on KMA fishermen, for which no positive net effect on UCI stocks has ever been demonstrated. Over half of the Mainland and Afognak Districts are subject to fishery closures in July, based on the 1988 KMA harvest of nonlocal Cook Inlet salmon. Many KMA stakeholders would say that the conservation burden is currently unfairly slanted against KMA fishermen.





ACR #11 - Question 4C: As an effect that was unforeseen, UCIDA states that “It was only recently, as a result of genetic testing and analysis, that the real magnitude of the harvest of Cook Inlet and other non-local salmon stocks in the Kodiak Management Area became known”.

Just because they may have forgotten about, or were too young to know about, the Mixed Stock Analyses of KMA sockeye harvests in the 1990s, doesn’t mean that that information doesn’t exist. The magnitude of nonlocal salmon harvests was known and was before the Board when KMA management plans were deliberated and adopted, but a new MSA has inspired a new round in the ongoing Cook Inlet-Kodiak fish fight.

This type of proposal is not new. In the past, UCIDA and UCI stakeholders have submitted many proposals for changes in management of the KMA fisheries. Very similar proposals were submitted to the BOF in the mid-1990s. With dozens of meetings and hundreds of hours of BOF discussions, committee discussions, as well as 2 years of work by a BOF-ADF&G-Stakeholder Cook Inlet-Kodiak Inter-Area Work Group, it is clear to us that the BOF has been informed, has reviewed the KMA nonlocal salmon issue, and has deliberated on such restrictive management plan proposals.

ACR #11 - Question 5: UCIDA states that, should this issue not be solved prior to the 2019/2010 regular BOF meeting cycle (the next in-cycle BOF meeting to consider Kodiak finfish issues) then the issue will lead to “increased conflicts, inappropriate biological assessments (escapement goals), economic stress, perhaps inappropriate management plans and inappropriate use of Emergency Order authority”.

Solving the issue of nonlocal salmon harvest within an area may be a completely different thing than massive area-wide restrictions and complete change to KMA’s traditional salmon fishery management and harvest opportunities, which would result from adoption of the proposed UCIDA umbrella plan. Should the proposed UCIDA ‘Solution’ be adopted, there would still be increasing conflict, increased economic stress and the potential for inappropriate assessments, management plans, or fishery actions (EOs).

ACR #11 - Question 6: UCIDA rightly admits that their ACR (#11) is allocative. We concur.

ACR #11 - Question 7: This is a complex question. The BOF asks for the “new information that compels the Board to consider an allocative proposal outside of the regular cycle. UCIDA claims that “Now, years later, with the aid of genetics, we know much more about the timing, location, extent and magnitude of the harvests of Cook Inlet origin salmon stocks. This ACR is the first opportunity to look at the harvest of Cook Inlet stocks in the Kodiak Management Area.”

We consider this a very serious misstatement of fact. This is not the ‘first opportunity to look’ at KMA incidental harvests of nonlocal, Cook Inlet sockeye, as suggested. This is NOT the first look at harvests of Cook Inlet salmon in the KMA. Beginning in the 1920s, salmon researchers have studied KMA salmon stocks composition and shown that Cook Inlet salmon contribute to KMA commercial fisheries. The magnitude of nonlocal sockeye in KMA commercial fishery harvests has been previously studied extensively by ADF&G. MSA estimates were conducted and reported to the BOF and the public between 1989 and 1996, with similar results as the new genetic MSA.

The recent 2014-16 Kodiak genetic MSA has indeed added to the data available, however it gives little to NO definitive answers to migratory timing, location, extent or magnitude of



nonlocal salmon passing through the Kodiak Management Area. It was a limited, short term study that looked at only some parts of June-August KMA salmon fisheries for only three years (three data points for each temporal/spatial stratum). Data was pooled into three fairly long temporal periods and six fairly large geo-spatial strata. For any temporal/spatial strata, there are only three annual data points. Three data points will show a false trend more often than a true trend. Three data points are most likely to show no trend.

The study cannot infer an absolute or precise harvest rate of nonlocal sockeye in KMA fisheries. There's just not enough information. The current MSA study and report has provided limited results from a limited sampling plan that was NOT intended to provide nonlocal salmon harvest rates, but rather the sockeye stock components of selected KMA fisheries during limited time periods.

UCIDA claims that the Kodiak sockeye genetic MSA is new information that should prompt the BOF to "look at the harvests of Cook Inlet sockeye stocks in the Kodiak Management Area". We strongly disagree. Again, more will be discussed regarding these point, in subsequent parts of this review.

ACR #11 - Question 9: UCIDA clearly states that there is NEW proposal, "not previously... before the board" and that it was "modeled after existing portions of both the Kodiak and Cook Inlet Alaska Administrative Code themes and regulations."

The proposed UCIDA restrictive umbrella plan from ACR #11 is not a new proposal. It is modeled after proposals from the November 1995 Kodiak Finfish BOF meeting and prior BOF meetings (Appendix E).

At that meeting, there were several such proposed changes to KMA fisheries. And the Board did not adopt any further restrictions. In the Summary of Actions taken at that meeting (Appendix E), it clearly states that "the past Board had pretty much resolved the issue in 1989 utilizing the best information available. And that information has not changed to this point. The effort and catch has increased in the disputed areas due to local management practices in other areas of Kodiak. And it is difficult to determine if this (is) a new and expanding fishery when both this area and Cook Inlet fisheries are at an all-time high. The overriding reason for apparent increase in intercept of Cook Inlet stocks seems to be directly related to the density and strength of that run" (emphasis added).

The 1995 Board of Fisheries reviewed MSA and harvest information and determined that shifts in effort levels could be fishermen movement due to closures of North Shelikof fisheries SMP, not new or expanded targeting of Cook Inlet stocks. They recognized that nonlocal salmon harvests occur in KMA fisheries and the relative level of such harvests were related to run strength. No biological concerns and no allocative concerns meant no change to Kodiak SMPs.

In both 1995 and 1988, Kodiak salmon fishermen submitted proposals to increase the harvest triggers used in the North Shelikof July 6-25 fisheries. They did so because the number of local Kodiak sockeye had increased since 1988, due to both an increase in natural production and increased enhancement of Kodiak sockeye. This would have increased the number of local sockeye salmon available in the North Shelikof fisheries. However, because of the complexity of the situations involved, the BOF did not accept either proposal.



There were subsequent changes to the North Shelikof SMP. In 2002, the Ouzinkie Native Corporation, representing tribal commercial fishermen from Ouzinkie and Port Lions, proposed a less restrictive plan for Southwest Afognak section commercial salmon fisheries during the North Shelikof SMP mid-season time period (July 6-25). The BOF allowed KMA fishermen to continue to fish traditional seine hauls in the Southwest Afognak Section out to within ½ Mile of the baseline (a reduction of the Seaward Zone). And at a regular Kodiak Finfish meeting in January 2008, the Board accepted an amended version of the Ouzinkie proposal, reducing the Seaward Zone in the Northwest Afognak Section to allow KMA fishermen to continue to fish traditional seine hauls.

The BOF, despite multiple considerations of the KMA salmon fisheries and the North Shelikof plan, has not accepted proposals for increased restriction of KMA fisheries based on Cook Inlet sockeye salmon harvests within the KMA.

Concern is expressed in the ACR that if the proposed plan is not adopted, KMA salmon fisheries continue to incidentally harvest nonlocal Cook Inlet sockeye salmon, and then there will be detrimental biological or ecological effects. Yet there are no examples given of what detriments have been experienced in Cook Inlet due to recent KMA salmon fisheries or fishing patterns. Nor was any potential biological or ecological harm identified in the ACR #11.

Since 1989, the Board of Fisheries has addressed dozens of proposals from Cook Inlet salmon fishery stakeholders, for KMA management plans or regulatory restrictions. And very few changes have been made to the existing Cook Inlet-Kodiak allocative SMP by the BOF, and the BOF has not deemed it necessary to expand the regulatory KMA fishery restrictions by time (before or beyond 7/6-25) or location (North Shelikof vs. other major fishing areas of the KMA such as the east side or southwest sides of Kodiak Island).

UCIDA's proposal would establish a complicated plan covering an expanded time period (5 weeks, from 6/25 to 7/29) and newly expanded locations to include most of the KMA wild stock salmon fisheries. Within the identified time period and locations, there would be weekly and "seasonal" (6/25 to 7/29) commercial harvest limits for sockeye salmon.

This proposed plan would completely change the nature of KMA commercial salmon fisheries, and the opportunity for KMA salmon fishermen to harvest millions of local salmon would be uncertain or lost due to shifting of fisheries to only inner bays and terminal harvest areas.

Long-standing harvest strategy criteria by which KMA managers have operated could be more difficult to assure or complete. For example, since about 1971, the KMA general pink salmon fishery has been managed to coordinate multiple fishery openings whenever possible, (several locations over a wide area opening to the salmon fishery during the same time periods) to disperse the purse seine fleet. More restriction of fishing areas means more boats in smaller places, increasing the likelihood of conflict. And since about 1980, managers have attempted to maximize harvest opportunities on the highest quality salmon during orderly fisheries. More restrictions and a completely new harvest management plan would reduce opportunities, and



would likely lead to poorer quality salmon products (brighter, fresher salmon are found outside of bays and in early pink salmon fisheries) as well as the potential for more gear conflicts.

Managers would be forced to be ultra-conservative in order to meet the proposed new plan's expectation that fishery managers would make closure announcements if they EXPECT a limit to be reached or if the current harvest is within 15% of that limit. The weekly and seasonal sockeye harvest limits given in the UCIDA proposal are vastly lower than actual harvest in the past. For example, for the Westside Districts the proposed weekly limit is 12,500 sockeye, yet over the past ten years (2008-2017) the weekly Westside sockeye harvest during the 6/25 to 7/29 plan duration has averaged over 61,000 sockeye (Appendix D).

In our opinion, such widespread KMA fishery restrictions in late June through July (five weeks in the middle of the KMA salmon season) would greatly reduce ADF&G's management precision (more uncertainty means more conservative management) and increase the likelihood of 'lost' harvest opportunities, reduced quality of the pink salmon harvested and increase the likelihood that Kodiak sockeye and pink salmon escapements would exceed the appropriate levels that have been determined by ADF&G and the BOF.

And, the proposed sockeye harvest limits are substantially below the recent or historical sockeye harvests in those fisheries. The vast majority of past KMA salmon fisheries (1985-present) would have been restricted had this proposed umbrella plan been in effect (Appendix D). The proposed management plan's weekly and/or seasonal sockeye harvest limits would have been met, forcing restriction of major KMA fisheries to only inshore waters.

This is a long-running fish fight, and one could expect that the KMA stakeholders would follow with their own Agenda Change Requests, proposed management plan adoption or modifications, negative rhetoric, legislative inquiries or legal actions. The effects of the proposed UCIDA umbrella plan on traditional strategies and fishing opportunities would force a substantial negative response by not only the KMA salmon fishermen, but by processors, business owners, local Borough and City governments, and local legislators that would know and experience the negative ramifications to KMA mid-season salmon fisheries.

Based on our knowledge of the KMA commercial salmon fishery, it is expected that should this proposal pass as is, it would severely cripple the Kodiak commercial salmon fishery and devastate the Kodiak economy.

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#### **Part 4 – Is there an Emergency or Compelling New Information?**

We feel there is no biological or conservation-based emergency, nor compelling new information that forces the Board to consider this Allocative Proposal. Therefore, we see no reason to take this issue up out of the regular BOF fishery-review meeting cycle.

**BIOLOGICAL CONCERNS** are mentioned in UCIDA's ACR #11. For a salmon run, escapement and resulting production are known biological concerns that are affected by commercial salmon fisheries.



Escapement estimation for Upper Cook Inlet salmon streams is a complicated and changing process. Based on data obtained from ADF&G, it appears that sockeye salmon escapement goals are generally being met (Table 2), and there is no chronic inability to meet escapement needs.

Table 2. Upper Cook Inlet sockeye salmon escapement goal ranges and recent escapement estimates, 2010 – 2017. *Data from ADF&G, Division of Commercial Fisheries, Anchorage, 8-22-17.*

| Sockeye Escapement Goal Ranges <sup>1</sup> | 2010    | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      |
|---------------------------------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
| Kasilof River 160,000 - 340,000             | 267,013 | 245,721   | 374,523   | 489,654   | 439,977   | 470,677   | 239,981   |
| Kenai River 1,000,000 - 1,300,000           | 970,662 | 1,599,217 | 1,581,555 | 1,359,893 | 1,520,340 | 1,704,767 | 1,383,692 |
| Fish Creek 15,000 - 45,000                  | 126,829 | 66,678    | 18,813    | 18,912    | 43,915    | 102,296   | 46,202    |
| Chelatna 20,000 - 45,000                    | 37,784  | 70,353    | 36,736    | 70,555    | 26,212    | 69,897    | 60,792    |
| Judd 15,000 - 40,000                        | 18,466  | 39,984    | 18,715    | 14,088    | 22,229    | 47,934    | No Count  |
| Larson 15,000 - 35,000                      | 20,324  | 12,190    | 16,566    | 21,821    | 12,430    | 23,185    | 14,333    |

1. Escapement goals are those provided by ADF&G following a 2017 Board of Fisheries review.

Harvestable surpluses of UCI sockeye salmon have been consistently realized. ADF&G forecasts for 2014-2017 Cook Inlet salmon fisheries show significant surplus sockeye salmon production, over and above published escapement needs. Harvest records show that recent annual Cook Inlet sockeye salmon commercial harvests were in excess of forecast (Table 3).

Table 3. Forecast, commercial harvest, and estimated total run of sockeye salmon in the Cook Inlet Area, 2014 – 2016. *Data from ADF&G annual run forecast and harvest reports.*

| Year | <u>Upper and Lower Cook Inlet Sockeye Salmon (in number of fish)</u> |                    |                     |
|------|----------------------------------------------------------------------|--------------------|---------------------|
|      | Forecast                                                             | Commercial Harvest | Estimated Total Run |
| 2014 | 4.3 million                                                          | 2.6 million        | 5.5 million         |
| 2015 | 3.7 million                                                          | 2.9 million        | 6.3 million         |
| 2016 | 5.3 million                                                          | 2.7 million        | 5.0 million         |

Looking further back, based on decadal averages it appears that recent (2010-16) total Upper Cook Inlet (UCI) sockeye salmon runs are above the previous two decades' average UCI sockeye runs and over twice the average from the 1970s (Table 4). If there has been biological or ecological harm to UCI sockeye salmon stocks from KMA incidental harvest, it does not show in total UCI sockeye run estimates.

Table 4. Total UCI sockeye run averages

| Decade  | Decadal Average |
|---------|-----------------|
|         | UCI Sockeye Run |
| 1972-79 | 2,408,257       |
| 1980-89 | 6,492,479       |
| 1990-99 | 6,052,752       |
| 2000-10 | 5,843,985       |
| 2011-16 | 6,208,675       |

*Data from ADF&G, Division of Commercial Fisheries, Anchorage, 8-22-17.*

Actual Cook Inlet commercial, subsistence or sport harvests may vary and at times may even be lower than in the past. However, commercial fisheries were prosecuted in Lower and Upper Cook Inlet resulting in Cook Inlet commercial salmon fishery harvests of millions of sockeye salmon. Sockeye salmon production seems to be near historical highs, based on data provided by ADF&G.



**A STOCK of CONCERN** designation was placed on the Susitna sockeye stock in 2008. However, the Susitna sockeye stock was categorized as a YIELD concern, not a Management or a Conservation Concern. Even that designation was not without controversy, both for and against. The level of Concern for Susitna sockeye has not changed with almost 10 years of subsequent ADF&G and BOF review.

Based on the *Policy for the Management of Sustainable Salmon Fisheries*, “Yield Concern” means a concern arising from chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock’s escapement needs (5 AAC 39.222(f)(42)). Based on the Sustainable Salmon Policy, there is an Action Plan for Susitna sockeye salmon as a Stock of Yield Concern, and that plan is reviewed and updated as necessary during salmon area specific BOF meetings. The Action Plan, in part, must contain goals, measurable and implementable objectives, and provisions, including fishery management actions needed to achieve rebuilding goals and objectives, as well as descriptions of new or expanding salmon fisheries.

Within the Susitna sockeye salmon Action Plan, there are NO new or expanding fisheries listed. This is especially surprising when considering the near meteoric rise in sport fishing effort and commercial sport fishing operations (guides, charter operators and lodges) across the State of Alaska in the past 20 years. The Kodiak commercial salmon fishery has not been identified as ‘New and Expanding’, nor have any portion of KMA salmon fisheries.

The Susitna sockeye salmon Action Plan designates that ADF&G Division of Commercial Fisheries will manage the Susitna sockeye stock using commercial fishery regulation of Upper Cook Inlet’s Northern and Central Districts, only (Figure 8). There are no commercial salmon fisheries restrictions in Lower Cook Inlet (5 Districts) based on this Stock of Concern.

It seems like an over-reach to ask for severe commercial fishing restriction in the KMA, so far ‘downstream’, while ignoring Lower Cook Inlet. Especially since all Upper Cook Inlet stocks MUST pass through Lower Cook Inlet.

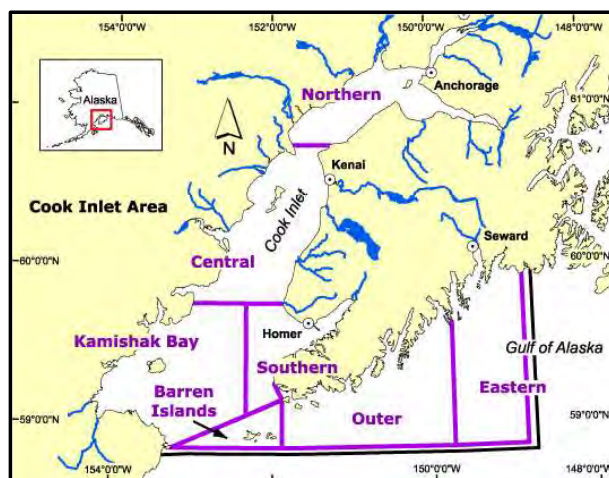


Figure 8. Map of Cook Inlet’s commercial salmon fishing districts. *Figure taken from ADF&G website*

ADF&G has identified several other factors, besides natural or incidental mortality, that may be affecting the survival (yield) of Susitna sockeye salmon in freshwater (spawning and rearing areas), including the introduction of invasive species (Northern Pike), loss or alteration of habitat, changes in water quality or quantity, pathogens, or harvest by sport fishing. Yield Concerns, by definition, are NOT concerns for the sustainability or successful management of the stock, rather it is concern for lower than desired harvestable surpluses, above expected escapement needs. To ‘conserve’ UCI sockeye salmon for harvest by a select group of Alaska fishermen, for only Cook Inlet commercial salmon fishermen or sport fishermen or commercial sport fishing business owners, is based on allocation; it is not a concern for conservation caused by new and expanding fisheries.





We feel confident that no biological reason exists for restricting KMA fisheries in order to protect Cook Inlet-bound salmon, based on the information given in the UCIDA ACR, or in the 2014-16 KMA genetic MSA (more in following part of this review).

Nothing New has been determined with which to accurately determine the impact of KMA sockeye harvests of nonlocal salmon on Cook Inlet sockeye salmon stocks.

Perhaps some people have assumed that the magnitude of the Cook Inlet sockeye component of KMA harvests was an unknown. Perhaps some people assumed that Cook Inlet salmon rarely migrate through the KMA, so the harvest numbers in the report were shocking to them.

However, the 2014-16 MSA report was not an analysis of nonlocal sockeye harvest in the KMA. It is a reporting of recent data collected in yet another MSA in the KMA. In the 2014-16 KMA sockeye genetic MSA, only very limited information from past tagging studies was included, and there is only one citation from several Kodiak MSA reports by ADF&G from 1989-1996.

Without a discussion of ‘How we got here’ it is often difficult to correctly ascertain exactly where we are now. It is unfortunate that, in the new MSA report, Shedd et al (2016) included only very limited information on past Kodiak sockeye MSA studies and published reports.

**Earlier MSA Studies were Conducted in the KMA** using existing fisheries data and samples, such as analyses of run timing, or of scale samples for stock-specific age-markers or patterns, or use of average sockeye salmon lengths or weights from KMA vs CIMA commercial harvests. A quick comparison shows that many data from the new KMA genetic MSA and from previous KMA average weight MSAs are similar. There was no mention or analysis of these facts in the new MSA report

Included in the new MSA report are over 60 tables describing the annual estimates of local and nonlocal sockeye salmon in each of six preselected geographic areas (geospatial strata) during each of three time periods (temporal strata). The middle stratum encompasses the July 6-25 period used in earlier studies, so is most comparable with that earlier data. The 1994 Barrett and Vining report also looked at specific area harvests, some of which approximate the 2014-2016 sampling areas.

Barrett and Vining (1994), using average weights, estimated the stock compositions of KMA July harvests from eight KMA locations (geospatial strata), which are basically the same as the geospatial strata in the recent KMA genetic MSA. For example, in Barrett and Vining (1994), for Ayakulik and Halibut Bay, the nonlocal (Cook Inlet) sockeye harvests for July, 1988-1992, ranged from 103,900 to 444,400 fish. In the recent KMA genetic MSA report, the mid-season (basically July) 2014-2016 KMA harvest of nonlocal sockeye in the Ayakulik/Halibut Bay strata ranged from 41,300 to 185,100 fish. From this comparison it is obvious that the earlier studies not only showed that Cook Inlet sockeye were present and were caught in July Ayakulik –halibut Bay fisheries, but that the magnitude of the incidental harvest was greater than in 2014-2016. Should the NEW information be touted as a decline in nonlocal salmon harvests, or only annual variability?



Using another example, the 1988-1992 MSA (Barrett and Vining 1994), the July (mid-season strata) Cape Alitak nonlocal (Cook Inlet) sockeye salmon harvest was estimated at 46,400 to 63,200 fish, and in the 2014-2016 KMA genetic MSA (Shedd et al, 2016) the harvest of nonlocal sockeye in the Alitak District ranged from 37,500 to 127,700 fish. The average weight MSA estimated significant harvest of nonlocal sockeye in the Alitak District, which was confirmed by the KMA genetic MSA. However, does the new MSA study point out an increase in nonlocal salmon harvest in the Alitak Bay District, or annual variability?

**There is simply no truthful way to claim that the harvest of nonlocal, Cook Inlet salmon is new information, or that the magnitude of those incidental harvests is new information, or that the timing and estimated number of incidental sockeye harvested is anything but unpredictable and widely variable between and among years.**

**The New Genetic MSA Report**, by presenting seemingly new MSA data with high numbers and percentages of nonlocal salmon in KMA salmon harvests, without comparing that to past study data and results (such as previously determined bycatch levels of Cook Inlet sockeye in KMA harvests), has led to unfounded conclusions and has created an emotional response by stakeholders from Cook Inlet fisheries. Vital information is not included, again pointing to the need for development of a comprehensive document or set of data, for review by stakeholders and the BOF prior to deliberating on any proposed change to KMA salmon management.

In the new 2014-2016 Kodiak sockeye genetic MSA report, authors show the number of nonlocal, Cook Inlet sockeye salmon estimated to be harvested in KMA commercial fisheries as a percent of the KMA commercial harvests during selected time periods and within selected portions of the area. This shows the estimated stock contribution rate (stock proportions) of the KMA harvest. We feel this has been misleading for some people.

The Kodiak genetic MSA provides nonlocal harvest data as a percentage of the KMA harvest. It does not attempt to show the potential impact to Cook Inlet stocks. It is understandable (and should have been expected) that some people, upon seeing tables of numbers demonstrating large percentages of nonlocal salmon, may jump to the conclusion that there is a danger to the sustainability of any seemingly fully utilized stocks. The new MSA report does not provide a comparison of the estimated KMA nonlocal Cook Inlet harvest to the total Cook Inlet sockeye harvest or run, or to individual CI sockeye runs (a harvest rate).

But again, as with number of salmon, similarity between the nonlocal stock contribution proportions from earlier and recent KMA sockeye MSA is quickly evident.

Within the new MSA report, the 2014-2016 estimates of overall nonlocal contribution to KMA harvests ranged from 12% (2014) to 42% (2015 and 2016); this is within the ranges determined by earlier studies... it is not new information. In 1996, ADF&G estimated that overall, during July 6-25 sockeye salmon harvest for 1983-1995 (excluding 1989), nonlocal sockeye salmon were from 10.6% to 76.2% of the KMA harvest (excluding Cape Igvak; Vining 1996).

The average weight studies were a rigorous scientific statistical analysis, much discussed, agreed to by ADF&G headquarters, Cook Inlet and Kodiak ADF&G staffs, edited by ADF&G, and the various authors thoroughly discussed the limitations of such a study and cautioned against misapplication of results. Vining (1996) wrote, “Each time the average weight method has been used as a sole approach, the public... and BOF members have voiced strong concerns about the estimates, due to low confidence in some of the estimates”.

Comparing the estimated number of nonlocal Cook Inlet sockeye harvested in sampled KMA commercial salmon fisheries against the total Cook Inlet harvest or total run, gives a look at the harvest rate of Cook Inlet salmon in KMA fisheries. This is an important distinction, if one is trying to gauge the potential biological impact of bycatch of Cook Inlet sockeye salmon (Table 5). Still, great caution must be employed when trying to determine accurate harvest rates for Cook Inlet sockeye in KMA fisheries. We can only generate very rough estimates of harvest rates from the available data. The 2014-2016 KMA sockeye genetic MSA was not intended or designed to provide accurate harvest rates of Cook Inlet-bound sockeye in KMA fisheries.

Table 5. Estimated KMA nonlocal Cook Inlet sockeye harvest in select KMA commercial fisheries, 2014 – 2017. *Data from ADF&G Anchorage, 8-22-17.*

| Year | Estimated<br>KMA Harvest<br>of CI Sockeye | Cook Inlet Sockeye Salmon |                         |                     |
|------|-------------------------------------------|---------------------------|-------------------------|---------------------|
|      |                                           | % of KMA harvest          | % of Cook Inlet Harvest | % of Cook Inlet Run |
| 2014 | 113,972                                   | 7.5%                      | 4.2%                    | 2.1%                |
| 2015 | 626,473                                   | 36.6%                     | 17.9%                   | 9.1%                |
| 2016 | 384,089                                   | 29.6%                     | 12.4%                   | 6.9%                |

Table 5 (above) shows that current estimated harvest percentages are also in agreement with Vining (1996); he showed the estimated percent of the UCI sockeye runs (in the Kodiak Management Area harvest) from 1983-1995 ranged from 1% to 12.1%. Using an overall estimate, it appears that less than 15% of Cook Inlet sockeye runs are harvested in KMA fisheries. It is interesting to note that the other KMA allocative plan, the Cape Igvak plan, allows KMA fishermen to harvest up to 15% of the Chignik sockeye runs. Annual variability is again perhaps the only fact that is clearly demonstrated.

The study and report document only numbers and percentages. Authors (Shedd et al, 2016a) do not comment on whether nonlocal sockeye presence and levels were an affirmation of historical migration patterns and natural background levels of historic bycatch in commercial salmon fisheries targeting Kodiak salmon stocks in this known Mixed Stock fishery.

## Part 5 – Limitations of the KMA Genetic MSA

*“Forcing a round peg into a square hole” ... Edward Bulwer-Lytton, 1834 (based on an Ancient Idiom)*

The recent MSA study was only the first look at a KMA mixed stock fishery using modern stock separation methods (Genetic Stock Identification). And, the report clearly informs readers that it only provided new harvest statistics for some fisheries for a limited set of years, for limited time periods. The lack of analyses or any further interpretation of this data and the lack of comparisons with previous sockeye stock composition estimates, within the KMA genetic MSA report or in a separate report, has led some people to draw their own conclusions.

**CAUTIONS:** However, the authors (Shedd et al, 2016a) did specify that, since the study was limited, caution must be exercised when trying to extrapolate limited results to wider questions or if trying to fit the data to other issues: “However, while this 3-year data set provides some measure of interannual variability in environmental and fishery conditions, some caution must be exercised when extrapolating the results to years, areas, and temporal periods not analyzed because changes in relative abundance among reporting groups, prosecution of fisheries, or migratory behavior due to ocean conditions very likely affect distribution of stock-specific harvests among fisheries.” (Shedd, et al, 2016a, page ; emphasis added).

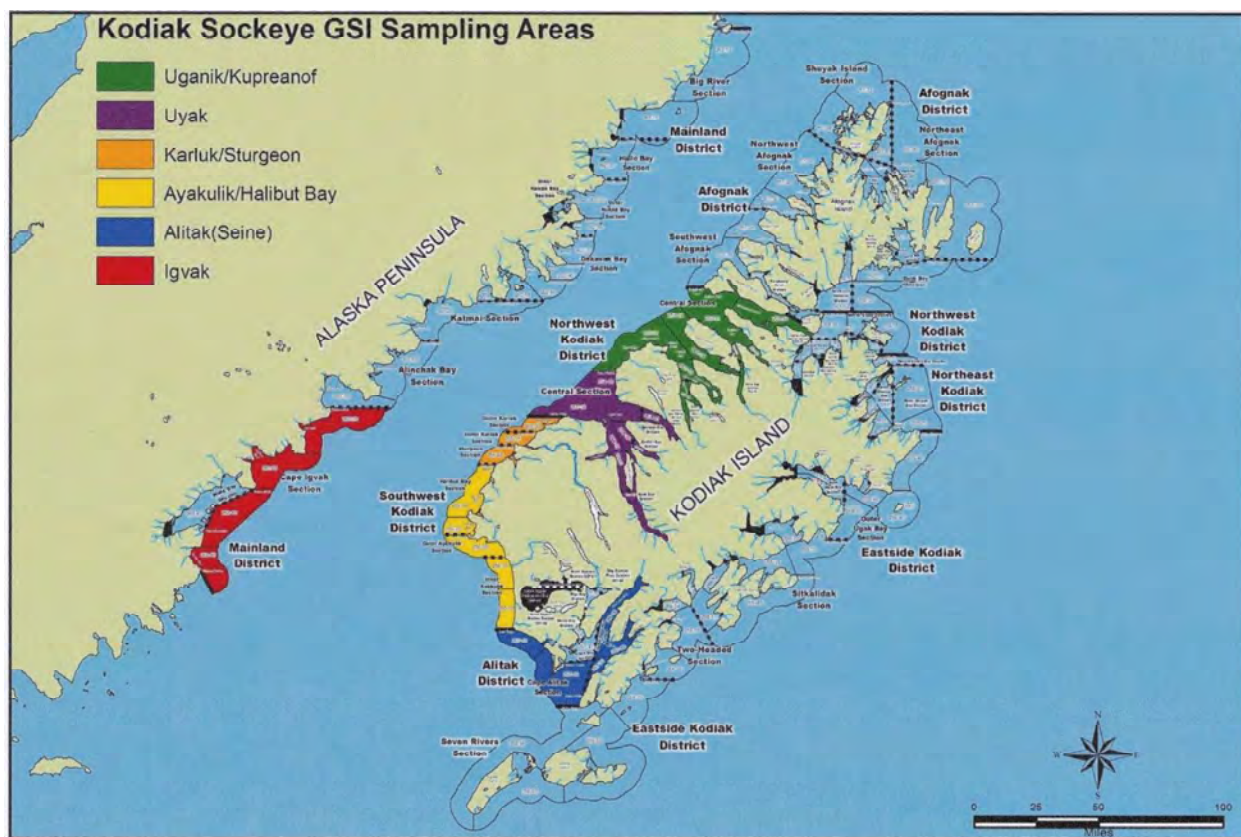


Figure 9. Kodiak Area management units sampled for genetic stock identification, 2014-2016.

Figure taken from Shedd, et al, 2016.



**Funding Limits** are very real constraints. Authors of the 2014-16 MSA report also found that “funding constraints limited the scope of this project to specific sampling areas and time periods”. The genetic sockeye MSA study planners had to limit both the study area (number of geospatial strata) and the time periods (temporal strata within the June 1 to October 31 KMA commercial salmon fishing season). Though the initial objective of this project was to sample the major directed sockeye salmon commercial fisheries in marine waters of KMA, only eight locations were selected, with all of them in the west and southwestern part of the KMA (Figure 9). Only three sampling time periods were used, spanning June 1 through August. Significant harvests of sockeye salmon can occur in September and October.

**Other Limits:** It’s clear that the new MSA study is a “snapshot”, showing results of samples collected from limited areas during limited time periods over a limited set of years. Not included in this new MSA study were not only the known areas where KMA fisheries may target nonlocal stocks (Afognak and Mainland District sections bordering the North Shelikof), but also areas of prior Board review for KMA harvest of nonlocal sockeye (Eastside Kodiak District). The authors of the new MSA report admit that, succumbing to funding limits, they sampled less than they intended, both in areas covered and time periods sampled.

The authors admit that GSI techniques are not robust enough to distinguish between Ayakulik and Frazer sockeye stocks; they did not attempt to distinguish between local Saltery stock sockeye salmon (Eastside District) and enhancement project production at Spiridon Lake (NW Kodiak District; west side). Are there other stocks that are difficult to distinguish? ADF&G also published a KMA Genetic Baseline report that contains many such statistics and graphic presentations. However, it is not clear to me, and may not be to any but the initiated, if there are KMA and UCI sockeye stocks that are so closely ‘related’ genetically, that there could be overlap or misidentification (i.e. Horse Marine sockeye salmon).

The study does not speculate on reasons for the observed variability in harvests between the three years. There are factors that could influence this and research could be directed at answering other important questions beside ‘How many?’ Funding has limited sampling by time and area, and stock similarity has limited the separation of at least three stocks, so this study cannot reveal the full picture over a robust set of years.

Do the results clarify or obfuscate issues relating to the use of this data or the controversy regarding KMA harvest of nonlocal sockeye?

The new KMA genetic MSA report authors believe that the study was successful: “These results represent a majority of sockeye salmon commercial harvests in KMA and should improve our understanding of stock productivity and migratory patterns, and provide information to evaluate assumptions built into management plans.” (Shedd, et al, 2016a, page 23; emphasis added).

Sufficient time should be given for ADF&G managers and researchers to utilize the limited data they’ve collected to discover its usefulness to actual fishery management needs.

We note that the 2014-2016 MSA report may seem incomprehensibly technical to some, but it’s easy to seize on numbers! As written, this report is of questionable utility for BOF members for





the purpose of a specific discussion of issues that could lead to restrictive regulatory changes to KMA salmon fishery management, let alone stakeholder understanding, interpretation, and education. We do not mean to diminish the work done; the report is a fine piece of Scientific Reporting, and meets ADF&G standards for technical publications.

The 2014-16 MSA report is fine for a scientific audience, not as the basis for stakeholder discussions or restrictive BOF actions that would destabilize the KMA fisheries. For concerned stakeholders, and the BOF, it is more likely to lead to misunderstanding, and raises more questions than answered. People want to jump on numbers, but may miss the limitations.

We feel this technical study and report should only serve to provide limited information on a limited study. It should be the impetus and basis for a further report to BOF, if the BOF determines that further review is needed at this time.

The study results alone are not sufficient for restricting KMA fisheries to potentially re-allocate sockeye salmon harvests; an additional more comprehensive report on the specific issue of Cook Inlet salmon within the KMA should be considered to educate and inform stakeholders and begin discussions, prior to Board action.

Any such additional document would need to include a thorough discussion of issues (not stats, not methods, etc.) in more digestible form. A more colloquial summarization, perhaps formulated by a joint stakeholder committee, would best serve if further discussion of nonlocal salmon harvest in the KMA is to become a Board of Fisheries agenda item at ‘Special’ meetings or the next regular Kodiak Finfish meeting.

The intent, goals and objectives of the new MSA study and report are shown within the report. Caution must be taken against misuse the data provided based on personal concerns.

It was not the intent and goal of the new MSA to produce specific information for a BOF review of KMA fisheries, nor was it to suggest restriction of the KMA fishery due to reported UCI sockeye harvest numbers. And the new MSA study and report’s goal was certainly not to open another allocative dispute, though that outcome could have been predicted and may have been prevented by additional analyses.

**INTENT:** When reviewing a scientific study, it is vital to bear in the forefront of one’s mind the general intent or purpose of that study, its specific goals and objectives, as well as the assumptions and limitations that encompass any analyses. It may be difficult, even dangerous, to try to draw answers or conclusions from information that was not collected specifically to answer that question, or which has many poorly founded assumptions. The possibility for misinterpretation, misuse and mistakes are increased. False assumptions or misinterpretation of data can lead to completely inaccurate conclusions.

The KMA sockeye genetic MSA study (or indeed any study) and the report should primarily be viewed through the lenses of the intent, or purpose, of the study. What was the intent of study planners and report authors? What was it needed for and why? What did it seek to show or do?





What issues or what answers were beyond the scope of the study? Attention to intent, goals and objectives will inform us what the results may actually demonstrate.

Unfortunately, the intent of the new MSA study is not clearly defined in the early portions of the report, but rather is found scattered throughout the report. In the acknowledgements comes the most basic purpose of this study. Authors thank a former ADF&G Director for “prioritizing department resources to address this knowledge gap in KMA” (Shedd, et al, 2016a, page 27; emphasis added).

Genetic stock identification for Mixed Stock Analysis has been completed for much of Western Alaska (WASSIP), and GSI has been used in Cook Inlet since 2005, to identify the mixed stocks within UCI fisheries. No such genetic data existed for the KMA (a knowledge gap), so a Kodiak salmon genetic MSA was funded. In the abstract, authors wrote: “Precise, accurate estimates of stock-specific harvests of sockeye salmon (*Oncorhynchus nerka*) are lacking for commercial fisheries in KMA” (Shedd, et al, 2016a, page 1).

Again, an identified knowledge gap was the only ‘problem’ this study was attempting to ‘solve’.

PLEASE NOTE: the MSA of Cook Inlet fisheries show NO nonlocal salmon, not because only local stocks are present... it appears that nonlocal stocks are NOT part of the UCI MSA model. That is, researchers assume that there are NO nonlocal salmon in Cook Inlet fisheries; nonlocal sockeye are not looked for! You can’t find what you don’t look for.

In other places in the new MSA report we find additional comments regarding intent. The authors state that: “The impetus for this study was to provide analytically sound estimates of stocks harvested in KMA fisheries to better understand stock productivity and address management assumptions. The principal objective of this project was to sample the major directed sockeye salmon commercial fisheries in marine waters of KMA.” (Shedd, et al, 2016a, page 23).

Unfortunately, what the authors meant by ‘management assumptions’ is NOT defined within this report; if that was a serious consideration by study developers and planners, then those assumptions should have been clearly defined. All assumptions of specific scientific research, particularly if they are to be tested in the study, should be clearly stated. The need to address management assumptions, if not defined, should not be a focus for use of data collected.

As former Kodiak Area Management Biologists, we know of no ‘management assumptions’ that would require a three year genetic study. Indeed, as managers we know that limited research is too often misused and is commonly taken ‘too far’ by strongly opinionated people in attempts to prove their point.

In another passage the authors state that: “While nonlocal harvest of sockeye salmon in KMA commercial fisheries has been assumed in regulation and demonstrated in previous studies based on tagging..., scale pattern analysis (Barrett and Swanton 1991, 1992), or average weight (Vining 1996), this project represents the first effort to use modern MSA techniques to quantify that harvest.” (Shedd, et al, 2016a, page 26; emphasis added).



The primary intent was to use newly provided funding for a ‘first effort’ to try genetic stock identification methods in a Kodiak MSA, since no GSI had been attempted prior to 2014.

**STUDY GOAL or PRINCIPLE OBJECTIVES:** The report authors specifically define their goal: “The overall goal of this project is to provide information that will be useful for reconstructing runs, building accurate brood tables to define escapement goals, and refining management by identifying spatial and temporal harvest patterns of local and nonlocal stocks....” (Shedd, et al, 2016a, page 5, emphasis added).

Unfortunately, this goal has NOT yet been met. Satisfactory completion of the stated goal will require additional time and analysis of the gathered information.

Can the data collected in the 2014-2016 KMA genetic MSA actually improve run reconstruction, make for more accurate brood tables, define escapement goals, and thereby ‘refine’ management?

It is important to give ADF&G time to actually apply these results to run reconstructions and brood table development. ADF&G may then be able to refine pre-season management by providing better predictors of stock productivity and anticipated run strengths (forecast). Inseason fishery management will not be improved.

It truly seems that there is an intent to reverse the order and to change management based on a limited study, rather than explore the statistics to see if solid, scientifically valid results point to needed changes in established, stable management. The possibility exists for future analysis and study, additional research, discussions between stakeholders and managers, researchers, and the BOF. We encourage the BOF to take this opportunity, and to use this study as intended. We fear a hasty, knee-jerk reaction to an emotional issue to appease a vocal user group.

The principle objective has been addressed, yet not fully met. “The principal objective of this project was to sample the major sockeye salmon commercial fisheries in marine waters of KMA from June through the end of August and use genetic mixed stock analysis (MSA) to estimate stock compositions and stock-specific harvest” (Shedd, et al, 2106a, page 2).

The study only partially accomplished this objective... KMA harvest samples have been collected and analyzed using the most current genetic MSA techniques. However, the project was not able to sample all KMA commercial fisheries, and so was limited to specific geographic areas, within specific time strata, for a limited number of years.

ADF&G study planners and authors agreed, with authors stating that: “these results may only have limited utility in formal run-reconstructions for 2 primary reasons. First, not all fishing areas were sampled, and sampling did not include harvest after August 29, when substantial numbers of Karluk and Upper Station late-run fish can be harvested. Second, the genetic baseline was unable to adequately distinguish between Ayakulik and Frazer stocks for the purposes of MSA.” (Shedd, et al, 2016a, page 26).

To meet the study's goals, it would appear that there is a need to work further with the information gathered, in run reconstruction (back-casting, to improve fit of forecasting models) and escapement goal review. Authors caution: "Management would benefit from estimates of stock-specific harvest of Ayakulik and Frazer stocks and future research should explore means to accomplish this objective" (Shedd, et al, 2016a, page 24).

To realize the study's goals, there needs to be further analysis of the Ayakulik/Frazer samples to either separate or determine and apply additional information needed to split this grouping into the two distinct stocks.

**OBJECTIVES of the REPORT:** In a specific 'Objectives' section, the report states that the study overall goal was "to provide information that will be useful..." (Shedd, et al, 2016a, page 5).

Four (4) objectives are then specifically listed, 1 through 4, yet these objectives address the report, not the study. The stated objectives for the report that describes the study are:

- "1) Describe sampling of genetic tissues from sockeye salmon caught from June through August in select commercial fisheries in the KMA, 2014–2016;
- 2) Describe subsampling of genetic tissues in proportion to catch within sampling areas and temporal strata;
- 3) Report MSA results of stock proportions and stock-specific harvests of sockeye salmon sampled from select commercial fisheries in the KMA, 2014–2016;
- 4) Characterize where stocks were harvested from select commercial fisheries in the KMA, 2014–2016" (Shedd, et al, 2016a, page 5)

These 'report objectives' are clearly stated and we feel were clearly met by the new MSA report.

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## **Part 6 – An Imperfect Design**

The new MSA study design left many pertinent questions unanswered and many data needs unmet. The study design was 'imperfect' to answer biological and allocative questions regarding KMA bycatch of nonlocal sockeye.

The study design seems practical for the general overall goal; that is, during some portion of KMA commercial salmon fishery, to collect samples from some portion of the KMA salmon fisheries and analyze for genetic MSA stock identification, over three years.

Unfortunately, it was not designed to address or answer some very fundamental questions that could enlighten the issue of variable incidental harvest of Cook Inlet sockeye in KMA fisheries. As shown previously, the study did not include the North Shelikof Straits, and so important information on nonlocal sockeye salmon harvests in the KMA was 'lost'.

Such 'lost opportunities' limit the usefulness of the study and report. However, it is possible that, with additional sampling, analyses or interpretation of results, more definitive answers or



conclusions could be made that would be helpful to the BOF during their consideration of this ongoing fish fight.

The BOF has attempted to ‘solve’ this issue in the past. After 4 years of ACRs and proposals at every Kodiak Finfish BOF review, in 1994 the BOF formed a Work Group to determine possible solutions.

**In 1994, a Kodiak / Cook Inlet Inter-Area Work Group** (hereafter referred to as the IAWG or the Work Group) was formed by the BOF. As previously stated, in 1988 following the occurrence of a large harvest of nonlocal sockeye salmon in mid-stream Shelikof Strait, the active allocative dispute between Cook Inlet and Kodiak fishermen gained strength. From 1988 through 1996, Kodiak ADF&G conducted sockeye stock identification studies (MSA). Cook Inlet-Kodiak allocative conflicts were the subject of many meetings with the Board of Fisheries. The IAWG met several times prior to reporting to the BOF at a Special Meeting in March 1995 (Appendix E).

At the beginning of IAWG discussions, ADF&G researchers and managers, Work Group stakeholder members, and the BOF members mutually agreed upon several key ‘facts’:

- The bycatch of Cook Inlet-bound sockeye in KMA fisheries is directly proportional to Cook Inlet sockeye run strength;
- The incidence of Cook Inlet sockeye in KMA fisheries varies widely. It is inconsistent as to area, annual timing, and between years;
- The incidence of Cook Inlet salmon in KMA fisheries is ‘insignificant’ if the Cook Inlet sockeye run is less than 4 million;
- The July 6-25 period is not only an important time period in KMA salmon fisheries management, it is the period of PEAK abundance of Cook Inlet-bound sockeye salmon in KMA waters;
- Within that period, the majority of bycatch occurs within a narrower, 7-10 day period.

These facts were established by ADF&G and stakeholders on the IAWG, based on the 1988-1995 Kodiak MSA studies and fisheries. These facts served the BOF and ADF&G by focusing the scope of research and discussions to a manageable level and by focusing any potential Board action on the most effective time period within the fishing season.

The 1994-95 Inter-Area Work Group also recommended that ADF&G undertake additional inseason stock-separation studies and develop inseason indices or markers to determine when Cook Inlet salmon are present in KMA fisheries. The IAWG asked that Kodiak and Cook Inlet ADF&G staff agree upon “the estimated timing and percentage of Cook Inlet run present in the Kodiak Area by time period during small, medium, and large Cook Inlet runs” (Appendix E2, IAWG memos).

It appears that the planners of the recent genetic MSA study did not seek to test the IAWG’s 4 facts, neither to confirm nor deny. Questions regarding UCI sockeye run strength and timing were not answered by the new genetic MSA report.

Other serious limits to the Kodiak sockeye genetic MSA include:



**GEAR SELECTIVITY** could have biased many of the genetic MSA samples. The geospatial strata included 2 location in the Central Section (Uyak and Uganik/Kupreanof), where both Set Gillnet and Seine gear are legal to operate. Based on concerns for getting ‘pure’ samples from these specific locations, the samples were collected from fixed set gillnet gear. Gillnets will select for the larger fish. In both 2015 and 2016, average sockeye sizes were lower than average, which would further bias against the smaller, local Kodiak sockeye. Karluk sockeye are the dominant stock, so these locations represent the major sockeye fishery of the KMA. Yet, the MSA study does not even mention gear type in the discussion of genetic sampling.

**TEMPORAL STRATA** used in the 2014-16 KMA genetic MSA do not readily correspond with actual KMA management plan fishing periods, which includes an important mid-season management period (July 6-25). We also feel the time periods used for this study are not sufficiently narrow to define periods when Cook Inlet sockeye stocks may be in the KMA and vulnerable to harvest.

Temporal strata were not consistent among the three years of the study, and the use of different and changing mid-season temporal strata effectively muddles the comparative usefulness of the data presented. During 2014 and 2016 the middle strata dates were June 28 through July 25, and in 2015 this was shifted to July 4 through August 1. While we recognize that, in some years, run timing may be delayed, pushing the mid-season temporal stratum by 7 days based on someone’s perception of run timing also confounds interpretation of the study results and their potential use for regulatory discussions. The KMA regulatory Salmon Management Plans all use calendar DATES that do not shift based on perceived run timing.

Anecdotal, first-hand knowledge shows that the location of harvest of larger, suspected Cook Inlet sockeye are almost ephemeral... here today, gone tomorrow. More relevant to CIMA-KMA allocative issues might be the selection and achievement of specific numbers of genetic samples during narrower time periods that correspond to how KMA fisheries are actually prosecuted, particularly during the July 6-25 time period.

**GEOSPATIAL STRATA** employed in the KMA genetic MSA report are overly broad, and the ability to determine potential offshore or cape fishery “hot spots” was lost. This could lead to misrepresentation. For example, Alitak sampling did not include set gillnet areas and combined the inside (inner bay) and outside (cape or offshore) seine fisheries; it was meant to be representative of the entire Alitak District harvests. However, even limited information about more specific harvest location is of interest and could be important in understanding stock compositions, timing and migratory patterns in KMA mixed stock fisheries.

**DATA POOLING** may also obscure important or essential information. The manner in which samples were later subsampled and data was pooled to fit temporal strata affects how the sample data can be used. Within the 2014-16 KMA genetic MSA report, there is no commercial fishery data given beside sample date, sample and subsample size, and the reported KMA sockeye catch from that particular geospatial and temporal strata. We don’t know if a sample that was analyzed for GSI was from single or multiple deliveries. We don’t know if the sampled harvest was from



a cape or offshore location or from inside more protected waters. And we don't know if a sample was from a Seiner or Gillnetter. Effort data is lost.

Caution must be taken in use of the KMA genetic MSA data. Again, we feel that since the study was limited by its intent and goals, by funding, by MSA and study design shortcomings, and was not designed to answer the known and important questions regarding Cook Inlet sockeye in KMA salmon harvests, such as above, then it would be very unwise to apply this new data other than as intended.

## **Part 7 - Does the genetic MSA create more uncertainty or less?**

The 2014-16 MSA report provides good presence/absence data, and provides MSA composition estimates for some geographic strata and/or time periods previously either unsampled or found to have insignificant or undiscernible levels of nonlocal sockeye. The report simply presents data, with little interpretation, leaving that to the readers. However, to fully explain the harvest numbers, there are many additional considerations (which we hope are becoming clearer after our review).

Presenting snapshots of fishery harvest stock compositions does not elucidate why or how those levels of harvest may have occurred. Is it due to targeting, or some unusual environmental factors? The 2014-16 MSA report does not show actual fishing time during periods in question... Was commercial fishing effort in high catch stratum due to targeting? Did participation increase following some initial 'event'? Would the effects of actual 2014 to 2016 management actions (Emergency Order-based fishing time) and commercial fishing effort point to a 'problem area'?

It should be fairly easy to disprove beliefs that there is a targeted interception fishery on Upper Cook Inlet sockeye in KMA fisheries. Yes, salmon fishermen target sockeye salmon, due to market demand and price, but KMA fishery managers and fishermen are not conducting a secret fishery within KMA salmon fisheries. A pairing of sample collection and estimated stock composition data with actual hours of fishing time and number of landings would show the incidental nature of nonlocal sockeye harvests.

The current KMA salmon commercial fishery management 'harvest strategy' relies on a period during July (July 6-25) when fishing periods targeting pink salmon are weekly 'pulse fisheries' with limited hours of fishing time allowed each week. Pink salmon numbers increase almost exponentially during this time period, but fish QUALITY remains good. After July 25, management sections may be opened for longer weekly periods only in sections where production is expected to be in excess of escapement needs. Management during the July 6-25 mid-season time period actually reduces potential bycatch of nonlocal sockeye. We feel that is an important consideration.

Similarly, without consideration of all factors, some may believe that KMA salmon stocks could all be harvested within 'terminal' fishing areas or 'inside the capes'. Long experience has shown that allowing salmon to enter the fresher (less saline), warmer, inside-waters of the KMA will





very quickly lead to loss of quality, or to complete loss to the fishery as the fish home-in and refuse to move out of closed water sanctuaries.

Without consideration of all factors, we cannot answer truly important questions (i.e. Why is there such variability in estimated nonlocal contribution to KMA salmon harvests, between and among years, time strata and geospatial strata?) This could be a topic requiring much study to fully elucidate.

The depth and complexity of the issues involved requires extensive analyses and discussions between ADF&G authors and managers and interested stakeholders, just to set the ground rules for further review and evaluation of proposed restrictive BOF actions. We feel this cannot occur in a few months, but will require additional time for all parties to become apprised of important considerations which may not be apparent to someone not intimately familiar with both KMA and Cook Inlet fisheries and the issues at hand.

We feel that there has always been some level of nonlocal sockeye salmon harvests in KMA salmon fisheries; KMA is a mixed stock fishery. This is an annual part of the KMA salmon fishery harvest, not an aberration or an unanticipated consequence or a new and expanding targeted 'interception' fishery. Identifying the 'natural' background level of harvest of nonlocal salmon would allow for the identification of new or expanding fisheries on nonlocal sockeye salmon versus historical fisheries of the KMA.

If 'reallocation' of some portion of the KMA salmon fishery harvest is to occur (restricting KMA fisheries with the HOPE to positively influence the harvest in UCI) then a lot of information needs to be clearly elucidated in a comprehensive report to the BOF. We offer a limited list of questions that we would like to see addressed prior to any BOF action.

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## **Part 8 - Evaluation of Application of the Policies of the Alaska BOF**

Several policies adopted by the BOF, as well as BOF findings or previous actions, may be used in evaluation of the data presented in the new MSA Report, to determine if action should be taken by the BOF.

### **MIXED STOCK FISHERIES POLICY**

In March 1993, the Alaska Board of Fisheries (BOF) adopted a significant policy into regulation, *The Policy for the Management of Mixed Stock Salmon Fisheries* (5 AAC 39.220; effective 5-29-1993). The Mixed Stock Fisheries (MSF) policy created a framework through which the BOF could analyze specific Alaska salmon fisheries with the goal of determining if Board action is appropriate and required to conserve and protect the salmon stocks in question. With this policy in regulation, any proposed change in the salmon fishery regulations or Board approved Management Plans, is to be judged against the criteria established in the Mixed Stock policy.

In fact, the 1988-1992 allocative disputes between the sport and commercial fishermen of Cook Inlet and the commercial salmon fishermen of the KMA were the 'backdrop' during the discussion and adoption of the Mixed Stock Policy into regulation.



The first use (test) of the MSF Policy following its adoption by the BOF (March 1993) was yet another petition from Upper Cook Inlet stakeholders seeking to control the harvest of Cook Inlet-bound salmon in KMA salmon fisheries; that petition failed (Appendix E)

It is important to evaluate each of the MSF policy's elements, and those of the associated findings (93-07-FB), against the best available information regarding the Kodiak salmon fishery, the associated take of Cook Inlet sockeye, and the status of Cook Inlet's sockeye stocks.

Pertinent sections of the MSF policy and our evaluation include:

- (a) In applying this statewide mixed stock salmon policy for all users, conservation of wild salmon stocks consistent with sustained yield shall be accorded the highest priority”

For UCI sockeye salmon, conservation and sustained yield, the highest priorities under the Mixed Stock Policy, are not threatened. This leaves allocation as the major consideration left, and any BOF actions must abide by established allocation criteria.

“(b) In the absence of a regulatory management plan that otherwise allocates or restricts harvests and when it is necessary to restrict fisheries on stocks where there are known conservation problems, the burden of conservation shall be shared among all fisheries in close proportion to their respective harvest on the stock of concern”.

There is an allocative management plan in place that allocates and restricts harvest, the North Shelikof fisheries management plan. IN ADDITION, the KMA fisheries were viewed as mixed stock fisheries with possible harvest of nonlocal salmon when the KMA's other guiding regulatory Salmon Management Plans were formulated, discussed, and placed into regulation by the BOF.

Further, no conservation problem has been shown for Cook Inlet sockeye stocks (Susitna Sockeye are a Stock of Yield Concern, not Conservation Concern). KMA commercial salmon fishermen currently bear a 'burden of conservation', which protects an unknown proportion of nonlocal salmon within KMA waters and fisheries. Would additional restrictions actually help in possible future conservation concerns? We feel the BOF should not be restricting fisheries and reallocating historic harvests of nonlocal salmon in the absence of a true Conservation Concern. Should the burden of conservation of relatively 'healthy' Cook Inlet salmon stocks be prioritized above that of KMA local salmon stocks? We do not believe so. We feel that much additional discussion is needed to begin to define and answer such questions.

- (d) Consequently, the board will restrict new or expanding mixed stock fisheries... Natural fluctuations in the abundance of stocks harvested in a fishery shall not be the single factor that identifies a fishery as new or expanding.

The KMA harvest of nonlocal salmon is neither new nor has it been shown to be expanding. In fact, the number of participants in KMA fisheries has significantly contracted (Figure 10). The KMA salmon fishery is old and contracting!

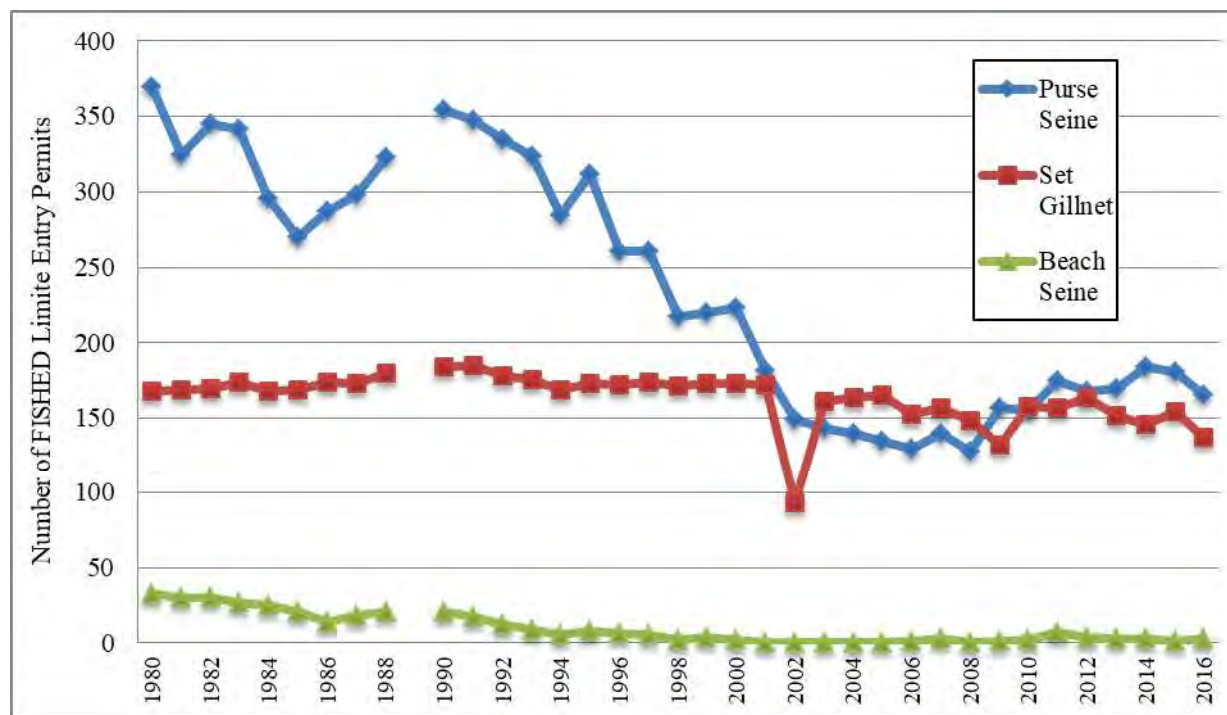


Figure 10. The number of Limited Entry permits actually fished for Kodiak commercial salmon fisheries, by gear type, 1980-2016. (No 1989 fisheries due to EVOS) *Data from ADF&G, Kodiak.*

For the 2014-2016 MSA study period, KMA set gillnet permit participation was down 22.5%, KMA purse seine participation was down 52.6%, and KMA beach seine participation was down 92.4% from the number of available permits to fish during those same three years.

A determination of the “natural fluctuation of abundance” of nonlocal salmon in the KMA is required in order to define any “new and expanding” fisheries in the KMA that target nonlocal sockeye salmon.

(e) This policy will be implemented only by the board through regulations adopted (1) during its regular meeting cycle; or (2) through procedures established in the... Policy for Changing Board Agenda (5 AAC 39.999).

This issue must be tabled until KMA fisheries come up in the regular BOF meeting cycle. The criteria for changing the BOF agenda have not been met.

Past analyses of the harvest of Cook Inlet sockeye in Kodiak waters, using the accepted MSA at the time, have postulated that such bycatch is negligible when Cook Inlet returns are poor to average (Ruggerone and Rogers, 1994). Under conditions when conservation of Cook Inlet's sockeye returns would be a concern, it is not likely that any significant Kodiak bycatch of those sockeye would occur. You can't catch what isn't there.

The Board's Findings, associated with adoption of the Mixed Stock Fishery policy regulations, not only reiterate specific points of the policy but amplify and clarify the Board's intent outside



of the constraint of regulatory language. Several of these findings apply to consideration of this Kodiak-Cook Inlet sockeye issue.

The Board found that Alaska's salmon industry appropriately relies upon stable existing fisheries, most of which harvest mixed stocks. Kodiak's established management program for the harvest and conservation of mixed stocks has been successful in sustaining and promoting Kodiak's century-old industry. The findings also speak to harvest of many mixed stocks with an eye towards QUALITY of the harvest, and management of KMA fisheries has promoted protection, rebuilding and high-quality harvests of a large number of stocks of salmon. To restrict fisheries to inside 'terminal' areas will lead to a significant decline in salmon quality, thereby significantly reducing the volume and value of KMA salmon fisheries.

KMA salmon fisheries are already managed according to a well-orchestrated series of management plans, none of which need to be amended now to account for harvests of fish that fluctuate on the basis of natural abundance and pose no threat to conservation. There is no indication that 135 years of commercial salmon fishing in Kodiak's waters ever posed any threat to Cook Inlet salmon stocks

**SUSTAINABLE SALMON POLICY:** The *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222; aka Sustainable Salmon policy), developed by the BOF, was adopted into regulation in September 2000. This policy greatly expands some of the same principles found in the Mixed Stock policy.

The policy updates and strengthens long-standing principles of Alaska's salmon management program. Most importantly, it directs ADF&G and the Alaska Board of Fisheries to follow a systematic process for evaluating the health of salmon stocks throughout the state by requiring ADF&G to provide the Board, in concert with its regulatory cycle, with reports on the status of salmon stocks and fisheries under consideration for regulatory changes (Clark, et al, 2006). The policy also defines a new process for identifying stocks of concern (stocks which have not met escapement goals or yield expectations), and requires ADF&G and the Alaska Board of Fisheries to develop action plans to rebuild these stocks through the use of management measures, improved research, and restoring and protecting habitat.

The Sustainable salmon policy is a long and very complicated policy, and we will not attempt to review KMA nonlocal salmon harvests through all of its many parts. We will instead point out what we consider to be salient points that apply to the current issue.

The stated goal of the policy include not only conservation of salmon and habitat, and protection of subsistence and other customary and traditional uses, it is also to ensure "the sustained economic health of Alaska's fishing communities".

There is little doubt that significant changes to KMA's long standing salmon management plans, restricting fisheries to protect nonlocal salmon, would negatively change the economic health of Kodiak communities to a considerable degree.

The policy also provides many clear definitions for terms commonly used and newly developed terms or classifications. Of note is the definition of Stocks of Concern (SOC). As mentioned



earlier, the Susitna sockeye salmon stock was listed as a Stock of Yield Concern in 2008. Yield concern is defined as “chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock's escapement needs; a yield concern is less severe than a management concern, which is less severe than a conservation concern”.

Based on that definition, there is NO conservation concern for Susitna sockeye salmon.

The policy dictates that an Action Plan be developed for SOC action. Such plans “should contain goals, measurable and implementable objectives, and provisions” including “fishery management actions needed to achieve rebuilding goals and objectives, in proportion to each fishery's use of, and hazards posed to, a salmon stock” and “a research plan as necessary to provide information to address concerns”.

The Action Plan for Susitna sockeye salmon, as prepared by ADF&G and approved by BOF through at least three BOF meeting cycles (over 9 years), contains NO mention of concern about Susitna salmon harvest in adjacent Areas (Kodiak) nor the need to further investigate (through research) possible nonlocal harvest. There is no concern of sufficient importance to even consider nonlocal harvest, let alone restriction of KMA salmon fisheries.

In fact, restriction to address the SOC status of Susitna sockeye salmon are limited to Northern or Central District salmon fisheries (Figure 7). No ADF&G management actions are taken in Cook Inlet salmon fisheries in the more southerly districts of the Cook Inlet Area (including Kamishak, Southern, Eastern and Outer Districts). The VAST majority of Susitna salmon MUST migrate through those southerly districts.

How could a restriction to KMA salmon fisheries, where some unknown portion of the Susitna sockeye run may sometimes migrate in unknown patterns) even be considered?

Deferral of ACRs and potential BOF regulatory action until the regular meeting cycle for KMA (and UCI) salmon fisheries is supported by our analysis of application of other BOF policies and criteria. This issue should be addressed within the BOF regular schedule for consideration of Alaska salmon fisheries, during the 2019/2020 cycle.

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### **Final Thoughts:**

*“I hate to be a kicker, I always long for peace, but the wheel that squeaks the loudest, is the one that gets the grease” - Josh Billings (AKA Henry Wheeler Shaw; c 1870)*

Importantly, not included in the new 2014-16 MSA report is any discussion of the incidence of KMA sockeye salmon in Cook Inlet or Chignik salmon fisheries. We learn in elementary school that we should first balance an equation in order to solve it, and working with unequal factors will lead to skewed solutions. The KMA is nestled between the Cook Inlet and Chignik management areas (Figures 1 and 2). Early tagging studies sought information on stock of origin as well as migration patterns and timing.





Management plans defining fishing opportunities on KMA local stock were developed by stakeholders, Management Biologists at ADF&G, concerned representatives of government and scientific agencies, and many prior Alaska Boards of Fisheries, over the course of many years. Discussions and decisions were made with full knowledge that KMA was a mixed stock fishery and that significant numbers of both Chignik and Cook Inlet sockeye will be found and may be harvested in KMA fisheries.

Nowhere in existing Alaska Statute, regulation, policy, or management plan does it allow for decisions based on political expediency or personal bias. Allocative pressures within Cook Inlet salmon fisheries are very real, very large, and are growing. The establishment of BOF findings is needed, clarifying the extent to which Inter-Area allocative disputes may be used to modify long standing regulatory structure. Without a definitive pronouncement that x number or percent of nonlocal salmon are harvested, either generally or by stock of origin, then allocative fish fights will be waged.

It is impossible to maintain the economic success of a fishery that is subject to capricious reduction based on poor information or colloquial opinion. A Board finding that historic KMA harvest may contain x% of salmon from Cook Inlet and x% of Chignik salmon will allow determination of new or expanded fisheries and sound allocative decisions.

The 2014-2016 MSA report is a technical report and maximum opportunity needs to be given for this report, and all other pertinent data, to be interpreted for stakeholders and interested parties. It's written in a format that makes ready understanding difficult for those uninitiated in modern genetics research. The format of the report does not lead to easy consumption. It's long on methods, techniques, statistics and data (a data dump from a three year project) and short on analysis.

All parties would benefit from time spent discussing the report, finding answers to questions that it brings up, seeking information from ADF&G or others, educating and discussing pertinent issues with as many stakeholders as possible, defining problems (from the most obvious to the minute), defining possible and favored BOF actions, refining arguments (both for and against), and educating the public. All this should occur PRIOR to full BOF review and deliberation on potential regulatory actions. Another document, more comprehensive and written for BOF and Stakeholder consideration, would be helpful and should be drafted with clearly defined issues and goals, all available data, lists of possible actions and repercussions, as well as the potential of success of proposed actions under the defined goals.

This issue, while not new, is unique and very complex. The new 2014-16 MSA only represents another piece of the larger puzzle. Representative and informed decision will require different /more information and involves further discussions with and between ADF&G and stakeholders. Stakeholders need background and education. They need to narrow their concerns, look for common ground, identify issues and potential problems, review possible actions to deal with the identified issues, and then suggest to the BOF a range of possible actions and recommendations, if needed.





There is potential for additional analyses or even additional research studies that would better inform the issue. We urge caution, and with no immediate biological conservation issues we urge the BOF to postpone or deny any regulatory limitations to the KMA salmon fisheries at this time.

It is a broad truth that 'Nature has allocated nonlocal salmon to Kodiak salmon fisheries'. It can't be predicted. It currently can't be identified inseason or postseason, without a recurring annual MSA. The effects of restricting KMA fisheries to limit nonlocal sockeye harvests on CIMA sockeye escapement or harvest cannot be identified or quantified.



## References Cited:

- Anderson, T. J., J. Jackson, and B. A. Fuerst. 2016. Kodiak Management Area commercial salmon fishery annual management report, 2016. Alaska Department of Fish and Game, Fishery Management Report No. 16-42, Anchorage.
- Anderson, T. J., and J. Jackson. 2017. Kodiak management area harvest strategy for the 2017 commercial salmon fishery. Alaska Department of Fish and Game, Fishery Management Report No. 17-20, Anchorage.
- Barrett, B.M. 1989. North Shelikof Strait 1988 catch distribution, timing and stock contribution. Alaska Department of Fish and Game, Regional Information Report No. 4K88-6, Kodiak.
- Barrett, B.M., and C.O. Swanton. 1991. Origins of sockeye salmon in the Kodiak Management Area North Shelikof Strait Fishery, 6 July 6 through 25 July, 1990. Alaska Department of Fish and Game, Regional Information Report No. 4K91-3, Kodiak.
- Barrett, B.M., and C.O. Swanton. 1992. Estimation of the major sockeye salmon stocks contributing to the North Shelikof Strait Fishery of July 6-25, 1988-1992. Alaska Department of Fish and Game, Regional Information Report No. 4K92-43, Kodiak.
- Burbank, D.C. 1977. Circulation studies in Kachemak Bay and lower Cook Inlet. Vol. III of Environmental Studies of Kachemak Bay and lower Cook Inlet, ed. by L.L. Trasky, et al. Marine Coastal Habitat Management Report, Alaska Department of Fish and Game, Anchorage, AK.
- Clark, J.H., A. McGregor, R.D. Mecum, P. Krasnowski, and A.M. Carroll. 2006. The Commercial Salmon Fisheries in Alaska. Alaska Department of Fish and Game, Alaska Fishery Research Bulletin 12(1): 1-146
- French, R.R., Bilton, H., Osako, M., and Hartt, A. 1976. Distribution and origin of sockeye salmon (*Oncorhynchus nerka*) in offshore waters of the North Pacific Ocean. International North Pacific Fisheries Commission Bulletin 34: 1-113.
- Gard, Richard, and Richard Lee Bottorff. 2014. A History of Sockeye Salmon Research, Karluk River System, Alaska, 1880-2010. U.S. Dept. of Commer. NOAA Technical Memorandum NMFS-F/SPO-125, 413 p.
- Muench, R.D., and J.D. Schumacher. 1980. Physical oceanographic and meteorological conditions in the Northwest Gulf of Alaska. NOAA Technical Memorandum ERL PMEL-22. Seattle; Pacific Marine Environmental laboratory. National Oceanic and Atmospheric Administration.
- Ruggerone, G. T., and D.E. Rogers. 1994. Harvest rates of Upper Cook Inlet-bound sockeye salmon commercial salmon fishery. Natural Resources Consultants report to the Kodiak Island Borough Salmon Working Group. Seattle.
- Shedd, K. R., M. B. Foster, T. H. Dann, H. A. Hoyt, M. L. Wattum, and C. Habicht. 2016a. Genetic stock composition of the commercial harvest of sockeye salmon in Kodiak management area, 2014-2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-10, Anchorage.



Shedd, K. R., T. H. Dann, H. A. Hoyt, M. B. Foster, and C. Habicht. 2016b. Genetic baseline of North American sockeye salmon for mixed stock analyses of Kodiak Management Area commercial fisheries, 2014–2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-03, Anchorage.

Shedd, K. R., M. B. Foster, M. Wattum, T. Polum, M. Witteveen, M. Stratton, T. H. Dann, H. A. Hoyt, and C. Habicht. 2016c. Genetic stock composition of the commercial and sport harvest of Chinook salmon in Westward Region, 2014 - 2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-11, Anchorage.

Tarbox, K.E., 1988. Migrator rate and behavior of salmon in Upper Cook Inlet, 1983-1984. Alaska Department of Fish and Game, Fishery Research Bulletin 88-05, Juneau.

Thompson, W.F. 1950. Some salmon research problems in Alaska. A talk prepared for the Meeting held by the National Research Council, on scientific research in Alaska, Alaska Science Conference, Nov. 9–11, 1950, Washington, DC. University of Washington Fisheries Research Institute, Circ. No. 11, 20 p.

Thompson, W. F., and D. E. Bevan. 1955. A proposal for experimental regulation of the Karluk fishery. University of Washington Fisheries Research Institute, Circ. No. 72 revised, Kodiak Island Memo. No. 13 (November 16, 1954, revised October 12, 1955), 10 p.

Van Cleve, R. and D.E. Bevan. 1973. Evaluation of causes for the decline of the Karluk sockeye salmon runs and recommendations for rehabilitation. Fish. Bull. 71(3): 627–649, 661–663.

Vining, I. W. and B. M. Barrett. 1994. The use of average weight to estimate the amount of interception of non-local sockeye salmon within selected areas of the Kodiak management area. Alaska Department of Fish and Game Regional Information Report 4K94-05, Kodiak.

Vining, I. W. and B. M. Barrett. 1995. The use of average weight to estimate the level of harvest of non-local sockeye salmon within the Kodiak management area, during July 6–25, 1983–1994. Alaska Department of Fish and Game Regional Information Report 4K95-11, Kodiak.

Vining, I. W. 1996. The use of average weight to estimate the level of harvest of non-local sockeye salmon within the Kodiak management area, during July 6–25, 1983–1995. Alaska Department of Fish and Game Regional Information Report 4K96-28, Kodiak.



October 2, 2017

John Jensen, Chairman  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

**RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon  
in the Kodiak Management Area**

Dear Chairman Jensen,

Koniag, Inc. is a regional Alaska Native Corporation formed under the terms of the Alaska Native Claims Settlement Act of 1971. Koniag, Inc. has approximately 3,900 Alutiiq Shareholders. Our region encompasses the Kodiak Archipelago in the Gulf of Alaska and a portion of the Alaska Peninsula. The communities in our region have traditionally been dependent on fisheries resources for subsistence and commercial purposes for centuries. Koniag, Inc. has been working diligently on issues affecting the viability and sustainability of the village communities of the Kodiak Archipelago and access to fisheries is a critical component of this effort.

Koniag, Inc. opposes the UCIDA Agenda Change Request because it does not meet the Board's agenda change request criteria. The basis for the request is the 2016 Kodiak Management Area genetic stock composition study. However, the study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in the Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Furthermore, the ACR does not address the natural variability of either Kodiak or Cook Inlet Sockeye runs (ie, Karluk in 2017). In addition, the changes advocated in the ACR does not consider the fact that shutting down areas in the Kodiak management area will cause over-escapement into local systems causing harm to local runs, not to mention the impact fleet redistribution will have on seine and gillnet operations. This proposal will completely disrupt

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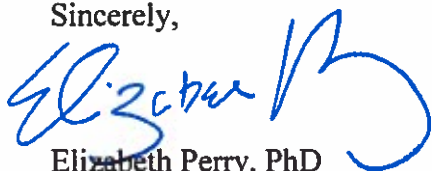
the Kodiak area fishery, causing significant economic harm to its fishermen, processors and communities while only slightly advantaging Cook Inlet's harvest.

The Kodiak Management Plans are working. They are focused on the availability and harvest of local stocks versus fishing in new areas or targeting fish destined for Cook Inlet. This has been the case for generations and continues to be a model that provides for healthy spawning systems and sustainable harvest.

Again, the UCIDA Agenda Change Request does not meet the Board of Fisheries ACR criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in the Kodiak area create a conservation concern. Moreover, there is no error in regulation that needs to be corrected.

Therefore, Koniag, Inc. requests that the Board of Fisheries reject the UCIDA Agenda Change Request and follow the board's normal three-year cycle for considering respective management areas which would place the Kodiak Area Management Plan in front of the board again in January 2020.

Sincerely,



Elizabeth Perry, PhD  
CEO

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Submitted By  
Kristie Wall  
Submitted On  
10/3/2017 10:37:39 PM  
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Kodiak set netter

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Kristie Wall  
  
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September 29, 2017

Chairman John Jensen  
  
Alaska Board of Fisheries  
  
Boards Support Section  
  
P.O. Box 115526  
  
Juneau, AK 99811-5526

Dear Chairman and Fisheries Board Members:

I'm writing to oppose the Agenda Change Request put forth by the United Cook Inlet Drift Association. As a fellow fisher I can certainly empathize with this group. As their region's dense and growing population places ever increasing pressure on their resources, everyone's piece of the "pie" continues to erode. It is a hard situation that we here in Kodiak are also facing as lodges, commercial and substance users hunt "their" portion of our once seemingly abundant resources.

HOWEVER, from the information available to me at this time, the request does meet the Boards own criteria for consideration. The fact that Cook Inlet and Kodiak sockeye frequently swim the same ocean routes along Kodiak's coast line is not "new information," but traditional knowledge that has been verified in studies since the 1940's. I can't understand how the confirmation of this situation creates a "conservation concern" overwhelming enough to ignite an out of cycle regulation change.

My family came to Kodiak in the late 1950's, a time of abundant resources and limited population, to help pioneer our once prosperous King Crab fisheries. Since then all members of my family have worked a variety of fisheries from crab and shrimp to herring and salmon in a variety of capacities from skippers to cannery workers. Salmon fishing in particular has been several family members main source of income. One constant and significant source of income, as well as traditional familial connectivity, however, has been the salmon set net site my family has operated in Uyak Bay since 1960, the year my young mother of four tried her hand at set netting while her husband worked days as a mechanic in the nearby cannery. Compared to others around us, we are a small operation working only one permit. However this one site has been the entry fisheries for my brothers who now seine and gillnet, myself and sister who paid our college tuitions, myself who supported a young family for five years, and now my eighty-two year old mother who runs the site with grandchild as crew. This income has been a critical supplement to her Social Security in our high cost of living state for at least a decade. **Please believe that I not exaggerate when I predict that the proposed allocation restrictions, if put into regulation, will put my family setnet site out of operation...**the July fishing periods selected for shutdown have always been our "cross your fingers and pray we break even" openings. To reduce our tiny slice of the Kodiak salmon "pie" by 20-30% might well cut the final thread in this family's 57 year traditional and financial fabric.





So as you can see I have great empathy for the Cook Inlet fishers. We have all witnessed, with an ominous eye to our own shores, their once ample percentage of returning sockeye be steadily sliced off and shared amongst their region's ever densifying population with its new users groups increasingly demanding their fair share of this natural, but limited resource. I even understand UCIDA's desperate attempt to use recent data from the 2014-2016 sockeye genetic stock composition study to justify enlarging their traditional portion by pulling from Kodiak's pool. **However, this desperate action does not make sense for several reasons.** Firstly, some questions arise when I examine the collection, interpretation and usage of data from the study. For example, it is my understanding that samples were not collected from the East side of the island. If so, what justifies the 5,000 weekly/20,000 limit to Eastside Kodiak, AAC 18.36. Also, is it sound scientific practice to propose new policy on such a narrow range of data? Three years may seem like an extended time in our human history but is nothing to the ancient species of salmon. Was information from other related studies used to inform this request? According to independent 3rd party analysis of studies dating from 1940 to present ( Barrett and Swanton, 1991), Kodiak's slice of the Cook Inlet sockeye "pie" has historically averaged well below 10 % — So how does this information justify proposed limits which between 22%-27% (A number that does not take into account the 10%-23% of pink harvest we would also miss during the proposed sockeye closures)? Furthermore, a wealth of information exists to show that 2 of the 3 seasons used in the ADF&G's Genetic study had notable climactical and natural anomalies likely to effect "typical" animal behavior. Were these conditions taken into consideration? Too many questions involving data collection and interpretation remain before reallocations of sockeyes should be considered.

And finally, the overall intention of this Agenda does not seem to justify the effect. The small potential increase to the Cook Inlet fisheries does not justify the potential economic tailspin these limits would bring our island community. Unlike the more diversified of the mainland, fisheries is Kodiak's economy, of which salmon is a huge part.

In short In summary, the one constant in our current scenario seems to be that sockeye salmon bound for Cook Inlet have be swimming past our Island since long before humans have been fighting over them. So, to spontaneously rework regulations and allocations for Kodiak based on a such a single narrow, possibly skewed, set of data seems contrary to the thoughtful work for which the board is renowned, especially considering the potential drastic economical effects such a decision will incur upon my family and my community.

Thank you for your thoughtful consideration of my hopefully accurate interpretation, and most humble input,

Kristie Wall



Submitted By  
Chariton Epchook  
Submitted On  
9/29/2017 8:57:34 AM  
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The Kwethluk Joint Group submitted an ACR 01.270 (n) (1) (B) Lawful Gear and specifications and operation, requesting to change the use of 4" gillnets during times of low chinook salmon runs on the Kuskokwim River. I actually forgot to change the 5 1/2" language on this proposal to 7 1/2" when I was requested to submit a copy in the word format of your proposal forms. This proposal will be in line with the Chum salmon regulation in times of low abundance.



Submitted By  
Richard Berezkin  
Submitted On  
8/29/2017 3:15:38 PM  
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The Kwethluk Joint Group submitted an AR Request Form to the Board of Fisheries and in its submission the section where the request was submitted for gill net size or measurement was 6'. We are asking to change the gillnet size from 6' inches to 7 1/2' inches. If any questions please call (907) 757-6714/6715 and ask for Richard. Thank You



Submitted By  
Boris L. Epchook  
Submitted On  
10/2/2017 2:31:03 PM  
Affiliation  
City of Kwethluk

The Kwethluk Joint Group submitted an ACR 01.270 (n) (1) (B) Lawful Gear, specifications and operations. Requesting to change the use of 4" gillnets during times of low Chinook Salmon runs on the Kuskokwim River.

The City of Kwethluk, a member of the Kwethluk Joint Group, is in support of the ACR. Thank you.

Regards,

Boris L. Epchook

City Manager



Submitted By  
Tanya Epchook  
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10/3/2017 2:54:45 PM  
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The Organized Village of Kwethluk

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The Kwethluk Joint Group submitted an ACR 01.270 (n)(1)(B) Lawful Gear and specifications and operation, requesting to change the use of 4" gillnets during times of low chinook salmon runs on the Kuskokwim River. We had forgotten to change the 5 1/2" language on this proposal to 7 1/2", which the group as a whole had agreed upon for this ACR. This proposal will be in line with the Chum Salmon regulation in times of low abundance.

October 1, 2017



Chairman John Jensen  
Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, AK 99811-5526

RE: UCIDA ACR 11

I have been commercial salmon fishing for forty years on the west side of Kodiak Island- spending each summer raising our children at eight different setnet sites in Uganik and Viekoda Bays. When I began setnetting in 1977 it was a 5 or 6 week season targeting pinks, beginning July 6th until the third week in August. The following season, 1978, the partial recovery of the early Karluk sockeye run allowed 2 days of fishing in June. I have observed the recovery of our sockeye fishery for forty years---this careful management has resulted in some seasons like 2017--open from June 1st with a mandatory closure in July, then fishing until the canneries quit buying.

My twin sons, Edin and Galen ran my site for the first time this summer. They have grown up on this beach for nineteen summers. My husband, Chris Berns and I, have also owned 4 different salmon seiners over the years and have been involved in fishery issues since the late 80s, after the EVOS. We received the Chamber of Commerce's Cornerstone Award in 1992 for our advocacy against IFQs. After the experience following the Exxon Valdez Oil Spill, I began advocating for our local small boat fisheries and involved on many boards, the Kodiak Maritime Museum, Northwest Setnetters, United Salmon Association, as a legislative aid to former Senator Jerry Mackie. I worked successfully with the State of Alaska to allow salmon fishermen into the Trade Adjustment Assistance program for retraining (TAA) as well as the DCED Quality Initiative in 2003, as a recipient of 2 quality grants. For the past fourteen years, I have been selling a portion of our own wild salmon into markets in Northern California as "Kodiak Catch"--I have witnessed first hand, the growth of popularity of Alaskan wild salmon.

Nearly 30 years ago, we were forced to defend our decades-old mixed stock fishery against accusations of a "new and expanding" effort of targeting Cook Inlet sockeye. In response the North Shelikof was created and has worked successfully since then. Then in 1992 KPRA once again, forced us before the BOF. In an effort to mitigate potential damage to our historic fishery, the Kodiak Salmon Work Group was formed. It became a successful, volunteer union of both seine and salmon fishermen, generously supported by both the City of Kodiak and the Kodiak Island Borough (travel, postage, office help).

I coordinated the efforts of the volunteer group over the following months, resulting in the production of several reports submitted to the BOF, including the Kodiak Management Area's "Kodiak Island Borough Salmon Work Group Report #5." There was tremendous community support for this endeavor, as the salmon fishery is the "life blood" of Kodiak's diverse fisheries; the State's largest diversified fishing community.

When faced with this radical attempt to change our salmon fishery, the BOF wisely decided upon the formation of an interarea workgroup. Ultimately, with Board of Fisheries approval, we reached a conclusion approved by all parties. No action. The "corridors" are working. The triggers are working. Again, rate of harvest of CI sockeye is directly proportional to the strength of the run and there is not a growing, expanding fishery as charged. (See Kodiak Island Borough Salmon Work Group Report #5)





Once again, over 20 years later, with no credible rationale, the Kodiak Management Area, community and its salmon fishermen are thrust into an out-of-cycle appearance before the Board of Fisheries. Not only is there no conservation emergency, but the UCIDA ACR proposes to *dismantle* the KMAs carefully managed fishery. ***Dismantle the KMA, jeopardizing the 5 to 6 week time-frame that was our season prior to 1978, in its crippled state?***

The Kodiak Management Area's salmon fishery is a model of success in post-limited entry Alaska. The KMA operates under ten, carefully-crafted, Board of Fisheries approved, management plans. The KMA has detailed strategies to manage for sustainability--on local mixed stocks. Because there are over 400 salmon-bearing streams it is an intricate playbook for salmon managers. Our fishery is a mixed stock fishery and has been for over 120 years (and centuries before that with Alutiiq fishermen). The historic, centuries-old incidental harvest of non-local salmon stocks is detailed in Report # 5 (page 70)

The five proposed weeks, from the end of June and beginning of August encompass a carefully managed mixed stock salmon fishery. What this umbrella plan suggests would cap weekly harvests of sockeye at levels that would *arbitrarily impact our own local pink, sockeye, chum, and coho fishery*. For example, on the "Westside" of Kodiak, the harvest of 12,500 local sockeye could easily occur within an hour of an opening, with two or three sets off Miner's Point or within Viekoda Bay setnetters shutting down the directed harvest of local stocks within a few hours. (see the map of the island). It would allow buildup of salmon into terminal areas with reallocation and quality issues by diverting cape fishing for ocean-bright salmon. The "real life" repercussions of this ACR are disastrous. The consequences would mean pulling our nets within a few hours of setting them, and sitting for a week while salmon pour by. Another note on the drive toward quality since 2003--we are now paid .11 cents/pound for bleeding our fish, plus .05 for chilling. Pushing salmon into terminal areas is a loser and will send us back two decades as far as what the market demands.

Nearly fifty years of carefully crafted management plans have evolved into a balanced 'system' of escapement and harvest. This equilibrium within this salmon "system" would be jeopardized; throwing all user groups and four hundred salmon-bearing streams into serious jeopardy. We saw what happened during the Exxon Valdez Oil Spill with island-wide closures. This graph illustrates the "species management" over the salmon season, showing that late run sockeye, blends into pink and chum management, which flows into late-run sockeye management, all local stocks. It also demonstrates that the ACR as proposed would have further decimated an already disastrous salmon season in 2016. **This graph shows the chornology of the KMA Speciest Management Focus- note between June 25th and August 1st, encompasses 90% of the harvest for 2016**

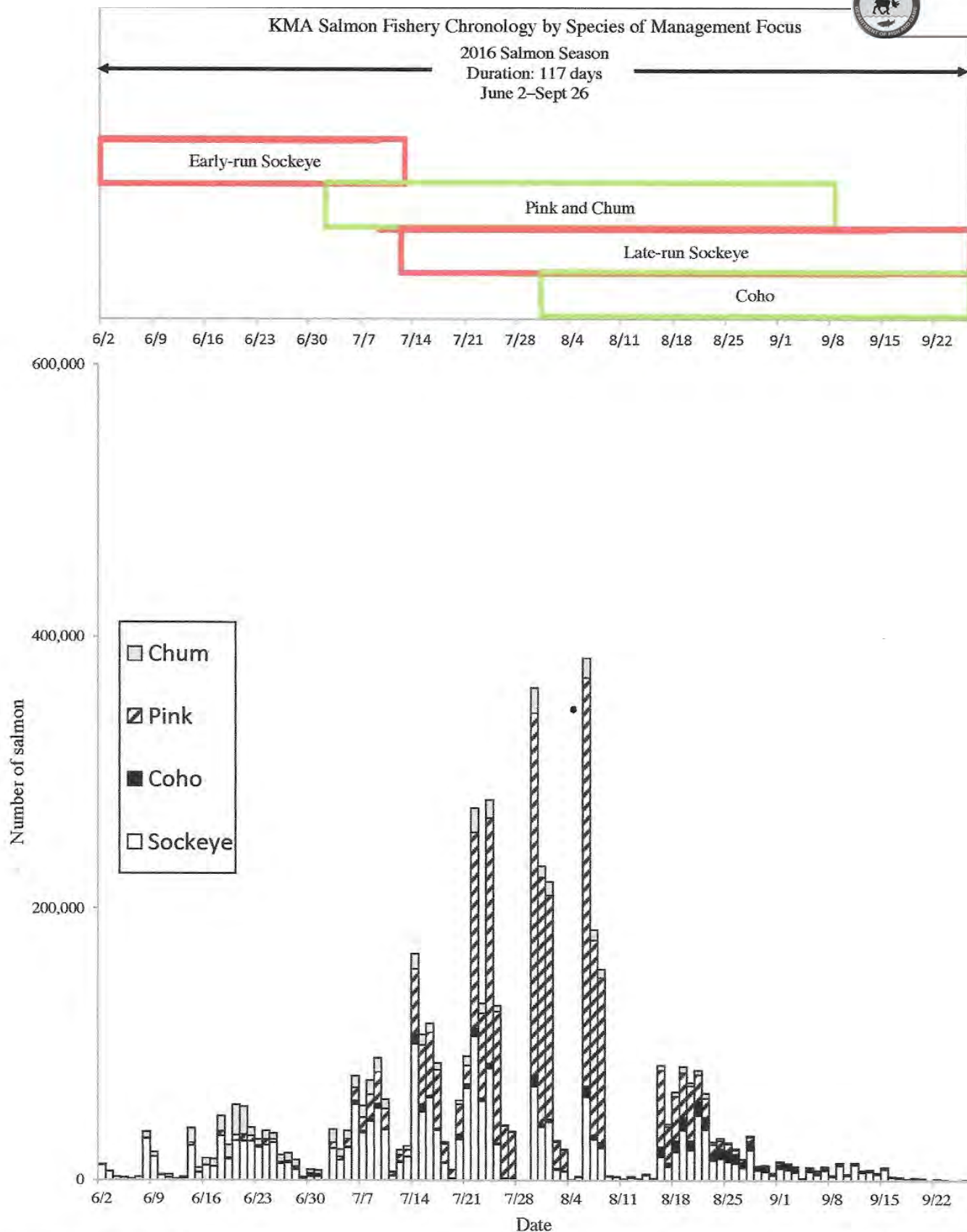


Figure 3.–Commercial salmon fishery chronology and daily harvest by date and species management focus, Kodiak Management Area, 2016.

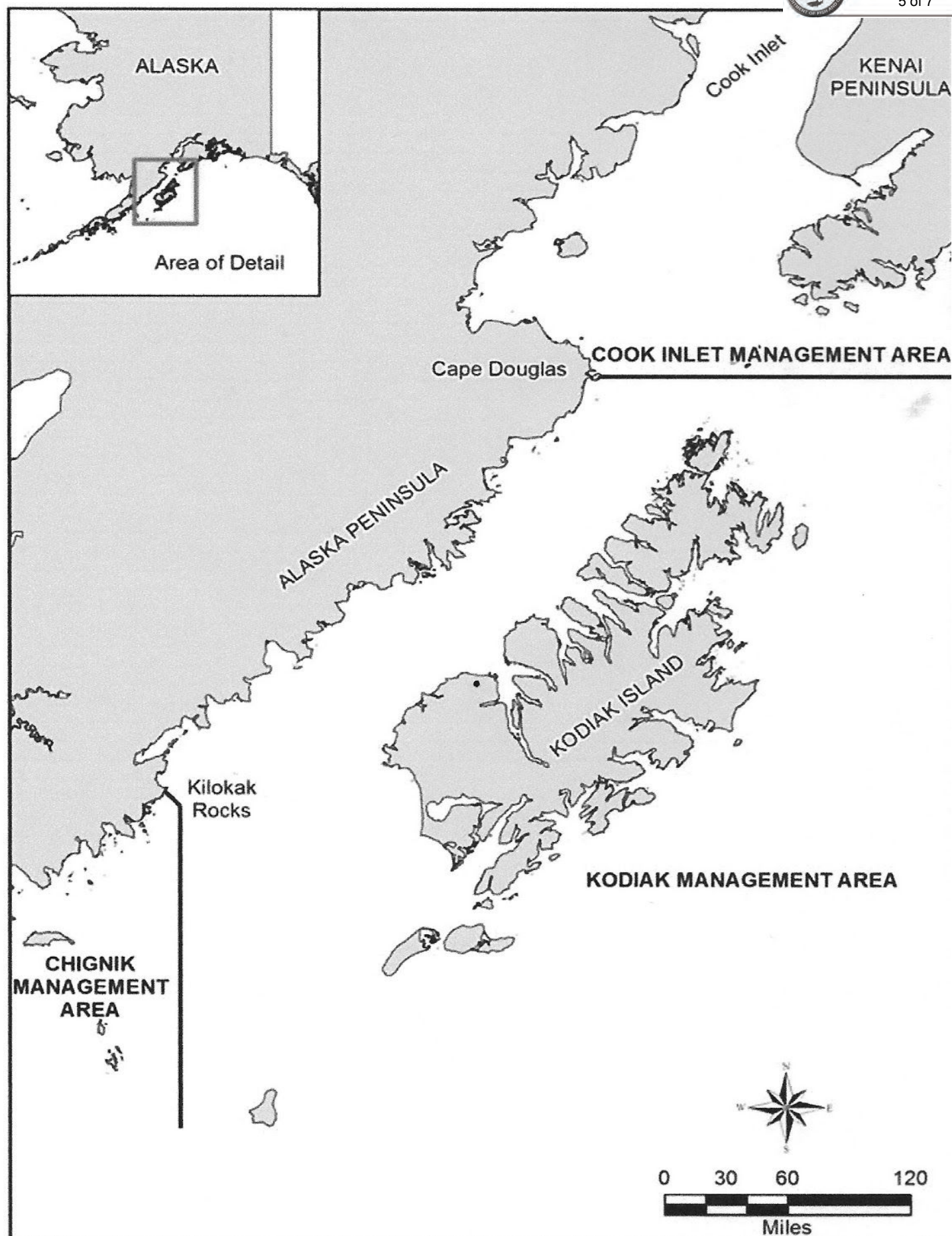
### **The ACR Casts Too Broad a Net**

Clearly, the real issue of “who is catching Cook Inlet sockeye?” should be squarely placed upon the thousands of stakeholders in that management area..is it possible that there are too few fish and too many fishermen to maintain a viable sockeye fishery into the future? Between Kachemak Bay and Upper Cook Inlet is the largest population base in the state. Not only are thousands of resident commercial and sport fishermen pursuing those stocks, nonresidents by the hundreds leave the Anchorage airport every year, toting an ever-expanding army of coolers bound for the Lower 48. Tourism is booming during the summer.

This ACR casts too broad a net, attempting to place the conservation burden on the KMA, hundreds of miles away. The onus, the responsibility of the health of their fishery must be placed upon those closest to the vulnerable stocks. Starting with salmon habitat protection, then with the fundamental principle of “escapement” there must be a clear accounting of the number of sockeye caught in and around salmon-bearing creeks and rivers. Cook Inlet stakeholders must come to terms with the politics of their region, their multi-week BOF meetings, the propensity for potential overfishing, the impact of thousands of fishermen of all types and the predictable consequences from this scenario. They must protect their own vulnerable stocks. Start first in your backyard. Be stewards of the resource, just as all Alaskans did in the late 50s with statehood. In Kodiak, we were stewards of the local salmon fishery through its recovery into the late 1970s.

This ACR is a radical set of ideas that should not form the basis of any kind of proposal or action at the October Board of Fisheries meeting.

To put this into perspective, Kodiak is situated in the Gulf of Alaska, the concerns are in the upper reaches of Cook Inlet, hundreds of miles away (chart of Kodiak Island)  
(\_\_\_\_\_)







## Community Stability & Salmon Infrastructure & Investment

An ACR, if accepted, would be catastrophic to the Kodiak community “equilibrium” which depends on the stable influence of the local salmon fishery. Since the salmon fishery recovery in the late 1970s, a balance between escapement and harvest has been reached, with careful ‘fine tuning’ of fish managers, professional biologists. Over the summer, ten management plans come into play which manage and control the fleet, dispersion and harvest of salmon for five hundred permitholders. Local processors plan their seasons based on the forecast, and stable management. This is a complex series of interlocking plans; a finely-tuned machine that depends on professional staff to execute the “dynamic play” that unfolds each summer around June 1st.

For the past 13 years, we have struggled to emerge from the devastating impact of low prices when fewer than 100 out of 350 seiners participating, finally recovering the past few years, but has never returned to the full number of permits. This ACR would throw the KMA into chaos and disrupt the three and a half month salmon fishery, also impacting villages and businesses which depend upon the long processing season.

We have all invested in our local salmon fishery. Each of us, hundreds of thousands of dollars, purchasing vessels, permits, and sites, gear over the years. In Viekola Bay, all of the site owners have been there for over 35 years, as families! As a setnetter, our sets are old sites of pre-statehood days, having been fished for many decades. We are stationary gear. This ACR proposes to shut us down, on a weekly basis. Kodiak fishermen make a four month commitment to fish the complicated KMA-- We depend on the entire, 4 month season: if we have a weak early run going to Karluk, we look forward to the major influx of pinks, chums, and local sockeye in late June, early July, throughout August. We do not quit fishing until ADFG closes it, sometimes until September 20th. Our family depends on the summer income for the rest of the year.

### Our 2% annual investment, funds our future

The map of the Kodiak Archipelago shows our island-wide “salmon infrastructure” *just out of town: weirs, communities, hatcheries, enhancement projects, villages, fish processing facilities.*

This chart represents the projects paid by the 2% investment all permitholders pay to KRAA, the enhancement of stocks. We have been paying this since the early 1980s, investing millions of dollars, adding a buffer to our wild salmon fishery. It shows the villages that have their small, local fleets and harbors, and processing facilities in Alitak, as well as the City of Kodiak (5). Thus, any potential closures, as suggested in the ACR would sever our participation into our “natural resource-based” community. We would lose access to this production and investment.

Kodiak Island has the largest most diversified fishing port in the State of Alaska. Fishermen pay a resource-based tax on our deliveries, to the Kodiak Island Borough. The salmon fleet’s investment in boats, nets, and sites is another level of asset development--physical capital. Then there is the processing industry in Kodiak, who not only invest in, develop and operate the canneries that keep the town ticking, but also its work force--hundreds of resident workers. The community is fisheries-dependent for processing jobs, marine, grocery and fuel businesses. There is a large resident cannery worker force; the salmon season is typically the longest during the year. For example, this year there were well over ninety processing days, often operating at full-speed, 24 hours a day.



The 2016 season, (ADFG Season Summary 2016) had the lowest pink salmon return and harvest in 40 years, a disaster for Kodiak salmon fishermen:

*The estimated total exvessel value of the 2016 KMA commercial salmon fishery (not including cost recovery) was \$14,509,665 (Table 11), which was well below th 10-year (2006–2015) average exvessel value of \$36,258,483*

Rough estimates of the impact of the UCIDA proposal, had it been in effect in 2016, Kodiak fishermen would have lost close to \$4,876,000 OUT OF a total ex-vessel value of \$14,509,665, one third of the salmon season. Seiners would have averaged, \$44,000 instead of \$66,243, setnetters,s \$18,000. (ADFG)

In summary, if CI is worried about conservation, start with your rivers, habitat, escapement, and go downstream from there...slowly...don't attack a fishery that is several hundred miles away. Kodiak's salmon management is a complex set of tasks and decisions, based on on the grounds information, compiled into ten management plans, over the past 40 years.. most of which depend on in-season management actions; it is the largest and longest fishery in the Archipelago..possibly the longest season around the state (salmon). It employs more harvesters than any other. The processors and their workers count on a 3 month season to shore up other fisheries or add a bonus to a good year. We have recovered from the decade-long price collapse, and have just the past few years, begun to have harvest, price, run, all in synch, increasing our ex-vessel value. This ACR would throw a wrench into a finely-tuned operation, for what? To forego millions of local salmon to "potentially" guess that it might address UCI's problems? It is not only a poorly thought out 'wrench' -- it has very little chance of fixing UCI's problems with sockeye. Let's not 'roll the dice' on a gamble will gum up the works for hundreds of Kodiak fishermen, the community, and would have a detrimental impact on future generations of both people and salmon.

Sincerely

Lacey J Berns  
Kodiak salmon fisherman/family since 1977  
1620 Kristin Way  
Mckinleyville, CA 95519  
707 839.8009





Alaska Board of Fisheries  
C/ O ADF&G Boards Support  
P.O. Box 115526  
Juneau, Alaska 99811-5526

Dear Board Members;

Attached is a document being conveyed to your Board per the wishes of Kodiak's Salmon Work Group (KSWG) regarding an historical perspective of the Kodiak Management Area's (KMA) Commercial Net Fisheries (CNF).

This document was authored by three retired former KMA Area Management Biologist and as was deemed by the KSWG to be an important historical perspective about KMA's CNF.

Please accept this document for consideration during your deliberations of the Agenda Change Request submitted by the United Cook Inlet Drifter Association.

This document submittal is on behalf of its three authors: Lawrence Malloy, Dave Prokopowich and Kevin Brennan, all ADFG KMA incumbent Area Management Biologists during the 1972-2006 ~34year period.

Thank you!

A handwritten signature in cursive script that reads "Lawrence Malloy".

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10.02.17a

## **KODIAK MANAGEMENT AREA (KMA).** **History Of Applied Salmon Management**

(Authored by retired ADFG KMA Biologists, incumbent as Area Mgmt. Biologists for the ~34 year period of 1972-2006; Larry Malloy, Dave Prokopowich and Kevin Brennan)

### **ABSTRACT:**

*This document provides a brief discussion of Kodiak's salmon commercial net fishery (CNF), its developmental history during Territorial oversight (~78 years) through to its current Statehood regulatory history (~57 years). Evolving from an initial chaotic discovery phase (from ~ 1882+) through a heavy exploitation period coupled with elementary regulatory controls (to ~1959) and then culminating in today's strictly regulated, sustainable, stabilizing major economic engine for Kodiak Island Borough's fishing industry (~ 2017+).*

*Alaskan salmon fisheries explicitly target local production via ADFG's local 'Mgmt. Area' oversight. Many of Ak.'s salmon fisheries have historically identified that portions of their respective area's total harvests are incrementally comprised of incidental harvests on migrating non-local stocks. Salmon homing migration patterns, mostly olfactory driven, can commonly yield unpredictable deviant migration routes.*

*For example, portions of CIMA waters, primarily flushing through Kennedy & Stevenson Entrances, can ebb extensively through KMA waters, depending upon the size/duration of a prevalent tidal series. As KMA's CNF became aware of sporadic deviantly migrating sockeye during it's directed fisheries on local salmon stocks, these phenotypically larger-bodied sockeye were anecdotally identified as being a non-KMA stock. Thus, an incidental sockeye harvests (ISH) was identified as occurring on suspected CIMA-bound sockeye. Various stock I.D. efforts strived to clarify the somewhat unpredictable presence of this non-local stock and to better understand related ISH biological impacts for other non-local 'stocks of concern' and/or any potential allocation issues.*

*Subsequently, for KMA, existing BOF regulatory INTER-AREA PLANS do now address biological and/or allocative impacts affecting non-local stocks/fisheries as they are exposed to local KMA fisheries. KMA has 2 such INTER-AREA PLANS which have been successfully implemented, both with full regulatory compliance as intended. The oldest Plan being the Cape Igvak Sockeye Mgmt. Plan (CISMP) that addresses a 'targeted sockeye harvest' (TSH) on 'definitive portions of defined sub-stocks' of Chignik-bound sockeye during KMA's Phase I & II fisheries. The newest Plan being the North Shelikof Sockeye Mgmt. Plan (NSSMP) that addresses an "incidental sockeye harvest" (ISH) sporadically occurring upon 'an unknown portion of some Cook Inlet-bound sockeye stocks' primarily during KMA's Phase II Fisheries.*

*The CISMP is an ~50 year plan, documented as regulatory-compliant with defined biological and allocative criteria for the plan's TSH 'capped harvest rate' and related 'un-capped harvest level'. The NSSMP is an ~28 year plan, also documented as regulatory-compliant within the plan's designated ISH 'capped harvest level' per only those plan-identified mgmt. units, whose seaward portions are hence restricted. Respectively, the CISMP has been structured by reasonably defined ADFG stock I.D. data analysis while the NSSMP has been initially structured by historical phenotypic stock I.D. data; it is currently proposed to be modified by contentious CIMA ACR-submittals based upon a recent ADFG Genetic Study's stock I.D. questionable extrapolations.*

*Additionally and note-ably, Kodiak's overall regulatory umbrella for local stock mgmt. further includes 6 such INTRA-AREA PLANS, on KMA's Phases I, II & III fisheries.*

*All of these BOF approved regulatory mgmt. plans have annually withstood heavily scrutinized Plan compliance by a multitude of KMA stakeholders, i.e. State & Federal agencies, competitive salmon user-groups, private land*





*owner corporations, concerned environmental citizenry, etc! These Plan's remain functionally very successful for KMA achieving salmon MSY goals, and subsequently are essentially supported by the aforementioned cross-section of critically pertinent scrutiny.*

*Regarding variations in non-KMA's sockeye production, environmentally induced or otherwise, ADFG's current extrapolations of potential KMA ISH impacts, to be valid, should require greater, more Agency-worthy, detailed explanations of such analysis. KMA's Annual Management Plans (AMP), being aggressively implemented, are structured to benefit KMA's local sockeye and pink fisheries. Seemingly so, without identifiably documented impacts upon portions of non-local sockeye migrants being a sporadic ISH in targeted local stock fisheries. This could suggest that the sporadic ISH during KMA local salmon fisheries may not be accountable for any perceived diminishment of certain non-local stock-specific production. Interestingly, it could further suggest the existence of non-KMA AMP operational deficiencies, environmental impacts notwithstanding.*

*KMA stakeholders continue to strongly support KMA's AMP's, and they exhibit a keen awareness of properly applied ADFG mgmt. procedures. They strongly cherish regulatory stabilities that they, as active stakeholders, have helped create and promote. Importantly, while remaining imperfect, KMA's ADFG/stakeholder regulatory interface-bond continues to support definitive mgmt. actions that annually "create the potential for KMA's MSY salmon production". A structured BOF evaluation of both KMA and CIMA AMPs should be seriously required to properly understand definitive impacts of KMA's Inter-Area ISH vs it's Intra-Area AMP implementations.*

*Pointedly, local ADFG Area Mgmt. annual reports to the BOF, should be explicitly structured, accurately presented and orally conveyed/defended and further, should require exclusive authorship/presentations by the incumbent Area Mgmt. Biologist. Categorically, these individuals should be the most knowledgeable ADFG staff regarding salmon production and stock status in their mgmt. areas. Responsible BOF agendas should continue to prioritize Area Manager presentations over other ADFG concurrently presented pertinent technical reports. The BOF will thus 'Fully Acquire The Area Manager's Best Salmon Management Practices' perspective from having been exposed to broad CNF experiences and from having developed explicitly defensible explanations for a multitude of pertinent 'Area-Specific salmon issues.*

#### **INTRODUCTION:**

Kodiak's commercial salmon net fisheries (CNF) have an 135 year history, extending annually from ~ 1882 to 2017. Management of KMA's fisheries pre-statehood was Federally Territorial Bureau of Fisheries and post-statehood was the State's ADFG. Historical harvest data. It identifies regulatory 'cause and effect' for the respective jurisdictions of Territorial Federal Wardens vs Statehood ADFG Biologists.

Authorship of this historical narrative is from three retired ADFG biologists actively involved with KMA's commercial net fisheries (CNF) as salmon area mgmt. biologists (AMB). Their combined 'mgmt. watch' occurred over an ~34 year period, from 1972 to 2006, an identified tumultuous period of KMA regulatory evolution. Noteworthy is that since statehood, KMA has had 11 AMB's, of which 3 are deceased, and the remaining 8 continue to be domiciled in Kodiak city, of which 2 are active ADFG KMA salmon AMBs.

KMA's harvest strategies have evolved since statehood when ADFG mgmt. initiated control. Subtly at first, but noticeably aggressive since the early 1970's, an ~45 year period, ADFG implemented major regulatory changes structured to best achieve the statutorily required Maximum Sustained Yield (MSY) salmon CNF required of ADFG. Most changes, having been BOF reviewed and approved, are identified in ADFG's CNF Annual Regulatory Booklet. Other changes have yielded Regional ADFG approved evolving mgmt. actions. All of which, pending proven functional utility, are identified in KMA AMPs for eventual ADFG submittals for BOF review and approval. Additionally, several local ADFG inspired in-season regulatory adjustments have been initiated to create enhanced mgmt. efficiency, by either having been blended into current AMP's narratives or else does exist as identified in-





season evolving perspectives for further enhancement of in-season mgmt. actions. These mgmt. adjustments have mostly remained in former ADFG AMB dead files. However, both the former and latter enhanced mgmt. perspectives have been included into aspects of this narrative of KMA's CNF history.

An excellent well researched book on Kodiak's CNF is Pat Roppel's "Kodiak Salmon" copyright 1985?. It thoroughly documents developmental events that track this fisheries evolution from pre- to early post- statehood. This book remains the premier desk reference document of Kodiak's salmon CNF development. It functions excellently as a prioritized reference for Alaskan salmon stakeholders and especially BOF members.

As Alaska's salmon fisheries developed, a series of conservation measures were initiated to address sustainability during the heavily exploited early phases of the state's salmon fisheries. Each of the state's salmon mgmt. areas, as they are currently defined, individually evolved regulatory measures to address each area's salmon sustainability issues and the importance of related salmon fisheries economics supporting the many pertinent coastal communities.

The KMA as currently defined, includes the entire Kodiak Archipelago plus that portion of the Alaska Peninsula draining into the Shelikof Straits between the latitude of Cape Douglas south to the southern entrance of Imuya Bay at Kilokak Rocks.

#### **SALMON INDUSTRY HISTORY:**

Some of Alaska's earliest salmon industry's development occurred in the KMA, with major processing canneries clustered near the terminus of major sockeye production systems, e.g. the Karluk and Ayakulik Rivers that empty into Shelikof Straits and the Upper Station and Akalura Rivers that empty into Olga/Moser Bay portion of Alitak Bay. As CNF harvests developed in KMA, and in the adjacent mgmt. areas of Chignik and Cook Inlet, those early sockeye harvests, were initially 'tendered' to KMA's existing processing canneries, prior to non-KMA processing facilities being developed.

Initially, KMA salmon harvests involved primarily extensive company sponsored beach seining operations at the mouths of major river systems, gradually evolving to expanding gear-type efficiencies, sorted by company-sponsored geographical locations and eventually to more individually owned/operated mobile purse seine vessels and fixed set gill-net sites and eventually to gear-type ownership currently common to KMA fisheries. Noteworthy, was that historical, company-sponsored gear included an array of mobile purse seine vessels, beach seine operations and fixed set gill-net sites along with the notorious fish traps, all strategically located to target KMA's high valued sockeye stocks coupled with its large volumed pink salmon returns.

Statewide, today's salmon fishing gear-types reflect state of the art technology for harvesting efficiency, per respective gear-types. In the early 1970's, Alaska's Commercial Fisheries Entry Commission (CFEC) statutorily implemented gear-numbers restrictions, containing them to levels historically active in their respective areas and capable of harvesting historically noted maximum returns. Some interesting KMA trends from the CFEC's 'gear-capping' event are that, KMA's current purse seine (S01K) effort levels have plunged significantly downward since CFEC S01K purse seine permits were issued and that their values have recently reached record low levels; a seller recently advertised his S01K permit @ \$28k (08.25.17. in the KDM). The S02k beach seine gear is essentially a non-existent economic unit, while the S04K set gill-net active gear levels have remained relatively stable. Because of S04K gear's non-mobile status, it's value remains heavily reliant upon ADFG's in-season mgmt. regulatory consistency as annually identified in KMA's AMP.

Notably, CFEC Permits issued, by gear-types, for each mgmt. area, involve commerce on oscillating permit values generally related to a mgmt. area's sustainable salmon production potential and specific gear-type economic efficiencies. KMA's trends in CFEC Permit commerce exemplify those points, as previously mentioned.

KMA mgmt. strongly stresses using the mobile S01K fleet as an important mgmt. tool to efficiently maximize high quality harvests utilizing traditional salmon harvest patterns developed and refined over the past ~85+ years (early 1930's through 2017). KMA's fixed set gill-net gear (S04K), is confined to two specific geographical areas. One of





which, the Moser/Olga Bay Section of the Alitak District, is exclusive to S04K gear and is regulated as an 'explicitly terminal fishery' targeting Olga Bay salmon production. The other of which, the Central section of the Northwest Kodiak District, is where S01K and S04K gear fish concurrently without differential fishing periods by gear-type, essentially regulated as a wholly undivided mgmt. unit., and structurally regulated as 'blended far-terminal, near-terminal and an explicitly terminal CNF'; specifics of which are identified later in this document or in KMA's Salmon Regulation Booklet.

Again, a noteworthy reminder is that KMA's active S01K gear levels have experienced significant downward participation trends, from potential to documented active numbers, respectively. Whereas, active S04K gear levels have remained relatively stable from potential to documented active numbers, respectively. A third gear-type, Beach Seine S02K gear, has historical documentation, but is essentially inactive in today's KMA salmon fishery.

KMA CNF's general economics, by gear-type, continue to exhibit oscillating trends in ex-vessel values during recent years of increasing annual harvesting costs. Reduced levels of active seine gear reflect current economic issues confronting KMA's S01K gear. Economic reality increasingly requires S01K gear's participation in multiple longline and pot fisheries, when available. Importantly, the vessels of the S01K fleet, with their multiple fisheries participation, continue to represent a key KMA stable economic engine per it's major fisheries. Those vessels remain significant contributors to Kodiak Island Borough's (KIB) fishery's economics, specifically through their multiple fisheries production for the Borough's 9+ shore-based fish processing plants. That economic significance to KIB's CNF manifests itself through the 'processor's first wholesale value', the CFEC permittee's 'ex-vessel values', raw-fish landing tax, KIB's severance tax and CFEC permittee's enhancement taxes. Importantly, this fleet further yields derivatively extensive multiplier economic effects throughout KIB's many fishery-related service industries

### **CHARACTERIZING KMA COMMERCIAL NET FISHERIES (CNF)**

#### **Economics:**

KMA's salmon CNF is annually characterized by a dedicated communities preordained rituals of:

- Island-wide pre-season accelerated readiness activities;
- Followed by tremendous grinding in-season harvesting and processing activities;
- Culminating in early post-season activities of harvesting deceleration, gear repair/storage, earnings/PAF discussions and ADFG AMP regulatory reviews;
- Definitive late post-season assessments of the past salmon season's CNF that had just consumed an approximate five month period, from early May to early October.
- Other fisheries will occur concurrently, but this salmon fishery has the crucial stabilizing persistence needed to maintain the healthy economics of Kodiak's fishery's communities, for all 8 outlying KMA villages and especially for their supporting hub of Kodiak City proper.

Recent KIB demographic data identifies KIB-community population distributions and the KMA CFEC permit holder distributions within those communities. Also, recent ADFG data further identifies ex-vessel values by gear type as derived from post-harvest 'fish ticket receipt' summaries. A Kodiak Salmon Work Group (KSWG) document submittal to the October 2017 BOF meeting contains that data.

ADFG annually distributes AMPs to all KMA CNF stakeholders prior to season openings. Since the early 1970's, this document has provided 'regulator' explanations to 'regulated' stakeholders for anticipated 'regulatory guidance' throughout the forthcoming salmon season. It identifies projected harvests by species and by geographical areas. These projections are either formally structured harvest forecasts or else extrapolated harvest expectations, all to occur within grouped mgmt. units for the various Phases I, II or III Fisheries and as are further implied to be 'Far-Terminal', 'Near-Terminal' or 'Explicit-Terminal' harvesting opportunities. Sporadically, KFGAC will need to provide special preseason forums for industry needed AMP regulatory clarifications required for anticipated potential in-season issues.





### **Regulatory Mgmt. Evolution:**

Prior to issuance of ADFG's AMP's, during transitional Territorial to statehood years, seasonal regulatory guidance was confined to annually printed Commercial Fishing Regulations Booklets distributed from agency HQ's and by local fishery wardens. Essentially, pre-season harvest strategies were 'regulatory fixed' per determinations by either distant Federal bureaucrats or Juneau-based State agency personnel. These 'Regulatory Booklets', along with simple 'Fisherman Charts' depicting many important salmon streams and some few mgmt. districts, were ADFG's early distributions during that early Territorial to State transitional period.

Subsequently, specific post-statehood salmon wild stock rehabilitation efforts did initially require remedial actions as ADFG became established and entrenched. Pre-statehood In-season mgmt. actions for time and area adjustments had been extremely cumbersome. Emergency Order (E.O.) field announcements lacked distribution efficiencies needed for expeditious conveyance to active CNF stakeholders. Pertinent geographical locations needing rapid regulatory adjustments yielded difficult, precise transmittal descriptions. An 'agency transitional period' driven by a strongly desired aggressive ADFG mgmt. was deemed necessary and was subsequently initiated extending from the 1970's pre-cyber electronics period and annually enhanced through to today's near instant communication society.

Historically noteworthy was a persistent, but publicly shielded, residual animosity that somewhat chilled relationships between the older 'regulated' Territorial industry and the State's younger 'regulators' who, full of "piss and vinegar ideas", were aggressively poised to create positive changes to rebuild Alaska's and especially KMA's fragile, injured salmon resources.

Record species-specific low salmon returns in the late 1960's and early 1970's, necessitated aggressively rapid regulatory adjustments to achieve escapement requirements. That issue, when coupled with subsequent production deficiencies from a 'territorial days' carryover period, a persistently exasperated industry's sense of economic instability and it's related future uncertainty swept through many ADFG mgmt. areas; again, it was especially noted throughout KMA's salmon fishery.

Consequently, ADFG initiated pivotal changes to the regulatory process during the 1970's. Rehabilitating KMA's post-statehood 'regulator'/'regulated' interface relationships between ADFG and industry became a prioritized mgmt. goal. The importance of rapid in-season information exchanges between all salmon 'regulators and regulated stakeholders' was promoted as being critical and prioritized as such. Accomplishing this process without compromising industry's cherished competitive aspects of acquired confidential harvesting/purchasing/tendering/processing logistical knowledge of industry participants was challenging but deemed critically necessary for ADFG's required education to achieve mgmt. improvements, especially the strict application of in-season "Conservation Burden" regulatory adjustments.

Multiple ADFG daily phone contacts identifying in-season 'salmon tender' reporting summaries between ADFG and processors often identified critical trends in species-specific returns which could require rapid regulatory adjustments, as needed. A 'fish ticket' rapid summarization process was efficiently implemented to confirm harvest precision as needed. Season's with near record harvests yielded up to ~20,000+ fish tickets requiring timely review.. KMA ADFG's well advertised 'public open door policy' further enhanced development of stakeholder personal relationships whereby industry's conveyed personalized accumulated knowledge proved extremely beneficial for developing ADFG's best mgmt. practices for applying the best technologically based biology.

ADFG's most significant changes at that time were to issue progressively detailed annual AMP's developed at KMA's ADFG office, along with an improved KMA Regulatory Booklet from ADFG HQ.. Most importantly, a super-enhanced KMA salmon 'Fisherman's Chart' depicting all 7 mgmt. districts encompassing newly defined 52 sections identified as 'need-to-know' mgmt. units, were 'forcefully distributed' to industry. Additionally, all ~400+ salmon streams, all Inner Bay and Estuarine post-fishery pre-escapement marine sanctuaries, all designated 'seaward' and





'shoreward' zones specific to the BOF regulatory NSSMP and a narrative-legend for aiding confusing interpretations of salmon stream terminus closed waters boundaries were well identified on these important stakeholder educational charts.

#### **Industry Production:**

Again, Roppel's book on Kodiak's salmon fishery thoroughly documents the evolution of KMA's commercial salmon fishing industry. Paralleling Ak's salmon industry's development, Roppel further, identifies KMA's evolving fishery corporations from initially localized buyer/processing seasonal entities to current global year around economic engines equally benefitting pertinent localized communities and their domiciled inhabitants.

KMA's fishing industry evolved with the normal chaotic initial development issues, i.e. poorly regulated harvesting issues yielding biologically damaging over-exploitation, followed by Agency applied sustainability concern-based regulatory restrictions. Eventually, KMA's salmon history evolved to be intimately intertwined with its diverse multi-species-fishery development, primarily through its multiple-species year around fish-processing facilities so important for competitive harvester relationships among salmon CFEC Permit holders.

#### **Agency Protection:**

A 'Mgmt. Area' BOF regulatory review was initially an annual exhaustive logistical process which eventually required implementing the efficiently evolved schedule of today's rational three-year regulatory cycle. Characteristically, this important regulatory review begins with ADFG AMP post-season summary reports presented at local KFGAC's public meetings, commonly followed by stakeholder/ADFG ad hoc interchanges and as needed, subsequent proposed regulation changes. Systematically scheduled BOF meetings address those proposals, only to be considered off-schedule by Agenda Change Requests (ACR) to address aberrant biological/allocative emergency situations and/or BOF Policy contradictions. The

#### **KMA'S APPLIED SALMON RESEARCH:**

##### **Escapement:**

Of KMA's 22+ sockeye salmon systems, several major producer's stock-status statistics have been sequentially added to KMA's evolving sockeye stock database. Documented indexed total escapements for all tallied salmon species is collected from the fish-weir stations, per funding availability. Initially installed for compliance with federal regulations of the 1920's, e.g. the White Act, these fish-weir stations evolved to become the cornerstone for KMA's post-statehood progressive sockeye management program.

Specific fish weir station installations, primarily for KMA's sockeye salmon mgmt., have been located at the following systems:

Karluk, Ayakulik, Dog Salmon, Upper Station, Akalura, Uganik, Saltry, Pasagshak, Buskin, Litnik, Little Kitoi, Thorsheim, Paul's and, Malina lake-supported systems.

Adult upstream in-migrants and juvenile downstream out-migrants can be accurately tallied/sampled at these fish-weir stations, per funding availability. These sites are crucial for stock-status database development which provides a myriad of system-specific research on analyzed data and for public scrutiny of KMA's AMP's functional utility.

All other targeted salmon species and steelhead indigenous to these systems are also tallied at these fish weir sites. ADFG's KMA's escapement database contains all such historical information.

Critically Important for acquiring all other KMA escapement data, for all species on all un-weird systems is the required funding for collection of indexed aerial survey data for inclusion into KMA's mgmt. salmon escapement database. ADFG mgmt. staff must aggressively conduct frequent, multiple KMA-inclusive aerial surveys. These surveys evaluate a standardize consistency for observed salmon run-timing, migration patterns, respective pre-escapement build-up locations, address comparative aerial visibility conditions and document consistency of staff observer experience issues. These remain crucial correlating factors for progressively achieving escapement goals. Subsequent in-season regulatory adjustments, aggressively implemented, commonly results from aerial survey





data that requires knowledgeably proper assessments of temporal escapement trends. This has been emphasized in KMA's AMP's and through extensive KMA stakeholder discussions. Approximately 30+ aerial survey sorties are conducted annual by AMB staff.

#### **Stock Identification:**

KMA's MSF mgmt. considerations requires the rapid accumulation of in-season intra-area stock-specific production potential, i.e utility of acquired knowledge by AMBs.. Ideally, detailed complete brood tables would be developed, especially for KMA's major sockeye systems. However, condensed brood tables, cursorily structured upon historically documented 2 or 3 brood year escapements, coupled with accumulated out-migrant smolt numbers and condition, along with pertinent environmental data, have yielded subsequent forecasted returns of sufficient utility for inclusion into AMP's. Additionally, historical mgmt. knowledge, actively promoted within evolving Area Mgmt. teams, remains functionally critical for achieving required MSY goals and the related consistency in AMP development and applications.

Furthermore, as mentioned, KMA's intra-area CNF requires astute mgmt. vigilance that aggressively monitors daily geographical MSF harvests and subsequent pertinent stock-specific escapement trends. Several aforementioned stock identification studies, relating stock-specific contributions to KMA's MSF, have successfully guided in-season mgmt. towards achieving escapement goals and thus "creating the potential for sustained maximum production".

Historically, KMA has had several species-specific stock identification studies, some of which are listed below:

#### **• Sockeye:**

- Peterson Disc adult sockeye tagging in KMA's MSF delineating stock-specific contributions (1970's, 1980's);
- Peterson Disc/surveyor ribbon adult sockeye tagging at KMA weir sites for in-system sub-stock identification/habitat use (1980's);
- KMA's Fraser Lake Sockeye donor stock Genetics Study by NMFS investigations into non-indigenous stock straying into adjacent indigenous stocks of Olga Bay Sockeye systems (1980's)
- KMA juvenile sockeye hatchery stock-specific thermo-marked fish (2015);
- KMA adult Sockeye genetics studies for intra- and inter-area MSF stock identifications (2014-2016);

#### **• Pinks:**

- Peterson Disc adult pink tagging in KMA's MSF delineating stock-specific contributions (1960's);
- KMA wild pink salmon adult genetic study by FRI (U of W) for geographically defined KMA stocks (1970's);
- KMA hatchery pink salmon adult Peterson Disc/Floy tagging within hatchery specific mgmt. units (1980's);
- KMA wild pink salmon adult tagging stream-life studies by ADFG for EVOS indexed total escapement determinations (late 1980's-early -1990's)

#### **• Chinook:**

- KMA wild chinook adult radio-tracked tagging at weir sites for in system sub-stock identifications/habitat use ( 1980's);
- Gulf-wide coded-wire juvenile chinook stock-specific tagging (1990's).
- KMA juvenile chinook hatchery stock-specific thermo-marked fish (~2010's+)

#### **• Chums and Coho:**

- Gulf-wide genetic studies for wild adult coho and chum stock identification. (1980's, 1990's);
- KMA juvenile coho hatchery stock-specific thermo-marked fish (~2015's+);

### **KMA'S APPLIED SALMON MANAGEMENT**

#### **Regulatory Issues:**

ADFG's Commercial Fishing Regulations booklet provides BOF approved regulations that have guided local ADFG staff's development of AMP's, e.g. KMA's AMP. Historically, these booklets, along with a simple chart depicting some salmon streams and large mgmt. districts were the exclusive written documents distributed to industry. Fishing opportunities, as seasonally published, often lacked responsive flexibility to efficiently address in-season biologically-based applied "Conservation Burden" issues.



Following statehood, a period of adjustment between federal and state regulators evolved, as did subsequent interactions between new state regulators and existing regulated industry. Some territorial personnel, as needed, transitioned to become ADFG staff, initially helping blend sluggish historical management with aggressive State localized in-season actions for needed regulatory stability.

Curtailling pre-statehood 'trap fishing operations' importantly allowed for ADFG-initiated 'pulse fishing' upon KMA's mixed stock fisheries (MSF). Intensive stock-specific mgmt. resulted whereby escapement goals were more likely to be achieved. Thus, ADFG's mgmt. annually created an improved potential for achieving maximum' production of all KMA's salmon stocks.

KMA's ADFG staff's 'aggressive development of' and BOF 'subsequent approval of' an historically based quasi-algorithmic structured regulatory guidelines, beginning sequentially in the late 1970's, has been successful in achieving statutorily required MSY goals. Past BOF members and CNF representatives familiar with independently evolved statewide regulatory diversity have praised KMA's regulatory structure, identifying its many aspects as an important template for consideration statewide.

#### **Mgmt. Strategies:**

Following statehood as fisheries management transitioned exclusively from Federal to State authority, ADFG developed an evolving strategy of accumulating functional in-season salmon management actions. Especially noteworthy are those structured aspects, initiated in statehood's second decade and enhanced annually through to today, have guided KMA's CNF through that difficult transitional period. Broad CNF support of KMA's prevailing salmon management strategy characterizes today's regulatory stability culminating with it's very functional AMPs..

Today, a KMA CFEC permit holder, who becomes a well informed CNF participant, can expect ADFG's annual salmon management plans to be structured as follow::

#### **# Fishery Phases and respective targeted species:**

- **Phase I:** (June 01 to July 05)
  - Early Sockeye: Wild and Enhanced;
  - Early Chums: Wild and Enhanced;
- **Phase II:** (July 06 to July 25)
  - Early-Mid Pinks: Wild;
  - Early-Mid Sockeye: Wild and Enhanced;
  - Early-Mid Chums: Wild and Enhanced;
  - Early Coho: Wild;
- **Phase III:** (July 26 to Oct 15)
  - Mid-Late Pinks/ Wild and Enhanced;
  - Mid-Late Sockeye: Wild and Enhanced;
  - Mid-Late Chums: Wild
  - Mid-Late Coho: Wild and Enhanced.

#### **# Mixed Stock Fisheries (MSF) 'Blended Mgmt. By Species'**

Essentially, in-season mgmt. actions focus on conducting orderly fisheries on highest quality salmon within expected traditional harvesting patterns, where possible;

Specifically, this provides for pulsed fisheries to yield pulses of escapement-bound salmon. As harvest opportunities occur, pertinent mgmt. units, with their perceived degree of MSF, are regulated accordingly and are identified below:

#### • **Far-Terminal Fisheries**

- Potentially where maximum heterogenous mixed-stock salmon populations occur in 'far' proximity to their indigenous 'terminal' locations;





- **Near-Terminal Fisheries**

- Potentially where minimum heterogeneous mixed-stock salmon populations occur in 'near' proximity to their indigenous 'terminal' locations;

- **Explicit Terminal Fisheries**

- Potentially where mostly homogenous single stock salmon populations occur in essentially their 'terminal' locations.

**# Fishing Period Descriptions and Expectations:**

- Structured regulatory quasi-algorithms identifying which mgmt. units, may be opened per a specified E.O. which also identifies an "openings duration", by further defining when those openings would begin and end, and what gear types would be affected;
- Operational details are provided in-season via field announcement Emergency Orders (E.O.'s);
- Commonly, the frequency of E.O.'s issued annually are: Phase I Fisheries ~ 8+, Phase II Fisheries ~ 10+ and Phase III Fisheries ~ 24+;
- Specific Regulatory Guidelines for these E.O.'s are documented in KMA's CNF Annual Regulatory Booklet.

**# BOF Management Plans:**

- Regulatory guidelines, developed through a rigorous public process, do document the structure needed to address Biological and Allocative considerations for stock(s)-specific issues;
- Specifics for all of KMA's CNF BOF Regulatory mgmt. plans are documented in Its Annual Regulatory Booklet;
- KMA has 6 INTRA-AREA mgmt. plans addressing local stocks for Fisheries Phases I, II and III;
  - These were developed from ~ 1978-1996 and are detailed in the BOF CNF Regulatory Booklet.
- KMA has 2 INTER-AREA mgmt. plans addressing non-local stocks;
  - The Cape Igvak Sockeye Management Plan (CISMP) was initially developed in the late 1960's, and has persisted annually for an ~50 year period for KMA's Phases I and II Fisheries;
    - \*This plan addresses a targeted sockeye harvest (TSH) on Chignik Management Area (CMA)-bound stock-specific sockeye;
    - \*It includes a 'capped harvest rate' and an 'uncapped harvest level' influenced by the 'harvest rate' on actual total CMA sockeye returns;
  - The North Shelikof Sockeye Management Plan (NSSMP) was initially developed in 1989, remaining annually pertinent for an ~38 year period for KMA's Phase II Fisheries;
    - \*This plan addresses an incidental sockeye harvest (ISH) on some portion of some Cook Inlet (CIMA)-bound sockeye stocks;
    - \*It includes a 'capped harvest level' tallied for all sockeye harvested within selected KMA mgmt. units adjacent to the north Shelikof Straits whereby related 'seaward zones' can be closed as harvest level caps are achieved in those pertinent mgmt. units.
    - \*This plan's ISH will be addressed at an Oct. 2017 BOF meeting per ACR submittals..

**# KMA's Special Harvest Areas**

- KMA's Kodiak Regional Aquaculture Association (KRAA), established in the mid-1980's, supports two hatchery facilities and funds an ADFG Bio-rehabilitation project. The Kitoi Bay Hatchery (KBH) functions as a Commercial Production facility and the Pillar Creek Hatchery (PCH) functions as a Central Incubation Facility. The bio-rehab project conducts system-specific applied salmon research needed for all KRAA funded salmon rehabilitation and enhancement projects to successfully occur.
- KBH incubates, rears and releases juvenile early-sockeye and late-coho smolt and early-chum and late-pink fed fry. All are released into Kitoi Bay proper, except for relatively minor coho releases into Ouzinkie village rearing lake. Common property fisheries on returns from these releases occur in mgmt. units adjacent to KBH or near Ouzinkie harbor as identified in KMA's CNF Regulatory Booklet and during in-season fisheries by E.O.'s.



- **PCH** incubates, rears and out-stocks several early-sockeye stocks of fed fry for barren lakes enhancement and for anadromous lake back-stocking rehabilitation projects. Additionally, **PCH** incubates, rears and out-stocks Chinook smolt and Coho fed fry and smolt into important road system and village stocking locations. Common property fisheries on returns from these releases occur in various mgmt. units as identified both in the CNF Regulatory Booklet and during in-season fisheries by E.O.'s.
- All SHA's associated with these hatchery releases are identified in KMA's CNF Regulatory Booklet.

#### **KMA's DISTRIBUTED INFORMATIONAL DATA**

##### **Annual Management Plans (AMP):**

KMA's salmon returns remained sporadically cyclic throughout the 1960's with prioritized harvesting effort targeting early and late sockeye and all pink salmon stock's returns within traditional MSF patterns by a mobile purse seine fleet and fixed set gill-net groups.

These record low salmon returns, resulting from both environmental and over-harvesting issues, had persisted from decades before and to immediately after statehood. Special concerns for escapement deficiencies for major sockeye and most pink salmon systems required ADFG to implement the aforementioned aggressively pro-active mgmt. strategies .

Beginning in the early 1970's, KMA's CNF was introduced to ADFG's newly 'structured mgmt. approach' per existing BOF regulatory guidelines. Most critical was gaining industry support through very active educational explanations as to in-season, "what, why, where, when and how" local ADFG mgmt. actions were to occur. Consequently, development of AMP's that strongly identified expected annual mgmt. actions for KMA's CNF, were broadly distributed and publicly reviewed at pertinent Fish and Game Advisory Committee (KFGAC) meetings, the epitome of 'town hall meetings' for Agency and Public interchanges of fisheries information.

Newly initiated AMP issues were pointedly designed for KMA's transitional CNF to become accustomed to being aggressively regulated by ADFG's 'young idealistic biologists' rather than Territorial's 'geezer wardens' during these transition years. These AMP's functioned to create a smooth transition for development of a credible relationship. Subsequent annual issues were sequentially improved per stakeholder discussion and input coupled with ADFG's compliant considerations stemming from that relationship. Copies of these AMP's have always been made available at KMA's ADFG office from the early 1970's through to today..

Summarily, these AMP's remain locally important, functional templates for guiding:

- ADFG's **pre-season development** of projected salmon returns and expected management actions;
- ADFG/Industries **in-season actions/reactions** of/to the plan's implementation, followed by:
- ADFG/ KFGAC **post-season assessment** of all pertinent aspects of that plan, followed by:
- BOF/ADFG **season-summary reviews/discussions** and adjusted regulatory guidance, as needed

##### **CNF Data Packets:**

These packets were initially included in the original AMP document as briefly identified graphics, but as ADFG became computerized and stakeholder data requests increased and as separate data packets were developed for BOF presentations, there was increasing public demand for these packets. These distributions have been very important for keeping all stakeholders well informed of KMA's CNF mgmt. procedures and especially escapement pattern expectations and correlated mgmt..actions;

##### **Daily Escapement Data:**

Daily escapement observations at ~12+ annually operated weir sites, occur for all species tallied whereby, 10 comparative years data will be documented and distributed daily, all on one sheet of paper for the entire season.. This public distribution occurs via ADFG web site, hardcopy handouts, newspaper publishings, misc. conversations, etc. It provides important educational stock status Information for cultivating stakeholder in-season assessment and support of KMA's ADFG mgmt. activities.





### **Fisherman's Chart/Guide:**

Also, readily available to all stakeholders, as previously mentioned, is an enhanced locally crafted ADFG 'fisherman's chart' depicting the entire KMA, its Area boundaries, its District and Sections 'mgmt. unit' boundaries, its number-identified salmon streams, its stream terminus and estuarine/extended bay closed water 'salmon build-up' sanctuaries, its 'sea-ward and shore-ward zone' locations per a BOF Regulatory Plan, along with a brief narrative describing closed waters interpretations and an associated chart legend. This chart remains an important visual aid for all stakeholders. It is used to ensure that current E.O. announced harvest opportunities are correctly relayed and understood by remotely positioned active CFEC Permit holders. The E.O.s, numerous and frequent, represent somewhat complicated in-season field announcements and these charts provide a depicted geographical aid for each E.O. issued by KMA's ADFG. Specific legal descriptions for all aspects of this chart are included in KMA's Commercial Salmon Fisheries Regulation Booklets.

### **Escapement Databases:**

Annually, ADFG mgmt. budgets prioritize in-season operational efforts to achieve escapement goals. Post-statehood management efforts have been motivated by the local staff's posted 'biblical-like' directive of **"It's the escapement stupid!"**. This helps insure that ADFG efforts remain aggressively focused on progressively accumulative escapement data collection, in season, for the vast array of KMA's wild salmon systems.

Interestingly, of KMA's ~400+ documented salmon systems, species-specific distribution by systems are: Kings 3, Reds ~23+, Coho ~65+, Pinks ~400+, Chums ~100+. Noteworthy, ADFG KMA's data summary reports to EVOS litigation evaluations (Barrett, et al) present defensible statistics identifying KMA's MSY salmon **"production potential"**. KMA's non-local deviant harvest components, i.e. CISM TSH and NSSMP ISH, seemingly occur in quantities that do not yield KMA's **'return per spawner'** levels in excess of normal expectations; food for thought!

ADFG's mgmt. team, which includes the lead mgmt. biologist and assistants, aggressively collects and compiles in-season post-fishery escapement estimates by species by system. ADFG's historical observations provide documented chronological sequences directing in-season data collection. This further facilitates mgmt. actions identified in an AMP promoting structured pulse fisheries, as defined for MSF's 'far-terminal', 'near-terminal' and 'explicitly terminal fisheries'. These actions should yield 'pulsed escapements' into 'closed water sanctuaries' which, as eventual escapement, create the 'potential for MSY' from KMA's salmon production systems.

**Reiterating**, ADFG's aggressive mgmt. approach requires exceedingly current escapement knowledge! KMA's escapement data base is historically extensive both as indexed total escapement data from fish-weirs and as indexed escapement data from aerial surveys and via some foot surveys. As mentioned, significant portions of ADFG's KMA operational budget are allocated to enhancing its salmon escapement database. Fish-weir activity is costly, but extremely cost effective considering the value of sustainably managing local salmon stocks. Likewise, aerial surveys are increasingly costly but are so very critical for successful in-season aggressive mgmt. actions. Proper development of ADFG's defensible escapement database is required for achieving desired MSY goals.

As needed, a conveyed ADFG to stakeholder 'homily' regarding regulatory achievement of escapement goals has seriously, but in good humor, been expressed that, "You hate to love us in-season when fisheries are restricted, and yet you love to hate us post-season if escapements are weak". Accordingly, KMA industry continues to appreciate ADFG's efforts towards achieving MSY salmon production.

### **NOTEWORTHY REGULATORY HISTORY**

#### **General Discussion:**

From early post-statehood years to the late 1980's, a ~30 year period, annually occurring BOF post-season regulatory meetings occurred. Since then, this schedule changed to a three-year cycle of regulatory review, current through today, an ~27 year period. ADFG 'Reports To The Board' summarize annual mgmt. activities, regulatory performance, stock status trends and localized industry's economic status. Regulatory issues, as identified by 'proposed regulatory change submittals', are commonly addressed by both public and agency testimony for BOF considerations. Variations from the current three year schedule requires a strictly structured Agenda Change





Request (ACR) submittal allowing the BOF to address 'special situation' considerations deemed regulatory necessary for addressing perceived or factual biological and allocative harvest deviations concerns.

Post-statehood regulatory discussions, transitionally placid, evolved to annually tumultuous events triggered by statehood's localized freedom to aggressively impact pertinent regulatory applications. Specifically identified were ADFG's desires to exercise stricter local mgmt. control and industries attempts to either establish perceptions of gear-type regulatory parity or else to contentiously propose adversarial positions regarding ADFG mgmt. Local KFGAC forums annually yielded 'old style' town hall meetings, with sometimes drama-filled discussions, usually fairly civil, highlighting all such post-season gatherings.

These types of gut-wrenching meetings, in hind-site, can now be characterized as necessary 'bonding events' between and amongst 'Regulators and Regulated' stakeholders. The tumultuous ~20 year decades of the 1970's and 80's, while locally difficult, did yield the relative stable regulatory decades of the 1990's continuing through to today. ADFG's mgmt. actions, while seemingly imperfect, have been strongly supported by most of KMA's well informed stakeholders who continue to responsibly address contentious intra-allocation issues, but do remain strongly united on inter-area allocation issues which, if eventually yield radical regulatory adjustments, could potentially severely impact KMA's well established and managed salmon production.

Pointedly, KMA's historical ISH of non-local stocks (CMA and CIMA-bound sockeye) have been an apparent significant component of KMA's total annual salmon harvest. This factual issue was 'baked into' CFEC considerations for correlating final KMA gear levels with its historical salmon fishery economics. Notwithstanding the need for biological considerations and allocative expectations for ISH of non-KMA stocks, proposed adjustments to existing 'Inter-Area Regulatory Plans' must recognize this ISH's historical contribution to KMA's salmon production. Any proposed Inter-Area regulatory adjustments must be mathematically defensible in a clear and concise manner. Technically summarized scientific data analysis MUST be understandably conveyed to all stakeholders, otherwise it will be prioritized as suspect and even meaningless!

Pointedly, recent CIMA ACR-submittals, to be discussed at the Oct. 2017 BOF meeting, have subsequently suggested alarming KMA regulatory adjustments. Questionably contentious inter-area ISH issues, vulnerable to a cursorily biased genetics study analysis, could egregiously support misguided ACR submittals structured to result in a blatant, unnecessarily destructive impact on KMA's CNF. Severe economic disruption to KMA's salmon industry will definitely and explicitly result if these ACR's intents are adopted as submitted.

**KMA Intra-Area and Inter-Area Mgmt. Plans:**

Factually, as previously mentioned, KMA CNF current regulations address two inter-area harvests of non-local sockeye. These are identified as either/or::

- A targeted sockeye harvest (**TSH**) on Chignik Mgmt. Area-bound (CMA) sockeye, managed specifically within KMA's Phase I and II 'far-terminal' Cape Igvak section fisheries (CISMP) but have been historically managed for local stock's 'near-terminal and terminal' Phase III Fisheries;
- An incidental sockeye harvest (**ISH**) on Cook Inlet Mgmt. Area-bound (CIMA) sockeye, managed specifically within KMA's Phase II "far, near and terminal fisheries" identified NSSMP-related mgmt. units, but which have been historically managed for local stocks in Phase II and III fisheries.
- The CISMP was initially developed in the late 1960's and has been further modified into today's **TSH** version. It has been in effect continuously for ~48 years. CMA's sockeye stocks have been cursorily identified to comprise of ~90% of CISMP's indexed **TSH** sockeye harvest. The CISMP provides both biological and allocative protection of CMA's bi-modal sockeye returns via contained time and area KMA openings and through closely monitored sockeye harvest rates; coordinated with CISMP's time-specific actions during vulnerable CMA sockeye stock's bimodal overlap closures.





- The NSSMP was initially drafted in the late 1980's in response to KMA's *ISH* on a specific phenotypically identified suspected non-local sockeye stock (CIMA-bound Kenai River sockeye) which had been experiencing record sockeye returns throughout the late 1980's. The NSSMP identifies time, area and harvest level restrictions for specific mgmt. units, or portions thereof, to contain that *ISH*; stock-specific harvest levels were cursorily extrapolated without harvest rates being identified. This BOF inter-area plan has remained in effect annually since 1989, an ~28 year period, suggesting that this *ISH* has not convincingly impacted biological requirements or allocative expectations for CIMA-bound sockeye stocks. Pointedly, a further implication is that ADFG CIMA AMP's should provide the primary responsible, defensible in-season intra-area mgmt. actions needed to guide intra-area issues. Consequently, CIMA AMP's must thoroughly be reviewed and screened as needed to maximum rational mgmt. levels before 'chicken little' inter-area ACRs are allowed to be submitted and considered.

Noteworthy, is that both of KMA's inter-area plans have been rigidly subjected to cyclic BOF regulatory review and to annual KMA AMP's scrutiny. Both inter-area plans have essentially maintained their stated regulatory compliance per each plan's respective specific criteria. This fact remains an important consideration for future regulatory review by all inter-area stakeholders and especially ADFG and BOF scrutiny.

KMA's adherence to its AMP-evolved intra-area quest for regulatory predictability, hence its economically anticipated long sought fishery stability, can be considered as exemplary per ADFG's statutory requirements.

#### **Misc. Historical Agency 'Information':**

Early KMA post-statehood 'factoids' emanating from Territorial agencies and industry 'intelligencia' bemoaned July's diminished sockeye harvests in KMA's 'west side sockeye fishery'. Initially it was conveyed as the loss of Karluk system's over-harvested "middle-run" sockeye production, which likewise accounted for Karluk's diminished sockeye escapement throughout the late-June to early-August period.

KMA's fish-weir escapement database for its sockeye systems, collected annually over an ~35 year pre-statehood history, identified all of KMA's major systems as having bi-modal production, i.e. two defined sub-populations. Fish-weir escapement time-of-entry data identified early- and late-run segments which peaked at ~ mid-June and ~late-August, respectively. KMA's major sockeye stocks, as monitored by fish-weirs at that time, were all noticeable deficient in July sockeye production, even when considering over-lapped 'production tails' between strong returns of early and late run's sub-stocks.

Further investigations identified minor sockeye systems on KMA's Eastside District where sockeye production essentially peaked in mid-July. Subsequent donor stock selectivity from such robust populations has yielded extensive barren lake enhancement sockeye production potential for S01K and S4K gear within Central Section Phase II Fisheries. Namely, KMA's eastside Saltery Lake's sockeye donor stock has provided significant production from KMA's westside's formerly barren Spiridon Lake, annually since the late 1990's, an ~20 year period.

Historically, agency mantra persisted that "KMA's westside lost indigenous July sockeye production" had been over-harvested; probably by pre-statehood fish-traps. Interestingly, post-statehood trap elimination did not yield increased July sockeye escapements into westside systems, even during years of extensive July fishery closures for pink salmon stock rebuilding efforts.

-Essentially, ADFG's investigations in the 1970's yielded a more realistic conjecture regarding KMA's July sockeye escapement deficiencies. Rather than having had resulted from "CNF over-fishing", it appeared to be an obvious mis-guided phantom 'factoid' conveyed via territorial to early statehood agency speculations.

- Specifically, KMA's major sockeye system, Karluk, historically being a closely monitored fish-weir station since 1924, was without a documented July "middle-run" during that ~97 year period when this stock would have been overfished.

- Historically, KMA sockeye harvested in July had averaged ~ 6.0+ lbs while those harvested in June and





August/September averaged ~5.0+ lbs., per ADFG 1980's investigations of industry's historical case pack data.

Post-statehood ADFG mgmt. transitioned from Territorial's cumbersome relatively fixed regulatory structure to Statehood's intense rapidly responding in-season mgmt. actions.. Subsequently, it focused upon CNF quality harvests of projected local stock surpluses, as previous discussed, and it strongly promoted pulse fishery/pulsed escapements as described in AMP's.

-Noticeably, near record CIMA sockeye returns of the late 1980's resulted in a surprising occurrence of ISH of CIMA-bound sockeye in KMA's July directed fisheries upon local stocks. Post-season, this issue was described per well reviewed AMP debriefings at KFGAC meetings. Phenotypically, large-bodied sockeye embellished KMA's July CNF harvest. Especially noteworthy were ISH locations where KMA's AMP aggressively directed CNF effort on local pink salmon stocks occurred in certain northern Shelikof Straits mgmt. units;

-Submitted CIMA proposed regulatory adjustments resulted in BOF adoption of KMA's NSSMP, an inter-area regulatory action intended to contain KMA's specific ISH on suspected CIMA-bound sockeye;

-Subsequent mgmt. actions for the NSSMP yielded 'sockeye harvest-triggered caps' that somewhat correlated with above average Kenai system's sockeye production;

-Of recognized importance, per these late 1980's ISH's, are the harvesting conditions required for incurring favorable probabilities of a KMA ISH on CIMA-bound sockeye, such as:

- \* Pre-announced open fishing periods targeting local stocks where ISH could occur;
- \* Persistent fishable weather conditions where ISH could also occur;
- \* Production of CIMA-bound sockeye at above average levels thus increasing potential ISH in KMA;
- \* Predictability of CIMA-bound sockeye migratory patterns for successful ISH targeting efficiency;
- \* Favorable tidal series for CIMA waters to increasingly ebb through KMA causing increases in deviant CIMA sockeye homing migrations and subsequent increases in ISH by KMA CNF.

-Aforementioned ISH 'opportunities' requires that serious consideration be given to the annual variability of CIMA-bound salmon migration patterns:

- \* CIMA-bound salmon's in-shore migrations generally track them exiting from the Alaska Gyre, primarily traveling northerly through Kennedy and Stevenson Entrances and eventually homing into Cook Inlet waters, as was conjectured in KSWG's 1989 contracted document from Natural Resource Consultants of Washington state.
- \* Unknown portions of CIMA-bound salmon can migrate through KMA waters homing on portions of CIMA waters ebbing through the KMA for extended periods, per anecdotal testimony conveyed by KMA longline and pot fishermen. This conjecture thereby yields observed potential deviant migration patterns for CIMA-bound salmon.
- \* Consequently, any KMA ISH on CIMA-bound salmon, represents an annually variable **unknown impact (rates) of unknown proportions (levels) on unpredictably deviant portions of unknown stock-specific CIMA-bound stocks and their respective unknown total biomasses!!** Mathematical extrapolations notwithstanding, this stated 'cause and effect conjecture' should require comprehensive explanations to all stakeholders if Inter-Area Mgmt. Plans are intended to be adjusted by BOF actions.

-Determining KMA's ISH impact upon CIMA-bound sockeye stocks remains essentially unknown. Poorly conceived future regulatory adjustments to KMA's existing NSSMP, without more precise stock-specific ISH rates and levels, should be concerning and strongly avoided as need be.





Specifically, CIMA biological requirements and allocative expectations must be clearly defined, whereby KMA's ISH **rates and levels** are 'clearly identified and reasonably defensible' and whereby extreme regulatory adjustments, as deemed needed, will not destructively impact KMA's Borough supported salmon fisheries.

*\*Without statistically defensible databases to expeditiously guide in-season mgmt. actions, reactionary economically devastating regulatory actions remains KMA's primary concern with anticipated BOF consideration of related recent ACR submittals;*

\*As previously stated, KMA clearly understands biological and allocative concerns by CIMA Stakeholders, especially as presented by selected print media. Generationally, their exposure to KMA's historical, but not yet fully and clearly defined, ISH of CIMA-bound sockeye persists.

\*However, those concerns could be mitigated by considering KMA's NSSMP-directed mgmt. responses, i.e. harvest caps, during its effective ~28 year existence. CIMA's recently elevated concerns about KMA's ISH have become newsworthy following ADFG's Genetic Studies analysis

\* Summarization of KMA's MSF stock composition, and its ISH on CIMA-bound sockeye stocks along with stock-specific harvest **rates and levels**, needs to be candidly and persuasively discussed in a manner explicitly comprehended by all. Currently, there exists, a strong KMA perception of a questionable 'shade-tree aspect' to ADFG's analysis of their mal-designed Genetic Study. KMA's AMP describes Fishery Specific Phases I, II and III, which is a longstanding mgmt. structure that should have guided this surprisingly uninformed sampling design for ADFG's Genetic Study.

**Misc. Historical BOF Testimony Regarding KMA Salmon Mgmt.:**

Noteworthy to KMA's mgmt. efforts remains its stakeholder's strong support for ADFG's escapement mandates and it's data collection process. This type of 'understanding stakeholder support ' continues to grow as a knowledgeable citizenry actively studies ADFG's KMA CNF mgmt. structure.

Furthermore, KMA ADFG mgmt. staff testimony to KFGAC and BOF regarding KMA's salmon stock status and it's related industries viability, as allowed to be presented, has been the regulatory-glue that has healed any festering adversarial relationships between agency regulators and industry's regulated entities.

Observed recent trends for conveyance of KMA's mgmt. actions, however, does suggest a retro-grade trend of ADFG HQ 'interference' of local AMP applications. Specifically, HQ guided regulatory 'staff positions' would be noteworthy when suggesting **'politically-induced' directives rather than expected 'policy-guideline adherences.** KMA's in-season mgmt. action specifics need to be honestly and factually conveyed at BOF meetings where defensible decision-making procedures will yield valid 'BOF findings'. KMA's ADFG local staff availability and their comments have always been considered crucial and 'second to none' in that regard. For those uninformed folks about the importance of ADFG's 'Area Mgmt. staff', it must be understood that, these specific 'Area Mgmt. positions', knowingly encompass most precisely the status of **'all things related to the salmon fisheries they manage.** These staff will proficiently possess that knowledge to address industry stakeholder's severe scrutiny of their job performance. These staff positions directly relate to their Area's economic stability as required by initiating proper local salmon stock management. Accordingly, their in-season mgmt. actions are structured to 'create the potential' for MSY of that area's sustainable salmon production and should be evaluated as such.

Quizzically, this attitude contrasts strangely with adjacent CIMA stakeholder's BOF conveyed testimony. Their cherished 'naturalist' approach, as opposed to ADFG's 'scientific' data collection process for determining 'proper and adequate' escapement levels was provided by interesting testimony. Specifically, their enlightened process of determining a **"stink on the bank"** escapement factor, when visiting their favorite streams, reveals a localized 'escapement status factor', i.e. an enlightened 'pheromone-induced' escapement data collection process; further handicapping their credibility-challenged testimony!





Also, lingering recollections persist of CIMA seiner's angry BOF testimony regarding 'KMA's "Viking Management" as related to the ISH issue. Their comparisons of CIMA's extremely restrictive AMP to KMA's aggressive AMP further challenged Inter-Area AMP issues, implying KMA mis-management. This mis-understood historical perspective reflected poorly, then and now, upon ADFG HQ being dutifully required to properly convey to CIMA stakeholders the known specifics about KMA ISH issues. Likewise, an evolving KMA perception developed that CIMA's parochial biases were prevalently ascending within ADFG HQ. Subsequent testimony by CIMA stakeholders was revealing in that regard. CIMA AMP Intra-Area actions were seemingly secondary issues at that time. KMA ADFG responses to CIMA's ISH concerns remained less focused than that of KMA's pertinent remedial local stock mgmt. efforts to address it's historical Intra-Area harvest quality and gear-allocation issues.

Critically disruptive regulatory issues for KMA's CNF were prevalent through-out the early post-statehood decades. However, the aggressive AMP strategies implemented by the late 1970's did successfully address and alleviate both pertinent harvest quality and gear allocation issues. Industry's expressed criticisms of ADFG KMA's post-statehood salmon mgmt. approach was resolved by implementing these aggressive AMPs!

Explicitly, the KMA's pink salmon stock rebuilding and harvesting strategies implemented in the late 1970's were critically important. The General Pink Salmon openings, during Phase II fisheries of late July, were adjusted to occur earlier, specifically on July 6<sup>th</sup>. This remedial mgmt. action has been reoccurring annually for the past ~38+ years. Noticeably, this action eliminated the harvest of 'built-up volumes' of 'watermarked dark & soft humpy shingles' which had been yielding case pack quality downgrades identified as some of the worst statewide. This also stabilized a persistent gear allocation issue in both the Central and Moser/aOlga Bay Sections.

Interestingly, certain 'deviant journalistic entrepreneurs', ill-informed via parochially-biased CIMA stakeholders, unabashedly used their news media forum to 'pimp' their 'journalistically cherry-picked antagonistic opinions'. Their published narratives have been consistently presented as 'self-embellished factual statements' deliberately bent to foment disharmony amongst well intentioned stakeholders struggling to understand ADFG mgmt. truths. Keenly written 'Letters to the Editor' should expose the mental deficiencies of these 'wanton wordsmith's' lusts for inducing regulatory havoc!

Generationally, as exhibited by recent hyper-discouraging public testimony, a 'misinformed, generationally self-limiting understanding and application of both CIMA and KMA's AMP's has presented itself as a flawed character issue'. Serious-minded rational stakeholders have attempted to embrace an honest understanding of both Inter-Area and Intra-Area mgmt. procedures. ADFG regulatory structured AMP's, guided by BOF regulations, are the baseline procedures that must be understood. Increased public interactions coupled with strong discussions about AMP development should be enhanced, as needed. Inter-area issues, likewise, need to be purged of parochially biased anecdotal information. ADFG's role, factually based, will be critical to developing future regulatory harmony for all.

To that end, in the late 1980s, KMA ADFG mgmt. staff provided a public presentation to CIMA stakeholders in Soldotna, per their request, regarding KMA's AMP application and related ISH conjecture associated with KMA's historical salmon fishery. The attending citizenry were graciously inquisitive, appreciative of KMA's staff presence and expressed a keen interest in understanding KMA's salmon management program. KMA staff considered the Soldotna experience a very positive 'regulator agency/ regulated stakeholder' event, certainly worthy of additionally similar interactions. As discussed, the recognition of a 'correlating database' may have regulatory tracking potential, but whereas the quest for a 'causation database' seemingly remains elusive. Again, food for thought!!



Submitted By  
Lee Walters  
Submitted On  
10/3/2017 8:42:58 PM  
Affiliation

Phone  
5036166294  
Email  
[carpediem189@yahoo.com](mailto:carpediem189@yahoo.com)  
Address  
342 ne Jackson st  
Hillsboro, Oregon 97124

Dear Board of Fish,

Hello, my name is Lee Walters, operator/owner of Cape Uganik setnet site. I've been fishing on Kodiak for 25 years and have owned my site for the past 14 years. I realize that this letter is coming in just under the wire, but I've been agonizing over things like citing sources, format, and proper language. I'm setting all of that aside just to let you know what I think about the UCIDA agenda change. I am all about fairness and equity. We, as fisherman, hopefully share a common goal of doing what is right by the environment so that the return of fish keep coming, and by each other, so that we can all share a piece of the harvest pie. I've sat by as fishermen have squabbled about who deserves what share of the harvest. I have never gotten rich in this industry. I have completely shifted my priorities the rest of the year so that I can offer my family the opportunity to grow in the Alaska bush. And they have thrived in this environment.

We are on a cape on the Shelikof Straight, arguably one of the roughest sites on the Island. Janet Axell, the woman we bought the site from pioneered the site 25 years before we bought it. She traditionally fished it until mid-July as the NW storms become more prevalent. We have extended this season until mid-August and braved the NW storms. So, this is the extent of our fishing season, from June to mid August. Now it seems like this short season is being threatened by a new proposal? How much is history and tradition taken into account in these decisions? We bought into a site 14 years ago where we accepted the management plan of our local fishery. If our streams weren't getting the escapement they needed, we gladly pulled our nets for the sake of longevity. We did not sign up for claims of fish ownership from Cook Inlet, Japan, California, or any other entity looking to make their piece of the pie a little bigger.

You have a big job and a big decision to make. Some people may make a little more or a little less money if in favor of Cook Inlet. In our case, it's an absolute nail in the coffin for our business and way of life. I hope we are allowed to continue our historical way of life.

Thank you for your consideration,

Lee, Christy, Zack Walters

Cape Uganik setnet site





Leigh Gorman-Thomet  
PO Box 3258  
Kodiak, Ak. 99615  
9-28-17

Chairman John Jensen  
Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, Ak 99811-5526

My name is Leigh Gorman-Thomet. I've been a commercial fisher in various fisheries for 34 years – predominantly salmon. My family and I have operated a setnet site on Kodiak Island for 28 years. I am writing to oppose the agenda change request no. 11.

In 1992 I remember writing my first letter to the B.O.F. opposing this very same issue. Back then Cook Inlet fishermen were concerned about Kodiak's sockeye interception and the issue is no different now. UCIDA's ACR does not meet the criteria because there's no new information, only new technology providing nuance to what was already known. This sets a dreadful precedent to overwhelmingly disrupt one area's fishery to slightly advantage another area's harvest.

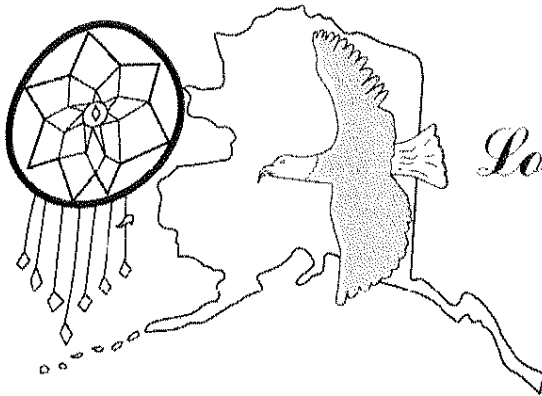
Since the State of Alaska took over the salmon fishery in 1959 salmon have been considered 'common property' and DO NOT belong to the management area where they were born. This is reflected in the B.O.F mixed stock policy. If Kodiak is regulated for the presence of Cook Inlet sockeye, will the BOF also regulate Chignik and Area M for the take of Kodiak sockeye and pink salmon?



The BOF greatly relies on public involvement in their process and because of this, it is considered by many to be the gold standard of fisheries management in the country. Addressing ACR No. 11 out of the normal board cycle disenfranchises the Kodiak community and diminishes the public's confidence in the way the BOF operates.

It is my hope that the BOF members take a considerable amount of time to understand the complexity and long history of the Kodiak region before changing the Kodiak management plan.

Thank you for your valuable time.  
Leigh Gorman-Thomet



## *Louden Tribal Council*

P.O. Box 244  
Galena, Alaska 99741  
Phone (907) 656-1711  
Fax (907) 656-2441

Alaska Department of Fish and Game  
Board of Fisheries  
PO Box 115526  
Juneau, AK 99811

October 3, 2017

RE: Agenda Change Request

Good afternoon,

Louden Tribal Council, Nulato Tribal Council and Koyukuk Tribal Council all sponsored ACR to the Board of Fisheries. This is an urgent issue for our communities. As you all know the drifting or seining for salmon is prohibited between Galena and Ruby. The reasons of its urgency are many. This includes safety, conservation of salmon, and not competing for the same resource as two other villages at the same time and place.

One is the safety of our residents. Right now in order to drift/sein our residents must go 30 miles downriver to be legal. When fishing period is open many residents make this drive whether in rough or calm waters. In order to make the drive worthwhile many residents will fish until early in the morning. At this spot at least three people from Galena who had to cut their rope before their boats took on water.

If we are allowed to fish in between Galena and Ruby we are more likely to conserve more fish. Many residents would not need to fish for so long. Our residents would only take what we "need" and bring that home to process. We have always been conservative in our management of our natural resources. We all want our children and grandchildren and generations to come the opportunity to provide for their own families by fishing.

In this opening period there could be Koyukuk, Nulato and Galena residents in this one area. Each boat takes their turn to put their nets in all in one spot right across the river from Koyukuk or across from Last Chance.

Right now in Galena there are four families who have a designated fish net spot. One family who uses fish wheel and the rest of the community uses drift/sein. The argument that drift/sein is not traditional use is true. We must adapt and change with our environment, economy and weather. The Yukon River continues to get warmer and this have eliminated many of the set net spots. Climate change has affected our community tremendously from the 2013 flood, changing of the Yukon River eliminating the fish net spots, and the warming of the waters and environment.



Again we are asking for your time to allow this Agenda Change Request to be heard this winter.

We do not want to make criminals out of our people; we just want the ability to put food on the table. We are not asking for anything more for our communities that other communities have had for years. This being the ability to drift/sein in this section of waters.

If you have any questions please contact me at the number above.

Thank you,

A handwritten signature in cursive script that reads "Susie J. Sam".

Susie J. Sam  
Tribal Administrator



Lucy O'Brien  
PO Box 8804  
Kodiak, AK 99615

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

October 2, 2017

Re: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

To Whom It May Concern:

My name is Lucy O'Brien and I am married to Stephen O'Brien, a local Kodiak commercial fisherman deeply invested in the Kodiak salmon fishery. I oppose the UCIDA agenda change request because it does not meet the Board's agenda change request criteria because the Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

My husband's family has been a part of the Kodiak salmon fisheries since 1977. Their set net site, located in Larsen Bay, Alaska, is on the west side of Kodiak Island. I know the set net site has been Stephen's summer home for the last 31 years, and has now become my summer home for the last 7 years. Since marrying Stephen, the Kodiak salmon fishery has become an integral part of my life. I spend my summers in Larsen Bay and work hard to be an avid supporter in their Kodiak salmon family business. My husband, brother in laws David and Erik, sister in law, nieces, and parent in laws are all significantly invested in the Kodiak salmon fishery. We rely heavily on strong salmon runs to provide for our families and crew members, especially during the June 23 to July 31 portion of the Kodiak salmon fishery.

I am deeply opposed to the agenda change request for a number of reasons. First, I do not think the agenda change request considers the drastic fishing impacts it will have on the fishing of local stocks, such as forgone harvest of local sockeye that will result in over-escapement or the fact that sockeye fishery closures will move the fleet to other areas. Second, I believe it to be a terrible model to completely disrupt one area's fishery to slightly advantage another area's harvest. Salmon are considered "common property" and do not "belong to" the management area where they were born. Lastly, if Kodiak is regulated for the presence of Cook Inlet sockeye,





will the board also move to regulate Chignik and Area M for the take of Kodiak sockeye and pinks?

The Kodiak fishery is a historical fishery that is not fishing in new areas. The Kodiak Management Plan is focused on the availability and harvest of local stocks and does not target Cook Inlet fish. I believe the management plans are working based on the continued success of Kodiak fishermen and the salmon runs seen around the island.

In conclusion, I feel it important to restate that the UCIDA agenda change request does not meet the Board of Fisheries Agenda Change Request criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Sincerely,

Lucy O'Brien  
[lmurdy@gmail.com](mailto:lmurdy@gmail.com)  
828-275-2589



Mark Beardsley  
P.O. Box 8776  
Kodiak, AK 99615

September 28, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

**RE: UCIDA Agenda Change Request and Genetic Stock Composition of  
Sockeye Salmon in the Kodiak Management Area**

I oppose the UCIDA agenda change request for numerous reasons. Foremost, it does not meet the criteria set out in the Board Policy for Changing Board Agenda. There must be a conservation purpose, there is an error in regulation that needs to be corrected, there is a need to correct an effect on a fishery that was unforeseen when a regulation was adopted and finally there must be compelling information for an allocative change. I don't believe any of the above criteria have been met. If the change request were adopted, this would not only create economic difficulties in the Kodiak community, it could possibly set a precedent in mixed stock salmon management statewide and create extreme difficulties in the management of local Kodiak salmon stocks. Most, if not all, salmon fisheries in the State of Alaska are mixed stock fisheries where origin bound salmon are harvested in other areas as they find their home streams. Maybe Cook Inlet and Chignik salmon fisherman are catching Kodiak bound sockeye salmon or other Kodiak bound salmon?

I have been a Kodiak salmon fisherman since the early 1980's. The Kodiak salmon fishery, as all salmon fisheries in the State, have cycles of ups and downs. Carving out potentially 5 weeks of the Kodiak salmon season, as proposed by UCIDA, would trigger an amplified downward swing in these natural cycles for our area. If UCIDA's ACR and their proposed changes were to take effect, the implications to my operation, as well as the entire salmon fishing fleet on Kodiak, processors, their employees, support businesses and the communities all around the island would suffer. UCIDA's proposal would have dire implications for all Kodiak salmon fisheries and related businesses.

The ACR simply does not make sense as it relates to the POLICY FOR CHANGING BOARD OF FISHERIES AGENDA:

- 1) Kodiak salmon fisheries have occurred historically for decades. There is no new fishery on Kodiak targeting specific Cook Inlet salmon. Additionally, there is no current conservation emergencies in Cook Inlet for sockeye salmon. Kodiak should not be held responsible for the Peninsula's habitat and conservation concerns based on limited data from



this new Mixed Stock Analysis (MSA) conducted over a brief period. Kodiak fishermen are already carrying a large conservation burden, since the mid 1990's for Cook inlet bound salmon. We should not be asked to carry additional burdens of conservation responsibility without any new compelling information.

- 2) I don't believe there is an error in regulation that would justify an agenda change. Making a hasty decision, without further discussion and research, could lead to an actual error in regulation.
- 3) The Kodiak salmon fleet does harvest nonlocal sockeye and has historically for many years, this is not "new" information. The effect of the Kodiak salmon fishery on Cook Inlet sockeye salmon stocks has not been proven to be negative either in the past or with this new MSA data. However, would the Cook inlet sockeye stocks be affected if there were no Kodiak salmon fishery?
- 4) The information in the most recent MSA is not compelling enough to consider this allocative ACR. The latest information is very similar to that which was available in the mid 1990's. Nothing new or compelling has been determined on this most recent, limited, 3-year study.

The ACR does not make sense, it doesn't consider the fact there could be drastic impacts on local Kodiak stocks. There could be foregone harvest of local Kodiak sockeye leading to over-escapement which has been proven to result in system crashes. Additionally, local (Kodiak) pink and chum harvests will be more concentrated on the tail end of the season, within inner bays, resulting in quality concerns. These are just a few of the resulting concerns that need to be considered with this ACR. The KMA management plans have been developed over decades and are functioning just fine. Drastic modifications to the plan may have numerous negative impacts to Kodiak's local salmon stocks and impair managers abilities to manage for sustainability. For these reasons, I oppose UCIDA's agenda change request.

Thank you for your work and consideration on this.

Sincerely,

Mark Beardsley  
Uyak Bay Setnetter



## October 1, 2017 Comments Regarding the Agenda Change Request ACR01 to Leave the Existing Regulations as Published:

I submit these comments as the sponsor of the original proposal #143 to restrict subsistence fishing through the ice for three miles upstream from the mouth of Goldstream on the Chatanika River, AND as a fisherman with sixty years of experience fishing in Minto Flats.

The approval of this original proposal wasn't an error in regulation. It was an effort to correct an overfished and high graded area that once had an outstanding high population of large pike, including many fish 30" to 45", the pre-spawning females. *The Pike Slough*, by Nick Jans, might be of interest (attached).

Fish and Game studies with radio tagged pike in Minto Lakes have shown that 50% of the migrating pike stay in the Chatanika River within two and three miles upstream from the confluence with Goldstream Creek, and the other 50% continue upstream from mile 3 to mile 10 (copy of study enclosed). **Hardly any fish remain in the first mile as shown on the study.**

So, the subsistence fish are there and a reasonable opportunity exists for their catch. They are just spread out over seven miles instead of being as consolidated as the fishermen are used to. These fishermen will have to put forth an effort to locate the hot spots and new holes.

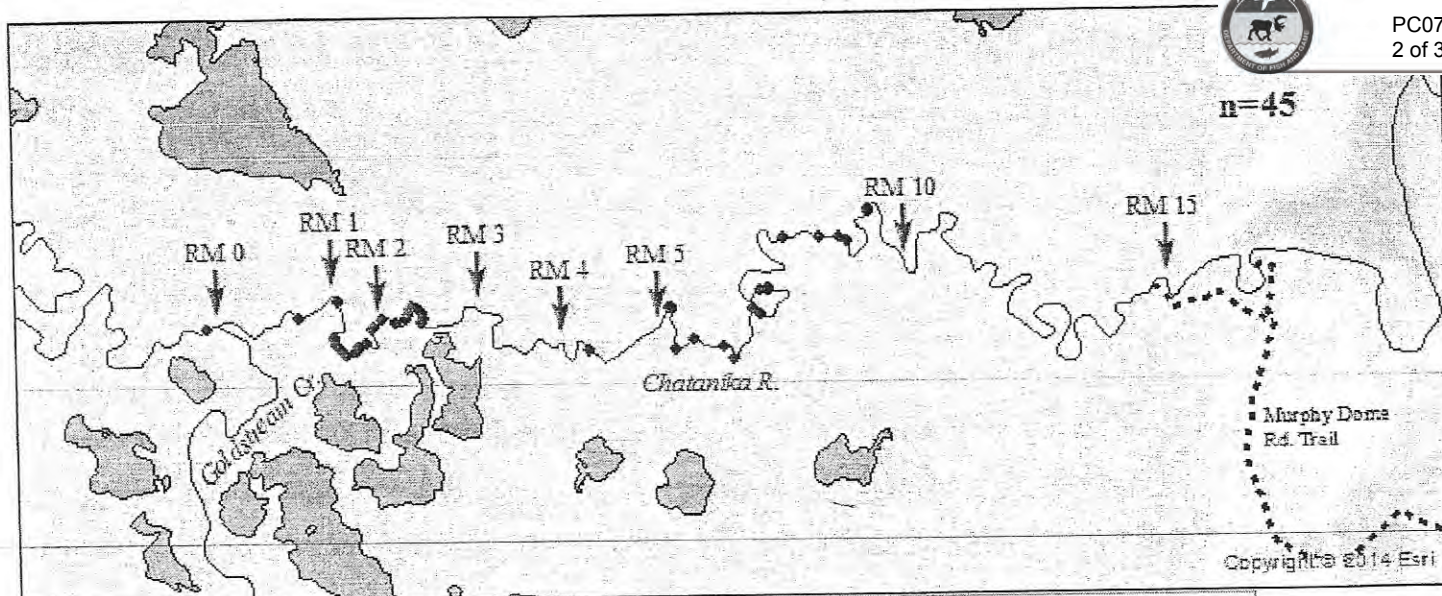
Perhaps the small catch this past winter is an indication of a sharply reduced available population caused by overfishing, or a die-off in the lakes, or thick ice restricting migration, or last summer's high water level negating the need for migration, or a combination of these. The three mile limit has only been in existence for one season – hardly enough time to make any conclusions or cause an increase in available fish.

This ACR was crafted and presented at the April 5, 2017 Fairbanks Fish & Game Advisory Committee meeting by an ice fishing member of the Board. Only two members of the public attended and spoke in support of this ACR.

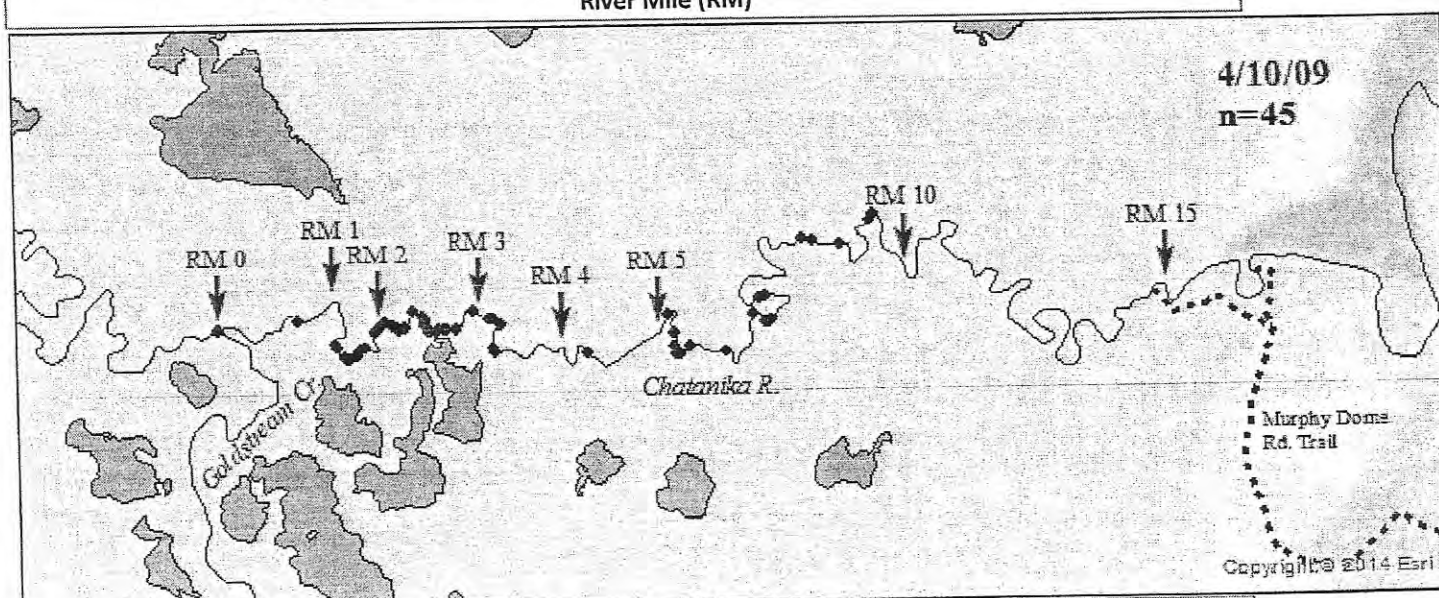
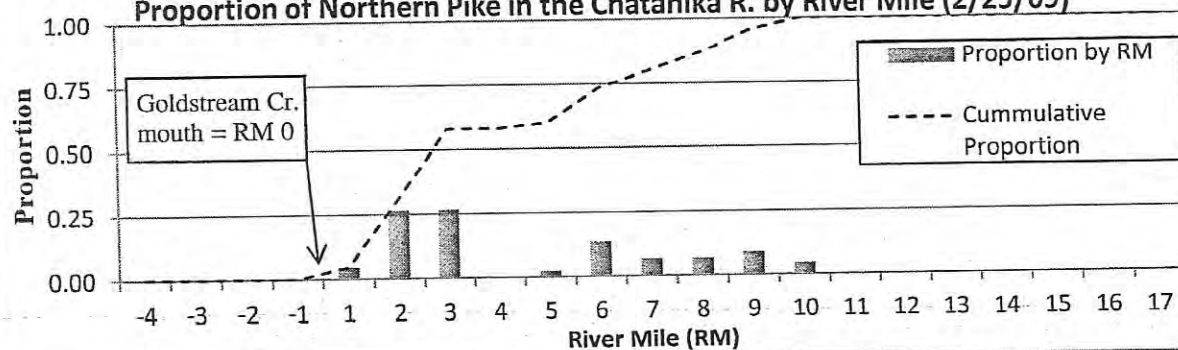
This three mile restriction needs to remain in effect long enough to allow these slow growing pike to rebound in number and size. Cutting it back to one mile is sure to cause an additional decline in what is already a fishery that has reached a level of concern.

Marv Hassebroek

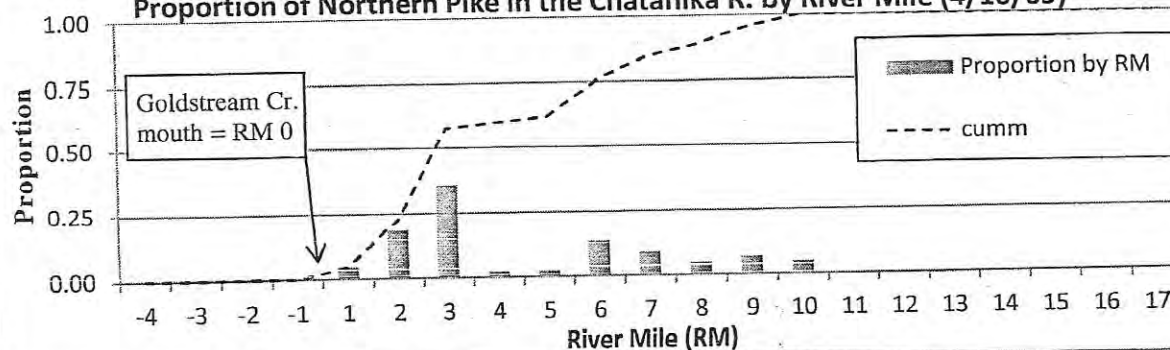




Proportion of Northern Pike in the Chatanika R. by River Mile (2/25/09)



Proportion of Northern Pike in the Chatanika R. by River Mile (4/10/09)







## The Pike Slough

Catch and release before they're deceased.

BY NICK JANS

**T**HE SLOUGH DIDN'T LOOK LIKE much—a dead-end, tannin-stained channel less than a cast across and maybe 150 yards long. I'd paused at its mouth to pick up a gas can I'd cached for my return trip down the Nuna. But as I stepped onto the bank, a rippling vee shot out from the reedy shallows. I rigged up my rod with a steel leader and weedless spoon and lobbed out a cast. Instantly, a half-dozen shark-like wakes converged on my lure. Raising a boil the size of a washtub, a giant pike slammed my lure, streaked into a clump of brush, and snapped my 15-pound test like thread.

My hands shook; I tied on another spoon. Another set of wakes, and another jarring strike. This time, I managed to horse the fish into open water. After a splashy fight, I boated a toothy twelve pounder—smaller, but still a serious chunk. Two heart-pounding hours later, I headed homeward, with a half-dozen pike aboard, all between 10 and 15 pounds. I'd released a dozen more, and lost at least that many. I gave away fish to appreciative friends back in the village, and kept two. We feasted that late summer on filets of golden-fried pike. I was pretty damn thrilled. While pike were common enough on the upper Kobuk, most ran half that size. I'd struck an apparently inexhaustible lode of behemoth fish.

The next time, I brought along my buddies Lynn and Steve, and the

(over)

Photo by Jeffery  
Patterson



Matthew Alward  
60082 Clarice Way  
Homer, AK 99603

October 3<sup>rd</sup>, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: ACR 11, UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
The Kodiak Management Area

Dear Mr. Jensen and Board members,

My name is Matthew Alward and I oppose ACR 11. ACR 11 does not meet the criteria for an agenda change request. This ACR is purely an allocation grab and has nothing to do with conservation concerns. The data in the genetic stock composition report is not new information; it is only a finer resolution of already known information. And there are no errors in KMA management plans that need to be corrected.

I have been operating my own boat in the Kodiak Salmon Seine fishery for 10 years and have raised two of our kids on the boat. My son is in the process of buying a Kodiak seine permit right now and if this ACR is accepted he won't be able to take the risk of buying into a fishery that may be severely restricted next year. When I made the decision to buy into the Kodiak fishery my business plan was based on the long standing KMA management plans. Some years I make over half of my income between June 25<sup>th</sup> July 29<sup>th</sup> in the areas that would be affected by ACR 11. The proposed changes would severely hamper my ability to have a profitable Kodiak salmon season to the point that I would not be able to support my family on the fishery any more.

There are no conservation concerns that are addressed by ACR 11. The historical Kodiak salmon fisheries have been taking place in the same manner for decades and there is no new or expanded fisheries targeting Cook Inlet bound fish. The Kenai River has been over escaped for many years and the Susitna systems have been meeting escapement goals. The reasoning in the ACR states that F&G is not using the best science or management practices to develop escapement goals. Escapement goals are set based on the appropriate amount of fish up a river to ensure a sustainable return and have nothing to do with where the surplus fish are harvested.



There are no errors in the KMA management plans. They have been in place for years and have been reviewed by the Board of Fish many times. They have always stood up as very well written management plans dealing with the extremely complex Kodiak salmon systems. The ACR only mentions the burden of conservation but there are no conservation concerns with the KMA management plans.

There is no new information that would correct an unforeseen effect on the fishery when KMA management plans were adopted. According to the third party report, "Barrett and Swanton (1991) report that sockeye harvests in the North Shelikof Strait in the 1940s, 1970s and 1980s ranged from 30% to 100% Kodiak fish and 0% to 59% Cook Inlet origin fish." The data from the genetic stock composition of the KMA report only supports this already know information that was considered when the current management plans were adopted. Any scientist would argue that a three year study does not give enough data to distinguish any certain migratory patterns. The large variances in the three years studied support this and show that this study cannot be seen as new information that shows an unforeseen effect.

This ACR does not take into account the economic hardship that it will cause the Kodiak region. If this proposal was in place in 2014 it would of cost the Kodiak fishery \$8.3 million dollars of lost revenue. The resulting forgone harvest would also cost the state and community losses in tax revenue. According to the genetic study Kodiak harvested 113,366 Cook Inlet bound sockeye in 2014. The Cook Inlet management plans do not allow the UCI fishermen to harvest all of the available surplus as shown in the over escapement of the Kenai River year after year, so we can assume that of the 113,366 fish that might of made it past Kodiak not of all would have been caught be caught by UCI fishermen. At \$10 a fish is that a financial reallocation that the board wants to make?

ACR 11 does not meet any of the agenda change request criteria and is only an allocation grab that would cause detrimental harm to the Kodiak salmon fisheries. In closing I strongly encourage you not to accept it.

Sincerely,

Matthew Alward

Owner-Alward Fisheries LLC





AK Board of Fish

Boards Support

PO Box 115526

Juneau, Ak 99811-5526

Sept 27<sup>th</sup>, 2017

Opposed to ACR 11/ UCIDA ACR & Genetic Stock Composition of Red Salmon in Kodiak

Chairman John Jensen,

I would like to ask the Board of Fish to consider taking no action on this ACR. It's an allocative action that causes more harm than good. By putting hard caps on Kodiak's West Side Capes, ACR 11 ties the hands of Fish and Game managers. By forcing large cape seiners into bays, it causes gear conflicts and re allocation of fish within the region. Then there's the issue of limit seiners with heavy nets, large skiffs, and deep drafts. These boats are not made nor are they set up for fishing inside many of the bays in Kodiak.

I was born and raised in Kodiak. I fish full time to provide for my family. In the summers, I work on a boat that tenders. We depend on the days adding up- with a cut of around 30% of Kodiak's harvest. I'm going to reasonably guess that a third of those days would be cut. Or more likely, a significant amount of Tender Boats would be cut. This means my job is on the line.

I believe this is the wrong direction to solve Cook Inlet's problems. They are asking for a reallocation of fish without regard to the consequences.

Micheal A Nelson

719 Cottonwood Circle

Kodiak Alaska 99615

A handwritten signature in black ink, appearing to read "Micheal A Nelson", written over a series of horizontal lines.



Michael A. Patitucci F/V Denise Marie  
PO Box 1511  
Kodiak, Alaska 99615

October 1, 2017

Chairmen John Jenson  
Alaska Board of Fisheries  
Boards Support Section  
P.O. box 115526  
Juneau, Alaska 99811-55562

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon  
in the Kodiak Management Area

This new proposal will close the west side down right in the middle of the season. I spent most of the 2017 salmon season at miners point on the Westside. Captain/ Owner of the 46' Denise Marie, I have been fishing salmon here for over 40 years.

Management for the pink Salmon starts on the 6<sup>th</sup> of July with lots of streams and rivers that produce fish starting in late June. The Karluk Red Salmon run trickles in all season along with other dozens of red Salmon runs up and down the Shelikof Straights.

I did not notice any large Cook Inlet fish coming through Miners Point during the time period of June 23<sup>rd</sup> to July 31<sup>st</sup> 2017. Just to let you know it is so random and unreliable where the Cook Inlet fish will show up. We have all been through this back in 1989 through 1995, the board of fish put restrictions on North Shelikof. Is this a conservation concern? I think not! This is a small percentage of small Cook Inlet salmon that get blown in randomly in the Kodiak Salmon area.

Are you planning in the future to restrict Chignik, Sand Point and Area M and cause undo economic hardship on to them also? That's what this agenda will do to Kodiak! I urge you to leave well enough alone as this not an expanding fishery. In fact, when I started running my own boat in 1980, there where over 300 Seiners fishing in the Kodiak area. This year...fewer than 165!

Last season was a break-even year at best for most Seiners and the West Side Gillnetters and that's what's coming next season! Do the math we are going to be shut down most of august for Pink Salmon management and this UCIDA agenda change will stifle us in July. It will bankrupt the younger generation and my son who runs 38' Lady Kathryn will be one of them. Please don't cause us unnecessary hardship.

Sincerely yours,

Michael A Patitucci





Submitted By

Mike ferris

Submitted On

10/2/2017 11:52:42 PM

Affiliation

I have been seining or involved in Kodiak fisheries since 1987 and do not believe we need any change to the current fishing regulations and laws ADF&G does a great job as it is no need for further restrictions in the Kodiak & Cook Inlet salmon fisheries



Chair John Jensen

AK Board of Fish

Boards Support

PO Box 115526

Juneau, Ak 99811-5526

Sept 20,2017

ACR #11- OPPOSED

My name is Miranda Stohl and I oppose the agenda change request, ACR 11, that seeks to impose closures seaward of capes along the Shelikof Straits in the Kodiak Area. This proposal will disrupt the harvest of mixed salmon stocks. While it intends to restrict interception of red salmon traveling to Cook Inlet, it's consequences hinder the fisheries management of all Kodiak's westside salmon runs. It negatively impacts Kodiak residents on multiple economic levels.

Growing up in Kodiak, I spent my summers working as a crewmember on my family's salmon seiner. My husband and I both worked on salmon tenders throughout our high school years. This income bought school clothes, first vehicles, and enabled us to go to college. My husband & I are now raising a young family and purchased our first home in 2015. We strive to make ends meet.

My husband, Malachi works as an equipment operator and drives a truck that delivers fish waste to the Kodiak Fishmeal Plant. If ACR 11 is acted upon and passed, it could shut down 21-26% of the overall salmon harvest in Kodiak. These percentages are a conservative guess and do not consider additional shut downs if other areas around Kodiak are taken into consideration. Our family would lose a significant amount of income due to reduced salmon deliveries in Kodiak. We would see a disproportionate cut in overtime that could reduce our income at double the cost. ACR 11 is bad for Kodiak's entire economy.

Our island is expensive to live in. We are already looking at an increased local sales tax and a possible state income tax. Please seriously consider the extensive negative consequences of taking action on this proposal.

A handwritten signature in cursive script that reads "Miranda Stohl".

Miranda Stohl

11354 Russian River Rd

Kodiak Alaska 99615

(805)550-7498



Submitted By  
Naomi Beck-Goodell  
Submitted On  
10/3/2017 8:54:50 AM  
Affiliation

I am writing in opposition of the UCIDA agenda change request regarding the Kodiak Management Plan. The genetic stock composition study that the request is being based on does not present any new or unknown information. The Cook Inlet sockeye caught in Kodiak do not create any conservation concern. Therefore, any proposed change to the Kodiak Management Plan is unnecessary.

Growing up setnetting on the Westside of Kodiak, I have fond memories of playing on the beach and going to pick the net with my family. Throughout college I looked forward to fishing each summer, a break from research and writing papers. Now, I co-own a setnet site with my partner and look forward to sharing the setnet lifestyle and all the lessons fishing has taught me with our young son. The fish we catch from June 23rd to July 31st makes up a large percentage of our total catch, for all the salmon species. Not being able to fish during this time period would make the Kodiak salmon fishery significantly less viable because too much income will be lost.

The request for the agenda change does not take into account the consequences to the Kodiak salmon stocks. Sockeye salmon travel throughout the Pacific Ocean before they return to the rivers where they were born to spawn. Do we need to collect genetic on all salmon catch throughout Alaska to prove their river of origin? That would cost billions of dollars and would upend the existing management plans for each region, which would ignore the fact that salmon are considered common property. There is no guarantee that Kodiak salmon fishermen will catch Cook Inlet fish every season, however, the over-escapement of local Kodiak stocks that would most likely occur if ACR 11 is adopted would threaten the health of the Kodiak stocks.

The Kodiak Management Area is a historical fishery that is focused on the health and availability of local stocks. Kodiak fishermen are not fishing in new areas, the fishing districts that the island is broken down into allows Fish and Game to manage the local systems sustainably.

The UCIDA agenda change does not meet the Board of Fisheries Agenda Change Request criteria because no new information was discovered by the Kodiak Management Area genetic stock composition study. The few Cook Inlet sockeye that are caught in the Kodiak do not create a conservation concern and therefor there is no reason to change the Kodiak Management Plan.

Sincerely,

Naomi Beck-Goodell



Nathaniel and Astrid Rose  
3011 Spruce Cape Road  
Kodiak AK, 99615

October 3, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

Dear Chairman Jensen and Board of Fish members:

My name is Nathaniel Rose, and I am writing in opposition to ACR 11 as it does not meet your agenda change request criteria which states that there must be a conservation concern, an error in regulation or a need to correct an effect on a fishery that was unforeseen when a regulation was adapted. By contrast, the ACR seeks to dramatize already known information and present radical solutions with little to no regard for the Alaska Board of Fisheries Policy for Mixed Stock Salmon Fisheries (93-145-FB). The adoption of ACR 11 would set a dangerous precedent about mixed stock management not only in the Kodiak area but statewide and would seriously debilitate the ability of Alaska Department of Fish and Game to manage the multitude of salmon producing systems in the Kodiak management area.

I am a second-generation Kodiak fisherman. I purchased my S01K salmon seine permit in the spring of 2011, and leased a boat during that summer to try my hand at salmon seining. Two years later when my wife and I purchased our 41-foot vessel in the spring of 2013, we did so by submitting an expected profit and loss statement to the bank, based off our history in the fishery. The percentage of my production for the summer of 2011 and 2012 during the time period proposed by ACR 11 was close to 40% per year. Acceptance of ACR 11 would be catastrophic to my small-scale family operation. It would be hard to find crew knowing that their paychecks would be 40% less. I hope that my 2 year old son Silas will be able to fish the traditional salmon fishery that I have fallen in love with, and I fear that the ACR would make other summer occupations more appealing to future generations.

The UCIDA agenda change request is a greed driven solution to a non-existent problem. The proposal itself is not based on scientific numbers, but rather an arbitrary hypothesis of a user group as to how to "gain" more fish, or rights to said fish. The proposal makes no logical or scientific sense. The basis for ACR 11 is a reaction to a relatively vague scientific study, one which does not display a defined trend, and which most scientists would reject on grounds of excess variability. To try and redesign an umbrella management plan for the complicated Kodiak management area, based off the three years studied in the genetic report would be as prudent as sending an elementary student into a master's program and expect that student to produce good grades. While the study shows, at first glance, what seems to be an abundance of Cook Inlet bound sockeye being caught in the Kodiak management area, the study fails to show the other salmon species caught in the same time periods. If the study were expanded to include all salmon species caught in the Kodiak management area during the time periods studied, the number of Cook Inlet origin fish would be very small in comparison to the total volume of fish taken across all salmon species.



The Board should not approve and schedule ACR 11 as it does not meet any of the criteria set forth by the Board of Fish; that there needs to be a fishery conservation purpose or reason, to correct an error in a regulation, or to correct an effect on a fishery that was unforeseen when a regulation was adopted.

There is no conservation purpose or reason. The Kodiak salmon fisheries are historical fisheries that have been taking place for decades. Traditional seiner hauling locations are often times marked on a GPS chart as being a fish trap in times past. The Kodiak salmon fishery is not a new and expanding fishery, nor are there any new fishing patterns that target the interception of Cook Inlet bound fish.

There are no errors in regulation that need to be corrected. KMA management plans have been in place for years and have been under scrutiny by other user groups and reviewed by the Board of Fish many times. They are designed to maintain sustainability of local stocks while maximizing stock utilization through harvest. For humor's sake, the only error in regulation is the number of sockeye harvest allowable in the North Shelikof Management plan. That number, 15,000, seems to be too low, as the Kenai and Kasilof rivers have been over escaped the majority of the years during the last 10-year period.

There is no effect on a fishery that was unforeseen when a regulation was adopted. As I said before the KMA management plans have been in place for a long time, and have come under significant scrutiny by user groups in other salmon management areas, time and time again. According to the report "Barrett and Swanton (1991)... "sockeye harvest in the North Shelikof Strait in the 1940's, 1970's and 1980's ranged from 30% to 100% Kodiak Fish and 0% to 59% Cook Inlet origin fish."

In light of the KMA genetic stock composition study which spawned this ACR, it would seem the genetic study does not shed light on any new information, nor could it claimed that any regulation created during review of KMA management plans has created an unforeseen effect.

Outside of addressing the criteria for an ACR, this proposal does not assess, nor does it even consider the economic cost to the community of Kodiak. The salmon fishery is an economic driver during the months of May through August, a time when ground-fish is not being harvested. The number of cannery workers that receive overtime pay during the summer months as a result of the increase in production is staggering, and those cannery workers struggle to make ends meet on standard hourly wages. Hydraulic shops, fabrication shops, marine fisheries supply shops, and air transport pilots are a few examples of industries that benefit from the summer salmon fishery, and the trickle-down effect that occurs from salmon income is felt even by individuals who have no direct tie to the salmon industry. This proposal is entirely allocative and a shift of this magnitude in allocation would be economically catastrophic to the community of Kodiak.

In conclusion ACR 11 should be rejected on the grounds that it does not meet the criteria for acceptance of an agenda change request, and the economic hardship it would place on young fisherman trying to make entry in to the fishery, and the economic hardship it would place on the entire community of Kodiak and surrounding native villages would be devastating.

Thank you for your attention to this matter.

Sincerely,

Nathaniel Rose  
Owner-3-Mile Fisheries  
F/V Historian





Chairman John Jensen  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526

28 Septemeber 2017

RE: UCIDA Agenda Change Request and Genetic  
Stock Composition of Sockeye Salmon in the Kodiak  
Management Area

I strongly oppose the UCIDA (United Cook Inlet Drift Association) Agenda Change Request because it is not based on any new information and does not correct any effect in the fishery. Also, limiting Cook Inlet sockeye caught in the Kodiak Area has no conservation purpose, because catching Cook Inlet sockeye in Kodiak causes no conservation concern. There is no error in the current regulation that needs correcting.

I've lived in Kodiak since I was twelve and started salmon fishing when I graduated high school in 2010. I started fishing on other people's boats and with the help of my father and family got my own small boat and my business has slowly grown. I've been running my own fishing boat for six years now. Salmon fishing makes up the huge majority of mine and my family's incomes. We have a lot invested in our fishing business and any loss of fishing time in June and July would be catastrophic for us. That time between June 23<sup>rd</sup> and July 31<sup>st</sup> is essential, not only for the income we make during that time period, but for travel to a lot of different fishing areas to gauge where the coming wave of pink salmon is going to hit hardest.

While the requested agenda change doesn't make sense for a lot of reasons, the most damaging and dangerous of these is that it sets a ridiculous and terrible precedent to completely disrupt an area's fishery to slightly advantage another area's harvest. Uncaught salmon are common property and don't belong to anyone or any one management area. If the Board of Fisheries is going to start regulating based on where the salmon were hatched, where



does it end? I bet every management area catches some fish that were hatched in another management area. Are we going to start regulating Chignik and Area M for their catch of Kodiak bound fish? This Agenda Change Request starts us on a slippery slope toward aggressive over-management and privatization of the salmon fishery.

The Kodiak fishery is well-managed and mainly focused on the catch of local salmon stocks. The Kodiak fleet is not fishing new areas and has not seen any drastic increase in the catch or targeting of Cook Inlet bound fish. We fish areas that have historically been fished for generations and that hasn't changed.

Again, I and my family stand in strong opposition to this Agenda Change Request. It does not meet the Board of Fisheries Agenda Change Request criteria and would cause financial ruin and will force good people out of the fishery. This latest genetic stock study does not provide any new information and does not correct any effect on the fishery that was unforeseen when the current management plan was adopted. There is no error in the regulation that needs correcting. We ask that you leave it as it is written.

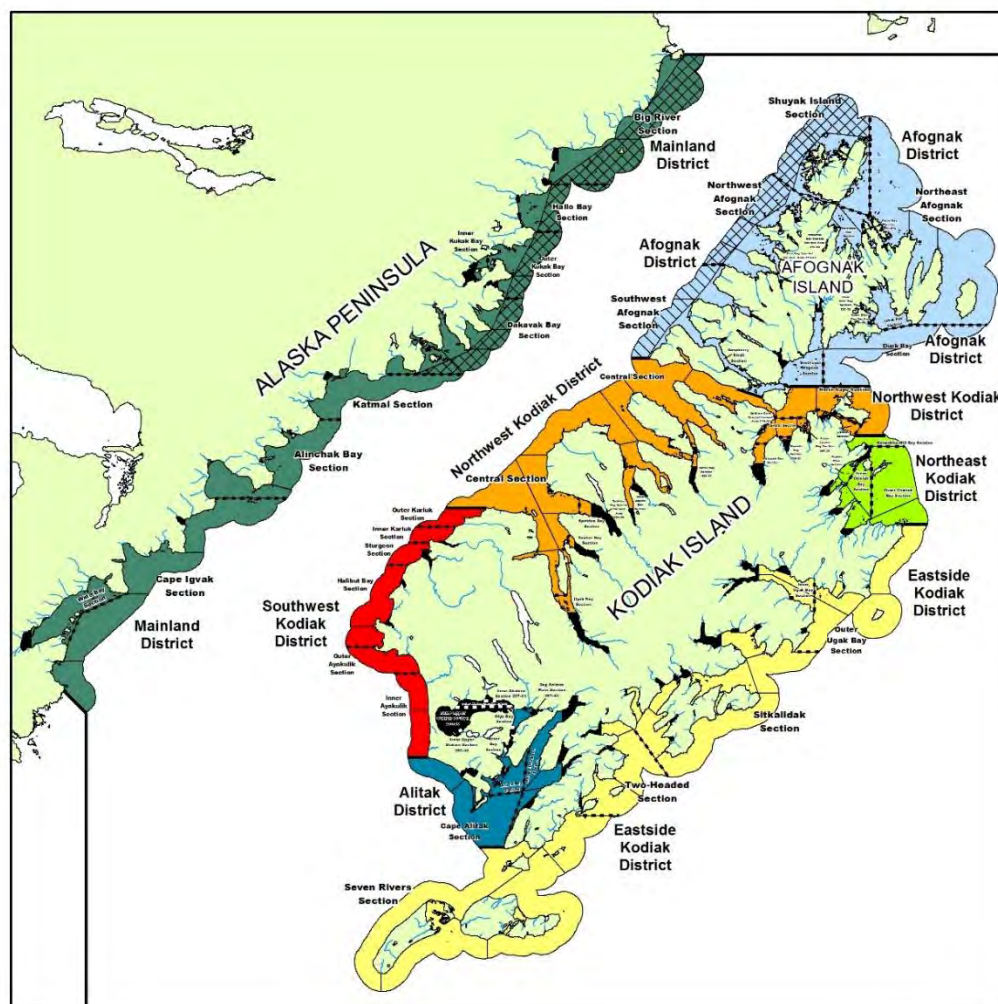
Sincerely,

Nicholas J. Hoffman and family

2159 Island Cir

Kodiak, AK 99615

(907) 539-6480



## Kodiak's Salmon Fishery and ACR #11

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Northwest Setnetters Association in conjunction with the Kodiak  
Salmon Work Group

10/2/2017



Northwest Setnetters Association  
PO Box 870  
Kodiak, Alaska 99615



PC088  
2 of 62

October 3, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

Dear Chairman Jensen and Board Members:

In conjunction with the Kodiak Salmon Workgroup's efforts to provide context and information about the recent Genetic Composition of Sockeye in the Kodiak Management Area report, the Northwest Setnetters Association is submitting the appendix to the primary text of a paper compiled by Kevin Brennan. The Brennan paper presents of a comprehensive review of the historical development of Kodiak's commercial fisheries, the implementation of area management plans and the complications of managing Kodiak's multitude of salmon producing streams and 5 species. (We understand that the Executive Summary and primary text of the Brennan paper will be submitted by the Kodiak Seiners Association.)

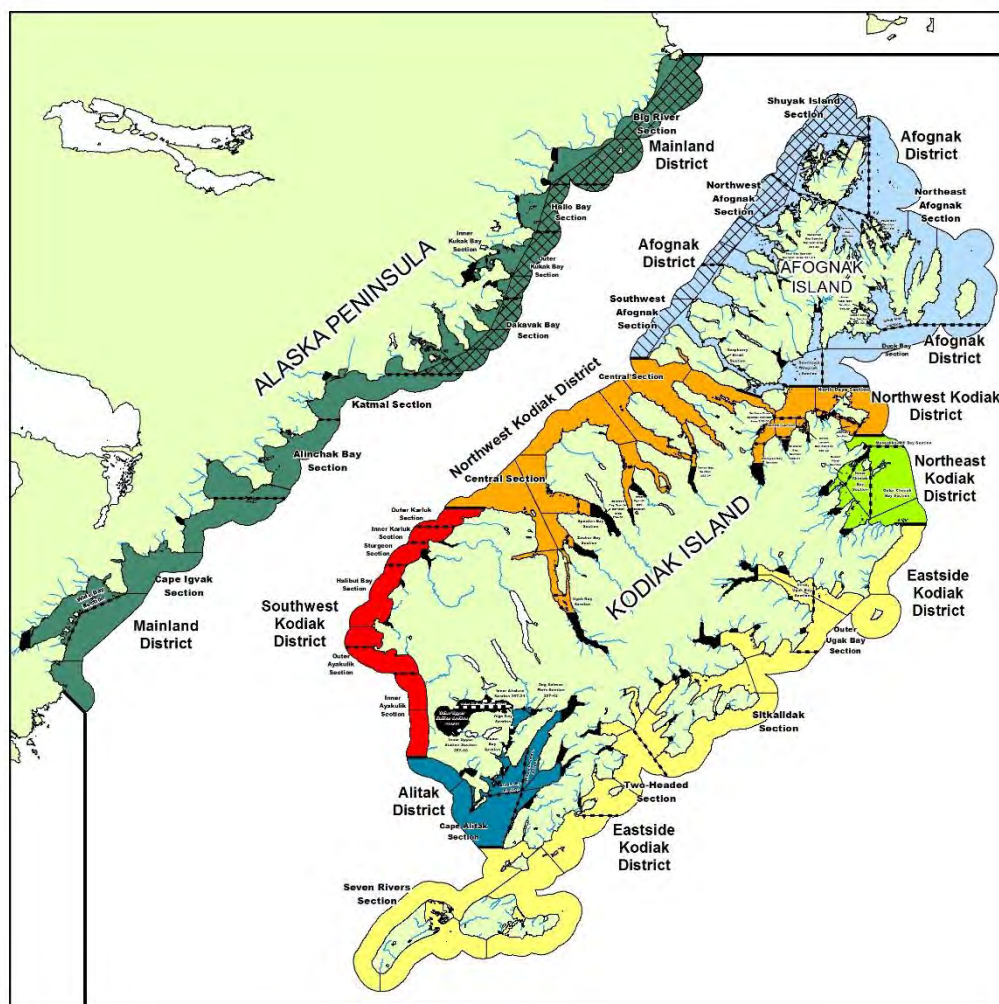
Setnetters don't move and we see year in and year out what happens in one location. We know the years when Cook Inlet fish are present and when they are not. More often than not we don't see many Cook Inlet fish in the Northwest District. The Brennan paper illustrates that the opportunistic harvest of Cook Inlet sockeye in the Kodiak area is not predictable in time or place or year. This mirrors our experience and that's why we think the Brennan paper is so important.

Northwest setnetters have fished under the Northwest District management plan for more than 20 years. We feel that the two mandatory closures under the plan during early July, ostensibly to protect Cook Inlet sockeye, just don't make sense when we often have local stocks that would allow us to fish and there aren't any Cook Inlet fish in the area. The fact that the northwest setnetters are already closed to protect Cook Inlet sockeye seems to go unnoticed by many Cook Inlet advocates. The Brennan report does not miss this detail

The Brennan report provides context and historical information that shows ACR 11 to be a strictly allocative proposal.

Sincerely yours,

Toby Sullivan, President



## A Review of Agenda Change Request #11 and the ADF&G Kodiak 2014-2016 Sockeye Genetic Mixed Stock Analysis technical Fishery Manuscript, with recommendations to the BOF.

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Kevin Brennan, Dave Prokopowich, and Larry Malloy

9/25/2017



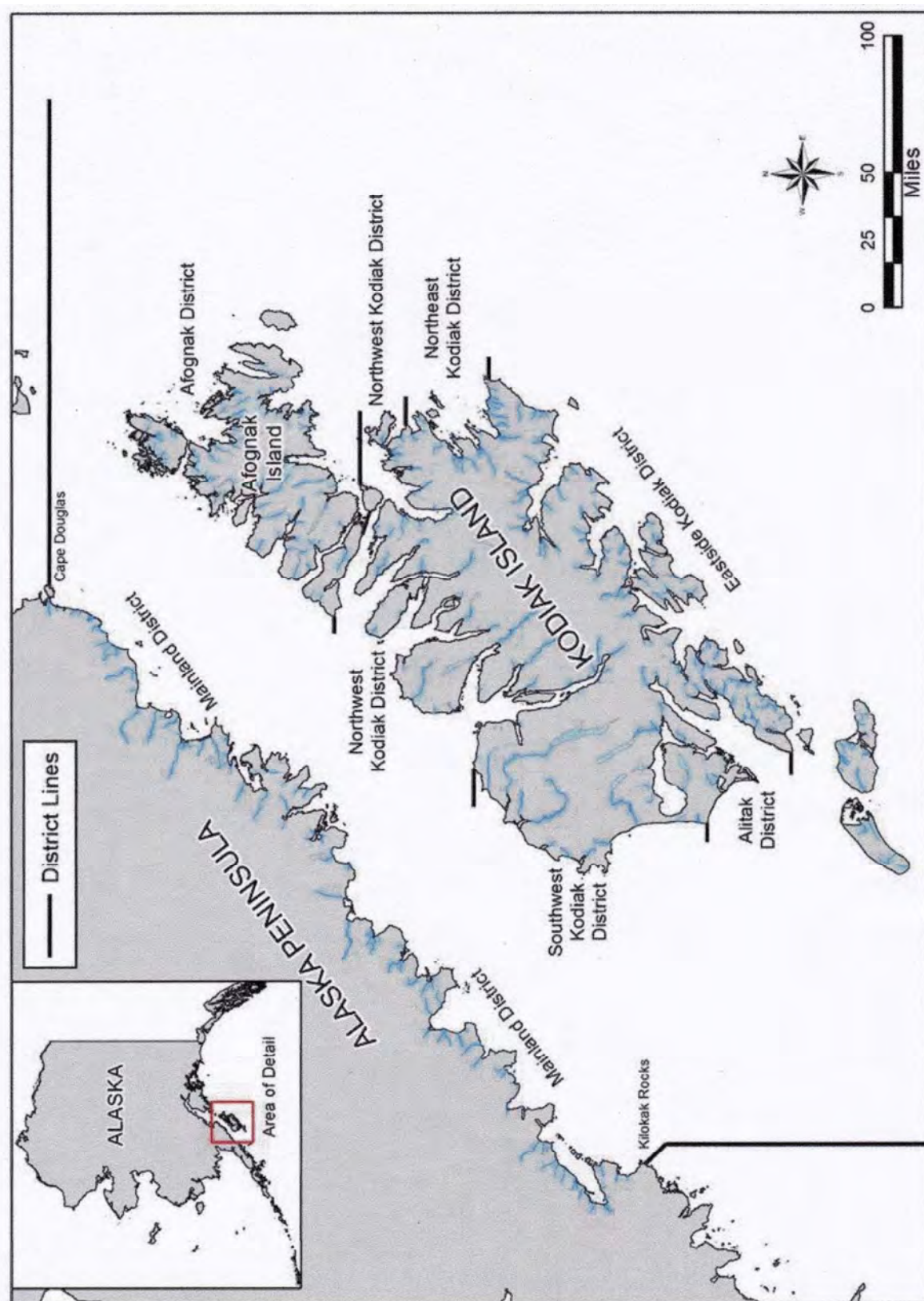


## APPENDICES

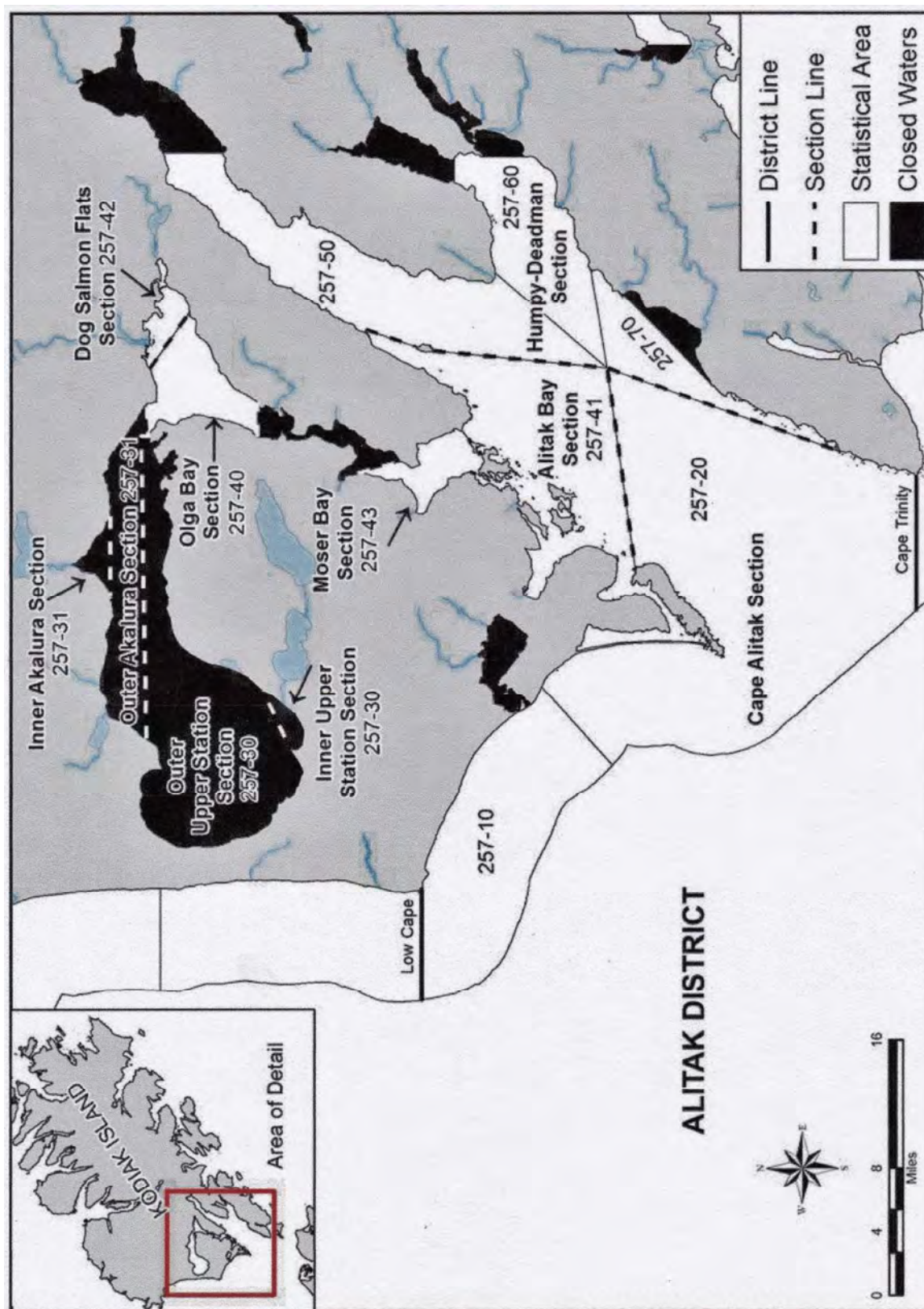


## Appendix A. Maps and Miscellaneous

Appendix A.1. Map of the Kodiak Management Area commercial salmon fishing districts.

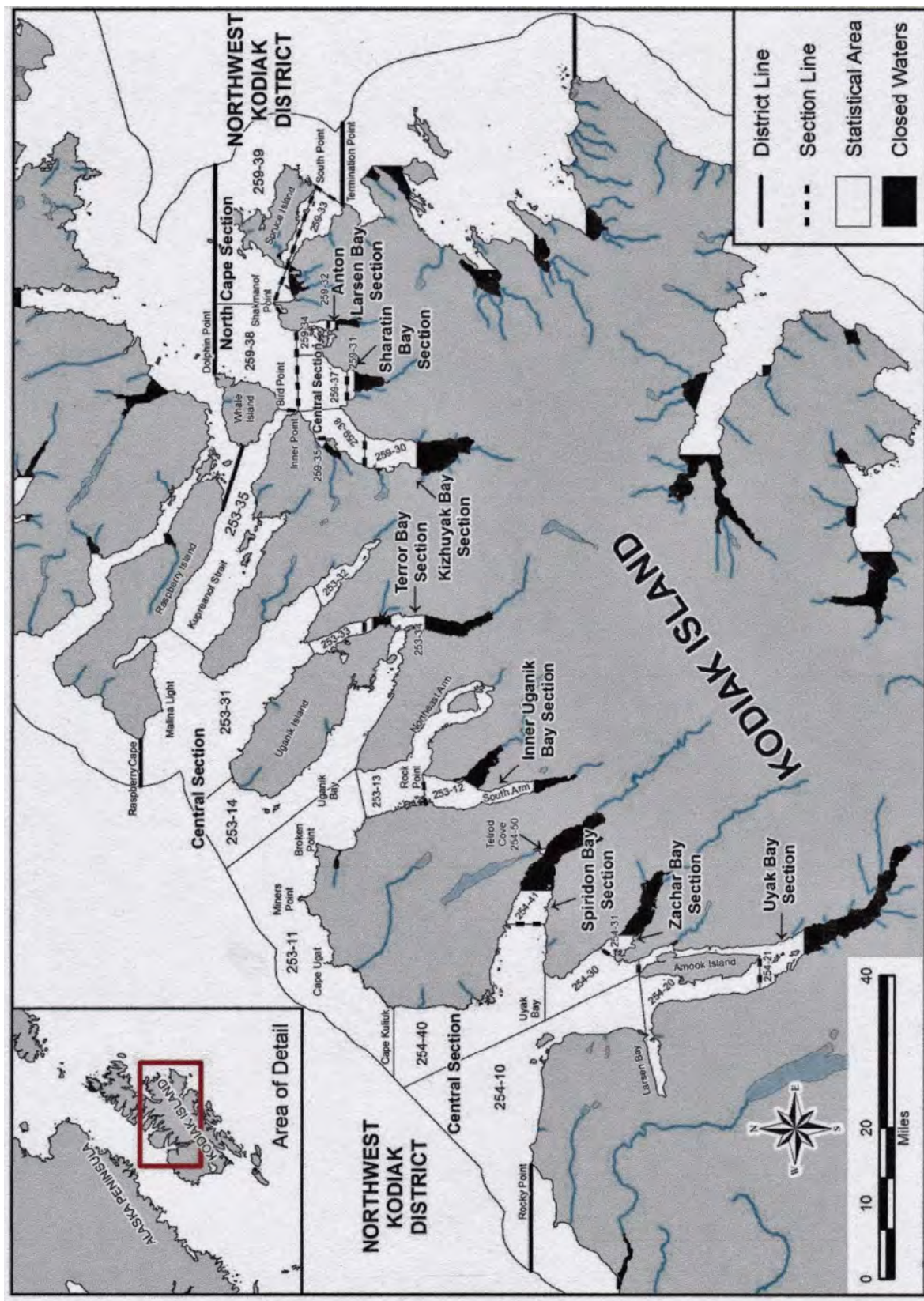


Appendix A.2. Map of the Alitak District commercial salmon fishing sections and statistical areas.



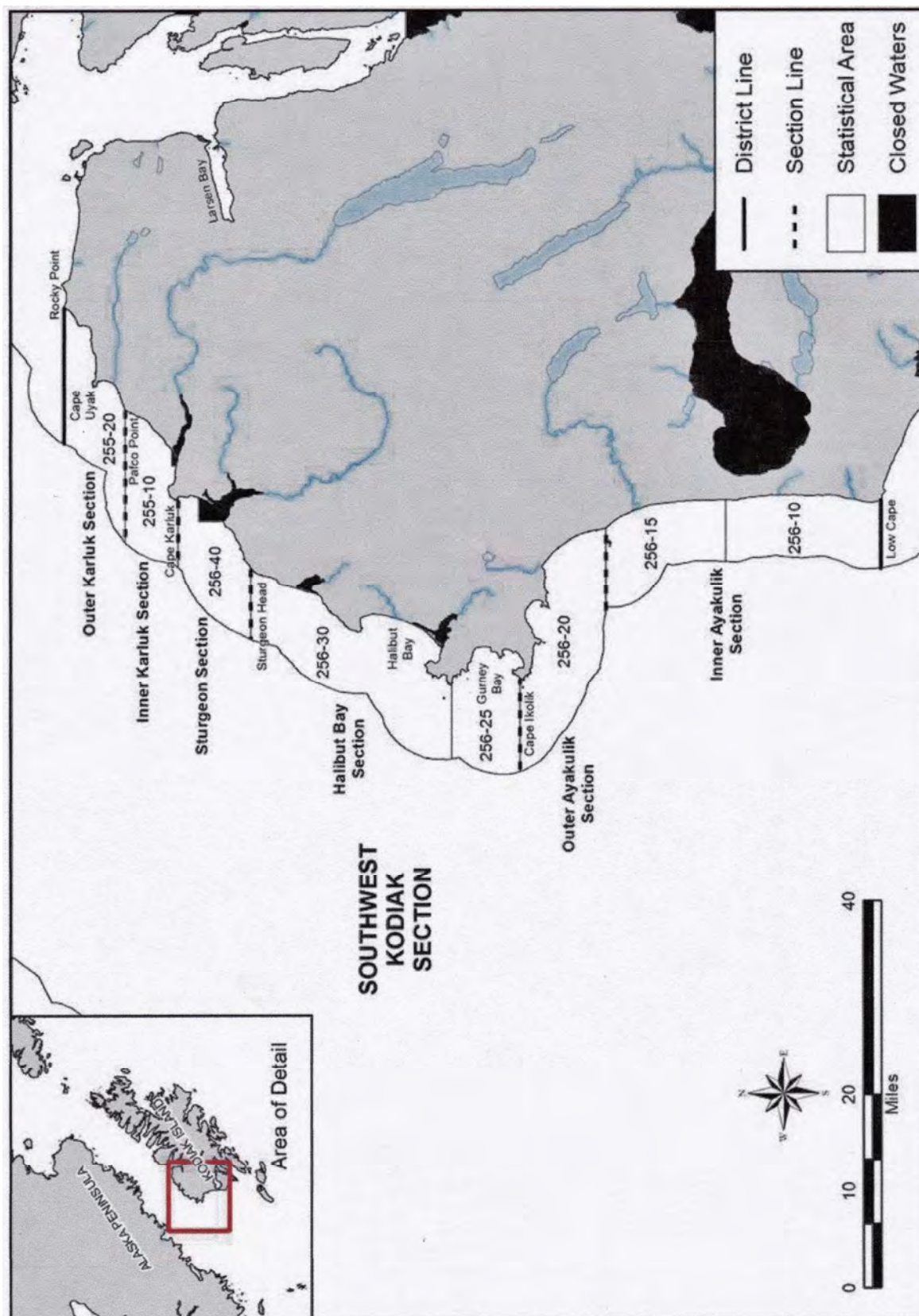


Appendix A.3. Map of the Northwest Kodiak District commercial salmon fishing sections and statistical areas.

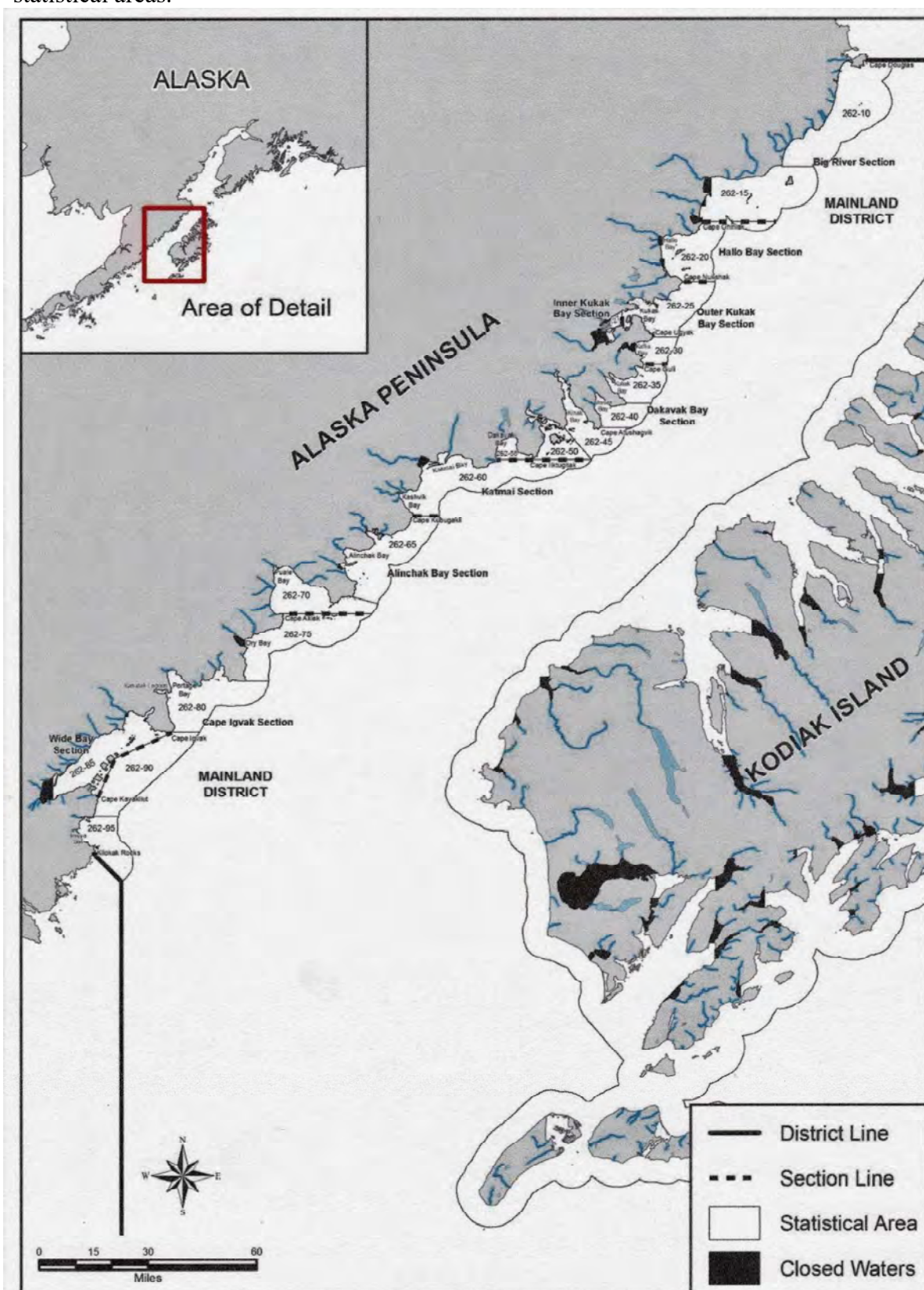




Appendix A.4. Map of the Southwest Kodiak District commercial salmon fishing sections and statistical areas.

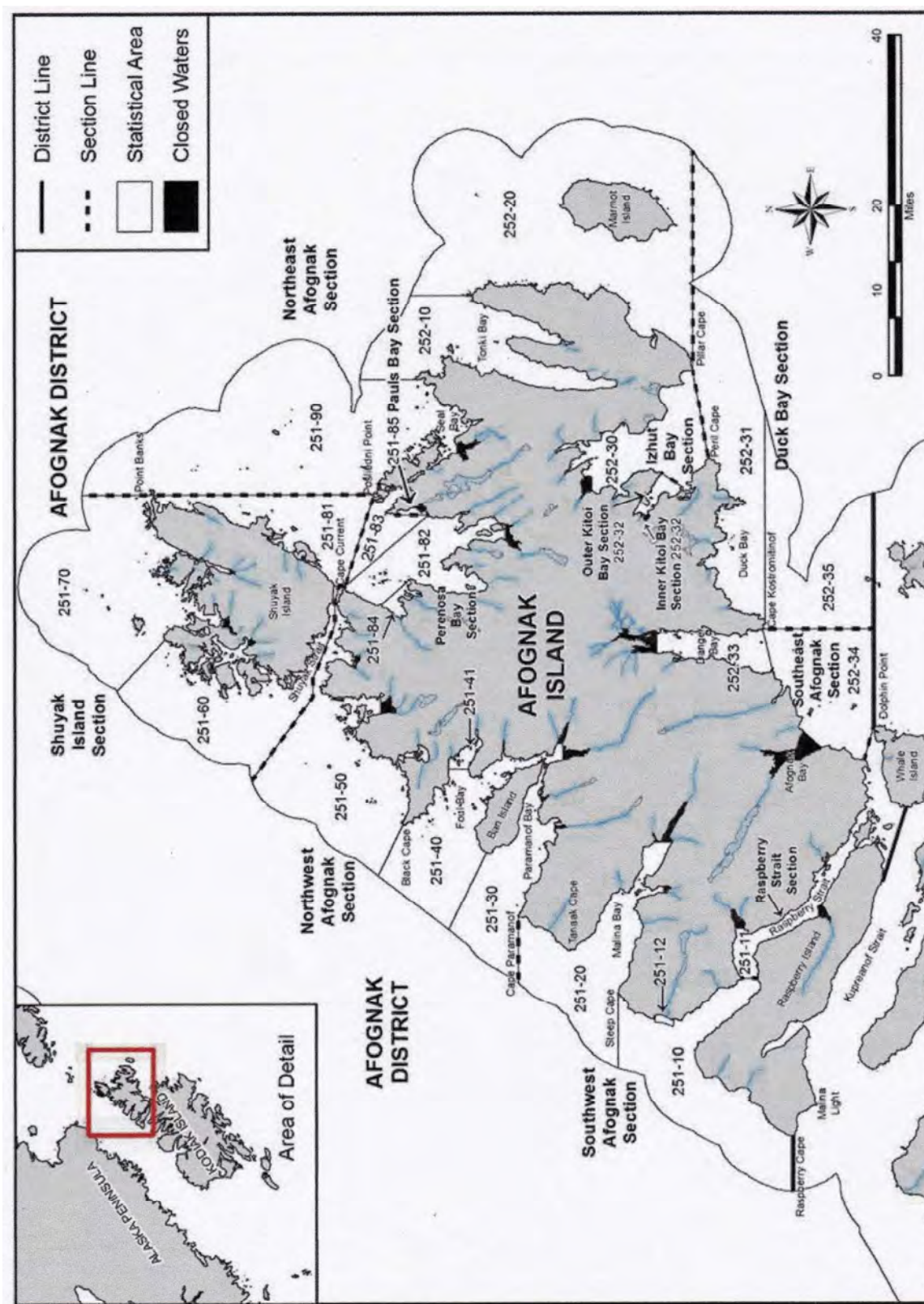


Appendix A.5. Map of the Mainland District commercial salmon fishing sections and statistical areas.

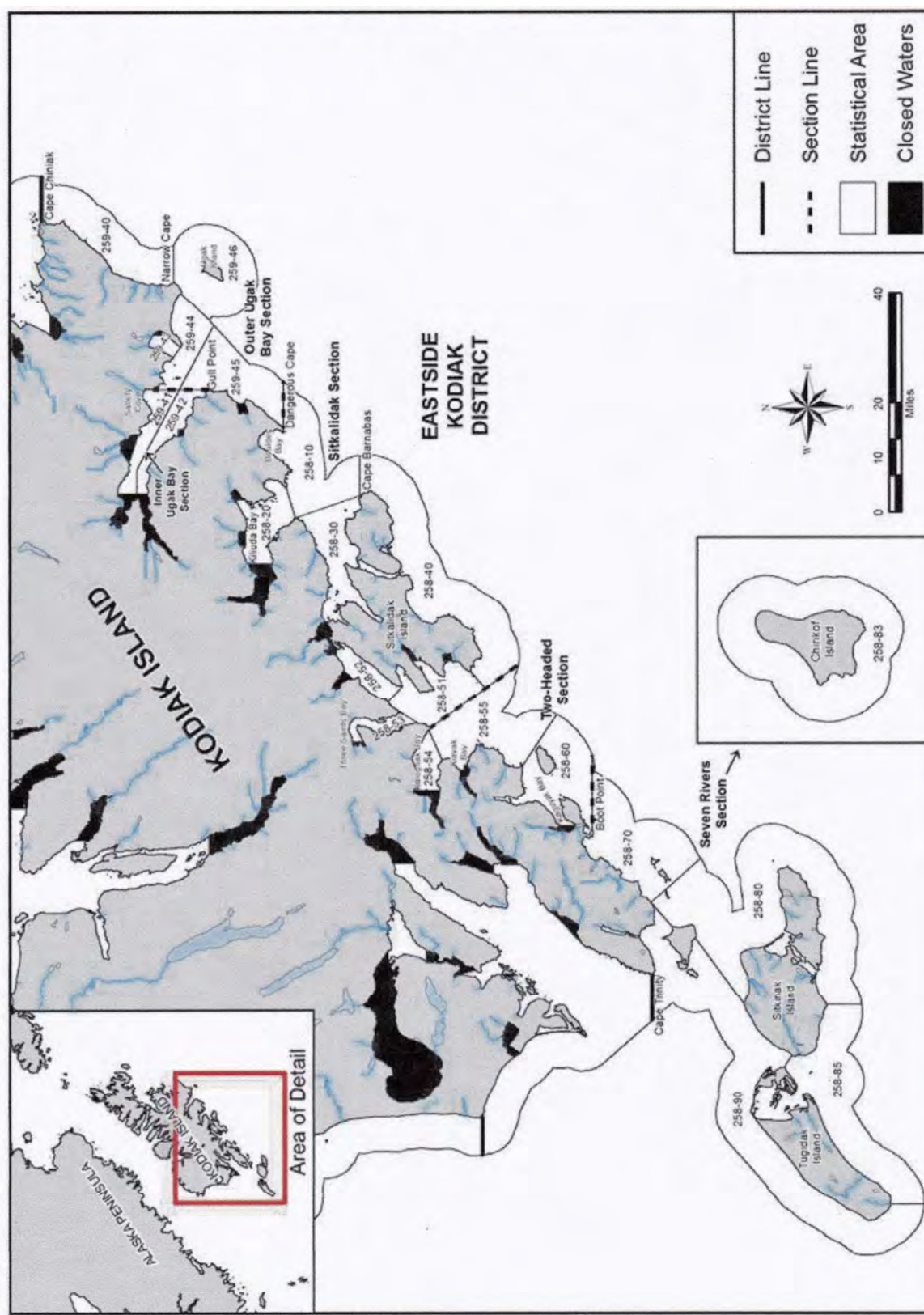




Appendix A.6. Map of the Afognak District commercial salmon fishing sections and statistical areas.

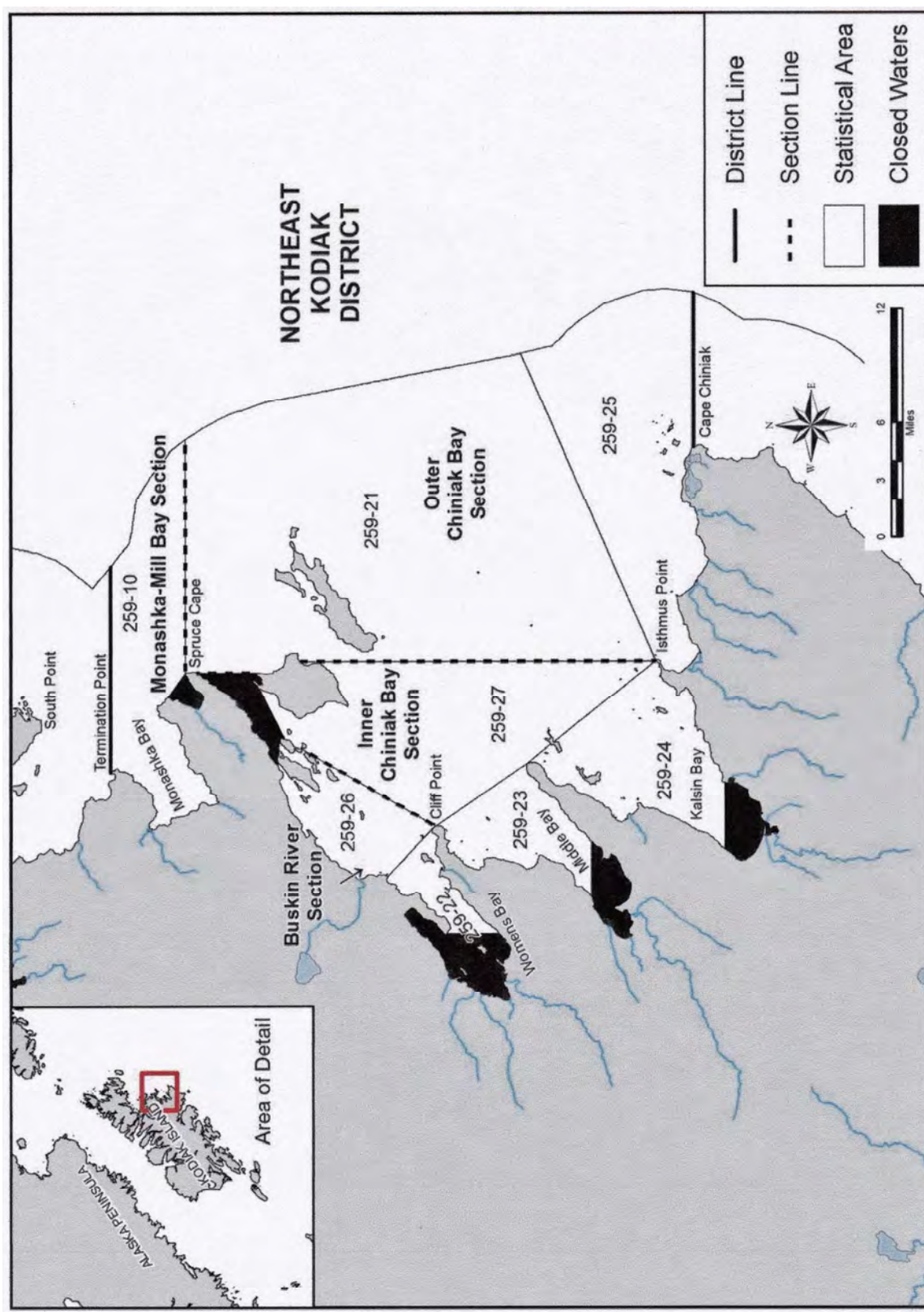


Appendix A.7. Map of the Eastside Kodiak District commercial salmon fishing sections and statistical areas.



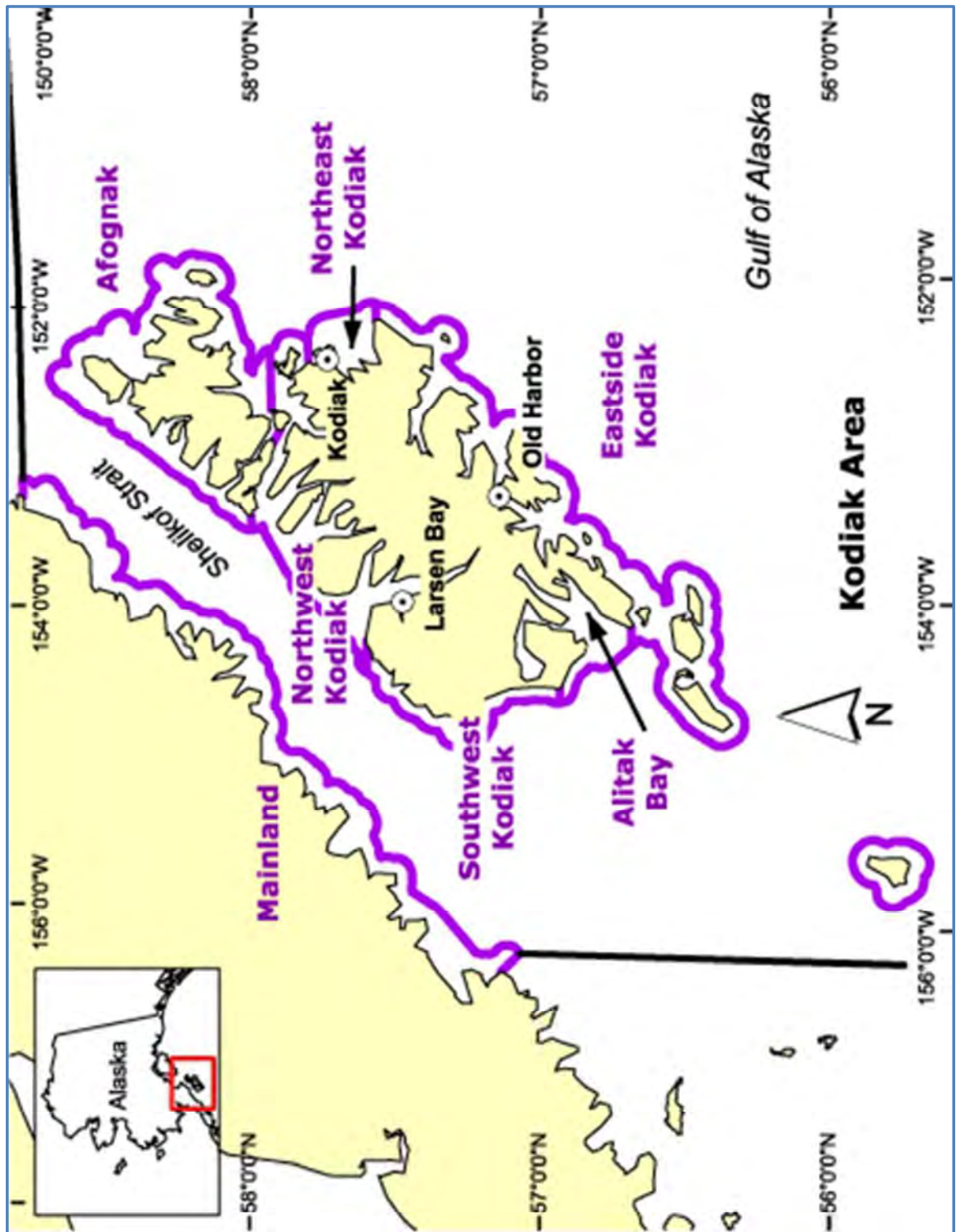


Appendix A.8. Map of the Northeast Kodiak District commercial salmon fishing sections and statistical areas.

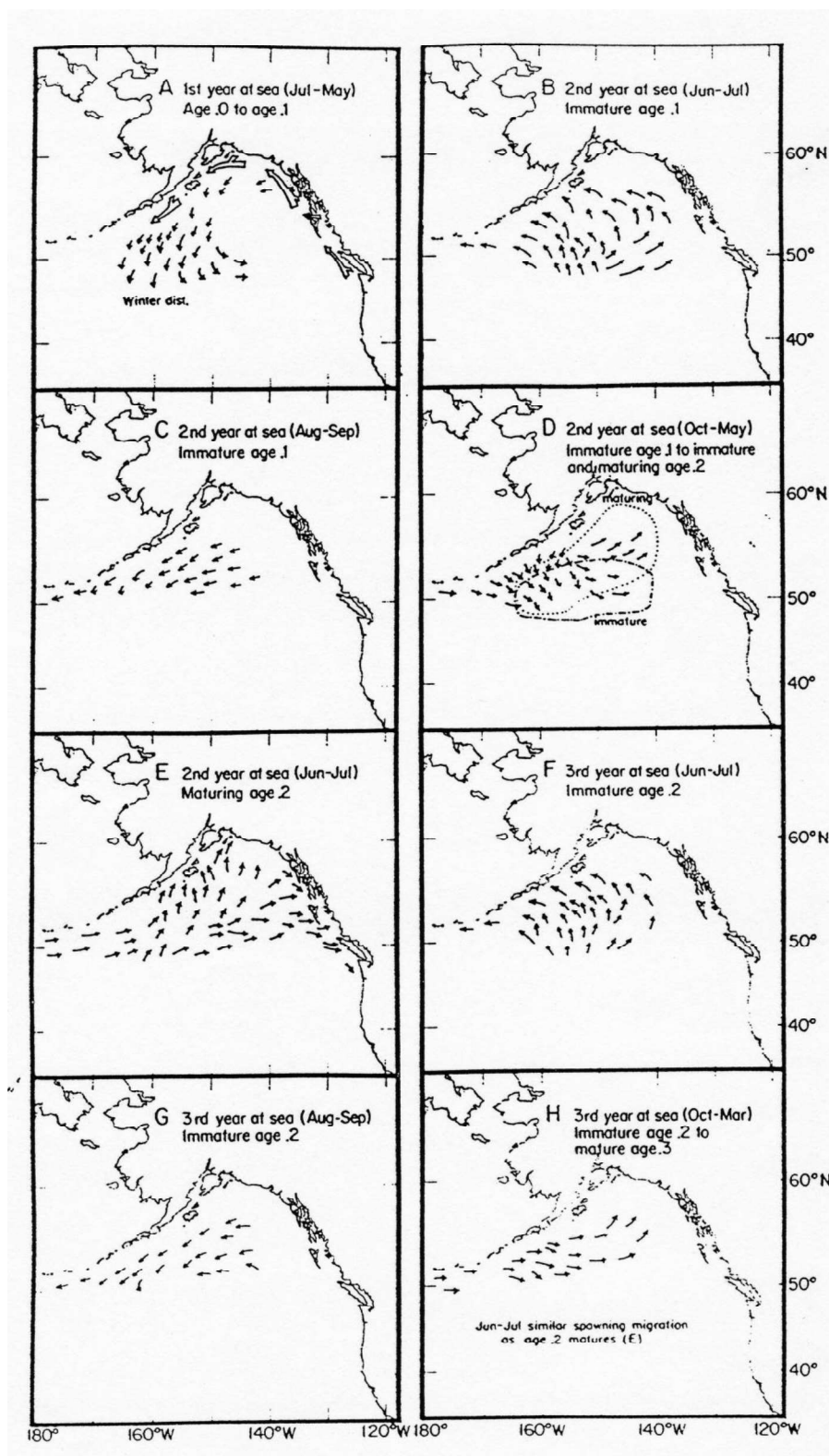




Appendix A.9. Map of the Kodiak Management Area and the 3 mile limit (State vs. Federal waters)



# Appendix A.10. Migratory patterns of North Pacific sockeye salmon.



Taken from: French, et al; 1976.



## Appendix B. Basis for local commercial fisheries management actions, by Kodiak Salmon Management Plan.

Excerpts from the preseason Kodiak management area harvest strategy for the 2017 commercial salmon fishery (Anderson and Jackson, 2017):



Appendix B.1. Alitak District basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| The Alitak Salmon Management Basis                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                   |                                                                                                      |                                                                                                                    |                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                         | June                                                                                                                                                                                                                                              | July                                                                                                 | August                                                                                                             | September                                                                                          |
| Cape Alitak Section                                                                                                                                                                                                                                     | June 1 through June 30, based on Frazer and early Upper Station systems sockeye salmon returns.                                                                                                                                                   | July 1 through July 15, based on either Frazer or early Upper Station system sockeye salmon returns. | July 16 through August 9, in odd years, based on either sockeye or pink salmon returning to the Frazer system.     | August 10 through August 25, in odd years, based on the sockeye salmon returning to Upper Station. |
| Alitak Bay, Moser Bay, and Olga Bay sections                                                                                                                                                                                                            | June 1 through June 30, based on Frazer and early Upper Station systems sockeye salmon returns.                                                                                                                                                   | July 1 through July 15, based on either Frazer or early Upper Station system sockeye salmon returns. | July 16 through August 9, in odd years, based on either sockeye or pink salmon returning to the Frazer system.     | August 10 through August 25 in odd years, based on the sockeye salmon returning to Upper Station.  |
| Humpy-Deadman Section                                                                                                                                                                                                                                   | June 1 through July 15, at the same time and with equal fishing time with the Cape Alitak Section.                                                                                                                                                |                                                                                                      | After July 15, based on the strength of salmon returns to systems located within the Humpy-Deadman Section.        |                                                                                                    |
| Dog Salmon Flats Section                                                                                                                                                                                                                                | June 1 through August 20, based on sockeye and pink salmon returns to the Frazer system.                                                                                                                                                          |                                                                                                      | From August 21 through the end of the season, based on coho salmon returns to Dog Salmon and Horse Marine systems. |                                                                                                    |
| Inner and Outer Akalura sections                                                                                                                                                                                                                        | The Dog Salmon Flats Section may be opened to fishing only when the department determines that escapement goals will be exceeded. These openings may not jeopardize achievement of minimum escapement goals for the other salmon species.         |                                                                                                      | August 21 through August 26, based on coho and sockeye salmon returns to Akalura.                                  | After August 26, based on coho salmon returns to the Akalura system.                               |
|                                                                                                                                                                                                                                                         | The Inner and Outer Akalura sections may be opened to fishing only when the department determines that escapement goals will be exceeded. These openings may not jeopardize achievement of minimum escapement goals for the other salmon species. |                                                                                                      |                                                                                                                    |                                                                                                    |
| Inner and Outer Upper Station sections                                                                                                                                                                                                                  | June 1 through August 25, based on early and late run sockeye salmon returning to Upper Station.                                                                                                                                                  |                                                                                                      | After August 26, based on coho and late sockeye salmon returns to the Upper Station system.                        |                                                                                                    |
| The Inner and Outer Upper Station sections may be opened to fishing only when the department determines that escapement goals will be exceeded. These openings may not jeopardize achievement of minimum escapement goals for the other salmon species. |                                                                                                                                                                                                                                                   |                                                                                                      |                                                                                                                    |                                                                                                    |





Appendix B.2. Westside Kodiak districts basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| The Westside Kodiak Salmon Management Basis |                                 |                                                                                                                                                                          |                                                                                                                                                                                                                                                                 |                                                                                                                                                   |                                                                                                                                                                               |                                                                                                                          |
|---------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|                                             |                                 | June                                                                                                                                                                     |                                                                                                                                                                                                                                                                 | July                                                                                                                                              | August                                                                                                                                                                        | September                                                                                                                |
| Aofgnak District                            | Southwest Aofgnak Section       | June 1 through June 15, based on sockeye salmon returning to Karluk, Ayakulik, and Olga Bay systems. There will be at least one 33-hour commercial test fishing period.  | June 16 through July 5, based on early-run sockeye salmon returning to the Karluk system.                                                                                                                                                                       | July 6 through August 15, based on pink salmon returning to the major systems in the Southwest Aofgnak Section and the Northwest Kodiak District. | August 16 through August 24, based on pink salmon returning to both the SW Aofgnak Section and NW Kodiak District and late-run sockeye salmon returning to the Karluk system. | August 25 through September 5, based on late-run sockeye salmon returning to the Karluk system.                          |
|                                             | Central and North Cape sections | June 1 through June 15, based on sockeye salmon returning to Karluk, Ayakulik, and Olga Bay systems. There will be at least two 33-hour commercial test fishing periods. | June 16 through July 5, based on early-run sockeye salmon returning to the Karluk system.                                                                                                                                                                       | July 6 through August 15, based on pink salmon returning to the major systems in the Northwest Kodiak District.                                   | August 16 through August 24, based on pink salmon returning to the Northwest Kodiak District and late-run sockeye salmon returning to the Karluk system.                      | August 25 through September 5, based on late-run sockeye salmon returning to the Northwest Kodiak District.              |
| Northwest Kodiak District                   |                                 | Anton, Larsen, Sheratin, Kizhuyak, Terror, Inner Ugalik, Spiridon, Zachar, Inner Uyak sections                                                                           | June 1 through June 15, based on local sockeye and early-run chum salmon returning to the major systems in each section. There will be at least two 33-hour commercial salmon fishing periods at the same time as those in the Central and North Cape sections. | June 16 through July 5, based on local sockeye and early-run chum salmon returning to the major systems in each section.                          | July 6 through July 31, based on local sockeye, pink, and early-run chum salmon returning to the major systems in each section.                                               | August 1 through August 24, based on local pink and late-run chum salmon returning to the major systems in each section. |
|                                             |                                 |                                                                                                                                                                          | June 16 through July 5, based on local sockeye and early-run chum salmon returning to the major systems in each section.                                                                                                                                        |                                                                                                                                                   | August 25 through September 5, based on local pink, late-run chum, and coho salmon returning to the major salmon systems in each section.                                     | After September 5, based on coho salmon returning to the major systems in each section.                                  |





Appendix B.2. page 2 of 2.

| Southwest Kodiak District         |                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                       |                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Inner and Outer Karluk sections   | June 1 through July 15, based on Karluk early-run sockeye, however fishing periods in the Inner Karluk Section may open only if the department determines that the midpoint early-run escapement goal range will be exceeded.<br>From June 16 through July 15, the Outer Karluk Section shall open at the same time as fishing periods in the Central Section. | July 16 through August 24 in odd years, based on late-run sockeye salmon returning to the Karluk system.                                                                                                              | August 25 through September 5, based on late-run sockeye and coho salmon returning to the Karluk system. |
| Sturgeon Section                  | June 1 through June 22, closed.                                                                                                                                                                                                                                                                                                                                | July 16 through August 24 in odd years, based on late-run sockeye salmon returning to the Karluk System.                                                                                                              | August 25 through September 5, based on coho salmon returning to local systems.                          |
| Halibut Bay Section               | June 1 through June 22, closed.                                                                                                                                                                                                                                                                                                                                | July 16 through July 31 in odd years, based on late-run sockeye salmon returning to the Ayakulik system.<br>August 1 through August 24 in odd years, based on late-run sockeye salmon returning to the Karluk system. | August 25 through September 5, based on coho salmon returning to local systems.                          |
| Inner and Outer Ayakulik sections | June 1 through July 15, based on early-run sockeye salmon returning to the Ayakulik system.                                                                                                                                                                                                                                                                    | July 16 through August 24 in odd years, based on late-run sockeye salmon returning to the Ayakulik system.                                                                                                            | After August 25, based on coho salmon returning to the Ayakulik system.                                  |



Appendix B.3. Eastside Kodiak districts basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| Eastside Kodiak Salmon Management Basis |                                                                  |                                                                                                                                                           |                                                                                                                                                                                        |                                                                                                                                                     |
|-----------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | June                                                             | July                                                                                                                                                      | August                                                                                                                                                                                 | September                                                                                                                                           |
| Northeast Kodiak District               | Outer Chiniak, Inner Chiniak, and the Monashka-Mill Bay sections | June 1 through July 5, closed.                                                                                                                            | July 6 through August 24, based on the abundance of local and mixed pink (and in the Inner Chiniak Section chum) salmon.                                                               | August 25 through Sept 5, based on the abundance of local pink and coho salmon.<br>After Sept 5, based on the abundance of local coho salmon.       |
|                                         | Buskin River Section                                             | June 1 through July 5, closed.                                                                                                                            | July 6 through July 15, based on the abundance of local pink salmon and Buskin Lake sockeye salmon.<br>July 16 through August 24, based on the abundance of local pink and chum salmon | August 25 through Sept 5, based on the abundance of local pink and coho salmon.<br>After Sept 5, based on the abundance of local coho salmon.       |
| Eastside Kodiak District                | Inner Ugak Section                                               | June 1 through June 13, closed.<br>June 14-June 21, based on the abundance of local sockeye salmon. There may not be more than two 33-hr fishing periods. | June 22 through July 5, based on the abundance of local pink chum, and Sallery Lake sockeye salmon.                                                                                    | August 25 through Sept 5, based on the abundance of local pink and coho salmon.<br>After Sept 5, based on the abundance of local coho salmon.       |
|                                         | Outer Ugak Section                                               | June 1 through June 13, closed.                                                                                                                           | June 14-June 21, based on the abundance of local sockeye and mixed salmon to Pasagshak River.                                                                                          | August 25 through Sept 5, based on the abundance of late-run chum and coho salmon.<br>After Sept 5, based on the abundance of local coho salmon.    |
|                                         | Seven Rivers, Two-Headed, and Sitkalidak sections                | June 1 through June 13, closed.                                                                                                                           | June 14 through July 5, based on the abundance of local and mixed sockeye salmon. There may not be more than two 33-hr fishing periods.                                                | August 25 through Sept 5, based on the abundance of local pink, chum and coho salmon.<br>After Sept 5, based on the abundance of local coho salmon. |



Appendix B.4. North Afognak/Shuyak basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| North Afognak/Shuyak Salmon Management Basis |                                                                                                                                                                                                                                                                   |                                                                                                                                  |                                                                                   |                                                                                      |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                              | June                                                                                                                                                                                                                                                              | July                                                                                                                             | August                                                                            | September                                                                            |
| <b>Afognak District</b>                      |                                                                                                                                                                                                                                                                   |                                                                                                                                  |                                                                                   |                                                                                      |
| <b>Northeast Afognak Section</b>             | June 1 through July 5, closed.                                                                                                                                                                                                                                    | July 6 through August 24, based the abundance of local and mixed pink salmon.                                                    | August 25 through September 5, based on local pink and coho salmon.               | After September 5, based on the abundance of local coho salmon.                      |
| <b>Perenosa Bay Section</b>                  | June 1 through July 5, based on sockeye salmon returning to Pauls Bay and Portage Lake.<br>Additional fishing time to harvest sockeye salmon bound to Waterfall Lake will occur in the Waterfall Bay Special Harvest Area only                                    | July 6 through August 20, based on the abundance of local and mixed pink and sockeye salmon bound to Portage Lake and Pauls Bay. | July 21 through August 20, based on the abundance of local and mixed pink salmon. | August 21 through September 5, based on the abundance of local pink and coho salmon. |
| <b>Pauls Bay Section</b>                     | June 1 through July 5, based on sockeye salmon returning to Pauls Bay.                                                                                                                                                                                            | July 6 through August 1, based on the abundance of local and mixed pink salmon and sockeye salmon bound for Pauls Bay.           | After August 1, based on the abundance of Pauls Bay coho salmon.                  |                                                                                      |
| <b>Northwest Afognak Section</b>             | June 1 through July 5, base on sockeye salmon bound to Thorsheim and Long Lagoon. There may not be more than two 33-hour fishing periods.<br>Additional fishing time to harvest sockeye salmon bound for Hidden Lake will occur in Foul Bay Special Harvest Area. | July 6 through August 24, based the abundance of local and mixed pink salmon.                                                    | After August 24, based on the abundance of local coho salmon.                     |                                                                                      |
| <b>Shuyak Island Section</b>                 | June 1 through July 6, closed.                                                                                                                                                                                                                                    | July 6 through August 1, based on the abundance of local and mixed pink salmon.                                                  | After August 1, based on the abundance of local coho salmon.                      |                                                                                      |





Appendix B.5. Eastside Afognak basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| Eastside Afognak Salmon Management Basis                                                                                                           |                                    |                                                                                                                                                                                                                                                                                        |                                                                                                                                                           |                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Afognak District                                                                                                                                   | June                               | July                                                                                                                                                                                                                                                                                   | August                                                                                                                                                    | September                                                                                                                     |
|                                                                                                                                                    | Raspberry Strait Section           | June 1 through July 5, closed.                                                                                                                                                                                                                                                         | July 6 through August 24, based on local and mixed pink salmon runs.                                                                                      | August 25 through the end of the season, based on coho salmon returning to the local systems of Raspberry Strait.             |
|                                                                                                                                                    | Southeast Afognak Section          | June 1 through July 5, based on sockeye salmon returning to Afognak Lake (Litnik).                                                                                                                                                                                                     | From July 6 through August 24, based on pink salmon returning to the major systems of Afognak, Danger, and Marka bays.                                    | After August 24, based on coho salmon returning to the Southeast Afognak Section.                                             |
|                                                                                                                                                    | Duck Bay Section                   | June 1 through July 18, based on early chum or sockeye salmon returns to Kitoi Bay hatchery                                                                                                                                                                                            | July 19 through August 24, based on returning mixed wild and hatchery pink salmon.                                                                        | After August 24, based on local coho salmon runs.                                                                             |
|                                                                                                                                                    | Izhut Bay Section                  | June 1 through July 26, based on early chum or sockeye salmon returning to Kitoi Bay hatchery.                                                                                                                                                                                         | July 27 through August 24, based on mixed wild and hatchery pink salmon.                                                                                  | After August 24, based on local coho salmon and hatchery-bound sockeye or coho salmon runs.                                   |
|                                                                                                                                                    | Inner and Outer Kitoi Bay sections | June 1 through July 26, based on early chum or sockeye salmon returning to Kitoi Bay hatchery.<br>From June 18 through July 26, fishing opportunities will not occur in the Inner Kitoi Bay Section until chum or sockeye salmon broodstock requirements for the hatchery are assured. | July 27 through August 24, based on pink salmon brood stock requirements. Fishing time may only occur if the broodstock requirements are not jeopardized. | After August 24, fishing time may be provided to harvest returning late sockeye and coho salmon that exceed broodstock needs. |
| Throughout the season, fishing time may be restricted in order to meet cost recovery goals for hatchery-bound chum, sockeye, pink, or coho salmon. |                                    |                                                                                                                                                                                                                                                                                        |                                                                                                                                                           |                                                                                                                               |



Appendix B.6. Mainland District basis for commercial salmon fisheries actions, by Section and time period.  
From 2017 Kodiak commercial salmon harvest strategy, 2017 (Anderson and Jackson, 2017)

| Mainland District Salmon Management Basis |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                             |                                                                                                                             |           |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------|
|                                           | June                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | July                                                                                                                                                                        | August                                                                                                                      | September |
| <b>Big River Section</b>                  | June 1 through July 5, based on sockeye salmon returning to Swikshak River. There may not be more than two 33-hr fishing periods.                                                                                                                                                                                                                                                                                                                                                                                                              | July 6 through August 20, based on local and mixed pink and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours.                         | After August 20, based on the return of coho salmon to streams located within the Big River Section.                        |           |
| <b>Hallo Bay Section</b>                  | June 1 through July 5, closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | July 6 through August 20, based on local and mixed pink and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours.                         | After August 20, based on the return of coho salmon to streams located within the Hallo Bay Section.                        |           |
| <b>Outer Kukak Bay Section</b>            | June 1 through July 5, based on sockeye salmon returning to Kafila Lakes. There may not be more than two 33-hr fishing periods.                                                                                                                                                                                                                                                                                                                                                                                                                | July 6 through August 15, based on the return of local and mixed sockeye, pink, and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours. | After August 15, based on late-run chum and coho salmon to streams located in Outer Kukak Section.                          |           |
| <b>Inner Kukak Bay Section</b>            | June 1 through July 5, closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | July 6 through August 15, based on the return of local and mixed sockeye, pink, and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours. | After August 15, based on late-run chum and coho salmon to streams located in Inner Kukak Section.                          |           |
| <b>Dakavak Bay Section</b>                | June 1 through July 5, closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | July 6 through August 25, based on local and mixed pink and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours.                         | After August 25, based on late-run pink and coho salmon returning to streams in the Dakavak Bay Section.                    |           |
| <b>Katmai and Alinchak Bay sections</b>   | June 1 through July 5, closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | July 6 through August 25, based on local and mixed pink and chum salmon.<br>July 6 through July 25, weekly fishing periods may not exceed 57 hours.                         | After August 25, based on local late-run pink and coho salmon returning to streams in the Katmai and Alinchak Bay sections. |           |
| <b>Wide Bay Section</b>                   | June 1 through July 25, closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | July 26 through August 25, based on local and mixed pink and chum salmon.                                                                                                   | After August 25, based on late-run pink and coho salmon returning to the Cape Igvak and Wide Bay sections.                  |           |
| <b>Cape Igvak Section</b>                 | June 1 through July 25, based on sockeye salmon returning to Chignik River. In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik river watershed sockeye salmon is expected to be more than 600,000 and the department determines the runs are as strong as expected, the department will manage the fishery in such a manner whereby the number of sockeye salmon taken in the Cape Igvak Section will approach as near as possible 15 percent of the total Chignik sockeye salmon catch. | July 26 through August 25, based on local and mixed pink and chum salmon.                                                                                                   | After August 25, based on late-run pink and coho salmon returning to the Cape Igvak and Wide Bay sections.                  |           |





### Appendix C. Pink Salmon Weekly Fishing Periods, July 6 through July 31

Excerpts from the preseason Kodiak management area harvest strategy for the 2017 commercial salmon fishery (Anderson and Jackson, 2017):



## Appendix C.1. Pink salmon fishing periods for the 2017 Kodiak commercial salmon fishing season, announced preseason in the Kodiak Management Area Harvest Strategy for the 2017 Commercial Salmon Fishery (Anderson and Jackson, 2017)

### Pink Salmon

In addition to the three management criteria identified in the introduction of this document, the KMA harvest strategy for pink salmon also utilizes

- a fixed opening date (July 6),
- wild stock pink salmon forecasts to set the length of the initial fishing periods, and
- coordination of multiple fisheries, whenever possible, to disperse the purse seine fleet.

The following schedule of pink salmon fishing periods for the 2017 season is provided for industry planning purposes. Changes to the following schedule should be expected if the perceived pink salmon run strength is weaker or stronger than forecasted. No extensions will occur during the first 2 periods. Extensions to later fishing periods may occur depending on run strength.

**First Period:** 105 hours – from noon Thursday, July 6, through 9:00 PM Monday, July 10.

Harvests during this initial period provide important data to assess run strength of KMA pink and chum salmon stocks. In the Mainland District north of Cape Aklek this period will be 57 hours, from noon Thursday, July 6 through 9:00 PM Saturday, July 8. There will be no extension in fishing time following this period.

**Second Period:** 105 hours – from noon Thursday, July 13, through 9:00 PM Monday, July 17.

During the second period, run strength for both pink and chum salmon will again be assessed from harvest data. In the Mainland District north of Cape Aklek this period will be 57 hours, from noon Thursday, July 13 through 9:00 PM Saturday, July 15. There will be no extension in fishing time following this period.

**Third Period:** 105 hours – from noon Thursday, July 20, through 9:00 PM Monday, July 24.

The previous closures will likely allow an influx of pink and chum salmon into terminal closed water areas, resulting in the buildup of potential escapement. At this time, a combination of harvest and early escapement and/or buildup information should provide an indication of the actual run strength for major pink salmon stocks. If the pink salmon run is strong, extensions in fishing time may occur if escapements are sufficient within the systems. In the Mainland District north of Cape Aklek, this period will also be 57 hours, from noon Thursday, July 20, through 9:00 PM Saturday, July 22, but no extensions may occur until after July 25. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay sections, fishery restrictions may occur to meet hatchery cost recovery needs.

**Fourth Period:** 105 hours – from noon Thursday, July 27, through 9:00 PM Monday, July 31.

During this period the run strength should be evident by the end of the period. The pink salmon harvest has traditionally increased during this period. If the pink salmon run is strong, extensions in fishing time will occur. In the Inner or Outer Kitoi Bay, Izhut Bay, or Duck Bay sections, fishery restrictions may occur to meet hatchery cost recovery needs.

Subsequent fishing periods will likely follow the same weekly pattern through August, unless escapement information indicates that an extension or reduction of fishing time is necessary. Fishing time will be based on pink salmon returns to individual systems. Differential fishing time, by management unit, may occur as stronger production areas are targeted, while moderate or lower production areas are provided additional protection. There may be changes in closed water sanctuaries to increase escapement levels or to harvest surplus salmon.

From approximately August 1 through August 24, there will be cost recovery fisheries for the Kitoi Bay Hatchery. These cost recovery fisheries will primarily occur within the Inner Kitoi Bay Section, but may also expand into the Outer Kitoi Bay Section. There may be restricted fishing time in the Izhut Bay and Duck Bay sections during this time period to allow fish to move into the Kitoi Bay sections for cost recovery and broodstock needs.



Appendix D. Kodiak Commercial Salmon Harvest Statistics for the Weekly Periods and Limits Proposed  
by the UCIDA Agenda Change Request (# 11), by Salmon Management Plan, 1985 - 2017



Appendix D.1. Alitak District commercial salmon harvests during the ACR #11 proposed weekly sockeye salmon harvest limit periods, 1985-2017, from the UCIDA Agenda Change Request (#11) and proposed new 'umbrella' Kodiak salmon management plan.

**ALITAK DISTRICT SALMON HARVEST, by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 1-4; 5,000 sockeye/Weekly; 20,000 sockeye/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits    | Landings | Chinook<br>Number Pounds | Sockeye<br>Number Pounds | Coho<br>Number Pounds | Pink<br>Number Pounds | Chum<br>Number Pounds |
|------|--------------------------------------------------|------------|----------|--------------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| 1985 | Week 1: June 25-July 1                           | 95         | 270      | 47 996                   | 57,425                   | 267,962               | 8 52                  | 15,103 57,714         |
|      | Week 2: July 2-July 8                            | 74         | 217      | 33 641                   | 48,211                   | 220,692               | 447 1,689             | 22,667 84,633         |
|      | Week 3: July 9-July 15                           | 14         | 20       | 1 32                     | 1,586                    | 7,432                 | 26 196                | 8,824 33,360          |
|      | Week 4: July 16-July 22                          | 55         | 98       | 13 250                   | 14,038                   | 65,514                | 134 1,017             | 35,444 131,425        |
| 1986 | Week 1: June 25-July 1                           | 36         | 124      | 1 30                     | 35,689                   | 164,844               | 8 67                  | 1 4                   |
|      | Week 2: July 2-July 8                            | 62         | 167      | 4 108                    | 34,444                   | 174,192               | 20 139                | 1,010 3,311           |
|      | Week 3: July 9-July 15                           | 92         | 268      | 43 870                   | 47,340                   | 263,721               | 404 3,152             | 16,214 49,550         |
|      | Week 4: July 16-July 22                          | 99         | 350      | 26 615                   | 60,122                   | 356,548               | 953 7,694             | 58,536 181,316        |
| 1987 | Week 1: June 25-July 1                           | 43         | 133      | 0 0                      | 16,088                   | 87,303                | 0 0                   | 103 320               |
|      | Week 2: July 2-July 8                            | 32         | 82       | 0 0                      | 14,766                   | 80,204                | 4 17                  | 114 412               |
|      | Week 3: July 9-July 15                           | 111        | 262      | 17 340                   | 28,689                   | 181,446               | 113 830               | 48,990 173,376        |
|      | Week 4: July 16-July 22                          | 119        | 294      | 21 613                   | 58,822                   | 378,930               | 197 1,454             | 129,628 451,685       |
| 1988 | Week 1: June 25-July 1                           | 114        | 274      | 95 1,800                 | 80,708                   | 393,338               | 15 114                | 125 434               |
|      | Week 2: July 2-July 8                            | 90         | 211      | 54 1,255                 | 85,624                   | 417,175               | 20 171                | 417 1,295             |
|      | Week 3: July 9-July 15                           | 94         | 356      | 27 665                   | 78,854                   | 454,794               | 145 1,115             | 4,288 14,746          |
|      | Week 4: July 16-July 22                          | 97         | 327      | 39 830                   | 92,369                   | 512,516               | 152 1,149             | 13,730 49,116         |
| 1990 | Week 1: June 25-July 1                           | 173        | 726      | 151 2,790                | 304,923                  | 1,412,997             | 26 226                | 37 106                |
|      | Week 2: July 2-July 8                            | 171        | 628      | 114 1,928                | 211,772                  | 988,269               | 60 444                | 442 1,358             |
|      | Week 3: July 9-July 15                           | 123        | 501      | 60 1,135                 | 104,598                  | 509,345               | 122 975               | 1,505 4,258           |
|      | Week 4: July 16-July 22                          | 99         | 270      | 32 516                   | 70,159                   | 352,122               | 190 1,617             | 5,380 16,652          |
| 1991 | Week 1: June 25-July 1                           | NO FISHERY |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8                            | 158        | 693      | 94 1,650                 | 576,534                  | 2,777,801             | 30 261                | 19,447 52,141         |
|      | Week 3: July 9-July 15                           | 171        | 686      | 245 2,729                | 218,985                  | 1,023,389             | 349 2,203             | 102,131 289,274       |
|      | Week 4: July 16-July 22                          | 128        | 436      | 84 1,410                 | 108,022                  | 560,754               | 716 5,083             | 290,527 817,053       |
| 1992 | Week 1: June 25-July 1                           | 84         | 122      | 40 727                   | 23,415                   | 112,949               | 0 0                   | 46 177                |
|      | Week 2: July 2-July 8                            | 113        | 431      | 104 1,943                | 107,180                  | 547,071               | 30 226                | 2,296 8,652           |
|      | Week 3: July 9-July 15                           | 47         | 49       | 11 223                   | 14,399                   | 82,468                | 11 77                 | 820 3,454             |
|      | Week 4: July 16-July 22                          | 118        | 327      | 86 1,717                 | 117,618                  | 705,054               | 646 4,653             | 19,494 75,108         |
| 1993 | Week 1: June 25-July 1                           | 101        | 228      | 193 3,492                | 136,842                  | 649,825               | 42 310                | 2,240 7,125           |
|      | Week 2: July 2-July 8                            | 121        | 392      | 303 4,834                | 156,960                  | 761,006               | 1,034 5,747           | 28,166 91,285         |
|      | Week 3: July 9-July 15                           | 105        | 459      | 310 4,123                | 112,216                  | 551,252               | 905 5,710             | 85,795 293,107        |
|      | Week 4: July 16-July 22                          | 94         | 233      | 44 750                   | 54,393                   | 278,902               | 687 4,477             | 145,266 498,249       |
| 1994 | Week 1: June 25-July 1                           | 121        | 421      | 338 6,761                | 136,375                  | 638,640               | 55 413                | 2,577 10,419          |
|      | Week 2: July 2-July 8                            | 100        | 261      | 239 4,383                | 104,651                  | 485,132               | 271 2,072             | 8,239 31,672          |
|      | Week 3: July 9-July 15                           | 115        | 478      | 126 2,384                | 136,687                  | 658,050               | 541 3,987             | 35,677 141,720        |
|      | Week 4: July 16-July 22                          | 100        | 259      | 37 914                   | 71,365                   | 350,229               | 176 1,348             | 73,140 304,326        |
| 1995 | Week 1: June 25-July 1                           | 141        | 576      | 80 1,527                 | 205,196                  | 1,021,983             | 40 260                | 15,948 53,346         |
|      | Week 2: July 2-July 8                            | 120        | 319      | 41 742                   | 111,506                  | 553,420               | 41 284                | 54,861 199,144        |
|      | Week 3: July 9-July 15                           | 116        | 509      | 33 652                   | 137,388                  | 706,978               | 244 1,764             | 165,132 643,654       |
|      | Week 4: July 16-July 22                          | 108        | 357      | 18 395                   | 119,958                  | 629,518               | 599 4,107             | 329,512 1,306,399     |
| 1996 | Week 1: June 25-July 1                           | 172        | 575      | 72 1,141                 | 258,596                  | 1,401,012             | 14 119                | 2,167 6,030           |
|      | Week 2: July 2-July 8                            | 119        | 348      | 28 464                   | 117,446                  | 655,722               | 86 585                | 721 2,400             |
|      | Week 3: July 9-July 15                           | 105        | 367      | 44 517                   | 67,694                   | 387,394               | 708 5,456             | 12,275 43,052         |
|      | Week 4: July 16-July 22                          | 93         | 172      | 17 358                   | 36,788                   | 212,693               | 132 1,005             | 15,210 58,204         |
| 1997 | Week 1: June 25-July 1                           | 113        | 325      | 121 2,041                | 44,241                   | 233,828               | 10 67                 | 5,486 17,326          |
|      | Week 2: July 2-July 8                            | 41         | 42       | 0 0                      | 9,029                    | 48,431                | 14 105                | 3,913 15,177          |
|      | Week 3: July 9-July 15                           | 82         | 181      | 23 369                   | 35,379                   | 188,574               | 235 1,520             | 30,928 119,781        |
|      | Week 4: July 16-July 22                          | 92         | 224      | 11 187                   | 35,924                   | 187,243               | 344 2,455             | 49,654 178,409        |
| 1998 | Week 1: June 25-July 1                           | 90         | 209      | 161 2,880                | 62,098                   | 294,050               | 6 56                  | 1,281 3,532           |
|      | Week 2: July 2-July 8                            | 93         | 405      | 148 2,710                | 109,938                  | 517,681               | 54 458                | 3,119 11,177          |
|      | Week 3: July 9-July 15                           | 97         | 303      | 108 2,140                | 70,626                   | 342,882               | 394 3,260             | 19,274 75,031         |
|      | Week 4: July 16-July 22                          | 81         | 210      | 36 788                   | 42,228                   | 209,440               | 353 2,905             | 86,807 342,442        |

- continued -



## Appendix D.1. page 2 of 3

## ALITAK DISTRICT SALMON HARVEST, by ACR #11 proposed management weeks

UCIDA PROPOSED LIMIT = WEEKS 1-4; 5,000 sockeye/Weekly; 20,000 sockeye/5 Week Mid-Season (June 25-July 29)

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits    | Landings | Chinook<br>Number | Pounds | Sockeye<br>Pounds | Number  | Coho<br>Number | Pounds | Pink<br>Number | Pounds    | Chum<br>Number | Pounds  |
|------|--------------------------------------------------|------------|----------|-------------------|--------|-------------------|---------|----------------|--------|----------------|-----------|----------------|---------|
| 1999 | Week 1: June 25-July 1                           | 89         | 270      | 70                | 1,336  | 75,103            | 380,919 | 0              | 0      | 3              | 17        | 2,283          | 20,209  |
|      | Week 2: July 2-July 8                            | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 3: July 9- July 15                          | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 4: July 16-July 22                          | 54         | 75       | 17                | 417    | 21,363            | 112,062 | 83             | 578    | 25,967         | 78,617    | 25,904         | 231,328 |
| 2000 | Week 1: June 25-July 1                           | 99         | 380      | 47                | 744    | 54,502            | 288,083 | 3              | 22     | 15             | 44        | 4,107          | 35,177  |
|      | Week 2: July 2-July 8                            | 83         | 326      | 55                | 1,041  | 64,003            | 363,288 | 54             | 338    | 2,111          | 6,903     | 10,330         | 89,891  |
|      | Week 3: July 9- July 15                          | 70         | 122      | 9                 | 159    | 24,471            | 132,137 | 208            | 1,528  | 3,603          | 11,382    | 9,914          | 86,511  |
|      | Week 4: July 16-July 22                          | 80         | 219      | 12                | 221    | 41,484            | 245,590 | 191            | 1,459  | 18,428         | 62,581    | 14,836         | 132,746 |
| 2001 | Week 1: June 25-July 1                           | 74         | 454      | 154               | 3,221  | 98,141            | 553,048 | 3              | 20     | 6,912          | 26,200    | 4,321          | 39,258  |
|      | Week 2: July 2-July 8                            | 75         | 300      | 65                | 1,403  | 66,868            | 380,286 | 61             | 374    | 34,207         | 132,165   | 4,121          | 38,308  |
|      | Week 3: July 9- July 15                          | 77         | 299      | 104               | 1,981  | 43,605            | 246,059 | 266            | 2,389  | 66,589         | 263,989   | 7,450          | 71,914  |
|      | Week 4: July 16-July 22                          | 75         | 305      | 43                | 1,112  | 42,567            | 241,338 | 159            | 1,117  | 168,095        | 659,563   | 13,307         | 107,178 |
| 2002 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 2: July 2-July 8                            | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 3: July 9- July 15                          | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 4: July 16-July 22                          | 7          | 12       | 0                 | 0      | 2,318             | 13,174  | 65             | 474    | 56,059         | 223,880   | 396            | 3,820   |
| 2003 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 2: July 2-July 8                            | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 3: July 9- July 15                          | 41         | 103      | 7                 | 152    | 28,995            | 171,565 | 159            | 1,130  | 23,520         | 76,737    | 5,074          | 39,868  |
|      | Week 4: July 16-July 22                          | 45         | 122      | 23                | 454    | 30,717            | 171,989 | 241            | 1,557  | 83,333         | 266,595   | 4,371          | 36,002  |
| 2004 | Week 1: June 25-July 1                           | 75         | 432      | 83                | 1,437  | 133,348           | 642,690 | 14             | 82     | 888            | 2,553     | 4,181          | 31,903  |
|      | Week 2: July 2-July 8                            | 70         | 274      | 75                | 1,371  | 70,328            | 351,054 | 415            | 2,466  | 7,866          | 24,086    | 4,200          | 34,157  |
|      | Week 3: July 9- July 15                          | 63         | 280      | 67                | 1,393  | 65,366            | 344,708 | 177            | 1,211  | 16,537         | 50,951    | 3,281          | 26,057  |
|      | Week 4: July 16-July 22                          | 71         | 433      | 91                | 2,061  | 105,505           | 529,523 | 1,753          | 8,339  | 115,927        | 362,799   | 6,661          | 52,701  |
| 2005 | Week 1: June 25-July 1                           | 71         | 287      | 95                | 1,580  | 70,225            | 354,612 | 12             | 80     | 10,046         | 31,249    | 2,239          | 18,554  |
|      | Week 2: July 2-July 8                            | 74         | 312      | 78                | 1,373  | 88,352            | 459,468 | 561            | 4,010  | 54,339         | 187,129   | 2,558          | 20,779  |
|      | Week 3: July 9- July 15                          | 70         | 373      | 61                | 1,361  | 110,200           | 583,692 | 634            | 4,803  | 336,636        | 1,072,974 | 3,447          | 28,388  |
|      | Week 4: July 16-July 22                          | 69         | 435      | 14                | 275    | 98,757            | 531,257 | 301            | 2,062  | 855,012        | 2,836,663 | 2,996          | 23,580  |
| 2006 |                                                  | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
| 2007 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 2: July 2-July 8                            | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 3: July 9- July 15                          | 44         | 155      | 3                 | 44     | 14,200            | 76,707  | 19             | 141    | 9,230          | 34,016    | 1,653          | 14,220  |
|      | Week 4: July 16-July 22                          | 42         | 66       | 7                 | 173    | 10,364            | 61,781  | 81             | 567    | 47,904         | 162,193   | 1,400          | 11,220  |
| 2008 | Week 1: June 25-July 1                           | 65         | 250      | 29                | 625    | 91,988            | 465,368 | 0              | 0      | 673            | 1,981     | 1,163          | 9,801   |
|      | Week 2: July 2-July 8                            | 57         | 266      | 7                 | 240    | 70,860            | 349,227 | 4              | 23     | 2,764          | 8,479     | 1,698          | 13,128  |
|      | Week 3: July 9- July 15                          | 63         | 304      | 26                | 405    | 81,249            | 427,548 | 101            | 724    | 28,330         | 89,060    | 6,378          | 53,761  |
|      | Week 4: July 16-July 22                          | 56         | 268      | 31                | 642    | 46,638            | 251,535 | 207            | 1,499  | 69,760         | 222,027   | 14,252         | 123,587 |
| 2009 | Week 1: June 25-July 1                           | 72         | 340      | 52                | 998    | 91,672            | 519,882 | 7              | 54     | 6,370          | 19,614    | 1,530          | 11,921  |
|      | Week 2: July 2-July 8                            | 68         | 270      | 25                | 465    | 84,761            | 478,315 | 113            | 774    | 28,664         | 88,377    | 3,311          | 26,093  |
|      | Week 3: July 9- July 15                          | 50         | 210      | 18                | 278    | 39,797            | 219,539 | 222            | 1,378  | 42,767         | 133,030   | 2,776          | 22,392  |
|      | Week 4: July 16-July 22                          | 57         | 264      | 42                | 425    | 41,893            | 240,685 | 1,621          | 9,685  | 190,570        | 601,150   | 8,129          | 64,172  |
| 2010 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 2: July 2-July 8                            | 58         | 115      | 10                | 165    | 11,919            | 61,532  | 4              | 28     | 175            | 558       | 960            | 7,921   |
|      | Week 3: July 9- July 15                          | NO FISHERY |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 4: July 16-July 22                          | 54         | 208      | 28                | 521    | 16,483            | 91,561  | 58             | 438    | 15,929         | 60,387    | 4,491          | 41,122  |
| 2011 | Week 1: June 25-July 1                           | 71         | 155      | 160               | 2,363  | 28,050            | 147,676 | 2              | 6      | 1,443          | 4,379     | 2,784          | 18,195  |
|      | Week 2: July 2-July 8                            | 57         | 220      | 1,302             | 8,766  | 47,491            | 252,302 | 54             | 388    | 14,288         | 42,651    | 3,677          | 23,434  |
|      | Week 3: July 9- July 15                          | 73         | 238      | 304               | 3,078  | 60,831            | 365,489 | 287            | 1,835  | 57,127         | 170,706   | 3,947          | 26,670  |
|      | Week 4: July 16-July 22                          | 64         | 225      | 486               | 5,876  | 33,465            | 193,063 | 667            | 4,407  | 197,350        | 620,938   | 5,122          | 36,231  |

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**ALITAK DISTRICT SALMON HARVEST, by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 1-4; 5,000 sockeye/Weekly; 20,000 sockeye/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits    | Landings | Chinook |        | Sockeye<br>Pounds | Number  | Coho   |        | Pink    |           | Chum   | Number  |
|------|--------------------------------------------------|------------|----------|---------|--------|-------------------|---------|--------|--------|---------|-----------|--------|---------|
|      |                                                  |            |          | Number  | Pounds |                   |         | Number | Pounds | Number  | Pounds    |        | Pounds  |
| 2012 | Week 1: June 25-July 1                           | 65         | 151      | 30      | 531    | 31,338            | 173,432 | 2      | 15     | 445     | 1,470     | 622    | 4,867   |
|      | Week 2: July 2-July 8                            | 62         | 216      | 32      | 297    | 44,783            | 266,420 | 6      | 31     | 5,927   | 18,499    | 3,027  | 24,450  |
|      | Week 3: July 9- July 15                          | 73         | 229      | 49      | 566    | 81,901            | 474,594 | 306    | 2,099  | 23,472  | 76,045    | 4,228  | 30,041  |
|      | Week 4: July 16-July 22                          | 71         | 259      | 52      | 648    | 64,294            | 350,560 | 133    | 714    | 95,015  | 294,003   | 4,808  | 34,956  |
| 2013 | Week 1: June 25-July 1                           | 56         | 201      | 102     | 1,422  | 33,727            | 182,561 | 7      | 44     | 6,437   | 18,145    | 1,372  | 10,888  |
|      | Week 2: July 2-July 8                            | 26         | 33       | 45      | 453    | 7,554             | 42,632  | 15     | 93     | 4,861   | 14,557    | 664    | 5,523   |
|      | Week 3: July 9- July 15                          | 68         | 244      | 274     | 2,886  | 35,782            | 215,003 | 507    | 3,016  | 254,508 | 752,713   | 7,320  | 57,980  |
|      | Week 4: July 16-July 22                          | 68         | 206      | 52      | 639    | 13,710            | 81,474  | 102    | 723    | 449,792 | 1,556,717 | 8,756  | 69,919  |
| 2014 | Week 1: June 25-July 1                           | 26         | 150      | 0       | 0      | 21,254            | 102,837 | 1      | 6      | 2       | 6         | 341    | 2,948   |
|      | Week 2: July 2-July 8                            | 67         | 205      | 79      | 622    | 65,882            | 337,263 | 867    | 6,378  | 33,574  | 101,874   | 2,850  | 21,116  |
|      | Week 3: July 9- July 15                          | 65         | 294      | 40      | 501    | 83,276            | 455,061 | 410    | 2,716  | 132,180 | 400,966   | 3,808  | 31,035  |
|      | Week 4: July 16-July 22                          | 73         | 262      | 45      | 693    | 31,415            | 153,624 | 384    | 2,684  | 284,781 | 903,482   | 3,403  | 27,659  |
| 2015 | Week 1: June 25-July 1                           | 76         | 215      | 66      | 598    | 33,335            | 151,167 | 780    | 4,756  | 8,784   | 27,357    | 2,535  | 18,315  |
|      | Week 2: July 2-July 8                            | 49         | 122      | 727     | 7,925  | 29,915            | 130,096 | 3,561  | 22,963 | 205,605 | 638,065   | 4,237  | 33,033  |
|      | Week 3: July 9- July 15                          | 65         | 231      | 482     | 5,345  | 78,418            | 358,559 | 4,005  | 21,801 | 381,807 | 1,213,250 | 5,578  | 43,161  |
|      | Week 4: July 16-July 22                          | 67         | 253      | 126     | 1,723  | 64,834            | 313,384 | 1,619  | 10,509 | 352,530 | 1,113,384 | 4,141  | 31,600  |
| 2016 | Week 1: June 25-July 1                           | 49         | 125      | 109     | 1,123  | 24,241            | 117,684 | 7      | 32     | 90      | 285       | 1,050  | 7,284   |
|      | Week 2: July 2-July 8                            | 45         | 101      | 51      | 557    | 29,727            | 153,777 | 288    | 2,284  | 1,962   | 7,856     | 1,948  | 14,153  |
|      | Week 3: July 9- July 15                          | 48         | 120      | 91      | 985    | 32,899            | 164,554 | 62     | 429    | 7,317   | 30,669    | 1,828  | 13,666  |
|      | Week 4: July 16-July 22                          | 46         | 107      | 83      | 867    | 25,922            | 134,094 | 47     | 364    | 19,376  | 88,407    | 1,436  | 10,679  |
| 2017 | Week 1: June 25-July 1                           | NO FISHERY |          |         |        |                   |         |        |        |         |           |        |         |
|      | Week 2: July 2-July 8                            | NO FISHERY |          |         |        |                   |         |        |        |         |           |        |         |
|      | Week 3: July 9- July 15                          | 50         | 117      | 29      | 469    | 15,870            | 85,847  | 256    | 1,636  | 35,979  | 170,610   | 18,990 | 164,032 |
|      | Week 4: July 16-July 22                          | 49         | 141      | 33      | 618    | 31,310            | 164,134 | 218    | 1,477  | 113,155 | 493,834   | 24,159 | 200,857 |

END



Appendix D.2. Westside Kodiak District commercial salmon harvests during the ACR #11 proposed weekly sockeye salmon harvest limit periods, 1985-2017, from the UCIDA Agenda Change Request (#11) and proposed new 'umbrella' Kodiak salmon management plan.

**WESTSIDE KODIAK SALMON HARVEST (\*Northwest and Southwest Kodiak Districts Combined), by ACR #11 proposed management weeks**  
**UCIDA PROPOSED LIMIT = WEEKS 1-4; 12,500\*/Weekly; 50,000\*/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|------|--------------------------------------------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1985 | Week 1: June 25-July 1                           | 329     | 836      | 1,434             | 26,921            | 187,088           | 876,430           | 25             | 194            | 59,325         | 196,452        | 16,455         | 143,100        |
|      | Week 2: July 2-July 8                            | 295     | 660      | 308               | 5,241             | 73,467            | 375,270           | 76             | 566            | 133,409        | 470,517        | 25,897         | 209,422        |
|      | Week 3: July 9-July 15                           | 263     | 464      | 162               | 2,937             | 36,381            | 188,472           | 432            | 3,018          | 83,787         | 298,402        | 28,687         | 231,848        |
|      | Week 4: July 16-July 22                          | 281     | 549      | 131               | 2,225             | 64,951            | 332,415           | 1,363          | 9,669          | 114,185        | 420,319        | 34,711         | 270,150        |
| 1986 | Week 1: June 25-July 1                           | 323     | 788      | 556               | 7,530             | 136,787           | 677,396           | 63             | 453            | 18,760         | 68,035         | 39,373         | 311,596        |
|      | Week 2: July 2-July 8                            | 306     | 802      | 395               | 4,967             | 99,445            | 516,811           | 1,022          | 6,716          | 145,340        | 526,039        | 65,386         | 496,007        |
|      | Week 3: July 9-July 15                           | 315     | 1,155    | 258               | 3,342             | 148,531           | 821,654           | 5,063          | 34,983         | 592,115        | 2,144,253      | 88,288         | 674,125        |
|      | Week 4: July 16-July 22                          | 340     | 1,420    | 193               | 3,656             | 204,215           | 1,194,202         | 5,690          | 40,823         | 1,524,306      | 5,451,982      | 71,103         | 548,984        |
| 1987 | Week 1: June 25-July 1                           | 220     | 740      | 217               | 2,434             | 81,489            | 438,129           | 73             | 393            | 43,400         | 139,544        | 25,347         | 168,298        |
|      | Week 2: July 2-July 8                            | 274     | 661      | 306               | 2,035             | 41,344            | 228,062           | 278            | 1,670          | 92,623         | 301,694        | 43,594         | 329,769        |
|      | Week 3: July 9-July 15                           | 283     | 671      | 196               | 1,477             | 44,378            | 264,511           | 1,136          | 7,111          | 146,343        | 494,550        | 36,265         | 273,108        |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 248     | 735      | 77                | 2,102             | 152,325           | 1,096,226         | 2,727          | 18,522         | 191,695        | 660,700        | 36,260         | 277,400        |
| 1988 | Week 1: June 25-July 1                           | 330     | 897      | 1,401             | 15,450            | 104,088           | 510,694           | 45             | 306            | 12,996         | 46,249         | 54,773         | 518,949        |
|      | Week 2: July 2-July 8                            | 281     | 701      | 271               | 4,886             | 66,717            | 373,309           | 185            | 1,287          | 76,129         | 299,247        | 89,710         | 855,131        |
|      | Week 3: July 9-July 15                           | 295     | 1,038    | 635               | 8,886             | 205,353           | 1,327,823         | 978            | 6,907          | 244,277        | 937,359        | 67,499         | 609,326        |
|      | Week 4: July 16-July 22                          | 331     | 1,158    | 923               | 13,197            | 124,688           | 777,069           | 6,061          | 43,800         | 645,987        | 2,421,254      | 76,074         | 680,736        |
| 1990 | Week 1: June 25-July 1                           | 122     | 288      | 682               | 8,478             | 161,991           | 749,352           | 2              | 23             | 310            | 784            | 2,311          | 20,596         |
|      | Week 2: July 2-July 8                            | 376     | 995      | 1,172             | 12,516            | 260,096           | 1,355,727         | 624            | 4,498          | 46,592         | 160,722        | 31,790         | 258,218        |
|      | Week 3: July 9-July 15                           | 310     | 851      | 715               | 7,785             | 222,748           | 1,151,279         | 1,644          | 11,845         | 72,896         | 243,075        | 26,485         | 215,076        |
|      | Week 4: July 16-July 22                          | 343     | 1,162    | 546               | 6,506             | 291,438           | 1,560,597         | 4,139          | 30,628         | 179,182        | 583,245        | 24,772         | 191,313        |
| 1991 | Week 1: June 25-July 1 <sup>1</sup>              | 11      | 11       | 6                 | 102               | 13,466            | 64,911            | 0              | 0              | 492            | 1,115          | 280            | 1,816          |
|      | Week 2: July 2-July 8                            | 309     | 784      | 631               | 8,287             | 170,391           | 874,709           | 494            | 3,269          | 97,892         | 278,805        | 16,612         | 118,736        |
|      | Week 3: July 9-July 15                           | 317     | 1,161    | 617               | 6,881             | 230,267           | 1,215,504         | 3,690          | 21,954         | 325,279        | 955,066        | 30,550         | 211,351        |
|      | Week 4: July 16-July 22                          | 352     | 1,312    | 847               | 9,554             | 303,273           | 1,634,583         | 8,293          | 53,922         | 775,961        | 2,297,514      | 33,666         | 245,122        |
| 1992 | Week 1: June 25-July 1                           | 359     | 1,072    | 1,160             | 12,511            | 173,626           | 844,262           | 87             | 565            | 19,698         | 78,283         | 31,608         | 225,744        |
|      | Week 2: July 2-July 8                            | 285     | 1,110    | 1,014             | 11,833            | 293,740           | 1,607,527         | 848            | 5,602          | 94,124         | 364,858        | 53,245         | 386,632        |
|      | Week 3: July 9-July 15                           | 406     | 1,159    | 474               | 7,119             | 494,529           | 3,173,071         | 2,200          | 15,024         | 140,864        | 548,009        | 43,659         | 337,856        |
|      | Week 4: July 16-July 22                          | 224     | 666      | 431               | 5,958             | 131,617           | 843,997           | 4,358          | 30,213         | 186,597        | 730,978        | 32,305         | 252,330        |
| 1993 | Week 1: June 25-July 1                           | 377     | 1,473    | 3,550             | 39,582            | 476,978           | 2,311,072         | 1,025          | 6,004          | 116,615        | 379,250        | 50,447         | 286,781        |
|      | Week 2: July 2-July 8                            | 320     | 1,259    | 2,384             | 26,886            | 362,935           | 1,876,213         | 5,656          | 32,230         | 312,894        | 1,038,676      | 39,173         | 227,169        |
|      | Week 3: July 9-July 15                           | 251     | 925      | 1,044             | 13,160            | 254,077           | 1,451,329         | 6,058          | 38,033         | 409,250        | 1,399,735      | 22,767         | 138,371        |
|      | Week 4: July 16-July 22                          | 253     | 826      | 621               | 8,250             | 88,316            | 505,485           | 10,793         | 69,857         | 672,919        | 2,319,462      | 16,621         | 103,071        |
| 1994 | Week 1: June 25-July 1                           | 210     | 800      | 1,515             | 22,422            | 120,355           | 559,182           | 260            | 1,800          | 19,436         | 73,612         | 33,181         | 232,976        |
|      | Week 2: July 2-July 8                            | 202     | 836      | 1,534             | 21,348            | 131,131           | 626,475           | 4,363          | 30,808         | 214,429        | 795,494        | 58,143         | 402,615        |
|      | Week 3: July 9-July 15                           | 229     | 619      | 747               | 11,996            | 66,611            | 340,505           | 7,093          | 51,770         | 414,980        | 1,589,104      | 43,336         | 329,895        |
|      | Week 4: July 16-July 22                          | 285     | 714      | 510               | 8,634             | 87,503            | 435,061           | 3,118          | 24,214         | 666,882        | 2,651,128      | 45,323         | 356,744        |
| 1995 | Week 1: June 25-July 1                           | 268     | 967      | 1,727             | 23,464            | 190,715           | 975,170           | 163            | 1,027          | 146,660        | 512,055        | 49,689         | 373,485        |
|      | Week 2: July 2-July 8                            | 296     | 1,143    | 1,414             | 18,441            | 293,016           | 1,508,960         | 897            | 5,860          | 467,606        | 1,622,807      | 97,985         | 750,010        |
|      | Week 3: July 9-July 15                           | 348     | 1,094    | 663               | 9,170             | 205,694           | 1,056,273         | 4,823          | 33,185         | 1,032,043      | 3,570,766      | 104,452        | 793,104        |
|      | Week 4: July 16-July 22                          | 289     | 816      | 436               | 7,616             | 94,092            | 477,954           | 4,097          | 29,196         | 1,447,165      | 5,050,652      | 116,423        | 860,742        |
| 1996 | Week 1: June 25-July 1                           | 218     | 859      | 1,177             | 11,893            | 199,423           | 1,101,400         | 118            | 817            | 28,876         | 93,688         | 34,955         | 295,931        |
|      | Week 2: July 2-July 8                            | 246     | 922      | 1,140             | 11,596            | 244,528           | 1,385,464         | 914            | 5,925          | 85,285         | 277,689        | 62,596         | 533,586        |
|      | Week 3: July 9-July 15                           | 240     | 739      | 196               | 2,605             | 457,674           | 2,686,703         | 1,119          | 7,961          | 152,411        | 506,162        | 37,092         | 294,265        |
|      | Week 4: July 16-July 22                          | 235     | 483      | 268               | 2,506             | 155,664           | 895,448           | 2,317          | 17,371         | 153,772        | 535,264        | 64,625         | 527,642        |
| 1997 | Week 1: June 25-July 1                           | 246     | 1,027    | 2,000             | 25,957            | 211,771           | 1,096,160         | 81             | 544            | 65,457         | 200,691        | 9,906          | 75,145         |
|      | Week 2: July 2-July 8                            | 244     | 987      | 1,047             | 10,272            | 214,083           | 1,137,987         | 895            | 6,345          | 107,602        | 366,127        | 16,099         | 118,931        |
|      | Week 3: July 9-July 15                           | 217     | 392      | 511               | 4,687             | 77,225            | 406,628           | 909            | 6,451          | 140,476        | 486,824        | 10,783         | 83,627         |
|      | Week 4: July 16-July 22                          | 209     | 503      | 983               | 9,339             | 85,439            | 454,079           | 2,748          | 20,372         | 217,402        | 779,350        | 22,052         | 184,002        |
| 1998 | Week 1: June 25-July 1                           | 229     | 941      | 1,574             | 21,951            | 246,079           | 1,172,099         | 473            | 3,430          | 47,805         | 162,469        | 20,207         | 154,452        |
|      | Week 2: July 2-July 8                            | 221     | 970      | 1,181             | 16,193            | 309,097           | 1,523,439         | 3,589          | 27,590         | 163,164        | 572,711        | 25,678         | 202,011        |
|      | Week 3: July 9-July 15                           | 204     | 538      | 560               | 10,592            | 191,978           | 976,672           | 5,584          | 43,218         | 268,147        | 984,255        | 11,409         | 94,220         |
|      | Week 4: July 16-July 22                          | 216     | 529      | 678               | 11,186            | 112,323           | 570,247           | 10,956         | 82,989         | 760,274        | 2,941,003      | 16,154         | 135,294        |

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**WESTSIDE KODIAK SALMON HARVEST (\*Northwest and Southwest Kodiak Districts Combined), by ACR #11 proposed management weeks****UCIDA PROPOSED LIMIT = WEEKS 1-4; 12,500\*/Weekly; 50,000\*/5 Week Mid-Season (June 25-July 29)****Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits    | Landings | Chinook |        | Sockeye |           | Coho   |         | Pink    |           | Chum   |         |
|------|--------------------------------------------------|------------|----------|---------|--------|---------|-----------|--------|---------|---------|-----------|--------|---------|
|      |                                                  |            |          | Number  | Pounds | Number  | Pounds    | Number | Pounds  | Number  | Pounds    | Number | Pounds  |
| 1999 | Week 1: June 25-July 1                           | 258        | 920      | 1,112   | 16,066 | 263,355 | 1,361,857 | 32     | 213     | 3,213   | 9,582     | 31,888 | 233,509 |
|      | Week 2: July 2-July 8                            | 218        | 851      | 1,223   | 14,598 | 267,851 | 1,408,095 | 269    | 1,737   | 22,459  | 68,164    | 27,946 | 211,149 |
|      | Week 3: July 9- July 15                          | 202        | 604      | 419     | 4,607  | 196,616 | 1,041,423 | 861    | 5,587   | 50,053  | 152,168   | 23,942 | 182,680 |
|      | Week 4: July 16-July 22                          | 205        | 445      | 207     | 2,852  | 131,777 | 711,082   | 1,808  | 12,357  | 133,296 | 416,376   | 23,555 | 196,184 |
| 2000 | Week 1: June 25-July 1                           | 254        | 871      | 1,026   | 16,220 | 182,725 | 1,022,453 | 38     | 279     | 11,437  | 34,524    | 46,820 | 389,575 |
|      | Week 2: July 2-July 8                            | 214        | 757      | 494     | 6,399  | 147,639 | 844,355   | 388    | 2,809   | 54,544  | 168,729   | 50,183 | 421,000 |
|      | Week 3: July 9- July 15                          | 184        | 366      | 248     | 3,779  | 103,374 | 653,701   | 3,187  | 22,661  | 106,814 | 351,422   | 33,932 | 282,198 |
|      | Week 4: July 16-July 22                          | 209        | 488      | 176     | 3,037  | 76,348  | 460,046   | 6,571  | 49,017  | 368,515 | 1,203,021 | 46,347 | 387,998 |
| 2001 | Week 1: June 25-July 1                           | 198        | 795      | 949     | 13,997 | 217,464 | 1,176,313 | 97     | 658     | 53,068  | 170,644   | 36,632 | 304,063 |
|      | Week 2: July 2-July 8                            | 173        | 684      | 383     | 6,048  | 138,907 | 795,039   | 756    | 5,116   | 116,956 | 406,239   | 55,248 | 494,985 |
|      | Week 3: July 9- July 15                          | 138        | 306      | 248     | 2,568  | 55,546  | 314,908   | 10,709 | 70,031  | 165,184 | 599,124   | 42,616 | 384,532 |
|      | Week 4: July 16-July 22                          | 162        | 371      | 212     | 2,804  | 61,815  | 354,880   | 5,360  | 36,654  | 376,805 | 1,302,637 | 52,464 | 455,840 |
| 2002 | Week 1: June 25-July 1                           | 155        | 451      | 2,082   | 17,406 | 108,226 | 622,827   | 67     | 470     | 56,491  | 198,725   | 32,791 | 255,394 |
|      | Week 2: July 2-July 8                            | 127        | 466      | 921     | 7,738  | 105,146 | 620,091   | 601    | 4,440   | 138,930 | 523,804   | 22,618 | 174,195 |
|      | Week 3: July 9- July 15                          | 114        | 250      | 435     | 4,831  | 67,499  | 386,351   | 5,644  | 40,897  | 351,877 | 1,340,739 | 13,236 | 107,809 |
|      | Week 4: July 16-July 22                          | 145        | 319      | 572     | 6,155  | 54,352  | 319,758   | 17,924 | 138,918 | 697,205 | 2,546,396 | 22,574 | 180,814 |
| 2003 | Week 1: June 25-July 1                           | 141        | 578      | 454     | 5,026  | 235,435 | 1,250,111 | 141    | 854     | 75,239  | 242,438   | 37,715 | 274,074 |
|      | Week 2: July 2-July 8                            | 120        | 526      | 281     | 3,205  | 159,435 | 842,545   | 899    | 6,165   | 127,765 | 439,619   | 26,267 | 193,951 |
|      | Week 3: July 9- July 15                          | 139        | 357      | 201     | 2,568  | 129,611 | 693,963   | 3,624  | 25,405  | 226,144 | 812,859   | 19,781 | 139,425 |
|      | Week 4: July 16-July 22 <sup>1</sup>             | 155        | 514      | 281     | 4,574  | 228,051 | 1,288,780 | 6,102  | 42,556  | 595,087 | 2,100,420 | 43,444 | 316,402 |
| 2004 | Week 1: June 25-July 1                           | 155        | 634      | 1,302   | 14,794 | 151,142 | 819,503   | 760    | 5,760   | 12,416  | 38,561    | 24,821 | 198,554 |
|      | Week 2: July 2-July 8                            | 170        | 725      | 1,458   | 17,166 | 290,641 | 1,599,338 | 1,814  | 13,662  | 162,719 | 526,631   | 73,943 | 594,785 |
|      | Week 3: July 9- July 15                          | 175        | 702      | 712     | 8,969  | 277,999 | 1,546,657 | 10,926 | 79,385  | 306,861 | 1,075,933 | 56,144 | 446,683 |
|      | Week 4: July 16-July 22                          | 160        | 547      | 473     | 7,436  | 109,973 | 601,744   | 15,358 | 103,645 | 745,394 | 2,804,047 | 70,161 | 551,908 |
| 2005 | Week 1: June 25-July 1                           | 118        | 402      | 467     | 5,188  | 46,396  | 242,460   | 760    | 4,871   | 65,073  | 231,329   | 15,044 | 116,262 |
|      | Week 2: July 2-July 8                            | 134        | 533      | 836     | 9,624  | 81,823  | 425,466   | 3,972  | 23,709  | 289,974 | 1,019,591 | 22,153 | 175,998 |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 144        | 544      | 413     | 5,894  | 113,478 | 637,001   | 5,166  | 36,355  | 644,482 | 2,295,657 | 43,098 | 350,838 |
|      | Week 4: July 16-July 22                          | 137        | 457      | 888     | 13,404 | 91,702  | 501,770   | 6,132  | 42,840  | 685,267 | 2,395,794 | 34,879 | 288,670 |
| 2006 | Week 1: June 25-July 1                           | 130        | 500      | 2,286   | 19,017 | 94,048  | 470,562   | 646    | 4,304   | 15,544  | 55,257    | 33,057 | 294,422 |
|      | Week 2: July 2-July 8                            | 131        | 522      | 1,018   | 9,264  | 90,348  | 439,967   | 2,030  | 13,672  | 66,717  | 243,494   | 36,679 | 333,272 |
|      | Week 3: July 9- July 15                          | 149        | 483      | 664     | 6,394  | 64,748  | 345,158   | 3,209  | 22,906  | 292,071 | 1,106,657 | 56,298 | 505,223 |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 138        | 500      | 358     | 3,979  | 49,888  | 259,297   | 3,791  | 28,381  | 682,565 | 2,767,722 | 48,661 | 439,040 |
| 2007 | Week 1: June 25-July 1                           | 129        | 425      | 993     | 8,540  | 84,927  | 460,837   | 143    | 955     | 25,533  | 82,166    | 13,801 | 97,129  |
|      | Week 2: July 2-July 8                            | 123        | 437      | 524     | 5,223  | 58,348  | 326,763   | 1,123  | 7,047   | 88,675  | 322,743   | 20,625 | 156,665 |
|      | Week 3: July 9- July 15                          | 140        | 433      | 406     | 3,870  | 97,314  | 557,204   | 3,278  | 21,133  | 284,310 | 997,408   | 25,312 | 206,537 |
|      | Week 4: July 16-July 22                          | 152        | 500      | 529     | 4,524  | 98,264  | 567,218   | 5,636  | 39,647  | 565,506 | 1,941,847 | 22,412 | 163,391 |
| 2008 | Week 1: June 25-July 1                           | NO FISHERY |          |         |        |         |           |        |         |         |           |        |         |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 103        | 200      | 878     | 6,494  | 74,428  | 431,175   | 1,276  | 8,159   | 53,030  | 204,389   | 13,458 | 112,961 |
|      | Week 3: July 9- July 15 <sup>1</sup>             | 101        | 218      | 422     | 2,203  | 47,064  | 271,494   | 2,539  | 17,484  | 98,465  | 376,711   | 27,790 | 262,703 |
|      | Week 4: July 16-July 22 <sup>1</sup>             | 104        | 248      | 1,309   | 8,927  | 55,535  | 321,863   | 2,049  | 14,223  | 172,665 | 630,218   | 32,779 | 297,777 |
| 2009 | Week 1: June 25-July 1                           | NO FISHERY |          |         |        |         |           |        |         |         |           |        |         |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 100        | 227      | 86      | 1,020  | 71,940  | 419,216   | 260    | 1,851   | 92,726  | 332,564   | 20,087 | 153,991 |
|      | Week 3: July 9- July 15 <sup>1</sup>             | 103        | 383      | 146     | 1,285  | 54,414  | 323,137   | 3,102  | 19,326  | 194,232 | 678,135   | 32,034 | 237,838 |
|      | Week 4: July 16-July 22                          | 141        | 459      | 182     | 1,951  | 92,665  | 533,817   | 4,887  | 33,730  | 494,009 | 1,698,767 | 50,545 | 380,662 |
| 2010 | Week 1: June 25-July 1                           | NO FISHERY |          |         |        |         |           |        |         |         |           |        |         |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 103        | 210      | 240     | 2,542  | 41,521  | 226,393   | 516    | 3,261   | 25,626  | 89,089    | 31,360 | 274,159 |
|      | Week 3: July 9- July 15                          | 130        | 264      | 428     | 3,784  | 127,597 | 690,479   | 1,175  | 8,497   | 135,112 | 459,949   | 33,227 | 276,345 |
|      | Week 4: July 16-July 22                          | 163        | 433      | 652     | 5,500  | 177,963 | 971,882   | 3,829  | 27,528  | 470,392 | 1,672,530 | 39,511 | 310,153 |
| 2011 | Week 1: June 25-July 1                           | NO FISHERY |          |         |        |         |           |        |         |         |           |        |         |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 87         | 186      | 320     | 3,279  | 57,059  | 330,513   | 444    | 2,537   | 6,776   | 20,858    | 9,065  | 65,065  |
|      | Week 3: July 9- July 15                          | 112        | 320      | 612     | 6,190  | 105,161 | 612,303   | 2,105  | 13,644  | 27,807  | 93,283    | 20,410 | 151,415 |
|      | Week 4: July 16-July 22                          | 125        | 363      | 1,337   | 12,063 | 125,147 | 700,598   | 5,734  | 37,257  | 86,711  | 273,981   | 32,982 | 235,484 |

- continued -



Appendix D.2. page 3 of 3

**WESTSIDE KODIAK SALMON HARVEST (\*Northwest and Southwest Kodiak Districts Combined), by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 1-4; 12,500\*/Weekly; 50,000\*/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits | Landings | Chinook |        | Sockeye |           | Coho   |         | Pink    |           | Chum   |         |
|------|--------------------------------------------------|---------|----------|---------|--------|---------|-----------|--------|---------|---------|-----------|--------|---------|
|      |                                                  |         |          | Number  | Pounds | Number  | Pounds    | Number | Pounds  | Number  | Pounds    | Number | Pounds  |
| 2012 | Week 1: June 25-July 1                           | 127     | 376      | 164     | 1,469  | 83,044  | 440,878   | 6      | 34      | 9,584   | 35,616    | 13,777 | 112,173 |
|      | Week 2: July 2-July 8                            | 109     | 387      | 105     | 1,083  | 83,155  | 488,818   | 163    | 955     | 40,673  | 157,324   | 31,100 | 269,654 |
|      | Week 3: July 9- July 15                          | 137     | 258      | 318     | 2,190  | 113,417 | 615,740   | 1,951  | 10,319  | 133,058 | 493,755   | 41,628 | 367,249 |
|      | Week 4: July 16-July 22                          | 146     | 351      | 227     | 1,911  | 61,567  | 343,610   | 1,663  | 10,597  | 457,947 | 1,679,858 | 46,576 | 375,898 |
| 2013 | Week 1: June 25-July 1                           | 155     | 436      | 1,081   | 8,581  | 133,109 | 717,162   | 32     | 185     | 20,234  | 62,884    | 24,297 | 193,009 |
|      | Week 2: July 2-July 8                            | 148     | 483      | 1,645   | 11,847 | 167,232 | 961,332   | 540    | 3,202   | 94,618  | 283,322   | 58,494 | 488,277 |
|      | Week 3: July 9- July 15                          | 155     | 271      | 1,217   | 8,398  | 100,757 | 605,762   | 1,385  | 8,862   | 236,516 | 714,883   | 33,982 | 263,850 |
|      | Week 4: July 16-July 22                          | 138     | 296      | 708     | 5,244  | 69,048  | 403,573   | 1,958  | 13,066  | 361,415 | 1,171,933 | 20,598 | 163,385 |
| 2014 | Week 1: June 25-July 1                           | 166     | 460      | 569     | 3,922  | 80,195  | 417,524   | 510    | 3,134   | 8,396   | 27,517    | 16,206 | 129,532 |
|      | Week 2: July 2-July 8                            | 140     | 406      | 249     | 1,814  | 83,662  | 437,637   | 3,102  | 20,121  | 37,876  | 123,239   | 12,584 | 102,571 |
|      | Week 3: July 9- July 15                          | 195     | 403      | 490     | 3,103  | 194,536 | 1,030,911 | 6,661  | 42,542  | 138,668 | 455,967   | 21,369 | 162,148 |
|      | Week 4: July 16-July 22                          | 168     | 452      | 268     | 2,150  | 148,058 | 775,986   | 7,807  | 54,267  | 372,900 | 1,259,907 | 21,599 | 177,088 |
| 2015 | Week 1: June 25-July 1                           | 183     | 488      | 1,000   | 7,105  | 62,850  | 292,516   | 16,823 | 101,856 | 45,704  | 148,480   | 45,397 | 305,826 |
|      | Week 2: July 2-July 8                            | 177     | 504      | 814     | 6,898  | 112,451 | 526,457   | 27,838 | 171,338 | 456,803 | 1,531,989 | 66,580 | 499,609 |
|      | Week 3: July 9- July 15                          | 172     | 345      | 261     | 3,035  | 263,676 | 1,256,230 | 21,265 | 116,390 | 668,266 | 2,092,351 | 48,991 | 355,582 |
|      | Week 4: July 16-July 22                          | 193     | 520      | 317     | 3,739  | 229,860 | 1,137,774 | 14,816 | 93,664  | 925,807 | 2,979,632 | 70,011 | 491,576 |
| 2016 | Week 1: June 25-July 1                           | 75      | 174      | 161     | 1,363  | 18,621  | 96,738    | 504    | 2,809   | 1,495   | 5,398     | 6,705  | 45,282  |
|      | Week 2: July 2-July 8                            | 137     | 393      | 516     | 4,315  | 90,556  | 455,006   | 2,435  | 15,282  | 35,281  | 127,378   | 35,115 | 241,254 |
|      | Week 3: July 9- July 15                          | 151     | 316      | 423     | 3,460  | 130,745 | 680,841   | 4,325  | 27,184  | 85,815  | 349,657   | 26,291 | 190,110 |
|      | Week 4: July 16-July 22                          | 124     | 220      | 206     | 1,784  | 82,228  | 435,288   | 2,388  | 15,279  | 119,968 | 520,986   | 12,940 | 93,415  |
| 2017 | Week 1: June 25-July 1                           | 142     | 402      | 175     | 1,364  | 85,637  | 455,162   | 48     | 279     | 18,501  | 67,699    | 36,946 | 288,733 |
|      | Week 2: July 2-July 8                            | 142     | 438      | 349     | 2,901  | 94,355  | 503,977   | 1,022  | 6,273   | 76,406  | 317,235   | 65,230 | 527,851 |
|      | Week 3: July 9- July 15                          | 143     | 416      | 216     | 1,739  | 93,678  | 501,660   | 1,318  | 8,478   | 303,155 | 1,276,149 | 81,621 | 674,207 |
|      | Week 4: July 16-July 22                          | 161     | 513      | 483     | 4,170  | 89,245  | 484,780   | 5,506  | 35,840  | 940,289 | 3,812,177 | 71,096 | 541,967 |

END



Appendix D.3. Eastside Kodiak District commercial salmon harvests during the ACR #11 proposed weekly sockeye salmon harvest limit periods, 1985-2017, from the UCIDA Agenda Change Request (#11) and proposed new 'umbrella' Kodiak salmon management plan.

**EASTSIDE KODIAK SALMON HARVEST (\* Eastside and Northeast Kodiak Districts Combined), by ACR #11 proposed management weeks**  
**UCIDA PROPOSED LIMIT = WEEKS 1-5; 5,000\*/Weekly; 20,000\*/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits      | Landings | Chinook<br>Number Pounds | Sockeye<br>Number Pounds | Coho<br>Number Pounds | Pink<br>Number Pounds | Chum<br>Number Pounds |
|------|--------------------------------------------------|--------------|----------|--------------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| 1985 | Week 1: June 25-July 1 <sup>1</sup>              | 10           | 10       | 1 20                     | 2,298 12,237             | 0 0                   | 56 206                | 12 99                 |
|      | Week 2: July 2-July 8                            | 25           | 35       | 18 423                   | 4,791 21,521             | 4 73                  | 6,503 23,415          | 945 8,375             |
|      | Week 3: July 9-July 15                           | 14           | 19       | 26 522                   | 2,965 14,504             | 197 1,409             | 2,052 7,184           | 1,586 14,482          |
|      | Week 4: July 16-July 22                          | 22           | 31       | 10 166                   | 2,618 13,229             | 45 345                | 5,528 20,522          | 4,939 32,892          |
|      | Week 5: July 23-July 29                          | 37           | 55       | 21 503                   | 2,108 10,291             | 35 234                | 17,835 67,809         | 5,577 42,585          |
| 1986 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8 <sup>2</sup>               | 16           | 28       | 50 791                   | 8,642 53,921             | 3 30                  | 655 2,186             | 1,108 7,846           |
|      | Week 3: July 9-July 15                           | 31           | 64       | 58 899                   | 12,600 78,479            | 105 810               | 6,012 21,383          | 4,687 35,138          |
|      | Week 4: July 16-July 22                          | 23           | 54       | 54 632                   | 8,432 57,101             | 163 1,079             | 31,825 107,593        | 7,323 57,424          |
|      | Week 5: July 23-July 29                          | 21           | 54       | 25 323                   | 4,573 28,177             | 193 1,404             | 25,088 85,591         | 9,666 77,728          |
| 1987 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8                            | 21           | 34       | 69 639                   | 1,441 7,063              | 1 6                   | 1,980 7,080           | 1,351 8,077           |
|      | Week 3: July 9-July 15                           | 19           | 51       | 92 613                   | 3,408 21,139             | 246 1,514             | 11,725 42,590         | 2,791 17,603          |
|      | Week 4: July 16-July 22                          | 39           | 94       | 154 1,081                | 8,944 59,038             | 423 2,885             | 41,297 150,750        | 6,757 48,072          |
|      | Week 5: July 23-July 29                          | 48           | 97       | 31 327                   | 1,905 10,051             | 287 2,013             | 128,037 459,298       | 7,333 56,148          |
| 1988 | Week 1: June 25-July 1 <sup>1</sup>              | 6            | 6        | 43 842                   | 1,942 11,488             | 5 24                  | 40 178                | 215 2,173             |
|      | Week 2: July 2-July 8                            | 29           | 51       | 299 4,260                | 10,725 67,012            | 25 184                | 1,112 4,158           | 7,604 71,971          |
|      | Week 3: July 9-July 15                           | 48           | 138      | 786 11,795               | 45,727 302,200           | 5,318 35,777          | 20,706 72,880         | 32,409 277,064        |
|      | Week 4: July 16-July 22                          | 43           | 114      | 312 4,710                | 5,368 31,859             | 519 4,019             | 31,043 112,127        | 44,818 423,839        |
|      | Week 5: July 23-July 29                          | 53           | 157      | 135 1,899                | 4,265 22,881             | 625 4,694             | 129,420 473,964       | 33,621 296,793        |
| 1990 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 41           | 89       | 566 3,595                | 27,408 170,324           | 3,058 20,888          | 2,813 7,719           | 10,902 71,084         |
|      | Week 3: July 9-July 15 <sup>1</sup>              | 42           | 70       | 219 1,635                | 16,573 107,924           | 3,886 24,826          | 21,224 63,109         | 12,282 86,624         |
|      | Week 4: July 16-July 22                          | 55           | 113      | 573 4,462                | 21,271 129,091           | 6,245 40,050          | 17,740 52,715         | 8,004 58,172          |
|      | Week 5: July 23-July 29                          | 48           | 108      | 191 2,015                | 11,653 66,971            | 2,810 18,021          | 35,550 106,003        | 9,643 72,520          |
| 1991 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8 <sup>2</sup>               | 45           | 67       | 653 5,155                | 45,535 221,813           | 1,479 8,830           | 67,504 156,242        | 30,667 173,541        |
|      | Week 3: July 9-July 15                           | 112          | 274      | 1,875 11,221             | 104,404 537,592          | 19,077 106,086        | 313,351 773,280       | 70,341 400,316        |
|      | Week 4: July 16-July 22                          | 93           | 197      | 395 3,442                | 42,717 221,393           | 13,505 78,149         | 345,749 904,301       | 19,131 119,406        |
|      | Week 5: July 23-July 29                          | 136          | 321      | 305 4,136                | 28,702 146,980           | 5,559 33,808          | 1,023,916 2,818,465   | 25,762 182,563        |
| 1992 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8                            | 60           | 110      | 153 2,293                | 60,744 397,883           | 1,262 7,931           | 9,413 35,023          | 22,529 148,868        |
|      | Week 3: July 9-July 15                           | 127          | 242      | 537 7,507                | 334,383 2,117,060        | 13,402 93,948         | 81,110 303,279        | 68,403 444,996        |
|      | Week 4: July 16-July 22                          | 207          | 376      | 759 10,853               | 179,071 1,124,435        | 17,899 117,746        | 100,593 383,195       | 62,023 390,603        |
|      | Week 5: July 23-July 29 <sup>2</sup>             | 84           | 144      | 346 5,581                | 40,133 230,757           | 15,088 101,964        | 111,100 418,005       | 14,214 101,726        |
| 1993 | Week 1: June 25-July 1                           | Confidential |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8                            | 116          | 210      | 1,840 20,872             | 101,733 545,870          | 16,082 91,656         | 86,852 252,135        | 5,200 29,236          |
|      | Week 3: July 9-July 15                           | 113          | 289      | 3,824 33,467             | 91,308 483,093           | 23,191 135,477        | 121,851 360,249       | 4,410 23,149          |
|      | Week 4: July 16-July 22                          | 74           | 194      | 670 8,247                | 42,739 220,063           | 10,742 61,323         | 365,104 1,097,042     | 6,566 36,787          |
|      | Week 5: July 23-July 29                          | 91           | 219      | 304 4,691                | 19,092 96,458            | 4,803 31,023          | 652,107 1,956,273     | 5,803 36,776          |
| 1994 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8                            | 80           | 134      | 726 7,646                | 30,006 147,905           | 9,252 62,210          | 24,953 82,935         | 45,084 284,064        |
|      | Week 3: July 9-July 15                           | 58           | 112      | 269 3,470                | 41,954 216,882           | 9,093 65,854          | 35,288 120,930        | 17,005 123,035        |
|      | Week 4: July 16-July 22                          | 34           | 71       | 33 599                   | 7,775 39,540             | 1,778 13,995          | 35,353 153,924        | 4,169 32,870          |
|      | Week 5: July 23-July 29                          | 36           | 90       | 103 1,938                | 10,938 51,234            | 1,652 8,502           | 152,810 634,571       | 10,597 83,808         |
| 1995 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 22           | 25       | 78 1,149                 | 9,414 50,229             | 211 1,349             | 5,986 19,753          | 2,819 20,787          |
|      | Week 3: July 9-July 15 <sup>2</sup>              | 98           | 193      | 503 7,252                | 100,766 552,635          | 10,196 67,577         | 240,009 805,509       | 51,286 371,815        |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 66           | 153      | 302 3,054                | 35,992 184,462           | 5,181 36,044          | 387,509 1,293,189     | 19,912 154,902        |
|      | Week 5: July 23-July 29                          | 46           | 135      | 99 2,203                 | 19,902 97,681            | 776 5,067             | 383,546 1,360,860     | 18,210 149,036        |
| 1996 | Week 1: June 25-July 1                           | NO FISHERY   |          |                          |                          |                       |                       |                       |
|      | Week 2: July 2-July 8 <sup>2</sup>               | 36           | 54       | 380 4,083                | 40,406 238,230           | 4,597 32,197          | 6,471 21,725          | 12,546 95,787         |
|      | Week 3: July 9-July 15 <sup>1</sup>              | 18           | 18       | 161 1,125                | 6,251 42,238             | 1,044 7,199           | 1,023 3,510           | 2,682 24,282          |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 16           | 20       | 8 182                    | 2,623 14,658             | 564 4,097             | 1,259 4,553           | 2,905 26,159          |
|      | Week 5: July 23-July 29 <sup>2</sup>             | 14           | 17       | 47 429                   | 3,778 20,514             | 1,155 8,909           | 9,754 36,480          | 4,247 32,877          |





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**EASTSIDE KODIAK SALMON HARVEST (\* Eastside and Northeast Kodiak Districts Combined), by ACR #11 proposed management weeks****UCIDA PROPOSED LIMIT = WEEKS 1-5; 5,000\*/Weekly; 20,000\*/5 Week Mid-Season (June 25-July 29)****Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits      | Landings | Chinook<br>Number | Pounds | Sockeye<br>Pounds | Number  | Coho<br>Number | Pounds  | Pink<br>Number | Pounds    | Chum<br>Number | Pounds  |
|------|--------------------------------------------------|--------------|----------|-------------------|--------|-------------------|---------|----------------|---------|----------------|-----------|----------------|---------|
| 1997 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 61           | 94       | 641               | 6,763  | 21,538            | 128,915 | 6,261          | 43,513  | 9,388          | 34,032    | 5,347          | 40,688  |
|      | Week 3: July 9- July 15                          | 64           | 91       | 859               | 9,826  | 27,967            | 159,670 | 25,324         | 174,859 | 14,475         | 48,719    | 29,163         | 217,762 |
|      | Week 4: July 16-July 22                          | 46           | 63       | 571               | 4,600  | 7,854             | 43,728  | 11,627         | 87,206  | 15,148         | 51,774    | 20,499         | 148,446 |
|      | Week 5: July 23- July 29                         | 26           | 28       | 85                | 1,027  | 1,115             | 5,774   | 2,810          | 23,666  | 18,493         | 68,488    | 3,412          | 26,914  |
| 1998 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 35           | 59       | 337               | 4,110  | 60,001            | 289,460 | 10,002         | 80,057  | 34,974         | 124,912   | 12,824         | 99,873  |
|      | Week 3: July 9- July 15                          | 37           | 66       | 186               | 2,539  | 17,089            | 86,991  | 17,566         | 139,369 | 37,102         | 135,130   | 3,342          | 26,389  |
|      | Week 4: July 16-July 22                          | 31           | 40       | 122               | 903    | 16,587            | 81,496  | 6,947          | 58,467  | 34,330         | 128,175   | 1,715          | 15,068  |
|      | Week 5: July 23- July 29                         | 11           | 11       | 17                | 179    | 2,223             | 10,279  | 1,235          | 10,839  | 56,477         | 216,606   | 277            | 2,339   |
| 1999 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 34           | 56       | 245               | 2,927  | 56,675            | 295,635 | 401            | 2,354   | 15,871         | 43,030    | 6,187          | 51,712  |
|      | Week 3: July 9- July 15                          | 59           | 114      | 346               | 3,112  | 74,922            | 410,959 | 3,409          | 21,245  | 27,668         | 82,339    | 15,951         | 127,024 |
|      | Week 4: July 16-July 22                          | 43           | 70       | 257               | 2,761  | 29,999            | 155,025 | 3,365          | 21,995  | 15,383         | 48,073    | 8,760          | 79,461  |
|      | Week 5: July 23- July 29                         | 43           | 76       | 514               | 4,341  | 22,688            | 115,301 | 11,005         | 69,678  | 66,990         | 203,526   | 21,338         | 179,761 |
| 2000 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 76           | 138      | 779               | 7,309  | 81,757            | 505,886 | 2,889          | 22,009  | 10,701         | 29,223    | 37,040         | 307,533 |
|      | Week 3: July 9- July 15                          | 37           | 53       | 158               | 2,384  | 11,531            | 69,072  | 2,118          | 16,134  | 8,785          | 25,558    | 6,580          | 59,611  |
|      | Week 4: July 16-July 22                          | 27           | 52       | 186               | 2,479  | 11,695            | 68,348  | 3,935          | 29,983  | 19,338         | 60,966    | 35,637         | 294,767 |
|      | Week 5: July 23- July 29                         | 33           | 66       | 67                | 742    | 3,926             | 21,791  | 630            | 4,788   | 24,446         | 79,804    | 45,210         | 402,449 |
| 2001 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 22           | 27       | 107               | 1,394  | 15,977            | 87,837  | 415            | 2,992   | 6,371          | 23,160    | 2,957          | 23,580  |
|      | Week 3: July 9- July 15                          | 25           | 36       | 197               | 1,984  | 23,149            | 124,694 | 12,421         | 93,875  | 24,570         | 83,979    | 3,641          | 29,120  |
|      | Week 4: July 16-July 22                          | 25           | 46       | 109               | 935    | 18,192            | 97,817  | 21,749         | 151,466 | 36,152         | 116,832   | 8,001          | 66,593  |
|      | Week 5: July 23- July 29                         | 13           | 19       | 69                | 535    | 2,464             | 13,339  | 1,913          | 14,662  | 32,457         | 112,137   | 4,849          | 37,560  |
| 2002 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 59           | 98       | 1,119             | 13,199 | 44,839            | 264,536 | 12,416         | 92,015  | 50,132         | 166,514   | 25,009         | 200,669 |
|      | Week 3: July 9- July 15                          | 48           | 78       | 516               | 5,830  | 40,591            | 231,150 | 17,851         | 117,035 | 82,418         | 283,257   | 21,042         | 165,931 |
|      | Week 4: July 16-July 22                          | 22           | 44       | 72                | 925    | 24,865            | 144,276 | 30,852         | 208,648 | 97,211         | 372,822   | 11,729         | 92,277  |
|      | Week 5: July 23- July 29                         | 12           | 23       | 11                | 180    | 3,012             | 16,211  | 1,516          | 10,829  | 100,091        | 349,463   | 11,393         | 89,937  |
| 2003 | Week 1: June 25-July 1                           | 7            | 8        | 42                | 840    | 7,443             | 41,243  | 0              | 0       | 17             | 66        | 23             | 144     |
|      | Week 2: July 2-July 8                            | 28           | 48       | 726               | 8,446  | 63,660            | 355,871 | 9,001          | 62,179  | 36,199         | 128,724   | 5,440          | 41,301  |
|      | Week 3: July 9- July 15                          | 29           | 48       | 475               | 6,410  | 35,059            | 201,906 | 4,988          | 30,649  | 29,476         | 107,454   | 2,877          | 20,632  |
|      | Week 4: July 16-July 22                          | 11           | 17       | 79                | 1,632  | 8,299             | 49,198  | 741            | 5,442   | 57,241         | 198,945   | 4,576          | 37,529  |
|      | Week 5: July 23- July 29                         | 13           | 42       | 40                | 861    | 4,452             | 24,751  | 141            | 999     | 226,411        | 797,248   | 11,167         | 86,790  |
| 2004 | Week 1: June 25-July 1                           | 3            | 3        | 1                 | 14     | 316               | 1,592   | 0              | 0       | 11             | 42        | 63             | 493     |
|      | Week 2: July 2-July 8                            | 32           | 40       | 314               | 2,517  | 43,030            | 241,468 | 5,867          | 40,396  | 13,901         | 46,302    | 9,820          | 74,745  |
|      | Week 3: July 9- July 15                          | 35           | 71       | 463               | 5,033  | 86,792            | 478,383 | 17,234         | 117,552 | 91,979         | 314,147   | 31,963         | 250,347 |
|      | Week 4: July 16-July 22                          | 20           | 35       | 70                | 803    | 19,446            | 102,299 | 7,399          | 48,892  | 41,386         | 146,461   | 4,721          | 36,007  |
|      | Week 5: July 23- July 29                         | Confidential |          |                   |        |                   |         |                |         |                |           |                |         |
| 2005 | Week 1: June 25-July 1                           | 5            | 9        | 133               | 850    | 6,257             | 39,405  | 1,000          | 7,359   | 11,657         | 38,585    | 1,845          | 12,760  |
|      | Week 2: July 2-July 8                            | 40           | 58       | 127               | 1,492  | 32,340            | 168,059 | 7,246          | 48,755  | 146,512        | 485,741   | 5,544          | 40,992  |
|      | Week 3: July 9- July 15                          | 31           | 92       | 108               | 1,662  | 63,311            | 356,098 | 9,365          | 70,477  | 535,383        | 1,710,826 | 9,290          | 72,227  |
|      | Week 4: July 16-July 22                          | 18           | 53       | 11                | 234    | 6,138             | 35,831  | 690            | 5,013   | 444,078        | 1,608,625 | 1,557          | 12,719  |
|      | Week 5: July 23- July 29                         | 24           | 91       | 36                | 779    | 3,237             | 18,414  | 1,021          | 6,737   | 921,884        | 2,970,869 | 5,402          | 43,274  |
| 2006 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 28           | 33       | 324               | 4,259  | 10,882            | 51,048  | 2,332          | 15,229  | 20,310         | 65,018    | 16,991         | 130,770 |
|      | Week 3: July 9- July 15                          | 24           | 73       | 316               | 4,296  | 32,563            | 163,568 | 9,437          | 59,067  | 105,989        | 348,659   | 53,391         | 399,036 |
|      | Week 4: July 16-July 22                          | 22           | 49       | 32                | 521    | 9,360             | 46,933  | 8,872          | 32,871  | 132,587        | 444,792   | 24,015         | 198,316 |
|      | Week 5: July 23- July 29                         | 16           | 45       | 8                 | 156    | 3,100             | 14,973  | 217            | 1,646   | 304,984        | 1,029,566 | 21,110         | 174,940 |
| 2007 | Week 1: June 25-July 1                           | NO FISHERY   |          |                   |        |                   |         |                |         |                |           |                |         |
|      | Week 2: July 2-July 8                            | 35           | 56       | 159               | 1,416  | 42,110            | 226,945 | 5,439          | 37,816  | 26,066         | 86,714    | 5,593          | 41,481  |
|      | Week 3: July 9- July 15                          | 32           | 73       | 105               | 1,200  | 49,227            | 270,752 | 5,300          | 35,789  | 76,638         | 243,750   | 6,984          | 50,248  |
|      | Week 4: July 16-July 22                          | 21           | 51       | 63                | 977    | 28,712            | 162,703 | 3,884          | 26,867  | 184,420        | 612,266   | 6,963          | 56,045  |
|      | Week 5: July 23- July 29                         | 27           | 47       | 27                | 443    | 9,647             | 51,390  | 470            | 3,353   | 331,415        | 1,064,527 | 7,646          | 59,451  |

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**EASTSIDE KODIAK SALMON HARVEST (\* Eastside and Northeast Kodiak Districts Combined), by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 1-5; 5,000\*/Weekly; 20,000\*/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA 8-17 ACR) | Permits    | Landings | Chinook<br>Number | Pounds | Sockeye<br>Number | Pounds    | Coho<br>Number | Pounds  | Pink<br>Number | Pounds    | Chum<br>Number | Pounds    |
|------|--------------------------------------------------|------------|----------|-------------------|--------|-------------------|-----------|----------------|---------|----------------|-----------|----------------|-----------|
| 2008 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |           |                |         |                |           |                |           |
|      | Week 2: July 2-July 8                            | 46         | 85       | 657               | 4,682  | 59,075            | 314,139   | 3,163          | 21,771  | 50,657         | 176,606   | 36,091         | 296,746   |
|      | Week 3: July 9-July 15 <sup>2</sup>              | 20         | 29       | 770               | 6,165  | 20,876            | 112,522   | 8,492          | 57,455  | 23,168         | 83,334    | 13,717         | 115,466   |
|      | Week 4: July 16-July 22 <sup>1</sup>             | 16         | 36       | 226               | 2,238  | 16,152            | 93,979    | 2,188          | 15,994  | 48,913         | 169,347   | 23,507         | 185,286   |
|      | Week 5: July 23- July 29 <sup>2</sup>            | 22         | 59       | 86                | 1,478  | 16,990            | 91,266    | 3,696          | 26,593  | 139,087        | 501,882   | 35,440         | 293,102   |
| 2009 | Week 1: June 25-July 1 <sup>1</sup>              | 15         | 17       | 37                | 381    | 3,189             | 17,814    | 0              | 0       | 372            | 907       | 330            | 2,356     |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 13         | 17       | 317               | 2,106  | 18,360            | 97,375    | 2,685          | 17,411  | 14,676         | 48,486    | 3,763          | 26,811    |
|      | Week 3: July 9- July 15 <sup>1</sup>             | 18         | 29       | 217               | 1,864  | 19,864            | 111,337   | 11,086         | 69,749  | 56,010         | 173,593   | 6,575          | 52,957    |
|      | Week 4: July 16-July 22                          | 20         | 48       | 1,001             | 3,850  | 18,784            | 103,617   | 9,083          | 58,440  | 213,610        | 804,914   | 13,111         | 96,363    |
|      | Week 5: July 23- July 29                         | 49         | 124      | 270               | 3,238  | 9,632             | 54,600    | 1,135          | 7,968   | 863,216        | 2,808,201 | 18,364         | 154,207   |
| 2010 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |           |                |         |                |           |                |           |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 29         | 50       | 863               | 6,035  | 57,394            | 287,276   | 5,014          | 29,461  | 20,686         | 64,153    | 18,105         | 126,154   |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 19         | 28       | 867               | 6,790  | 26,401            | 131,830   | 5,676          | 33,738  | 26,329         | 88,698    | 15,676         | 121,238   |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 12         | 22       | 565               | 5,430  | 8,892             | 49,841    | 1,003          | 7,227   | 37,249         | 124,993   | 6,595          | 52,950    |
|      | Week 5: July 23- July 29 <sup>2</sup>            | 16         | 38       | 521               | 5,073  | 9,289             | 48,741    | 1,175          | 8,206   | 94,901         | 314,144   | 20,687         | 166,942   |
| 2011 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |           |                |         |                |           |                |           |
|      | Week 2: July 2-July 8                            | 35         | 53       | 351               | 3,323  | 99,681            | 615,786   | 1,544          | 10,116  | 34,105         | 94,634    | 8,929          | 62,980    |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 50         | 96       | 1,121             | 9,122  | 182,057           | 1,203,765 | 7,298          | 44,800  | 66,390         | 180,855   | 12,780         | 86,778    |
|      | Week 4: July 16-July 22                          | 49         | 103      | 1,699             | 13,285 | 51,918            | 298,763   | 10,843         | 69,602  | 237,790        | 725,917   | 25,677         | 167,160   |
|      | Week 5: July 23- July 29                         | 65         | 109      | 769               | 9,395  | 12,889            | 74,931    | 4,353          | 27,316  | 453,807        | 1,370,688 | 12,487         | 87,340    |
| 2012 | Week 1: June 25-July 1 <sup>1</sup>              | 8          | 10       | 25                | 267    | 2,659             | 16,390    | 0              | 0       | 37             | 148       | 96             | 759       |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 51         | 88       | 1,726             | 10,095 | 63,107            | 359,322   | 839            | 5,347   | 40,906         | 121,237   | 16,674         | 122,932   |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 27         | 47       | 736               | 3,573  | 36,011            | 221,257   | 1,838          | 10,443  | 30,975         | 94,340    | 6,851          | 52,086    |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 21         | 33       | 370               | 2,960  | 16,274            | 81,849    | 945            | 5,582   | 37,840         | 119,206   | 6,901          | 50,486    |
|      | Week 5: July 23- July 29 <sup>1</sup>            | 8          | 11       | 7                 | 69     | 1,085             | 5,188     | 43             | 248     | 8,820          | 25,745    | 4,895          | 38,247    |
| 2013 | Week 1: June 25-July 1 <sup>1</sup>              | 14         | 22       | 120               | 772    | 5,236             | 28,947    | 0              | 0       | 23             | 57        | 158            | 1,346     |
|      | Week 2: July 2-July 8                            | 46         | 69       | 1,132             | 7,026  | 31,233            | 179,602   | 1,128          | 6,828   | 41,730         | 123,770   | 19,882         | 152,208   |
|      | Week 3: July 9- July 15                          | 31         | 61       | 4,280             | 28,994 | 26,319            | 158,964   | 2,779          | 20,121  | 170,534        | 494,260   | 33,241         | 282,302   |
|      | Week 4: July 16-July 22                          | 49         | 90       | 1,711             | 13,830 | 10,725            | 66,339    | 2,218          | 13,903  | 384,838        | 1,134,009 | 27,216         | 225,393   |
|      | Week 5: July 23- July 29                         | 83         | 206      | 518               | 4,820  | 13,217            | 74,704    | 2,502          | 18,337  | 1,157,036      | 3,550,680 | 34,583         | 275,386   |
| 2014 | Week 1: June 25-July 1 <sup>1</sup>              | 4          | 5        | 39                | 364    | 1,572             | 7,838     | 47             | 282     | 11             | 33        | 251            | 1,695     |
|      | Week 2: July 2-July 8                            | 78         | 113      | 1,144             | 7,642  | 52,502            | 282,511   | 15,924         | 103,506 | 36,456         | 116,394   | 29,170         | 219,405   |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 38         | 49       | 768               | 5,086  | 25,213            | 136,417   | 4,766          | 30,521  | 22,675         | 70,757    | 8,474          | 60,509    |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 21         | 30       | 86                | 554    | 8,483             | 43,519    | 1,406          | 8,727   | 90,154         | 278,491   | 3,134          | 20,936    |
|      | Week 5: July 23- July 29 <sup>2</sup>            | 20         | 46       | 32                | 291    | 4,850             | 25,574    | 548            | 4,059   | 157,765        | 492,354   | 7,328          | 63,531    |
| 2015 | Week 1: June 25-July 1 <sup>1</sup>              | 5          | 5        | 3                 | 27     | 618               | 2,844     | 105            | 574     | 14             | 44        | 19             | 124       |
|      | Week 2: July 2-July 8                            | 28         | 39       | 89                | 450    | 5,095             | 21,767    | 4,694          | 24,111  | 34,026         | 107,194   | 6,551          | 36,807    |
|      | Week 3: July 9- July 15 <sup>2</sup>             | 5          | 7        | 0                 | 0      | 1,463             | 8,062     | 235            | 1,119   | 7,522          | 34,723    | 1,335          | 9,741     |
|      | Week 4: July 16-July 22                          | 9          | 16       | 148               | 774    | 1,724             | 8,503     | 470            | 2,856   | 36,486         | 124,031   | 3,494          | 23,762    |
|      | Week 5: July 23- July 29                         | 44         | 94       | 99                | 1,485  | 14,462            | 73,306    | 6,943          | 31,169  | 458,779        | 1,467,018 | 28,597         | 232,309   |
| 2016 | Week 1: June 25-July 1 <sup>1</sup>              | 6          | 9        | 4                 | 59     | 2,728             | 13,401    | 47             | 300     | 41             | 115       | 534            | 3,749     |
|      | Week 2: July 2-July 8 <sup>1</sup>               | 42         | 74       | 132               | 707    | 53,410            | 291,896   | 4,306          | 25,598  | 7,571          | 27,246    | 4,421          | 30,387    |
|      | Week 3: July 9- July 15                          | 46         | 78       | 146               | 1,390  | 62,729            | 336,085   | 10,047         | 62,668  | 21,576         | 80,677    | 4,299          | 30,684    |
|      | Week 4: July 16-July 22 <sup>2</sup>             | 16         | 19       | 27                | 226    | 7,327             | 37,119    | 1,052          | 6,966   | 6,928          | 30,857    | 750            | 5,476     |
|      | Week 5: July 23- July 29 <sup>1</sup>            | 8          | 12       | 50                | 459    | 9,354             | 48,374    | 646            | 4,340   | 11,676         | 58,003    | 2,074          | 8,149     |
| 2017 | Week 1: June 25-July 1                           | NO FISHERY |          |                   |        |                   |           |                |         |                |           |                |           |
|      | Week 2: July 2-July 8                            | 65         | 114      | 131               | 1,116  | 30,698            | 169,224   | 7,798          | 53,984  | 106,186        | 394,639   | 225,793        | 1,665,204 |
|      | Week 3: July 9- July 15 <sup>1</sup>             | 58         | 136      | 302               | 1,853  | 35,958            | 192,383   | 10,974         | 70,172  | 212,019        | 780,452   | 212,965        | 1,588,988 |
|      | Week 4: July 16-July 22 <sup>1</sup>             | 29         | 53       | 184               | 1,935  | 17,187            | 85,556    | 3,918          | 24,385  | 78,832         | 303,216   | 35,256         | 250,664   |
|      | Week 5: July 23- July 29 <sup>2</sup>            | 12         | 22       | 26                | 297    | 2,508             | 13,011    | 188            | 1,136   | 61,154         | 206,723   | 11,513         | 86,431    |

END



Appendix D.4. North Shelikof Management Unit commercial salmon harvests during the ACR #11 proposed weekly sockeye salmon harvest limit periods, 1985-2017, from the UCIDA Agenda Change Request (#11) and proposed new 'umbrella' Kodiak salmon management plan.

**NORTH SHELIKOF SALMON HARVEST (North Mainland, Shuyak, NW Afognak combined), by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 2-5; 3,750 sockeye/Weekly; 15,000 sockeye/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits    | Landings | Chinook<br>Number | Pounds | Sockeye<br>Number | Pounds    | Coho<br>Number | Pounds | Pink<br>Number | Pounds  | Chum<br>Number | Pounds  |
|------|-------------------------------------------------|------------|----------|-------------------|--------|-------------------|-----------|----------------|--------|----------------|---------|----------------|---------|
| 1985 | Week 2: July 2-July 8                           | 5          | 5        | 0                 | 0      | 1,780             | 8,335     | 15             | 86     | 256            | 974     | 238            | 1,998   |
|      | Week 3: July 9- July 15                         | 2          | 2        | 1                 | 32     | 1,107             | 5,594     | 20             | 103    | 263            | 1,141   | 305            | 2,433   |
|      | Week 4: July 16-July 22                         | NO FISHERY |          |                   |        |                   |           |                |        |                |         |                |         |
|      | Week 5: July 23- July 29                        | 5          | 6        | 3                 | 54     | 864               | 3,227     | 5              | 44     | 735            | 2,772   | 905            | 7,918   |
| 1986 | Week 2: July 2-July 8                           | 6          | 7        | 23                | 304    | 2,573             | 13,723    | 265            | 1,561  | 1,214          | 3,932   | 2,515          | 19,045  |
|      | Week 3: July 9- July 15                         | 5          | 7        | 25                | 295    | 4,601             | 23,574    | 0              | 0      | 1,893          | 7,753   | 1,178          | 8,883   |
|      | Week 4: July 16-July 22                         | 8          | 9        | 0                 | 0      | 120               | 736       | 4              | 25     | 8,647          | 32,265  | 9,712          | 84,170  |
|      | Week 5: July 23- July 29                        | 6          | 6        | 3                 | 72     | 2,010             | 8,262     | 4              | 40     | 1,114          | 4,140   | 5,813          | 47,250  |
| 1987 | Week 2: July 2-July 8                           | 18         | 26       | 69                | 731    | 6,738             | 39,694    | 69             | 286    | 1,441          | 4,442   | 2,143          | 16,773  |
|      | Week 3: July 9- July 15                         | 17         | 17       | 188               | 702    | 3,645             | 21,662    | 24             | 128    | 1,361          | 4,738   | 1,893          | 15,020  |
|      | Week 4: July 16-July 22                         | 7          | 9        | 5                 | 24     | 1,568             | 9,575     | 0              | 0      | 356            | 1,167   | 4,001          | 29,758  |
|      | Week 5: July 23- July 29                        | 13         | 20       | 3                 | 64     | 10,027            | 69,244    | 579            | 4,249  | 8,150          | 29,756  | 12,387         | 99,291  |
| 1988 | Week 2: July 2-July 8                           | 22         | 30       | 134               | 1,270  | 19,382            | 130,234   | 12             | 117    | 1,124          | 4,371   | 7,278          | 71,452  |
|      | Week 3: July 9- July 15                         | 121        | 253      | 3,015             | 20,695 | 182,321           | 1,320,692 | 603            | 4,752  | 29,524         | 107,521 | 40,110         | 370,219 |
|      | Week 4: July 16-July 22                         | 136        | 297      | 518               | 5,850  | 146,232           | 1,050,319 | 4,281          | 32,775 | 98,042         | 349,301 | 32,528         | 290,424 |
|      | Week 5: July 23- July 29                        | 52         | 99       | 1,394             | 11,357 | 30,060            | 189,916   | 3,334          | 25,294 | 73,261         | 263,167 | 46,547         | 403,307 |
| 1990 | Week 2: July 2-July 8                           | 15         | 18       | 11                | 100    | 3,489             | 14,915    | 371            | 2,539  | 20,129         | 59,653  | 1,374          | 12,221  |
|      | Week 3: July 9- July 15                         | 40         | 64       | 61                | 799    | 28,858            | 182,671   | 865            | 6,053  | 4,102          | 13,009  | 11,624         | 96,711  |
|      | Week 4: July 16-July 22                         | 33         | 46       | 59                | 704    | 20,216            | 120,999   | 2,246          | 15,304 | 10,888         | 35,503  | 5,602          | 45,132  |
|      | Week 5: July 23- July 29                        | 42         | 61       | 26                | 475    | 7,546             | 42,740    | 3,226          | 22,839 | 34,062         | 105,216 | 6,250          | 51,249  |
| 1991 | Week 2: July 2-July 8                           | 4          | 4        | 55                | 521    | 1,062             | 5,697     | 1              | 6      | 410            | 1,119   | 143            | 949     |
|      | Week 3: July 9- July 15                         | 20         | 23       | 606               | 3,936  | 4,614             | 23,020    | 176            | 1,094  | 11,769         | 35,050  | 1,512          | 10,783  |
|      | Week 4: July 16-July 22                         | 19         | 27       | 151               | 1,237  | 5,040             | 28,271    | 667            | 4,743  | 15,406         | 41,204  | 534            | 3,749   |
|      | Week 5: July 23- July 29                        | 9          | 13       | 415               | 2,340  | 2,494             | 14,034    | 1,003          | 5,809  | 19,036         | 49,814  | 849            | 5,780   |
| 1992 | Week 2: July 2-July 8                           | 21         | 31       | 85                | 961    | 12,254            | 74,741    | 56             | 371    | 5,442          | 20,287  | 1,696          | 13,684  |
|      | Week 3: July 9- July 15                         | 7          | 9        | 2                 | 14     | 1,836             | 11,267    | 12             | 91     | 1,930          | 7,594   | 448            | 3,874   |
|      | Week 4: July 16-July 22                         | 27         | 32       | 115               | 1,550  | 33,395            | 244,600   | 915            | 7,263  | 5,682          | 20,133  | 2,649          | 19,507  |
|      | Week 5: July 23- July 29                        | 123        | 196      | 134               | 2,341  | 184,694           | 1,202,994 | 12,438         | 80,721 | 33,880         | 123,387 | 23,669         | 169,961 |
| 1993 | Week 2: July 2-July 8                           | 7          | 7        | 5                 | 50     | 2,696             | 12,407    | 1              | 7      | 8,949          | 23,553  | 183            | 954     |
|      | Week 3: July 9- July 15                         | 21         | 31       | 53                | 635    | 15,693            | 84,600    | 154            | 928    | 16,956         | 48,687  | 676            | 3,771   |
|      | Week 4: July 16-July 22                         | 33         | 44       | 105               | 1,164  | 18,019            | 112,469   | 612            | 3,981  | 14,381         | 42,306  | 926            | 5,199   |
|      | Week 5: July 23- July 29                        | 15         | 20       | 37                | 575    | 12,970            | 76,656    | 845            | 5,189  | 42,378         | 129,331 | 2,017          | 12,408  |
| 1994 | Week 2: July 2-July 8                           | 8          | 14       | 5                 | 121    | 3,925             | 17,377    | 130            | 801    | 6,370          | 20,268  | 1,305          | 8,199   |
|      | Week 3: July 9- July 15                         | 29         | 42       | 57                | 1,043  | 18,731            | 103,462   | 989            | 6,805  | 14,253         | 47,990  | 3,692          | 27,784  |
|      | Week 4: July 16-July 22                         | 5          | 12       | 10                | 217    | 504               | 1,981     | 34             | 282    | 21,507         | 82,640  | 843            | 6,029   |
|      | Week 5: July 23- July 29                        | 32         | 47       | 49                | 868    | 18,981            | 96,239    | 2,622          | 20,578 | 73,126         | 257,903 | 5,629          | 42,849  |
| 1995 | Week 2: July 2-July 8                           | 20         | 27       | 49                | 566    | 3,208             | 15,862    | 46             | 327    | 23,814         | 77,602  | 2,262          | 14,786  |
|      | Week 3: July 9- July 15                         | 27         | 30       | 43                | 581    | 4,719             | 23,239    | 150            | 994    | 38,932         | 129,989 | 5,052          | 36,303  |
|      | Week 4: July 16-July 22                         | 16         | 16       | 6                 | 134    | 11,558            | 49,712    | 641            | 4,198  | 28,810         | 96,283  | 2,262          | 15,787  |
|      | Week 5: July 23- July 29                        | 16         | 51       | 9                 | 165    | 3,387             | 17,673    | 580            | 4,059  | 232,589        | 797,473 | 3,784          | 28,174  |
| 1996 | Week 2: July 2-July 8                           | 9          | 14       | 30                | 344    | 4,835             | 29,317    | 116            | 912    | 1,079          | 3,192   | 3,020          | 28,168  |
|      | Week 3: July 9- July 15                         | 3          | 3        | 3                 | 46     | 916               | 5,216     | 59             | 458    | 805            | 2,517   | 448            | 3,726   |
|      | Week 4: July 16-July 22                         | 9          | 12       | 4                 | 37     | 5,217             | 29,293    | 200            | 1,497  | 6,671          | 22,569  | 2,589          | 24,677  |
|      | Week 5: July 23- July 29                        | 39         | 45       | 14                | 164    | 29,607            | 181,228   | 728            | 5,597  | 12,886         | 39,543  | 2,711          | 23,497  |
| 1997 | Week 2: July 2-July 8                           | 36         | 50       | 1,397             | 11,487 | 19,129            | 120,947   | 97             | 686    | 7,646          | 25,733  | 1,412          | 11,634  |
|      | Week 3: July 9- July 15                         | 3          | 3        | 2                 | 20     | 590               | 3,337     | 5              | 50     | 940            | 3,203   | 35             | 246     |
|      | Week 4: July 16-July 22                         | 15         | 16       | 75                | 613    | 6,194             | 34,016    | 439            | 3,377  | 5,165          | 17,335  | 656            | 5,776   |
|      | Week 5: July 23- July 29                        | 6          | 6        | 21                | 203    | 1,088             | 5,676     | 206            | 1,438  | 5,293          | 17,681  | 890            | 5,778   |
| 1998 | Week 2: July 2-July 8                           | 4          | 7        | 40                | 666    | 1,851             | 10,353    | 296            | 2,270  | 2,536          | 8,084   | 1,880          | 15,739  |
|      | Week 3: July 9- July 15                         | 10         | 17       | 43                | 514    | 8,354             | 46,625    | 386            | 3,551  | 28,146         | 107,478 | 523            | 4,493   |
|      | Week 4: July 16-July 22                         | 16         | 20       | 22                | 463    | 14,065            | 75,006    | 2,757          | 20,184 | 16,961         | 62,416  | 2,355          | 18,056  |
|      | Week 5: July 23- July 29                        | 7          | 11       | 65                | 913    | 2,816             | 15,152    | 3,889          | 33,971 | 59,260         | 216,142 | 2,339          | 18,513  |

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**NORTH SHELIKOF SALMON HARVEST (North Mainland, Shuyak, NW Afognak combined), by ACR #11 proposed management weeks****UCIDA PROPOSED LIMIT = WEEKS 2-5; 3,750 sockeye/Weekly; 15,000 sockeye/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits    | Landings | Chinook |        | Sockeye |         | Coho   |        | Pink   |         | Chum   |         |
|------|-------------------------------------------------|------------|----------|---------|--------|---------|---------|--------|--------|--------|---------|--------|---------|
|      |                                                 |            |          | Number  | Pounds | Number  | Pounds  | Number | Pounds | Number | Pounds  | Number | Pounds  |
| 1999 | Week 2: July 2-July 8                           | 20         | 29       | 147     | 1,869  | 9,022   | 47,012  | 13     | 95     | 4,404  | 12,891  | 2,020  | 17,452  |
|      | Week 3: July 9- July 15                         | 13         | 14       | 32      | 287    | 5,445   | 31,636  | 16     | 86     | 2,654  | 8,205   | 1,620  | 13,660  |
|      | Week 4: July 16-July 22                         | 6          | 7        | 45      | 459    | 4,134   | 24,804  | 136    | 879    | 16,711 | 49,885  | 1,499  | 11,601  |
|      | Week 5: July 23- July 29                        | 8          | 15       | 25      | 345    | 11,687  | 60,296  | 545    | 3,461  | 31,164 | 95,638  | 1,587  | 12,311  |
| 2000 | Week 2: July 2-July 8                           | 13         | 15       | 18      | 315    | 4,189   | 26,414  | 7      | 45     | 1,143  | 2,985   | 1,190  | 9,060   |
|      | Week 3: July 9- July 15                         | 6          | 9        | 19      | 254    | 2,775   | 15,935  | 170    | 1,097  | 3,018  | 9,603   | 1,783  | 16,085  |
|      | Week 4: July 16-July 22                         | 11         | 11       | 11      | 158    | 923     | 5,911   | 465    | 3,679  | 10,310 | 30,867  | 14,490 | 113,650 |
|      | Week 5: July 23- July 29                        | 10         | 18       | 17      | 366    | 836     | 4,721   | 286    | 2,279  | 18,541 | 47,246  | 37,033 | 336,835 |
| 2001 | Week 2: July 2-July 8                           | 7          | 9        | 27      | 723    | 3,757   | 20,249  | 94     | 573    | 5,722  | 17,135  | 630    | 5,385   |
|      | Week 3: July 9- July 15                         | 12         | 13       | 60      | 657    | 9,604   | 63,538  | 3,654  | 27,350 | 9,370  | 21,863  | 3,740  | 29,905  |
|      | Week 4: July 16-July 22                         | 13         | 16       | 71      | 996    | 6,219   | 39,535  | 3,060  | 24,244 | 9,192  | 27,102  | 3,700  | 30,550  |
|      | Week 5: July 23- July 29                        | 6          | 7        | 40      | 542    | 1,529   | 8,768   | 3,119  | 24,973 | 8,202  | 28,423  | 1,680  | 13,229  |
| 2002 | Week 2: July 2-July 8                           | 11         | 12       | 141     | 1,367  | 6,484   | 34,547  | 623    | 2,010  | 10,625 | 36,559  | 1,955  | 14,865  |
|      | Week 3: July 9- July 15                         | 13         | 14       | 17      | 276    | 6,600   | 41,025  | 289    | 2,495  | 42,382 | 146,768 | 2,872  | 22,221  |
|      | Week 4: July 16-July 22                         | 4          | 4        | 2       | 38     | 1,947   | 11,858  | 961    | 8,321  | 10,106 | 42,228  | 363    | 3,297   |
|      | Week 5: July 23- July 29                        | 12         | 19       | 34      | 506    | 5,940   | 37,037  | 7,843  | 54,256 | 64,475 | 229,742 | 3,753  | 32,837  |
| 2003 | Week 2: July 2-July 8                           | 8          | 12       | 3       | 34     | 5,373   | 28,115  | 384    | 1,574  | 12,056 | 45,417  | 845    | 5,727   |
|      | Week 3: July 9- July 15                         | 10         | 12       | 7       | 90     | 6,740   | 37,714  | 333    | 2,504  | 13,699 | 45,369  | 939    | 7,212   |
|      | Week 4: July 16-July 22                         | 5          | 5        | 8       | 127    | 1,737   | 8,960   | 190    | 1,381  | 3,870  | 14,839  | 1,427  | 10,150  |
|      | Week 5: July 23- July 29                        | 7          | 7        | 3       | 57     | 699     | 3,916   | 198    | 1,466  | 11,530 | 42,592  | 6,184  | 50,907  |
| 2004 | Week 2: July 2-July 8                           | 7          | 8        | 125     | 1,174  | 2,389   | 13,447  | 58     | 477    | 5,184  | 16,542  | 1,931  | 15,463  |
|      | Week 3: July 9- July 15                         | 12         | 14       | 200     | 2,384  | 21,077  | 111,105 | 1,058  | 7,802  | 20,006 | 64,950  | 4,446  | 30,900  |
|      | Week 4: July 16-July 22                         | 3          | 5        | 3       | 50     | 2,794   | 17,590  | 1,542  | 10,000 | 1,740  | 7,666   | 1,173  | 9,113   |
|      | Week 5: July 23- July 29                        | 7          | 7        | 4       | 92     | 7,861   | 43,906  | 2,125  | 14,113 | 13,485 | 51,297  | 4,187  | 29,924  |
| 2005 | Week 2: July 2-July 8                           | 10         | 13       | 42      | 636    | 10,698  | 62,672  | 26     | 161    | 7,197  | 22,962  | 568    | 5,124   |
|      | Week 3: July 9- July 15                         | 15         | 25       | 24      | 533    | 37,951  | 218,001 | 1,094  | 8,718  | 10,658 | 36,399  | 3,845  | 30,925  |
|      | Week 4: July 16-July 22                         | 6          | 7        | 21      | 475    | 11,207  | 67,874  | 689    | 4,791  | 9,414  | 30,817  | 948    | 8,148   |
|      | Week 5: July 23- July 29                        | 18         | 37       | 32      | 607    | 84,228  | 528,236 | 5,685  | 42,354 | 42,145 | 140,716 | 6,666  | 52,596  |
| 2006 | Week 2: July 2-July 8                           | 1          | 1        | 8       | 38     | 2,399   | 11,277  | 8      | 99     | 507    | 2,030   | 58     | 467     |
|      | Week 3: July 9- July 15                         | 11         | 20       | 106     | 1,086  | 13,967  | 65,303  | 665    | 4,630  | 20,498 | 73,213  | 4,659  | 40,912  |
|      | Week 4: July 16-July 22                         | 15         | 25       | 106     | 2,402  | 23,083  | 121,279 | 3,556  | 25,665 | 44,153 | 161,072 | 9,045  | 74,277  |
|      | Week 5: July 23- July 29                        | 19         | 22       | 41      | 822    | 5,385   | 28,795  | 3,224  | 20,265 | 57,664 | 206,543 | 16,412 | 141,005 |
| 2007 | Week 2: July 2-July 8                           | 13         | 13       | 100     | 1,042  | 11,536  | 61,111  | 121    | 932    | 4,307  | 14,452  | 970    | 8,719   |
|      | Week 3: July 9- July 15                         | 3          | 4        | 45      | 426    | 2,059   | 9,541   | 13     | 123    | 3,351  | 9,274   | 91     | 875     |
|      | Week 4: July 16-July 22                         | 13         | 13       | 21      | 225    | 2,058   | 12,562  | 425    | 3,153  | 4,552  | 15,697  | 3,720  | 12,986  |
|      | Week 5: July 23- July 29                        | 17         | 22       | 51      | 507    | 17,346  | 100,756 | 2,738  | 19,995 | 27,889 | 90,780  | 3,813  | 30,187  |
| 2008 | Week 2: July 2-July 8                           | 4          | 4        | 8       | 76     | 548     | 2,736   | 6      | 52     | 1,962  | 5,430   | 1,862  | 15,665  |
|      | Week 3: July 9- July 15                         | 2          | 2        | 2       | 18     | 183     | 1,083   | 30     | 208    | 1,104  | 4,069   | 398    | 3,421   |
|      | Week 4: July 16-July 22                         | 2          | 3        | 80      | 760    | 3,946   | 21,190  | 329    | 2,179  | 10,334 | 40,064  | 1,839  | 15,149  |
|      | Week 5: July 23- July 29                        | 3          | 5        | 123     | 1,013  | 1,314   | 5,471   | 485    | 3,399  | 33,265 | 99,797  | 2,745  | 28,041  |
| 2009 | Week 2: July 2-July 8                           | 6          | 11       | 159     | 1,825  | 8,256   | 44,978  | 114    | 828    | 27,837 | 86,348  | 4,372  | 38,776  |
|      | Week 3: July 9- July 15                         | 6          | 6        | 6       | 125    | 4,298   | 22,942  | 50     | 330    | 9,680  | 30,596  | 546    | 3,957   |
|      | Week 4: July 16-July 22                         | 4          | 5        | 5       | 61     | 2,083   | 10,530  | 205    | 1,416  | 8,790  | 26,807  | 519    | 4,974   |
|      | Week 5: July 23- July 29                        | 1          | 2        | 8       | 209    | 230     | 1,318   | 413    | 2,918  | 16,962 | 49,089  | 2,796  | 23,882  |
| 2010 | Week 2: July 2-July 8                           | 8          | 12       | 503     | 2,804  | 13,959  | 83,215  | 1,336  | 10,127 | 2,739  | 8,424   | 5,221  | 38,990  |
|      | Week 3: July 9- July 15                         | 5          | 6        | 1       | 26     | 1,301   | 6,671   | 57     | 352    | 4,533  | 13,208  | 1,066  | 8,955   |
|      | Week 4: July 16-July 22                         | 3          | 3        | 0       | 0      | 857     | 4,286   | 23     | 152    | 18,149 | 62,227  | 1,555  | 11,202  |
|      | Week 5: July 23- July 29                        | 15         | 17       | 18      | 108    | 5,315   | 27,786  | 2,261  | 14,327 | 63,821 | 217,981 | 4,629  | 34,867  |
| 2011 | Week 2: July 2-July 8                           | NO FISHERY |          |         |        |         |         |        |        |        |         |        |         |
|      | Week 3: July 9- July 15                         | 7          | 10       | 202     | 1,142  | 6,705   | 42,646  | 254    | 1,679  | 2,812  | 8,286   | 1,540  | 11,455  |
|      | Week 4: July 16-July 22                         | 12         | 16       | 112     | 695    | 5,054   | 31,640  | 636    | 4,238  | 4,300  | 13,284  | 2,566  | 18,069  |
|      | Week 5: July 23- July 29                        | 4          | 4        | 27      | 301    | 2,596   | 13,994  | 1,011  | 3,375  | 10,836 | 35,769  | 3,602  | 22,323  |

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**NORTH SHELIKOF SALMON HARVEST (North Mainland, Shuyak, NW Afognak combined), by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 2-5; 3,750 sockeye/Weekly; 15,000 sockeye/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits    | Landings | Chinook |        | Sockeye |         | Coho   |        | Pink    |         | Chum   |         |
|------|-------------------------------------------------|------------|----------|---------|--------|---------|---------|--------|--------|---------|---------|--------|---------|
|      |                                                 |            |          | Number  | Pounds | Number  | Pounds  | Number | Pounds | Number  | Pounds  | Number | Pounds  |
| 2012 | Week 2: July 2-July 8                           | 2          | 2        | 4       | 24     | 3,050   | 18,337  | 0      | 0      | 385     | 1,413   | 621    | 5,607   |
|      | Week 3: July 9- July 15                         | 10         | 12       | 69      | 322    | 5,976   | 32,527  | 22     | 131    | 3,888   | 12,232  | 3,726  | 32,545  |
|      | Week 4: July 16-July 22                         | 13         | 19       | 16      | 154    | 26,620  | 142,386 | 501    | 3,651  | 55,138  | 186,002 | 9,825  | 76,548  |
|      | Week 5: July 23- July 29                        | 9          | 15       | 46      | 267    | 6,211   | 32,913  | 215    | 1,318  | 61,022  | 190,839 | 2,880  | 22,796  |
| 2013 | Week 2: July 2-July 8                           | 11         | 12       | 197     | 1,712  | 5,140   | 28,245  | 78     | 509    | 8,098   | 20,572  | 4,347  | 36,560  |
|      | Week 3: July 9- July 15                         | 5          | 5        | 148     | 803    | 5,253   | 30,876  | 266    | 1,560  | 4,907   | 14,443  | 1,443  | 12,043  |
|      | Week 4: July 16-July 22                         | NO FISHERY |          |         |        |         |         |        |        |         |         |        |         |
|      | Week 5: July 23- July 29                        | NO FISHERY |          |         |        |         |         |        |        |         |         |        |         |
| 2014 | Week 2: July 2-July 8                           | 19         | 26       | 41      | 251    | 14,364  | 79,550  | 223    | 1,473  | 5,297   | 17,871  | 1,152  | 9,281   |
|      | Week 3: July 9- July 15                         | 22         | 27       | 33      | 324    | 34,450  | 173,441 | 1,428  | 8,689  | 18,881  | 61,616  | 4,069  | 29,097  |
|      | Week 4: July 16-July 22                         | 15         | 25       | 26      | 256    | 51,035  | 268,601 | 1,740  | 11,939 | 68,097  | 223,169 | 3,768  | 27,939  |
|      | Week 5: July 23- July 29                        | 40         | 59       | 79      | 786    | 71,877  | 370,733 | 6,030  | 38,559 | 87,396  | 289,007 | 6,641  | 50,032  |
| 2015 | Week 2: July 2-July 8                           | 8          | 9        | 3       | 53     | 1,317   | 5,846   | 373    | 2,341  | 3,287   | 10,156  | 399    | 3,054   |
|      | Week 3: July 9- July 15                         | 7          | 12       | 10      | 107    | 10,428  | 50,759  | 1,866  | 12,735 | 18,258  | 70,383  | 2,014  | 15,165  |
|      | Week 4: July 16-July 22                         | 19         | 26       | 73      | 836    | 30,250  | 161,154 | 1,767  | 11,676 | 134,019 | 392,203 | 4,128  | 30,821  |
|      | Week 5: July 23- July 29                        | 21         | 54       | 4       | 22     | 76,536  | 351,199 | 2,999  | 18,200 | 216,048 | 647,351 | 6,548  | 44,243  |
| 2016 | Week 2: July 2-July 8                           | 15         | 21       | 131     | 1,235  | 9,473   | 55,180  | 89     | 663    | 1,446   | 5,183   | 2,840  | 21,528  |
|      | Week 3: July 9- July 15                         | 17         | 17       | 44      | 454    | 18,383  | 101,660 | 324    | 1,959  | 2,760   | 12,220  | 1,359  | 8,995   |
|      | Week 4: July 16-July 22                         | 12         | 12       | 5       | 50     | 14,215  | 70,483  | 444    | 3,105  | 6,847   | 30,606  | 985    | 7,013   |
|      | Week 5: July 23- July 29                        | 5          | 6        | 6       | 90     | 12,179  | 69,428  | 283    | 1,821  | 3,231   | 13,677  | 784    | 5,407   |
| 2017 | Week 2: July 2-July 8                           | 12         | 12       | 2       | 15     | 2,967   | 14,577  | 9      | 52     | 3,311   | 12,962  | 2,270  | 19,365  |
|      | Week 3: July 9- July 15                         | 10         | 10       | 79      | 825    | 6,464   | 33,183  | 37     | 268    | 13,436  | 46,288  | 3,453  | 30,788  |
|      | Week 4: July 16-July 22                         | 12         | 15       | 50      | 577    | 22,525  | 118,238 | 1,238  | 8,972  | 31,244  | 118,213 | 12,728 | 108,847 |
|      | Week 5: July 23- July 29                        | 8          | 13       | 36      | 416    | 11,805  | 63,205  | 3,587  | 23,244 | 50,455  | 170,296 | 18,273 | 146,034 |

END





Appendix D.5. Southwest Afognak Section commercial salmon harvests during the ACR #11 proposed weekly sockeye salmon harvest limit periods, 1985-2017, from the UCIDA Agenda Change Request (#11) and proposed new 'umbrella' Kodiak salmon management plan.

**SOUTHWEST AFOGNAK SECTION SALMON HARVEST, by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 2-5; 12,500 sockeye/Weekly; 50,000 sockeye/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits      | Landings | Chinook<br>Number | Pounds | Sockeye<br>Number | Pounds  | Coho<br>Number | Pounds | Pink<br>Number | Pounds    | Chum<br>Number | Pounds  |
|------|-------------------------------------------------|--------------|----------|-------------------|--------|-------------------|---------|----------------|--------|----------------|-----------|----------------|---------|
| 1985 | Week 2: July 2-July 8                           | 16           | 17       | 9                 | 155    | 1,215             | 7,659   | 3              | 25     | 1,688          | 6,326     | 142            | 1,143   |
|      | Week 3: July 9- July 15                         | 7            | 7        | 8                 | 139    | 510               | 2,202   | 13             | 67     | 599            | 2,382     | 180            | 1,339   |
|      | Week 4: July 16-July 22                         | NO FISHERY   |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 5: July 23- July 29                        | Confidential |          |                   |        |                   |         |                |        |                |           |                |         |
| 1986 | Week 2: July 2-July 8                           | 14           | 22       | 45                | 356    | 1,679             | 9,233   | 102            | 747    | 17,666         | 66,961    | 1,209          | 9,549   |
|      | Week 3: July 9- July 15                         | 29           | 51       | 21                | 177    | 5,908             | 30,906  | 453            | 3,338  | 57,929         | 220,704   | 4,674          | 35,019  |
|      | Week 4: July 16-July 22                         | 38           | 95       | 13                | 190    | 10,907            | 60,882  | 420            | 2,818  | 202,752        | 760,018   | 8,920          | 68,209  |
|      | Week 5: July 23- July 29                        | 24           | 82       | 5                 | 71     | 4,543             | 26,942  | 282            | 2,013  | 283,084        | 1,050,181 | 7,514          | 53,834  |
| 1987 | Week 2: July 2-July 8                           | 3            | 3        | 0                 | 0      | 75                | 390     | 0              | 0      | 184            | 609       | 25             | 204     |
|      | Week 3: July 9- July 15                         | 7            | 11       | 1                 | 43     | 1,028             | 5,903   | 5              | 28     | 1,015          | 3,358     | 117            | 842     |
|      | Week 4: July 16-July 22                         | 28           | 45       | 10                | 229    | 31,906            | 240,037 | 148            | 1,059  | 16,267         | 55,649    | 2,130          | 16,467  |
|      | Week 5: July 23- July 29                        | 44           | 66       | 53                | 506    | 35,751            | 254,468 | 1,425          | 9,865  | 35,199         | 125,001   | 3,223          | 23,848  |
| 1988 | Week 2: July 2-July 8                           | 10           | 13       | 2                 | 16     | 1,315             | 7,594   | 3              | 18     | 4,023          | 14,545    | 1,917          | 18,476  |
|      | Week 3: July 9- July 15                         | 73           | 134      | 192               | 2,522  | 60,175            | 438,963 | 193            | 1,552  | 36,590         | 130,205   | 7,219          | 65,861  |
|      | Week 4: July 16-July 22                         | 58           | 93       | 129               | 2,343  | 22,541            | 160,545 | 914            | 7,688  | 57,195         | 204,767   | 5,928          | 51,207  |
|      | Week 5: July 23- July 29                        | 43           | 68       | 386               | 7,013  | 5,113             | 33,214  | 1,598          | 11,636 | 120,914        | 450,329   | 4,202          | 35,625  |
| 1990 | Week 2: July 2-July 8                           | 31           | 41       | 61                | 968    | 9,494             | 51,575  | 286            | 2,235  | 9,913          | 29,121    | 2,202          | 17,319  |
|      | Week 3: July 9- July 15                         | 24           | 30       | 72                | 715    | 3,588             | 17,726  | 997            | 6,678  | 12,525         | 39,207    | 1,533          | 12,509  |
|      | Week 4: July 16-July 22                         | 34           | 55       | 111               | 1,573  | 8,267             | 47,570  | 1,540          | 10,790 | 20,635         | 61,710    | 1,614          | 11,974  |
|      | Week 5: July 23- July 29                        | 58           | 99       | 132               | 1,712  | 5,960             | 33,093  | 3,253          | 24,703 | 101,902        | 315,032   | 3,063          | 23,476  |
| 1991 | Week 2: July 2-July 8                           | 16           | 18       | 40                | 416    | 2,086             | 10,834  | 41             | 252    | 7,346          | 19,566    | 820            | 5,606   |
|      | Week 3: July 9- July 15                         | 28           | 48       | 108               | 912    | 7,787             | 40,617  | 433            | 2,786  | 28,254         | 74,537    | 1,560          | 9,828   |
|      | Week 4: July 16-July 22                         | 35           | 73       | 54                | 519    | 23,888            | 137,386 | 2,598          | 15,886 | 61,154         | 166,191   | 1,506          | 11,244  |
|      | Week 5: July 23- July 29                        | 19           | 32       | 186               | 1,536  | 2,335             | 12,353  | 2,452          | 15,934 | 42,060         | 111,101   | 1,972          | 14,684  |
| 1992 | Week 2: July 2-July 8                           | 52           | 98       | 465               | 5,653  | 32,076            | 170,599 | 125            | 838    | 17,705         | 68,393    | 5,339          | 41,625  |
|      | Week 3: July 9- July 15                         | 43           | 62       | 59                | 898    | 28,647            | 188,758 | 296            | 2,129  | 11,911         | 45,772    | 2,334          | 17,008  |
|      | Week 4: July 16-July 22                         | 14           | 18       | 10                | 133    | 1,596             | 9,714   | 111            | 755    | 6,424          | 24,873    | 849            | 6,869   |
|      | Week 5: July 23- July 29                        | 21           | 24       | 242               | 3,475  | 1,671             | 10,353  | 1,502          | 10,121 | 14,604         | 56,858    | 1,391          | 10,489  |
| 1993 | Week 2: July 2-July 8                           | 54           | 97       | 383               | 4,629  | 47,853            | 244,739 | 344            | 2,397  | 67,010         | 199,192   | 5,851          | 33,818  |
|      | Week 3: July 9- July 15                         | 37           | 66       | 376               | 3,797  | 27,399            | 155,197 | 676            | 4,384  | 30,230         | 90,586    | 1,826          | 10,389  |
|      | Week 4: July 16-July 22                         | 30           | 53       | 148               | 1,801  | 13,374            | 75,680  | 1,733          | 11,335 | 75,599         | 233,418   | 1,683          | 9,365   |
|      | Week 5: July 23- July 29                        | 42           | 95       | 369               | 5,509  | 27,590            | 164,262 | 7,127          | 45,960 | 196,178        | 604,871   | 5,268          | 30,057  |
| 1994 | Week 2: July 2-July 8                           | 21           | 36       | 197               | 2,517  | 9,347             | 42,276  | 98             | 752    | 12,844         | 45,147    | 2,952          | 20,032  |
|      | Week 3: July 9- July 15                         | 14           | 21       | 172               | 2,477  | 6,166             | 28,217  | 464            | 3,486  | 20,861         | 72,442    | 1,178          | 8,648   |
|      | Week 4: July 16-July 22                         | 27           | 36       | 74                | 977    | 3,370             | 17,469  | 430            | 3,351  | 30,815         | 115,524   | 977            | 7,328   |
|      | Week 5: July 23- July 29                        | 15           | 27       | 88                | 1,413  | 3,017             | 15,778  | 570            | 4,716  | 44,483         | 146,844   | 1,193          | 9,507   |
| 1995 | Week 2: July 2-July 8                           | 42           | 64       | 1,103             | 9,270  | 17,325            | 85,363  | 96             | 646    | 121,142        | 368,210   | 13,970         | 101,949 |
|      | Week 3: July 9- July 15                         | 35           | 51       | 311               | 3,031  | 8,536             | 40,832  | 363            | 2,343  | 141,330        | 419,304   | 8,176          | 56,547  |
|      | Week 4: July 16-July 22                         | 35           | 53       | 155               | 2,205  | 5,610             | 26,120  | 631            | 4,369  | 194,969        | 584,923   | 6,147          | 44,300  |
|      | Week 5: July 23- July 29                        | 24           | 44       | 90                | 1,331  | 2,998             | 15,646  | 998            | 6,553  | 154,687        | 525,704   | 5,871          | 46,171  |
| 1996 | Week 2: July 2-July 8                           | 23           | 30       | 162               | 1,372  | 7,776             | 41,449  | 121            | 502    | 3,824          | 11,946    | 6,261          | 52,462  |
|      | Week 3: July 9- July 15                         | 7            | 7        | 44                | 411    | 1,099             | 6,480   | 21             | 160    | 1,620          | 5,300     | 1,099          | 8,421   |
|      | Week 4: July 16-July 22                         | 19           | 28       | 121               | 1,149  | 6,075             | 35,846  | 446            | 3,459  | 9,539          | 29,252    | 6,708          | 56,828  |
|      | Week 5: July 23- July 29                        | 10           | 16       | 14                | 159    | 2,943             | 17,816  | 369            | 2,639  | 10,606         | 35,668    | 1,369          | 11,392  |
| 1997 | Week 2: July 2-July 8                           | 35           | 57       | 307               | 3,581  | 13,411            | 67,372  | 62             | 462    | 17,612         | 57,971    | 2,125          | 16,429  |
|      | Week 3: July 9- July 15                         | 32           | 35       | 238               | 2,027  | 5,559             | 28,607  | 127            | 897    | 12,506         | 43,109    | 1,741          | 13,786  |
|      | Week 4: July 16-July 22                         | 16           | 19       | 240               | 2,517  | 2,775             | 15,050  | 720            | 5,345  | 14,491         | 47,568    | 2,228          | 20,449  |
|      | Week 5: July 23- July 29                        | 26           | 27       | 835               | 5,363  | 3,459             | 18,887  | 865            | 7,105  | 25,315         | 77,874    | 3,356          | 29,380  |
| 1998 | Week 2: July 2-July 8                           | Confidential |          |                   |        |                   |         |                |        |                |           |                |         |
|      | Week 3: July 9- July 15                         | 11           | 15       | 35                | 530    | 3,056             | 15,901  | 173            | 1,419  | 13,408         | 46,168    | 291            | 2,373   |
|      | Week 4: July 16-July 22                         | 13           | 17       | 106               | 1,225  | 6,464             | 32,280  | 696            | 5,781  | 33,897         | 125,355   | 1,024          | 7,897   |
|      | Week 5: July 23- July 29                        | 12           | 18       | 169               | 2,584  | 2,405             | 11,958  | 1,878          | 13,582 | 91,072         | 325,612   | 1,193          | 8,351   |

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**SOUTHWEST AFOGNAK SECTION SALMON HARVEST, by ACR #11 proposed management weeks****UCIDA PROPOSED LIMIT = WEEKS 2-5; 12,500 sockeye/Weekly; 50,000 sockeye/5 Week Mid-Season (June 25-July 29)**

Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits      | Landings | Chinook<br>Number Pounds | Sockeye<br>Number Pounds | Coho<br>Number Pounds | Pink<br>Number Pounds | Chum<br>Number Pounds |
|------|-------------------------------------------------|--------------|----------|--------------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| 1999 | Week 2: July 2-July 8                           | 20           | 39       | 908 8,187                | 16,024 81,900            | 13 85                 | 2,930 8,854           | 4,671 37,404          |
|      | Week 3: July 9- July 15                         | 11           | 13       | 234 2,241                | 2,002 10,970             | 9 56                  | 3,272 9,919           | 567 4,634             |
|      | Week 4: July 16-July 22                         | 29           | 38       | 351 3,833                | 10,444 56,030            | 243 1,850             | 21,641 59,034         | 2,521 19,808          |
|      | Week 5: July 23- July 29                        | 19           | 28       | 160 1,684                | 9,157 44,898             | 519 3,777             | 38,715 115,646        | 2,638 20,321          |
| 2000 | Week 2: July 2-July 8                           | 17           | 25       | 92 926                   | 8,863 57,430             | 26 185                | 5,617 15,789          | 3,138 25,465          |
|      | Week 3: July 9- July 15                         | 19           | 21       | 17 278                   | 5,740 30,456             | 223 1,540             | 5,696 18,128          | 1,656 13,783          |
|      | Week 4: July 16-July 22                         | 10           | 15       | 17 196                   | 3,429 20,285             | 408 2,983             | 10,240 35,163         | 1,621 13,978          |
|      | Week 5: July 23- July 29                        | 14           | 23       | 8 225                    | 5,362 29,901             | 967 7,630             | 37,762 112,627        | 3,191 26,697          |
| 2001 | Week 2: July 2-July 8                           | 18           | 34       | 83 905                   | 15,508 81,561            | 259 1,373             | 41,844 130,502        | 3,849 32,275          |
|      | Week 3: July 9- July 15                         | 18           | 23       | 36 381                   | 5,584 30,800             | 264 1,524             | 26,562 83,469         | 2,432 19,003          |
|      | Week 4: July 16-July 22                         | 23           | 33       | 315 2,962                | 10,513 59,075            | 1,345 9,938           | 50,101 157,615        | 5,597 47,800          |
|      | Week 5: July 23- July 29                        | 29           | 52       | 121 1,567                | 11,384 59,390            | 5,283 34,737          | 95,502 312,665        | 6,492 52,387          |
| 2002 | Week 2: July 2-July 8                           | 29           | 67       | 886 7,872                | 39,989 225,185           | 151 1,237             | 53,111 174,855        | 8,302 66,499          |
|      | Week 3: July 9- July 15                         | 6            | 6        | 41 187                   | 2,402 13,742             | 88 602                | 3,333 13,291          | 320 2,474             |
|      | Week 4: July 16-July 22                         | 6            | 6        | 148 1,564                | 2,671 15,148             | 1,176 9,726           | 30,127 106,463        | 706 5,976             |
|      | Week 5: July 23- July 29                        | 13           | 21       | 191 1,714                | 3,487 19,342             | 2,696 20,454          | 78,938 284,446        | 1,673 13,609          |
| 2003 | Week 2: July 2-July 8                           | 27           | 63       | 416 4,851                | 40,698 213,685           | 317 2,262             | 100,446 320,033       | 12,633 92,894         |
|      | Week 3: July 9- July 15                         | 22           | 31       | 174 1,653                | 33,304 191,079           | 2,448 17,310          | 56,339 185,964        | 2,772 20,064          |
|      | Week 4: July 16-July 22                         | 24           | 43       | 87 1,475                 | 62,452 359,788           | 2,080 14,841          | 86,877 297,600        | 5,010 35,925          |
|      | Week 5: July 23- July 29                        | 22           | 40       | 114 1,528                | 16,581 97,906            | 3,510 26,801          | 114,189 396,156       | 6,056 44,638          |
| 2004 | Week 2: July 2-July 8                           | 12           | 22       | 2,447 19,783             | 11,014 57,094            | 619 4,499             | 13,326 49,715         | 7,937 68,371          |
|      | Week 3: July 9- July 15                         | 11           | 21       | 776 6,613                | 9,018 52,082             | 2,798 20,188          | 23,272 75,849         | 3,132 24,251          |
|      | Week 4: July 16-July 22                         | 14           | 22       | 386 4,413                | 4,555 25,495             | 2,614 21,921          | 89,759 346,402        | 5,000 36,463          |
|      | Week 5: July 23- July 29                        | 22           | 52       | 802 9,415                | 8,928 48,591             | 6,218 50,723          | 258,294 954,125       | 8,410 64,582          |
| 2005 | Week 2: July 2-July 8                           | 22           | 37       | 452 4,638                | 25,376 141,157           | 836 6,946             | 93,021 327,005        | 2,543 25,027          |
|      | Week 3: July 9- July 15                         | 15           | 15       | 102 1,058                | 7,598 44,007             | 304 1,995             | 40,609 148,837        | 745 5,719             |
|      | Week 4: July 16-July 22                         | 8            | 10       | 82 1,604                 | 5,714 32,440             | 515 4,231             | 48,477 156,631        | 612 6,248             |
|      | Week 5: July 23- July 29                        | Confidential |          |                          |                          |                       |                       |                       |
| 2006 | Week 2: July 2-July 8                           | 17           | 27       | 1,138 8,283              | 12,020 56,984            | 655 4,593             | 24,713 87,992         | 6,192 53,060          |
|      | Week 3: July 9- July 15                         | 15           | 29       | 1,448 9,249              | 11,746 54,271            | 1,652 12,277          | 54,024 206,345        | 6,526 58,051          |
|      | Week 4: July 16-July 22                         | 10           | 12       | 122 1,065                | 3,419 19,064             | 1,034 7,685           | 52,984 203,196        | 3,177 21,164          |
|      | Week 5: July 23- July 29                        | 6            | 8        | 302 3,304                | 1,158 6,212              | 978 6,763             | 48,326 187,877        | 1,467 13,033          |
| 2007 | Week 2: July 2-July 8                           | 7            | 11       | 383 3,532                | 5,381 28,937             | 3 21                  | 12,997 46,697         | 1,019 7,557           |
|      | Week 3: July 9- July 15                         | 16           | 25       | 925 7,359                | 7,098 36,981             | 812 4,754             | 44,686 148,908        | 2,173 15,452          |
|      | Week 4: July 16-July 22                         | 22           | 32       | 975 9,116                | 8,435 47,814             | 1,471 10,685          | 91,404 333,702        | 1,884 14,222          |
|      | Week 5: July 23- July 29                        | 13           | 18       | 227 2,490                | 5,194 28,345             | 1,383 10,211          | 87,758 310,029        | 1,757 12,912          |
| 2008 | Week 2: July 2-July 8                           | 3            | 4        | 651 3,773                | 1,236 6,079              | 0 0                   | 2,201 8,865           | 1,132 7,464           |
|      | Week 3: July 9- July 15                         | 14           | 20       | 895 7,952                | 5,291 30,854             | 176 1,314             | 27,070 99,401         | 3,105 25,842          |
|      | Week 4: July 16-July 22                         | 15           | 24       | 414 3,296                | 9,374 51,575             | 902 6,607             | 52,199 177,247        | 5,868 51,137          |
|      | Week 5: July 23- July 29                        | 8            | 17       | 418 3,947                | 3,843 20,409             | 1,555 12,788          | 63,147 206,357        | 4,304 33,671          |
| 2009 | Week 2: July 2-July 8                           | 8            | 10       | 63 370                   | 10,934 63,113            | 52 414                | 19,937 57,486         | 3,065 23,658          |
|      | Week 3: July 9- July 15                         | 15           | 26       | 63 612                   | 16,603 92,541            | 567 4,362             | 56,711 183,453        | 4,958 39,666          |
|      | Week 4: July 16-July 22                         | 14           | 15       | 36 297                   | 8,696 49,547             | 742 4,783             | 43,072 140,940        | 2,973 23,730          |
|      | Week 5: July 23- July 29                        | 10           | 24       | 106 979                  | 9,815 55,138             | 1,381 9,892           | 137,094 445,756       | 5,391 45,026          |
| 2010 | Week 2: July 2-July 8                           | 5            | 5        | 146 959                  | 2,602 14,219             | 33 241                | 2,962 11,185          | 1,121 8,741           |
|      | Week 3: July 9- July 15                         | 16           | 20       | 214 1,480                | 6,870 35,135             | 360 2,588             | 36,903 116,050        | 2,896 23,677          |
|      | Week 4: July 16-July 22                         | 22           | 29       | 377 2,777                | 12,298 66,545            | 1,080 7,445           | 165,553 574,017       | 6,324 49,071          |
|      | Week 5: July 23- July 29                        | 29           | 43       | 195 1,819                | 8,377 44,785             | 1,285 9,199           | 217,841 738,106       | 6,422 46,187          |
| 2011 | Week 2: July 2-July 8                           | Confidential |          |                          |                          |                       |                       |                       |
|      | Week 3: July 9- July 15                         | 10           | 13       | 88 756                   | 7,007 34,697             | 528 2,156             | 8,576 24,219          | 1,948 12,662          |
|      | Week 4: July 16-July 22                         | 14           | 17       | 162 1,531                | 6,564 35,656             | 1,324 7,113           | 11,905 37,134         | 4,046 26,900          |
|      | Week 5: July 23- July 29                        | 9            | 13       | 148 1,330                | 2,213 12,293             | 725 4,755             | 10,752 38,317         | 2,795 19,626          |

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**SOUTHWEST AFOGNAK SECTION SALMON HARVEST, by ACR #11 proposed management weeks**

**UCIDA PROPOSED LIMIT = WEEKS 2-5; 12,500 sockeye/Weekly; 50,000 sockeye/5 Week Mid-Season (June 25-July 29)**

**Please Note: RED Numbers indicate weeks when a Kodiak Area fishery closure would occur, based on UCIDA proposed sockeye harvest limits**

| Year | Proposed Weekly Periods<br>(From UCIDA ACR #11) | Permits      | Landings | Chinook |        | Sockeye |         | Coho   |        | Pink    |         | Chum   |        |
|------|-------------------------------------------------|--------------|----------|---------|--------|---------|---------|--------|--------|---------|---------|--------|--------|
|      |                                                 |              |          | Number  | Pounds | Number  | Pounds  | Number | Pounds | Number  | Pounds  | Number | Pounds |
| 2012 | Week 2: July 2-July 8                           | Confidential |          |         |        |         |         |        |        |         |         |        |        |
|      | Week 3: July 9- July 15                         | 3            | 3        | 14      | 96     | 956     | 5,646   | 6      | 30     | 1,063   | 3,703   | 396    | 2,768  |
|      | Week 4: July 16-July 22                         | 22           | 27       | 269     | 2,047  | 22,116  | 112,695 | 719    | 4,440  | 114,659 | 350,365 | 9,161  | 78,372 |
|      | Week 5: July 23- July 29                        | 23           | 38       | 222     | 1,634  | 13,195  | 74,685  | 987    | 6,581  | 114,476 | 368,587 | 7,002  | 55,535 |
| 2013 | Week 2: July 2-July 8                           | 23           | 44       | 322     | 2,096  | 31,670  | 183,302 | 59     | 419    | 22,920  | 60,540  | 9,521  | 78,958 |
|      | Week 3: July 9- July 15                         | 9            | 9        | 83      | 668    | 2,800   | 16,248  | 108    | 635    | 15,331  | 45,598  | 1,151  | 9,032  |
|      | Week 4: July 16-July 22                         | 10           | 13       | 134     | 861    | 7,904   | 44,526  | 470    | 2,916  | 62,736  | 196,691 | 2,413  | 19,611 |
|      | Week 5: July 23- July 29                        | 11           | 19       | 24      | 250    | 6,774   | 37,281  | 671    | 4,360  | 104,668 | 322,854 | 1,944  | 15,621 |
| 2014 | Week 2: July 2-July 8                           | 9            | 11       | 0       | 0      | 8,018   | 41,028  | 83     | 557    | 3,095   | 10,103  | 580    | 5,107  |
|      | Week 3: July 9- July 15                         | 21           | 24       | 17      | 168    | 12,094  | 66,231  | 983    | 6,381  | 9,262   | 30,245  | 1,898  | 14,751 |
|      | Week 4: July 16-July 22                         | 29           | 50       | 35      | 470    | 25,363  | 127,921 | 1,794  | 12,408 | 45,089  | 150,751 | 4,954  | 37,219 |
|      | Week 5: July 23- July 29                        | 30           | 40       | 20      | 228    | 23,023  | 121,304 | 2,889  | 21,209 | 117,556 | 380,509 | 3,428  | 25,109 |
| 2015 | Week 2: July 2-July 8                           | 10           | 17       | 21      | 200    | 5,450   | 25,221  | 1,485  | 10,125 | 27,820  | 93,386  | 2,647  | 19,551 |
|      | Week 3: July 9- July 15                         | 9            | 16       | 24      | 392    | 9,529   | 43,008  | 2,322  | 17,169 | 80,542  | 242,972 | 2,122  | 15,885 |
|      | Week 4: July 16-July 22                         | 15           | 40       | 134     | 1,669  | 20,798  | 97,810  | 3,368  | 22,208 | 134,356 | 441,129 | 5,525  | 39,665 |
|      | Week 5: July 23- July 29                        | 28           | 50       | 61      | 780    | 22,358  | 112,306 | 2,521  | 16,630 | 199,185 | 663,173 | 5,834  | 41,234 |
| 2016 | Week 2: July 2-July 8                           | 15           | 29       | 28      | 226    | 7,562   | 41,137  | 67     | 456    | 3,036   | 10,029  | 3,666  | 25,031 |
|      | Week 3: July 9- July 15                         | 11           | 12       | 4       | 49     | 4,412   | 21,358  | 187    | 1,291  | 5,478   | 20,504  | 1,360  | 9,693  |
|      | Week 4: July 16-July 22                         | 14           | 15       | 10      | 99     | 4,298   | 20,865  | 281    | 2,054  | 17,506  | 85,246  | 1,111  | 8,194  |
|      | Week 5: July 23- July 29                        | 14           | 16       | 9       | 133    | 8,437   | 41,976  | 251    | 1,727  | 27,121  | 138,771 | 1,209  | 8,503  |
| 2017 | Week 2: July 2-July 8                           | 12           | 16       | 13      | 97     | 6,667   | 33,745  | 12     | 87     | 6,984   | 27,941  | 5,825  | 45,154 |
|      | Week 3: July 9- July 15                         | 5            | 5        | 3       | 30     | 1,602   | 10,164  | 64     | 489    | 16,023  | 61,397  | 2,793  | 23,288 |
|      | Week 4: July 16-July 22                         | 22           | 33       | 166     | 1,824  | 9,435   | 49,418  | 821    | 5,924  | 111,652 | 440,101 | 7,226  | 57,782 |
|      | Week 5: July 23- July 29                        | 11           | 15       | 175     | 1,748  | 7,939   | 38,555  | 720    | 5,069  | 60,129  | 212,923 | 2,363  | 20,538 |

END



## Appendix E: Board of Fisheries Summaries and Inter-Area Work Group Memos



Appendix E.1. Excerpts from the Alaska Board of Fisheries Summary of Actions taken at their March 1995 Work Session, regarding Kodiak/Cook Inlet sockeye salmon issues.

**SUMMARY OF ACTIONS  
BOARD OF FISHERIES**

**March 12 - 15, 1995  
Kodiak, Alaska**

**KODIAK/COOK INLET SOCKEYE SALMON ISSUES  
AGENDA CHANGE REQUESTS  
and**

**March 17 - 23, 1995  
Anchorage, Alaska**

**STATEWIDE FINFISH  
and  
JUNEAU AREA PERSONAL USE KING CRAB**

**DESIGNATED REPORTERS:** Kevin J. Messing, Regulations Specialist, Commercial Fisheries Management and Development Division, and Gary H. Sanders, Fishery Biologist, Division of Sport Fish.

*This summary of actions is for information purposes only and is not intended to detail, reflect, or fully interpret the reasons for the Board's actions. Amendments to proposed regulations may appear different in the codified regulations due to editorial changes made during the regulation review process. For the final language, refer to Title 5 or the Alaska Administrative Code. All votes were unanimous, unless noted otherwise.*

**MARCH 12 -15, 1995 - KODIAK, ALASKA**

**PROPOSAL NO. 333**

**ACTION: FAILED**

**DESCRIPTION: 5 AAC 18.3XX.** Consider recommendations of the Kodiak/Cook Inlet Inter-Area Work Group to address the interception of sockeye salmon bound for Cook Inlet in the Kodiak Area.

**DISCUSSION:** The board received reports from the department, and written and oral public comments/testimony from Kodiak and Cook Inlet interests over a three day period. The board deliberated the proposal for several hours and concluded that it would prefer to delay any changes in regulations in the Kodiak area until the next board cycle when the entire Kodiak area will be available for changes in regulations. The board was hesitant to make changes in regulations in just the identified "hot spot" areas because of the effect it would have regarding the allocation balance in the Kodiak area.

- continued -





Appendix E.1. page 2 of 2

The board noted that the proposal deadline for the 1995-96 board cycle was April 10, 1995 which still would allow time for specific proposals to be submitted.

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**Agenda Change Requests**

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**AGENDA CHANGE REQUEST #1**

**ACTION: FAILED**

**DESCRIPTION:** 5 AAC 34.935. Modify the closed waters for red king crab in the Norton Sound Area.

**DISCUSSION:** The board determined that the agenda change request did not meet any of its agenda change request criteria in 5 AAC 39.999.

---

**AGENDA CHANGE REQUEST #2**

**ACTION: FAILED**

**DESCRIPTION:** 5 AAC 28.113. Consider changes to the Southeast Alaska Lingcod Management Plan.

**DISCUSSION:** The board determined that the agenda change request did not meet any of its agenda change request criteria in 5 AAC 39.999. The agenda change request was rejected by a vote of 1-6.

---

**AGENDA CHANGE REQUEST #3**

**ACTION: ACCEPTED**

**DESCRIPTION:** 5 AAC 05.200. Reconsider the establishment of the Yukon Coastal District.

**DISCUSSION:** The board determined that the agenda change request met several of its agenda change request criteria and scheduled the topic for it February 1996 board meeting.

---

**AGENDA CHANGE REQUEST #4**

**ACTION: FAILED**

**DESCRIPTION:** 5 AAC 24.370. Prince William Sound Management and Salmon Enhancement Allocation Plan.

**DISCUSSION:** The board determined that the agenda change request did not meet any of its agenda change request criteria in 5 AAC 39.999.



Appendix E.2. Alaska Board of Fisheries' formation framework for the Kodiak/Cook Inlet Inter-Area Work Group, March 1994.

FRAME WORK FOR KODIAK/COOK INLET  
INTER-AREA WORK GROUP

At it's March 1994 meeting, the Board of Fisheries determined that the [BY]catch of Cook Inlet sockeye salmon in the Kodiak area may be an expanding fishery and which cannot be solved in a piece meal manner. Such an action would result in a protracted allocation dispute in the absence of an allocation plan. At the present time, except for the North Shelikof Strait Management plan no regulation addresses inter-area allocation of sockeye salmon in the Kodiak fisheries. To economize on the board and public's limited time and resources in resolving this complex issue of management and allocation, the board desires that affected fishermen work together to develop a comprehensive solution.

Therefore a work group is established to recommend to the board a comprehensive plan for the harvest of Cook Inlet sockeye salmon in the Kodiak Area. The work group may address whether the Kodiak by catch of Cook Inlet sockeye salmon is:

1. an expanding mixed stock catch that should be regulated pursuant to the board's mixed stock policy;
2. a historic density dependent catch; or
3. a catch that may or may not be subject to the board's mixed stock policy, but may be regulated pursuant to mutually agreed upon actions.

Under the particular option(s) agreed upon above, the work group may provide separate management options for years when Cook Inlet sockeye salmon abundance is large, average, or depressed.

The work group shall develop regulatory proposals to be considered by the board at its March 1995 meeting. At that meeting the board may adopt permanent regulations, interim regulations, or may instead extend the charge of the work group until the regular scheduled 1995/1996 (winter) Kodiak meeting. The board may adopt the recommendations of the working group or may adopt a regulatory plan of it's own or take no action at the March 1995 meeting. The board will also consider other regulatory proposals or plans submitted pursuant to the regular board process.

The work group shall be comprised as follows:

1. two Board of Fisheries member who shall be co-facilitators of the work group;
2. three fishermen from each of the two areas; and
3. ADF&G support consisting of at least one staff from each area who shall be non-voting group members.

Costs associated with user group participation should be borne by the respective areas. Tele-conferencing should be employed when feasible. Meetings should alternate between the two areas.





Appendix E.3. Summary memo from first meeting of the Alaska Board of Fisheries'  
Kodiak/Cook Inlet Inter-Area Work Group, May 1994.

KODIAK - COOK INLET INTER-AREA WORK GROUP

TO: Theo Matthews, Cook Inlet Representative  
Duncan Fields, Kodiak Representative  
FROM: <sup>LE</sup> Larry Edfelt, Board of Fisheries Facilitator  
DATE: May 31, 1994  
SUBJECT: Summary of Initial Work Group Meeting - Anchorage,  
5/17/94

At its initial organizational meeting the work group representatives agreed as follows:

1. Kodiak Fish and Game staff will develop a uniform agreed-upon set of fisheries data that will be used by the work group in its deliberations.

2. Both the Kodiak and Cook Inlet Fish and Game management staff will agree, to the extent information is available, upon the estimated timing and percentage of Cook Inlet run present in the Kodiak area by time periods during small, medium, and large Cook Inlet runs. This will include estimating the percent of Cook Inlet run present in the Kodiak area outside of the cap period (July 6 - July 25).

3. Kodiak Fish and Game staff will provide the work group with 1994 preseason harvest strategy.

4. Fish and Game will undertake a peer review of all Westward Region stock separation studies and reports presented to the Board of Fisheries at its March 1994 meeting.

5. The work group recognized that uniform management regulations in the Kodiak area may not be appropriate all years to diminish adverse impacts on Cook Inlet runs. The group recognized that the 1995 return to Cook Inlet is expected to be poor. The group decided to focus first on conservation considerations for the 1995 season. Management measures imposed for conservation purposes during weak Cook inlet runs may or may not be appropriate during average or large Cook Inlet returns. Focusing the work group initially on the 1995 return is not intended to delay allocation decisions during larger runs but merely serves as a logical starting point.

6. The group agreed that any management measures developed will be flexible enough to take into account Cook Inlet enhancement.



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7. The group strongly encouraged the Department of Fish and Game to undertake some in-season stock separation work during 1994, and to develop in-season indices or "markers" to determine when Cook Inlet fish are present in area K. These indices could include but need not be limited to average weights, scale analyses, abundance, and genetic markers.

8. The group agreed that it would act as a consensual lobbying body to attempt to achieve funding for stock identification studies, particularly Genetic Stock Identification.

9. The next meeting will be of two days duration in Kodiak for three sessions: first day a.m. - data acquisition; first day p.m. - ideas; second day a.m. - action (?). The meeting will be in late October at a date to be announced.

Please distribute this summary to the other members of your group and to any other interested parties.

cc: Board of Fish Members  
Laird Jones  
Pete Probasco  
John Hilsinger  
Paul Ruesch  
Larry Nicholson  
Jeff Koenings/Paul Larson



Appendix E.4. Summary memo from second meeting of the Alaska Board of Fisheries' Kodiak/Cook Inlet Inter-Area Work Group, November 1994.

DEPARTMENT OF FISH AND GAME  
COMMERCIAL FISHERIES MANAGEMENT &  
DEVELOPMENT DIVISION

STATE OF ALASKA  
MEMORANDUM

TO: Distribution

DATE: November 8, 1994

FILE: fish\cikt#1.mem

PHONE: 465-4210

FROM: Bob Clasby  
Deputy Director for Operations  
Commercial Fisheries Management  
and Development Division

SUBJECT: Cook Inlet/Kodiak  
Sockeye Salmon Working  
Group - Second Meeting

Larry Edfelt asked that I act as rapporteur for the second meeting of the working group, primarily to record points of agreement. The following is the result of that assignment.

Staff Reports

Staff updated the task force on the status of the various data packages and reports requested during the previous meeting.

The 1983 through 1993 salmon harvest data for Kodiak and Cook Inlet had been standardized, and was provided in electronic format and hard copy. The data sets contain catch information for the two areas by year, gear type, day, statistical area, and species. The 1994 Kodiak and Cook Inlet data will be sent out in early November and will follow the format used for the earlier data.

Estimated Sockeye Run Timing of Selected Stocks. Barrett and Nelson. This report has been peer reviewed and was handed out at the meeting. The report is final.

Sockeye Salmon Average Weights from Fish Tickets. Are They Accurate? Barrett and Nelson. This report has been peer reviewed. A draft was handed out. The report will be final by the end of January.

Use of Average Weight to Estimate the Amount of Interception of Non-local Sockeye Salmon. Vining and Barrett. This report is final and was handed out.

Estimated Origins of Sockeye Salmon in the Kodiak July 1994 Catch for Selected Areas Using Scale Pattern Analysis. Swanton and Barrett. The report has not been completed. Will be peer reviewed and final by the end of January subject to establishing a reasonable age 1.3 stock.

Are Migrating Adult Sockeye Salmon Feeding? Swanton, et. al. The report has not been completed. Will be peer reviewed and final by the end of January.

Estimated Incidence of Non-local Sockeye in the Kodiak July Catch using Average Fish Weight, 1983 through 1994. Vining. This report has not been completed. Preliminary estimates of stock composition of the Kodiak harvests should be available by early November. The





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Distribution

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November 8, 1994

report will be peer reviewed and final by the middle of December.

Kodiak Commercial Salmon Fishery Management Activities, Harvest Strategies, Historical Harvest, and Effort Distribution During July. Prokopowich. The report has not been completed. Will be peer reviewed and final by the end of January.

On Overview of the Kodiak Management Area Commercial Salmon fisheries. Brennan, et. al. The report has not been completed. Will be peer reviewed and final by the end of January.

Updates were provided on the status of the 1995 sockeye salmon forecasts for Kodiak and Cook Inlet.

Kodiak staff gave a rough preliminary estimate of the 1994 non-local (Cook Inlet) sockeye catch of about 100,000 to 200,000 fish.

**Agreements**

The following are points upon which the two sides generally agreed.

The time period of major concern is July 6 through 25, called the "cap" period.

Areas or fisheries that do not need to be included under any management plan that might be adopted included the Cape Igvak fishery, the North Shelikof July fishery, the Moser-Olga Bay fishery, and inner terminal harvest areas.

The areas of utmost concern were Sitkalidak, Halibut Bay, and Katmai-Alinchak.

A long-term solution was preferable to a short-term solution.

Any management plan should not prevent the Kodiak fleet from harvesting Kodiak sockeye stocks.

The average weights of sockeye salmon taken in the Kodiak commercial fisheries during June and August will be used to determine the Kodiak sockeye stock contribution to the July harvest.

Staff will determine whether the Cook Inlet stock contribution should be based on the average weight of the driftnet catch or a combination of the drift and setnet catches.

**Conceptual Proposals**

By the end of the meeting, the groups had focused in on three conceptual proposed general action triggers:

- (1) the percent species composition of the catch;



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Distribution

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November 8, 1994

- (2) a cap based on the average pre-1987 harvest adjusted for recent increased production; and
- (3) a cap based on the recent 10-year average harvest.

Three actions that might be taken when the trigger is reached were discussed. The actions were reduction of the fishing area to a 1-1/2 mile wide corridor, a headland-to-headland closure, and a five-to-seven day closure.

Next Meeting

The next meeting is tentatively planned for December 15 and 16 in Soldotna. The two parties are to present their proposals at this meeting. The proposals are to be in writing and contain estimates of their effects and the assumptions used. Each side is to also prepare a written document detailing their points of disagreement with the other side.

Distribution:

Larry Edfelt, Board of Fisheries  
Larry Engel, Board of Fisheries  
Duncan Fields, Kodiak Representative  
Loren Flagg, Cook Inlet Representative  
Oliver Holms, Kodiak Representative  
Dave Martin, Cook Inlet Representative  
Theo Matthews, Cook Inlet Representative  
Nick Troxel, Kodiak Representative  
Bruce Barrett  
John Hilsinger  
Pete Probasco  
Paul Ruesch

cc: Jeff Koenings  
Paul Larson  
Dave Prokopowich  
Ken Tarbox  
Laird Jones



Appendix E.5. Summary memo from third meeting of the Alaska Board of Fisheries' Kodiak/Cook Inlet Inter-Area Work Group, January 1995.

DEPARTMENT OF FISH AND GAME  
COMMERCIAL FISHERIES MANAGEMENT &  
DEVELOPMENT DIVISION

STATE OF ALASKA  
MEMORANDUM

TO: Distribution

DATE: January 6, 1995

FILE: fish\cikt#2.mem

PHONE: 465-4210

BC  
FROM: Bob Clasby  
Deputy Director for Operations  
Commercial Fisheries Management  
and Development Division

SUBJECT: Cook Inlet/Kodiak  
Sockeye Salmon Working  
Group - Third Meeting

The following are highlights of the third meeting of the Cook Inlet/Kodiak Sockeye Salmon Working Group which was held in Soldotna on December 15-16, 1994.

Review of November 8, 1994 Memorandum

One change to the memorandum was agreed to. On page 3, under "Agreements," substitute "the fisheries covered by the Alitak Bay District Salmon Management Plan" for "the Moser-Olga Bay fishery."

Staff Reports

The staff gave brief oral reports on the status of various data packages and reports. The following data packages were provided to the working group by the staff since the last meeting.

1. The 1994 commercial catch data for Kodiak and Cook Inlet by species, by day, by gear type, and by statistical area. This data is in a similar format which was provided to the working group at the October meeting in Kodiak.
2. A preliminary estimate of the local and non-local harvest within the Kodiak Management Area for the period July 6-25, 1983-1994.
3. A series of summaries from the Kodiak salmon catch data for the years 1970-1994. This was presented to the working group as both tabular and graphical form.

The report on the use of average weight to determine sockeye salmon stock contribution to the Kodiak commercial fishery for the July 6-25 period has been peer reviewed. The two regional staffs and headquarters staff have met, discussed the report, and agreed to final revisions. Harvests will be assigned to three categories: local, non-local, and unassessed. A weighted average of the Cook Inlet drift and set gillnet harvests will be used to determine the Cook Inlet contribution. A final draft of the report should be available by the first week of February.

It appears that scale pattern analysis can be used to determine Kodiak, Cook Inlet, and Chignik contributions to the sockeye salmon catch for 1994. A model using the 1-3 age class was tested successfully. A final draft of the report of the analysis should be available by the first week of February.





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Distribution

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January 6, 1995

The latest information on the 1995 forecasts are for a Cook Inlet returns of about 3.9 million sockeye salmon, with a harvest of 2.7 million, and Kodiak returns of about 4.4 million sockeye salmon, with a harvest of about 2.4 million. The Kodiak pink salmon harvest for 1995 is estimated to be about 18 million, of which about 8 million will be from the Kitoi Hatchery.

Proposals

Both parties presented their conceptual proposals. The assumptions upon which the proposals were based, their assumed effects, and their merits were presented and debated. While the parties did not agree to a proposal for the board's consideration, the discussion did result in a list of options that could be considered by the board in developing a management plan for the Kodiak fishery.

Options

Time Periods:

The entire month of July.

The period July 6 through 25.

Areas:

The entire Kodiak management area, except for the fisheries covered by the Igvak, Alitak, and North Shelikof management plans.

The Sitkalidak, Katmai/Alinchak, and Halibut Bay fisheries.

The Sitkalidak and Katmai/Alinchak fisheries.

Triggers:

A single number cap.

A threshold sockeye catch, plus a sockeye percentage of the total catch.

An inseason change in average weight.

Actions:

Time: a five day closure,

a closure for the remainder of July or July 6-25 period.

Area: a closure of waters more than 1-1/2 miles off shore,

a headland to headland closure.

Multipliers:

Harvest only

Total return

78 - 87 and 88 - 94 time periods

85 - 94 time period

78 - 94 time period

Exclude strike years

Exclude closed years

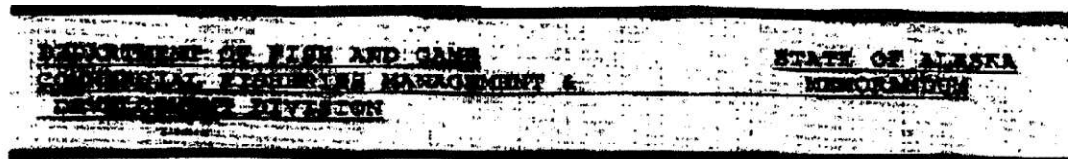
Island wide

Area specific

None



Appendix E.6. Summary memo from fourth meeting of the Alaska Board of Fisheries' Kodiak/Cook Inlet Inter-Area Work Group, February 1995.



TO: Distribution

DATE: February 10, 1995

FILE: fish/ciktf#3.mem

FROM: **AC** Bob Clasby

PHONE: 465-4210

Deputy Director for Operations  
Commercial Fisheries Management  
and Development Division

SUBJECT: Cook Inlet/Kodiak  
Sockeye Salmon  
Working Group  
Fourth Meeting

The following are the highlights of the fourth meeting of the Cook Inlet/Kodiak Sockeye Salmon Working Group which was held in Anchorage on February 9, 1995.

#### Review of January 6, 1995 Memorandum

Few of those on the distribution list received the memorandum. The author will take measures to ensure that folks do receive correspondence in the future.

The January memorandum should have contained the assignment that each side was to prepare a written justification of their positions on the issue for exchange at the February meeting.

#### Staff Reports

Staff gave brief oral summaries of the following written reports.

1. The Use of Average Weight to Estimate the Level of Harvest of Non-Local Sockeye Salmon Within the Kodiak Management Area, During July 6-25, 1983-1994. Vining and Barrett. The report is undergoing final peer review, but no significant changes to the data or conclusions are expected. The verbal portion of the report is undergoing proofing. The major change from the last draft is the addition of an "unassessed" category. Ivan pointed out that there are large variations in nonlocal contribution between areas and between years, that each year the method did indicate a nonlocal contribution to the catch, that the information is basically trend information, and that the larger the difference in weight between nonlocal and local stocks, the better the data. Larry Engel asked that Ivan review the data to see if the "hot spots" stand out. It was agreed that Table D contains the best point estimates.
2. Kodiak Sockeye Escapement Weight Estimates. Memorandum from Swanton and Nelson to Barrett. Charlie explained that this was a preliminary report of the data and will be revised before the board meeting. Charlie and Ivan were requested to compare the results of this analysis with the data in the above report. The results will be presented in Ivan's oral report to the board.





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3. Scale Pattern Analysis Age 1.3 Results, 1994. Memorandum from Swanton to Probasco. This memorandum is the draft of the report on this work. A final will be available about two weeks before the board meeting. The discussion pointed out some mathematical errors in the tables. Charlie was asked to compare the final results of this analysis with the 1994 data contained in Ivan's report.

Staff was requested to prepare executive summaries of their reports when they are submitted to the board. Each summary should contain clear statements of how the work relates to the issues before the board, the important aspects and conclusions of the report, and any limitations on the use of the information. The executive summary should not contain any tables or figures, but should indicate which tables and figures contain the data most useful to the board and the public when addressing the issue.

Position Statements

Because they did not receive the January memorandum, the Cook Inlet representatives did not have a written document presenting the justification for their position on the issue. The Kodiak group had prepared such a document, which was handed out. Duncan Fields gave an oral summary of the contents of the report.

Proposal

Agreement was reached on a draft proposal which each group will take back to their respective fishing organizations for review. A copy of that proposal is attached. It is the hope of each side that they will have a position on the proposal by Friday, February 17.

Schedule For Future Actions/Meetings

The board has agreed to hear a report on the progress of the working group as the fourth agenda item (after the Call To Order, Introductions, and Ethics Disclosures) at their February 21 meeting in Anchorage. Each side is requested to have one member give the board a 15 minute oral report directed towards their position on the draft proposal.

Enclosure

Distribution:

|                |                 |
|----------------|-----------------|
| Larry Edfelt   | Larry Engel     |
| Duncan Fields  | Loren Flagg     |
| Oliver Holm    | Dave Martin     |
| Theo Matthews  | Nick Troxel     |
| John Hilsinger | Pete Probasco   |
| Paul Ruesch    | Charlie Swanton |
| Ivan Vining    |                 |

cc: Jeff Koenings  
Paul Larson  
Dave Prokopowich  
Ken Tarbox  
Laird Jones



Appendix E.7. Excerpt from the 1995/1996 Alaska Board of Fisheries Proposal Booklet, showing Kodiak Finfish proposal #138.

**WHO IS LIKELY TO SUFFER?** Harvest of pink salmon should not be affected. Kodiak fishermen who depend on harvests from their "local" area will have less impact from mobile seiners targeting sockeye salmon.

**OTHER SOLUTIONS CONSIDERED?** A directive for staff to minimize the harvest of Cook Inlet sockeye was rejected since Kodiak staff would support it. This proposal is not intended to be the definitive solution, but rather a "tool" to be considered in combination with other options to minimize non-local harvests.

**PROPOSED BY:** United Cook Inlet Drift Association (UCIDA) (HQ-95-F-273)  
\*\*\*\*\*

**PROPOSAL 137** - 5 AAC 18.XXX. NEW REGULATION. Adopt a Kodiak area salmon management plan as follows:

Adopt an island-wide sockeye salmon management plan for the 7/6-7/25 time period to minimize the harvest of Cook Inlet and other non-local sockeye. The plan should provide that for areas not covered by the North Shelikof or Cape Igvak Sockeye Plans, that the seine fishery should be prosecuted normally until the average weight of sockeye salmon during a fishing period increases by 1/4 pound over the June average for the district. Fishing thereafter will be limited to inside lines drawn headland to headland except where "outside" terminal harvest areas are identified as necessary by area staff. Fishing periods will be limited to 24 hour duration to provide for timely identification of the presence of non-local stocks.

**PROBLEM:** The lack of an island-wide regulation directing Kodiak area managers to limit in any way the harvest of Cook Inlet or other non-local sockeye stocks.

**WHAT WILL HAPPEN IF NOTHING IS DONE?** No limits will be placed on the harvest of Cook Inlet sockeye in the Kodiak Management Area. This will be the case regardless of the size of Cook Inlet returns.

**WHO IS LIKELY TO BENEFIT?** All users of non-local sockeye and other stocks.

**WHO IS LIKELY TO SUFFER?** Harvest of pink salmon should not be affected. Kodiak fishermen who depend on harvests from their "local" area will have less impact from mobile seiners targeting sockeye salmon.

**OTHER SOLUTIONS CONSIDERED?** A directive for staff to minimize the harvest of Cook Inlet sockeye was rejected since Kodiak staff would not support it. This proposal is not intended to be the definitive solution, but rather a "tool" to be considered in combination with other options to minimize non-local harvests.

**PROPOSED BY:** United Cook Inlet Drift Association (UCIDA) (HQ-95-F-276)  
\*\*\*\*\*

**PROPOSAL 138** - 5 AAC 18.XXX. NEW REGULATION. Adopt a Kodiak area salmon management plan as follows:





## Appendix E.7. page 2 of 4

The purpose of this management plan is to provide direction to the Department in the management of the seine fishery during the July 6-25 period when Cook Inlet bound sockeye salmon are migrating through the Kodiak Management Area. It is the intent of the Board to allow fisheries throughout the management area to be conducted on Kodiak area salmon stocks while minimizing the harvest of Cook Inlet sockeye salmon stocks.

The Board recognizes that some incidental catch of Cook Inlet sockeye and other stocks has and will occur in this area while the seine fishery is managed for Kodiak Area salmon stocks. The Board intends, however, to prevent a repetition of the non-traditional harvest patterns which have occurred since 1987.

The Board intends to minimize the interception of Cook Inlet sockeye salmon in the Kodiak Management Area to not exceed 5% of the total Cook Inlet sockeye salmon return. An annual post season adjustment will be conducted to determine if the goal of the Board is met. Management adjustments in succeeding years will be made to meet this goal.

Therefore, the Board establishes the following guidelines to the Department for management of salmon stocks during the July 6-25 period:

- ) When predominately local Kodiak Area stocks are present within any management district emergency orders will be given consistent with the management plan for that district;

- ) When predominately Cook Inlet or other non-local stocks are present within any management district the Department shall, to the extent practical, use its emergency order authority to avoid interception of non-local stocks;

- ) The Department shall attempt to minimize the interception of Cook Inlet sockeye and other non-local stocks during the July 6-25 period by the following means:

- (A) Restrict fishing time: Emergency orders extending fishing time will not be given when it is apparent to the Department that, based on fish size, species composition, harvest patterns and other information available, that the predominant salmon stocks harvested within any district or section of the Kodiak Management Area are of non-local origin.

- (B) Restrict fishing area: The department shall restrict the seine fishery in any district or section of the management area from fishing seaward of lines drawn from headland to headland when predominately non-local sockeye salmon stocks are present in offshore waters.

- ) In addition to the above actions, seine fishing in the following areas will be restricted as follows to protect migrating Cook Inlet sockeye salmon and other non-local stocks during the July 6-25 period:

- (A) From July 6-25 in the Halibut Bay Section of the Southwest Kodiak District the Department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;

- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 39,000 sockeye salmon;



Appendix E.7. page 3 of 4

(3) when the harvest reaches 39,000 sockeye salmon the Department shall close the section until the first regularly scheduled period that follows July 26.

(B) From July 6-25 in the Sitkalidak Section of the Eastside Kodiak District the Department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 17,500 sockeye salmon;
- (3) when the harvest reaches 17,500 sockeye salmon, the Department shall close that portion of the section seaward of a line ½ mile offshore extending along the east side of Sitkalidak Island from the longitude of Rolling Bay to Cape Barnabas until the first regularly scheduled period that follows July 26.

(c) From July 6-25 in the Katmai/Alinchak Section of the Mainland District the Department shall manage the fishery as follows:

- (1) the management of the fishery shall be based on local stocks;
- (2) the fishery shall remain open during normal fishing periods until the harvest reaches 6,900 sockeye salmon;
- (3) when the harvest reaches 6,900 sockeye salmon, the department shall close that portion of the section seaward of the line from Cape Ilktugitak to Cape Kubugakli to Cape Kekurnoi to Cape Aklek until the first regularly scheduled period that follows July 26.

**PROBLEM:** The continued rapid expansion and development of the intercept fishery which targets Cook Inlet sockeye and other non-local salmon stocks.

**WHAT WILL HAPPEN IF NOTHING IS DONE?** Without this regulation the Department has no emergency under authority to limit the Kodiak intercept fishery unless the intercept fishery itself would jeopardize Cook Inlet stocks. (State of Alaska, Dept. of Law Memo, April 7, 1989. File No. 663-89-0465.) Kodiak seiners will continue to target Cook Inlet bound sockeye salmon at the expense of Cook Inlet fishermen and stocks. A conservation problem could develop in which Cook Inlet users will bear the burden of the unregulated Kodiak intercept fishery if this fishery continues uncontrolled.

**WHO IS LIKELY TO BENEFIT?** Cook Inlet commercial, sport, personal use, and subsistence fishermen will benefit. The State of Alaska, through improved salmon stock management will also benefit.

**WHO IS LIKELY TO SUFFER?** Kodiak seine fishermen will have reduced opportunity to harvest Cook Inlet sockeye and other non-local stocks.

**OTHER SOLUTIONS CONSIDERED?** We considered designated closure of other sections of the Kodiak Management Area during the July 6-25 intercept period, however, this may not be necessary if managers are required to target local stocks and minimize the harvest of non-local stocks.





Appendix E.7. page 4 of 4

**PROPOSED BY:** Kenai Peninsula Fishermen's Association (HQ-95-F-206)

\*\*\*\*\*

**PROPOSAL 139** - 5 AAC 18.3XX. KODIAK-COOK INLET SALMON MANAGEMENT PLAN. Adopt a new management plan as follows:

5 AAC 18.367. Kodiak-Cook Inlet Salmon Management Plan.

(a) The purpose of the Kodiak-Cook Inlet Salmon Management Plan is to allow traditional fisheries in the area to be conducted on Kodiak area salmon stocks, while minimizing the directed harvest of Cook Inlet and the other non-local salmon stocks. The board recognizes that some level of bycatch of other stocks has and will occur while the seine fishery is managed for Kodiak area salmon stocks. The board intends, however, to prevent a repetition of the non-traditional harvest patterns.

(a) From July 1 to July 30 the fishing area closed restrictions apply seaward of lines down from headland to headland.

(b) Terminal harvest areas would be open by E.O. within the outside waters if the river terminus is located within the outside waters and the salmon are predominant of local origin.

(c) Terminal harvest areas could be open by E.O. within the outside waters of the Sitkalidak Section based on predominant local stock abundance.

**PROBLEM:** The Kodiak fleet has developed a very effective directed intercept fishery on Cook Inlet sockeye since 1987. To be effective at intercepting Cook Inlet sockeye the fishery has had to move from inside the bays to fishing outside waters and off the Capes. The results of this new targeted fishery has resulted in millions of Cook Inlet sockeye being intercepted but also very large numbers of Chinook, chums, coho and pinks. In many areas the catch of Chinook, chums and coho has skyrocketed to more than ten times the historical catch.

In Lower Cook Inlet the chum, coho and pink seine fishery in Kamishak Bay has been virtually non-existent since 1989. The systems are barely making escapement goals even without a local seine fishery. The bear food is being jeopardized. There are conservation concerns. A base graph shows Kamishak salmon declining at a comparable rate and time as Kodiak catches are skyrocketing.

**WHAT WILL HAPPEN IF NOTHING IS DONE?** Lower Cook Inlet seiners will continually have their Kamishak fishery closed because of the Kodiak interception of this area chums, coho and pinks. Kamishak bears will not get a sufficient food supply.

**WHO IS LIKELY TO BENEFIT?** Lower Cook Inlet seiners, Upper Cook Inlet commercial, sport, subsistence and personal-use fishermen. Other wildlife that depends on salmon for food.

**WHO IS LIKELY TO SUFFER?** Kodiak fishermen who want to intercept all species of Cook Inlet salmon.

**OTHER SOLUTIONS CONSIDERED?** No other solutions considered. Cook Inlet has been trying since 1989 to restrict this new and expanding intercept fishery. No action now will only prolong and increase the problem.

**PROPOSED BY:** David Martin (HQ-95-F-258)

\*\*\*\*\*





Appendix E.8. Excerpts from the Alaska Board of Fisheries Summary of Actions taken at the on-cycle November 1995 Kodiak Finfish meeting, regarding Kodiak/Cook Inlet sockeye salmon issues.

## **SUMMARY OF ACTIONS**

### **ALASKA BOARD OF FISHERIES**

**NOVEMBER 29 -- DECEMBER 6, 1995  
KODIAK, ALASKA**

**KODIAK/CHIGNIK  
(ALL FINFISH)**

**DESIGNATED REPORTER: Joe Chythlook, Southwest Regional  
Coordinator**

*This summary of actions is for information purposes only and is not intended to detail, reflect or fully interpret the reasons for the Board's actions.*

**PROPOSAL NO. 88**

**ACTION: Passed**

**DESCRIPTION: 5 AAC 64.020.** Increase the bag limit for sockeye salmon in Saltery Cove streams. (HQ-95-F-184)

**AMENDMENTS: None**

**DISCUSSION:** The Board agreed with the ADF&G staff comments that positive action on this would not jeopardize stock conservation and that it would promote sport harvest opportunity. It was also noted that the Kodiak Advisory Committee (KAC) and other members of the public supported it.

**PROPOSAL NO. 89**

**ACTION: Passed**

**DESCRIPTION: 5 AAC 64.020.** Increase the possession limit for salmon. (HQ-95-F-183)

**AMENDMENTS: None**

**DISCUSSION:** The Board agreed there was a harvestable surplus of salmon other than chinook and that it would not adversely impact the fish stocks while providing more opportunity to the sport users. It was also noted that the Department intended to monitor the fishery and if changes were needed, they would respond with future proposals.

**PROPOSAL NO. 90**

**ACTION: Failed**

**DESCRIPTION: 5 AAC 64.020.** Allow a bag limit of one king salmon of any size in the Kodiak Island remote zone. (HQ-95-F-05)



Appendix E.8. page 2 of 3

to Black Cape and remain Cape to Cape north of Black Cape. (HQ-95-F-293)

**AMENDMENTS:** None

**DISCUSSION:** The Board viewed adoption of this proposal as having potential allocative impacts with possible increase in the catch of Cook Inlet sockeye. The present plan seemed to be working and this would upset the balance that has been created in the present plan.

And there was also no apparent conservation problem that needed addressing.

**PROPOSAL NO. 135**

**ACTION:** Failed

**DESCRIPTION:** 5 AAC 18.363. Limit the duration of fishing periods to 24 hours and the require a 24 hour closure between fishing periods. (HQ-95-F-259)

**AMENDMENTS:** None

**DISCUSSION:** The Board expressed the adoption of this would result in a significant departure from the current management and would disrupt the normal fishing periods. They would also incorporate some comments given for 134.

**PROPOSAL NO. 136**

**ACTION:** No Action.

**DESCRIPTION:** 5 AAC 18.XXX. Adopt a Kodiak area wide sockeye salmon management plan that restricts the seine fishery in "outside" waters in areas managed for pink salmon to waters within one half mile of shore from July 6 - 25. (HQ-95-F-273)

**AMENDMENTS:** None

**DISCUSSION:** Based on action taken on 138.

**PROPOSAL NO. 137**

**ACTION:** No Action.

**DESCRIPTION:** 5 AAC 18.XXX. Adopt a Kodiak area wide sockeye salmon management plan to minimize the harvest of Cook Inlet and other non-local sockeye salmon from July 6 - 25. (HQ-95-F-276)

**AMENDMENTS:** None

**DISCUSSION:** Based on action taken on 138.

**PROPOSAL NO. 138**

**ACTION:** Failed



Appendix E.8. page 3 of 3

**DESCRIPTION:** 5 AAC 18.XXX. Adopt a Kodiak management plan to provide direction to the department for management of the purse seine fishery during the July 6 - 25 time period, when Cook Inlet sockeye salmon are migrating through the area. (HQ-95-F-206)

**AMENDMENTS:** None

**DISCUSSION:** The Board heard public testimony which addressed differing views on the issue. The conclusions drawn showed that both local and non-local sockeye stocks are harvested during July 6-25 to some degree. However, the Board expressed the assumptions of the proposers when compared with the limited scale and weight sample data were inconclusive. And the past Board had pretty much resolved the issue in 1989 utilizing the best information available. And that information has not changed to this point. The effort and catch has increased in the disbuted area due to local management practices in other areas of Kodiak. And it is difficult to determine if this a new and expanding fishery when both this area and Cook Inlet fisheries are at an all time high. The overriding reason for apparent increase in intercept of Cook Inlet stocks seem to be directly related to the density and strength of that run.

**PROPOSAL NO.** 139

**ACTION:** No Action.

**DESCRIPTION:** 5 AAC 18.XXX. Adopt a new Kodiak-Cook Inlet salmon management plan to allow traditional Kodiak Area fisheries while minimizing the interception of Cook Inlet and other non-local sockeye salmon. (HQ-95-F-258)

**AMENDMENTS:** None

**DISCUSSION:** No action due to action taken on 138.

**PROPOSAL NO.** 140

**ACTION:** Failed

**DESCRIPTION:** 5 AAC 18.362. Clarify Kakluk Lake sockeye salmon escapement goals. (SW-95-F-07)

**AMENDMENTS:** None

**DISCUSSION:** The Board agreed with KAC that establishment of escape-ment goals was the purview of the Department and not the BOF.

**PROPOSAL NO.** 141

**ACTION:** Failed

**DESCRIPTION:** 5 AAC 18.362. Provide equal fishing time for seine and gillnet gear types to fish inner bay opening of the Northwest



END





Thursday, September 28, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, AK. 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

Mr. Chairman and Members of the Board of Fish,

Thank you for the opportunity to express our views on the above matter. Ocean Beauty Seafoods is opposed to the UCIDA Agenda Change Request because it does not meet the agenda change request criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted. Cook Inlet sockeye caught in the Kodiak Management area do not create a conservation concern, nor does this have a conservation purpose or reason. There is no error in regulation that needs correcting.

Ocean Beauty owns and operates 2 facilities on Kodiak Island and has a long history of participating in the salmon fishery in and around Kodiak Island. Our Kodiak facility operates all year and employs over 250 local Kodiak residents' year around. During the 5-week period of the proposal we process, on average, over 12.5 million pounds of salmon and pay over \$2.3 million in wages. Annually we spend over \$4 million on tendering, much of it with Kodiak based vessels.

The proposal for the agenda change does not address many of the issues surrounding salmon harvest in both the Kodiak and Cook Inlet areas. The agenda item does not address the natural variability (both up and down) of either the Cook Inlet or Kodiak sockeye runs. This type of action sets a terrible precedent to completely disrupt one area's fishery to slight advantage another area's harvest. Salmon are considered "common property" and do not belong to the management area where they were born.

There is insufficient information to make this type of change. In the summary provided by ADF&G at the request of the BOF it points out "that it is really impossible to establish a trend with only three years data." The report notes that the highest number in Cook Inlet origin fish in 2014-15 was "much reduced" in 2016.

OCEAN BEAUTY SEAFOODS LLC

1100W. EWING ST. • P.O. BOX 70739 • SEATTLE, WASHINGTON 98127-1539 • (206) 368-7699





The proposal does not assess the economic consequences to Kodiak stakeholders, including fishermen, processing workers, processors, business and community. Greatly restricting the amount of salmon available to harvest and process will have a large economic impact and adversely affect our ability to maintain a local workforce.

The Kodiak Island area salmon harvest is a historical fishery that is not fishing in new areas, or seeing an increase in targeting of Cook Inlet fish. The Kodiak Management Area plans are focused on the availability and harvest of local stocks.

The core or anchor of our business involves the purchasing, tendering, and processing of Salmon from the waters around Kodiak Island and the Mainland across Shelikof Strait. Any changes to the Kodiak Management Area will have a huge impact on our processing facilities, the people that work here and the fishermen that deliver to us. This will also impact Kodiak Island if we are not able to process during those dates (June 23-July 31). There would be little hope to keep workers employed year around and contribute to the community.

The UCIDA Agenda Change Request does not meet the Board of Fish criteria to take up this issue out of cycle. The genetic stock composition study does not present any new information, nor is there sufficient information to base any management changes on. It does not create a conservation concern or have a conservation purpose or reason. For these reasons, and the lack of economic impact consideration, we urge you to reject the Agenda Change Request.

Sincerely,

John Hanrahan  
Chief Operating Officer

  
Mike Simpson  
Director of Alaska Operations

Woody Knebel  
Plant Manager - Alitak

James Turner  
Plant Manager - Kodiak

Rick Crooks  
Assistant Manager - Alitak

Cindy Walton  
Assistant Manager - Kodiak

Justin Simpson  
Production Manager - Alitak

Darren Rudger  
Fleet Manager



IN REPLY REFER TO:

## United States Department of the Interior

Office of Subsistence Management  
1011 East Tudor Road MS 121  
Anchorage, Alaska 99503-6199

FWS/OSM/BOF 17079.GP

OCT 03 2017

Mr. John Jensen, Chair  
Alaska Board of Fisheries  
Alaska Department of Fish and Game  
P.O. Box 115526  
Juneau, Alaska 99811-5526

Dear Chairman Jensen:

The Alaska Board of Fisheries will consider 18 Agenda Change Requests (ACR), among other issues, at its October 17-19, 2017 work session.

The U.S. Fish and Wildlife Service, Office of Subsistence Management, working with other Federal agencies, has reviewed these requests and does not believe the decision to accept any of these requests for out-of-cycle regulatory action will have a significant impact on Federally qualified subsistence users. If any of the requests are accepted and assigned to future meeting dates for deliberation, Federal staff will submit comments on proposals which may result in impacts to Federally qualified subsistence users. During the meeting, we may comment on other agenda items if issues arise, that may have an impact on Federal subsistence users or fisheries.

We appreciate the opportunity to comment on these important regulatory matters and look forward to working with your Board and the Alaska Department of Fish and Game on these issues.

Sincerely,

Eugene R. Peltola Jr.,  
Assistant Regional Director



Chairman Jensen

2

CC: Sam Cotten, Alaska Department of Fish and Game, Juneau  
Anthony Christianson, Chair Federal Subsistence Board  
Tom Brookover, Alaska Department of Fish and Game, Anchorage  
Hazel Nelson, Alaska Department of Fish and Game, Anchorage  
Scott Kelly, Alaska Department of Fish and Game, Juneau  
Glenn Haight, Alaska Department of Fish and Game, Juneau  
Jill Klein, Alaska Department of Fish and Game, Anchorage  
Tom Taube, Alaska Department of Fish and Game, Juneau  
Lisa Olson, Alaska Department of Fish and Game, Anchorage  
Forrest Bowers, Alaska Department of Fish and Game, Juneau  
Interagency Staff Committee  
Administrative Record





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September 25, 2017

Alaska Board of Fisheries  
Chairman, John Jensen  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request #11

Dear John and Board members,

I have commercial fished salmon out of Old Harbor all of my life. I am chairman of the Old Harbor Native Corporation fisheries committee and have worked for more than 30 years to keep fishing opportunities available for Old Harbor residents. Generations of Old Harbor fishermen have known that big sockeye are sometimes available on the east side of Kodiak Island. More often than not, they don't show up. Based on my experience as a commercial fisherman, I think the Board has to realize two things: First, fish out in the ocean don't belong to a single group of fishermen. Sockeye going to Cook Inlet are common property fish not Cook Inlet's fish. Second, Kodiak fishermen have always fished for local stocks and always caught some Cook Inlet fish.

The UCIDA agenda change request illustrates they don't even have even a basic understanding of the Kodiak fishery. Moreover, it appears that they think all Cook Inlet origin fish belong to Cook Inlet fisherman. Lots of years I'd like Area M, Chignik and Lower Cook Inlet to stop fishing to make sure I can catch all of MY Kodiak fish. But we all know that good fishery management can't manage for the incidental occurrence of non-local stocks. Such management ignores the collateral damage on local stocks, history of the development of the fishery and is contrary to all of the Board's policies regarding mixed stock fisheries. Because of their starting assumptions, the UCIDA agenda change request is strictly allocative and the Board must reject it.

I know that the new genetic information has caused some concern. I just wish that ADF&G would have continued the study for a couple of more years. We had lots of unusual things happening out on the ocean, especially on the east side of Kodiak Island, in 2015 and 2016. Just look at all of the dead whales that were recorded. I think the warm water and limited food moved more Cook Inlet sockeye into the Kodiak Management Area during these years. If the study had continued through 2017, I believe the genetics would have shown the percentages of Cook Inlet sockeye caught in the KMA were more like 2014.

I've heard that the Board may want to do some kind of Kodiak/Cook Inlet working group. If the group is focused on educating folks about Kodiak's salmon management and on trying to understand why Cook Inlet fish are sometimes available in Kodiak then I'm fine with it. I think any group formed should work to inform the Board at the 2020 Board meeting here in Kodiak.

Sincerely yours,

Freddie Christiansen

Chairman OHNC Fisheries Committee



Submitted By  
Oliver Holm  
Submitted On  
9/28/2017 2:10:08 PM  
Affiliation  
self

Phone  
907-486-6957  
Email  
[chicken@gci.net](mailto:chicken@gci.net)

Address  
3338 Tona Lane residence address  
PO Box 8749. mailing address  
Kodiak, Alaska 99615

Chair, John Jensen

I oppose accepting the agenda change request submitted by United Cook Inlet Drift Assoc. to change Kodiak salmon management plans. This ACR is primarily allocative in its intended effects. The presence of some Cook Inlet origin sockeye in Kodiak catches has been well known for a long time. After the huge Kenai River returns in 1987 and 1988 the Board of Fisheries took up the issue in a regularly scheduled Kodiak and Chignik meeting in late fall of 1989. I represented the Kodiak Fish and Game Advisory Committee at that meeting. The BOF took action at that time to address a change in effort levels in the North Shelikof area but looked at other areas and determined that action wasn't warranted. The issue came back before the BOF at later regular cycle meetings and there was a work group formed of which I was a member.

The contribution of Cook Inlet origin sockeye in Kodiak catches is well known in general but is very variable in location and magnitude. The recently completed genetic stock analysis is just the latest ADF@G study that identifies the presence of Cook Inlet sockeye in Kodiak. Before the genetic study there was a scale analysis study and average weights were used to estimate the presence of Cook Inlet fish. Some Cook Inlet sockeye have been caught in Kodiak waters ever since the late 1800's. This was known by the BOF when the various Kodiak salmon management plans were adopted by the board.

If the BOF were to accept this ACR based on the results of the genetic study, short comings in the genetic study would become apparent. There is no fine scale information in the study that would inform where lines for restrictions to fishing should be. Samples were collected from tenders with fish caught within districts and that is as far as it goes. In the NW Kodiak district samples were mostly from set net tenders in order to divide the large district into three regions-Kupreanof/Viekoda, Uganik, and Uyak. Deliveries to seine tenders would often be from more than one of these areas. The ACR is aimed at regulating seiners. In the NW Kodiak district set netters catch 50% or more of the sockeye. Using set net samples to regulate seiners only would be hard to justify as would drawing lines that would affect some set netters but not others near by with no spacial information on the presence of Cook Inlet sockeye beyond the rather broad areas.

The genetic study is only a three year snapshot and shows wide variations. Unfortunately the other fish being targeted are not shown in the study. Sockeye are most often just a small component of the catches in Kodiak when Cook Inlet sockeye are most likely to be present. The public, veiwing only the report, gets a very distorted view of the Kodiak fishery and the study results because the other salmon species are ignored in the report. During the three years of the genetic study Kodiak sockeye runs were not very productive. This fact leads to higher percentages of Kodiak sockeye catches being of Cook Inlet origin. The late Karluk sockeye run had been doing quite well but much of that run is caught after the period sampled in the genetic study. In the middle and late sampling periods if all salmon species caught are included, the percentage of Cook Inlet origin salmon in the Kodiak catches is very small.

Cook Inlet sockeye have been a component of the catches in Kodiak for a very long time. This is not an emergency situation. Kodiak seine effort levels aroud 1988 were around 300 vessel or more. The last three years seine participation in Kodiak has ranged from 186 to only 163 this year. Kodiak origin salmon are no doubt caught in other regions both to the northeast of Kodiak and to the southwest. The department doesn't have the funding to up end management across the state to manage for fish straying between regions. The highly variable nature of these inter regional catches makes regulations hard to craft even if you thought they were somehow justified.

I began fishing salmon in Kodiak waters in 1964. My wife, daughter, son, and son in law all participate as permit holders in the Kodiak salmon fisheries. Continued smooth functioning of the adopted Kodiak salmon management plans is essential to our livelihoods.

Sincerely;

Oliver Holm



# OUZINKIE NATIVE CORPORATION



PC093  
1 of 2

September 22, 2017

John Jensen, Chairman  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: Genetic Stock Composition of Sockeye Salmon in the Kodiak  
Management Area and UCIDA Agenda Change Request

Dear Chairman Jensen and Board members:

On behalf of the Ouzinkie Native Corporation and the community of Ouzinkie, I want to thank you for your decision last January to restrict fishing in the Ouzinkie harbor to subsistence fishing only. Subsistence salmon harvests this year were a big success and although a few seine vessels "checked out" the local sockeye, they were not able to harvest the fish and take away the community's subsistence opportunities. THANK YOU!

On behalf of our shareholders and the Ouzinkie community, Ouzinkie Native Corporation strongly opposes acceptance of the United Cook Inlet Drift Association's Agenda Change request regarding regulatory changes in the Kodiak management area. The proposal is strictly allocative and does not meet the Board's agenda change request criteria.

Ouzinkie is one of the oldest continuously occupied community sites in the Kodiak archipelago. Ouzinkie fishermen have been fishing salmon since long before there was a commercial fishery on Kodiak Island -- hundreds if not thousands of years. Our father's fathers and grandfathers passed down local knowledge about the occasional presence of large sockeye, known as "big bluebacks," in Marmot Bay and behind Spruce Island during some seasons. Occasionally, we caught these fish for subsistence and commercial sale. The genetic study showing that the larger sockeye were Cook Inlet fish doesn't surprise anyone in Ouzinkie. Believe me, this is not "new information." Also, it was no surprise that the genetic study showed that in one year the percentage of larger fish was very low and in another year, it was higher. Again, we've seen this pattern for generations.

Ouzinkie Native Corporation has worked long and hard to rebuild fishing opportunities for Ouzinkie residents. We have three resident seine boats and one resident set net operation. Our resident fishermen fish locally and seldom travel outside the N.W. Kodiak and Afognak districts. It is no exaggeration to say that limiting fishing for five weeks in these areas could put one or more of our fishermen out of business.

Ouzinkie Native Corporation believes in the Board process and we believe that Ouzinkie has been treated fairly by the Board in the Past. We simply do not understand why the Board would consider taking up the issue of Cook Inlet stocks in the Kodiak area out of cycle, away from Kodiak and without the opportunity

# OUZINKIE

## NATIVE CORPORATION



PC093  
2 of 2

for public testimony. This is neither fair nor equitable. We ask you to please restrain from over-reacting and allow the regular Board cycle to address this issue.

Yours truly,

A handwritten signature in cursive script, appearing to read "Darren Muller".

Darren Muller, Chairman  
Ouzinkie Native Corporation  
P.O. Box 89  
Ouzinkie, Alaska 99644



## **CITY OF OUZINKIE**

### **RESOLUTION 2017-13**

#### **A RESOLUTION TO THE ALASKA BOARD OF FISHERIES OPPOSING OUT OF CYCLE SCHEDULING OF KODIAK MANAGEMENT AREA FINFISH ISSUES**

**WHEREAS**, the fisheries and the access to marine resources have always been a foundational resource for island communities such as Ouzinkie rely on strong fisheries and resident fishermen to thrive; and

**WHEREAS**, the Alaska Board of Fisheries has established a 3-year cycle for their agenda schedule in addressing finfish issues in each of Alaska's fisheries management areas; and

**WHEREAS**, the Alaska Board of Fisheries just completed the Kodiak finfish cycle meeting in Kodiak to discuss Kodiak finfish issues in January of 2017; and

**WHEREAS**, exceptions to the Alaska Board of Fisheries 3-year cycle for addressing area finfish issues are narrowly outlined in the Board's "Policy for Changing Board of Fisheries Agenda" and such "Agenda Change Requests" (ACRs) are only heard by the Board during their "first meeting in the fall"; and

**WHEREAS**, United Cook Inlet Drift Association (UCIDA) has submitted an Agenda Change Request(#11) to have the Board schedule Kodiak finfish issues out of cycle during the Board's 2017-18 meeting schedule to "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the UCIDA Agenda Change Request does not meet the Alaska Board of Fisheries' criteria for approval in that it is not; a. for a fishery conservation purpose or reason, b. to correct an error in a regulation or c. to correct an effect on a fishery that was unforeseen when a regulation was adopted; and

**WHEREAS**, the UCIDA Agenda Change Request states on its face that it is "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the Alaska Board of Fisheries Policy for Changing Board of Fisheries Agenda clearly states that "the board will not accept an agenda change request that is predominately allocative in nature absent new information found by the board to be compelling"; and

**WHEREAS**, the UCIDA Agenda Change Request is entirely allocative in nature and information about the opportunistic harvest of Cook Inlet bound sockeye in the Kodiak Management Area while fishing for local stocks has been known for more than 70 years and was documented before the Alaska Board of Fisheries 25 years ago with research



reaching back to the 1940s with estimates of the presence of Cook Inlet sockeye in the Kodiak Management Area ranging from 0 to 60%; and

**WHEREAS**, the 2016 report on the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016 merely provides additional detail to information already known by the Alaska Board of Fisheries about the opportunist harvest of Cook Inlet bound sockeye in the Kodiak Management Area and was not an assessment for allocative purposes;

**NOW THEREFORE BE IT RESOLVED** that the City of Ouzinkie respectfully requests that the Alaska Board of Fisheries reject the UCIDA agenda change proposal to address, out of cycle, the harvest of Cook Inlet stocks in the Kodiak area; and

**THEREFORE BE IT FURTHER RESOLVED** that the Board of Fisheries leave the issue of the harvest of Cook Inlet bound sockeye caught in the Kodiak Management Area to be thoroughly vetted through the normal Board of Fisheries process during the 2019-2020 Kodiak finfish meeting.

**PASSED AND APPROVED** by the Council of the City of Ouzinkie this 26<sup>th</sup> day of September, 2017.

Signed:

Linda Getz  
Linda Getz, Mayor

**Attest:**

Lovett Panamarioff  
Lovett Panamarioff, City Clerk





**Native Village of Ouzinkie  
Ouzinkie, Alaska 99644**

**RESOLUTION #2017-10**

**A RESOLUTION TO THE ALASKA BOARD OF FISHERIES OPPOSING  
OUT OF CYCLE SCHEDULING OF KODIAK MANAGEMENT AREA FINFISH ISSUES**

**WHEREAS**, The Native Village of Ouzinkie is a federally recognized tribe; and The Ouzinkie Tribal Council is the governing body of the Native Village of Ouzinkie; and

**WHEREAS**, fisheries and access to marine resources have always been a foundational resource for these island communities and we rely on strong fisheries and resident fishermen to thrive; and

**WHEREAS**, the Alaska Board of Fisheries has established a 3-year cycle for their agenda schedule in addressing finfish issues in each of Alaska's fisheries management areas; and

**WHEREAS**, the Alaska Board of Fisheries just completed the Kodiak finfish cycle meeting in Kodiak to discuss Kodiak finfish issues in January of 2017; and

**WHEREAS**, exceptions to the Alaska Board of Fisheries 3-year cycle for addressing area finfish issues are narrowly outlined in the Board's "Policy for Changing Board of Fisheries Agenda" and such "Agenda Change Requests" (ACRs) are only heard by the Board during their "first meeting in the fall"; and

**WHEREAS**, United Cook Inlet Drift Association (UCIDA) has submitted an Agenda Change Request (#11) to have the Board schedule Kodiak finfish issues out of cycle during the Board's 2017-18 meeting schedule to "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the UCIDA Agenda Change Request does not meet the Alaska Board of Fisheries' criteria for approval in that it is not; a. for a fishery conservation purpose or reason, b. to correct an error in a regulation or c. to correct an effect on a fishery that was unforeseen when a regulation was adopted; and

**WHEREAS**, the UCIDA Agenda Change Request states on its face that it is "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the Alaska Board of Fisheries Policy for Changing Board of Fisheries Agenda clearly states that "the board will not accept an agenda change request that is predominately allocative in nature absent new information found by the board to be compelling"; and





**WHEREAS**, the UCIDA Agenda Change Request is entirely allocative in nature and information about the opportunistic harvest of Cook Inlet bound sockeye in the Kodiak Management Area while fishing for local stocks has been known for more than 70 years and was documented before the Alaska Board of Fisheries 25 years ago with research reaching back to the 1940s with estimates of the presence of Cook Inlet sockeye in the Kodiak Management Area ranging from 0 to 60%; and

**WHEREAS**, the 2016 report on the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016 merely provides additional detail to information already known by the Alaska Board of Fisheries about the opportunist harvest of Cook Inlet bound sockeye in the Kodiak Management Area and was not an assessment for allocative purposes;

**THEREFORE BE IT RESOLVED** that the Alaska Board of Fisheries reject the UCIDA agenda change proposal to address, out of cycle, the harvest of Cook Inlet stocks in the Kodiak area; and

**AND THEREFORE BE IT FURTHER RESOLVED** that the Board of Fisheries leave the issue of the harvest of Cook Inlet bound sockeye caught in the Kodiak Management Area to be thoroughly vetted through the normal Board of Fisheries process during the 2019-2020 Kodiak finfish meeting.

**PASSED AND APPROVED** by the Native Village of Ouzinkie Tribal Council this 26<sup>th</sup> day of September, 2017.

IN WITNESS THEREOF:

  
Katharine Panamarioff



Submitted By  
Patrick Pikus  
Submitted On  
10/3/2017 11:00:50 AM  
Affiliation  
F/V Polar  
  
Phone  
907-486-5258  
Email  
[pikus@acsalaska.net](mailto:pikus@acsalaska.net)  
Address  
P.O. Box 2843  
Kodiak, Alaska 99615

Dear Chairman Jensen:

I oppose the agenda change request proposed by the United Cook Inlet Drift Association (ACR 11). This ACR clearly does not meet the Board's ACR criteria, nor do I believe that there is a conservation concern great enough to warrant such a drastic and damaging change to the Kodiak Area Salmon Management Plan.

I have lived in Kodiak since 1972 and have fished for salmon in the Kodiak area since the mid-60s as a boy. I am an original issue permit holder. The Kodiak salmon fishery has been a vital part of my income for more than 40 years, and the period of time in question, late June and the month of July, are at the heart of the salmon season for me. The proposal put forward by UCIDA, if adopted, would have a tremendous detrimental impact on my ability to make a decent living fishing for salmon in the Kodiak area.

The proposed ACR would be a terrible management change for a variety of reasons. First and foremost, to my mind, is that this change would greatly hamper ADF&G's ability to effectively manage local Kodiak stocks. There is great variability in the natural local runs, and the Kodiak area management plan has been largely effective in managing them for many years. In particular, I believe the proposed changes would lead to over-escapement, which would present a conservation concern. So, the proposed ACR would have a detrimental conservation impact for Kodiak stocks, when there isn't a significant conservation concern with Kodiak's impact on the Cook Inlet stocks. This makes no sense.

The proposed ACR would be disruptive to the Kodiak fleet's fishing and harvest patterns. The three areas under consideration in the ACR represent a substantial part of the Kodiak Management Area, where much of the fleet is concentrated during that time frame. Closures would result in the seine fleet being forced to move into other areas and the inner bays, resulting in increased competition, diminished catches, and poorer quality pink and chum catches. Again, the proposed ACR would have a tremendous detrimental impact to the Kodiak area, and all to slightly advantage Cook Inlet.

The Kodiak Area salmon management plan is, and should be, focused on the conservation and effective management of the local Kodiak salmon stocks. There is just too much variability with both Kodiak's salmon runs, and with the timing and locality of when Cook Inlet fish are sometimes caught, to justify altering the management plan when there really isn't a vital reason to do so.

In conclusion, the UCIDA agenda change request does not meet the Board's ACR criteria, and would have an enormous detrimental impact on the Kodiak area salmon fishery, so I believe the proposal should not be considered. There is no significant new information, conservation reason, or error in regulation that would come close to justifying consideration of this terrible proposal. I urge the Board of Fish to reject ACR 11.

Thank you for your consideration.

Regards,  
Patrick Pikus





## Pauloff Harbor Tribe

---

P.O. Box 97  
Sand Point, Alaska 99661

Phone: (907) 383-6075  
Fax: (907) 383-6094

September 20, 2017

Chairman John Jensen, Alaska Board of Fisheries

Board Support, P.O. Box 115526

Juneau, AK, 99811-5526 Emailed via pdf attachment to  
[dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

Re: Requesting the Board of Fisheries Reject Agenda Change Request 12

Dear Chairman Jensen,

We urge the Alaska Board of Fisheries to reject ACR 12 at your October 17-19, 2017 Work Session. This ACR does not meet Board criteria found in 5 AAC 39.999, for approving an agenda change Request.

At the February 2016 Board meeting, the Board encouraged salmon fishery stakeholder groups from the South Alaska Peninsula area and Chignik area to find a compromise solution that would restrict commercial fishing in the Dolgoi Island Area to allow additional sockeye salmon to potentially travel to Chignik, while still allowing harvest opportunity for South Alaska Peninsula fishermen. The new regulations were in place for the 2016 & 2017 salmon seasons.

ACR 12 proposes to radically change the mutually agreed upon Dolgoi Island Area regulations. ACR 12 is predominately allocative and therefore should not be approved at this time. We believe this ACR does not meet the Board's criteria for accepting an ACR:

There is no fishery conservation concern. This new regulation established only last year, February 2016, is working as conceived. Dolgoi fishing is restricted and Chignik escapement goals have been met.

There is no error in the regulation – the Board was diligent in promulgating the compromise proposal into regulations, and the Department has been careful to enact the rules as written.



There were no unforeseen effects on the salmon fisheries from this regulation. Both the 2016 & 2017 salmon seasons were unique and surprising, but not as a result of these regulations.

There are plenty of problems with this ACR, however we would prefer to debate the merits of the proposal during the next meeting cycle, when it would regularly come up. At the February 2019 Alaska Peninsula/Chignik fish meeting, the Board will have three years of data under the new regulations to better inform the next decision on this issue.

We respectfully request the Alaska Board of Fisheries reject ACR 12 at the 2017 Work Session. Thank you for the opportunity to provide written comment.

Sincerely,

A handwritten signature in cursive script that reads "George P. Gundersen".

George P. Gundersen  
President





Peter S. Danelski  
2069 Ridge Cir  
Kodiak, AK 99615

October 1, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

Dear Board of Fisheries:

I've been a Kodiak setnetter all my life. I grew up fishing in Uyak Bay and continue to do so in a business with my parents and sister, some crew and my wife and three kids. We make most of our income from fishing and stay out at the site for about 4 months. It is a job and a major part of our lives.

As such, I am opposed to the United Cook Inlet Drift Association's agenda change request. There is no regulation that is in error or needs correcting. The Kodiak Management Area genetic stock composition study doesn't present any "new information" to "correct and effect on the fishery that was unforeseen when the regulation (in this case, the KMA management plan) was adopted."

I start setting anchors in late May with the intention of our family being ready, as best we possibly can, for every fishing day. As a setnetter we have many slow days and some very good days, but are limited in volume by the nature of our gear. We make a season by maximizing our days. I am always ready on the first opener and don't stop until the season closes or we no longer have a market. Like every day we fish, late June and July are extremely important to the viability of our business, as is the traditional dispersal of the local Kodiak fleet on the grounds.

The UCIDA Agenda Change Request is flawed in many ways.

First of all, the Genetic Stock study is not "proof" of timing or location of Cook Inlet salmon in the Kodiak Management Area. The data set is small and the variables are many.

Also, the ACR doesn't consider the huge effect on local Kodiak salmon stocks. We have recently recovered from a prolonged slump in Karluk river sockeye that was



most likely caused by chronic over-escapement. Closures could make this happen again. Management needs to be local.

Furthermore, it is odd and foolish to completely disrupt one area's fishery to "possibly" slightly advantage another's. Disruption would include over-escapement, foregone harvest, redistribution of fish among the Kodiak fleet between different fishermen and gear types.

One must also consider that if Kodiak is regulated for the possible presence of Cook Inlet sockeye, that would set a very difficult precedent for the regulation of other fisheries like Area M and Chignik.

Finally, the proposal does not consider the fact that lost fishing time in areas of the KMA could be devastating to the economy and people of Kodiak in all industries. It is a fishing town that is extremely dependent on salmon.

The Kodiak Salmon Management plan is very effective for the local Kodiak fishery, and it has to be implemented for the good of Kodiak stocks. Kodiak has to be managed for Kodiak. It works to effectively disperse the fleet around the island and maximize local harvest of high quality salmon.

The United Cook Inlet Drift Association agenda change request doesn't meet the Board of Fisheries Agenda Change Request criteria. The KMA genetic stock study doesn't present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation was adopted" nor does Cook Inlet sockeye caught in the Kodiak area create a conservation concern. There is no error in regulation that needs correcting

Sincerely,

Peter S. Danelski and Sara Loewen-Danelski and family



City of Port Lions  
207 Spruce Drive, Box 110  
Port Lions, Alaska 99550  
[cityofportlions@gmail.com](mailto:cityofportlions@gmail.com)

Phone: (907) 454-2332 Fax: (907) 454-2420

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

Dear Chairman Jensen,

The City of Port Lions opposes the UCIDA agenda change request because it does not meet the Board's agenda change request criteria. The basis for the request is the 2016 Kodiak Management Area genetic stock composition study. However, the study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in the Kodiak Area create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

The City of Port Lions has an economic stake in the Kodiak Island Fisheries. Approximately 1/3 of our population are Commercial Fishermen or run Sport Fishing Operations and recently our community has seen a decline in population which can be directly traced to commercial and sport federal and state fisheries policies. Our community and our City Government are dependent upon fisheries for jobs and the various sources of income that come with having fishermen and their vessels located in the community. The City of Port Lions is a second class city located on the northern edge of Kodiak Island. We are a community of 177 which swells to 250 in the summer months, mostly due to the influx of commercial fishermen and their crews. Salmon fishing during the period of June 23 to July 31 is critical to the viability of our fleet and in turn to our community.

This agenda change request by UCIDA does not make sense as it does not address the natural variability of Kodiak sockeye salmon runs (like Karluk in 2017) or the Cook Inlet runs. It is known already by fisheries management that there is a geographical variability in the availability of Cook Inlet sockeye in the Kodiak Area. If Cook Inlet fish are present, they can be encountered both in and out of the designated three areas. This proposed agenda change does not consider several items of impact including;

- Biological impacts to the lack of harvesting sockeye such as over escapement.
- Moving the Kodiak fleet to other areas that cannot sustain them.
- Redistribution of the catch among other types of fishing such as gillnets.
- Pink and Chum harvests will be decreased as catches are moved to inner bay areas.





Acceptance of this agenda change proposal will set a precedent that would corruptly disrupt one areas fishery to advantage another areas harvest. It is widely known and accepted that Salmon are considered common property and are not the property of the management area where they were born. This agenda change would totally disrupt the lives and income of fishermen and communities alike. We are dependent upon each other and the fish that are caught in our Kodiak waters. The poor catch of pink salmon in 2016 is a good example of what can happen to communities and fishermen when salmon harvests of any species are disrupted for any reason. Fishermen cannot pay their bills and in turn do not spend money and this has a trickle- down effect that is widely felt in our communities. The UCIDA proposal does not assess the economic impacts to Kodiak Island through the limitations specified in their proposal.

According to 5 AAC 39.999, the UCIDA proposal does not meet the criteria specified for changing the board's agenda. The Kodiak Area Management plans are focused on the availability and harvest of "local" stocks. The Kodiak fishery is historical, not fishing in new areas, nor is it seeing an increased targeting of Cook Inlet fish. The Kodiak Management plans are working as escapements are being met and the stocks appear to be healthy. The poor pink season in 2016 seems to be a fluke that no one can fully explain. The 2017 season showed healthy stocks of all species and escapements were met with no problems.

In conclusion, the Kodiak Management Area genetic stock composition does not represent any "new information" that "corrects and effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in the Kodiak area create a conservation concern or have any conservation purpose or reason. Also there is no error in regulation that needs correction.

The City of Port Lions appreciates your time in reading our comments and we would appreciate your due diligence in your decision making on this very important issue.

Sincerely,

Jess Eggemeyer II, Deputy Mayor, City of Port Lions



**Native Village of Port Lions  
Port Lions Traditional Tribal Council  
RESOLUTION No. 2017-26R**

**A RESOLUTION TO THE ALASKA BOARD OF FISHERIES OPPOSING  
OUT OF CYCLE SCHEDULING OF KODIAK MANAGEMENT AREA FINFISH  
ISSUES**

**WHEREAS**, the Native Village of Port Lions is a federally recognized Indian Tribe as defined in Section 3 (c) of the Alaska Native Claims Settlement Act as amended; and

**WHEREAS**, the Port Lions Traditional Tribal Council is the governing body of the Native Village of Port Lions; and

**WHEREAS**, fisheries and access to marine resources have always been a foundational resource for these island communities and we rely on strong fisheries and resident fishermen to thrive; and

**WHEREAS**, the Alaska Board of Fisheries has established a 3-year cycle for their agenda schedule in addressing finfish issues in each of Alaska's fisheries management areas; and

**WHEREAS**, the Alaska Board of Fisheries just completed the Kodiak finfish cycle meeting in Kodiak to discuss Kodiak finfish issues in January of 2017; and

**WHEREAS**, exceptions to the Alaska Board of Fisheries 3-year cycle for addressing area finfish issues are narrowly outlined in the Board's "Policy for Changing Board of Fisheries Agenda" and such "Agenda Change Requests" (ACRs) are only heard by the Board during their "first meeting in the fall"; and

**WHEREAS**, United Cook Inlet Drift Association (UCIDA) has submitted an Agenda Change Request (#11) to have the Board schedule Kodiak finfish issues out of cycle during the Board's 2017-18 meeting schedule to "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the UCIDA Agenda Change Request does not meet the Alaska Board of Fisheries' criteria for approval in that it is not; a. for a fishery conservation purpose or reason, b. to correct an error in a regulation or c. to correct an effect on a fishery that was unforeseen when a regulation was adopted; and

**WHEREAS**, the UCIDA Agenda Change Request states on its face that it is "address the harvests of Cook Inlet and other non-local salmon stocks in the Kodiak Area"; and

**WHEREAS**, the Alaska Board of Fisheries Policy for Changing Board of Fisheries Agenda clearly states that "the board will not accept an agenda change request that is predominately allocative in nature absent new information found by the board to be compelling"; and





*Native Village of Port Lions  
Resolution 2017-26R*

**WHEREAS**, the UCIDA Agenda Change Request ~~is~~ entirely allocative in nature and information about the opportunistic harvest of Cook Inlet bound sockeye in the Kodiak Management Area while fishing for local stocks has been known for more than 70 years and was documented before the Alaska Board of Fisheries 25 years ago with research reaching back to the 1940s with estimates of the presence of Cook Inlet sockeye in the Kodiak Management Area ranging from 0 to 60%; and

**WHEREAS**, the 2016 report on the Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016 merely provides additional detail to information already known by the Alaska Board of Fisheries about the opportunist harvest of Cook Inlet bound sockeye in the Kodiak Management Area and was not an assessment for allocative purposes;

**THEREFORE BE IT RESOLVED**, that the Alaska Board of Fisheries reject the UCIDA agenda change proposal to address, out of cycle, the harvest of Cook Inlet stocks in the Kodiak area; and

**AND THEREFORE BE IT FURTHER RESOLVED**, that the Board of Fisheries leave the issue of the harvest of Cook Inlet bound sockeye caught in the Kodiak Management Area to be thoroughly vetted through the normal Board of Fisheries process during the 2019-2020 Kodiak finfish meeting.

**CERTIFICATION:**

We, the undersigned members of the Port Lions Traditional Tribal Council, do hereby certify that the foregoing resolution was duly adopted by the Port Lions Traditional Tribal Council, on the 25<sup>th</sup> day of September, 2017 with a quorum present and 7 votes for, 0 votes against, and 0 abstaining.

Handwritten signature of Denise May in cursive.

Denise May, President

Handwritten signature of Katrina Gundersen in cursive.

Katrina Gundersen, Secretary-Treasurer



QAGAN TAYAGUNGIN TRIBE  
P.O. BOX 447  
SAND POINT, ALASKA 99661  
PHONE (907) 383-5616  
FAX (907) 383-5814

September 11, 2017

Chairman John Jensen, Alaska Board of Fisheries  
Board Support, P.O. Box 115526  
Juneau, AK, 99811-5526  
Emailed via pdf attachment to [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

Re: Requesting the Board of Fisheries Reject Agenda Change Request 12

Dear Chairman Jensen,

The Qagan Tayagungin Tribe (QTT) of Sand Point is a federally recognized tribe in rural Alaska, located in the Shumagin Islands, off the Alaska Peninsula. The purpose of the Qagan Tayagungin Tribe is to provide for the self-government and quality of life for our membership through social, economic, education, health, and cultural services and programs. As you likely know, the health and wellbeing of our local fisheries is of the utmost importance when it comes to providing for the economic, health, and cultural wellbeing of the tribe and our citizens.

As the governing body of the Qagan Tayagungin Tribe, the Tribal Council hereby urges the Alaska Board of Fisheries to reject ACR 12 at your October 17-19, 2017 Work Session. This ACR does not meet Board criteria found in 5 AAC 39.999, for approving an agenda change request.

At the February 2016 Board meeting, the Board of Fish encouraged salmon fishery stakeholder groups from the South Alaska Peninsula area and Chignik area to find a compromise solution to restrict commercial fishing in the Dolgoi Island Area. Stakeholders were asked to do this in order to allow additional sockeye salmon to potentially travel to Chignik, while still allowing harvest opportunity for South Alaska Peninsula fishermen. The new regulations were in place for the 2016 & 2017 salmon seasons.

ACR 12 proposes to radically change the mutually agreed upon Doloi Island Area regulations. ACR 12 is predominately allocative and therefore should not be approved at this time. The Qagan Tayagungin Tribe believes this ACR does not meet the Board's criteria for accepting an ACR:

- There is no fishery conservation concern. This new regulation established only last year is working as conceived. Dolgoi fishing is restricted and Chignik escapement goals have been met.
- There is no error in the regulation – the Board was diligent in transmitting the compromise proposal into regulations, and the Department has been careful to enact the rules as written.



- There were no unforeseen effects on the salmon fisheries from this regulation. Both the 2016 & 2017 salmon seasons were unique and surprising, but not as a result of these regulations.

There are plenty of problems with this ACR, however the Qagan Tayagungin Tribe encourages you to allow debate on the merits of the proposal during the next meeting cycle, when it would regularly come up. At the February 2019 Alaska Peninsula/Chignik Fishfish meeting, the Board will have three years of data under the new regulations to better inform the next decision on this issue.

In conclusion, we respectfully request the Alaska Board of Fisheries reject ACR 12 at the 2017 Work Session. Thank you for the opportunity to provide written comment.

Sincerely,

A handwritten signature in blue ink, appearing to read "David O. Osterback".

David O. Osterback  
President



Quinnan McWethy  
PO Box 8552  
Kodiak AK 99615  
907 942-5567

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811

RE: UCIDA Agenda Change Request and Genetic Stock  
Composition of Sockeye Salmon in the Kodiak  
Management Area

To Fish Board,

I am opposed to the UCIDA agenda change dealing with Kodiak Salmon stocks. There is not enough years of sampling to make it an emergency.

I'm a second generation salmon seiner, I'm 25 years old and have been running a boat for 4 years.

I bought my first boat last through the Alaska Dept of Economic Commerce last year. A change in the agenda with a crippling decision could harm my ability to pay back my loan.

A change in the openings will reshuffle the seine fleet and will upset how, when and where we harvest salmon. Boats could pile up in unconventional areas and create chaos.

Any change needs much more scientific data. Please take into consideration the limits of this study and gather more information before you make any changes to the agenda.

Sincerely,

Quinnan McWethy

A handwritten signature in cursive script that reads "Quinn McWethy".





Raymond May

PO box 8985

Kodiak, AK 9915

09/29/2017

Chairman John Jensen

Alaska Board of Fisheries

PO Box 115526

Juneau, AK 99811-5526

RE: **UCIDA** Agenda change request

I would like to express there should not be any agenda change requests for Kodiak Management Area. do not believe it meets the criteria for agenda change request. There is no regulation that needs correcting. The genetic stock composition study does not show any new information that corrects an effect on the fishery that was unforeseen when the management plan was adopted.

My family and I have roots on Kodiak Island well before Statehood. Our families have fished the Kodiak archipelago for decades. Fishing around Kodiak Island both commercially and Subsistence is our way of life.

The agenda change request would set a bad precedent to try dismantle one areas fishery to try to enhance another area fishery. I think that Cook Inlet fisheries should look at issues within their own area before trying to attack another area out of Board of Fish cycle.

Sincerely

A handwritten signature in black ink, appearing to read "Ray May".

Raymond May





Richard and Amanda Roth  
F/V Kelly Girl  
39142 Suchaview Road  
Homer, Alaska 99603

September 29, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.D. Box 115526  
Juneau, AK 99811-5526

Re: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

Chairman Jensen,

Thank you for the opportunity to comment. I firmly OPPOSE the UCIDA agenda change request because it does not meet the Board's agenda change request criteria as the Kodiak Management Area genetic stock composition study does not present new information correcting an effect on the fishery that was unforeseen when the management plan was adopted, nor does Cook Inlet sockeye caught in Kodiak present a conservation concern or have conservation purpose or reason. In fact, it could have adverse conservation effects on local Kodiak runs.

I have been fishing in Kodiak for the last 16 years as part of a family salmon seining business. I have been operating my vessel as captain for 7 years. My wife and two children also participate in the family fishing business both on my boat and as shore support. We employ at least three crew members every year, and do all of our boat work in Homer using local marine trades and supply stores. I have fished my entire salmon career mostly on the West Side of Kodiak, most years I do not even leave the West Side. Our family's livelihood and that of our crew - some of which live in other Kenai Peninsula communities - depend on the viability and availability of West Side fishing grounds as that is where my fishing experience and expertise lies as well as our Processor, Icicle Seafoods.

This agenda change request is not tied to any assessment of the annual percentage of Cook Inlet sockeye incidental catch in any of the management areas targeted. It also does not address natural variability in either Kodiak or Cook Inlet sockeye runs. Most importantly to me as a West Side Kodiak salmon fisherman is the drastic impact on fishing of local stocks. For example, forgoing harvest of local sockeye will cause over-escapement, fleet movement and proposed closures would reallocate catch between local gear-types and local Pink and Dog harvest being limited to inner bays will result in lower quality of catch for Processors and



potentially lower salmon prices for Kodiak fishermen which are already often lower than the prices that Cook Inlet fishermen receive.

This sets a dangerous precedent, completely disrupting one area's fishery to slightly, if at all, provide gains in another area's harvest. Salmon are considered common property and do not belong to the management area where they are born. If Kodiak is regulated for the presence of Cook Inlet sockeye then, for example, will the Board also place regulations on Chignik and Area M for the take of Kodiak Sockeye and Pinks? We do not wish, nor expect, such a burden placed on our neighbors.

This Proposal does not take into consideration the economic costs to Kodiak salmon fishing families, Processors, processing workers, or Alaskan coastal communities that benefit from the income of Kodiak salmon fishermen. This UCIDA agenda change request, that does not meet BOF criteria for presenting new information that has unforeseen conservation effects on a fishery would have enormous negative economic and conservation impact. I hope that the Board sees that there is no error in the regulation that needs correcting.

Thank you for your careful consideration,

Richard and Amanda Roth Family  
F/V Kelly Girl

A handwritten signature in blue ink, appearing to read "Richard Roth", written over a horizontal line.



Robert E. Fellows

P.O. Box 1065

Homer, AK. 99603

September 20, 2017

Chairman John Jensen

Alaska Board of Fisheries

Boards support section

P.O. Box 115526

Juneau, AK. 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock  
Composition of Sockeye Salmon in the Kodiak Management  
Area

This letter is in opposition of the UCIDA agenda change request. That request does not meet the board's criteria for that action. The genetic stock composition study does not present any new information. There is no conservation concern and no regulation that needs correcting.

I have been fishing in the Kodiak area for over 30 years and commercial salmon fishing there for 28 years. I, my family and my crew depend on the Kodiak area salmon fishery for the majority of our yearly income. I have built my fishing business over those years with strong consideration of the consistency of the Kodiak area management plans. They are some of the longest standing in the state and they work well for all stakeholders.

There are many adverse affects this request could bring about. The most severe being the economic impact to several hundred fishermen and families in the Kodiak management area and the businesses that support them.

Sincerely,

Robert, Lisa, Anna, Larsen, and Malina Fellows



Robert B Lindsey  
3162 Spruce Cape Road,  
Kodiak, Alaska 99615

**October 3, 2017**

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

I oppose the UCIDA agenda request on the basis that there is no “new” information contained within, rather it is newer science presented using the same statistical analysis. It seems short sighted to apply the genetic information presented for one relatively small sampling to apply statistically to the whole of the KMA. Therefore it does not correct an unforeseen effect that was created when the existing regulation went into effect.

I have been involved with the Kodiak salmon fishery since birth, being born to a local fisherman and growing up on canned salmon and rice. I have participated as a salmon fisherman approximately 35 years, from age 8-30, and again from age 45-56. I’ve fished Kodiak, Prince William Sound and Chignik as a salmon seine deckhand, skiffman, skipper, vessel owner and permit holder. I have planned my life for the last 15 years around securing a small pension so that I could pursue Salmon fishing as a viable income after I retire, because I want to raise my grandchildren in the same fashion as my childhood. I see this out of order Agenda change as a threat to this way of life.

One of my fears greater than the rest is the precedent setting possibility of this agenda change gaining traction creating a Pandora’s Box regarding the established method of the boards use of authority. This year in particular saw a lot of fish showing up in unanticipated numbers in unexpected locations. Particularly with regard to pink salmon, will the high numbers caught in Area “M”, and Chignik Management areas now trigger a review of allocation of pink stocks take that could possibly have been bound for Kodiak or PWS? UCIDA’s letter hints strongly at revisiting or challenging current Chinook catch issues, will this be the next challenge raised by them or another similar user group?

It seems to me the board is getting drawn into an allocative arena, which takes away from the original intent that created the Limited entry process. In my opinion the Alaskan model which was established to provide a limited total number of participants and in no way sought to allocate catch by user group, but for maximum long term resource viability has proven to be a far more fair and equitable structure than the Federal quota system model.



While limited entry has stood the test of time we see the ongoing effects of the federal system continuing to devastate the traditional way of life in Alaskan communities. Please do not be drawn into a user group allocation dilemma.

Even a casual consideration of the sea change this creates reveals obvious and unavoidable problems such as underutilized/ loss of quality salmon in the KMA due to restricted access as a by product of this proposal. How then does the board go back and rectify a possible greater impact created by UCIDA's proposal? One of the huge glaring omissions (of UCIDA's data) is the improved runs in the Karluk due in no small part to KMA attention of overescapement. At what point do one groups demands warrant the possibility of creating the demise of another areas salmon stock?

While I'm no biologist, I can say that a guy would starve in this fishery if all he focused on was the Cook Inlet fish. The other side of that coin is there's no way you can guarantee that even if you closed the whole island, could you guarantee no CI fish would be caught. They just pop up where conditions are right and I don't think (especially with all the strange run patterns lately) that is wise to consider massive new restrictions that have no basis in any new data. 6,000 years ago there was probably some local indigenous person here happily surprised to catch a Cook inlet fish.

Try as I might I cant see a conservation issue served by this proposal.

Sincerely yours,

Robert B. Lindsey





Submitted By  
Robert Munsey  
Submitted On  
9/30/2017 9:49:22 AM  
Affiliation

I oppose the UCIDA agenda change request because the latest genetic stock composition study doesn't supply any new information. Also this was a genetic not allocative study and should not be used for allocative purposes.

I have been set net fishing on the west side of Kodiak for the past 40 years. June 23rd to July 31st is an important time for me. The Karluk sockeye run can still be productive, sockeye are returning to Telrod Cove, and the west side pink run is increasing. Mandatory closures- that are not related to Kodiak salmon- during this time could be devastating for fishermen and salmon managers.

I think we have to be very careful about making allocative decisions. We can't predict the route salmon take back to their home stream, so we've all caught fish bound for a different area. To make laws to try to prevent this would- in my opinion- be impossible and would make salmon management much more difficult.

Thank-you, Robert Munsey



Chairman John Jensen  
Alaska Board of Fisheries  
Sept 25, 2017  
Against ACR #11

My name is Ron Kavanaugh, Kodiak Resident since 1966. Engaged in the Kodiak Salmon Fisheries since 1975, our family is 100% dependent on commercial fisheries in the Gulf of Alaska & holds multiple S01K permits. I own and operate the 58 ft limit Seiner Sylvia Star and the 58 ft, FV Insatiable. I strongly oppose Agenda Change Request #11 as it is out of cycle and honestly brings no new or surprising information that merits the Kodiak Area Salmon Management plan being rewritten in such a reactionary and broad manner. My family participates in cape fisheries from Igvak to North Afognak with a vessel that was purpose built with heavy gear designed for cape fishing.

Some years I fish the Shelikof corridor from early June through late August depending on pink salmon abundance. The Shelikof has always been a mixed stock fishery; and based on Mother Nature's whims, this fishery can produce little to no Cook Inlet fish or the exception of a high interception rate as shown in 2015. I believe this anomaly in 2015 was a result of high water temperatures. This condition seemed to keep the fish circulating in the Shelikof corridor for an extended amount of time before continuing to their destination

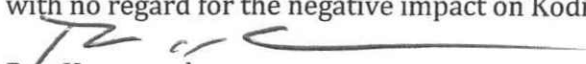
That being said, I find it very troublesome that ACR #11 seeks changes with disregard to the impacts on salmon stocks in the Kodiak Management Area. These changes would severely disrupt the Department's ability to provide harvest opportunity on Shelikof stocks.

If implemented as outlined, this proposal would dramatically change traditional fishing areas and put a large amount of gear into the inner bays creating both gear conflicts and overcrowding.

At a time when the State should be maximizing its natural resources, this ACR runs a real risk of preventing the full utilizing of sockeye returning to Kodiak. As you move a fishery into bays, you also lessen the quality of local pink and chum salmon. This negates efforts to deliver to the processor the highest quality fish available. A lower quality fish equals lower ex-vessel price equals lower raw fish tax.

I'm sure you will receive over whelming correspondence concerning the economic impact this will have on boat owners, skippers, crew, canneries, processing workers, and the service & goods providers. If implemented I could see this costing me 50% or more of my salmon earnings as our vessel fishes almost exclusively in the affected areas.

In closing, this is a very reactionary and open-ended proposal. It appears the proposer has no real plan, but to initiate actions rewriting the Kodiak Area Management Plan based on their belief that Kodiak is responsible for a lack of fish returning to Cook Inlet with no regard for the negative impact on Kodiak Stocks.

  
Ron Kavanaugh  
1533 Sawmill Circle  
Kodiak Alaska 99615  
(907)942-0047



October 2, 2017

To: Board of Fisheries  
Alaska Department of Fish and Game  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

Re: EF-F17-067 Request for Board support for CFEC regulatory change

Dear Board Members,

In April of this year we submitted a proposal to allow existing Sitka Sound Sac Roe Seine permit holders to use open pound roe on kelp as an alternative to seining in the harvest of herring eggs from Sitka Sound. The proposal was similar to what was presented to the Alaska Board of Fisheries (Board) during the last cycle in 2014/15. As some of you may recall there is divergence on whether or not the Board had the statutory authority to act on the proposal. There seems to be a circular argument taking place: The Board cannot act on the proposal until Commercial Fisheries Entry Commission (CFEC) makes changes and CFEC will not make changes until the Board acts on the proposal. Interesting to note: The most recent letter indicates the Board cannot dictate gear used as opposed to the administrative area overlap which was previously believed to be the problem.

In continued dialogue with CFEC we continue to be told that CFEC will not act until the Board acts. This has been stated in virtually every memo and exchange the Board has had with CFEC regarding this situation. Why is the Board's council so staunch in an opinion which differs from CFEC's view? Why is it that folks involved in the same process, reading the same statutes, can't arrive at a similar conclusion?

The proposal in question encourages a change which would result in increased fishery value combined with a reduction in the amount of fishing mortality. To anyone tasked with resource management this is a win/win scenario. This proposal offers more value for less resource removal. Why shouldn't the Board have opportunity to approve or deny such a concept? Isn't this what the Board of Fisheries is for?

We have attached documents supporting our position that the Board should be able to act on our proposal. The proposal was never intended for, or submitted to, CFEC as CFEC has made it clear they wish the Board to present a position to them before they will propose regulation. Contrary to CFEC's opinion there is support from Sitka permit holders however; the support letters were submitted to the Board and not CFEC. We believe the proposal in question is a good idea which will improve a fishery. We believe the decision of whether the proposal is carried or fails should be left up to the Board of Fisheries. Please find a way for this proposal to be heard, debated, and decided by the Board.

Thank you for your time.

Regards,

Darrell and Ryan Kapp



THE STATE  
of ALASKA  
GOVERNOR BILL WALDEE

## Department of Fish and Game

BOARDS SUPPORT SECTION  
Headquarters Office

1255 WOOD BIRCH DRIVE

PO BOX 115294

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PHONE: 907-249-8111

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[www.adfg.state.ak.us](http://www.adfg.state.ak.us)

August 2, 2017

Mr. Darrell Kapp  
338 Bayside Road  
Bellingham, Washington 98225

Subject: 2017/2018 Board of Fisheries Proposal Review

Dear Mr. Kapp:

On behalf of the Board of Fisheries (board) and Department of Fish and Game (department), thank you for submitting a proposal for consideration by the board in the 2017/2018 meeting cycle. Proposals accepted for the meeting cycle are in response to the Call for Proposal that was issued by the board in the fall of 2016. The call sought proposals for regulatory change in Title 5 of the Alaska Administrative Code specifically for finfish in the Prince William Sound Area including Upper Copper and Upper Susitna Rivers, finfish and shellfish in the Southeastern Alaska and Yakutat Areas, and Dungeness crab, shrimp, and other miscellaneous shellfish in all other statewide regions.


As part of the proposal review, the department looks to see if proposals are related to the regulations cited in the call, within the board's statutory authority to act, clear and understandable, and seeking regulatory change. There are occasions when proposals do not meet this baseline review and are not entered into the meeting cycle proposal book.

The proposal you submitted, EF-F17-067, seeks to create a herring pound fishery in Sitka Sound to allow existing herring sac roe permit holders the option of using either gear, or if board authority does not exist, express support for the concept to the Commercial Fishery Entry Commission (CFEC).

The board does not have the authority to determine which gear will be used by limited entry permit holders. As noted in your proposal that is under the authority of CFEC. The proposal will be added to the board's October 2017 work session work book in the event they care to take up the subject of expressing support to CFEC for this concept. If you would like to provide additional information to the board prior to that meeting, the due date for public comment is October 3, 2017.

Again, thank you for taking a personal interest and direct action in Alaska's fish and game management system.

Sincerely,

  
Glenn Haight  
Executive Director





Ryan Kapp RC100

## MEMORANDUM

STATE OF ALASKA  
COMMERCIAL FISHERIES ENTRY COMMISSION

TO: Alaska Board of Fisheries

DATE: January 12, 2000

Dan K. Coffey, Chairman  
Ed Dersham  
Larry J. Engel  
Grant Miller  
Russell Nelson  
Virgil L. Umphreus  
Dr. John R. White

PHONE: (907) 789-6160 VOICE  
(907) 789-6170 FAX

FROM: Commercial Fisheries  
Entry Commission

SUBJECT: Board Proposals 168, 175 and 174—  
Optional Open Pounding  
Alternative for the Southeast Roe  
Herring Seine Fishery (Sitka Sound)

Marlene Johnson, Commissioner  
Mary McDowell, Commissioner  
Bruce Twomley, Chairman

Board Proposals 168 and 175 would authorize open pounding as an alternative means of harvesting roe herring in the Sitka Sound roe herring seine fishery. Board Proposal 174 opposes the change.

The Board previously considered this issue in January of 1997 (Proposal 441). Our comments at the time (coordinated with those of the Department of Law) remain current today. This memo is a recap.

Since our 1997 communications, (1) the Department has experienced managing the experimental, Sitka Sound open pound fishery authorized by the Board in 1997; and (2) the Board authorized a herring pound spawn-on-kelp alternative for Norton Sound herring limited entry permit holders (both gillnet and beach seine). 5 AAC 27.965.

If the Board were to act favorably on Proposals 168 and 175, the Board should be very clear its action affects only the existing, limited Sitka Sound roe herring purse seine fishery.

In turn, following favorable Board action on Proposals 168 and 175, CFEC would stand ready to propose complimentary changes to its regulations. To adopt such regulations after a public comment period, CFEC would be required to determine independently that the purposes of the Limited Entry Act would be served by doing so.

In particular, CFEC's current definition of the administrative area for the Northern Southeast herring spawn-on-kelp pound fishery includes the area in which the Sitka Sound roe herring purse seine fishery is conducted. Compare 20 AAC 230(a) and 5 AAC 33.200(m)(2). CFEC would likely propose





modification of its current definition of the administrative area for the Northern Southeast herring spawn-on-kelp pound fishery to exclude the area included within the Board's definition of the Sitka Sound roe herring purse seine fishery.

In making and considering this proposal, CFEC would be guided by the Limited Entry Act, AS 16.43.200, which reads in relevant part as follows:

The commission shall establish administrative areas suitable for regulating and controlling entry into the commercial fisheries. The commission shall make the administrative areas reasonably compatible with the geographic areas for which specific commercial fishing regulations are adopted by the Board of Fisheries.

\* \* \*

The commission may modify or change the boundaries of administrative areas when necessary and consistent with the purposes of [the Limited Entry Act].

Generally, the Entry Commission would also be guided by AS 16.43.950, which, in relevant part, provides:

Nothing in [the Limited Entry Act] limits the powers of the Board of Fisheries, including the power to determine legal types of gear and the power to establish size limitations or other uniform restrictions applying to a certain type of gear. Holders of interim-use permits or entry permits issued under this chapter are subject to all regulations adopted by the Board of Fisheries.

Our regulatory procedure would allow us to meet our responsibility under the Limited Entry Act, and, additionally, help generate public awareness and comment (particularly from members of the public who believe they have interests under the limited entry system that should be addressed). Our procedure creates an opportunity for the commission to clarify potential ambiguity between regulations of the Board and of the commission. The commission must reserve judgment on the issue until it has received public comment.

Bruce Twomley plans to report to the Board on Saturday, January 15, 2000.

If the Board has additional questions during the following Board meetings, at least one of the following individuals will be available by phone at 789-6160: Bruce Twomley, Susan Haymes, or Kurt Schelle.

cc: Frank Rue, Commissioner, ADF&G  
Doug Mecum, Director of Commercial Fisheries  
Scott Marshall, Regional Supervisor  
Diana Cote, Executive Director, Board of Fisheries  
Stephen White, Assistant Attorney General



## MEMORANDUM

## STATE OF ALASKA

*Department of Law*

To: Glenn Haight  
Executive Director  
Alaska Board of Fisheries

Date: February 11, 2015

File No.: JU2014200582

Tel. No.: 269-5232

Fax: 279-2834

From: Lance Nelson  
Seth Beausang  
Assistant Attorneys General  
Natural Resources Section  
Department of Law

Subject: **Comments on Proposals for  
2015 Board of Fisheries  
Meeting on Southeast  
Alaska/Yakutat Finfish Issues**

The Department of Law has the following comments on the proposals to be considered by the Board of Fisheries at its 2015 meeting in Sitka on regulations for Southeast Alaska and Yakutat Areas finfish issues.

**Proposal 124:** This proposal would authorize equal share quotas for participants in the Sitka Sound sockeye herring fishery during years when 70% of permit holders voted in favor of such quotas. This is likely beyond the authority of the board. The board may not delegate its authority to decide how a fishery is prosecuted to anyone other than the commissioner or department, especially when there are expected to be individual fishers who do not favor the quota.

**Proposal 126:** This proposal would allow herring seiners to opt to use open herring pounds in lieu of their seine gear. Southeast Alaska herring pound limited entry permit holders are generally the only users who can participate in a pound fishery in their administrative area, not seiners. "Herring pound" is generally defined as "an enclosure used primarily to retain herring alive over an extended period of time." 5 AAC 39.105(d)(20). But in Southeast Alaska, a "herring pound" can include an "open pound" which is defined in 5 AAC 27.130(c)(2). The board likely does not have authority to allow additional users into this limited entry fishery without prior action by the Commercial Fisheries Entry Commission (CFEC).

**Proposals 131-134:** These proposals raise similar issues as in Proposal 126. There are already three permit holders in the Southern Southeast sablefish limited entry pot fishery, 20 AAC 05.320(e). The board likely does not have authority to allow additional users into this limited entry fishery without prior action by the CFEC.

**Proposal 148:** If the board authorizes community harvest permits, such permits could not be limited to residents of Hoonah or any other particular community.

**Proposal 155:** This proposal would allow "boat" or "party limits" for sport fishing rather than bag or possession limits that apply to individuals. One consideration



THE STATE  
of ALASKA

GOVERNOR BILL WALKER

RC 142  
Department of Fish and Game  
ALASKA BOARD OF FISHERIES

1255 West 8th Street  
P.O. Box 115526  
Juneau, Alaska 99811-5526  
Phone: 907.465.4119  
Fax: 907.465.6094

March 3, 2015

Bruce Twomley  
Chairman, Alaska Commercial Fisheries Entry Commission  
P.O. Box 110302,  
Juneau, AK 99811-0302

Subject: Board of Fisheries Action on Southeast and Yakutat Finfish Meeting Proposal 126

Chairman Twomley:

During the 2015 Southeast and Yakutat Finfish meeting in Sitka this past week, the Board of Fisheries considered Proposal 126, which would allow Sitka Sound herring seine permit holders to utilize open pounds to harvest roe on kelp in lieu of their customary sac-roe herring seine gear.

You may be aware the Sitka Sound herring fishery value has declined somewhat over the past few years with the market price falling below \$200/ton.

Also, the Sitka Tribe has encouraged the Board to reduce open fishing area and diminish harvest levels.

In considering Proposal 126, the Board was intrigued that the open pound fishery might provide a potentially higher price-point product to the market.

The Board was advised by the Department of Law that the Board likely does not have authority to allow new entrants to limited entry herring pound fisheries without approval by the Commercial Fisheries Entry Commission (CFEC).

A majority of the Board voted to again consider Proposal 126 next year if CFEC were to re-define the current administrative area for the Southern Southeast herring pound limited entry fishery to exclude Sitka Sound, where it appears no herring pound operations are currently authorized or have occurred there. The Board could then consider authorization of open pound gear as an alternative for sac roe seine permit holders. The CFEC could then ratify that alternative gear for seine permits.

The Board was offered a variety of options by the Department of Law for action on Proposal 126 in light of the inability of the Board to pass the proposal as written, including passing the proposal contingent on eventual approval by CFEC. Not knowing whether or when CFEC might act, the Board found it difficult to craft appropriate language. The Board decided it was more appropriate for the proposer to approach CFEC for approval of this concept before the Board would take subsequent action and allow current seine permit holders the option of utilizing open pound alternative gear.



Commissioner Bruce Twomley

- 2 -

March 3, 2015

Accordingly, I am writing to inform you that the Board is open to further consideration of the proposal, and encourages the CFEC to assess the feasibility of acting to allow this fishery when approached by the proposer, Mr. Ryan Kapp.

You may already be aware of this concept as it has been before both the Board of Fisheries and CFEC over the years. We understand that CFEC may need a fair amount of time to make its determination.

Best Regards,

A handwritten signature in black ink, appearing to read "Tom Kluberton", followed by a horizontal line.

Tom Kluberton, Chairman  
Alaska Board of Fisheries

Attached: Proposal 126

CC: The Honorable Sam Cotten, Commissioner ADF&G



THE STATE  
of ALASKA  
GOVERNOR BILL WALKER

Commercial Fisheries Entry Commission

6000 Glacier Highway, Suite 500  
PO Box 110303  
Juneau, Alaska 99811-0303  
Phone: 907.785.5150  
Toll Free: 800.785.5150  
Fax: 907.789.0170

May 13, 2015

Tom Kluberton, Chairman  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526

Re: Board of Fisheries Action on Southeast and Yakutat Finfish  
Meeting Proposal 126

Dear Chairman Kluberton:

I am sorry for the time that this response to your March 3, 2015 letter has taken. CFEC and I have had much more than the usual interruptions during the intervening period.

You called our attention to Board Proposal 126, which appears to be intended to authorize open pounding as an alternative means of harvesting roe herring in the Sitka Sound roe herring seine fishery.

An issue arising from the proposal is that CFEC's current definition of the administrative area for the Northern Southeast herring spawn-on-kelp pound fishery includes the area in which the Sitka Sound roe herring purse seine fishery is conducted.

Your letter suggested the following approach:

The Board was advised by the Department of Law that the Board likely does not have authority to allow new entrants to limited entry herring pound fisheries without approval by the Commercial Fisheries Entry Commission (CFEC).

\* \* \*





A majority of the Board voted to again consider Proposal 126 next year if CFEC were to re-define the current administrative area for the [Northern] Southeast herring pound limited entry fishery to exclude Sitka Sound, where it appears no herring pound operations are currently authorized or have occurred there. The Board could then consider authorization of open gear as an alternative for sac roe seine permit holders. The CFEC could then ratify that alternative gear of seine permits.

I dithered over this a little bit, because I am accustomed to the Board first making a methods and means decision conditioned on subsequent independent regulatory action by the commission. However, there is at least a *prima facie* case for CFEC making a regulatory proposal that would modify its current definition of the administrative area for the Northern Southeast herring spawn-on-kelp pound fishery to exclude the area within Board's definition of the Sitka Sound roe herring purse seine fishery. Because our administrative area definition includes another limited fishery subject to Board regulation, there is an argument that we have not fully met our statutory duties under the Limited Entry Act AS 16.43.200, which reads in relevant parts as follow:

The commission shall establish administrative areas suitable for regulating and controlling entry into the commercial fisheries. The commission shall make the administrative area reasonably compatible with the geographic areas for which specific commercial fishing regulations are adopted by the Board of Fisheries.

\* \* \*


The commission may modify or change the boundaries of administrative areas when necessary and consistent with the purposes of [the Limited Entry Act].

We will develop and publish a regulatory proposal for public comment. Of course, we will have to reserve judgment, until we have heard all the public testimony, as to whether the proposal is or is not consistent with the purposes of the Limited Entry Act. I can think of



competing analyses, and I am not sure about where this proposal will end up. But we can ensure that all sides are heard and fairly considered.

By Direction of the  
COMMERCIAL FISHERIES ENTRY COMMISSION

  
Benjamin Brown, Commissioner  
Bruce Twomley, Chairman

cc: The Honorable Sam Cotten  
Commissioner, ADF&G



CFEC SITKA SOUND  
Modern



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This is a public hearing on CFEC's regulatory proposal to modify CFEC's administrative area definition for the Northern Southeast herring spawn-on-kelp pound fishery.

Now I'd like to introduce fellow staff members sitting here with me. I have my Co-Commissioner (Benjamin Brown). We have our Law Specialist (Doug Rickey) and we have Head of our Research (Craig Farrington). And we are the folks in response to your testimony who are likely to be asking you questions. And so as we go forward if someone has a question if you'd just get my attention I'll acknowledge you for the record and so they know who's speaking.

Also before we begin I really want to extend a thank you to (Randy Lippert), (David Pierce), and (Ty McMichael) for helping make this work. You guys have done a splendid job. And we are also grateful to GCI and particularly (Julie Pierce) who has helped us through this process.

Now before we begin taking testimony I wanted to say just a few words about the procedure and our regulatory proposal to remove Sitka Sound from our administrative area of definition for the Northern Southeast herring spawn-on-kelp pound fishery. I mean, as you know, earlier board proposal 126 asked the Board of Fisheries to authorize open pounding as an alternative means for the Sitka Sound roe herring fishery.

Now proposal 126 is not at issue in this proceeding but it certainly was the catalyst for this proceeding and our proposal - the trigger that led to this hearing. And you'll notice that CFEC's proposal in front of you says nothing about proposal 126. Our proposal addresses only our area definition. And I wanted to tell you that we made this proposal for two reasons. And the first is that we were asked to do so by the Board of Fish and by the Department of



CFEC SITKA SOUND

Madera



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Law. And that's unusual but that request had a certain amount of force. We like to be good colleagues and cooperate where we can. But there's a second reason and that's actually what prepared us forward to make this proposal.

We took a look at our statutory authorization to define administrative areas at our statute with is AS 16 - Alaska Statute 16.43.200 says that the Commission shall make the administrative area reasonably compatible with the geographic areas for which specific commercial fishing regulations are adopted by the Board of Fisheries. And it further says that the Commission may modify or change the boundaries of administrative areas when necessary and consistent with the purposes of the Limited Entry Act.

So, I mean, for us the question that was raised was why did we define the area for Northern (rolunt) kelp to include Sitka Sound in the first place. And we went back to our records, asked our staff to search through what we had, and we could not find a stated reason for doing that. And of course the managers of Sitka Sound have never told us that they wanted to invite more participants in that fishery. It seems that there are plenty of demands there now.

And so we had to acknowledge that our current definition of Northern spawn-on-kelp may not have fully complied with our statute. We just didn't have a stated reason for having included Sitka Sound in that definition. And so we made this proposal and maybe you folks through your testimony can provide us with a sound reason for maintaining the definition or maybe not. It will - much of that will turn on your testimony.

But the thing that I would like all of you to note is that our proposal does not address the merits of proposal 126. And please note that however - whichever way CFEC decides on our proposal the Board of Fisheries could still take up proposal 126. And if the Board were to act favorably on proposal 126 then



CPEC SITKA SOUND  
Modern



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CFEC would have to review the Board's action for consideration of whether the Board's action was consistent with the purposes of the Limited Entry Act under Alaska Statute 16.43.4112. And the basic purposes for a Limited Entry that we'd have to have in mind are that Limited Entry is intended to serve conservation and prevent economic distress among fishermen and those depended upon them for a livelihood. That's the most basic standard we work with.

And another thing to keep in mind is that the Board has means and methods authority under Alaska Statute 16.05.251. In turn, the Limited Entry Act governing us Alaska Statute 16.43.950 declares -- and I'm paraphrasing -- nothing in the Limited Entry Act limits the powers of the Board of Fisheries including the power to determine the legal types of gear.

So the short of this proceeding is if the Board in the future acts favorably on Proposal 126 the Board's action will need to come back to CFEC and CFEC will have to determine whether the Board's action is consistent with the purposes of the Limited Entry Act to give it effect.

And so that's when CFEC will be called upon to address the merits. If this does come back to us of course you will all get notice -- anyone interested will get notice -- and have an opportunity to address the merits as well.

So I think we're ready to move forward with your testimony. And if you have questions I'd like you to raise the questions while you are testifying. And we're going to start first with a testimony of people who have traveled here and who are here in this room to testify to us. When we get through your testimony then we'll turn to the people who are lined up on the phone to give their testimony.





THE STATE  
of ALASKA

GOVERNOR BILL WALDEE



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Commercial Fisheries Entry Commission

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Juneau, Alaska 99811-0302  
Phone: 907, 586, 6180  
Fax: 907, 586, 6180

January 8, 2016

Tom Kluberton, Chair  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526

Re: Board of Fisheries Action on Southeast and Yakutat Finfish Meeting Proposal 126

Dear Chairman Kluberton:

As indicated we would in my letter to you of May 13, 2015, the Entry Commission developed and gave public notice of a regulatory proposal to exclude Sitka Sound from the administrative area for the Northern Southeast herring spawn-on-kelp pound fishery [20 AAC 05.230(a)(9)].

In addition to the usual public notice, CFEC sent an individual notice to all permit holders in that fishery, the Southern Southeast herring spawn-on-kelp pound fishery, and the Southeast roe herring seine fishery, inviting them to send written comments or appear at a public hearing on the proposal that was held at the Entry Commission offices in Juneau on November 6, 2015. The public comment period closed on November 13, 2015.

After due consideration, the Commission has decided to take no further action on the proposal, as we believe the record at this point does not support a change in the boundaries of the administrative area for the pound fishery.

When the Entry Commission considered a petition to limit the pound fisheries in Southeast Alaska in 1994, ADF&G Commissioner Carl Rosier sent us a memorandum regarding the Department's management and conservation concerns with the fisheries in the Hoonah Sound and Craig/Klawock areas. The Commissioner made clear the department's preference for either two large administrative areas (Northern and Southern) covering all of Southeast Alaska, or two



smaller administrative areas that would encompass Hoonah Sound and Craig/Klawock. The Entry Commission ultimately chose the first alternative and defined the Northern and Southern administrative areas as suggested in Commissioner Rosier's memorandum.

Nothing in our research or the public comment we received on this latest proposal convinces us that a change is needed at this time in the administrative area definition for the fishery that has been in place since 1995. If, however, the Board of Fisheries decides to go forward with Proposal 126 or something like it, we would reconsider the matter and examine whether allowing the Southeast roe herring seine permit holders to participate as pound fisherman would be consistent with the Limited Entry Act. Without prejudging the issue, I must tell you that, based on the overwhelmingly negative public comment we received, proponents of such a change will have a significant burden of persuasion.

I have copied this letter by email to Glenn Haight and attached copies of all public comment we received (letters and emails), as well as an unofficial transcript of the public hearing we held in Juneau on November 6, 2015. Virtually all of the public comment and testimony concerns Proposal 126 and, with the exception of those of its proponent Mr. Kapp, all comments were in opposition to the adoption of Proposal 126, mostly because of the potential negative economic effects on the existing pound fishery and its permit holders. It is also worth noting that not a single Southeast roe herring purse seine permit holder offered comment or testimony in favor of the proposal.

Please don't hesitate to contact me if you and have any questions regarding this matter.

Yours Truly,  
Commercial Fisheries Entry Commission

Bruce Twomley, Chairman  
Benjamin Brown, Commissioner

CC: Permit Holders (G01A, L21A, & L21C)  
Sitka Tribe of Alaska  
Southeast Alaska Seiners Association



## MEMORANDUM

## State of Alaska

### Department of Law

TO: Glenn Haight  
Executive Director  
Alaska Board of Fisheries

DATE: March 4, 2016

FILE NO.: JU2015200517

FROM: Seth M. Beausang *SMB*  
Assistant Attorney General

TEL. NO.: 269-5289

SUBJECT: Department of Law  
comments on proposals  
for the March 8-11, 2016  
Statewide Finfish and  
Supplemental Issues  
meeting

The Department of Law has the following comments on the proposals to be considered by the Board of Fisheries at its March 8-11, 2016 Statewide Finfish and Supplemental Issues meeting:

**Proposal 126:** As we explained to the board last cycle, this proposal would allow Southeastern Alaska herring purse seine permit holders in Sitka to use open herring pounds in Sitka Sound in lieu of their seine gear. The Northern Southeast herring pound fishery is a limited entry fishery and includes Sitka Sound within the limited entry administrative area. In Southeastern Alaska, a "herring pound" can include an "open pound," which is defined in 5 AAC 27.130(e)(2). The board does not have authority to allow new entrants into the Northern Southeast herring pound limited entry fishery by allowing non-permit holders to use open pounds in the fishery. We understand from PC 16 that CFEC considered changing the administrative area of this limited entry fishery, in order to allow the board to act on this proposal, but that CFEC ultimately declined to change the administrative area. The board does not have the authority to adopt this proposal.

**Proposal 194:** Based on the statements in the proposal about the alleged impacts of trawl fishing on subsistence uses in this area, the board is encouraged to consider



|                                                                                                                                                         |                                                                                                                                                                      | FISH AND GAME | SUPPORT                                                                                                                                                                                                                                                                                                         | GENERAL COMMENT                                               | OPPOSITION                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 126-2014-2015                                                                                                                                           | Establish a commercial open pound herring spawn on kelp fishery in Sitka Sound. (Tabled at 2015 Southeast Fishery meeting, for consideration at this meeting.)       | N             | <ul style="list-style-type: none"><li>• Efraim Bay AC 25</li><li>• Alan Otness PC 9</li><li>• William R. Menish PC 9</li><li>• Ryan Kapp PC 14</li><li>• Gary Snydram PC 22</li><li>• Joe Lindholm PC 25</li><li>• Darrell Kapp PC 42</li><li>• Steve Feensstra PC 45</li><li>• Terry Kilbreath PC 49</li></ul> | <ul style="list-style-type: none"><li>• CFEAC PC 16</li></ul> | <ul style="list-style-type: none"><li>• Sitka AC 17</li><li>• Wrangell AC 20</li><li>• Sitka Tribe of Alaska PC 2</li><li>• Clyde Curry PC 17/18</li><li>• Clyde Curry PC 18</li><li>• Don Johnson PC 19</li><li>• Joel Randsrup PC 29</li><li>• Larry Diekmann PC 30</li><li>• Southeast Alaska Fishermen Alliance PC 44</li><li>• United Southeast Alaska Gillnetters PC 52</li></ul> |
| <b>Identification of Gear (2 proposals) (This set of proposals was also heard at the Bristol Bay Fishery meeting where public testimony was taken.)</b> |                                                                                                                                                                      |               |                                                                                                                                                                                                                                                                                                                 |                                                               |                                                                                                                                                                                                                                                                                                                                                                                         |
| 27                                                                                                                                                      | Require that a CFEC permit holder's name displayed on a set gillnet site marking sign complies with the same character size marking requirements for permit numbers. | N             | <ul style="list-style-type: none"><li>• Cooper Landing AC 11</li></ul>                                                                                                                                                                                                                                          |                                                               | <ul style="list-style-type: none"><li>• Central Peninsula AC 6</li></ul>                                                                                                                                                                                                                                                                                                                |
| 28                                                                                                                                                      | Change the character size requirements for set gillnet marking signs.                                                                                                | N             |                                                                                                                                                                                                                                                                                                                 |                                                               | <ul style="list-style-type: none"><li>• Central Peninsula AC 6</li></ul>                                                                                                                                                                                                                                                                                                                |

*Salmon (1 proposal)*



September 15, 2017

Chairman John Jensen, Alaska Board of Fisheries  
Board Support, P.O. Box 115526  
Juneau, AK, 99811-5526  
Emailed via pdf attachment to [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

Re: Requesting the Board of Fisheries Reject Agenda Change Request 12

Dear Chairman Jensen,

The City of Sand Point urges the Alaska Board of Fisheries to reject ACR 12 at your October 17-19, 2017 Work Session. This ACR does not meet Board criteria found in 5 AAC 39.999, for approving an agenda change Request.

Last year at the February 2016 Board meeting, the Board encouraged salmon fishery stakeholder groups from the South Alaska Peninsula area and Chignik area to find a compromise solution that would restrict commercial fishing in the Dolgoi Island Area to allow additional sockeye salmon to potentially travel to Chignik, while still allowing harvest opportunity for South Alaska Peninsula fishermen. The new regulations were in place for the 2016 & 2017 salmon seasons.

ACR 12 proposes to radically change the mutually agreed upon Dolgoi Island Area regulations. ACR 12 is predominately allocative and therefore should not be approved at this time. We believe this ACR does not meet the Board's criteria for accepting an ACR:

- There is no fishery conservation concern. This new regulation established only last year is working as intended. Dolgoi fishing is restricted and Chignik escapement goals have been met.
- There is no error in the regulation – the Board was diligent in promulgating the compromise proposal into regulations, and the Department has been careful to enact the rules as written.
- There were no unforeseen effects on the salmon fisheries from this regulation. Both the 2016 & 2017 salmon seasons were unique and surprising, but not as a result of these regulations.

There are plenty of problems with this ACR, however we would prefer to debate the merits of the proposal during the next meeting cycle, when it would regularly come up. At the February 2019



Alaska Peninsula/Chignik Finfish meeting, the Board will have three years of data under regulations to better inform the next decision on this issue.



PC110  
2 of 2

The City of Sand Point aligns with the Aleutians East Borough, the City of King Cove, and other regional communities on this issue. We respectfully request the Alaska Board of Fisheries reject ACR 12 at the 2017 Work Session. Thank you for the opportunity to provide written comment.

Sincerely,

A handwritten signature in cursive script that reads "Glen Gardner Jr." is positioned above the printed name.

Glen Gardner, Jr

Mayor



Sandra M. Katelnikoff-Lester  
3350 Eider  
Kodiak, Alaska 99615

mish\_maru@yahoo.com

907-486-2246

September 22, 2017

Chairman John Jensen & All Board Members  
Alaska Board of Fisheries  
Boards Support Section

P.O. Box 115526

Faxed to: 904-465-6094 because this↓ email address does not work

Juneau, Alaska 99811-5526

Submitted electronically to: [dfg.bofcomments@alaska.gov](mailto:dfg.bofcomments@alaska.gov)

Re: Comments regarding Agenda Change Request #11

Dear Chairman Jensen and Members of the Board of Fisheries,

I would like to speak to you all from a different perspective than others when I talk about DNA testing. I relate to using this type of testing to figure out regulations on who gets to catch fish the same way I relate to the idea that there is such a thing as "invasive species". It is all very subjective and there is no right answer.

Allow me to explain; DNA testing is great to know where you come from as a person. It helps people identify their history, which people they come from and what their main culture is. That is all good and well for people. To me the issue here is, when you identify people in this way it begs others to ask questions like, why did your ancestors come here. Who were they? When did they arrive? Where are they going? How are they and you affecting my environment in the present? This is where I come from, where I was born and raised. This is where I live. To me I might consider your DNA and say you and your ancestors have been an invasive and disruptive people to my environment. I will use your DNA to prove this. Can you see where this is going? Can you see the road we may all take if you chose to make differences in the fisheries regulations according to results from DNA testing?

The system of fishing is not broken and it is not unfair. The fishing industry is regulated and has been for many, many years. The fish caught in any given area is determined by realities given by Mother Nature and not by humans. In the fishing industry around Kodiak Island the fish are caught some years and some years they are not. Over the years of developing our fishing industry we have created a sustainable fishing commerce. Some years our fishermen catch tons of fish, dependent on Mother Nature's decision for right ocean currents, good fishing weather, wind blowing fish our way, getting enough rain, etc...

You see, we have really no control over the fish. Sometimes our fish might end up elsewhere and we don't cry foul. We just continue to do what we do. Wait for next year and hope for the best because it is our people's island life. Fishing is our culture. Subsistence is what we do to survive and it is all dependent on natural influences which are outside of our control.

DNA proves something. It proves that some fish end up where they are not programed to go in any given year due to circumstances that are out of human control.



There is absolutely no way to change this, but consider what will happen to the Kodiak Island people if you try to make changes to our fishing regulations according to effective science for DNA identification. Do you really all want to be responsible for the probable and foreseeable devastation that will follow? My people of this island will suffer and we will be forced to show the world how your board and its DNA have changed our environment.

In closing, I truly believe you are trying to change rules according to information you have no control over. It would be best for all involved if we all just forget about this DNA testing information when trying to relate it to commercial fishing, or animal harvesting for subsistence or commercial purposes, and let's just continue to allow nature to dictate where and when fish and other animals will be harvested. Let's keep it as is and call it the luck of the draw and in some cases Divine Intervention as created by GOD.

Oh, and to touch upon "Invasive species" let's just say, there is no such thing on earth, unless of course you're a species not of earth.

Best Regards,

Sandra M. Katelnikoff-Lester  
Kodiak Island Resident



Sandra M. Katelnikoff-Lester  
3350 Eider  
Kodiak, Alaska 99615

mish\_maru@yahoo.com

907-486-2246

September 22, 2017

Chairman John Jensen & All Board Members  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

Faxed to: 904-465-6094

Re: Comments regarding Agenda Change Request #11

Dear Chairman Jensen and Members of the Board of Fisheries,

I have a question for the scientists or biologists. I believe it is a rather important question to ask. I want to know if they considered when they wrote to you about Agenda Change Request #11 if they considered the theory that the reason there are DNA identified Cook Inlet fish that show up in the different Kodiak Archipelago areas is because the species of fish is attempting to keep their DNA from mutating.

Everything in life has to mix its DNA with a fresh batch of DNA every so often so that DNA specific mutation does not happen and it keeps the stock viable and healthy. So just maybe the fish are taking care of their DNA by mixing with fish from other areas and not just the Kodiak Island Area.

I totally believe this is a sound theory and it would mean that we are not catching the pass thru fish but rather fish that are attempting to keep the species strong.

If this is the case, we would request you make no changes to our fishing regulations. At least until this theory is disproven by science.

Best Regards,

Sandra M. Katelnikoff-Lester  
Kodiak Island Resident



Shirley Monroe

P. O. BOX 1202

Kodiak, Alaska 99615

September 29, 2017

Chairman John Jensen

Alaska Board of Fisheries

Boards Support Section

P.O. Box 115526

Juneau, Alaska 99811-5526

RE: UCIDA AGENDA CHANGE REQUEST AND  
GENETIC STOCK COMPOSITION OF SOCKEYE SALMON IN  
THE KODIAK MANAGEMENT AREA

As a fisherman and boat owner I oppose the UCIDA agenda change request because it does not meet the Board's agenda change request criteria because the Kodiak Management Area genetic stock composition study does not present any new information that corrects an effect on the fishery that was unforeseen when the regulation or management plan was adopted nor does Cook Inlet sockeye caught in the Kodiak Area create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

I have been fishing a set net site in Larsen Bay and Uyak Bay since Summer of 1961, family operation. Became a partner in a Kodiak Seine vessel in 1981 as you can see our family depends on the fishing season in Kodiak Area, the time period between June 23 – July 31<sup>st</sup> would cut into our family income in a big way.

I have a question for the Alaska Board of Fisheries, has anyone ever taken samples of scales to see just how many fish in the Cook Inlet Area belong to the Kodiak Area or some other area? First it was Kodiak taking Chignik and Area M fish now taking Cook Inlet fish when does it stop? We have no control over what the salmon do and were the salmon go so they are like "common property", until caught.





Kodiak fishery is an historical fishery that has been well managed over the years through the good and bad years, keep up the good work Department of Fish and Game.

As a west side Kodiak Salmon fisherman I feel we need to do more research and do a complete genetic stock composition over a longer period of time before any changes are made. UCIDA agenda change request does not meet the Board of Fisheries Agenda Change Request criteria.

Sincerely yours,

  
Shirley Monroe

James, Kip, Darlin Monroe



# Southeast Alaska Fishermen's



PC113  
1 of 1

9369 North Douglas Highway

Juneau, AK 99801

Phone: 907-586-6652

Email: [seafa@gci.net](mailto:seafa@gci.net)

Fax: 907-523-1168

Website: <http://www.seafa.org>

October 3, 2017

Board of Fisheries  
John Jensen, Chairman  
PO Box 115526  
Juneau, AK 99811

RE: Agenda item #13 – 2017/2018 Cycle

Dear Board of Fish Members,

In reviewing the materials for the October work-session we noted in agenda item #13 the suggestion of possibly shortening the scheduled days for the Southeast meeting. We would respectfully request that if you are shortening the length of the meeting to please take days from the end of the meeting. This request is because the Board of Fish meeting overlaps with the International Pacific Halibut Commission meeting in Portland, Oregon and many of the same representatives that attend the Board of Fish meeting are participants at the IPHC meeting.

We also hope while discussing the length of the meeting – the Board clearly articulates the plan for the Southeast meeting since you combined both finfish and shellfish together. Our association would hope that you plan to split the meeting into two or three segments with public testimony before each segment. Our preference would be to split it into Shellfish 1<sup>st</sup>, followed by the 2<sup>nd</sup> segment of salmon and groundfish and a 3<sup>rd</sup> segment with herring last or divided into shellfish and finfish. It would be the participants responsibility to follow the process and be there in time for whenever public testimony will start. There are too many proposals to be able to speak to them in one public testimony segment. Thank you for your consideration of our request.

Sincerely,

Kathy Hansen  
Executive Director



Stephen O'Brien  
PO Box 8804  
Kodiak, AK 99615

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

October 2, 2017

Re: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

To Whom It May Concern:

My name is Stephen O'Brien and I oppose the UCIDA agenda change request because it does not meet the Board's agenda change request criteria because the Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted" nor does Cook Inlet sockeye caught in Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

In 1977, my parents bought into a set net site in Larsen Bay, Alaska. Larsen Bay, located in Uyak Bay, is on the west side of Kodiak Island and has been my summer home for the last 31 years. Set netting and the Kodiak salmon fishery has always been a part of my life. As a kid, I spent my summers in Larsen Bay while my parents, Jane Petrich and Jim O'Brien, ran their own set net permits. At the age of 14, my parents transferred their permits to my brother David and me, and together we began running a two-permit set net operation. Since then, our set net site has grown into a family business. My wife, brothers David and Erik, sister in law, nieces, and parents are all significantly invested in the Kodiak salmon fishery. We rely heavily on strong salmon runs to provide for our families and crew members, especially during the June 23 to July 31 portion of the Kodiak salmon fishery.

I am deeply opposed to the agenda change request. I believe it to be a terrible model to completely disrupt one area's fishery to slightly advantage another area's harvest. Salmon are considered "common property" and do not "belong to" the management area where they were born. Further, if Kodiak is regulated for the presence of Cook Inlet sockeye, will the board also move to regulate Chignik and Area M for the take of Kodiak sockeye and pinks? Lastly, I do not believe the information gathered from the genetic testing done in a short three-year time period holds enough merit to move forward with changing the management for the pertaining areas permanently.



The Kodiak fishery is a historical fishery that is not fishing in new areas. The Kodiak Management Plan is focused on the availability and harvest of local stocks and does not target Cook Inlet fish. I believe the management plans are working based on the continued success of Kodiak fishermen and the salmon runs seen around the island.

In conclusion, I feel it important to restate that the UCIDA agenda change request does not meet the Board of Fisheries Agenda Change Request criteria. The Kodiak Management Area genetic stock composition study does not present any “new information” that “corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted” nor does Cook Inlet sockeye caught in Kodiak create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Sincerely,

Stephen O'Brien  
[Kodiaksob@gmail.com](mailto:Kodiaksob@gmail.com)  
907-942-4166



Steve and Jenny Roth  
F/V Sea Grace  
PO Box 3171  
Homer, Alaska 99603

September 29, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.D. Box 115526  
Juneau, AK 99811-5526

Re: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

Chairman Jensen,

My wife and I appreciate the opportunity to comment. We are against ACR-11 because it does not meet the Board's agenda change request criteria. The Kodiak Management Area genetic stock composition study does not present new information correcting an effect on a fishery that was unforeseen when the management plan or regulation was adopted, nor does Cook Inlet sockeye caught in Kodiak present a conservation concern or have conservation purpose or reason. In fact, it could have damaging conservation effects on Kodiak salmon runs.

I have run a family salmon seining operation in Kodiak for the last 27 years. My wife, children, nephews and grandchildren have also participated in the family fishing business both on my boat and as shore support. We employ at least three crew members every year, and do all of our boat work on the Kenai Peninsula using local marine trades and supply stores. We spend an average of \$75,000 on boat and gear work alone annually and base our annual financial plan on income provided from our Kodiak fishery. I have fished my entire salmon career mostly on the West Side of Kodiak. Our family's livelihood and that of our crew depend on the availability of West Side fishing grounds as that is where my fishing knowledge and expertise lie and is also where our Processor, Icicle Seafoods, is located.

This agenda change request is not tied to any assessment of the annual percentage of Cook Inlet sockeye incidental catch in any of the management areas targeted. It also does not address biological and environmental variability in either Kodiak or Cook Inlet sockeye runs. Most important, as a West Side Kodiak salmon fisherman, is the drastic impact on fishing of local stocks. Forgoing harvest of local Kodiak run sockeye will cause over-escapement, fleet movement and proposed closures would reallocate catch between seine and gillnet gear-types and local Pink and Dog harvest being limited to inner bays will result in lower quality of catch for Processors and potentially lower salmon prices for Kodiak fishermen which are already often lower than the prices that Cook Inlet fishermen receive. Additionally, many set gillnetters





with fish camps near capes that have been established for generations do not have the flexibility to move to inner bays and it would present an absolutely catastrophic burden on their multi-generational family fishing businesses.

This proposal sets a dangerous precedent, completely disrupting one area's fishery to slightly, if at all, provide gains in another management area. We appreciate the responsible and sustainable management by Alaska Department of Fish and Game biologists in Kodiak that have the sustainable future of salmon stocks in mind. We can empathize with the frustrations of our northern neighbors in Cook Inlet, both commercial and recreational fishermen, who have experienced less successful management of their area. However, as salmon are considered common property and do not belong to the management area where they are born, we do not see placing the burden of resolving Cook Inlet fishery issues on the Kodiak Management Area as the answer to their problem. If Kodiak is regulated for the presence of Cook Inlet sockeye then will the Board of Fish also place regulations on Chignik and Area M for the take of Kodiak Sockeye and Pinks? We do not wish, nor expect, such a burden placed on our neighbors.

This proposal does not take into consideration the economic costs to Kodiak salmon fishing families, Processors, processing workers, or Alaskan coastal communities that benefit from the income of Kodiak salmon fishermen. The proposal does not meet Board of Fish criteria for presenting new information that has unforeseen conservation effects on a fishery would have immense negative economic and conservation impacts. I hope that the Board sees that there is no error in the current regulation that needs correcting.

Thank you for your time and consideration in this matter,

Steve and Jenny Roth Family  
F/V Sea Grace

Handwritten signatures of Steve and Jenny Roth. The signature "Steve" is written in a cursive script, followed by "Roth". Below it, "Jenny" is written in a similar cursive script, followed by "Roth".



Steven E. Horn  
1210 Mission Road, Kodiak, AK 99615  
F/V Gallant Girl  
Email: <sehorn52@hotmail.com>; Telephone: 907-539-5211

September 26, 2017

Mr. John Jensen, Chair  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526

**Issues: 1) UCIDA Agenda Change Request #11, 2), Kodiak Area Red Salmon Management & Genetic Stock Structure.**

Dear Chairman & Members of the Alaska Board of Fisheries,

I adamantly oppose the UCIDA Agenda Change Request #11.

The Kodiak Area commercial salmon fishery, to the extent that some Cook Inlet sockeye salmon are caught in this fishery, does not create a conservation concern for the Cook Inlet sockeye salmon resource.

ACR #11 would have the result of unjustifiably taking a large piece my livelihood away from me, and from many other Kodiak Area Salmon permit holders, crew members, processing companies and their workers, etc.

Among the significant negative economic impacts that are driven by the implementation of the reasoning and objectives of the proposed ACR #11, or some other action that approximates such objectives, ACR #11 would a) severely restrict and damage the ability of all Kodiak salmon permit holders to target and harvest the Kodiak sockeye and pink salmon stocks that are routinely present in large numbers, and in a wide geographic distribution, during June 23 to July 31 time-frame, b) cause unnecessary confinement and concentrations of seiners in many areas, including areas in which set net fisheries occur, c) create gear conflicts between small seiners, large seiners and set net fishermen, and d) result in the provision of dark and lesser-quality salmon to processors, the marketplace and consumers.

Cook Inlet Salmon are, as are other salmon in Alaska, a common property resource that belong to the citizens of the State of Alaska, and not only to Cook Inlet Area commercial salmon permit holders and other users who are specific to Cook Inlet. I respect and understand that the management of the salmon resource in a specific management Area must first and primarily consider and manage to achieve important objectives of conservation, escapement and other biological goals, and then should appropriately seek to achieve benefits from the provision of these salmon for the commercial, recreational, sport, subsistence, personal use and other user groups.



Why would the Board focus only on Kodiak, and not on other areas in the Gulf of Alaska where the interception of Cook Inlet sockeye salmon occurs? If the Board is going to continue to scrutinize any harvest of Cook Inlet salmon that may occur in Kodiak, the Board should act fairly, equitably and with equal conservation concern by additionally scrutinizing the interception of Cook Inlet salmon that may occur in other areas that lie to the East and West of Cook Inlet. The Board should certainly not fail to consider and address that there is an interception of Cook Inlet-bound sockeye salmon in the outside sections of the Chignik management area. Before the Board proceeds any further, it is imperative, and fair, for the Board to ask ADF&G to design, fund and implement an appropriately designed and comprehensive multi-year study to address the extent of harvest, productivity and other biological concerns associated with the harvest of Cook Inlet-bound sockeye salmon that occurs outside of the Cook Inlet management area, and the harvest of Kodiak bound sockeye and pink salmon that occurs outside of the Kodiak Area.

I have commercially fished salmon in the Kodiak area since I was 8 years old. I have been a Kodiak salmon area permit holder in the Kodiak area since 1973 (44 years), and have engaged in this salmon fishery every year with the exception of 1989 when the fishery was closed because of the Exxon Valdez Oil Spill.

My operation has provided employment for three crewmembers during all of those 44 years.

My father was a commercial salmon fisherman since the late 1940's until the early 1970's, and he fished salmon in Chignik, Cook Inlet and Kodiak.

Fishing is my only income, and the Kodiak salmon fishery that occurs in the Kodiak salmon fishery during the June 23 – July 31<sup>st</sup> time frame is very important to me, and represents a significantly substantial amount of my entire salmon season. Moreover, this time frame provides a substantial amount of income for the many crewmembers who have worked with me in my salmon fishing endeavors.

Thank you for your consideration of my comments. Please make the effort to be careful and comprehensive with respect to your study and understanding of this multi-dimensional and complex issue.

Sincerely Yours,

Steven E. Horn



Stosh Anderson  
Box 310  
Kodiak AK 99615  
30 September 2017

Alaska Board of Fish

Re: ACR. 11

Dear Mr. Chairman and Board Members,

I am requesting that you deny ACR 11 as it doesn't meet your requirement for an ACR or a Board generated proposal. This is not a new issue and if it needs to be addressed it should be in the normal BOF cycle. Recent genetic information is not designed for or should be use in an allocation process.

Thank You,

Stosh Anderson



It has come to my attention that some one desires to change the ice fishing restriction on the Chatanika river from 3 miles upstream of Goldstream to one mile. I consider this proposal to be ill advised and illogical since the object of this restriction has been to rebuild the seriously depleted Pike stocks in Minto Flats and the Chatanika drainage. I propose, instead, that all ice fishing on the Chatanika and Tolovana Rivers be eliminated until the fishery recovers. My 35 years of, "catch and release", fishing experience in this area, convinces me that the Pike stocks are significantly lower than I experienced in the 80's. If it is politically impossible to defend the overwintering areas I suggest the bag and possession limits for Pike be extended to the subsistence fishery. Pike recruitment and growth rates do not support an unrestricted harvest of the sort I have observed at the mouth of Goldstream.

Stuart Varner





Submitted By  
SUE JEFFREY  
Submitted On  
10/3/2017 10:44:24 AM  
Affiliation

Sue Jeffrey  
P.O. Box 3363  
Kodiak, AK 99615

October 3, 2017

Chairman John Jensen Alaska Board of Fisheries

P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request (ACR#11) and Genetic Stock Composition of Sockeye to the Kodiak Management Area

Dear Chair Jensen and Board of Fish members,

My husband, Dan, and I have been fishing our setnet site on the west side of Kodiak Island since 1987.

One of my major concerns is that ACR #11 is primarily allocative. It not only allocates between regions, but also proposes a major restructuring of Kodiak's longstanding Kodiak Management Plan that would create a significant reallocation of Kodiak's salmon fisheries between Kodiak's two major salmon gear groups and trigger a significant and widespread economic loss in Kodiak.

The following bullets are offered to briefly shed light on the history and components of the Kodiak Management Area (KMA):

- \* Nonlocal salmon mix with Kodiak bound salmon as they migrate throughout the Kodiak Archipelago. This is a region of largely undeveloped, pristine salmon habitat and nutrient rich waters that sustain Alaska's wealth of marine resources and its residents who depend on them today as they have for the past 10,000 years.
- \* Kodiak fishermen and processors have been harvesting salmon commercially since the 1880s in the Kodiak region.
- \* The majority of the KMA has been managed the same way since well before statehood, targeting local runs while realizing that nonlocal sockeye migrate through the KMA.
- \* After limited entry resulted in harvest reallocations, Kodiak's area-wide pink salmon harvest strategy was developed in the 1970s and 1980s to minimize targeting of nonlocal salmon by focusing fishing on abundance of local salmon.
- \* All sections and districts of the KMA are managed on local pink and sockeye salmon runs. If there are no local stocks to harvest ... if escapement numbers on our Kodiak systems are weak ... the section or district is closed. Period.
- \* The Kodiak salmon fleet targets local runs with gear designed to catch Kodiak's abundant pink and sockeye runs.
- \* In July of 1988, the timing of unusually good weather on the Shelikof Strait allowed the Kodiak salmon fleet to see and target large schools of sockeye jumping far offshore, presumably headed for Cook Inlet.
- \* As a result, the North Shelikof Strait Management Plan was created in 1990 with "triggers" that establish harvest caps for *all* sockeye in the North Shelikof – local and nonlocal – for three weeks in July.
- \* Although the burden of conservation falls squarely on the Kodiak salmon fleet, salmon managers cannot quantify the effects of restricting Kodiak sockeye salmon harvests in North Shelikof Strait on the sockeye harvests or escapements in Cook Inlet.

ACR #11 states that it is only now, as a result of the genetic study, that the magnitude of the harvest of nonlocal stocks in the KMA is known. However, for my family and those of us who have been salmon fishing in Kodiak for more than 30 years, THIS IS NOT NEW NEWS. We already have sliced and diced the mixed stock component of Kodiak's salmon fisheries. The BOF already places a heavy burden of conservation on the Kodiak fleet.

In its wisdom, the BOF adopted the ACR criteria clearly to ensure orderly, dependable fisheries for the benefit of the people of the State of Alaska. It is a grave matter to deviate from the BOF cycle. Doing so is disruptive to everyone involved: harvesters, processors, support industries and entire communities who depend the fisheries.



BOF "Policy for Changing Board of Fisheries Agenda" (5AAC 39.999) (2) states "... the board will not accept an : that is predominantly allocative in nature in the absence of new information found by the board to be compelling,"

It is wise public policy for the BOF to deviate only very rarely from its long-established board cycle. ACR #11 is not compelling. There is no error in regulation to correct, nothing was unforeseen when the regulation was adopted, and there is no conservation threat or new information to warrant an aberration from the BOF cycle. Moreover, ACR #11 is highly allocative. I urge you to vote this down.

Sincerely,

Sue Jeffrey



Submitted By  
Susan Payne  
Submitted On  
10/3/2017 8:40:43 AM  
Affiliation

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Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526  
October 2, 2017

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area.

I am disappointed that the Board of Fish approved the Agenda Change Request to allow consideration of UCIDA's proposal to drastically change the Kodiak Management Plan to limit Kodiak's ability to participate in the traditional mixed-stock fishery that it has always been. In my letter to you in February, I presented reasons why the sampling methodology and scope of the genetic study was flawed and incomplete: gear type contribution unclear, area limited, and length of study too short to represent typical ocean conditions. Now we have UCIDA's proposal to consider and we can get down to business.

We currently are set gillnet fishermen on the Kodiak Westside where we have been since 2002, fishing two permits. Prior to this fishery, we both were beach seiners (since 1983 and 1994) and still own the permits. The last few years, our two children have grown up to the point that we count on them as full crew. Sometimes, depending on the forecast, we hire one other crew person often from Kodiak. We fish from June 1 until school starts in Kodiak, mid-August. Salmon fishing contributes significantly to our income.

Cook Inlet's proposal would be a reallocation of a traditional resource from the Kodiak salmon gear types, potentially impacting in lost fishing time and revenue not only the 188 set gillnetters, but also the 375 seiners and the possible 31 beach seiners, the crew, processors, cannery workers, and local businesses. If you decide to adopt the UCIDA plan, the Kodiak set gillnet fishery will be put out of business. Set gillnet fishermen cannot chase the fish to the stream terminus thus it also would reallocate salmon away from our fishery to the Kodiak seiner. Would you fix this situation by letting the set gillnet fleet fish continuously from June 1-October 15? Sounds good to me as a continuous fishery would be a great platform for salmon research.

The proposed in-season closures could be a significant amount of time out of our season having us sit on the beach up to 6 weeks out of the summer. To make a season, we need fishing time on all the local stocks, for the entire time period. Many years, we make our season in the time period in question: June 23 thru July 31. Our camps require significant work to open and close and require a presence to guard equipment from weather. We already operate under a Harvest Strategy during that time period and are limited in fishing time during years of poor pink forecast. How would the two limitations interact and affect us? The proposal is untenable and would bring economic disaster to everyone.

Conservation of Cook Inlet bound fish will not necessarily improve as the returning fish will be caught by the Cook Inlet commercial fleet, a growing subsistence fishery, and sport fishermen in Cook Inlet. To address conservation, Cook Inlet resource users need to support habitat protections to identify and protect salmon spawning habitat and address development and use along streams, kill the Susitna Dam project once and for all, and reduce and control the subsistence harvest (freezers are full of wasted fish each year). Ironically, the 2017 Cook Inlet season was relatively good as I would hope was escapement. The Burden of Conservation for Cook Inlet bound fish shifts to our gear type especially and appears to further impact gill net sites located on headlands.

Unless, you can prove that Kodiak is targeting Cook Inlet salmon, current management is no different than in 1988 when this issue was last addressed by the BOF. Cook Inlet bound fish contribute some to the entire Kodiak harvest then as now, some more years than others. It is unclear to me how the managers will determine the number of Cook Inlet bound fish and how this will be implemented and funded. It is clear that UCIDA's proposal will impact us with reallocation, disruption, and lost revenue, but provide little conservation gain.

Sincerely,

Susan Payne  
Horseshoe Bay  
PO Box 1903  
Kodiak, AK 99615





Chair John Jensen  
AK Board of Fish  
Boards Support  
PO Box 115526  
Juneau, Ak 99811-5526

Sept 29, 2017

My name is Sylvia Kavanaugh and I am against ACR #11. I am a lifelong Kodiak resident, born and raised on Kodiak island. I grew up fishing on our family seiner spending summers working as a crewmember during Salmon. My first job consisted of pushing salmon into the fish hold and taking wheel watches from my Dad's lap at the age of 4. I own a S01K salmon seine permit. My fiancé, 19-month-old daughter, and I are 100% dependent on fishing income.

The Alaska Board of Fish and Game took steps to improve their proposal cycle and the frequency that those issues would be taken up. I would like to highlight that this ACR has no new information that meets the provisions required to take up a proposal outside of cycle. ACR 11 lacks a depth of data necessary to make factual conclusions and creates a climate for hysteria and misinformation. It seeks to reallocate a utilized resource- The proposer even states that the proposal is allocative. While the proposer seeks to dismiss the allocative nature of ACR 11, there is no less negative economic aspects of reallocation whether it is regional or gear type. Although, in this circumstance the allocative measures have a much farther-reaching influence. It crosses over to biological and management concerns.

This ACR disregards the mixed stocks Kodiak has in the Shelikof. It creates management problems such as gear conflicts, overcrowding, over escapement, and unpredictability of openings/closures.

I believe this could lead to a devaluation of my S01K permit which is already the lowest in the State. I believe that it could cost my fiancé and I our jobs, as lost fishing time and opportunity take their toll on boat ownership & earnings. I believe canneries would necessarily hire less workers and offer less hours to their employees. I believe that streams and salmon habitat could be harmed because of forgone harvests.

I believe that this ACR overreaches and has the potential to do more harm than good.

  
Sylvia Kavanaugh

719 Cottonwood Circle  
Kodiak Alaska 99615  
(907)942-7481





Terri Springer  
PO Box 1790  
Kodiak, AK 99615

September 25, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

I adamantly oppose the UCIDA agenda change request because it does NOT meet the Boards agenda change request criteria for the following reasons:

1. The KMA genetic stock composition study does not present any "new information" that corrects an effect on the fishery that was unforeseen when the management plan was adopted.
2. Cook Inlet sockeye caught in Kodiak does NOT create a conservation concern or have any conservation purpose or reason.
3. Therefor there is NO error in regulation that needs correcting.

I have been actively involved in commercial set net fishing on the Westside for 30 years. This has been our families main source of income. During the time frame of June 23-July 31 an overall average of 65-69% of our total income is caught during this time. Loss of fishing time would be devastating to our family! Not only personally, but our community would be facing a catastrophic economic disaster. From processors, to processing workers and all kodiak businesses would be severely negatively impacted by this proposal.

This Agenda Change Request does not make any sense for several reasons but one of my biggest concerns is that it does NOT consider the drastic fishing impacts it would have on the local fishing stocks. The absolute devastation of our local runs from over escapement is a forgone conclusion. The quality of the fish will plummet as the fleet is forced to move into the inner bays to harvest.

This is a terrible precedent to set. Salmon are considered "common property" and do not "belong to" the management area where they were born. By disrupting one area's fishery to slightly advantage another areas harvest will have statewide repercussions as other areas will jump on the "THEY'RE MINE" bandwagon.

Kodiak fisheries is a historical fishery. We are not fishing in any new areas. The same species come and go year after year. Many years ago our seasons fluctuated quite a bit more than they do now. I believe this is due to our Kodiak Management Area management plans affectively focusing on our local streams.



The UCIDA agenda change request does NOT meet the Board of Fisheries Agenda Change Request criteria. The Kodiak Management Area genetic stock composition study does NOT present any "new information" that "corrects and effect on the fishery that was unforeseen when the regulation management plan was adopted" nor does Cook Inlet sockeye caught in the Kodiak area create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Sincerely yours,

Terri Springer



Submitted By  
Theresa Peterson  
Submitted On  
10/2/2017 9:07:32 PM  
Affiliation

Boards Support Section

P.O. Box 115526

Juneau, AK. 99811-5526

RE: ICIDA Agenda Change Request

Dear Chairman Jenson and Members of the Board of Fish,

As an Alaska with great respect for the policy making process for fisheries in Alaska, I oppose the UCIDA agenda change request as I believe it both undermines and violates the integrity of the established process. The request does not meet the agenda change criteria as an error in regulations, nor do Cook Inlet sockeye caught in the Kodiak area create a conservation concern. In addition, the genetic study composition does not provide adequate information to justify an ACR as it does not contain new information that was unforeseen when the Kodiak Management Plan was adopted. Any discussions to change the Kodiak Management Plan should take place during the normal board cycle, the cycle when the public may plan for and participate in the decision making process which impacts the fisheries they are engaged in.

Our family has been involved in the Kodiak Salmon fishery since the 1970's and in 1987 we purchased our first seine vessel. We further invested in the Kodiak fishery by upgrading our vessel in 1991 and purchasing a setnet site in Alitak Bay in 2004. We live in Kodiak year round and derive most of our income from commercial fishing. Our three children participate in the salmon fishery as well. Like many in Kodiak, the salmon fishery is a significant part of our fishing portfolio and without it we would not be able to maintain our vessel, reside in Kodiak and prosecute other fisheries. The island can be a challenging place to live; expensive, isolated and subject to harsh weather. Access to the fisheries is the key to our survivability in this remote environment and any changes to Kodiaks Management Plan should be discussed in the normal board cycle with adherence to all Board of Fish regulations.

The ACR submitted by UCIDA does not take into account the natural variability, both large and small, of either Cook Inlet run or the Karluk run. The proposed caps during a 5-week period do not consider run strength in either management area and contradict the mixed stock policy of the Board of Fish. Guidance for this action can be found in the "Alaska Board of Fish Findings for Policy on Mixed Stocks Salmon Fisheries" from 1993.

The UCIDA ACR does not consider the drastic fishing impacts on the fishing of local Kodiak stocks. The foregone harvest of local sockeye will cause over-escapement and poor quality as catches would be moved to inner bays. There is no consideration of the impacts of this action and no assessment on the economic costs to Kodiak salmon fishermen, processors, processor workers, Kodiak businesses and the Kodiak community.

We have the opportunity to review the Kodiak Management Plan during its' scheduled cycle in 2020. This is the process we support and believe is the most responsible to address concerns regarding management plans. ACR's are a terrible way to manage and set a bad precedence throughout the State. This is Alaska – we expect a policy process which is predictable and serves to engage the stakeholders. Please maintain the high standards of State management and deny the ACR from UCIDA by following the criteria set by the Board of Fish.

Thank you,

Theresa Peterson and Family



Submitted By  
Thomas Wischer  
Submitted On  
10/2/2017 11:42:34 AM  
Affiliation

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Dear Board Members,

My name is Thom Wischer. I am a Kodiak set net permit holder. I have fished the same net locations for the past 41 seasons. I would urge you to put the science and the politics on the shelf for a moment and look at the Cook Inlet ACR only with common sense.

Kodiak is an island in the North Pacific. Fish swim in our waters bound for many streams, not all of them on Kodiak Island. This has been a well-known fact since before there was a commercial fishery. Kodiak has always been a mixed stock fishery. The cited "genetic study" did not tell us anything we didn't already know. I fish in Kupreanof Strait. There are no spawning streams in the strait, so all of the fish that I catch are bound for someplace else. If a fisherman cannot catch any of the fish swimming past his net for fear that a few are not "local fish," then why fish at all? Kodiak is primarily an intercept fishery. It has never been managed as a terminus fishery, and attempting to do so would be a disaster for all species of salmon that sustain this community.

There are many variables when specific returns decline and those affected will always want to place blame somewhere. The resource belongs to all Alaskans. Because you fish in a specific region or location, those fish are not "your fish." It has not ever been demonstrated that the incidental catch by Kodiak fishermen of "non-local" fish is the cause or even a contributing factor in the diminishing returns for Cook Inlet or anywhere else fish swimming in our waters might be headed.

It is a very slippery slope if the Board of Fish allows one region to dictate the management of another region. I employ you to reject the ACR submitted by UCIDA.



Tim Gossett

P.O. Box 1277

Kodiak, AK 99615

October 1, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK. 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition in the Kodiak Management Area

Dear Board of Fish members:

My name is Tim Gossett. I have fished commercially in Kodiak since 1978 and have been running my own seine boat for over 30 years. My income is derived solely from commercial fishing. I am opposed to the UCIDA change request and restricting KMA fisheries with the hope to positively influence the harvest in UCI.

I am concerned about the consequences and trickle down affect of again changing the Kodiak Management Area plan. I am certain that if passed the ACR would have a crippling affect not just on the Kodiak fishermen but on the island as a whole, the town and its people.

Kodiak has a long history of commercially caught salmon dating as far back as 1882. Review of historical records indicates Kodiak has harvested Cook Inlet sockeye at low levels for well over a century now. The complex inter connected nature of Kodiak's management plan has nurtured the recovery of local stocks, helped create a high quality product and maintained flexibility for the fleet to maximize production ...none of which has negatively impacted Cook Inlet sockeye returns to a significant degree.

Many questions abound. How many Kodiak processors would remain committed to buying our fish knowing that they could lose a major portion of the season? What about our local pink and chum systems and the very real possibility that they would be over escaped? If the thrust of the proposal is to keep us from fishing outside waters and force everyone into the bay, what happens to the sockeye, pink, chum and coho from our more prolific LOCAL systems that empty DIRECTLY into Shelikof Strait? (i.e. Karluk / Ayakulik) Do we over escape them, too ? Could set netters survive when forced to compete with seine boats inside the bay? Would product quality suffer when seiners were forced into the inner bays ?( and bright fish turn dark ) Why should the burden of conservation of relatively healthy Cook Inlet salmon stocks be prioritized above that of KMA local stocks ?

We have been down this road before. Really, nothing has changed. We only have more data that tells us what we already knew. The recent genetic MSA report is a new way to get the same information we had in 1988 (and beyond)....it is long on data and short on analysis.





The adoption of this change would be precedent setting. Kodiak could now make a strong case that Area M is harvesting pink and chum salmon bound for its waters. Other areas throughout the state could follow suit. In 1993 the Board of Fisheries addressed the policy for mixed stock salmon fisheries when it said, "most mixed stock fisheries are long standing and have been scrutinized many times by past Boards. Consequently, existing regulatory management plans are understood to incorporate conservation burden and allocation." They followed up by stating " the policy should not be a tool to be used for allocating outside of the Board's allocation criteria".

UCIDA's change request does not meet the ACR criteria as ;

1) There is not a conservation issue. Escapement goals are met. In my opinion, we have actually helped Cook Inlet each year from July 6th - 25th when we adhere to the rules set forth in the North Shelikof Management Plan first implemented in 1990. This takes away access to our own LOCAL stocks and prevents us from fishing in approximately 324 square miles and 108 nautical miles of coastline in the Kodiak Management Area.

2) There is not an error in regulation. Kodiak is a mixed stock fishery. All of the studies in the past have shown comparative type numbers of Cook Inlet fish during the same brief period of time. The Board of Fish was aware of this. It is a given. Nature has allocated non local salmon to Kodiak salmon fisheries.

3) There has not been an effect on the fishery that was unforeseen. We have not affected (or endangered) Cook Inlet stock or harvests in a negative way. Our mixed stock fishery has a long history and the presence of Cook Inlet fish has not been "unforeseen".

Our community has worked hard in the past on this issue as it has been re addressed over and over. Thank you for your time and service.

Sincerely,

Tim Gossett



Submitted By  
Timothy Murphy  
Submitted On  
10/1/2017 9:49:24 PM  
Affiliation  
Chignik Fisherman

To the Chairman and members of the Alaska Board of Fisheries;

I am writing to you to offer my support for ACR 12, in regards to addressing the intercept of non local stocks in the Dolgoi Island area of the South Alaska Peninsula Management Area.

The proposal passed at the previous South Alaska Peninsula Board Meeting in 2016 had the intent of helping non local sockeye stocks pass thru this interception zone in the hopes they may make it into the Chignik Management Area.

The proposal intended to close the Dolgoi Island section when a cap limit of 191,000 sockeye harvest was achieved. The Dolgoi Island section was not closed until a harvest in the area of 277,000 sockeye was achieved. Ive heard someone did the math and this overharvest wouldve equated to approximately 4000 sockeye per boat average in the CMA fleet.

Chignik is a sockeye fishery, and a small piece of the whole State salmon pie, regulations on either side of the CMA have gone for a long time with no regard and to the detriment of the fishery in Chignik. The Chignik salmon fishery needs more resource to be able to make it through intercept areas. Compare overall salmon harvests between the neighboring areas, or just compare the amount of sockeye harvested between the areas and you can see who is starving for resource, losing out on harvest opportunity thanks to the interception of non local stocks that we know about thanks to the WASSIP study.

A sockeye harvest in the area of 850,000 was the reality in the CMA in 2017, the CMA could be a strong economic region able to stand on its own if the resource bound for there was able to make it through intercept areas.

Timothy Murphy

Chignik Fisherman



Submitted By  
Tollef Monson  
Submitted On  
10/3/2017 8:48:07 AM  
Affiliation

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Tollef Monson  
P.O. Box 2971  
Kodiak, AK 99615  
October 3, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

**RE: UCIDA Agenda Change Request and Genetic Stock Composition in the Kodiak Management Area**

Dear Board of Fish members:

I'm a concerned fisherman in Kodiak who doesn't see that the UCIDA proposal meets the criteria for an agenda change request, IE there is no error in regulation, no new conservation concern, and it wouldn't be correcting an unforeseen affect on a fishery. When the management plans were developed 1950s to 1989 the idea that Kodiak does catch some Cook Inlet fish and that this is a mixed stock fishery was factored in with the best data available. The new study isn't enough to say that this is new information in light of the fact that Cook Inlet fishermen stated their case in early 1990's and were rejected. This is a traditional fishery.

My personal concern is that I'm a young business owner and have made a business plan enter this historic fishery in Kodiak after being a deckhand and learning from older fishermen in the traditional way. This business that I own and employ crew for depends on the fact that we can fish from early June to mid Sept. It takes that long to make a season of it. If the west side of Kodiak is closed or significantly shut down late June to July 25, how am I supposed to keep workers around without a fish coming in? How are the processors supposed to do the same?

Please also consider than I'm one of the remote residents who lives in bush Alaska with my year round home in Village Islands, Uganik Bay where my setnet site is also located. There aren't any other jobs to be had - this is a fishing community as is most of the island. There are limited jobs and salmon fishing encompasses much of the population's income in the crucial summer months. Shutting down the west side is less damaging to seiners as they can go to the eastside but by law, setnetters aren't allowed to move to the east side.

As part of vertical integration to the catching side of fishing, I have also started a direct marketing business (Soul Mate Salmon) that may not survive if you shut down the west side of Kodiak for the proposed time frame. It's a new business I'm building to try and generate enough income to subsist on salmon fishing, and it is based on the current ADFG management plan, which was developed under intense scrutiny using information about Cook Inlet bound fish in the mix. You change the management plan, and I lose everything.

If this proposal were to go through, you would have closures that promote build up for terminal area fishing that supports seiners where they can mop up quickly any quota or caps. As setnetters, we need consistent consecutive days that balance out the gear types in Kodiak. Incidentally this promotes high quality fish processing that isn't built up sitting on the docks, which the world demands. I haven't caught a large bodied "Cookie" in years and I want ADFG to have tools properly manage our entire fishery (all species) not handcuffed by the growing greedy population of Anchorage/Soldotna, which has political power. To put it in perspective, it is important to know that this "issue" of Cook Inlet bound fish in Kodiak waters amounts to only 1% of our total catch of all species, while we are actively catching all other species at the same time.



To consider this out of sequence request based on a very limited genetic study is unthinkable. To make such decisions without a thorough and large study that incorporates the entire Island and gives all stakeholders a chance to study the science and become truly informed and provide their knowledge and comments is irresponsible. I trust you to do the right thing and not hear the proposal until 2020.

Sincerely,

Tollef Monson

Uganik Bay Setnetter



Tom Springer  
PO Box 1790  
Kodiak, AK 99615

September 25, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

I adamantly oppose the UCIDA agenda change request because it does NOT meet the Boards agenda change request criteria for the following reasons:

1. The KMA genetic stock composition study does not present any "new information" that corrects an effect on the fishery that was unforeseen when the management plan was adopted.
2. Cook Inlet sockeye caught in Kodiak does NOT create a conservation concern or have any conservation purpose or reason.
3. Therefor there is NO error in regulation that needs correcting.

I started fishing on the Westside of Kodiak in 1968. Our family has been involved in this fishery ever since. In my 49 years of being involved in the fishing industry I have seen high years and low years. Set net fishing on the Westside is our families main source of income. 65-69% of our total income is caught during the June 23-July 31 time frame. This loss of income would devastate our family. As we live in a small rural area, our choices for offsetting this loss of income with an alternate source is non existent. You would in effect be taking away my livelihood and those of many others. The economic impact on our town would be catastrophic!

This Agenda Change Request does not make any sense for several reasons. The long closures will force the fleet into the inner bays which are only accessible by the seine fleet thereby eliminating the right of set net areas to catch any fish. The quality of the fish will deteriorate as well.

Kodiak fisheries is a historical fishery. We are not fishing in any new areas. Many years ago our seasons fluctuated quite a bit more than they do now. I believe this is due to our Kodiak Management Area management plans affectively focusing on our local streams and stocks.

The UCIDA agenda change request does NOT meet the Board of Fisheries Agenda Change Request criteria. The Kodiak Management Area genetic stock composition study does NOT present any "new information" that "corrects and effect on the fishery that was unforeseen when the regulation management plan was adopted" nor does Cook Inlet sockeye caught in the Kodiak area create a conservation concern or have conservation purpose or reason. Moreover, there is no error in regulation that needs correcting.

Sincerely,

Tom Springer





08-31-17;02:25PM;From:

To:19072672489 :9072562080

Tuntutuliak Traditional Council  
PO Box 8086  
Tuntutuliak, Ak 99680  
Phone (907)256-2128; fax (907)256-2080

**RESOLUTION 17-08-03**

**A RESOLUTION TO KEEP THE CHINOOK SALMON FISHING OPEN ON  
THE MOUTH OF JOHNSON RIVER, KIALIQ RIVER, KINAK RIVER,  
TAGYARAQ RIVER AND PAILLEQ RIVER.**

**WHEREAS**, the Tuntutuliak Traditional Council is a federally recognized Tribal Governing body for the Native Village of Tuntutuliak; and

**WHEREAS**, the Tribal Council is a Tribal Entity organized for the purpose of leadership and program operations for the Native Village of Tuntutuliak; and

**WHEREAS**, the Village of Tuntutuliak has always been active subsistence gatherers of the different species of salmon most importantly chinook salmon which are gathered for keeping families fed throughout the long winters;

**WHEREAS**, the Village of Tuntutuliak sees the need to keep the mouth of the Johnson river, Kialiq river, Kinak river, Tagyaraq river and Pailleg river open for subsistence users from all the surrounding villages around Bethel; and

**WHEREAS**, the subsistence gathering for households meets their catches each year without over catching; and

**NOW THEREFORE BE IT RESOLVED**, the Tuntutuliak Traditional Council opposes the resolution formulated by Kalskag requesting closures to the mouths of the Johnson river, Kialiq river, Kinak river, Tagyaraq river and Pailleg river due to the fact that Chinook salmon do not go up to these rivers to spawn.

**CERTIFICATION**

Passed and approved by a constituted quorum of the Tuntutuliak Traditional Council on this 14<sup>th</sup> day of August, 2017, by a vote of; 4 in favor, 0 opposed, and 0 abstaining.

  
Roland White, President

  
John Fitka, Secretary



United Southeast Alaska Gillnetters (USAG) submitted a proposal for the Board of Fisheries' (BOF) January meeting but it was deemed not worded as regulation language and we are told it will be a discussion item for this work session. It is our wish that the BOF create a task force (or use the current Joint Regional Planning Team) to look at allocation based on overall value to each commercial user group. Previous BOFs have discussed how many overlapping Southeast allocation plans and historic sharing percentages of wild and enhanced fish affect each other.

Generally BOF proposals ask this board to look at a specific gear groups' side of an individual allocation plan to support their particular position or imbalance while ignoring other fleets' shortfalls in other areas. It is not our intent to ask you to look at things from one position, rather to look at the whole picture to see long term trends. It would be an injustice to shift value from one gear group to another to satisfy one allocation plan while ignoring that effect on another gear groups' traditional economic viability. USAG does not wish to gain another fleets' share of the pie through a value grab, only to maintain our traditional harvest sharing percentages by working together with the other commercial gear groups.

Currently, fleets below their allocative range of enhanced fish have been allowed increased opportunity to harvest them in common property fisheries. The consequence of this is that wild fish harvested in this increased opportunity are not counted as a value shift in the Enhanced Allocation Plan. The Enhanced Allocation Plan first adopted in 1994 has been in place well over 20 years, yet large imbalances still occur. This and every plan should be reevaluated to see if the assumptions and predictions made were correct and to take into consideration unintended consequences of those actions. The attached "*Southeast Alaska Enhanced Salmon Allocation: A Twenty-year Retrospective*" is an informative draft analysis of the Plan.

The accompanying data provided by ADF&G looks at salmon contributions to the user groups in three ways, natural production/wild, hatchery-produced/enhanced and overall by year, and as a five-year rolling average (comparable to how we look at enhanced alone). The five-year rolling average helps smooth out the highs and lows and shows long term trends. If you look at the overall value from 1994 when the Enhanced Allocation Plan was formed to 2016, you will notice that seine value has gone up, troll down and gillnet is constant, yet according to the Enhanced Allocation Plan the seine is just below their allocative range.

The problem we perceive is a gear group below their enhanced allocation range can gain value according to the Enhanced Allocation Plan, which would increase their share of the overall value. It is doubtful that the intent of the Plan was to allow for economic growth of a particular gear group at the expense of another yet this is now the case. We feel that incorporating overall value into the Enhanced Allocation Plan where a gear group trending downward in overall value would be allowed increased enhanced opportunity, is a fair system in that it protects each gear groups' current and historic economic share of the region's harvest.

Currently, representatives on Joint Regional Planning Teams and Regional Aquaculture Associations' Board of Directors are only allowed to discuss allocation based on enhanced fish yet many of their decisions also involve wild interception. These are likely to be the same fleet-elected leaders to make up this proposed overall value task force as well.



| Total Ex-vessel / Overall Salmon Values |                     |                     |                     |                     | Ex-vessel value in five-year rolling averages |       |         |
|-----------------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------------------------------|-------|---------|
|                                         | Seine               | Troll               | Driftnet            | S+T+DGN Total       | Seine                                         | Troll | Gillnet |
| 1985                                    | \$52,018,934        | \$25,009,669        | \$17,083,901        | \$94,112,504        |                                               |       |         |
| 1986                                    | \$53,893,815        | \$28,074,767        | \$14,585,793        | \$96,554,375        |                                               |       |         |
| 1987                                    | \$22,739,529        | \$25,368,212        | \$19,227,191        | \$67,334,932        |                                               |       |         |
| 1988                                    | \$53,314,374        | \$29,827,740        | \$32,342,986        | \$115,485,100       |                                               |       |         |
| 1989                                    | \$91,241,060        | \$23,526,234        | \$20,578,737        | \$135,346,031       | 54%                                           | 26%   | 20%     |
| 1990                                    | \$44,821,503        | \$31,101,694        | \$16,439,366        | \$92,362,563        | 52%                                           | 27%   | 20%     |
| 1991                                    | \$36,071,105        | \$25,162,099        | \$12,037,061        | \$73,270,265        | 51%                                           | 28%   | 21%     |
| 1992                                    | \$51,054,882        | \$29,351,980        | \$20,850,361        | \$101,257,223       | 53%                                           | 27%   | 20%     |
| 1993                                    | \$52,894,318        | \$26,642,558        | \$15,904,271        | \$95,441,147        | 55%                                           | 27%   | 17%     |
| 1994                                    | \$61,164,567        | \$38,943,302        | \$17,207,769        | \$117,315,638       | 51%                                           | 32%   | 17%     |
| 1995                                    | \$55,806,812        | \$16,673,792        | \$16,899,040        | \$89,379,644        | 54%                                           | 29%   | 17%     |
| 1996                                    | \$42,813,455        | \$16,394,667        | \$14,430,995        | \$73,639,117        | 55%                                           | 27%   | 18%     |
| 1997                                    | \$40,813,997        | \$18,853,651        | \$11,143,699        | \$70,811,347        | 57%                                           | 26%   | 17%     |
| 1998                                    | \$45,509,746        | \$14,974,147        | \$11,345,286        | \$71,829,179        | 58%                                           | 25%   | 17%     |
| 1999                                    | \$56,402,089        | \$20,442,587        | \$11,489,118        | \$88,333,794        | 61%                                           | 22%   | 17%     |
| 2000                                    | \$38,060,764        | \$14,786,178        | \$10,940,909        | \$63,787,851        | 61%                                           | 23%   | 16%     |
| 2001                                    | \$48,742,800        | \$17,191,517        | \$11,316,836        | \$77,251,153        | 62%                                           | 23%   | 15%     |
| 2002                                    | \$20,244,170        | \$13,164,474        | \$8,132,853         | \$41,541,497        | 61%                                           | 24%   | 16%     |
| 2003                                    | \$26,705,739        | \$14,812,555        | \$8,903,210         | \$50,421,504        | 59%                                           | 25%   | 16%     |
| 2004                                    | \$31,672,452        | \$29,016,910        | \$11,778,867        | \$72,468,229        | 54%                                           | 29%   | 17%     |
| 2005                                    | \$36,073,649        | \$26,770,816        | \$12,753,519        | \$75,597,984        | 52%                                           | 32%   | 17%     |
| 2006                                    | \$27,536,028        | \$34,645,633        | \$20,007,955        | \$82,189,616        | 44%                                           | 37%   | 19%     |
| 2007                                    | \$49,646,050        | \$30,985,116        | \$15,081,267        | \$95,712,433        | 46%                                           | 36%   | 18%     |
| 2008                                    | \$40,986,039        | \$36,566,992        | \$24,209,429        | \$101,762,460       | 43%                                           | 37%   | 20%     |
| 2009                                    | \$48,417,377        | \$22,942,077        | \$18,578,453        | \$89,937,907        | 46%                                           | 34%   | 20%     |
| 2010                                    | \$56,238,100        | \$31,945,182        | \$26,618,998        | \$114,802,280       | 46%                                           | 32%   | 22%     |
| 2011                                    | \$122,177,082       | \$32,413,206        | \$31,126,506        | \$185,716,794       | 54%                                           | 26%   | 20%     |
| 2012                                    | \$73,082,389        | \$29,855,484        | \$37,475,213        | \$140,413,086       | 54%                                           | 24%   | 22%     |
| 2013                                    | \$154,063,995       | \$41,312,132        | \$29,456,345        | \$224,832,472       | 60%                                           | 21%   | 19%     |
| 2014                                    | \$58,358,331        | \$46,554,302        | \$28,379,708        | \$133,292,341       | 58%                                           | 23%   | 19%     |
| 2015                                    | \$55,228,071        | \$25,793,745        | \$20,621,205        | \$101,643,021       | 59%                                           | 22%   | 19%     |
| 2016                                    | \$36,497,295        | \$32,187,715        | \$22,194,539        | \$90,879,549        | 55%                                           | 25%   | 20%     |
| <b>1985-93 Average</b>                  | <b>\$50,894,391</b> | <b>\$27,118,328</b> | <b>\$18,783,296</b> | <b>\$96,796,016</b> |                                               |       |         |
| <b>Percentage</b>                       | <b>53%</b>          | <b>28%</b>          | <b>19%</b>          |                     |                                               |       |         |
| Allocation Plan Percentages             |                     |                     |                     |                     |                                               |       |         |
| 5 AAC 33.364                            | 44-49%              | 27-32%              | 24-29%              |                     |                                               |       |         |
| <b>'94-'16 Average Ex-vessel</b>        | <b>\$53,314,826</b> | <b>\$26,401,138</b> | <b>\$18,264,857</b> | <b>\$97,980,822</b> |                                               |       |         |
| <b>Percentage</b>                       |                     |                     |                     |                     |                                               |       |         |
| <b>1994-2016</b>                        | <b>54%</b>          | <b>27%</b>          | <b>19%</b>          |                     |                                               |       |         |

**Hatchery-Produced Salmon Values****Allocation value in five-year rolling averages**

|      | seine        | troll        | gillnet      | Yearly Value |
|------|--------------|--------------|--------------|--------------|
| 1985 | \$3,428,844  | \$1,420,786  | \$1,200,076  | \$6,049,706  |
| 1986 | \$2,770,790  | \$2,400,444  | \$1,245,862  | \$6,417,096  |
| 1987 | \$4,298,648  | \$1,460,796  | \$1,426,244  | \$7,185,688  |
| 1988 | \$5,475,727  | \$1,987,416  | \$4,547,547  | \$12,010,690 |
| 1989 | \$2,718,810  | \$1,599,441  | \$2,323,091  | \$6,641,342  |
| 1990 | \$2,318,017  | \$3,774,529  | \$1,780,854  | \$7,873,400  |
| 1991 | \$2,353,588  | \$3,837,368  | \$2,217,805  | \$8,408,761  |
| 1992 | \$6,652,722  | \$4,782,046  | \$4,653,863  | \$16,088,631 |
| 1993 | \$11,089,282 | \$4,353,481  | \$4,934,886  | \$20,377,649 |
| 1994 | \$8,876,576  | \$5,317,271  | \$3,797,692  | \$17,991,540 |
| 1995 | \$14,789,338 | \$2,871,032  | \$7,169,053  | \$24,829,423 |
| 1996 | \$12,061,185 | \$3,224,761  | \$4,184,597  | \$19,470,543 |
| 1997 | \$10,752,998 | \$3,004,073  | \$4,037,169  | \$17,794,241 |
| 1998 | \$9,277,676  | \$1,973,521  | \$3,792,912  | \$15,044,109 |
| 1999 | \$10,061,642 | \$3,461,492  | \$4,110,113  | \$17,633,247 |
| 2000 | \$17,113,326 | \$3,465,550  | \$6,219,903  | \$26,798,778 |
| 2001 | \$7,170,159  | \$3,752,912  | \$4,852,294  | \$15,775,364 |
| 2002 | \$3,645,488  | \$2,303,490  | \$3,627,174  | \$9,576,152  |
| 2003 | \$3,744,188  | \$2,774,408  | \$3,385,285  | \$9,903,881  |
| 2004 | \$5,498,187  | \$4,139,539  | \$5,400,059  | \$15,037,785 |
| 2005 | \$4,405,236  | \$3,522,736  | \$4,707,650  | \$12,635,622 |
| 2006 | \$15,109,033 | \$4,192,671  | \$12,215,370 | \$31,517,075 |
| 2007 | \$6,531,971  | \$4,728,923  | \$8,851,525  | \$20,112,418 |
| 2008 | \$16,158,998 | \$7,319,611  | \$16,385,073 | \$39,863,682 |
| 2009 | \$12,746,563 | \$4,032,749  | \$12,255,256 | \$29,034,568 |
| 2010 | \$17,451,677 | \$7,215,190  | \$15,728,240 | \$40,395,107 |
| 2011 | \$15,430,492 | \$9,109,654  | \$20,391,332 | \$44,931,479 |
| 2012 | \$34,363,203 | \$8,113,226  | \$28,453,598 | \$72,137,175 |
| 2013 | \$24,834,517 | \$13,266,168 | \$19,221,485 | \$57,303,369 |
| 2014 | \$12,912,970 | \$8,786,771  | \$17,772,977 | \$37,637,261 |
| 2015 | \$16,689,459 | \$6,063,853  | \$13,068,340 | \$35,821,652 |
| 2016 | \$10,513,342 | \$5,018,230  | \$11,450,087 | \$26,981,660 |

| Seine | Troll | Gillnet |
|-------|-------|---------|
|       |       |         |
|       |       |         |
|       |       |         |
|       |       |         |
| 49%   | 23%   | 28%     |
| 44%   | 28%   | 28%     |
| 41%   | 30%   | 29%     |
| 38%   | 31%   | 30%     |
| 42%   | 31%   | 27%     |
| 44%   | 31%   | 25%     |
| 50%   | 24%   | 26%     |
| 54%   | 21%   | 25%     |
| 57%   | 19%   | 24%     |
| 59%   | 17%   | 24%     |
| 60%   | 15%   | 25%     |
| 61%   | 16%   | 23%     |
| 58%   | 17%   | 25%     |
| 56%   | 18%   | 27%     |
| 52%   | 20%   | 28%     |
| 48%   | 21%   | 30%     |
| 39%   | 26%   | 35%     |
| 41%   | 22%   | 37%     |
| 40%   | 22%   | 39%     |
| 40%   | 20%   | 40%     |
| 41%   | 18%   | 41%     |
| 42%   | 17%   | 41%     |
| 39%   | 19%   | 42%     |
| 42%   | 16%   | 41%     |
| 43%   | 17%   | 39%     |
| 42%   | 18%   | 40%     |
| 42%   | 18%   | 40%     |
| 43%   | 18%   | 39%     |

**1985-'93**

|                   |                    |                    |                    |                     |
|-------------------|--------------------|--------------------|--------------------|---------------------|
| <b>Average</b>    | <b>\$4,567,381</b> | <b>\$2,846,256</b> | <b>\$2,703,359</b> | <b>\$10,116,996</b> |
| <b>Percentage</b> | <b>45%</b>         | <b>28%</b>         | <b>27%</b>         |                     |

Plan %                      44-49%                      27-32%                      24-29%

**1994-'16**

|                   |                     |                    |                     |                     |
|-------------------|---------------------|--------------------|---------------------|---------------------|
| <b>Average</b>    | <b>\$12,614,705</b> | <b>\$5,115,558</b> | <b>\$10,046,834</b> | <b>\$27,748,962</b> |
| <b>Percentage</b> | <b>45%</b>          | <b>18%</b>         | <b>36%</b>          |                     |

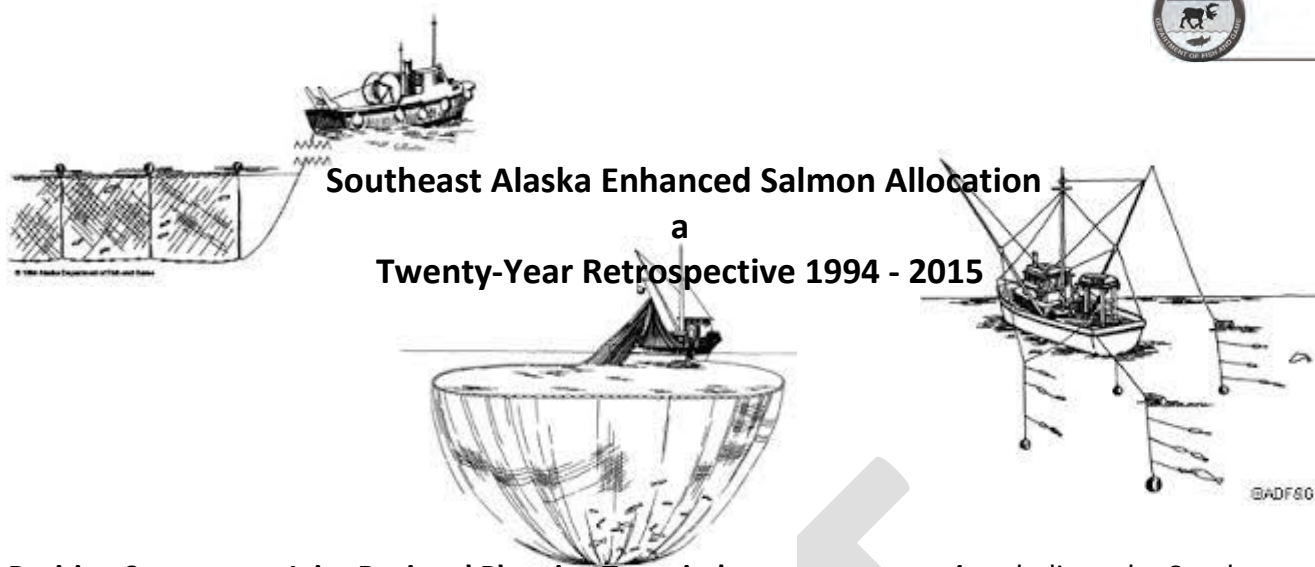


**Natural Production Values  
(Ex-vessel minus hatchery-produced)**

**Natural production  
value in five-year  
rolling averages**

|                 | seine         | troll        | gillnet      | total         | Seine | Troll | Gillnet |
|-----------------|---------------|--------------|--------------|---------------|-------|-------|---------|
| 1985            | \$48,590,090  | \$23,588,883 | \$15,883,825 | \$88,062,798  |       |       |         |
| 1986            | \$51,123,025  | \$25,674,323 | \$13,339,931 | \$90,137,279  |       |       |         |
| 1987            | \$18,440,881  | \$23,907,416 | \$17,800,947 | \$60,149,244  |       |       |         |
| 1988            | \$47,838,647  | \$27,840,324 | \$27,795,439 | \$103,474,410 |       |       |         |
| 1989            | \$88,522,250  | \$21,926,793 | \$18,255,646 | \$128,704,689 | 54%   | 26%   | 20%     |
| 1990            | \$42,503,486  | \$27,327,165 | \$14,658,512 | \$84,489,163  | 53%   | 27%   | 20%     |
| 1991            | \$33,717,517  | \$21,324,731 | \$9,819,256  | \$64,861,504  | 52%   | 28%   | 20%     |
| 1992            | \$44,402,160  | \$24,569,934 | \$16,196,498 | \$85,168,592  | 55%   | 26%   | 19%     |
| 1993            | \$41,805,036  | \$22,289,077 | \$10,969,385 | \$75,063,498  | 57%   | 27%   | 16%     |
| 1994            | \$52,287,991  | \$33,626,031 | \$13,410,077 | \$99,324,098  | 53%   | 32%   | 16%     |
| 1995            | \$41,017,474  | \$13,802,760 | \$9,729,987  | \$64,550,221  | 55%   | 30%   | 15%     |
| 1996            | \$30,752,270  | \$13,169,906 | \$10,246,398 | \$54,168,574  | 56%   | 28%   | 16%     |
| 1997            | \$30,060,999  | \$15,849,578 | \$7,106,530  | \$53,017,106  | 57%   | 29%   | 15%     |
| 1998            | \$36,232,070  | \$13,000,626 | \$7,552,374  | \$56,785,070  | 58%   | 27%   | 15%     |
| 1999            | \$46,340,447  | \$16,981,095 | \$7,379,005  | \$70,700,547  | 62%   | 24%   | 14%     |
| 2000            | \$20,947,438  | \$11,320,628 | \$4,721,006  | \$36,989,073  | 60%   | 26%   | 14%     |
| 2001            | \$41,572,641  | \$13,438,605 | \$6,464,542  | \$61,475,789  | 63%   | 25%   | 12%     |
| 2002            | \$16,598,682  | \$10,860,984 | \$4,505,679  | \$31,965,345  | 63%   | 25%   | 12%     |
| 2003            | \$22,961,551  | \$12,038,147 | \$5,517,925  | \$40,517,623  | 61%   | 27%   | 12%     |
| 2004            | \$26,174,265  | \$24,877,371 | \$6,378,808  | \$57,430,444  | 56%   | 32%   | 12%     |
| 2005            | \$31,668,413  | \$23,248,080 | \$8,045,869  | \$62,962,362  | 55%   | 33%   | 12%     |
| 2006            | \$12,426,995  | \$30,452,962 | \$7,792,585  | \$50,672,541  | 45%   | 42%   | 13%     |
| 2007            | \$43,114,079  | \$26,256,193 | \$6,229,742  | \$75,600,015  | 47%   | 41%   | 12%     |
| 2008            | \$24,827,041  | \$29,247,381 | \$7,824,356  | \$61,898,778  | 45%   | 43%   | 12%     |
| 2009            | \$35,670,814  | \$18,909,328 | \$6,323,197  | \$60,903,339  | 47%   | 41%   | 12%     |
| 2010            | \$38,786,423  | \$24,729,992 | \$10,890,758 | \$74,407,173  | 48%   | 40%   | 12%     |
| 2011            | \$106,746,590 | \$23,303,552 | \$10,735,174 | \$140,785,315 | 60%   | 30%   | 10%     |
| 2012            | \$38,719,186  | \$21,742,258 | \$9,021,615  | \$69,483,059  | 60%   | 29%   | 11%     |
| 2013            | \$129,229,478 | \$28,045,964 | \$10,234,860 | \$167,510,302 | 68%   | 23%   | 9%      |
| 2014            | \$45,445,361  | \$37,767,531 | \$10,606,731 | \$93,819,623  | 66%   | 25%   | 9%      |
| 2015            | \$38,538,612  | \$19,729,892 | \$7,552,865  | \$65,821,369  | 67%   | 24%   | 9%      |
| 2016            | \$25,983,953  | \$27,169,485 | \$10,744,452 | \$63,897,890  | 60%   | 29%   | 10%     |
| <b>1985-'93</b> |               |              |              |               |       |       |         |
| Average         | \$46,327,010  | \$24,272,072 | \$16,079,938 | \$86,679,020  |       |       |         |
| Percentage      | 53%           | 28%          | 19%          |               |       |       |         |
| Plan %          | 44-49%        | 27-32%       | 24-29%       |               |       |       |         |
| <b>1994-'16</b> |               |              |              |               |       |       |         |
| Average         | \$40,700,121  | \$21,285,580 | \$8,218,023  | \$70,203,724  |       |       |         |
| Percentage      | 58%           | 30%          | 12%          |               |       |       |         |





**Position Statement:** Joint Regional Planning Team industry representatives believe the Southeast Salmon Enhancement program has benefitted all gear groups far beyond fishermen's expectations when the Enhanced Salmon Allocation Plan was adopted in 1994. Further, the Plan has been and continues to be an effective tool for measuring success and setting future goals.

This document was developed by the Joint NSRAA & SSRAA RPT members representing the interests of salmon limited entry permit holders. The JRPT consists of two elected representatives from each gear group – trollers, gillnetters, and seiners – the identical gear composition and representation of the original Allocation Task Force convened 1991 to 1994.

**Goal:** To document enhanced salmon allocation from 1994 to 2015 and the factors affecting gear allocation percentages, whether in terms of underperformance or over-performance. The report is intended to inform the Board of Fisheries and user groups with an examination of the Allocation Plan's assumptions and premises, including the Plan's strengths and weaknesses.

**Road Map to the Goal:** The objectives to meet these goals are accomplished through an examination of the assumptions which the allocation plan is based, a consideration of premises that are foundational to the Plan, and a review of the enhancement program outputs. To provide some context, in 1991 the enhanced salmon cumulative value was \$8 million compared with 2013 when the enhanced value was \$50 million. The paper reports enhanced salmon value and percentages, but also analyzes why current results are not what was envisioned in 1994. Therefore the report includes a discussion of exigencies thwarting expected outcomes. Finally, the report provides a description of our vision set in motion in 2014 to solve the allocation imbalance under current regulatory criteria.

**Expectations beyond 2017:** New production with predicted adult returns starting in 2017 and beyond are outlined; expected impacts on allocation percentages for future five and ten year periods are presented.



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## Introduction

Allocation of enhanced fish in southeast Alaska has been considered and debated since the inception of the program in the late 1970s. The discussion was heated enough at the beginning of the nineties that the board of fisheries directed NSRAA and SSRAA (Southeast Alaska Allocation Task Force SATF) to negotiate a consensus agreement. An agreement in 1994 was promulgated by the Board of Fish in #94-02-FB, but later that year updated by including value data tables showing the base period years 1985 – 1991 (#94-148-FB, appendix A). It took many meetings over a period of three years to reach a consensus. Subsequent to 1994, the gear groups have worked together to reach enhanced allocation consensus agreements with reports to the board of fisheries in 2009, 2012, and 2015.

The #94 BoF findings laid out fourteen guiding principles. These principles are pertinent to allocation ranges, agency contribution goals (60% - 70%), protection of wildstocks, program evaluation, marking responsibilities, criteria for action, and types of management actions to be employed to influence value to a gear type out of their lower range. However, the plan did not provide the context in which the plan was written in the late 80s and early 90s, including consideration of traditional fisheries vis-à-vis enhancement plans, explicit acknowledgement of target species for seine and gillnet gear versus troll gear, or inherent gear efficiency differentials (although we posit there was a tacit understanding). In retrospect, there are good reasons for these oversights. This paper will provide that historical context with the advantage of twenty years of knowledge, discovery, and data analyses.

## Base Period for Allocation Plan 1985 – 1991

The allocation plan percentage ranges for each gear are based on value of enhanced fish for the period 1985 to 1991. The cumulative value for all gear for all seven baseline years combined was \$54 million. The value in 2012 for comparison, a single year, was \$74 million and for 2013 it was \$52 million. On average the overall value has tripled since 1994 due to increased production and price. During the baseline period trollers caught 71.7% of the enhanced coho and 86.6% of the enhanced Chinook, but only 2.0% of the chum, conversely the net groups caught 97% of the enhanced chum and pink salmon (Appendix A, #94-148-FB) . This is a clear indication of what the 1994 SATF expected in the future given the seven year period upon which the Allocation Plan was based. This is not to say the gear groups considered a prohibition on which gear group caught chum or Chinook, but it certainly supports the idea that based on history the net groups would likely harvest the chum production and trollers would catch the lion's share of coho/Chinook production.



| <b>Southeast Allocation Base Period 1985 - 1991 (#94-148-FB)</b> |              |                      |
|------------------------------------------------------------------|--------------|----------------------|
| Species                                                          | Total Value  | Percent              |
| Coho                                                             |              |                      |
|                                                                  | Troll        | \$ 10,775,635 71.7%  |
|                                                                  | Seine        | \$ 1,626,678 10.8%   |
|                                                                  | Gillnet      | \$ 2,616,161 17.4%   |
| Chinook                                                          |              |                      |
|                                                                  | Troll        | \$ 4,559,573 87%     |
|                                                                  | Seine        | \$ 260,671 5%        |
|                                                                  | Gillnet      | \$ 446,040 8%        |
| Chum                                                             |              |                      |
|                                                                  | Troll        | \$ 521,184 2%        |
|                                                                  | Seine        | \$ 17,265,856 66%    |
|                                                                  | Gillnet      | \$ 8,261,208 32%     |
| Pinks                                                            |              |                      |
|                                                                  | Troll        | \$ 124,857 3%        |
|                                                                  | Seine        | \$ 2,377,096 65%     |
|                                                                  | Gillnet      | \$ 1,173,472 32%     |
| Sockeye                                                          |              |                      |
|                                                                  | Troll        | \$ 119,287 3%        |
|                                                                  | Seine        | \$ 1,856,903 44%     |
|                                                                  | Gillnet      | \$ 2,220,614 53%     |
|                                                                  | <b>Total</b> | <b>\$ 54,205,235</b> |

Table 1. Summary portion of table from board of fish #94-148-FB showing 1985 – 1991 enhanced salmon cumulative total values by species, gear, and percentages for each species. The base period shows trollers catching 72% and 87% of coho and Chinook respectively. The net groups caught 98% of the chum salmon or 47% of the total cumulative value.

The 1995 RPT minutes state, “(Mr. Ken) Duckett added that if Snettisham (hatchery) were to come on line, it undoubtedly would throw the allocation numbers “out” (gillnet above target range) and the Joint RPT would have a significant job on their hands getting them back into compliance. (Mr. Scott) Marshall (regional commercial fish supervisor) commented that the “jury was out” for Snettisham until they could see how many fish they were getting back and how they were distributed; when it showed up in the data they would deal with it then.” While the Snettisham Hatchery did not perform as feared/hoped as conveyed in this statement, another DIPAC program producing chum salmon did ‘throw the allocation numbers out’. The outcome predicted in 1995 came to pass, but with a different species. This is an example of one unforeseen consequence; there are many more that will be examined.

It was clear to the SATF members that the future troll allocation was dependent on a high Chinook interception. Even with that presumption they predicted that trollers would be well below their allocation range. Specifically in the 1994 finding #94-148-FB SATF predicted at full production the trollers would attain 21.2% of the enhanced value, although in 1994 trollers were at 29.7%. The



document also considered future production that was in the works in 1994; this also predicted the trollers would be well below their range. In both of these scenarios (presented below) the total value of enhanced salmon was predicted to increase significantly with the gillnet proportion rising and the troll falling. Therefore, it appears the SATF, agreed upon the gear group ranges while at the same time predicting gear group values that would not attain the gear balances they envisioned.

| Southeast Allocation Base Period 1985 - 1991 (#94-148-FB) |         |                              |                                |               |               |                |                 |
|-----------------------------------------------------------|---------|------------------------------|--------------------------------|---------------|---------------|----------------|-----------------|
| Species                                                   | Gear    | Annual Full Production Value | Annual Full Production Percent | Total         | Value         | Future Percent | Potential Total |
| Coho                                                      |         |                              |                                | \$ 4,201,270  |               |                | \$ 4,201,270    |
|                                                           | Troll   | \$ 3,021,781                 | 71.9%                          |               | \$ 3,021,781  | 71.9%          |                 |
|                                                           | Seine   | \$ 540,786                   | 12.9%                          |               | \$ 540,786    | 12.9%          |                 |
|                                                           | Gillnet | \$ 638,703                   | 15.2%                          |               | \$ 638,703    | 15.2%          |                 |
| Chinook                                                   |         |                              |                                | \$ 5,473,259  |               |                | \$ 9,433,951    |
|                                                           | Troll   | \$ 4,773,109                 | 87.2%                          |               | \$ 7,400,573  | 78.4%          |                 |
|                                                           | Seine   | \$ 359,042                   | 6.6%                           |               | \$ 944,601    | 10.0%          |                 |
|                                                           | Gillnet | \$ 341,108                   | 6.2%                           |               | \$ 1,088,777  | 11.5%          |                 |
| Chum                                                      |         |                              |                                | \$ 24,632,796 |               |                | \$ 24,632,796   |
|                                                           | Troll   | \$ 293,658                   | 1.2%                           |               | \$ 293,658    | 1.2%           |                 |
|                                                           | Seine   | \$ 16,010,792                | 65.0%                          |               | \$ 16,010,792 | 65.0%          |                 |
|                                                           | Gillnet | \$ 8,328,346                 | 33.8%                          |               | \$ 8,328,346  | 33.8%          |                 |
| Pinks                                                     |         |                              |                                | \$ 2,197,761  |               |                | \$ 2,197,761    |
|                                                           | Troll   | \$ 57,882                    | 2.6%                           |               | \$ 57,882     | 2.6%           |                 |
|                                                           | Seine   | \$ 1,370,607                 | 62.4%                          |               | \$ 1,370,607  | 62.4%          |                 |
|                                                           | Gillnet | \$ 769,272                   | 35.0%                          |               | \$ 769,272    | 35.0%          |                 |
| Sockeye                                                   |         |                              |                                | \$ 2,150,892  |               |                | \$ 7,557,008    |
|                                                           | Troll   | \$ 51,810                    | 2.4%                           |               | \$ 112,610    | 1.5%           |                 |
|                                                           | Seine   | \$ 953,598                   | 44.3%                          |               | \$ 1,283,040  | 17.0%          |                 |
|                                                           | Gillnet | \$ 1,145,484                 | 53.3%                          |               | \$ 6,161,358  | 81.5%          |                 |
| All Species                                               |         |                              |                                | \$ 38,655,978 |               |                | \$ 48,022,786   |
|                                                           | Troll   | \$ 8,198,240                 | 21.2%                          |               | \$ 10,886,504 | 22.7%          |                 |
|                                                           | Seine   | \$ 19,234,825                | 49.8%                          |               | \$ 20,149,826 | 42.0%          |                 |
|                                                           | Gillnet | \$ 11,222,913                | 29.0%                          |               | \$ 16,986,456 | 35.4%          |                 |

## NOTES:

1. Current annual production includes permitted capacity on existing ongoing projects using assumed survival rates and average prices, weights
2. Future production includes Deep Cove Chinook, Snettisham sockeye, and Chilkat Lake sockeye enhancement  
Chilkat will produce 264,000 sockeye: 250,800 to gillnet, 13,200 to seiners  
Snettisham will produce 320,000 sockeye: 288,000 gillnet, 32,000 seiners  
Beaver Falls and Klawock will produce 259,000 sockeye: 123,000 gillnet, 130,000 seine, 5,000 troller (current production)  
Deep Cove will produce 75,000 harvestable Chinook: 55,250 troll, 14,400 seine, 5,250 gillnet
3. AAI (Alaska Aquaculture Inc) added November 1992: 300,000: gillnet 239,000, seine, 61,000 chum
4. Future potential is a best guess of what might happen. It is not an allocation.

*Table 2. SATF table of full production and potential production enhanced values by gear, species and proportions. The table shows large increases in Chinook catch by trollers and large sockeye harvests, neither of which came to pass. Chum value was predicted to be strong which was correct although it was under forecasted.*



## Premises & Assumptions

A fundamental premise of the 1994 Plan was trollers would continue to catch high quality Chinook and coho at relatively high prices, and eventually at considerably higher abundances (Table 2). Contained in the board of fish finding was an expectation from the proposed program at Deep Cove, southwest Baranof Island: “Deep Cove will produce 75,000 harvestable Chinook: 55,250 troll, 14,400 seine, 5,250 gillnet”. Net groups were expected to harvest lower priced pink and chum salmon for the most part, also eventually at greater abundances. The assumption that enhancement programs could produce 100,000 catchable chinook for the troll fleet was thought to be attainable. The net fleet side of the calculation depended on production increases of chum salmon at large volumes with prices in the thirty cents per pound range.

In the SATF report there are notes quantifying production of sockeye at Chilkat Lake, Snettisham Hatchery, and Beaver Lake Hatchery, none of which came to fruition. The report also states that 75,000 harvestable Chinook will be produced at Deep Cove on eastern Baranof Island. Of all these programs only Snettisham became reality, although with mediocre marine survivals and modest harvest rates for the gillnet fleet.

In the 1993 paper *Allocation of Enhanced Salmon* by Don Amend, SSRAA general manager and support staff for the SATF, noted “....forecasting the future, one makes certain assumptions which may or may not be true.” This was a prescient observation, because in fact the premises were faulty, even if admirable. Coho and Chinook prices fell due to competition with farm fish while chum prices initially fell but ultimately rose to unprecedented and sustained high levels for years 2010 to 2014. Price was only one factor and perhaps not the most important.

An additional factor that compromised the outcome was moderate to low exploitation rates on coho and Chinook by the troll fleet. Salmon escaping the troll harvest end up in the terminal area where they exacerbate the allocation inequity due to terminal harvest by the net fleets which take advantage of a ‘mop up’ fishery. Terminal mop up generally does not work for the troll fleet because salmon are motivated to spawn rather than feed once close to their natal freshwater.

Marine survival of chum salmon varied greatly among facilities in the early 1990’s. DIPAC (traditional gillnet area) in the 90’s had 0.5% to 1% marine survivals while Hidden Falls (traditional seine) survival was 4% to 7%. Many assumed DIPAC production would not be much of a factor in the future. The current reality is DIPAC production since 2010 is double to triple that of Hidden Falls, resulting in rising gillnet catch and falling seine harvest.

## **Value Assumptions 1994**

Dr. Amend cited in the 1993 report, “because the troll fleet harvests the higher value fish, they actually will receive more value than either of the two net groups.” This statement discounts volume affects and assumed continued wide price disparity between troll and net caught salmon. Both assumptions were incorrect. In terms of total value, high volume chum harvest by gillnet and seine can and does overwhelm low volume and high value coho/Chinook harvest by the troll fleet.

## **Historical Context**

### **U.S./Canada Pacific Salmon Treaty**

The Pacific Salmon Treaty was signed in 1985. Alaska trollers in particular suffered major cuts in their traditional harvest. Commitment to the Pacific Salmon Treaty (PST) required the loss of fishing opportunity to the Alaska troll fleet. The historical chinook salmon catch at that time was reduced by 100,000 fish annually. The U.S. Congress originally intended that Alaskan enhanced production would mitigate this loss, but early enhancement programs fell short of this 100,000 goal by some sixty percent. Unfortunately, this continues to be true for enhanced Chinook through the two thousand ought's and teens.

The PST agreement negatively affected the harvests' of the net groups but not nearly to the extent of the troll fishery. Most troll Chinook originate as smolt from Washington, Oregon, and British Columbia rivers and hatchery programs but grow to adults in the North Pacific and Alaskan waters, whereas the majority of gillnet and seine harvest is produced from southeast Alaskan streams and enhancement programs. This reality is highly significant to the troller's attainment of their allocation.

### **Pacific Coastal Salmon Recovery Fund**

Traditional Alaska troll fish were Chinook and coho. When the Alaska enhancement programs could not meet the PST Chinook obligation in the 1990's, the Pacific Coastal Salmon Recovery Initiative (1999) was put forward to fund enhancement programs targeting production of coho salmon, sometimes called 'Chinook equivalents'. PST and Pacific Coastal Salmon Recovery mitigation monies amounting to \$30 million was primarily directed toward constructing Chinook and coho capital projects throughout southeast Alaska. The coho programs have demonstrated greater success for the trollers in the sense of harvest and exploitation rates, although when trollers cannot catch all the enhanced coho or chinook on the ocean or in mixed stock areas, the 'uncaught' coho filter through to the net fisheries and terminal harvest areas.

### **Magnuson-Stevens Act**

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was of less direct impact to trollers than the Pacific Salmon Treaty but it still had import, positive and negative. The two hundred



mile limit helped conserve Alaska stocks especially immature and adult Chinook salmon. In addition, the Act established federal area management zones to the twelve mile limit from Cape Suckling to Dixon Entrance. Foreign high seas gillnetting continued to vex enforcement into the 2000's although seems to be under control. However, trollers were forced off portions of federal waters for non-Alaska stock conservation, areas that were traditional fishing areas. Enhancement programs were expected to mitigate federal and state harvest strictures.

### **Farmed Salmon Industry**

Alaska set the salmon market price for decades even into the early 1980's when Alaska controlled over sixty percent of the world harvest of salmon. During this period salmon farming in Norway and elsewhere had little effect on Alaska salmon prices. By 1994 that was beginning to change in a significant way; by 2000 farmed salmon usurped Alaska's market position and consequently prices plummeted for all salmon, especially coho. Trollers responded in a variety of ways, competing in high volume, round chum fisheries (neither gutted nor bled) was one alternative.

Commensurate with this period in the new century was a major marketing effort by Alaska Seafood Marketing Institute (ASMI) to differentiate Alaska salmon from farmed salmon by accentuating Alaska salmon's wildness, pristine waters, higher omega-3s, and natural life cycle. The negatives of farmed salmon were also featured to heighten the contrast. By 2010, world markets responded to this campaign and Alaska salmon was back on top in value terms, especially troll caught Chinook.

### **Southeast Alaska Comprehensive Salmon Enhancement Plan**

The Comprehensive Salmon Plans (Phase I & II) were the chief salmon planning and production documents beginning in the late 1970's and continuing through the 1990's. A complete revision of the Comprehensive Salmon Plan (CSEP): Phase III was published and signed by the ADF&G commissioner in 2004. The CSEP continues to be the official umbrella document for enhanced salmon as delineated in AS 16.10.375. The CSEP and updates set production targets for Alaska's five Pacific salmon species, listed specific projects for future development, and delineated gear group target species. As production of chum surpassed the original CSEP goals and Chinook goals could not be attained, the Allocation Plan took center stage in the 2000's as the political and production driving force. Nevertheless, it is informative to review CSEP narrative for an understanding of gear group imperatives.

In the 1980 Comprehensive Salmon Plan (Phase I, pg 49), under the section *User Group Needs and Aspirations*, "Both NSRAA and SSRAA found that power trollers as well as hand trollers preferred Chinook and coho (production). NSRAA's gear group committee placed top priority on Chinook. The major reason was the severely depressed Alaskan chinook stocks and the importance of avoiding dependence on non-Alaskan stocks."



Phase II of the CSEP, December 1982, "...the northern and southern regions of Southeast present independent action plans to meet the common goals and harvest objectives." These action plans are derived by each of the five species and forecast future harvests by gear and species. Seine and gillnet forecasted sockeye, chum, and pink harvests, but no mention of coho or Chinook and conversely, trollers lay out harvest expectations for Chinook and coho and no other species.

The planning documents of the 80's and 90 set a direction for program development by species and harvest type. The momentum and support for them carry forward to the current day, although shifts in target species, prices, and allocation have altered expectations of these founding documents.

The Joint Regional Planning Team recognized as early as 1997 that what was predicted for trollers in 1994 was coming to be. The history was documented in the 2004 Phase III CSEP:

".....by 1997 the 5-year moving averages for seiners and trollers had been substantially out of the allocation range for two consecutive years, and the Joint RPT believed the imbalance was likely to continue. Rather than wait until the mandated trigger point for taking corrective measures, the Joint RPT held a workshop early in 1998 to explore ideas and proposals to alleviate the imbalance. The workshop helped to clarify the applicability, strengths, weaknesses, and limits of the allocation regulation.....the following conclusions were drawn:

- The current method used by CFEC to compute the price per pound value of enhanced fish, while resulting in imperfect data, is the best method available.
- Changes in marine survival and exvessel price of fish, benefitting some species and harming others, had dramatically changed the distribution of benefits.
- For Chinook salmon, the troll fleet's primary target, significant decreases in marine survival rate, number released, and price per pound resulted in decreased benefit the troll fleet
- For chum salmon, the seine fleet's primary target, increased hatchery releases, amplified by an extraordinary increase in marine survival rate, overrode a decline in price per pound to provide the increased benefit to the seine fleet.
- Marine survival and price of fish are factors outside the control of the enhanced fish producers, ADF&G, and the Board of Fisheries.
- Remedies should focus on improving troll harvest. The troll representatives on the RPT expressed the opinion they were catching as many fish as they could, given the U.S./Canada treaty restrictions, and were not interested in taking fish away from other gear groups. The distribution of coho and Chinook catch between gear types has remained relatively constant."

Traditional Chinook and coho troll fisheries were low volume compared to net fisheries, and considered a higher quality product that brought more value. Chinook and coho were, and still are, marketed as individually caught, bled, iced, high fat content omega-3 oil salmon, and delivered to the dock as Alaska's best. Volume net fisheries were not expected to compete on a quality basis.

## Analyses of Assumptions and Premises

### Fundamental Premise of 1994 Allocation Plan

The fundamental belief and focus of enhancement in 1994 was new production of Chinook and coho salmon at Medvejie, Deep Cove, Hidden Falls, Whitman Lake, Neets Bay and Deer Lake program would be developed for trollers, and importantly they would catch a high proportion of that production. At the same time new production for the net groups would be comprised of chum salmon.

The 1997 RPT minutes (page 4) has a quote by Tom Fisher (SATF troll representative), “maybe the percent allocation for trollers was too high – that they might need a wider range to bounce around in”. Ms Denton asked Fisher, as a troller, was he “not dissatisfied?” Fisher said he was not dissatisfied because trollers were not losing value, noting what was happening was that seiners were gaining more value because of more chums in the water.

### Results versus Allocation Plan Assumptions

Contrary to expectations, trollers catch a low proportion of enhanced Chinook production (23% (2007-14 average; range 19%-30%)) and a moderate proportion of coho production (37% (2007-14 average; range 30%-51%)). Chinook and coho must bite to get caught by troll gear and in order to get high exploitation rates the majority of the fish need to be available for harvest far from the terminal area. Conversely, the net groups can catch 100% of the enhanced chum salmon production and any coho or Chinook that pass through a terminal or mix stock net fisheries. In fact, to avoid over harvest by seine and gillnet gear in terminal areas the SHA’s must be managed carefully to control harvest. A salmon’s lack of interest in biting once in the proximity of the terminal area is a biological and genetically driven behavior, and has a profound effect on troll exploitation rates as salmon near freshwater spawning grounds, while this biological behavior of salmon has no negative effect on net group harvest rates.

An example of a program designed for trollers is informative. The Neck Lake Coho program located near Sumner Strait, is a summer returning coho of exceptional quality. Due to timing conflict with the summer Chinook season or some inherent stock characteristic, few of these coho are taken by trollers but are highly exploited by the gill fleet in district 6. Rather than ‘fix’ the allocation imbalance the Neck Lake program exacerbated the problem.

Joint Regional Planning Team minutes from the 1997 (page 6) document: (Mr. Ken) Duckett (SATF gillnet representative) said when the Task Force developed allocations, they realized it would take at least 10 years to bring a gear group that was out (of their allocation) into balance; he said it was designed only to trigger solutions over the long term. Dr. Amend concurred with Mr. Duckett, noting the Task Force had been aware the net gear groups would be easier to deal with.





### **Gear Efficiency**

Gear efficiency was not discussed in the development of the Allocation Plan for an obvious reason, and that is the net groups and troll group were targeting different species. It was assumed by simply increasing production of a group's target species the fix or desired result would follow. No one believed in 1994 nor does anyone believe in 2015 that if the three gear groups were expecting to compete for the same species that gear harvest efficiency would not be a fundamental discussion point.

That is not to say trollers cannot catch significant numbers of chum. Average catch rates for chum have been as high as 250 fish per day. A hundred boats could catch 25,000 fish in a single day. Chum salmon became an important troll species in 1993 in Eastern Channel, Sitka showing a catch that year of 450,000. It was the first location where fish behavior, abundance, weather, and the troll fleet merged in perfect harmony; it would not be until 2000 and 2013 for the second and third occurrences at this level, although catches ranged from 24,000 to 300,000 during this twenty year period. The largest total return on record for Medvejie/Eastern Channel chum was 3.6 million fish in 1999, a year when only 67,000 chum were caught by the troll fishery. Abundance is a factor but not the most important factor influencing troll harvest rates on chum salmon. Price plays a large role in a troller's decisions on where they put their effort. Chum prices in 1999 & 2000 were in the \$0.18/lb range.

### **Terminal Area Clean-up Fisheries**

In 1993 when trollers had their best year on record in Eastern Channel and could harvest twenty-four hours per day, seven days per week most of the fish still got past the troll fleet and into the terminal harvest area. Over 1.1 million chum were caught by the net groups and cost recovery in Deep Inlet in 1993. Seven years later, in 2000 when the next record troll catch (450,000) occurred, three million chum were caught by the net groups and cost recovery.

## Value of Enhanced Salmon - Historical Perspective

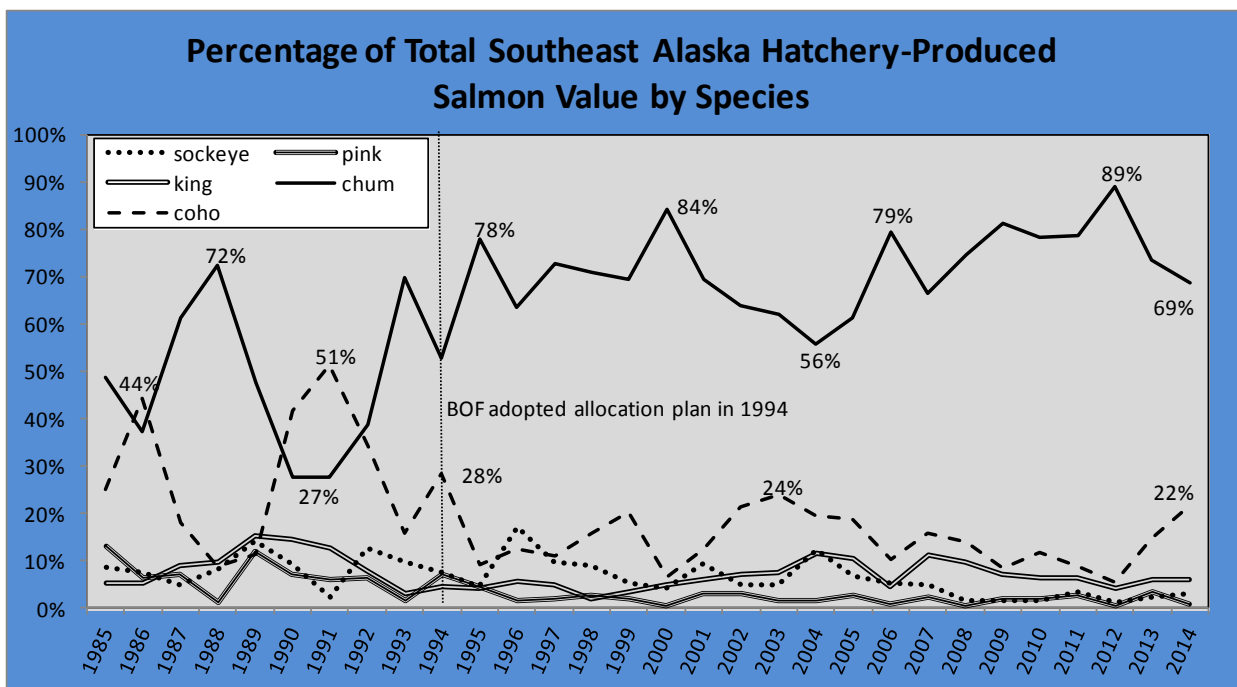


Figure 1. All gear total value for chum harvest represents about 80% in the past twenty years, whereas coho is 15% and Chinook is 5%.

In the 1997 RPT minutes (page 7), “(Mr. Tom) Fisher noted that one of their (SATF) basic faulty assumptions was that the prices for salmon increases and decreases across the board. There is a general trend in salmon prices going up and down, but chum roe can drive prices high when other salmon prices decline.

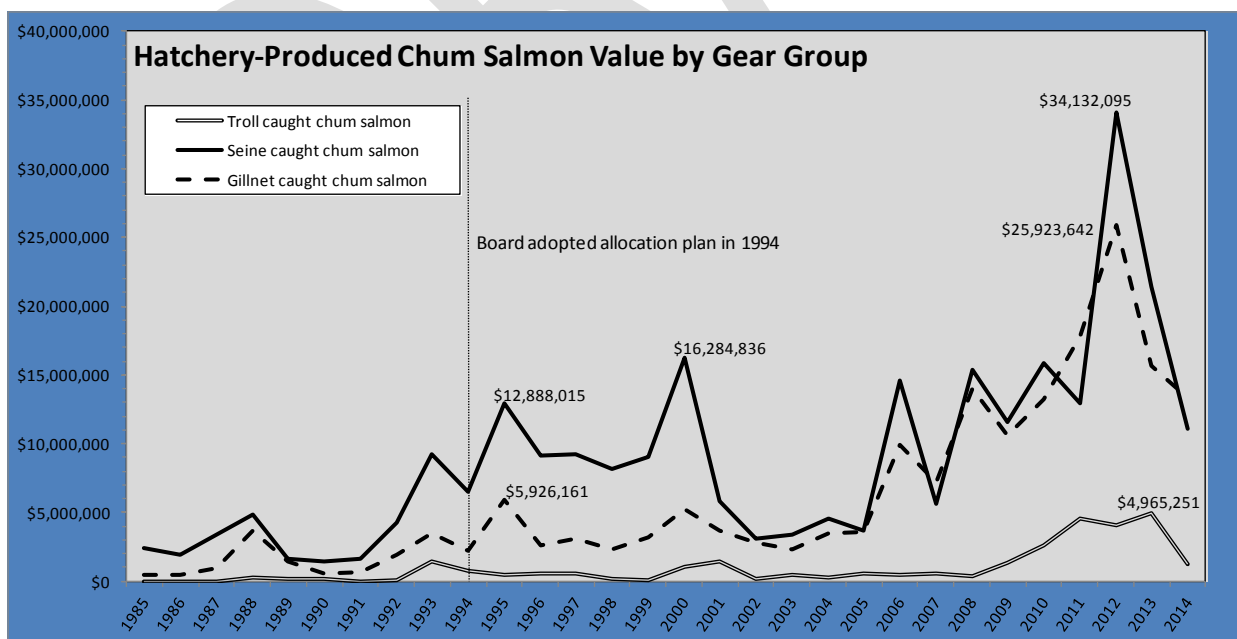


Figure 2. Chum value by gear for 1985 to 2014 shows a strong increasing trend.

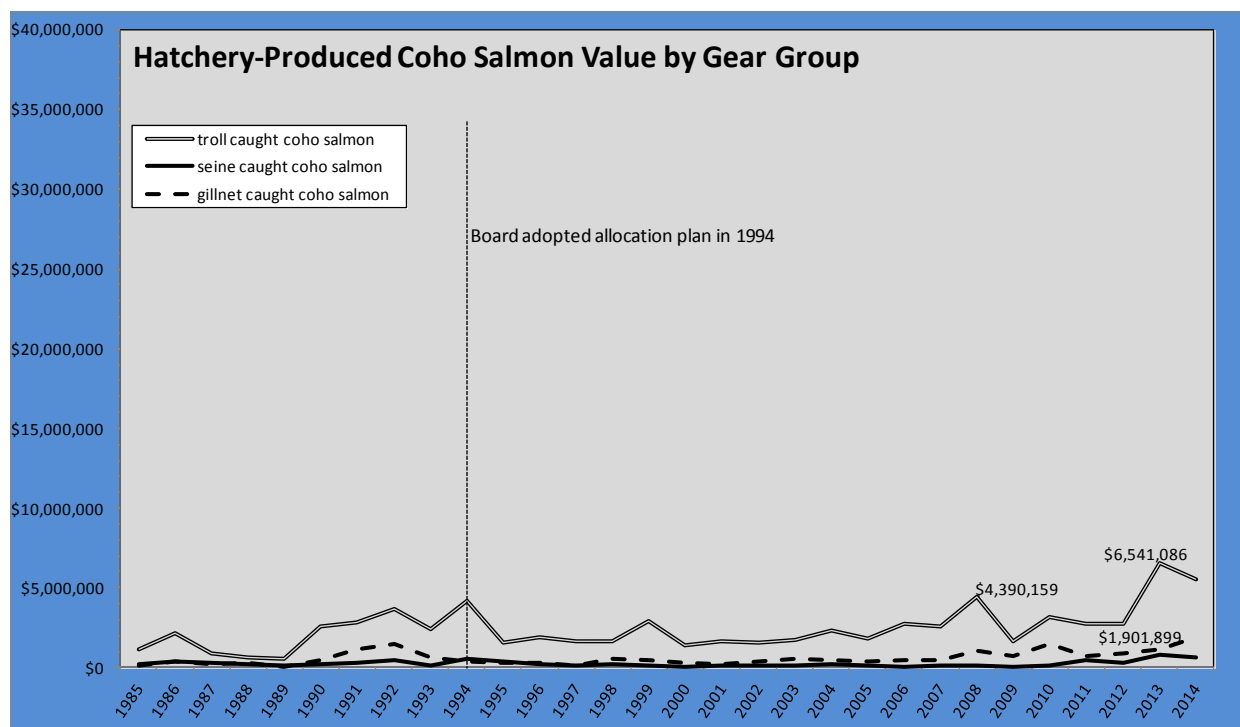


Figure 3. Coho value by gear showing high year value in 2013 for troll at \$6.5 million. Note x-axis scale for graph is identical to figure 2 & 4. ADF&G data.

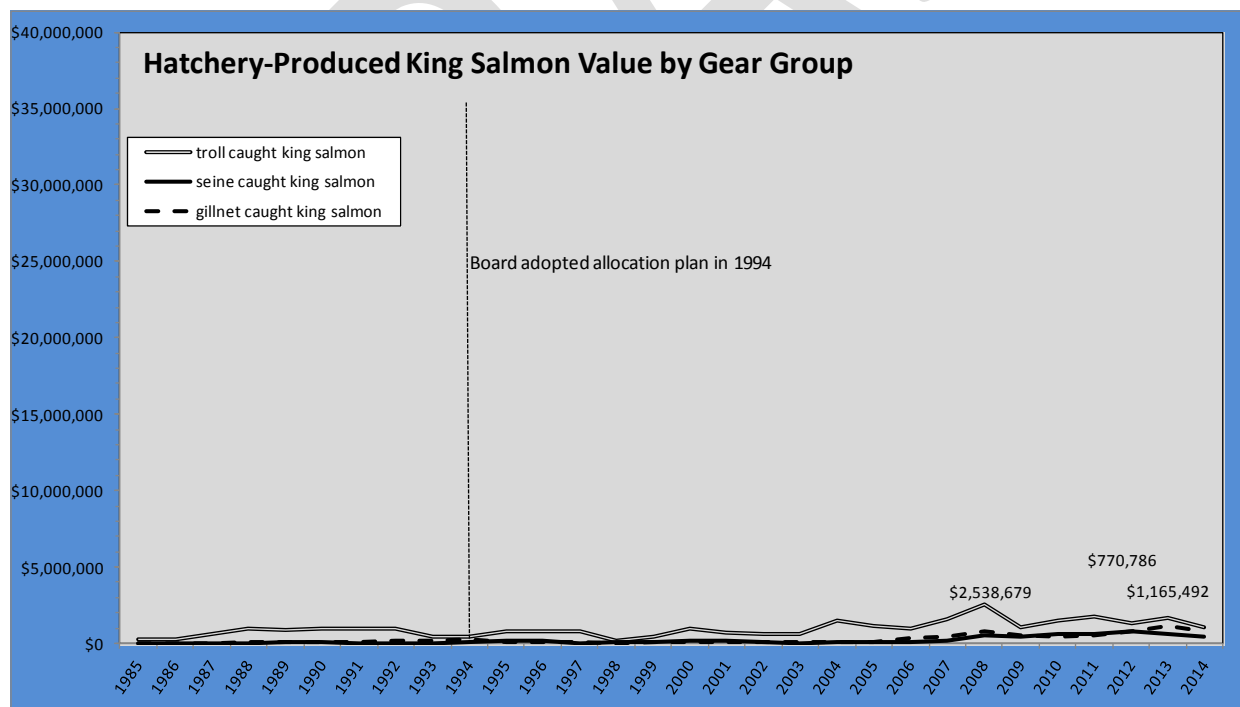


Figure 4. Chinook value by gear showing high value year for each gear group – troll \$2.5 million in 2008, gillnet \$1.1 million in 2013, and seine \$770,000 in 2012. Note x-axis scale for graph is identical to figure 2 & 3. ADF&G data.

## Exploitation Rates

Wildstock fisheries are managed for escapement, whether troll fisheries on the ocean or corridor troll, gillnet and seine fisheries. The greater the gear harvest efficiency and exploitation rate in a fishery, the more necessary time and area restrictions become. Troll fisheries occur most of the year and for much of southeast Alaska, whereas net fisheries are restricted primarily to the summer period with time and area protocols, often with one day or two days fishing per week in late June/July to four days per week in late July and August.

Enhanced fisheries are managed differently since they are located in special harvest areas isolated from most wildstocks. Unlike wildstocks, enhancement programs can sustain exploitation rates up to 95%. The result is terminal area fisheries often have seven day per week openings with the expectation that 100% of the fish will be harvested. Intense fishery management of this type also helps minimize straying.

## Spring Access and Experimental Troll Fisheries

Spring Chinook fisheries, considered a mixed stock fishery, have been an important component of NSRAA and SSRAA programs. Management and fishing boundaries were developed by ADF&G managers, fishermen, and the regional associations. The spring fisheries have evolved considerably over the past twenty years to maximize Alaska hatchery catch of Chinook and at the same time minimize non-Alaska hatchery catch. Spring access Chinook troll fisheries not only increase catch but value due to low supply and high market demand in May and June. Price usually falls dramatically by the July summer opening for Chinook. These spring fisheries tend to favor local Alaskan fishermen.

The period 2005-2014, trollers harvested 385,200 Chinook in spring troll fisheries. Of this total, 138,500 (36%) were Alaska hatchery fish and 246,700 (64%) were non-Alaska hatchery fish. For each AK hatchery Chinook harvested, an additional 1.78 non-Alaska hatchery Chinook was caught – fish that may have not otherwise been harvested at the higher value. Production of Chinook even with these low Alaska Chinook exploitation rates allows for leverage to prosecute the spring fisheries. Without Alaska Chinook production the spring troll fisheries would not exist and therefore opportunity for the troll fleet during the spring time frame.

## Terminal Fish are Genetically Programmed to Spawn, not Bite

The biological imperative of Pacific salmon to spawn limits catchability for hook and line since the salmon needs to be an active participant in the 'catch'. Salmon likely do not want to be caught in nets but are ill-equipped to avoid such gear. These factors may be obvious but help explain some of the difficulty of solving the imbalance in allocation.

Catchability and exploitation rates were not topics considered during the three year long SATF. The expectation was to 'produce 100,000 Chinook or one million coho and the troll fleet will catch them'. The average all gear harvest from 2005-14 has been 100,600 hatchery Chinook and 881,100 hatchery coho per year; troll harvest on these total has averaged 22,700 (23%) for Chinook and 332,800 (38%) for coho.



## Enhancement: Review of the Past Twenty Years

In the past twenty years there has been very little new hatchery construction although major expansions have occurred at existing hatcheries. Program expansion has resulted from greater efficiencies and technological advances. Maximizing facility infrastructure and water use have been at the core of chum, coho, and Chinook expansions. Value to fishermen has increased steadily through the period commensurate with production increases. Infrequently, low price and poor marine survival has worked in concert to lower overall value. Nevertheless, in the past twenty years value has gone from \$17.9 million in 1994 to \$52.7 million in 2013. The all time record value was over \$72 million in 2012.

Summary Table - Annual Value Estimates by Gear

| ALL SPECIES     | TROLL          | SEINE          | GILLNET        | TOTAL          | SOURCE      | RANK |
|-----------------|----------------|----------------|----------------|----------------|-------------|------|
| 1994            | \$ 5,317,271   | \$ 8,876,576   | \$ 3,797,692   | \$ 17,991,540  | ADFG        | 13   |
| 1995            | \$ 2,871,032   | \$ 14,789,338  | \$ 7,169,053   | \$ 24,829,423  | ADFG        | 10   |
| 1996            | \$ 3,224,761   | \$ 12,061,185  | \$ 4,184,597   | \$ 19,470,543  | ADFG        | 12   |
| 1997            | \$ 3,004,073   | \$ 10,752,998  | \$ 4,037,169   | \$ 17,794,241  | ADFG        | 14   |
| 1998            | \$ 1,973,521   | \$ 9,277,676   | \$ 3,792,912   | \$ 15,044,109  | ADFG        | 17   |
| 1999            | \$ 3,461,492   | \$ 10,061,642  | \$ 4,110,113   | \$ 17,633,247  | ADFG        | 15   |
| 2000            | \$ 3,465,550   | \$ 17,113,326  | \$ 6,219,903   | \$ 26,798,778  | ADFG        | 9    |
| 2001            | \$ 3,752,912   | \$ 7,170,159   | \$ 4,852,294   | \$ 15,775,364  | ADFG        | 16   |
| 2002            | \$ 2,303,490   | \$ 3,645,488   | \$ 3,627,174   | \$ 9,576,152   | ADFG        | 21   |
| 2003            | \$ 2,774,408   | \$ 3,744,188   | \$ 3,385,285   | \$ 9,903,881   | ADFG        | 20   |
| 2004            | \$ 4,139,539   | \$ 5,498,187   | \$ 5,400,059   | \$ 15,037,785  | ADFG        | 18   |
| 2005            | \$ 3,522,736   | \$ 4,405,236   | \$ 4,707,650   | \$ 12,635,622  | ADFG        | 19   |
| 2006            | \$ 4,192,671   | \$ 15,109,033  | \$ 12,215,370  | \$ 31,517,075  | ADFG        | 7    |
| 2007            | \$ 4,728,923   | \$ 6,531,971   | \$ 8,851,525   | \$ 20,112,418  | ADFG        | 11   |
| 2008            | \$ 7,320,371   | \$ 16,158,998  | \$ 16,385,073  | \$ 39,864,442  | ADFG        | 5    |
| 2009            | \$ 4,032,749   | \$ 12,746,563  | \$ 12,255,256  | \$ 29,034,568  | ADFG        | 8    |
| 2010            | \$ 7,215,190   | \$ 17,451,677  | \$ 15,728,240  | \$ 40,395,107  | ADFG        | 4    |
| 2011            | \$ 9,109,654   | \$ 15,430,492  | \$ 20,391,332  | \$ 44,931,479  | ADFG        | 3    |
| 2012            | \$ 8,113,226   | \$ 35,570,351  | \$ 28,453,598  | \$ 72,137,175  | ADFG        | 1    |
| 2013            | \$ 12,717,367  | \$ 20,863,723  | \$ 19,128,923  | \$ 52,710,013  | ADFG prelim | 2    |
| 2014            | \$ 7,863,185   | \$ 11,923,318  | \$ 16,772,454  | \$ 36,558,957  | OPER prelim | 6    |
| 1994-14 Total   | \$ 105,104,121 | \$ 259,182,125 | \$ 205,465,672 | \$ 569,751,918 |             |      |
| 1994-14 Avg.    | \$ 5,004,958   | \$ 12,342,006  | \$ 9,784,080   | \$ 27,131,044  |             |      |
| 1994-14 Percent | 18%            | 45%            | 36%            | 100%           |             |      |
| 2014 Percent    | 22%            | 33%            | 46%            | 100%           |             |      |
| Target          | 27-32%         | 44-49%         | 24-29%         |                |             |      |

Table 1. All enhancement program value by gear (all species combined) for 1994 - 2014

The salmon enhancement program has contributed \$570 million in exvessel value since 1994. During that period 18% of the value has gone to troll, 45% to seine, and 36% to gillnet. The 2014 estimate moves the troll fleet up a bit to 22% of the value for that year, while seine dropped to 33% and gillnet edged up to 46%.



| ALL SPECIES                             |        |         |        |      |
|-----------------------------------------|--------|---------|--------|------|
| 1994-2013                               | Troll  | Gillnet | Seine  |      |
| NSRAA                                   | 20%    | 12%     | 68%    | 100% |
| SSRAA                                   | 22%    | 34%     | 44%    | 100% |
| DIPAC                                   | 5%     | 84%     | 11%    | 100% |
| All others AKI,<br>Klawock, Gunnuk Cr., | 31%    | 20%     | 49%    | 100% |
| All Combined                            | 18%    | 35%     | 47%    | 100% |
| Target                                  | 27-32% | 24-29%  | 44-49% |      |

Table xxx. Allocation of salmon within NSRAA, SSRAA, DIPAC, and all others producers combined for each gear type. SSRAA comes the closest to the Allocation Plan ranges. In the 'other' grouping Klawock and Port Armstrong have large coho programs with relatively high troll exploitation rates.

Salmon enhancement organizations have developed under different circumstances and have different site selection opportunities, and therefore each produce a different mix of species and biomass. Port Armstrong for example was developed as a coho and pink salmon facility targeting their coho benefits to the troll fleet and using pink salmon returns to pay the bills. DIPAC was developed as a gillnet organization due to its location in the heart of districts 11 and 15, traditional gillnet areas and has been very effective in benefitting the gillnet fleet.

The regional associations by contrast were developed with boards of directors representing all gear groups and expected to create programs benefiting all common property fisheries. NSRAA has been successful with numerous coho and Chinook programs that benefit trollers, but far less successful getting benefits to the gillnet fleet. Deep Inlet in Sitka Sound, a traditional troll and seine area was opened to gillnetting in 1993 to provide some benefit that would not have occurred otherwise. Other than Deep Inlet and districts 11 and 15 there are no other gillnet areas within NSRAA's purview. Most of NSRAA's districts 9 through 15 are traditional seine and troll areas and the returns to each group reflect that reality.

SSRAA gear contribution proportions are close to the Allocation Plan ranges. The SSRAA programs are centrally located within both gillnet and seine districts. District 1, 6, and 8 mixed stock gillnet fisheries intercept Neets Bay, Carroll Inlet, Neck Lake, and Anita Bay returning fish. Seine fisheries in Clarence Strait, district 1, 2, and 4 also intercept the returns from the same programs. Somewhat by serendipity and partially through design the SSRAA programs attain a gear distribution balance closer to the ideal than any other individual organization.

DIPAC with a \$117 million contribution to commercial fisheries is the third largest enhancement organization in southeast Alaska. Initially organized as a gillnet enhancement group it has expanded to produce a fair number of coho and Chinook for the troll fleet and now that its debt has been paid off, they have made large contributions to the seine fleet with openings at Amalga Harbor. Even so, 84% of DIPAC's value goes to the gillnet fleet.

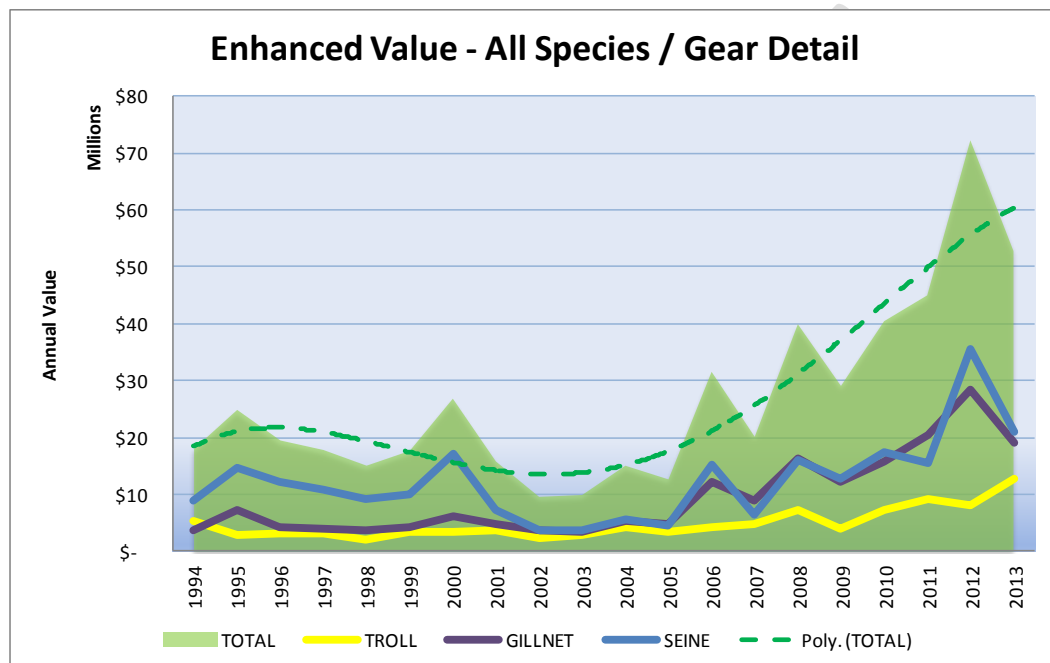


Chart xxx. Annual value for the three gear groups has gone up in aggregate and for each individual gear group. The aggregate trend line is expected to continue for the next decade and then level off by 2025.

| ALL Years 1994-2013* |               |                |                |                |
|----------------------|---------------|----------------|----------------|----------------|
|                      | troll         | gillnet        | seine          | Grand Total    |
| NSRA                 | \$ 39,611,496 | \$ 24,005,116  | \$ 137,976,704 | \$ 201,593,316 |
| SSRA                 | \$ 38,014,623 | \$ 57,963,518  | \$ 76,278,563  | \$ 172,256,703 |
| DIPAC                | \$ 5,948,904  | \$ 98,062,716  | \$ 13,038,313  | \$ 117,049,933 |
| REST                 | \$ 13,711,132 | \$ 8,664,156   | \$ 21,861,920  | \$ 44,237,208  |
|                      | \$ 97,286,155 | \$ 188,695,506 | \$ 249,155,500 | \$ 535,137,160 |

Table xxx. Cumulative value by gear and by enhancement organization for years 1994 – 2013.

### Southeast Allocation by Percentage, Five Year Rolling Averages

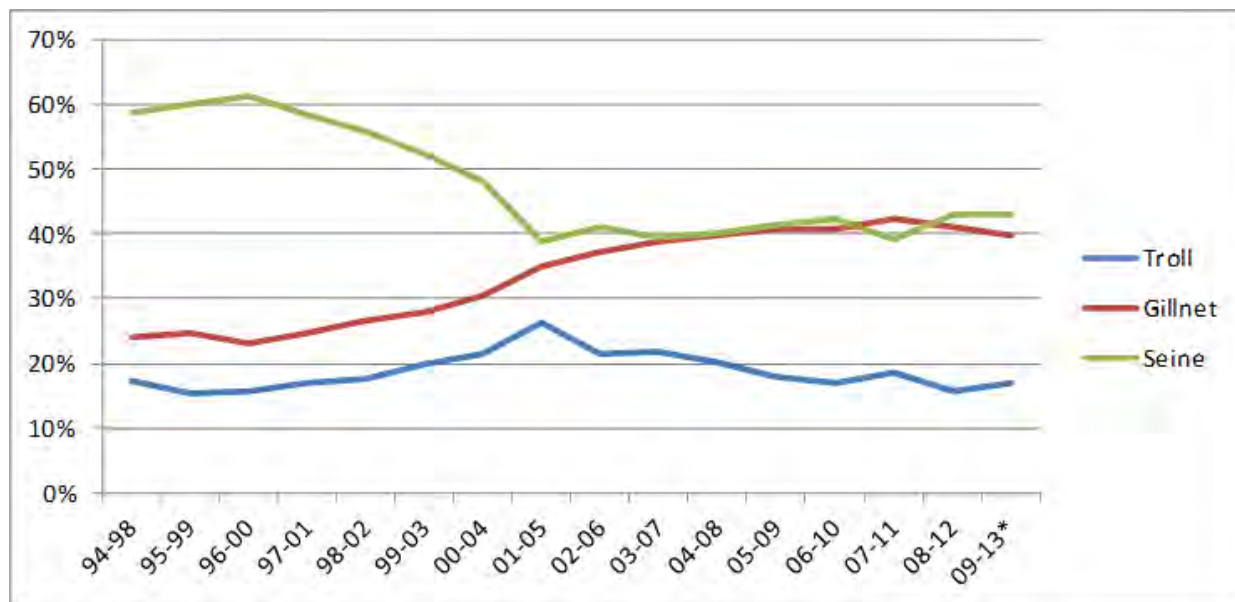


Chart xxx. Five year value rolling average as gear group percentage of total value.

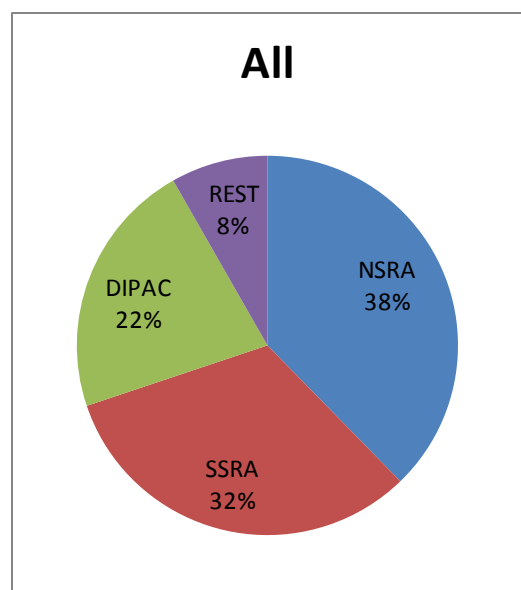


Chart xxx. Proportion of total enhanced value by organization. Rest is composed of Pt Armstrong, Klawock, and Gunnuk Creek hatcheries.

## **Programs & Management Strategies Implemented to Address Troll Imbalance**

Considerable planning and effort has gone into creating new coho, Chinook, and chum programs to improve troll opportunities, value, and harvest in the past twenty years. Many millions of dollars have been spent for new raceways, net pens, incubation space, and other infrastructure to support new salmon production specifically for the troll fleet. Beyond that there have been numerous management changes to increase troll access and opportunity. The following is a bulleted summary of program development, costs, and management structuring by agency to address the troll allocation imbalance.

### **Northern Southeast Regional Aquaculture Assoc Capital and Operational Changes**

#### **Capital Expenditures to Increase Troll Fish since 2000:**

- Created new chum production at Crawfish Inlet in 2014 with troll priority, \$1.9 million capital outlay
- Create new chum production at S.E. Cove, Kuiu Island in 2012 with troll access priority, \$1.5 million outlay so far
- Construction of Sawmill Creek Hatchery for 2 million smolt capacity, \$3.0 million construction
- Increase coho production at Hidden Falls from ~2 million to 3 million smolt, construction of new rearing and incubation building at HF to accomplish, \$1.2 million capital investment
- Increase coho production at Deer Lake from 1 million smolt to 2.5 million smolt. Capital investment of \$200,000 and \$550,000 annually operating costs

#### **Program Changes to Increase Troll Fish since 2000:**

- Shift 400,000 Medvejie Chinook smolt production release to HPR at troller request
- Shift majority of 2.5 million Medvejie Chinook production to Green Lake where marine survival is highest
- Shift production at HF by decreasing chinook and increasing coho due to a tripling of benefit to cost
- Expansion of Deer Lake project from 1 million to 2 million, and then to 2.8 million fry stocking; consistent production of 2 million smolt, operational cost \$200,000
- Stock surplus coho fry in Cliff Lake and Banner Lake
- Backfill shortfalls at Crystal Lake Chinook program with HF Chinook eggs, numerous years
- Obtain permit increases for chum release at Medvejie from 7m to 10m to the current 20m, operational costs \$100,000

#### **Management Changes to Increase Troll Fish since 2000:**

- Shift line within Deep Inlet during May and June to provide greater area for Chinook troll drag
- Provide for trolling in Eastern Channel during coho troll closure (BoF ~2003)
- Extend troll season in Hidden Falls terminal harvest area every year ADFG extended troll season beyond September 20



- Allow additional coho troll area at Kasnyku and Mist Cove THAs

## **Southern Southeast Regional Aquaculture Assoc Capital and Operational Changes**

- Assume the operation of Deer Mountain Hatchery, including retrofitting the building and fish culture equipment to produce 500,000 chinook a year. Historically KIC produced less than 100,000 fish a year, primarily summer coho. Annual operating budget of about \$200,000 a year. Capital costs have been covered by several grants to date, but there will be some expenses on finishing the project. Hatchery will release 100K smolt from Whitman Lake this spring (2015) and accept between 400K and 500K juveniles from Whitman Lake later this spring (2015)
- Reestablish the Carroll Inlet SHA including releasing 400K to 600K Chinook smolt annually. The cost of running the site and tagging the fish will be about \$30K to \$40K a year, which would also include fish transport. The first release in Carroll Inlet, if all goes well, will take place in the spring of 2016. The first fishery in the SHA should occur in 2018 or 2019.
- Underwrite the POWHA program up to \$500K a year through 2016 (2014 through 2016 for a total of \$1.5 million). DIPAC has granted two \$500K grants toward this program to be administered through SSRAA. In addition to the funding, SSRAA has assisted POWHA with administrative and technical support for the past 5 years or more. POWHA annually releases between 4 and 5 million fall coho smolt. SSRAA is entered in a long term deliberation as to whether to assume the operation of the Klawock Hatchery. If SSRAA takes this course it will involve resolving the \$5 million debt owed by POWHA to the State as well as a \$700K a year operating budget. If SSRAA does not either take over the facility or continue to underwrite the program, the hatchery association, POWHA, will be bankrupt within several months of that decision.
- Annually provide about 300K Chickamin stock chinook eggs to POWHA for the Port St. Nick hatchery. The fish are released at Port St. Nick and in Coffman Cove. This has been ongoing for the past 7 or 8 years. There is some cost to SSRAA as the required broodstock could have otherwise been sold for cost recovery or caught in common property fisheries.
- Increase fall coho production by 2 million smolt a year. These increases began with SSRAA's 5-year project in Bakewell Lake about 9 years ago. The project involved 500K to 1 million smolt a year that were reared and released in Bakewell Lake. It was a cooperative project with the USFS. With a change in local personnel that project fell out of favor when the 5-year contract was over – Bakewell Lake lies partly in Misty Fjords Wilderness and current USFS no longer support our presence there. The production was to be moved to Connell Lake near Ketchikan.



This was part of the fisherman's agreement preceding the BOF meeting 6 years ago...that SSRAA would increase annual fall coho production by about 1 million smolt. Ultimately the USFS and AK DNR could not decide who had permitting authority for Connell Lake (a reservoir), and though permitted by DNR it was not considered compatible with the current public use designation for Connell Lake. Subsequently, SSRAA increased annual fall coho production by 2 million smolts that are reared in Neck Lake and transported for release at Anita Bay, Nakat Inlet, and Neets Bay.

- Assume full cost of Whitman Lake chinook production despite the loss of \$200K a year in state funds in 2014 forward.
- Continue operation of Crystal Lake Hatchery at about \$300,000 a year to SSRAA. The original cost to SSRAA was less than \$200K a year. The State contribution has been fixed for the past 12 years with all increases in cost going to SSRAA. Crystal Lake is a chinook hatchery.

#### **Management Changes:**

- Include trollers in the Kendrick Bay SHA (SSRAA proposal to BOF 2015).
- Open the outer portion of the Neets Bay SHA to chum troll from 2011 forward.
- Propose/Support other troller proposals to leave an area of Behm Canal adjacent to Neets Bay open to coho harvest through September regardless of the general troll closure at an earlier date.
- Open large portions of the Neets Bay SHA to troll in September for fall chum and coho harvest.
- Reestablish the Carroll Inlet SHA for chinook trolling, through spring RPT 2015.

#### **Program changes/issues:**

- 1998, added 140,000 coho smolt to Neets Bay release.
- 1999, rear and release 250,000 chinook smolts in Long Lake (drains into Neets Bay).
- 1999, active and intense lobbying effort with governor to keep CLH open when the current SF Director proposed closing the site. Found funding to continue the program through 1999. Negotiated SSRAA's operating the site for SF Division in 2000 with State Administration and Legislative support. At the time SSRAA assumed 1/3 of the direct operating expenses at the site with the State paying 2/3 the cost. Costs have increased since 2000. Currently it costs SSRAA more than \$300K annually with the state paying a fixed cost...SSRAA's increase has been more than \$100K a year.



- 2001 Increase fall coho production/release by 100,000 fish at Nakat Inlet (most of these fish are caught by trollers).
- 2002 SSRAA adopts a Neets Bay Management Plan that sets 3 priorities: broodstock, cost recovery, and a chum troll harvest of at least 200,000 fish. The chum troll fishery in 2003 harvested 171,000 fish, which was all they were able to harvest (SSRAA did not constrain the harvest)
- 2006 add 8 million summer chum to Anita Bay release and 1 million to Neets Bay.
- 2006 provide 250K to 300K chinook eggs to POWHA for the Port St. Nick facility – release at Port St. Nick and Coffman Cove.
- 2008 Initiate the Bakewell Lake coho project with the USFS (500,000 to 1 million coho smolt annually).
- 2009 Joint RPT/Fisherman’s proposal for the BOF: retrofit Burnett Inlet Hatchery to accommodate 22 million additional summer chum; increase the release of summer chum at Neets Bay by 12 million smolt (61 million overall from 49 million); propose a fall coho project for 1.2 million smolt to be reared in Connell Lake (ultimately was not permitted and production was moved to Neck Lake); and, actively promoted the chum troll fishery in Neets Bay involving gaining a commitment from fishermen and subsequently for tendering from Ketchikan processors.
- 2011 redefine a Neets Bay Harvest Fund (reserve) that would insure a chum troll fishery even if this caused SSRAA to fall short of cost recovery. The cost recovery shortfall, if caused by overharvest (primarily intended for chum troll), would be paid from the fund. Since this time (and before) SSRAA has designated a chum troll target as part of its annual budget process. The forecasted return to Neets Bay is often exceeded by the total of fish designated for chum troll, broodstock and cost recovery. Broodstock is the single priority, but chum trolling will not be curtailed until their annual target is hit. This is a management target...the point at which the chum fishery may be curtailed by SSRAA, but it will not be curtailed at any point short of that target.

## **Douglas Island Pink and Chum Capital and Operational Changes**

### **Capital Expenditures**

- Expanded Macaulay Salmon Hatchery in 2012-2013 to maintain king production & restore coho production to previous levels (\$3 million).

### **Program Changes**



- Transferred ADF&G Chinook program from Snettisham Hatchery to Macaulay Salmon Hatchery in 1994. Increased production from 250,000 to 600,000 smolts; total operational costs \$350,000. Abandoned plans to increase coho production and reduced existing production by 200,000 in order to accommodate extra Chinook.
- Initiated Skagway Chinook program in 1998. Increased Chinook production from 600,000 smolts to 900,000 smolts; total operational costs \$500,000. Reduced coho production by an additional 300,000 to accommodate extra Chinook.
- Increased coho production from 500,000 smolts to 1,000,000 smolts; operational costs \$400,000.

### Management Changes

- Allocated \$6 million to NSRAA over last three years to reduce cost recovery and increase common property access in THAs as well as assist in development of new enhancement.
  - 2013: \$1.5 million for Deep Inlet cost recovery.
  - 2014: \$2.5 million for the following:
    - \$1.5 million for Deep Inlet cost recovery.
    - \$500,000 for portion of Hidden Falls cost recovery.
    - \$450,000 for capital costs for infrastructure development at Southeast Cove.
    - \$50,000 for 2013 Deep Inlet cost recovery shortfall.
  - 2015: \$2 million for all Deep Inlet and a portion of Hidden Falls cost recovery.
- Allocated \$2.5 million to SSRAA over last two years reduce cost recovery and increase common property access in THAs as well as provide financial support for Klawock Hatchery.
  - 2014: \$2 million for the following:
    - \$1.5 million for Neets Bay cost recovery fund.
    - \$500,000 for Klawock Hatchery operations.
  - 2015: \$1 million for the following:
    - \$500,000 for Neets Bay cost recovery fund.
    - \$500,000 for Klawock Hatchery operations.
- Supported development of directed troll chum fishery at Homeshore, Icy Strait and Hawk Inlet.
- Provided otolith reading of Homeshore troll-caught chums at the request of the Chum Trollers Association in order to provide ADF&G with necessary information to manage fishery and improve access to hatchery chums.

### Armstrong-Keta Capital and Operational Changes

#### Capital Expenditures to Increase Troll Fish:

- Expansion of the Port Armstrong chinook and coho programs in 1993-1997: \$1.18m US/Canada mitigation capital funds plus \$453,000 in associated operations funds.
- Initiation of the Port Armstrong chum program (ultimately directed at a Port Lucy troll terminal harvest) with construction of new incubation building in 2003-2005: \$1.46m Southeast Sustainable Salmon Fund grant.



- Expansion of the Port Armstrong coho program in 2003-2005: \$670,00 Sustainable Salmon Fund grant.
- Coho and chinook handling equipment in 2007-2008: \$28,000 Fisheries Economic Development grant, plus \$9,000 in AKI matching funds.
- Additional net pens for Port Armstrong coho program in 2007: \$133,000 Fisheries Economic Development grant, plus \$44,000 in AKI matching funds.
- Facilities upgrade for the Port Armstrong coho and chinook programs in 2011-2013: \$631,000 Chinook Mitigation Fund grant.
- Expansion and improvement of Little Port Walter facilities in order to move the Port Armstrong chinook program to LPW, creating space for additional coho production at Port Armstrong in 2014-2015: \$201,000 Chinook Salmon Hatchery Enhancement Fund grant.
- Additional troll facility capital improvements for coho and chinook incubation building, saltwater pump system, rearing water system additions, raceways, net pens and feed storage, 2000-2015: \$1.45m in AKI funds.

#### Program Changes to Increase Troll Fish since 2000:

- Shift production at Port Armstrong by decreasing chinooks to approximately 200,000 annually and increasing cohos proportionally, using the rearing facilities to triple the benefit to trollers for the same cost.
- Initiation of a chinook zero check program in 2005, eventually releasing 20g smolts of Unuk River stock in early May by utilizing surplus heated water from the Port Armstrong hydropower load banks to accelerate incubation.
- Support both financially and in-kind for the Keta River chinook stock remote egg takes and rearing in 2014 and 2015 at Little Port Walter.
- Provide showers and laundry facilities and serve countless dinners to trollers at the Port Armstrong Hatchery manager's residence since 2007.

#### Management Changes to Increase Troll Fish since 2000:

- Removal of the infamous Port Armstrong gut harvest barrier net from 2009 on.
- Open Port Armstrong SHA except for a small broodstock reserve area annually since 2011 for trolling during the chinook cost recovery season.
- Permit retention of chinooks 26" or larger in the Port Armstrong SHA annually since 2011.
- Extend the coho troll season in the Port Armstrong SHA past the ADF&G September fall closure in 2014 with plans to continue to do so in the future.
- Obtain a permit increase of 30 million chums in 2015 for release at Port Lucy and establishment of a troll terminal harvest.



## Joint Regional Planning Team Recommendations, a Selected History

The following is a small selection of annual recommendations to the commissioner from the JRPT. These excerpts demonstrate the extent and seriousness that the RPT members brought to the discussion regarding allocation. The complete text of JRPT letters to the commissioner are presented in Appendix **XXX**

### **May 1997, started discussing roe and value calculations and two motions were made:**

Wyman moved and Mecum seconded the Joint RPT direct the regional associations to work collectively to resolve what should constitute the value of the enhanced salmon used for the Southeast allocation plan and Fisher moved and Bigsby seconded the motion to request the original Allocative Task Force look at the different levels of participation in the fishery (total permit in a gear/active participation) and factor those in when deciding the allocative percentages per gear group.

### **April 1999 letter to the commissioner – JRPT**

*Allocation of enhanced fish:* Most of the day-long meeting was dedicated to a discussion of the status of allocation. This was the first consideration for submitting BOF proposal(s) that addressed the troll imbalance.

### **Meeting December 7, 2004**

Allocation of Enhanced Fish Task Force meeting chaired by Ken Duckett. Value calculation delivered by CFEC Kurt Iverson. All day meeting.

**December 2008** – Workshop to discuss the allocation situation including considerations of reasons for the current imbalance, modeling what would happen if Hidden Falls Hatchery returned to standard survival rates, and modeling what would occur if one or more special harvest area management plans were changed.

**December 2009** – *Industry members of the RPT would like to state that this is the first time since 1994 where both net fleets are significantly out of their ranges in opposite directions. It is the first time the joint RPT has needed to consider recommending changes in SHA rotations. The JRPT recognizes that there may be a better and timelier alternative than the Board of Fish process for continually readjusting the management of rotational fisheries. The joint RPT will consider alternatives and may have a recommendation by the 2012 board meeting that will allow significant adjustments in SHA's without requiring board of fisheries action. These adjustments would be conducted within the current Southeast Enhanced Allocation Plan and would not make any changes to the allocation ranges. If the RPT cannot come up with a plan the RPT will submit Board of Fish proposals as appropriate for the gear groups based on the current situation within the allocation plan. (Industry Consensus 12/9/08) (AGENDA LEADIN 12/10/09)*

**December 2011** – Industry consensus to support proposal 325, chum access in districts 9, 12, & 14.





## April 2014 Letter to the Commissioner excised selection

*Efforts continue to be made to improve chum salmon harvest opportunities for the troll fleet and the troll fleet is increasing its success at harvesting chum salmon.*

*SSRAA has established a Neets Bay Harvest Fund, which is intended to provide regular and increased chum salmon harvesting opportunities for trollers. DIPAC has contributed to this fund. The fund will also increase opportunities for net fishermen, but will likely help seiners more than gillnetters.*

*Hatchery operators continue to increase production of Chinook and coho salmon, which are the targeted troll species.*

### Cost of Production: Coho/Chinook Smolt vs Chum Fry

The capital and operational costs of Chinook and coho production are significantly higher due to the requirements of freshwater rearing environment; an environment that is not necessary for chum salmon. Capital costs for Chinook/coho is approximately 80% of hatchery construction costs, while annual operational costs of production are close to 50%. Looking at costs by individual fry/smolt release the differential is tremendous, about one cent per chum fry compared to \$0.30 per Chinook and \$0.15 per coho.

| Program Costs  | Annual Budget | Proportion for coho/chinook |
|----------------|---------------|-----------------------------|
| NSRAA          | \$7,000,000   | 46%                         |
| SSRAA          | \$9,000,000   | 50%                         |
| DIPAC          | \$5,000,000   | 45%                         |
| Armstrong Keta | \$4,000,000   | 50%                         |
| Total          | \$25,000,000  | \$12,000,000 (48%)          |

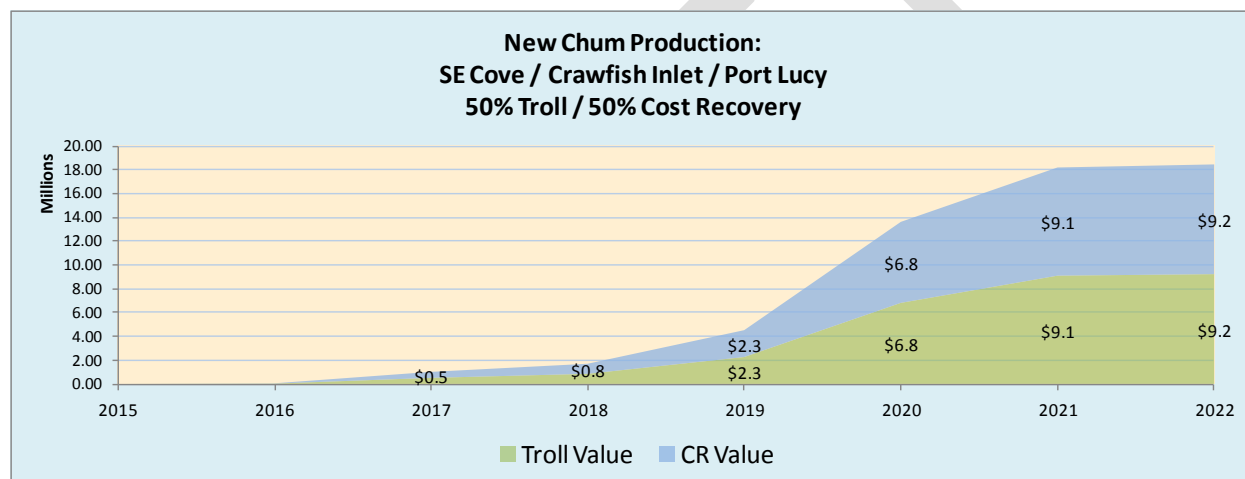
When looking at the costs of production versus the value of returns to commercial fisheries the differential or benefit to cost is also stark: Chinook 1:1, coho 4:1, and chum salmon 8:1.

### Future Salmon Production

New chum salmon programs are in the works that are expected to benefit the troll fleet significantly. These programs were specifically designed to avoid net harvest and provide troll opportunities – Southeast Cove (2013), Crawfish Inlet (2015), Port Lucy (2016), and Port Assumption (2017). Coho and Chinook programs are mature and not expected to expand with the exception of Sawmill Creek

Hatchery where smolt production will increase from its current 500,000 smolt to two million smolt by 2017.

In a general sense these programs can be considered an experiment that will test whether additional production with an emphasis toward terminal area troll harvest can move the trollers into their allocation range. The total fry production of these chum programs is about 140 million or 3.5 million adults valued at \$16.8 million. This value if harvested primarily by trollers could easily move the trollers into their allocation range; this assumes the cleanup is conducted for cost recovery revenue, not harvested by the net fleets. Alternatively if there are surplus terminal fish that are not needed by aquaculture associations for their operational and capital revenues, operators will be forced to open these terminal areas to the net groups.

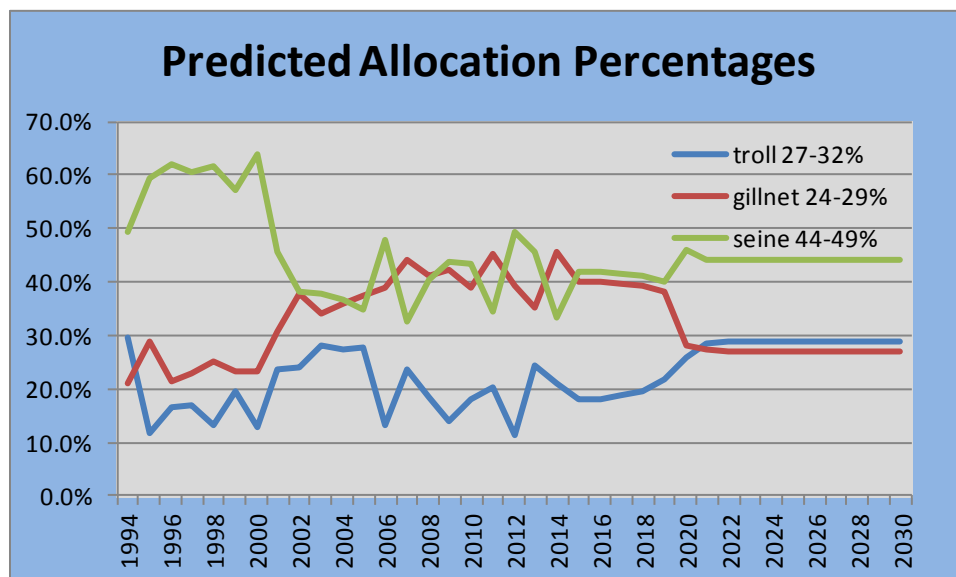


|              | 2012 | 2013 | 2014 | 2015 | 2016      | 2017       | 2018       | 2019         | 2020         | 2021         | 2022         |
|--------------|------|------|------|------|-----------|------------|------------|--------------|--------------|--------------|--------------|
| 50% SEC      |      |      |      |      |           |            |            |              |              |              |              |
| Fish         |      |      |      | -    | 5,144     | 108,029    | 173,190    | 297,509      | 717,623      | 931,109      | 943,113      |
| CRAW         |      |      |      | -    | -         | -          | 7,716      | 169,760      | 414,112      | 509,281      | 514,425      |
| AKI          |      |      |      | -    | -         | -          | -          | 15,433       | 324,088      | 504,137      | 514,425      |
| Troll Fish   |      |      |      | -    | 5,144     | 108,029    | 180,906    | 482,702      | 1,455,823    | 1,944,527    | 1,971,963    |
| 7.8 SEC      |      |      |      | \$ - | \$ 24,075 | \$ 505,577 | \$ 810,528 | \$ 1,392,343 | \$ 3,358,475 | \$ 4,357,591 | \$ 4,413,767 |
| \$ 0.60 CRAW |      |      |      | \$ - | \$ -      | \$ -       | \$ 36,113  | \$ 794,478   | \$ 1,938,045 | \$ 2,383,434 | \$ 2,407,509 |
| AKI          |      |      |      | \$ - | \$ -      | \$ -       | \$ -       | \$ 72,225    | \$ 1,516,731 | \$ 2,359,359 | \$ 2,407,509 |
| Troll Value  |      |      |      | \$ - | \$ 24,075 | \$ 505,577 | \$ 846,641 | \$ 2,259,046 | \$ 6,813,250 | \$ 9,100,384 | \$ 9,228,785 |

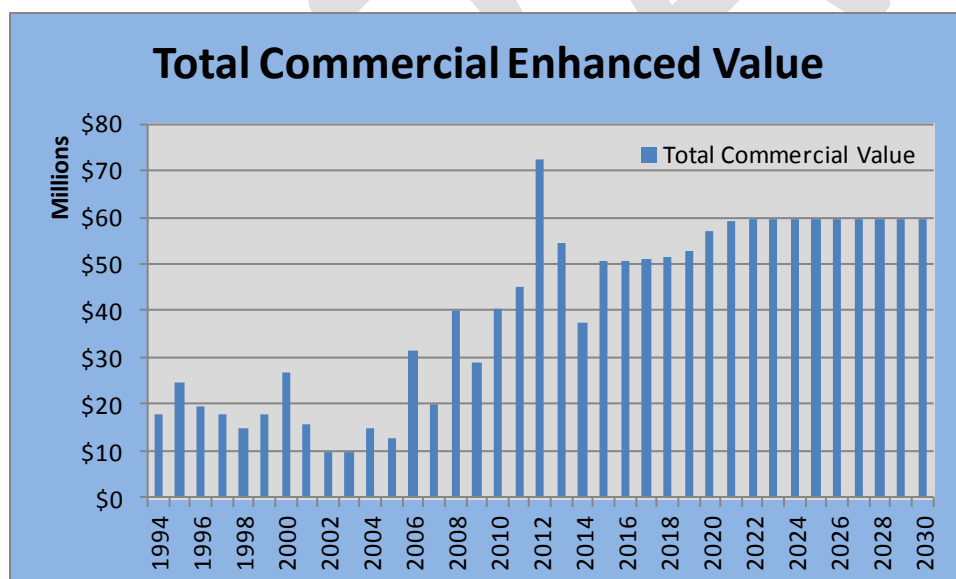
Table and Graph xxx. Three new chum projects – Crawfish Inlet, Southeast Cove, and Port Lucy (AKI) have been permitted and are at various stages of development. The first 3 year olds return to SE Cove in 2015. Value to trollers is based on a fifty percent exploitation rate; full value expected beginning in 2021.

The best case scenario is the troller fleet will increase their gross revenue and attain their allocation range; worst case scenario trollers will increase their gross revenue but not attain their allocation. Both scenarios increase the size of the pie significantly to float all boats higher.

## Enhanced Allocation Tables and Graph Projections for 2020 & 2025



Graph xxx. Troll, gillnet, and seine allocation percentages, actual for 1994 – 2013 and predicted for 2014 – 2030 based on new chum production at Crawfish Inlet, SE Cove, and Port Lucy. Predicted values use the recent five year averages and assume status quo for all other programs and harvest. Trollers are predicted to be in their allocation range beginning in 2021.



Graph xxx. Total commercial value of southeast Alaska enhanced salmon 1994 – 2013 actual and 2014 – 2030 predicted with the additional production of new projects Crawfish Inlet, Southeast Cove, and Port Lucy. Value is expected to average close to \$60 million annually beginning in 2021.

## Wild Coho Allocation Accounting and Discounting

*Table showing Board of Fish designated allocation percentages of coho among gear groups and actual results in percent and catch averages. Note the past ten year average shows trollers 7% above their prescribed allocation.*

|            | Seine   | Gill net | Set net | Troll     | Total     |
|------------|---------|----------|---------|-----------|-----------|
| Allocation | 19%     | 13%      | 7%      | 61%       | 100%      |
| 1962-2013  | 333,425 | 262,305  | 141,388 | 1,238,144 | 1,975,262 |
| 2004-2013  | 294,993 | 312,316  | 127,399 | 1,581,723 | 2,316,431 |
| 1962-2013  | 17%     | 13%      | 7%      | 63%       | 100%      |
| 2004-2013  | 13%     | 13%      | 5%      | 68%       | 100%      |

The last ten year cumulative overage of wild coho allocation is 1.62 million fish or 11.3 million pounds for a value imbalance of \$19.9 million using a seven pound average and \$1.75/lb.

## Alternative Models for Allocation (THIS SECTION TO BE UPDATED THROUGH 2016)

### A Rising Tide Perspective

The Allocation Plan is based solely on the value of enhanced salmon, while salmon fisheries of southeast Alaska operate in a more encompassing context. Overall, enhancement represents 25% of the total salmon value in commercial fisheries, wild capture fisheries the other 75%. These proportions do not represent the magnitude of importance for individual gear types. The troll fleet gets 84% of its harvest value from wild salmon whereas the gillnet fleet derives only 55% of their value from wild harvest. The seine fleet derives 77% of their value from wild stock fisheries and 23% from enhanced salmon, close to the overall value that enhanced salmon represents when all salmon and fisheries are combined – 75% wild and 25% enhanced.

The gillnet fleet is more dependent on the enhancement program for its livelihood than either the seine or troll fleets. An alternative method for viewing allocation is combining wild and enhanced salmon in its entirety. As noted enhanced salmon represents 25% of the overall value but is distributed among the three groups disproportionately. When viewed this way, coincidentally perhaps, the percentages come close to falling within the Allocation Plan ranges, gillnet 18% (range 24-29%), seine 53% (44-49%), and troll 29% (27-32%). The following graphic illustration provides a look at the value numbers for wild and enhanced in southeast Alaska.

## SE Alaska Salmon Value



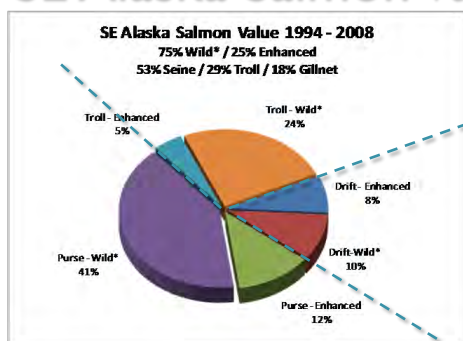
Enhanced Value has  
accounted for about  
25% of the total Value  
from 1994-2008  
(perceived allocation  
plan in effect)

| Gear / Fish Source | Value                   | Percent of Total | Subtotals      | Percent Wild* / Enhanced | Percent of Subtotal |
|--------------------|-------------------------|------------------|----------------|--------------------------|---------------------|
| Troll - Enhanced   | \$ 55,263,417           | 5%               |                |                          | 19%                 |
| Purse - Enhanced   | \$ 142,483,767          | 12%              |                |                          | 49%                 |
| Drift - Enhanced   | \$ 91,761,657           | 8%               | \$ 289,508,841 | 25%                      | 32%                 |
| Troll - Wild*      | \$ 288,958,101          | 25%              |                |                          | 33%                 |
| Purse - Wild*      | \$ 479,694,590          | 41%              |                |                          | 54%                 |
| Drift-Wild*        | \$ 113,782,361          | 10%              | \$ 882,435,052 | 75%                      | 13%                 |
| <b>Total</b>       | <b>\$ 1,171,943,893</b> | <b>100%</b>      |                |                          |                     |

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Fig. 1 Enhanced salmon represents about 25% of the total commercial salmon catch which has been documented in this report. However, the wild component of the harvest is distributed differently than the enhanced portion. The gillnet fleet gets a small sliver of their value from wild fish (13% of total wild), whereas the troll fleet gets 33% of wild salmon pie; seine 54%. The seine fleet harvests a similar proportion of wild and enhanced.

## SE Alaska Salmon Value



Percent of Total Value:

|       |     |
|-------|-----|
| Drift | 18% |
| Purse | 53% |
| Troll | 29% |

| Gear / Fish Source | Value                   | Percent     | Gear  | Subtotals      | Percent |
|--------------------|-------------------------|-------------|-------|----------------|---------|
| Drift - Enhanced   | \$ 91,761,657           | 8%          |       |                |         |
| Drift-Wild*        | \$ 113,782,361          | 10%         | Drift | \$ 205,544,018 | 18%     |
| Purse - Enhanced   | \$ 142,483,767          | 12%         |       |                |         |
| Purse - Wild*      | \$ 479,694,590          | 41%         | Purse | \$ 622,178,357 | 53%     |
| Troll - Enhanced   | \$ 55,263,417           | 5%          |       |                |         |
| Troll - Wild*      | \$ 288,958,101          | 25%         | Troll | \$ 344,221,518 | 29%     |
| <b>Total</b>       | <b>\$ 1,171,943,893</b> | <b>100%</b> |       |                |         |

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Figure 2. Perhaps coincidentally, the distribution of enhanced plus wild catch falls close to the enhanced allocation percentages for the three gear groups.



## Proportions of Salmon Value

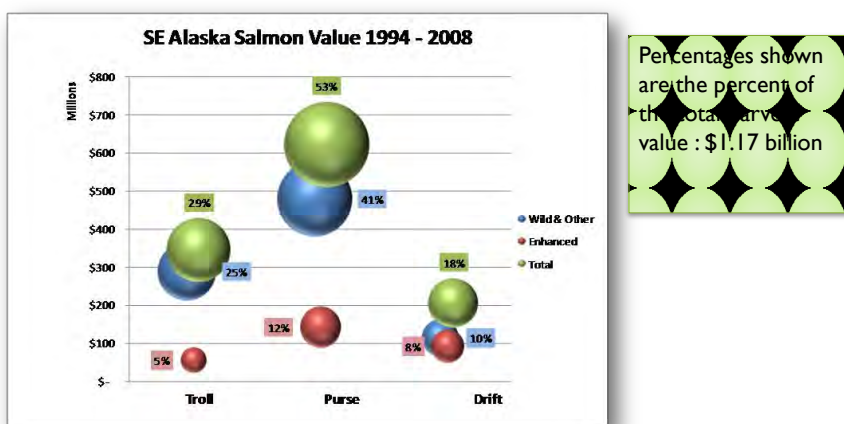


Figure 3. It is evident that enhanced salmon is most critical to the gillnet fleet in the sense that it makes up nearly half of their total value. Conversely, seine total value is less sensitive to enhanced salmon, primarily due to importance of wild pink salmon to their gross revenue.

Using the SATF allocation ranges and combining enhanced and wild value the graphic results follow.

## Total Value (BIT) - 5yr Rolling

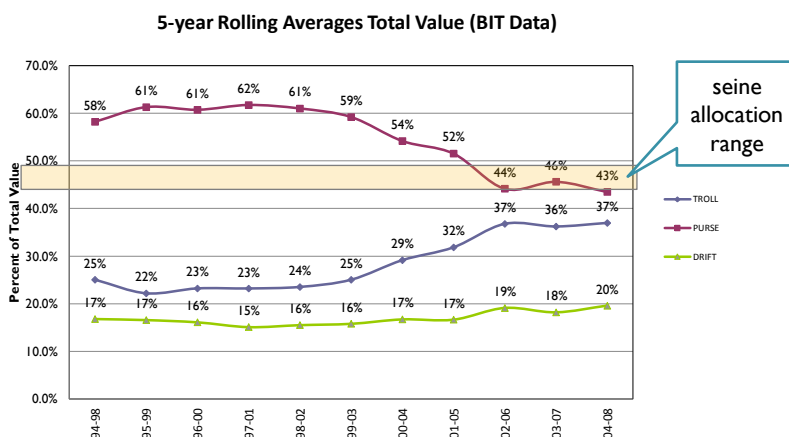
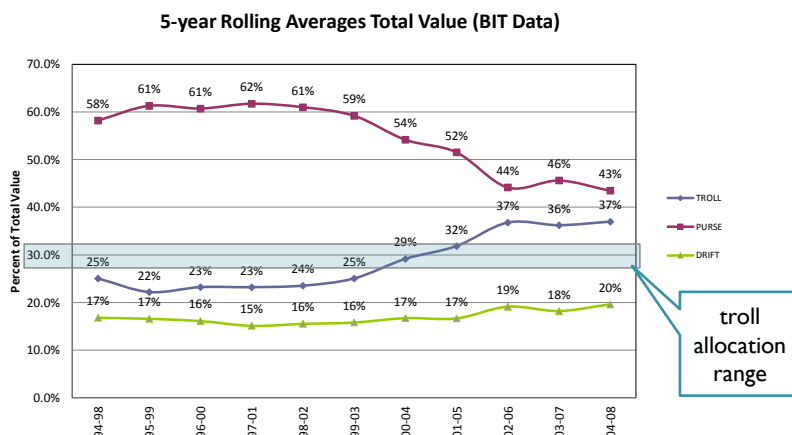


Figure 4. Total seine value puts the seiners in the lower range of their allocation for the 2003 to 2009 five year rolling average periods.

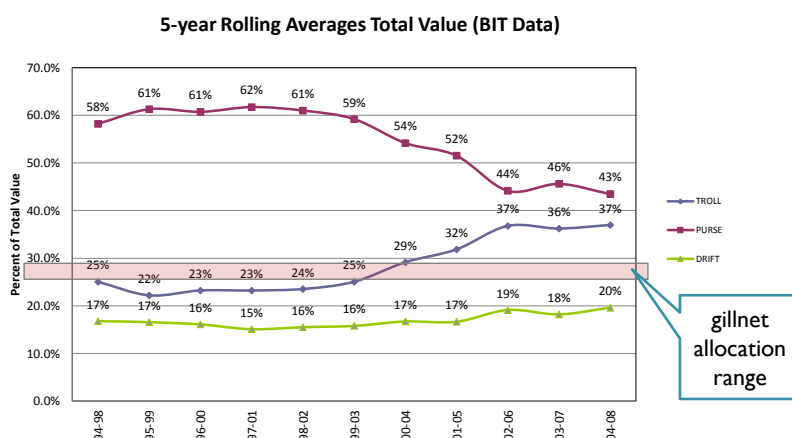
## Total Value (BIT) - 5yr Rolling



22

Figure 5. Total troll values show the trollers above their range for the 2002 to 2009 period; the rolling average is 36% to 37%. The increasing trend from 1994 is being driven by lower chum survivals at Hidden Falls and Deep Inlet but also by high troll prices for coho and Chinook in recent years.

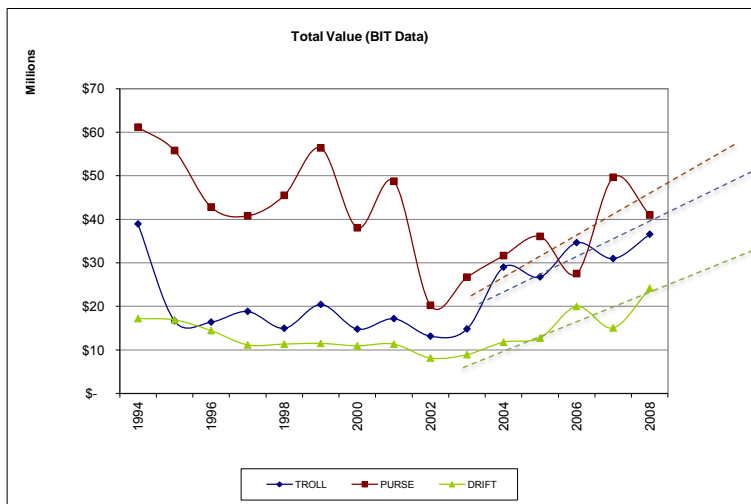
## Total Value (BIT) - 5yr Rolling



21

Figure 6. Total gillnet value by percentage creates a contrary allocation reality for the gillnet fleet. They show a relatively low proportion of value and which is well below the enhanced allocation range. The period from 2002 to 2009 shows the rolling average is 18% to 20%.

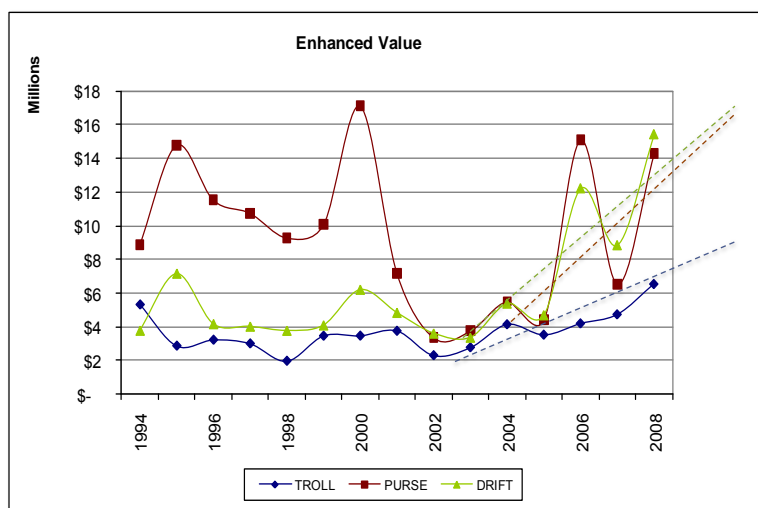
## Total Value during Allocation Plan Period Annual Value



24

Figure 7. Total salmon value has trended up for all three gear groups since the low period of 2001 and 2002.

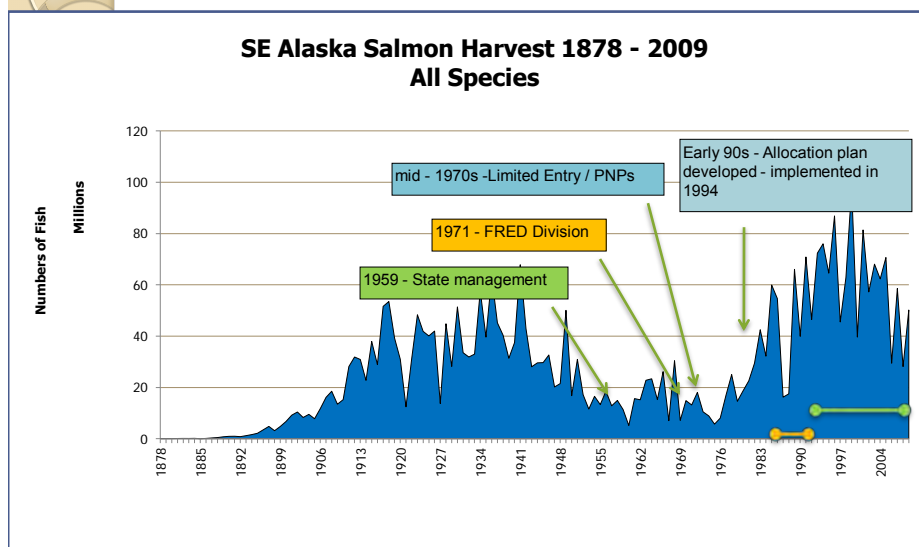
## Enhanced Value during Allocation Plan Period – Annual Value



25

Figure 8. Enhanced value has demonstrated an even steeper increase in value than total wild and enhanced value. Filtering just for the net groups the increase in enhanced value shows a dramatic increase driven by the success of DIPAC's chum program.

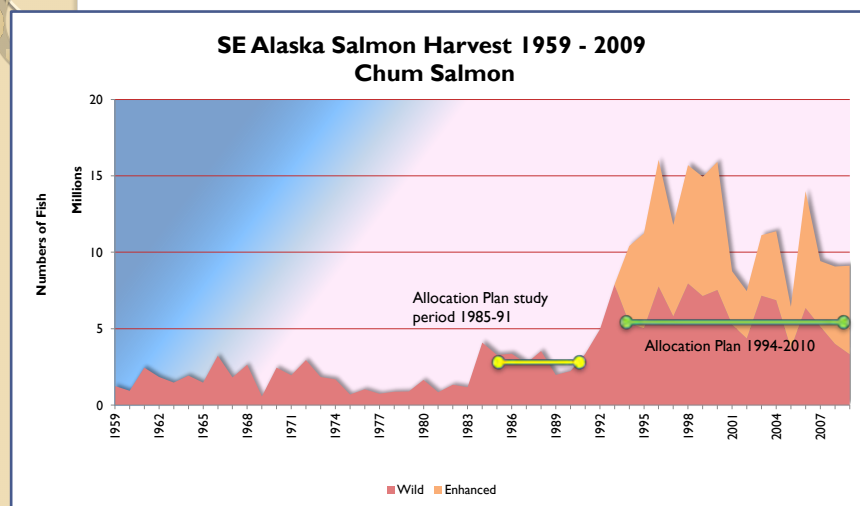
## SE Alaska Salmon Harvest



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Figure 9. The historical harvest of salmon in Alaska has several important milestones including statehood in 1959, ADF&G FRED division, limited entry, and private non-profit aquaculture production.

## SE Alaska Chum Salmon Harvest



28

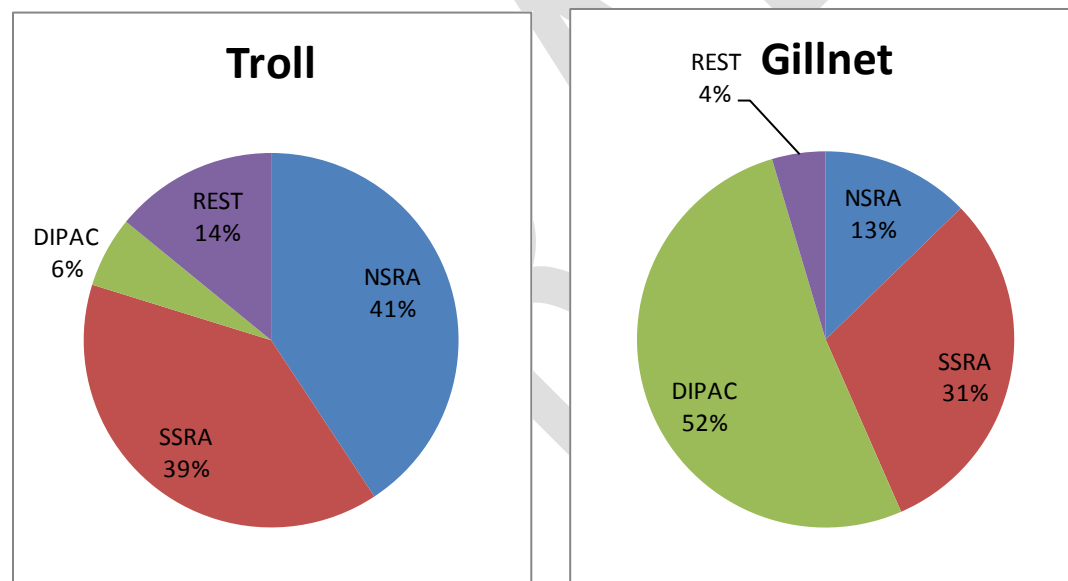
Figure 10. The allocation plan was adopted in 1994 and based on enhanced salmon catches from the 1985 to 1991 period, a seven year block of time when very little enhanced chum salmon was produced. The twenty year period 1994 – 2015 was defined by significant chum salmon harvest numbers and value, representing some 80% of all enhanced salmon.

### Exclusion of Non-Regionals from Allocation Plan Perspective

There has been discussion and proposals at the board of fish to remove non-regionals from the Allocation Plan or remove just DIPAC. If the allocation ranges are not changed there are many ways producers can be included/excluded from the Allocation Plan but agreement to remove or slice and dice hatchery operators will always result in winners and losers. In order to visualize the results of removing DIPAC, for example, the past twenty years of production value has been calculated for each organization and then summarized by gear, averaged, and presented in tables and graphs.

| ALL Years 1994-2013* |               |                |                |                |
|----------------------|---------------|----------------|----------------|----------------|
|                      | troll         | gillnet        | seine          | Grand Total    |
| NSRA                 | \$ 39,611,496 | \$ 24,005,116  | \$ 137,976,704 | \$ 201,593,316 |
| SSRA                 | \$ 38,014,623 | \$ 57,963,518  | \$ 76,278,563  | \$ 172,256,703 |
| DIPAC                | \$ 5,948,904  | \$ 98,062,716  | \$ 13,038,313  | \$ 117,049,933 |
| REST                 | \$ 13,711,132 | \$ 8,664,156   | \$ 21,861,920  | \$ 44,237,208  |
|                      | \$ 97,286,155 | \$ 188,695,506 | \$ 249,155,500 | \$ 535,137,160 |

Table 1. DIPAC contributes most significantly to the gillnet fleet. Of the \$117 million value in the past twenty years nearly \$100 million is to the gillnet fleet.



Graph 1. From 1994 to 2013, the last year of official value data, DIPAC contributed 52% of the gillnet value for all of southeast Alaska. The troll fleet received its greatest value from NSRAA (41%) and SSRAA (39%), or 80% from the regional's. The troll fleet receives significant benefits from Klowack and Port Armstrong coho programs.

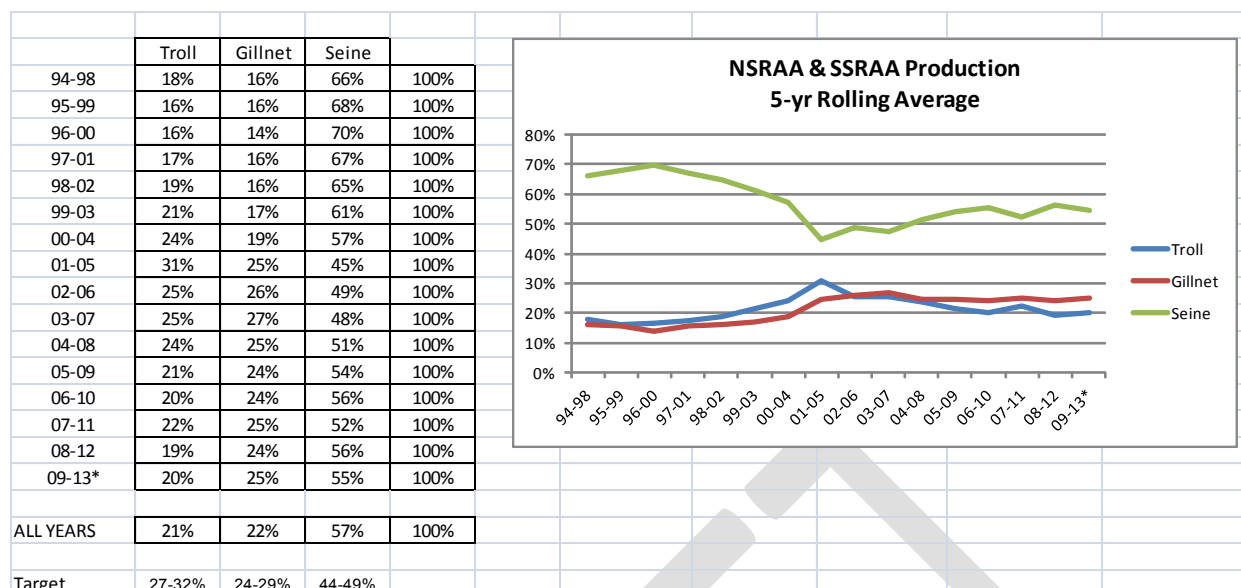
There is little surprise that with DIPAC out of the Allocation Plan that the gillnet proportion will plummet precipitously. Table 3 shows the five year rolling average and results. The proportion for troll comes up primarily because the pie is \$117 million smaller, \$98 million of that from the gillnet column. The allocation pie slices are closer to the consensus ranges.





| NSRAA & SSRAA ONLY |                 |                |                |                |
|--------------------|-----------------|----------------|----------------|----------------|
| Group              | (All)           |                |                |                |
| Sale Type          | (All)           |                |                |                |
| Area (N-S)         | (All)           |                |                |                |
| Project            | (All)           |                |                |                |
| Agency             | (Multiple Ites) |                |                |                |
| Species            | (All)           |                |                |                |
| Sum of Value       | Gear            |                |                |                |
| Year               | troll           | gillnet        | seine          | Grand Total    |
| 1994               | \$ 4,214,924    | \$ 2,273,963   | \$ 7,455,209   | \$ 13,944,096  |
| 1995               | \$ 2,455,982    | \$ 3,439,660   | \$ 13,360,623  | \$ 19,256,265  |
| 1996               | \$ 2,737,604    | \$ 1,468,159   | \$ 9,678,070   | \$ 13,883,833  |
| 1997               | \$ 2,354,905    | \$ 2,343,057   | \$ 10,217,260  | \$ 14,915,222  |
| 1998               | \$ 1,698,679    | \$ 2,388,167   | \$ 8,727,320   | \$ 12,814,167  |
| 1999               | \$ 2,985,497    | \$ 2,134,440   | \$ 8,857,012   | \$ 13,976,949  |
| 2000               | \$ 2,916,946    | \$ 2,577,953   | \$ 16,370,518  | \$ 21,865,417  |
| 2001               | \$ 3,162,960    | \$ 2,395,153   | \$ 6,372,574   | \$ 11,930,687  |
| 2002               | \$ 1,866,676    | \$ 1,435,891   | \$ 3,187,451   | \$ 6,490,018   |
| 2003               | \$ 2,348,288    | \$ 2,078,916   | \$ 3,175,983   | \$ 7,603,187   |
| 2004               | \$ 3,675,370    | \$ 2,320,403   | \$ 4,069,303   | \$ 10,065,076  |
| 2005               | \$ 2,988,186    | \$ 3,127,354   | \$ 3,612,226   | \$ 9,727,766   |
| 2006               | \$ 3,628,856    | \$ 5,863,507   | \$ 13,891,791  | \$ 23,384,154  |
| 2007               | \$ 3,533,327    | \$ 3,863,965   | \$ 5,605,401   | \$ 13,002,693  |
| 2008               | \$ 6,135,756    | \$ 5,494,954   | \$ 15,677,252  | \$ 27,307,962  |
| 2009               | \$ 3,501,470    | \$ 4,336,893   | \$ 11,624,976  | \$ 19,463,339  |
| 2010               | \$ 5,945,269    | \$ 7,429,768   | \$ 15,532,603  | \$ 28,907,641  |
| 2011               | \$ 6,529,276    | \$ 7,627,044   | \$ 11,569,800  | \$ 25,726,120  |
| 2012               | \$ 6,964,819    | \$ 11,880,235  | \$ 30,894,596  | \$ 49,739,650  |
| 2013               | \$ 7,981,329    | \$ 7,489,152   | \$ 14,375,297  | \$ 29,845,778  |
| Grand Total        | \$ 77,626,119   | \$ 81,968,634  | \$ 214,255,267 | \$ 373,850,020 |
| Total Enhanced     | \$ 97,286,155   | \$ 188,695,506 | \$ 249,155,500 | \$ 535,137,160 |
| Percent            | 80%             | 43%            | 86%            | 70%            |

Table 2. NSRAA and SSRAA only with DIPAC and other producers out of the allocation for years 1994 to 2013. The percentages represent NSRAA and SSRAA portion of total value by gear. NSRAA and SSRAA programs provide only 43% of the gillnet value, but 80% of the troll value.



*Table 3. SSRAA and NSRAA production only with all other producers removed for years 1994 – 2013. The greatest effect aside from shrinking the pie is to lower the gillnet proportion from 35% with all producer value to 22% for NSRAA and SSRAA only. The seine fleet shows a larger piece of the pie in this scenario with 57%.*

There are a variety of permutations that could be considered to evaluate which combination of producers delivers the appropriate gear percentages vis-à-vis the allocation ranges. There does not seem to be merit in this exercise given that the regulations for allocation include all producers in southeast Alaska except Metlakatla's Tamgass Hatchery. The solution based on current regulation **5AAC 33.364** will need to be found by increasing production and getting that production into the holds of the troll fleet. (See section on Future Production pg. 28)

## Discussion

Allocation has been a vexing issue since the inception of salmon enhancement program. The initial concept of a northern southeast association in the mid 1970s was limited to Baranof-Chichagof Islands while simultaneously Juneau gillnetters were considering only the Juneau area. Nevertheless, when incorporation became official, gillnet, troll, and seine had equal representation in NSRAA. The conceptual plan in 1979 was to develop Coho Lake stocking on Baranof, Chichagof, and Admiralty Islands using local broodstocks and as many as fifty lakes. A program to benefit the troll fleet was at the core of NSRAA origins.

Simultaneously Medvejie and Salmon Lake (Juneau) hatcheries were being designed and developed for central incubation facilities for coho and chum salmon. In these early years there were few fish to divvy up, the struggle was funding, establishing a legal enhancement tax, site selection, brood sources, and cash flow. The 1980s were a development decade and learning period. By the end of the 1980s Coho

and chum demonstrated that production was possible and return on investment could be favorable. Chinook and sockeye were thought to have great promise during this decade although there was much to be worked out with regard to standard operating procedures for egg takes, disease management, rearing strategies, and costs. The Allocation Plan participants (1991 – 1994) believed that 100,000 adult chinook and a million adult sockeye could be produced and caught in commercial troll and gillnet fisheries, respectively.

What we now know is that adult sockeye production is elusive. Chilkat Lake, Redoubt, Beaver Lake and other programs all failed to measure up to expectations and were shut down. Only Snettisham Hatchery has been successful, although moderately so. If it were not for Snettisham's political and financial connection to the PST's Transboundary River programs on the Taku and Tatsamení Rivers the domestic sockeye program might not have the requisite benefit to continue operation. The SATF predicted that these sockeye programs were to benefit the net groups. In some ways this left a huge gap in expected value.

Chinook smolt production on the other hand was more much successful with large programs at Macaulay, Medvejie, Hidden Falls, Port Armstrong, Crystal Lake, Whitman Lake, and Metlakatla. Some seven million Chinook smolt are released each year from these facilities. A marine survival of 2% would produce 140,000 adults. The last ten year average harvest is 53,000 adults Chinook (cost recovery harvest not included) with the ten year average troll harvest of 22,700 adults with an average value of just under a million dollars. A troll caught Chinook is much more valuable than a net caught king. Even though the 22,700 troll caught chinook represent 42.8% of the number of fish, it represents 68% of the value. This demonstrates how important and consequential a higher harvest rate would be to the allocation balance.

The Chinook smolt production numbers surpass the two decade old goals but the harvest is far below the 100,000 chinook in the fish holds of trollers envisioned in 1994. The cost of this production is significant compared to the other salmon species; the cost to benefit is close to 1:1 when considering only commercial benefit but near 2:1 when cost recovery value is included.

Chinook programs may be underperforming to the original expectations but continue to have enthusiastic support from fishermen. Producers continue to experiment with a variety of rearing strategies and Chinook stocks (Andrews, Chickamin, Unuk, and Blossom) to increase survival and troll exploitation. There is great frustration that the traditionally most important and valuable species thwarts producers and trollers alike. Hatchery raised Chinook is the only species that underperforms their wild cohort. Wild Chinook smolt on the Taku and Stikine Rivers are considerably smaller (4 – 6 grams) than hatchery smolt (20 – 70 grams) yet the wild fish have a higher marine survival rate. Work continues in hopes of a breakthrough.



As the Alaska Chinook program developed, 'experimental' and 'spring access' Chinook fisheries were implemented to provide additional troll opportunity and harvest in major corridors leading up to the Chinook facilities. These spring fisheries in May and June have successfully increased Alaska Chinook contributions that otherwise would not occur. By the late 2000s, the spring Chinook fisheries evolved to a standard operating procedure, although it took much work on the part of the Chinook producers, fishermen, and ADF&G to get to this point.

Coho salmon have provided the greatest benefit to the troll fleet in terms of value, \$2.4 million average from 1994 – 2014; the record year in 2013 was \$6.5 million in value. On average trollers capture 69% of the commercially caught enhanced coho. Coho is one species that could be developed further; although ADF&G has concerns about the already large percentage of hatchery coho in the troll catch (~25%).

Chum salmon is confounding as a problem solver for the allocation of enhanced salmon. Chum value is second to coho in value to the troll fleet. The past twenty year average commercial chum value is \$15.9 million with 6% of that going to the troll fleet, or just under a million dollars. The biggest year for chum troll value was \$4.9 million in 2013, but still just 11.6% of all gear chum value. So the chum conundrum is that when chum are schooling properly the troll fleet can have a good catch rate but the net groups due to efficiencies of scale do proportionately better. There is a larger pie but little or no incremental change in proportions.

Troll chum catch rates and efficiency are part of the puzzle when attempting to solve the allocation imbalance. Currently there are three primary chum troll areas – Homeshore, Eastern Channel, and Neets Bay. Analysis of these three troll fisheries during the peak weeks show a daily catch/boat of 140-150 chum (data in file: ALLOC NSRAA proforma 4.30.14 (2).xlsx). There are anecdotal reports of 1,000 fish per day but the average based on actual catch data is much lower. Large cumulative catches do occur when there are 250 boats fishing which has resulted in 35,000 fish in a single day and 400,000 or even 500,000 chum in a season. To solve the allocation with chum salmon the catch rate would need to move to 280/day/boat or there would need to be twice as many boats fishing. Active power troll permits in all of Southeast for the recent ten year average is 741. Using the 140/chum/boat average, 741 boats could theoretically harvest 104,000 fish per day. Hand troll permits make up another 300 harvesters each year although their effort and catch rate is comparatively small.

As the new chum programs at Crawfish Inlet, Southeast Cove, and Port Lucy come on line the troll fleet will have more options and be able to spread out geographically. This may help increase catch per unit effort and overall harvest proportion. These projects are partitioned geographically but also temporally. Crawfish and Eastern Channel are Medvejie stock fish with return timing in August. Neets Bay, Port Lucy, Southeast Cove, and Homeshore use summer run chum stocks with similar run timing.



One of the challenges for the troll fleet at Eastern Channel, Homeshore, and to a lesser degree Neets Bay is variability of catch from year to year. Chum salmon migratory behavior is strongly influenced by numerous factors, including water temperature, wind, and barometric pressure. The catch at Homeshore was promising in 2011 with 137,000 chum harvested but fell flat the next year although the DIPAC run was quite large both years. In 2013, the highest harvest recorded for Homeshore was 311,000 chum. The fish traveled in large schools and milled in the Homeshore area for several weeks, two weeks which had a maximum catch rate of 131 chum/permit/day. The following year an equally large DIPAC return swam deep and the troll fleet caught very few fish, in fact the worst catch in the five year history of the Homeshore fishery.

Eastern Channel near Sitka has the longest chum troll history dating to 1988 when 1,000 fish were harvested. Since 1994, total returns have ranged from 370,000 to 3.6 million; the average close to two million. Troll harvest during this period has ranged from 24,000 in 2012 to 455,000 in 2013, the same year the troll fleet caught nearly a million chum region-wide. Given the long history in Eastern Channel it is evident that high troll catches are strongly related to run strength, high barometric pressure, absence of cost recovery harvest, and price. The strongest influence is weather. During the peak of the return in mid August if the barometric pressure is low bringing wind and rain, the chum move straight through Eastern Channel to Deep Inlet. The result is poor troll exploitation. In 1999, the largest chum return on record, 3.6 million fish, and the troll fleet harvested only 67,000. The following year in 2000 an equally large return with a more favorable weather pattern delivered 450,000 chum to trollers.

Price is always a factor for the troll fleet as it is with any salmon permit holder. Maximizing daily or weekly revenues is based on price/pound times biomass harvested. A thousand pounds of chum at sixty cents/pound is more lucrative than 200 pounds of coho at \$1.75. This is simplistic as there are many other factors fishermen consider, for example tradition and herd mentality or alternatively loner mentality.

Hatchery operators and more particularly the fishermen boards have a long track record of expanding Chinook and coho programs designed to increase troll harvest and value. Many millions of dollars from three percent revenues, cost recovery, State of Alaska, and Pacific Salmon Treaty mitigation monies have been spent on infrastructure to maximize smolt production. In 2014, 23 million coho smolt and 7 million Chinook smolt were released to the ocean; these programs were developed over the past twenty years for the benefit of the troll fleet. In 1994, coho and Chinook smolt production was 13 million and 7 million, respectively; coho is nearly double that today. The fact that Chinook has not increased during the period speaks to the relatively low performance and high costs of raising Chinook.

Chum production also increased significantly over these same years, with the intent to target the net fisheries. All chum salmon program development was expected to benefit the troll fleet at least





marginally since State of Alaska waters are open to trolling most of the year. The Homeshore troll fishery is an example of serendipity. Considering that the DIPAC program had been in operation since the late 1980s, it wasn't until 2010 that large numbers of DIPAC chum were taken in the Homeshore area. Chum trolling in nearby Icy Strait and Cross Sound in June has a much longer history, although the magnitude of the catch was never as large as at Homeshore.

Chinook and coho have a high demand for space, water, and dollars which can and has posed limits on chum salmon production. Leaving aside the issue of permitting, associations and hatchery producers allocate resources with reference to allocation and cost effectiveness. All hatcheries have limited space and water, so production of smolt species can preclude additional chum production. Chum require relatively little freshwater but if water is finite, new production requires lower one species to increase another. Approximately 20 million chum fry can be incubated and hatched on one cubic foot of water whereas this same amount of water could raise about 200,000 coho or Chinook. These water, space, and financial demands limit smolt production at most facilities today.

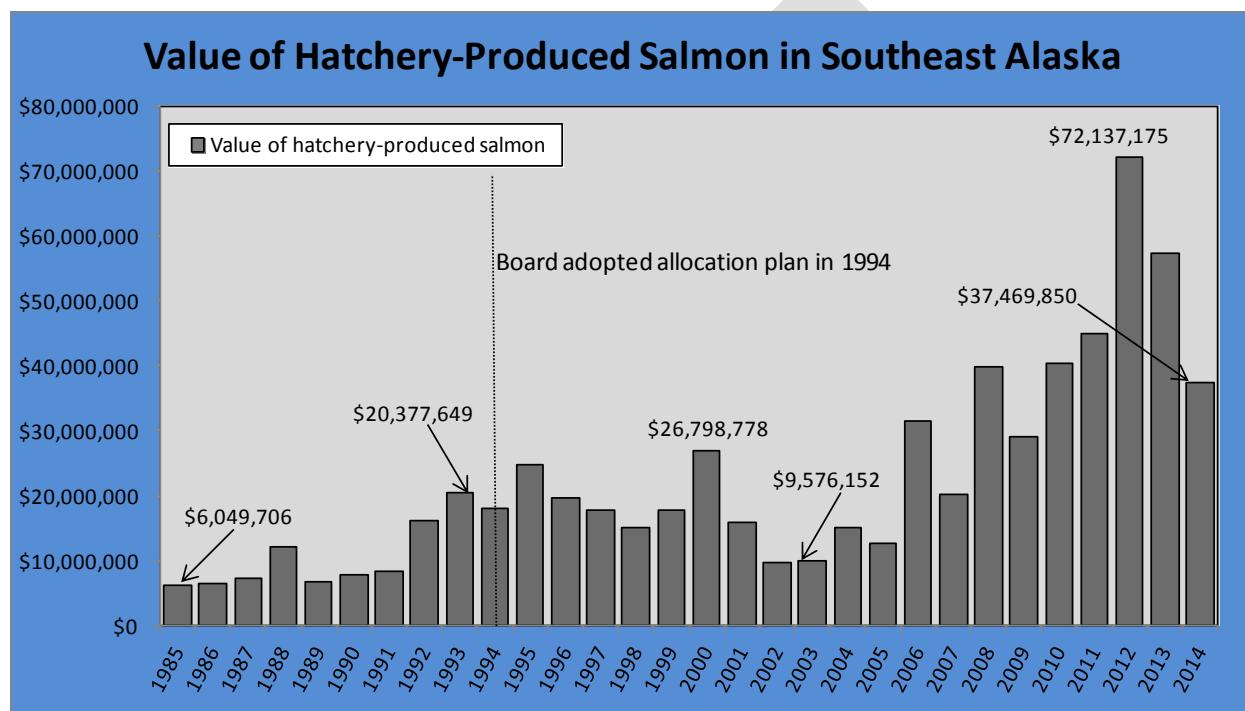
At times the allocation imbalance limits new program options especially if it includes chum production in traditional seine or gillnet areas with a known interception fishery leading up to the terminal area. This type of program would likely worsen the allocation imbalance and therefore doesn't even make it to the permitting stage.

The troll allocation percentage is 18% for the past five year average, 2010-2014 or 9% below their lower range of 27%. The five year rolling average has ranged from 15% to 26% for the past twenty years. Significant money has been expended over the past two decades to move the troll percentage into their range without success. Efforts to increase the overall enhanced troll value has been successful to a large degree but seine and gillnet harvest shares have increased to a greater degree. The seine fleet is also out of its expected range but to a much smaller degree than the trollers. Projects that benefit trollers and only trollers are difficult to construct, especially in inside fisheries and programs such as DIPAC, SSRAA, and NSRAA typically conduct. Factors contributing to this outcome include gear efficiency, low exploitation rates, catch per unit effort, mixed stock net fishery interception of enhanced stocks, and terminal net fisheries.

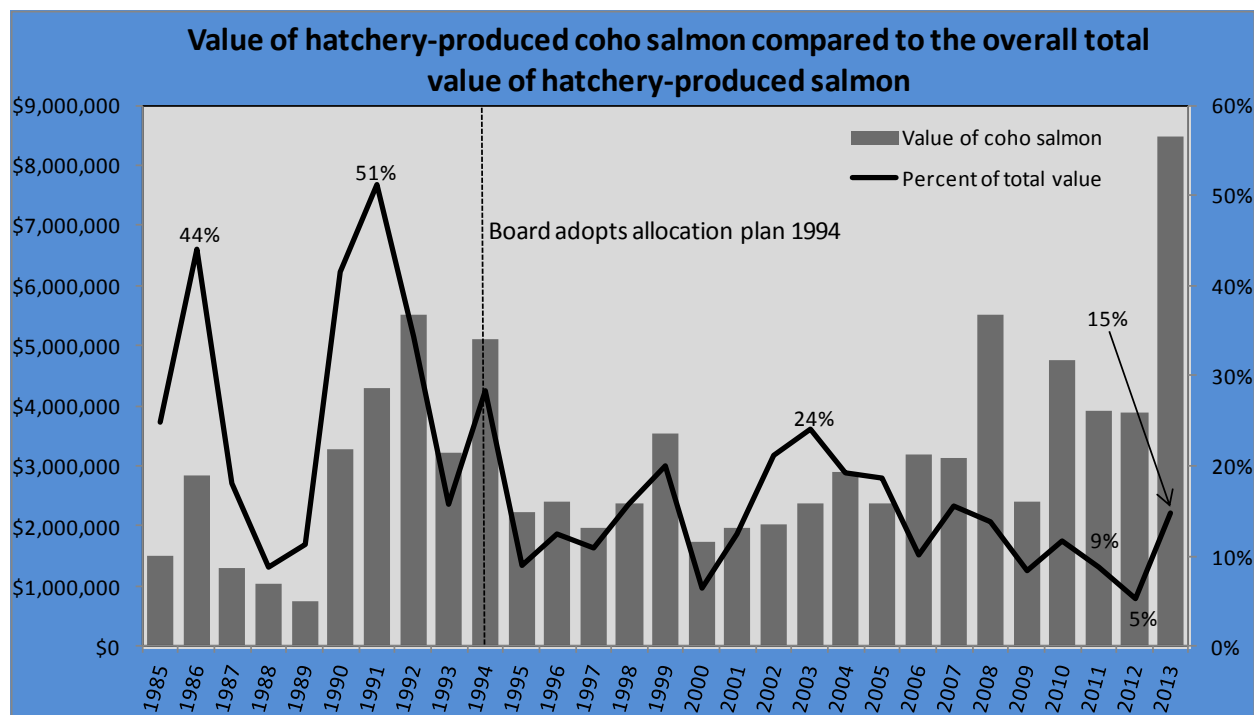
New chum programs at Port Lucy and Crawfish Inlet are located in outside areas and have the potential to change the above circumstances to some extent, particularly because there are few or no net fisheries in the migratory path as the chum return to their natal release sites. Southeast Cove, Kuiu Island is similarly situated except it potentially will have some seine interception during Chatham Strait pink salmon directed fisheries in late July. Nevertheless, the run timing for Southeast Cove chum will favor troll interception from Port Malmesbury to Keku Strait rather than the seine fleet. Southeast Cove terminal harvest area is small, rocky, and poorly suited for troll drags.

SSRAA has a permit to produce chum salmon at Port Assumption near Craig, Alaska. If this program goes forward it could also benefit the troll fleet as it is located on the outside waters where fish will migrate via traditional troll fisheries. Summer chum run timing should segregate these fish from net fisheries for the most part, but early Noyes Island seine openings may intercept some of the returning chum.

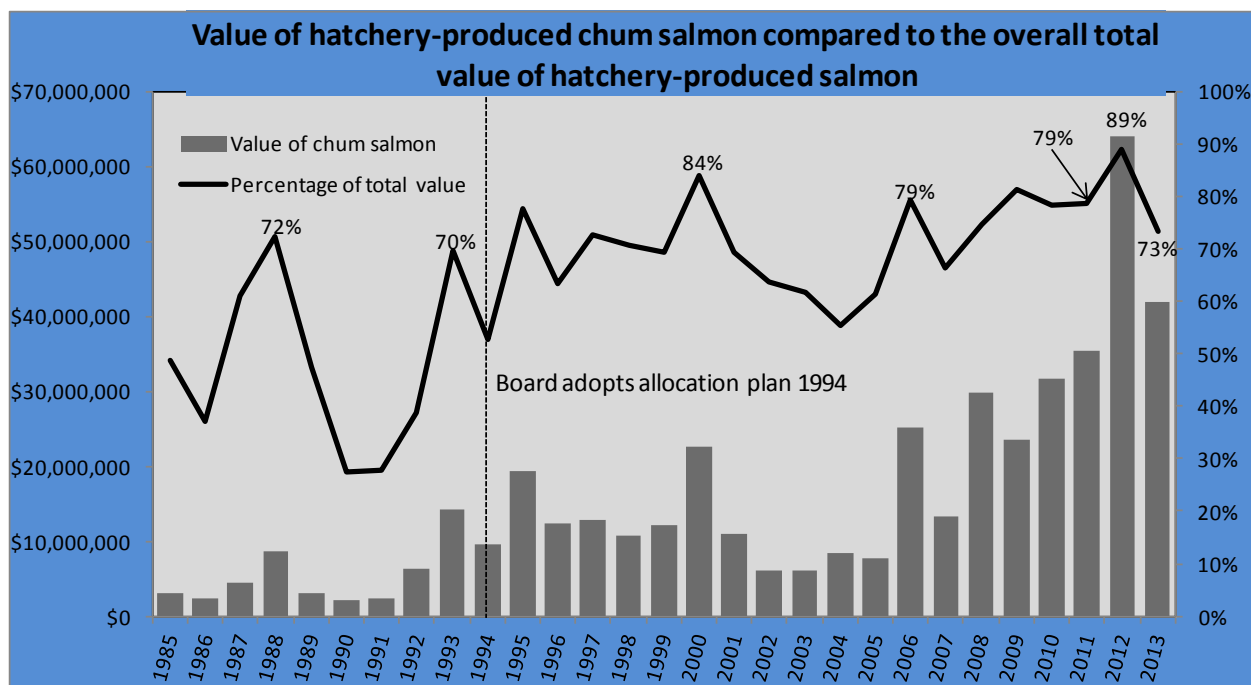
The new chum production, Crawfish, Port Lucy, and SE Cove, has the potential to move the trollers into their allocation range assuming the trollers maintain current exploitation rates on Chinook, coho, and chum salmon production. Certainly troll values will increase; it is the proportions that are unknown.



Graph x. Value of enhanced salmon in southeast Alaska from 1985 to 2014, a thirty year period. In the first decade average value was less than \$10 million, the next decade averaged close to \$20 million in value, while the past decade took a considerable jump in value to \$40 million or more.



Graph xx. Coho salmon has been the second most valuable species second to chum salmon in total value. Coho are relatively easy to produce in a hatchery and lake environment. Marine survival of hatchery reared coho normally range from range from 6% to 10% and have relatively high exploitation rates by the troll fleet. Production has increased since the inception of the allocation plan but the overall value has moved up only slightly. As a proportion of the total value of enhanced fish, coho has declined from around 20% of the total value to 10% or less. This is driven more by the tremendous increase in chum value than any other factor. See Graph xxx.



Graph xxx. Chum salmon value has increased since 1994 to a greater extent than other salmon species. In the 1980s chum value was in the \$5 million range while the past ten year average is \$29.8 million for all gear combined. As a proportion of total value, chum has also increased. In the pre-allocation years the proportion was about 50% while the past ten year average is about 75%.

## Conclusions

<Conclusions section will not be developed until gear group consensus. This seems unlikely to occur before the December 2015 JRPT meeting. However, after review of the document if there seems to be consensus on certain points, they could be added to conclusion section as draft or interim>



## References

Amend, Don 1993, Allocation of Enhanced Salmon, Southeast Allocation Task Force. Ketchikan, AK

Comprehensive Salmon Enhancement Plan: Phase II 1994 Update and Action Plan <http://www.sf.adfg.state.ak.us/FedAidPDFs/CFSP.28.pdf>

Comprehensive Salmon Enhancement Plan: Phase III, 2004  
[http://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/plans/se\\_comprehensivesalmonplan\\_p3.pdf](http://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/plans/se_comprehensivesalmonplan_p3.pdf)

Elias, Tom 1994 Finding of the Alaska Board of Fisheries, #94-148-FB Southeast Alaska Area Enhanced Salmon Allocation Management Plan 5 AAC 33.364. Ketchikan, AK

Pacific Coastal Salmon Recovery Fund, 2002  
[http://www.westcoast.fisheries.noaa.gov/publications/recovery\\_planning/salmon\\_steelhead/pcsrp/pcsrp-rpt-2002.pdf](http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/pcsrp/pcsrp-rpt-2002.pdf)

Reifenstuhl, S., et.al., 1999 Pacific Coastal Salmon Recovery Initiative. Sitka, AK





## Appendices

Joint RPT Minutes

Findings of the Alaska Board of Fisheries 94-148-FB

Allocation percentage history

Allocation of Enhanced Salmon by Dr. Don Amend

Benefit Cost Analysis

DRAFT



Combined Years Values 1985 – 1991 from Board of Fish #94-148-FB finding, including original notes

| Southeast Allocation Base Period 1985 - 1991 (#94-148-FB)                                                                                      |         |               |           |               |              |               |                 |               |       |                              |                                |       |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|-----------|---------------|--------------|---------------|-----------------|---------------|-------|------------------------------|--------------------------------|-------|
| Species                                                                                                                                        | Gear    | Value         | 1985-1991 |               | Total        | Annual        |                 | 1985-1991     |       | Annual Full Production Value | Annual Full Production Percent | Total |
|                                                                                                                                                |         |               | Percent   | Total         |              | Average Value | Percent Value   | Total         |       |                              |                                |       |
| Coho                                                                                                                                           | Troll   | \$ 10,775,635 | 71.7%     | \$ 15,018,474 | \$ 1,539,376 | 71.7%         | \$ 2,145,496.29 | \$ 3,021,781  | 71.9% | \$ 4,201,270                 |                                |       |
|                                                                                                                                                | Seine   | \$ 1,626,678  | 10.8%     |               | \$ 232,383   | 10.8%         |                 | \$ 540,786    | 12.9% |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 2,616,161  | 17.4%     |               | \$ 373,737   | 17.4%         |                 | \$ 638,703    | 15.2% |                              |                                |       |
| Chinook                                                                                                                                        | Troll   | \$ 4,559,573  | 86.6%     | \$ 5,266,284  | \$ 651,368   | 86.6%         | \$ 752,326.29   | \$ 4,773,109  | 87.2% | \$ 5,473,259                 |                                |       |
|                                                                                                                                                | Seine   | \$ 260,671    | 4.9%      |               | \$ 37,239    | 4.9%          |                 | \$ 359,042    | 6.6%  |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 446,040    | 8.5%      |               | \$ 63,720    | 8.5%          |                 | \$ 341,108    | 6.2%  |                              |                                |       |
| Chum                                                                                                                                           | Troll   | \$ 521,184    | 2.0%      | \$ 26,048,248 | \$ 74,455    | 2.0%          | \$ 3,721,178.29 | \$ 293,658    | 1.2%  | \$ 24,632,796                |                                |       |
|                                                                                                                                                | Seine   | \$ 17,265,856 | 66.3%     |               | \$ 2,466,551 | 66.3%         |                 | \$ 16,010,792 | 65.0% |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 8,261,208  | 31.7%     |               | \$ 1,180,173 | 31.7%         |                 | \$ 8,328,346  | 33.8% |                              |                                |       |
| Pinks                                                                                                                                          | Troll   | \$ 124,857    | 3.4%      | \$ 3,675,425  | \$ 17,837    | 3.4%          | \$ 525,060.71   | \$ 57,882     | 2.6%  | \$ 2,197,761                 |                                |       |
|                                                                                                                                                | Seine   | \$ 2,377,096  | 64.7%     |               | \$ 339,585   | 64.7%         |                 | \$ 1,370,607  | 62.4% |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 1,173,472  | 31.9%     |               | \$ 167,639   | 31.9%         |                 | \$ 769,272    | 35.0% |                              |                                |       |
| Sockeye                                                                                                                                        | Troll   | \$ 119,287    | 2.8%      | \$ 4,196,804  | \$ 17,041    | 2.8%          | \$ 599,543.43   | \$ 51,810     | 2.4%  | \$ 2,150,892                 |                                |       |
|                                                                                                                                                | Seine   | \$ 1,856,903  | 44.2%     |               | \$ 265,272   | 44.2%         |                 | \$ 953,598    | 44.3% |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 2,220,614  | 52.9%     |               | \$ 317,231   | 52.9%         |                 | \$ 1,145,484  | 53.3% |                              |                                |       |
| All Species                                                                                                                                    | Troll   | \$ 16,100,536 | 29.7%     | \$ 54,205,235 | \$ 2,300,077 | 29.7%         | \$ 7,743,605.00 | \$ 8,198,240  | 21.2% | \$ 38,655,978                |                                |       |
|                                                                                                                                                | Seine   | \$ 23,387,204 | 43.1%     |               | \$ 3,341,029 | 43.1%         |                 | \$ 19,234,825 | 49.8% |                              |                                |       |
|                                                                                                                                                | Gillnet | \$ 14,717,495 | 27.2%     |               | \$ 2,102,499 | 27.2%         |                 | \$ 11,222,913 | 29.0% |                              |                                |       |
| NOTES:                                                                                                                                         |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| 1. Current annual production includes permitted capacity on existing ongoing projects using assumed survival rates and average prices, weights |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| 2. Future production includes Deep Cove Chinook, Snettisham sockeye, and Chilkat Lake sockeye enhancement                                      |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| Chilkat will produce 264,000 sockeye: 250,800 to gillnet, 13,200 to seiners                                                                    |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| Snettisham will produce 320,000 sockeye: 288,000 gillnet, 32,000 seiners                                                                       |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| Beaver Falls and Klawock will produce 259,000 sockeye: 123,000 gillnet, 130,000 seine, 5,000 troller (current production)                      |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| Deep Cove will produce 75,000 harvestable Chinook: 55,250 troll, 14,400 seine, 5,250 gillnet                                                   |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| 3. AAI (Alaska Aquaculture Inc) added November 1992: 300,000: gillnet 239,000, seine, 61,000 chum                                              |         |               |           |               |              |               |                 |               |       |                              |                                |       |
| Future potential is a best guess of what might happen. It is not an allocation.                                                                |         |               |           |               |              |               |                 |               |       |                              |                                |       |



Annual Value by Gear and Species 185-1991 Table from Board of Fish #94-148-FB finding

| Southeast Allocation Base Period 1985 - 1991 (#94-148-FB) |      |  |  |      |  |  |      |  |  |
|-----------------------------------------------------------|------|--|--|------|--|--|------|--|--|
| Species                                                   | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |
|                                                           | 1985 |  |  | 1986 |  |  | 1987 |  |  |



**Annual Value by Gear and Species 185-1991 Table from Board of Fish #94-148-FB finding, continued**



| Sum of Value | Gear       |            |            |             |
|--------------|------------|------------|------------|-------------|
| Year         | troll      | gillnet    | seine      | Grand Total |
| 1994         | 5,317,271  | 3,797,692  | 8,876,576  | 17,991,540  |
| 1995         | 2,871,032  | 7,169,053  | 14,789,338 | 24,829,423  |
| 1996         | 3,224,761  | 4,184,597  | 12,061,185 | 19,470,543  |
| 1997         | 3,004,073  | 4,037,169  | 10,752,998 | 17,794,241  |
| 1998         | 1,973,521  | 3,792,912  | 9,277,676  | 15,044,109  |
| 1999         | 3,461,492  | 4,110,113  | 10,061,642 | 17,633,247  |
| 2000         | 3,465,550  | 6,219,903  | 17,113,326 | 26,798,778  |
| 2001         | 3,752,912  | 4,852,294  | 7,170,159  | 15,775,364  |
| 2002         | 2,303,490  | 3,627,174  | 3,645,488  | 9,576,152   |
| 2003         | 2,774,408  | 3,385,285  | 3,744,188  | 9,903,881   |
| 2004         | 4,139,539  | 5,400,059  | 5,498,187  | 15,037,785  |
| 2005         | 3,522,736  | 4,707,650  | 4,405,236  | 12,635,622  |
| 2006         | 4,192,671  | 12,215,370 | 15,109,033 | 31,517,075  |
| 2007         | 4,728,923  | 8,851,525  | 6,531,971  | 20,112,418  |
| 2008         | 7,319,611  | 16,385,073 | 16,158,998 | 39,864,442  |
| 2009         | 4,032,749  | 12,255,256 | 12,746,563 | 29,034,568  |
| 2010         | 7,215,190  | 15,728,240 | 17,451,677 | 40,395,107  |
| 2011         | 9,109,654  | 20,391,332 | 15,430,492 | 44,931,479  |
| 2012         | 8,113,226  | 28,453,598 | 35,570,351 | 72,288,600  |
| 2013         | 13,266,168 | 19,221,485 | 24,815,716 | 54,502,787  |
| 2014         | 7,900,306  | 17,050,323 | 12,519,221 | 37,469,850  |
| 2015         | 9,120,909  | 20,168,996 | 21,157,491 | 50,447,396  |
| 2016         | 9,120,909  | 20,168,996 | 21,157,491 | 50,447,396  |
| 2017         | 9,626,486  | 20,168,996 | 21,157,491 | 50,952,973  |
| 2018         | 9,967,550  | 20,168,996 | 21,157,491 | 51,294,037  |
| 2019         | 11,379,955 | 20,168,996 | 21,157,491 | 52,706,442  |
| 2020         | 14,713,556 | 16,135,197 | 26,235,289 | 57,084,042  |
| 2021         | 17,000,690 | 16,135,197 | 26,235,289 | 59,371,176  |
| 2022         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2023         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2024         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2025         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2026         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2027         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2028         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2029         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |
| 2030         | 17,129,091 | 16,135,197 | 26,235,289 | 59,499,576  |

**Allocation Value Actual 1994-2014 and Projected for 2015-2030, New Production Included**





## 5-Year Rolling Averages for Gear Groups

Source: ADF&G ESTIMATES (SE ALLOCATION DATA  
FROM ADF&G)

|        | SE    | SE      | SE    |       | Annual Percent |                |              |
|--------|-------|---------|-------|-------|----------------|----------------|--------------|
|        | Gear  |         |       |       |                |                |              |
| Period | Troll | Gillnet | Seine | TOTAL | troll 27-32%   | gillnet 24-29% | seine 44-49% |
| 94-98  | 17%   | 24%     | 59%   | 100%  | 29.6%          | 21.1%          | 49.3%        |
| 95-99  | 15%   | 25%     | 60%   | 100%  | 11.6%          | 28.9%          | 59.6%        |
| 96-00  | 16%   | 23%     | 61%   | 100%  | 16.6%          | 21.5%          | 61.9%        |
| 97-01  | 17%   | 25%     | 58%   | 100%  | 16.9%          | 22.7%          | 60.4%        |
| 98-02  | 18%   | 27%     | 56%   | 100%  | 13.1%          | 25.2%          | 61.7%        |
| 99-03  | 20%   | 28%     | 52%   | 100%  | 19.6%          | 23.3%          | 57.1%        |
| 00-04  | 21%   | 30%     | 48%   | 100%  | 12.9%          | 23.2%          | 63.9%        |
| 01-05  | 26%   | 35%     | 39%   | 100%  | 23.8%          | 30.8%          | 45.5%        |
| 02-06  | 22%   | 37%     | 41%   | 100%  | 24.1%          | 37.9%          | 38.1%        |
| 03-07  | 22%   | 39%     | 40%   | 100%  | 28.0%          | 34.2%          | 37.8%        |
| 04-08  | 20%   | 40%     | 40%   | 100%  | 27.5%          | 35.9%          | 36.6%        |
| 05-09  | 18%   | 41%     | 41%   | 100%  | 27.9%          | 37.3%          | 34.9%        |
| 06-10  | 17%   | 41%     | 42%   | 100%  | 13.3%          | 38.8%          | 47.9%        |
| 07-11  | 19%   | 42%     | 39%   | 100%  | 23.5%          | 44.0%          | 32.5%        |
| 08-12  | 16%   | 41%     | 43%   | 100%  | 18.4%          | 41.1%          | 40.5%        |
| 09-13  | 17%   | 40%     | 44%   | 101%  | 13.9%          | 42.2%          | 43.9%        |
| 10-14  | 18%   | 40%     | 42%   | 101%  | 17.9%          | 38.9%          | 43.2%        |
| 11-15  | 18%   | 41%     | 42%   | 101%  | 20.3%          | 45.4%          | 34.3%        |
|        | 18%   | 40%     | 43%   | 101%  | 11.2%          | 39.4%          | 49.2%        |
|        | 20%   | 40%     | 41%   | 101%  | 24.3%          | 35.3%          | 45.5%        |
|        | 19%   | 41%     | 40%   | 100%  | 21.1%          | 45.5%          | 33.4%        |
|        | 19%   | 39%     | 41%   | 100%  | 18.1%          | 40.0%          | 41.9%        |
| 16-20  | 21%   | 37%     | 42%   | 100%  | 18.1%          | 40.0%          | 41.9%        |
|        | 23%   | 34%     | 43%   | 100%  | 18.9%          | 39.6%          | 41.5%        |
|        | 25%   | 32%     | 43%   | 100%  | 19.4%          | 39.3%          | 41.2%        |
|        | 27%   | 29%     | 44%   | 100%  | 21.6%          | 38.3%          | 40.1%        |
|        | 28%   | 27%     | 44%   | 100%  | 25.8%          | 28.3%          | 46.0%        |
| 21-25  | 29%   | 27%     | 44%   | 100%  | 28.6%          | 27.2%          | 44.2%        |
|        | 29%   | 27%     | 44%   | 100%  | 28.8%          | 27.1%          | 44.1%        |
|        | 29%   | 27%     | 44%   | 100%  | 28.8%          | 27.1%          | 44.1%        |
|        | 29%   | 27%     | 44%   | 100%  | 28.8%          | 27.1%          | 44.1%        |
|        | 29%   | 27%     | 44%   | 100%  | 28.8%          | 27.1%          | 44.1%        |
| 26-30  | 29%   | 27%     | 44%   | 100%  | 28.8%          | 27.1%          | 44.1%        |
|        |       |         |       |       | 28.8%          | 27.1%          | 44.1%        |
|        |       |         |       |       | 28.8%          | 27.1%          | 44.1%        |
|        |       |         |       |       | 28.8%          | 27.1%          | 44.1%        |



Table 19.—Weekly troll chum salmon harvest and effort in Icy Straits/Homeshore, Neets Bay/West Behm Canal, Sitka Sound, and the region-wide totals 2010–2014.

| Icy Strait/Homeshore/Northern Chatham Strait |         |         |         |         |         |         |         |         |         |         |  |
|----------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|
| Week                                         | 2010    |         | 2011    |         | 2012    |         | 2013    |         | 2014    |         |  |
|                                              | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits |  |
| 23                                           | —       | —       | —       | —       | —       | —       | 14,103  | 43      | —       | —       |  |
| 24                                           | —       | —       | 5,613   | 27      | 554     | 24      | 35,710  | 118     | 99      | 5       |  |
| 25                                           | —       | —       | 23,571  | 100     | 8,088   | 95      | 140,859 | 154     | 2,290   | 30      |  |
| 26                                           | 16,603  | 30      | 79,951  | 140     | 9,386   | 83      | 99,977  | 141     | 15,405  | 36      |  |
| 27                                           | 14,878  | 36      | 27,496  | 87      | 7,340   | 37      | 18,810  | 57      | 2,196   | 19      |  |
| 28                                           | 15,863  | 32      | 451     | 6       | 1,665   | 18      | 1,111   | 15      | a       | a       |  |
| 29                                           | 2,137   | 14      | a       | a       | a       | a       | a       | a       | —       | —       |  |
| Total                                        | 49,556  | 56      | 137,244 | 158     | 27,175  | 133     | 311,236 | 193     | 19,990  | 51      |  |
| Neets Bay/West Behm Canal                    |         |         |         |         |         |         |         |         |         |         |  |
| Week                                         | 2010    |         | 2011    |         | 2012    |         | 2013    |         | 2014    |         |  |
|                                              | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits |  |
| 26                                           | a       | a       | a       | a       | 13,862  | 45      | 2,227   | 11      | —       | —       |  |
| 27                                           | 3,968   | 10      | 1,225   | 17      | 32,108  | 106     | 18,250  | 41      | 1,680   | 11      |  |
| 28                                           | 37,631  | 48      | 35,576  | 78      | 77,851  | 209     | 54,597  | 106     | 12,141  | 43      |  |
| 29                                           | 116,454 | 106     | 129,775 | 141     | 99,560  | 247     | 67,987  | 115     | 47,889  | 85      |  |
| 30                                           | 45,881  | 82      | 122,864 | 153     | 78,078  | 182     | 22,383  | 77      | 32,729  | 68      |  |
| 31                                           | 393     | 4       | 48,499  | 97      | 17,238  | 97      | 10,554  | 20      | 15,748  | 47      |  |
| 32                                           | a       | a       | 24,527  | 45      | 1,714   | 10      | 3,877   | 15      | 9,438   | 18      |  |
| 33                                           | a       | a       | 6,387   | 21      | 8,750   | 26      | 328     | 4       | 1,306   | 10      |  |
| 34                                           | —       | —       | 8,289   | 18      | 13,920  | 33      | 369     | 4       | 1,024   | 5       |  |
| 35                                           | —       | —       | 16,230  | 31      | 29,897  | 55      | 914     | 5       | 1,331   | 7       |  |
| 36                                           | 599     | 3       | 20,563  | 47      | 28,143  | 72      | 2,643   | 7       | 6,666   | 13      |  |
| 37                                           | 3,503   | 5       | 10,499  | 36      | 4,117   | 51      | 2,007   | 7       | 13,494  | 26      |  |
| 38                                           | 6,736   | 6       | 16,728  | 25      | 872     | 10      | —       | —       | 4,866   | 18      |  |
| Total                                        | 216,489 | 114     | 441,371 | 175     | 406,335 | 265     | 186,701 | 137     | 148,330 | 98      |  |
| Sitka Sound                                  |         |         |         |         |         |         |         |         |         |         |  |
| Week                                         | 2010    |         | 2011    |         | 2012    |         | 2013    |         | 2014    |         |  |
|                                              | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits | Harvest | Permits |  |
| 25                                           | —       | —       | —       | —       | —       | —       | 831     | 3       | —       | —       |  |
| 26                                           | —       | —       | —       | —       | —       | —       | 7,305   | 14      | —       | —       |  |
| 27                                           | —       | —       | —       | —       | —       | —       | 2,495   | 12      | —       | —       |  |
| 28                                           | —       | —       | —       | —       | —       | —       | 5,599   | 13      | —       | —       |  |
| 29                                           | 112     | 4       | —       | —       | —       | —       | 5,531   | 18      | —       | —       |  |
| 30                                           | 26      | 3       | a       | a       | —       | —       | 33,582  | 46      | —       | —       |  |
| 31                                           | 18,421  | 44      | 3,798   | 24      | 377     | 3       | 80,843  | 94      | 522     | 4       |  |
| 32                                           | 35,632  | 84      | 14,962  | 81      | 15,529  | 39      | 122,081 | 101     | 9,485   | 34      |  |
| 33                                           | 30,098  | 86      | 4,315   | 34      | 6,742   | 31      | 153,748 | 106     | 198     | 8       |  |
| 34                                           | 22,941  | 51      | 90      | 3       | 1,136   | 8       | 42,120  | 78      | 180     | 3       |  |
| 35                                           | 2,930   | 18      | 31      | 3       | —       | —       | 1,198   | 8       | 871     | 5       |  |
| 36                                           | 5,958   | 15      | —       | —       | —       | —       | a       | a       | a       | a       |  |
| Total                                        | 116,118 | 105     | 23,428  | 92      | 23,797  | 51      | 455,510 | 147     | 11,411  | 42      |  |

-continued-

Table 19.–Page 2 of 2.

| Region-wide Totals |         |         |              |              |              |              |              |              |              |              |
|--------------------|---------|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Week               | 2010    |         | 2011         |              | 2012         |              | 2013         |              | 2014         |              |
|                    | Harvest | Permits | Harvest      | Permits      | Harvest      | Permits      | Harvest      | Permits      | Harvest      | Permits      |
| 23                 | –       | –       | <sup>a</sup> | <sup>a</sup> | <sup>a</sup> | <sup>a</sup> | 14105        | 44           | <sup>a</sup> | <sup>a</sup> |
| 24                 | –       | –       | 5613         | 27           | 558          | 25           | 35727        | 120          | 151          | 8            |
| 25                 | –       | –       | 23,571       | 100          | 8,239        | 102          | 141,851      | 162          | 2,359        | 32           |
| 26                 | 16,608  | 32      | 80,146       | 142          | 23,234       | 125          | 109,594      | 167          | 15,453       | 40           |
| 27                 | 18,846  | 45      | 28,873       | 105          | 39,422       | 143          | 41,355       | 101          | 4,089        | 33           |
| 28                 | 53,494  | 69      | 36,829       | 88           | 79,508       | 226          | 63,492       | 137          | 12,523       | 49           |
| 29                 | 118,703 | 124     | 130,225      | 145          | 99,685       | 250          | 74,708       | 139          | 47,893       | 86           |
| 30                 | 45,907  | 85      | 123,183      | 156          | 78,078       | 182          | 56,088       | 123          | 32,764       | 72           |
| 31                 | 18,814  | 46      | 52,297       | 121          | 17,615       | 100          | 92,533       | 117          | 16,414       | 55           |
| 32                 | 36,819  | 85      | 39,489       | 125          | 17,243       | 49           | 127,392      | 117          | 20,126       | 58           |
| 33                 | 30,215  | 87      | 10,702       | 55           | 15,736       | 58           | 154,152      | 111          | 1,546        | 19           |
| 34                 | 22,941  | 51      | 8,379        | 21           | 14,951       | 40           | 44,037       | 84           | 1,297        | 9            |
| 35                 | 2,930   | 18      | 16,261       | 34           | 29,906       | 56           | 2,112        | 13           | 2,240        | 13           |
| 36                 | 6,557   | 18      | 20,569       | 48           | 28,143       | 72           | 2,817        | 9            | 11,464       | 28           |
| 37                 | 3,503   | 5       | 10,570       | 38           | 4,117        | 51           | 2,156        | 8            | 13,494       | 26           |
| 38                 | 6,736   | 6       | 16,778       | 27           | 872          | 10           | <sup>a</sup> | <sup>a</sup> | 4,866        | 18           |
| Total              | 382,163 | 193     | 603,533      | 299          | 457,352      | 352          | 962,181      | 366          | 186,710      | 183          |

Notes: Numbers for harvest and permits fished are based on vessels that targeted chum salmon.

Region-wide totals do not reflect the sum of these directed fisheries.

– denotes no effort or harvest.

<sup>a</sup> confidential data



## **An Alternative Benefit: Cost Estimate for SE Alaska All Salmon**

### **Introduction**

There are a variety of ways to evaluate the benefits of salmon enhancement. 1) use three percent money paid in by fishermen against the value fishermen get from harvest, 2) cost of operating hatchery programs against value they provide to fishermen, 3) same as two but include cost recovery value, 4) total economic output vis-à-vis a McDowell type report, among other approaches.

The salmon fisheries of southeast Alaska consist of a wild component (75%) and an enhanced component (25%) and are prosecuted simultaneously. Sometimes these fisheries are discrete such as Kendrick Bay or Amalga Harbor terminal harvest areas, but often harvest of wild and enhanced salmon occurs in mixed stock common property fisheries. The value of each can be determined by CWT and otolith sampling but in terms of prosecution of the fisheries and in the eyes of the CFEC limited entry permit, wild and enhanced are integrally linked. Wild and enhanced dovetail or work in concert with one another.

Therefore, simply as an exercise, looking at the wild and enhanced benefits as they accrue to troll, gillnet, and seine is informative.

### **Methods:**

1. “Cost” side: estimated 3% Salmon Enhancement Tax (SET) paid by gear group.
  - a. 3% SET is not tracked by gear; however an estimate of 3% SET by gear might be made by taking the total annual value by gear x 3%.
  - b. Total Value estimates by gear were obtained from CFEC BIT data.
  - c. Seine and gillnet values are for SEAK. Troll includes Yakutat, which may make up 1-2% (?) of the total value. For this initial analysis, no adjustment is made for the (slightly) larger troll area.
2. “Benefit” side: value of SEAK enhanced harvest from allocation data.
3. Offset: 3% SET collected in any given year funds future releases & returns. For instance, 3% tax collected in 2014 might fund 2015 chum releases which have a major age class (four-year-olds) return in 2018. In this example, the cost year of 2014 would have an offset of 4 years until the major benefit year of 2018. A case might be made for a 4 or 5 year offset; I’ve chosen to use a 4 year offset in this analysis.
4. Calculations are made by gear for annual and 5-year rolling averages.

### **Data:**

| Year               | DRIFT GILLNET      | TROLL*             | PURSE SEINE          | Total                |
|--------------------|--------------------|--------------------|----------------------|----------------------|
| 1994               | 17,207,769         | 38,943,302         | 61,164,567           | 117,315,638          |
| 1995               | 16,899,040         | 16,673,792         | 55,806,812           | 89,379,644           |
| 1996               | 14,430,995         | 16,394,667         | 42,813,455           | 73,639,117           |
| 1997               | 11,143,699         | 18,853,651         | 40,813,997           | 70,811,347           |
| 1998               | 11,345,286         | 14,974,147         | 45,509,746           | 71,829,179           |
| 1999               | 11,489,118         | 20,442,587         | 56,402,089           | 88,333,794           |
| 2000               | 10,940,909         | 14,786,178         | 38,060,764           | 63,787,851           |
| 2001               | 11,316,836         | 17,191,517         | 48,742,800           | 77,251,153           |
| 2002               | 8,132,853          | 13,164,474         | 20,244,170           | 41,541,497           |
| 2003               | 8,903,210          | 14,812,555         | 26,705,739           | 50,421,504           |
| 2004               | 11,778,867         | 29,016,910         | 31,672,452           | 72,468,229           |
| 2005               | 12,753,519         | 26,770,816         | 36,073,649           | 75,597,984           |
| 2006               | 20,007,955         | 34,645,576         | 27,536,028           | 82,189,559           |
| 2007               | 15,081,267         | 30,985,116         | 49,646,050           | 95,712,433           |
| 2008               | 24,209,429         | 36,566,992         | 40,986,039           | 101,762,460          |
| 2009               | 18,578,453         | 22,942,077         | 48,417,377           | 89,937,907           |
| 2010               | 26,618,998         | 31,945,182         | 56,238,100           | 114,802,280          |
| 2011               | 31,126,506         | 32,407,478         | 122,177,082          | 185,711,066          |
| 2012               | 37,475,213         | 29,859,299         | 73,082,389           | 140,416,901          |
| 2013               | 29,456,345         | 41,312,132         | 154,063,995          | 224,832,472          |
| <b>Grand Total</b> | <b>348,896,267</b> | <b>502,688,448</b> | <b>1,076,157,300</b> | <b>1,927,742,015</b> |
|                    | 100.0%             | 100.0%             | 100.0%               | 100.0%               |

Note: Color scales are relative to each gear group (applied on a column - by - column basis).

Table 1. Total value for all commercially harvested salmon, enhanced and wild, for years 1994 to 2013. Percents are for individual gear and therefore all percents add to 100%.

### SEAK Salmon: Total Value by Gear

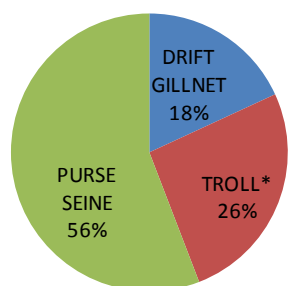


Chart 1. Total Value for the period (1994-2013) is 1.93 billion dollars with proportions by gear. Note wild and enhanced salmon proportions are very different than the Allocation percentages. Gillnet percentage is 18% based on all salmon harvest and troll is 26%.



| Year               | DRIFT GILLNET     | TROLL *           | PURSE SEINE       | Total             |
|--------------------|-------------------|-------------------|-------------------|-------------------|
| 1994               | 516,233           | 1,168,299         | 1,834,937         | 3,519,469         |
| 1995               | 506,971           | 500,214           | 1,674,204         | 2,681,389         |
| 1996               | 432,930           | 491,840           | 1,284,404         | 2,209,174         |
| 1997               | 334,311           | 565,610           | 1,224,420         | 2,124,340         |
| 1998               | 340,359           | 449,224           | 1,365,292         | 2,154,875         |
| 1999               | 344,674           | 613,278           | 1,692,063         | 2,650,014         |
| 2000               | 328,227           | 443,585           | 1,141,823         | 1,913,636         |
| 2001               | 339,505           | 515,746           | 1,462,284         | 2,317,535         |
| 2002               | 243,986           | 394,934           | 607,325           | 1,246,245         |
| 2003               | 267,096           | 444,377           | 801,172           | 1,512,645         |
| 2004               | 353,366           | 870,507           | 950,174           | 2,174,047         |
| 2005               | 382,606           | 803,124           | 1,082,209         | 2,267,940         |
| 2006               | 600,239           | 1,039,367         | 826,081           | 2,465,687         |
| 2007               | 452,438           | 929,553           | 1,489,382         | 2,871,373         |
| 2008               | 726,283           | 1,097,010         | 1,229,581         | 3,052,874         |
| 2009               | 557,354           | 688,262           | 1,452,521         | 2,698,137         |
| 2010               | 798,570           | 958,355           | 1,687,143         | 3,444,068         |
| 2011               | 933,795           | 972,224           | 3,665,312         | 5,571,332         |
| 2012               | 1,124,256         | 895,779           | 2,192,472         | 4,212,507         |
| 2013               | 883,690           | 1,239,364         | 4,621,920         | 6,744,974         |
| <b>Grand Total</b> | <b>10,466,888</b> | <b>15,080,653</b> | <b>32,284,719</b> | <b>57,832,260</b> |
|                    | 3.0%              | 3.0%              | 3.0%              | 3.0%              |

Table 2. Using the total commercial harvest by gear the 3% dollars paid is calculated. The 3% is collected on enhanced as well as wild salmon. These are monies that have been paid out to SSRAA and NSRAA. Trollers have paid \$15.0 million, gillnet \$10.4 million, and seine \$32.3 million.

### SEAK Salmon: 3% SET by Gear

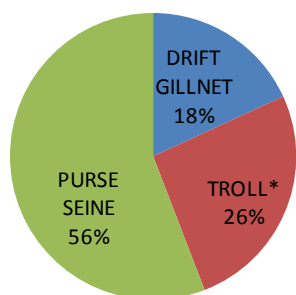


Chart 2. Estimated 3% SET collected for the period is 57.8 million dollars and is represented by the same percentages as the total salmon values by gear.

| Year               | DRIFT GILLNET      | TROLL*            | PURSE SEINE        | Total              |
|--------------------|--------------------|-------------------|--------------------|--------------------|
| 1994               | 3,797,692          | 5,317,271         | 8,876,576          | 17,991,540         |
| 1995               | 7,169,053          | 2,871,032         | 14,789,338         | 24,829,423         |
| 1996               | 4,184,597          | 3,224,761         | 12,061,185         | 19,470,543         |
| 1997               | 4,037,169          | 3,004,073         | 10,752,998         | 17,794,241         |
| 1998               | 3,792,912          | 1,973,521         | 9,277,676          | 15,044,109         |
| 1999               | 4,110,113          | 3,461,492         | 10,061,642         | 17,633,247         |
| 2000               | 6,219,903          | 3,465,550         | 17,113,326         | 26,798,778         |
| 2001               | 4,852,294          | 3,752,912         | 7,170,159          | 15,775,364         |
| 2002               | 3,627,174          | 2,303,490         | 3,645,488          | 9,576,152          |
| 2003               | 3,385,285          | 2,774,408         | 3,744,188          | 9,903,881          |
| 2004               | 5,400,059          | 4,139,539         | 5,498,187          | 15,037,785         |
| 2005               | 4,707,650          | 3,522,736         | 4,405,236          | 12,635,622         |
| 2006               | 12,215,370         | 4,192,671         | 15,109,033         | 31,517,075         |
| 2007               | 8,851,525          | 4,728,923         | 6,531,971          | 20,112,418         |
| 2008               | 16,385,073         | 7,320,371         | 16,158,998         | 39,864,442         |
| 2009               | 12,255,256         | 4,032,749         | 12,746,563         | 29,034,568         |
| 2010               | 15,728,240         | 7,215,190         | 17,451,677         | 40,395,107         |
| 2011               | 20,391,332         | 9,109,654         | 15,430,492         | 44,931,479         |
| 2012               | 28,453,598         | 8,113,226         | 35,570,351         | 72,137,175         |
| 2013               | 19,128,923         | 12,717,367        | 20,863,723         | 52,710,013         |
| <b>Grand Total</b> | <b>188,693,218</b> | <b>97,240,936</b> | <b>247,258,807</b> | <b>533,192,962</b> |
| % of Total Value:  | 54.1%              | 19.3%             | 23.0%              | 27.7%              |

Table 3. Value of enhanced salmon by gear for 1994 – 2013. This table pulls out the enhanced value from Table 1 but shows the value percentage of enhanced salmon to total enhanced plus wild by gear. This could be viewed as relative importance of enhanced salmon by gear.

### SEAK Enhanced Salmon Value by Gear

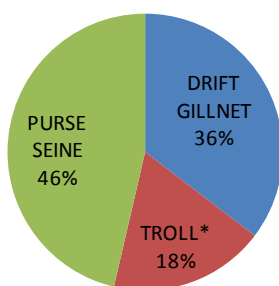


Chart 3. Percentage of enhanced salmon by gear for comparison to Table 3. Estimated value of enhanced production for the period is 533.2 million dollars, which is 27.7% of the total SEAK salmon value.

Table 4. Enhanced B:C estimates by gear (4-year offset)

| Year | DRIFT GILLNET | TROLL* | PURSE SEINE | Total |
|------|---------------|--------|-------------|-------|
| 1994 |               |        |             |       |
| 1995 |               |        |             |       |
| 1996 |               |        |             |       |
| 1997 |               |        |             |       |
| 1998 | 7             | 2      | 5           | 4     |
| 1999 | 8             | 7      | 6           | 7     |
| 2000 | 14            | 7      | 13          | 12    |
| 2001 | 15            | 7      | 6           | 7     |
| 2002 | 11            | 5      | 3           | 4     |
| 2003 | 10            | 5      | 2           | 4     |
| 2004 | 16            | 9      | 5           | 8     |
| 2005 | 14            | 7      | 3           | 5     |
| 2006 | 50            | 11     | 25          | 25    |
| 2007 | 33            | 11     | 8           | 13    |
| 2008 | 46            | 8      | 17          | 18    |
| 2009 | 32            | 5      | 12          | 13    |
| 2010 | 26            | 7      | 21          | 16    |
| 2011 | 45            | 10     | 10          | 16    |
| 2012 | 39            | 7      | 29          | 24    |
| 2013 | 34            | 18     | 14          | 20    |
|      | 25            | 8      | 10          | 12    |

Table 4. Enhanced Value by gear (Benefit) and divide by the 3% SET Estimate (Cost) by gear a benefit: cost can be calculated, as shown above in Table 4.

Overall, there is a 12:1 Benefit: Cost Ratio for the period with this gear split:

Gillnet 25:1      Troll 8:1      Seine 10:1

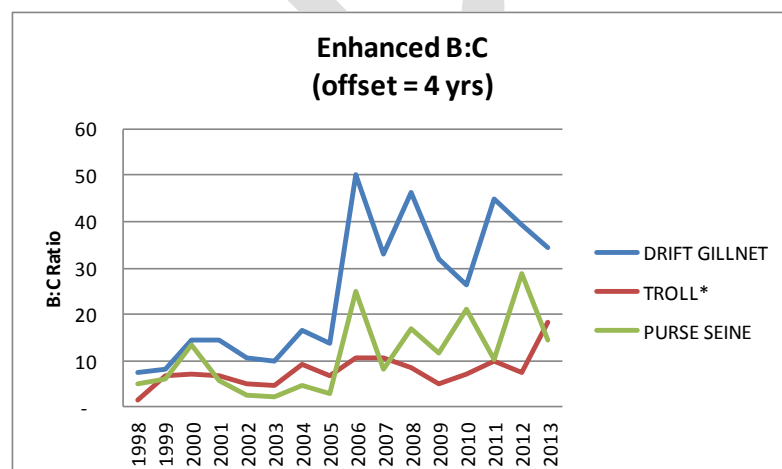


Chart 4. Benefit to Cost by gear for 1998 to 2013. Note product occurs in year 1998 but not accrue to benefits until four years later.

Table 5. Cumulative Enhanced B:C estimates by gear (4-year offset)

| Year | DRIFT GILLNET | TROLL* | PURSE SEINE | Total |
|------|---------------|--------|-------------|-------|
| 1994 |               |        |             |       |
| 1995 |               |        |             |       |
| 1996 |               |        |             |       |
| 1997 |               |        |             |       |
| 1998 | 7             | 2      | 5           | 4     |
| 1999 | 8             | 3      | 6           | 5     |
| 2000 | 10            | 4      | 8           | 7     |
| 2001 | 11            | 5      | 7           | 7     |
| 2002 | 11            | 5      | 6           | 7     |
| 2003 | 10            | 5      | 6           | 6     |
| 2004 | 11            | 5      | 6           | 6     |
| 2005 | 11            | 5      | 5           | 6     |
| 2006 | 14            | 6      | 6           | 7     |
| 2007 | 16            | 6      | 6           | 8     |
| 2008 | 18            | 6      | 7           | 9     |
| 2009 | 20            | 6      | 7           | 9     |
| 2010 | 20            | 6      | 8           | 10    |
| 2011 | 22            | 7      | 8           | 10    |
| 2012 | 24            | 7      | 10          | 11    |
| 2013 | 25            | 8      | 10          | 12    |

Table 5. Cumulative enhanced B:C by gear. This has the effect of smoothing out the annual fluctuations as shown in Chart 5.

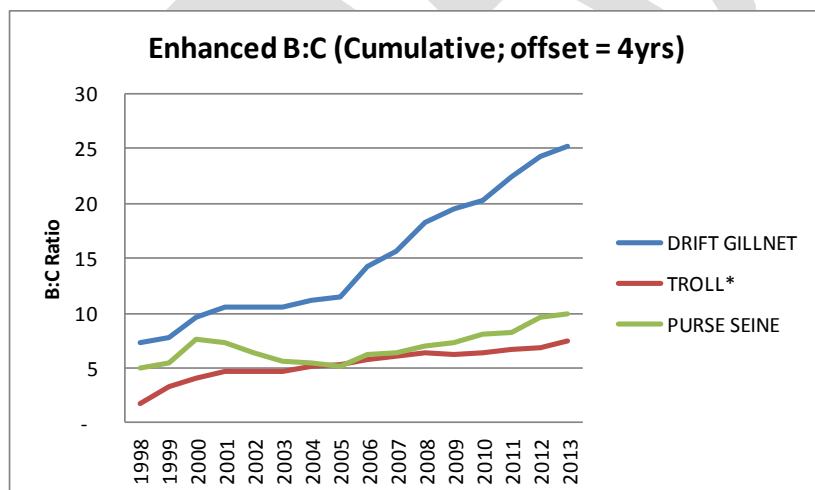


Chart 5. Benefit to Cost cumulative by gear 1998 to 2013.

| Year               | DRIFT GILLNET | TROLL*     | PURSE SEINE | Total      |
|--------------------|---------------|------------|-------------|------------|
| 1994               | 22%           | 14%        | 15%         | 15%        |
| 1995               | 42%           | 17%        | 27%         | 28%        |
| 1996               | 29%           | 20%        | 28%         | 26%        |
| 1997               | 36%           | 16%        | 26%         | 25%        |
| 1998               | 33%           | 13%        | 20%         | 21%        |
| 1999               | 36%           | 17%        | 18%         | 20%        |
| 2000               | 57%           | 23%        | 45%         | 42%        |
| 2001               | 43%           | 22%        | 15%         | 20%        |
| 2002               | 45%           | 17%        | 18%         | 23%        |
| 2003               | 38%           | 19%        | 14%         | 20%        |
| 2004               | 46%           | 14%        | 17%         | 21%        |
| 2005               | 37%           | 13%        | 12%         | 17%        |
| 2006               | 61%           | 12%        | 55%         | 38%        |
| 2007               | 59%           | 15%        | 13%         | 21%        |
| 2008               | 68%           | 20%        | 39%         | 39%        |
| 2009               | 66%           | 18%        | 26%         | 32%        |
| 2010               | 59%           | 23%        | 31%         | 35%        |
| 2011               | 66%           | 28%        | 13%         | 24%        |
| 2012               | 76%           | 27%        | 49%         | 51%        |
| 2013               | 65%           | 31%        | 14%         | 23%        |
| <b>Grand Total</b> | <b>54%</b>    | <b>19%</b> | <b>23%</b>  | <b>28%</b> |

Table 6. Percentage of value each gear group derives from enhanced salmon for 1994 to 2013. Importance of enhanced fish to each gear type is evident.

What is driving the large B:C for drift gillnet? Dividing enhanced value by total value results in the portion of value from enhanced production. This shows that drift gillnet gets a much larger share of their value from enhanced fish.

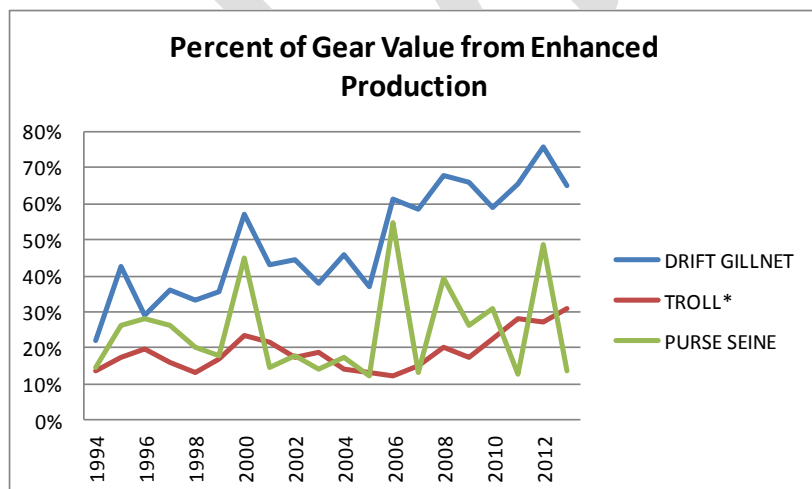


Chart 6. Chart plots Table 6 data. Troll and gillnet percent value from enhanced salmon show a general trend up while seine has an undulating high and low value. Seine value is pegged to odd year pink cycle abundance. Low seine value years correspond to large pink catches and high value.



| Year                           | DRIFT GILLNET      | TROLL*             | PURSE SEINE        | Total                |
|--------------------------------|--------------------|--------------------|--------------------|----------------------|
| 1994                           | 13,410,077         | 33,626,031         | 52,287,991         | 99,324,098           |
| 1995                           | 9,729,987          | 13,802,760         | 41,017,474         | 64,550,221           |
| 1996                           | 10,246,398         | 13,169,906         | 30,752,270         | 54,168,574           |
| 1997                           | 7,106,530          | 15,849,578         | 30,060,999         | 53,017,106           |
| 1998                           | 7,552,374          | 13,000,626         | 36,232,070         | 56,785,070           |
| 1999                           | 7,379,005          | 16,981,095         | 46,340,447         | 70,700,547           |
| 2000                           | 4,721,006          | 11,320,628         | 20,947,438         | 36,989,073           |
| 2001                           | 6,464,542          | 13,438,605         | 41,572,641         | 61,475,789           |
| 2002                           | 4,505,679          | 10,860,984         | 16,598,682         | 31,965,345           |
| 2003                           | 5,517,925          | 12,038,147         | 22,961,551         | 40,517,623           |
| 2004                           | 6,378,808          | 24,877,371         | 26,174,265         | 57,430,444           |
| 2005                           | 8,045,869          | 23,248,080         | 31,668,413         | 62,962,362           |
| 2006                           | 7,792,585          | 30,452,905         | 12,426,995         | 50,672,484           |
| 2007                           | 6,229,742          | 26,256,193         | 43,114,079         | 75,600,015           |
| 2008                           | 7,824,356          | 29,246,621         | 24,827,041         | 61,898,018           |
| 2009                           | 6,323,197          | 18,909,328         | 35,670,814         | 60,903,339           |
| 2010                           | 10,890,758         | 24,729,992         | 38,786,423         | 74,407,173           |
| 2011                           | 10,735,174         | 23,297,824         | 106,746,590        | 140,779,587          |
| 2012                           | 9,021,615          | 21,746,073         | 37,512,038         | 68,279,726           |
| 2013                           | 10,327,422         | 28,594,765         | 133,200,272        | 172,122,459          |
| <b>Grand Total</b>             | <b>160,203,049</b> | <b>405,447,512</b> | <b>828,898,493</b> | <b>1,394,549,053</b> |
| % of Total Value               | 46%                | 81%                | 77%                | 72%                  |
| Non-enhanced relative to drift | 1.0                | 2.5                | 5.2                |                      |

Table 7. Non enhanced value by gear for 1994 to 2013. Troll and seine derive 81% and 77% respectively from wild salmon harvests. Relative to gillnet, trollers get 2.5 times the value that gillnetters get; seiners 5.2 times.

The flip-side is this: trollers and seiners have much greater access to non-enhanced salmon. Of this non-enhanced value, trollers get 2.5x the value and seine 5.2x the value of drift gillnet.

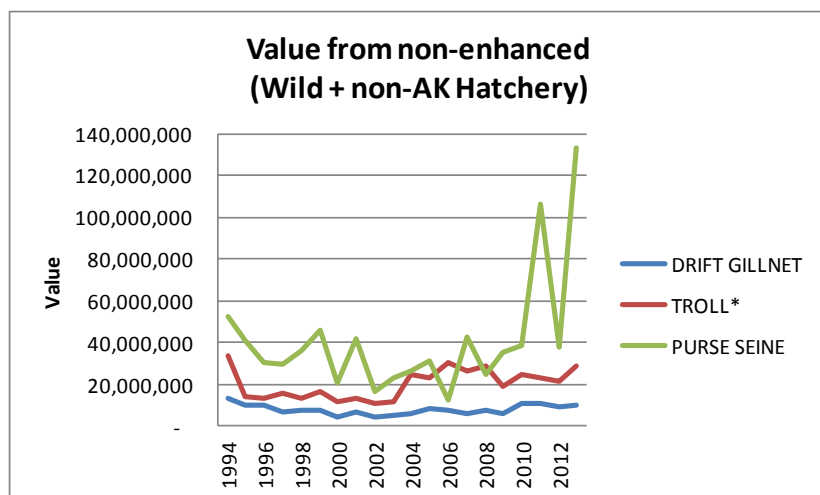


Chart 7. Graphic of Table 7 showing wild salmon harvest value by gear for 1994 – 2013.

Table 8. Enhanced B:C estimates by gear using  
TOTAL VALUE as the Benefit (4-year offset)

| Year | DRIFT GILLNET | TROLL * | PURSE SEINE | Total |
|------|---------------|---------|-------------|-------|
| 1994 |               |         |             |       |
| 1995 |               |         |             |       |
| 1996 |               |         |             |       |
| 1997 |               |         |             |       |
| 1998 | 22            | 13      | 25          | 20    |
| 1999 | 23            | 41      | 34          | 33    |
| 2000 | 25            | 30      | 30          | 29    |
| 2001 | 34            | 30      | 40          | 36    |
| 2002 | 24            | 29      | 15          | 19    |
| 2003 | 26            | 24      | 16          | 19    |
| 2004 | 36            | 65      | 28          | 38    |
| 2005 | 38            | 52      | 25          | 33    |
| 2006 | 82            | 88      | 45          | 66    |
| 2007 | 56            | 70      | 62          | 63    |
| 2008 | 69            | 42      | 43          | 47    |
| 2009 | 49            | 29      | 45          | 40    |
| 2010 | 44            | 31      | 68          | 47    |
| 2011 | 69            | 35      | 82          | 65    |
| 2012 | 52            | 27      | 59          | 46    |
| 2013 | 53            | 60      | 106         | 83    |
|      | 43            | 37      | 44          | 42    |

Table 8. A unique way to look at benefit cost is to combine the value of wild and enhanced salmon compared to the cost of the enhancement program. This methodology allows viewing southeast fisheries in total as the

benefits to fishermen accrue from both types of production. Annual variation in B:C is great but long term B:C is similar for the three groups – 43:1 for gillnet, 37:1 for troll, and 44:1 for seine.

The original allocation plan probably envisioned a more stable sharing / growth of both enhanced and non-enhanced salmon value among gear groups. Un-foreseen circumstances have caused some un-expected imbalances. Above (Table 8.) is an alternative look at the data - where the Benefit side of the equation is changed from Enhanced Value to Total Value.

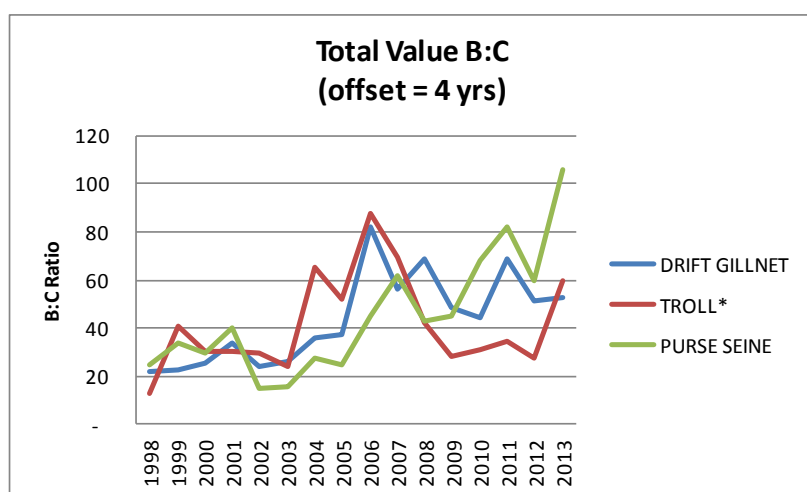


Chart 8. Annual benefit to cost graphed for total value of wild and enhance salmon. The trend for all groups is up since 1998 and is expected to continue rising. Chart 8 is a graphic of table 8.

Table 9. Cumulative TOTAL VALUE B:C estimates by gear (4-year offset)

| Year | DRIFT GILLNET | TROLL * | PURSE SEINE | Total |
|------|---------------|---------|-------------|-------|
| 1994 |               |         |             |       |
| 1995 |               |         |             |       |
| 1996 |               |         |             |       |
| 1997 |               |         |             |       |
| 1998 | 22            | 13      | 25          | 20    |
| 1999 | 22            | 21      | 29          | 26    |
| 2000 | 23            | 23      | 29          | 27    |
| 2001 | 25            | 25      | 31          | 29    |
| 2002 | 25            | 25      | 28          | 27    |
| 2003 | 25            | 25      | 26          | 26    |
| 2004 | 26            | 29      | 26          | 27    |
| 2005 | 28            | 32      | 26          | 28    |
| 2006 | 31            | 36      | 27          | 30    |
| 2007 | 33            | 39      | 29          | 32    |
| 2008 | 36            | 39      | 30          | 34    |
| 2009 | 37            | 38      | 31          | 34    |
| 2010 | 38            | 37      | 33          | 35    |
| 2011 | 41            | 37      | 37          | 38    |
| 2012 | 42            | 36      | 39          | 38    |
| 2013 | 43            | 37      | 44          | 42    |

Table 9. Taking the same harvest data for enhanced and wild value, then calculating the running cumulative benefit to cost results in a smoothing of the trend. The trend is evident with the annual B:C in Table 8 and Chart 8, but can be seen more distinctly in Chart 9 below.

Here the same data is viewed cumulatively, smoothing out the annual fluctuations.

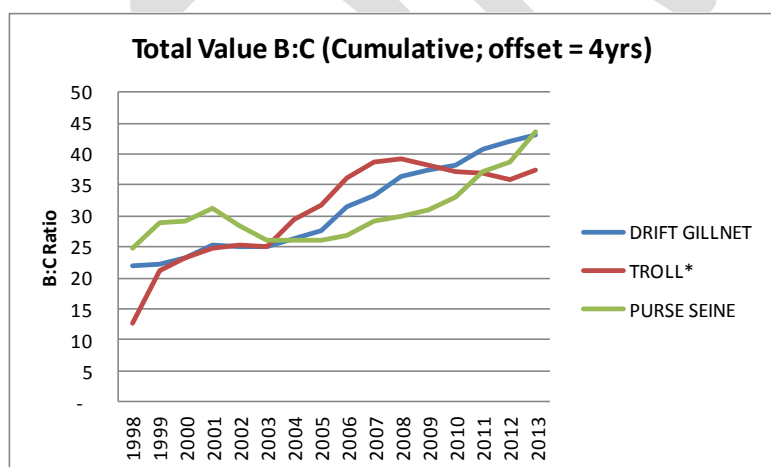


Chart 9. Cumulative benefit to cost of wild and enhanced salmon harvest. The benefits viewed in this fashion show similar outcomes for gillnet, troll, and seine in the past twenty years. In 1998, lagged four years from the start of the Allocation plan B:C ratios were in the 15 to 25 range compared to 2013 era where the B:C ratio is 40.



END

DRAFT



**Adjustments for Cook Inlet Reporting Groups to the Addendum to FMS 16-10: Redefinition of Reporting Groups to Separate Cook Inlet into Four Groups for Genetic Stock Composition of the Commercial Harvest of Sockeye Salmon in the Kodiak Management Area, 2014-2016.**



United Cook Inlet Drift Association, September 2017



### Study Background to FMS 16-10, Shedd, et al., December 2016

“The Alaska Department of Fish and Game (ADF&G) used genetic mixed stock analysis (msa)\* to estimate the stock composition and the stock-specific harvest of commercial sockeye salmon (*Oncorhynchus Nerka*) harvests in the Kodiak Management Area (KMA) from 2014 to 2016.” (Shedd, et al., 2016). The first ADF&G report concerning the genetic msa was released in December 2016 as Fishery Manuscript Series No. 16-10, authors: Shedd, Foster, Dun, Hoyt, Wattum and Habicht (FMS 16-10). This genetic msa report FMS 16-10 was released to the public a few days prior to the Board of Fish (BOF) 2017 tri-annual Kodiak regulatory meeting. The FMS 16-10 report was released to the public nine (9) months after the close of submitting regulatory proposal changes for both the KMA and Cook Inlet Management Areas. The December 2016 public release of FMS 16-10 generated great concerns from the public, regional stakeholders, ADF&G managers and the BOF. Numerous questions arose as to the msa genetic findings, the significance of these findings and how these findings were to be used in the development and adjustments to salmon management plans and attending regulations.

In FMS 16-10, there were genetic findings concerning the sockeye harvests in KMA from six (6) regional reporting groups: 1. West of Chignik; 2. Chignik; 3. Cook Inlet; 4. Prince William Sound; 5. South of Cape Suckling and 6. Kodiak.

### Addendum to FMS 16-10

At the January 2017 BOF meeting held in Kodiak, there was a specific request of ADF&G to further examine the Cook Inlet regional reporting group and divide it into four (4) subregional groups: 1. Other Cook Inlet (OCI); 2. Susitna; 3. Kenai; and 4. Kasilof. The Addendum to FMS 16-10 was made public in September 2017. In the Addendum to FMS 16-10, the regional (Cook Inlet) group was further defined, refined and reported as belonging to one of these four subregional groups. Tables 1-10 in the Addendum report the assignment of the Cook Inlet regional sockeye salmon stocks into the 4 subregional reporting groups. Also, in the Addendum to FMS 16-10, the original six (6) reporting groups have been expanded, refined and are now listed in Tables 1-9 as 19 reporting groups. In the Addendum to FMS 16-10, there are 19 reporting groups: three (3) original regional groups and sixteen (16) newly described subregional reporting groups. Among these newly described and listed reporting groups are the “Unknown.” These “Unknown” are also listed as “Unsampled Areas.” It is some of these sockeyes that, on a mathematical basis, will be assigned to one the four Cook Inlet subregional groups in the adjustments for Cook Inlet Reporting Groups.

\* UCIDA suggests using non-capitalized letters, noting difference from the Magnuson Stevens Act (MSA).



In both the FMS 16-10 and the Addendum to FMS 16-10, all genetic msa are estimates, even though in both reports, both regional and subregional harvest numbers are often estimated to the single digit (sockeye). In the Addendum to FMS 16-10, on Tables 1-9 there are two notes: the first to Stock Specific and second to Results for Cook Inlet. Both of the notes alert the reader that the median number of sockeyes is biased low and that the value of sockeye in any strata below a 5% contribution are not reported in Tables 1-9. An asterisk (\*) is shown rather than the numerical value. The 5% cut-off screening was reflected only in the 4 Cook Inlet subregional groups.

Tables 1A through 9A show the Cook Inlet subregional reporting group totals. There is a corresponding decrease in the "Unknown (Unsampled)" as some of these sockeyes were assigned to one of the four Cook Inlet subregional groups.



Table 1A (Adjusted for Cook Inlet). Kodiak Management Area, 2014, early temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A1, A13, A25 and A37 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak | Alitak | Ayaklulik Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|-------|--------|-----------------------|-----------------|---------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 0     | 0      | 2,479                 | 1,292           | 2,066   | 5,273            | 11,403                   | 11,403             |
| Black Lake              | 0               | 0     | 0      | 1                     | 146             | 1,348   | 3,486            | 5,250                    | 5,250              |
| Chignik Lake            | 0               | 0     | 0      | 0                     | 0               | 0       | 977              | 1,168                    | 1,168              |
| Upper Station / Akalura | 0               | 0     | 0      | 4,539                 | 1,622           | 1,523   | 524              | 8,472                    | 8,472              |
| Ayakulik / Frazer       | 0               | 0     | 0      | 116,247               | 19,980          | 18,819  | 12,571           | 167,723                  | 167,723            |
| Karluk                  | 0               | 0     | 0      | 16,588                | 26,303          | 31,477  | 16,000           | 90,526                   | 90,526             |
| Uganik                  | 0               | 0     | 0      | 768                   | 816             | 18,449  | 12,073           | 32,444                   | 32,444             |
| Northwest Kodiak        | 0               | 0     | 0      | 0                     | 363             | 6,027   | 4,121            | 10,855                   | 10,855             |
| Afognak                 | 0               | 0     | 0      | 0                     | 313             | 936     | 3,869            | 5,301                    | 5,301              |
| Eastside Kodiak         | 0               | 0     | 0      | 348                   | 425             | 0       | 0                | 1,353                    | 1,353              |
| Saltery                 | 0               | 0     | 0      | 2,897                 | 830             | 16,457  | 17,565           | 37,982                   | 37,982             |
| Other Cook Inlet (OCI)  | 0               | 0     | 0      | 1,223                 | *               | *       | *                | 2,784                    | 3,740              |
| Susitna                 | 0               | 0     | 0      | 0                     | *               | *       | *                | 2                        | 3                  |
| Kenai                   | 0               | 0     | 0      | 1,601                 | *               | *       | *                | 2,056                    | 2,762              |
| Kasilof                 | 0               | 0     | 0      | 8,228                 | *               | *       | *                | 10,854                   | 14,583             |
| PWS                     | 0               | 0     | 0      | 3,866                 | 881             | 2,009   | 1,065            | 8,095                    | 8,095              |
| South of Cape Suckling  | 0               | 0     | 0      | 1,625                 | 49              | 1       | 0                | 2,105                    | 2,105              |
| Unknown (Unsampled)     | 137,712         | 0     | 0      | 0                     | 0               | 0       | 0                | 137,712                  | 132,320            |
| Actual                  | 137,712         | 0     | 0      | 160,410               | 53,020          | 99,112  | 77,524           | 536,085                  | 536,085            |
| Total by Sampling Area  | 137,712         | 0     | 0      | 162,984               | 56,018          | 102,346 | 79,494           | 538,554                  |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns



Table 2A (Adjusted for Cook Inlet). Kodiak Management Area, 2014, middle temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A1, A13, A25 and A37 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak | Alitak  | Ayaklulik Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|-------|---------|-----------------------|-----------------|---------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 0     | 139     | 7,202                 | 4               | 0       | 0                | 8,461                    | 8,461              |
| Black Lake              | 0               | 0     | 0       | 0                     | 0               | 0       | 1,137            | 1,450                    | 1,450              |
| Chignik Lake            | 0               | 0     | 1,217   | 0                     | 2,244           | 1,138   | 3,085            | 8,076                    | 8,076              |
| Upper Station / Akalura | 0               | 0     | 5,383   | 3,428                 | 0               | 0       | 0                | 9,641                    | 9,641              |
| Ayakulik / Frazer       | 0               | 0     | 65,573  | 90,666                | 17,635          | 6,804   | 4,331            | 185,249                  | 185,249            |
| Karluk                  | 0               | 0     | 0       | 1,725                 | 25,856          | 12,800  | 11,895           | 53,027                   | 53,027             |
| Uganik                  | 0               | 0     | 2       | 0                     | 3,665           | 2,305   | 8,208            | 14,736                   | 14,736             |
| Northwest Kodiak        | 0               | 0     | 0       | 0                     | 115             | 0       | 0                | 538                      | 538                |
| Afognak                 | 0               | 0     | 0       | 0                     | 0               | 256     | 927              | 1,600                    | 1,600              |
| Eastside Kodiak         | 0               | 0     | 2,579   | 4,617                 | 220             | 198     | 0                | 8,320                    | 8,320              |
| Saltery                 | 0               | 0     | 935     | 22,990                | 13,690          | 90,992  | 88,284           | 217,070                  | 217,070            |
| Other Cook Inlet (OCI)  | 0               | 0     | 4,239   | 2,775                 | *               | 0       | *                | 7,976                    | 15,398             |
| Susitna                 | 0               | 0     | 1,194   | 1,173                 | *               | 1,081   | *                | 4,214                    | 8,136              |
| Kenai                   | 0               | 0     | 18,640  | 29,413                | *               | 2,866   | *                | 51,541                   | 99,505             |
| Kasilof                 | 0               | 0     | 12,932  | 6,987                 | *               | 2,840   | *                | 24,990                   | 48,246             |
| PWS                     | 0               | 0     | 768     | 958                   | 1,096           | 2,689   | 7,839            | 14,102                   | 14,102             |
| South of Cape Suckling  | 0               | 0     | 10      | 0                     | 0               | 0       | 0                | 612                      | 612                |
| Unknown (Unsampled)     | 569,159         | 0     | 0       | 0                     | 0               | 0       | 0                | 569,159                  | 486,595            |
| Actual                  | 569,159         | 0     | 113,611 | 171,934               | 64,525          | 123,969 | 125,706          | 1,180,762                | 1,180,762          |
| Total by Sampling Area  | 569,159         | 0     | 115,998 | 175,205               | 68,438          | 126,840 | 128,836          | 1,184,476                |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns





The 2014 totals by Shedd, et al., and UCIDA, 2017 for all three time stratum are shown in Tables 11 and 11A, see page 13.

| Table 3A (Adjusted for Cook Inlet). Kodiak Management Area, 2014, late temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A3, A15, A27, A39, and A50 for additional stock composition and stock-specific harvest statistics.               |                 |       |        |                     |                 |         |                  |                          |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|--------|---------------------|-----------------|---------|------------------|--------------------------|--------------------|
| Reporting Group                                                                                                                                                                                                                                                                                                                                                                                                                    | Unsampled Areas | Igvak | Alitak | Ayakluk Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
| West of Chignik                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 0      | 423                 | 0               | 0       | 0                | 484                      | 484                |
| Black Lake                                                                                                                                                                                                                                                                                                                                                                                                                         | 0               | 0     | 0      | 0                   | 0               | 0       | 0                | 0                        | 0                  |
| Chignik Lake                                                                                                                                                                                                                                                                                                                                                                                                                       | 0               | 0     | 19     | 401                 | 334             | 0       | 1,103            | 2,029                    | 2,029              |
| Upper Station / Akalura                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 3,449  | 12,307              | 11,887          | 11,664  | 7,194            | 46,775                   | 46,775             |
| Ayakulik / Frazer                                                                                                                                                                                                                                                                                                                                                                                                                  | 0               | 0     | 1,366  | 29,735              | 7,688           | 3,581   | 0                | 43,013                   | 43,013             |
| Karluk                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 7,239               | 100,168         | 111,318 | 131,408          | 349,984                  | 349,984            |
| Uganik                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 0                   | 0               | 13      | 0                | 254                      | 254                |
| Northwest Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                   | 0               | 0     | 0      | 0                   | 0               | 0       | 0                | 2                        | 2                  |
| Afognak                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 0                   | 0               | 0       | 0                | 0                        | 0                  |
| Eastside Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 203    | 398                 | 0               | 393     | 0                | 1,180                    | 1,180              |
| Saltery                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 2,403               | 3,591           | 25,780  | 18,364           | 50,307                   | 50,307             |
| Other Cook Inlet (OCI)                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 548                 | *               | *       | *                | 752                      | 1,128              |
| Susitna                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 0                   | *               | *       | *                | 24                       | 36                 |
| Kenai                                                                                                                                                                                                                                                                                                                                                                                                                              | 0               | 0     | 268    | 2,270               | *               | *       | *                | 7,171                    | 10,758             |
| Kasilof                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 0                   | *               | *       | *                | 0                        | 0                  |
| PWS                                                                                                                                                                                                                                                                                                                                                                                                                                | 0               | 0     | 9      | 95                  | 14              | 671     | 143              | 1,269                    | 1,269              |
| South of Cape Suckling                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 62     | 412                 | 5               | 170     | 1,245            | 2,173                    | 2,173              |
| Unknown (Unsampled)                                                                                                                                                                                                                                                                                                                                                                                                                | 254,809         | 0     | 0      | 0                   | 0               | 0       | 0                | 254,809                  | 250,833            |
| Actual                                                                                                                                                                                                                                                                                                                                                                                                                             | 254,809         | 0     | 5,376  | 56,231              | 123,687         | 153,590 | 159,457          | 760,226                  | 760,226            |
| Total by Sampling Area                                                                                                                                                                                                                                                                                                                                                                                                             | 254,809         | 2,477 | 5,437  | 57,066              | 124,879         | 155,658 | 163,843          | 764,169                  |                    |
| <p><i>Note:</i> Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.</p> <p><i>Note:</i> Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.</p> <p><i>Note:</i> Actual figures calculated by UCIDA are shown in gray rows and columns</p> |                 |       |        |                     |                 |         |                  |                          |                    |



Table 4A (Adjusted for Cook Inlet). Kodiak Management Area, 2015, early temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A5, A17, A29, A41, and A52 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak | Alitak | Ayakluk Halibut Bay | Karluk Sturgeon | Uyak   | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|-------|--------|---------------------|-----------------|--------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 0     | 50     | 0                   | 182             | 0      | 63               | 546                      | 546                |
| Black Lake              | 0               | 0     | 290    | 3,628               | 0               | 2,161  | 2,806            | 9,149                    | 9,149              |
| Chignik Lake            | 0               | 0     | 0      | 0                   | 0               | 0      | 0                | 12                       | 12                 |
| Upper Station / Akalura | 0               | 0     | 1,801  | 8,193               | 1,494           | 0      | 0                | 11,609                   | 11,609             |
| Ayakulik / Frazer       | 0               | 0     | 15,333 | 91,015              | 12,355          | 1,879  | 687              | 121,361                  | 121,361            |
| Karluk                  | 0               | 0     | 110    | 19,035              | 15,885          | 13,736 | 4,404            | 53,331                   | 53,331             |
| Uganik                  | 0               | 0     | 0      | 4,314               | 1,220           | 9,887  | 9,681            | 25,330                   | 25,330             |
| Northwest Kodiak        | 0               | 0     | 0      | 0                   | 1,232           | 3,002  | 3,080            | 7,822                    | 7,822              |
| Afognak                 | 0               | 0     | 242    | 1,064               | 687             | 962    | 3,446            | 6,617                    | 6,617              |
| Eastside Kodiak         | 0               | 0     | 429    | 0                   | 0               | 0      | 0                | 677                      | 677                |
| Saltery                 | 0               | 0     | 93     | 0                   | 0               | 1,985  | 2,611            | 4,805                    | 4,805              |
| Other Cook Inlet (OCI)  | 0               | 0     | 1,970  | 8,289               | *               | 5,490  | 1,327            | 17,240                   | 25,864             |
| Susitna                 | 0               | 0     | 0      | 0                   | *               | 0      | 0                | 0                        | 0                  |
| Kenai                   | 0               | 0     | 858    | 9,964               | *               | 1,269  | 232              | 12,500                   | 18,753             |
| Kasilof                 | 0               | 0     | 4,809  | 38,593              | *               | 163    | 947              | 46,174                   | 69,273             |
| PWS                     | 0               | 0     | 2,068  | 16,111              | 1,271           | 6,565  | 1,725            | 27,747                   | 27,747             |
| South of Cape Suckling  | 0               | 0     | 0      | 0                   | 0               | 0      | 0                | 134                      | 134                |
| Unknown (Unsampled)     | 119,569         | 0     | 0      | 0                   | 0               | 0      | 0                | 119,569                  | 81,593             |
| Actual                  | 119,569         | 0     | 28,053 | 200,206             | 34,326          | 47,099 | 31,009           | 464,623                  | 464,623            |
| Total by Sampling Area  | 119,569         | 0     | 28,723 | 203,170             | 35,183          | 49,515 | 31,607           | 467,767                  |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns



Table 5A (Adjusted for Cook Inlet). Kodiak Management Area, 2015, middle temporal stratum. Median estimates of stock-specific harvest by subregional group. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A6, A18, A30, A42, A53 and A60 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak | Alitak  | Ayaklulik Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|-------|---------|-----------------------|-----------------|---------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 93    | 0       | 0                     | 0               | 0       | 0                | 122                      | 122                |
| Black Lake              | 0               | 727   | 0       | 0                     | 0               | 293     | 2                | 1,364                    | 1,364              |
| Chignik Lake            | 0               | 1,324 | 0       | 0                     | 0               | 0       | 8,725            | 10,193                   | 10,193             |
| Upper Station / Akalura | 0               | 0     | 0       | 0                     | 0               | 0       | 0                | 36                       | 36                 |
| Ayakulik / Frazer       | 0               | 0     | 28,542  | 156,626               | 2,394           | 7       | 2,974            | 191,277                  | 191,277            |
| Karluk                  | 0               | 152   | 0       | 17,586                | 14,921          | 11,758  | 19,845           | 64,814                   | 64,814             |
| Uganik                  | 0               | 54    | 0       | 0                     | 0               | 4,822   | 9,812            | 15,550                   | 15,550             |
| Northwest Kodiak        | 0               | 74    | 0       | 0                     | 1               | 0       | 871              | 1,246                    | 1,246              |
| Afognak                 | 0               | 0     | 0       | 0                     | 495             | 0       | 2                | 604                      | 604                |
| Eastside Kodiak         | 0               | 0     | 5,691   | 1,991                 | 299             | 0       | 0                | 8,387                    | 8,387              |
| Saltery                 | 0               | 119   | 810     | 18,453                | 1,921           | 52,377  | 121,181          | 195,662                  | 195,662            |
| Other Cook Inlet (OCI)  | 0               | 1,268 | 7,796   | 28,391                | 1,815           | 12,925  | 4,493            | 57,626                   | 86,730             |
| Susitna                 | 0               | 220   | 14,845  | 14,172                | 1,707           | 16,184  | 11,840           | 59,809                   | 90,015             |
| Kenai                   | 0               | 1,560 | 100,790 | 103,596               | 3,725           | 56,413  | 15,510           | 282,000                  | 424,423            |
| Kasilof                 | 0               | 489   | 3,438   | 37,658                | 1,369           | 7,798   | 5,099            | 56,450                   | 84,960             |
| PWS                     | 0               | 384   | 1,857   | 1,056                 | 846             | 7,874   | 11,886           | 24,953                   | 24,953             |
| South of Cape Suckling  | 0               | 0     | 0       | 0                     | 0               | 520     | 0                | 676                      | 676                |
| Unknown (Unsampled)     | 493,152         | 0     | 0       | 0                     | 0               | 0       | 0                | 493,152                  | 262,909            |
| Actual                  | 493,152         | 6,464 | 163,769 | 379,529               | 29,493          | 170,971 | 212,240          | 1,463,921                | 1,463,921          |
| Total by Sampling Area  | 493,152         | 6,595 | 165,894 | 384,390               | 29,915          | 174,009 | 215,645          | 1,469,600                |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns



The 2016 totals by Shedd, et al., and UCIDA, 2017 for all three time stratum are shown in Tables 11 and 11A, see page 13.

| Table 6A (Adjusted for Cook Inlet). Kodiak Management Area, 2015, late temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A7, A19, A31, A43, and A54 for additional stock composition and stock-specific harvest statistics.               |                 |       |        |                     |                 |         |                  |                          |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|--------|---------------------|-----------------|---------|------------------|--------------------------|--------------------|
| Reporting Group                                                                                                                                                                                                                                                                                                                                                                                                                    | Unsampled Areas | Igvak | Alitak | Ayakluk Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
| West of Chignik                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 0      | 40                  | 0               | 0       | 0                | 49                       | 49                 |
| Black Lake                                                                                                                                                                                                                                                                                                                                                                                                                         | 0               | 0     | 0      | 0                   | 0               | 0       | 0                | 0                        | 0                  |
| Chignik Lake                                                                                                                                                                                                                                                                                                                                                                                                                       | 0               | 0     | 0      | 0                   | 0               | 0       | 2,382            | 2,418                    | 2,418              |
| Upper Station / Akalura                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 10,719 | 3,271               | 2,498           | 0       | 919              | 17,591                   | 17,591             |
| Ayakulik / Frazer                                                                                                                                                                                                                                                                                                                                                                                                                  | 0               | 0     | 11,648 | 5,105               | 162             | 0       | 0                | 17,150                   | 17,150             |
| Karluk                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 5,030               | 50,056          | 47,994  | 30,477           | 133,679                  | 133,679            |
| Uganik                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 38                  | 0               | 294     | 4,338            | 5,343                    | 5,343              |
| Northwest Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                   | 0               | 0     | 0      | 41                  | 0               | 0       | 0                | 84                       | 84                 |
| Afognak                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 0                   | 0               | 0       | 0                | 9                        | 9                  |
| Eastside Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 5,127  | 352                 | 0               | 0       | 304              | 5,989                    | 5,989              |
| Saltery                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 2,214  | 4,475               | 3,821           | 36,573  | 49,391           | 96,587                   | 96,587             |
| Other Cook Inlet (OCI)                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | *      | 116                 | 412             | 1,253   | 3,308            | 5,465                    | 10,195             |
| Susitna                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | *      | 1                   | 1,101           | 8,896   | 5,713            | 16,009                   | 29,864             |
| Kenai                                                                                                                                                                                                                                                                                                                                                                                                                              | 0               | 0     | *      | 1,542               | 4,038           | 29,461  | 34,796           | 70,645                   | 131,783            |
| Kasilof                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | *      | 0                   | 0               | 0       | 414              | 571                      | 1,065              |
| PWS                                                                                                                                                                                                                                                                                                                                                                                                                                | 0               | 0     | 160    | 232                 | 66              | 0       | 7,673            | 8,698                    | 8,698              |
| South of Cape Suckling                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 0                   | 517             | 0       | 1,578            | 2,622                    | 2,622              |
| Unknown (Unsampled)                                                                                                                                                                                                                                                                                                                                                                                                                | 334,654         | 0     | 0      | 0                   | 0               | 0       | 0                | 334,654                  | 254,437            |
| Actual                                                                                                                                                                                                                                                                                                                                                                                                                             | 334,654         | 0     | 29,868 | 20,243              | 62,671          | 124,471 | 141,293          | 717,563                  | 717,563            |
| Total by Sampling Area                                                                                                                                                                                                                                                                                                                                                                                                             | 334,654         | 1,552 | 31,294 | 20,619              | 63,532          | 126,126 | 143,567          | 721,344                  |                    |
| <p><i>Note:</i> Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.</p> <p><i>Note:</i> Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.</p> <p><i>Note:</i> Actual figures calculated by UCIDA are shown in gray rows and columns</p> |                 |       |        |                     |                 |         |                  |                          |                    |



Table 7A (Adjusted for Cook Inlet). Kodiak Management Area, 2016, early temporal stratum. Median estimates of stock-specific harvest by area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A9, A21, A33, A45, A56, and A62 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak   | Alitak | Ayakluk Halibut Bay | Karluk Sturgeon | Uyak   | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|---------|--------|---------------------|-----------------|--------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 11,843  | 0      | 0                   | 414             | 0      | 0                | 12,375                   | 12,375             |
| Black Lake              | 0               | 109,455 | 231    | 0                   | 0               | 0      | 321              | 110,161                  | 110,161            |
| Chignik Lake            | 0               | 4,762   | 0      | 0                   | 170             | 0      | 0                | 4,955                    | 4,955              |
| Upper Station / Akalura | 0               | 13      | 1,548  | 0                   | 674             | 0      | 0                | 2,459                    | 2,459              |
| Ayakulik / Frazer       | 0               | 4,166   | 6,022  | 3,859               | 3,073           | 1,698  | 1,349            | 20,301                   | 20,301             |
| Karluk                  | 0               | 7,224   | 0      | 28                  | 7,760           | 7,057  | 5,027            | 27,308                   | 27,308             |
| Uganik                  | 0               | 1,565   | 244    | 7                   | 778             | 19,102 | 43,092           | 64,998                   | 64,998             |
| Northwest Kodiak        | 0               | 5       | 0      | 0                   | 58              | 88     | 2,066            | 2,632                    | 2,632              |
| Afognak                 | 0               | 0       | 56     | 0                   | 58              | 649    | 1,782            | 2,664                    | 2,664              |
| Eastside Kodiak         | 0               | 0       | 265    | 0                   | 0               | 0      | 35               | 484                      | 484                |
| Saltery                 | 0               | 0       | 0      | 0                   | 0               | 1,609  | 2,424            | 4,147                    | 4,147              |
| Other Cook Inlet (OCI)  | 0               | 2,079   | 1,151  | *                   | *               | 2,509  | 2,957            | 8,855                    | 11,477             |
| Susitna                 | 0               | 0       | 2      | *                   | *               | 0      | 0                | 20                       | 26                 |
| Kenai                   | 0               | 301     | 773    | *                   | *               | 0      | 322              | 1,550                    | 2,009              |
| Kasilof                 | 0               | 6,542   | 627    | *                   | *               | 726    | 1,052            | 9,080                    | 11,769             |
| PWS                     | 0               | 3,307   | 0      | 0                   | 363             | 3,372  | 1,195            | 8,548                    | 8,548              |
| South of Cape Suckling  | 0               | 4       | 0      | 0                   | 277             | 0      | 0                | 461                      | 461                |
| Unknown (Unsampled)     | 83,870          | 0       | 0      | 0                   | 0               | 0      | 0                | 83,870                   | 78,094             |
| Actual                  | 83,870          | 151,266 | 10,919 | 3,894               | 13,625          | 36,810 | 61,622           | 364,868                  | 364,868            |
| Total by Sampling Area  | 83,870          | 154,318 | 11,118 | 3,937               | 13,856          | 37,238 | 62,771           | 367,108                  |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns





Table 8A (Adjusted for Cook Inlet). Kodiak Management Area, 2016, middle temporal stratum. Median estimates of stock-specific harvest by subregional group. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A10, A22, A34, A46, A57, and A63 for additional stock composition and stock-specific harvest statistics.

| Reporting Group         | Unsampled Areas | Igvak   | Alitak | Ayaklulik Halibut Bay | Karluk Sturgeon | Uyak   | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
|-------------------------|-----------------|---------|--------|-----------------------|-----------------|--------|------------------|--------------------------|--------------------|
| West of Chignik         | 0               | 0       | 0      | 0                     | 0               | 0      | 0                | 52                       | 52                 |
| Black Lake              | 0               | 440     | 1,172  | 0                     | 0               | 0      | 0                | 1,802                    | 1,802              |
| Chignik Lake            | 0               | 9,300   | 0      | 0                     | 0               | 0      | 0                | 10,137                   | 10,137             |
| Upper Station / Akalura | 0               | 0       | 1,761  | 1,083                 | 132             | 0      | 0                | 3,206                    | 3,206              |
| Ayakulik / Frazer       | 0               | 1,008   | 15,768 | 56,389                | 1,826           | 2,767  | 0                | 78,019                   | 78,019             |
| Karluk                  | 0               | 0       | 0      | 4,487                 | 3,455           | 5,442  | 13,192           | 27,061                   | 27,061             |
| Uganik                  | 0               | 0       | 0      | 1,611                 | 745             | 6,835  | 20,508           | 29,991                   | 29,991             |
| Northwest Kodiak        | 0               | 0       | 0      | 0                     | 0               | 4      | 265              | 805                      | 805                |
| Afognak                 | 0               | 0       | 0      | 242                   | 109             | 0      | 1,912            | 2,406                    | 2,406              |
| Eastside Kodiak         | 0               | 0       | 789    | 252                   | 100             | 0      | 0                | 1,448                    | 1,448              |
| Saltery                 | 0               | 0       | 0      | 1,912                 | 1,740           | 40,571 | 64,073           | 108,507                  | 108,507            |
| Other Cook Inlet (OCI)  | 0               | 20,696  | 1,839  | 3,507                 | 154             | 767    | 7,512            | 35,065                   | 60,777             |
| Susitna                 | 0               | 9,174   | 3,406  | 7,055                 | 311             | 2,625  | 7,738            | 30,640                   | 53,107             |
| Kenai                   | 0               | 131,637 | 34,067 | 36,642                | 306             | 6,465  | 18,257           | 227,515                  | 394,342            |
| Kasilof                 | 0               | 3,087   | 1,588  | 3,005                 | 341             | 1,140  | 2,119            | 11,774                   | 20,407             |
| PWS                     | 0               | 0       | 294    | 0                     | 1,322           | 1,854  | 94               | 4,992                    | 4,992              |
| South of Cape Suckling  | 0               | 0       | 0      | 317                   | 0               | 0      | 0                | 1,471                    | 1,471              |
| Unknown (Unsampled)     | 423,895         | 0       | 0      | 0                     | 0               | 0      | 0                | 423,895                  | 200,255            |
| Actual                  | 423,895         | 175,342 | 60,684 | 116,502               | 10,541          | 68,470 | 135,670          | 998,786                  | 998,786            |
| Total by Sampling Area  | 423,895         | 177,315 | 61,930 | 120,068               | 10,700          | 69,803 | 138,281          | 1,001,992                |                    |

*Note:* Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.

*Note:* Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.

*Note:* Actual figures calculated by UCIDA are shown in gray rows and columns



The 2016 totals by Shedd, et al., and UCIDA, 2017 for all three time stratum are shown in Tables 11 and 11A, see page 13.

| Table 9A (Adjusted for Cook Inlet). Kodiak Management Area, 2016, late temporal stratum. Median estimates of stock-specific harvest by sampling area for all subregional groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based of fish ticket information by area. See Appendix A11, A23, A35, A47, and A58 for additional stock composition and stock-specific harvest statistics.              |                 |       |        |                       |                 |         |                  |                          |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|--------|-----------------------|-----------------|---------|------------------|--------------------------|--------------------|
| Reporting Group                                                                                                                                                                                                                                                                                                                                                                                                                    | Unsampled Areas | Igvak | Alitak | Ayaklulik Halibut Bay | Karluk Sturgeon | Uyak    | Uganik Kupreanof | Total by Reporting Group | Total UCI Adjusted |
| West of Chignik                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 0      | 0                     | 0               | 0       | 0                | 110                      | 110                |
| Black Lake                                                                                                                                                                                                                                                                                                                                                                                                                         | 0               | 0     | 0      | 0                     | 0               | 0       | 0                | 0                        | 0                  |
| Chignik Lake                                                                                                                                                                                                                                                                                                                                                                                                                       | 0               | 0     | 0      | 0                     | 0               | 0       | 0                | 0                        | 0                  |
| Upper Station / Akalura                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 13,918 | 2,976                 | 2,976           | 1,890   | 0                | 21,920                   | 21,920             |
| Ayakulik / Frazer                                                                                                                                                                                                                                                                                                                                                                                                                  | 0               | 0     | 2,777  | 2,027                 | 42              | 2,667   | 0                | 7,831                    | 7,831              |
| Karluk                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 936    | 15,965                | 103,210         | 79,005  | 75,234           | 274,309                  | 274,309            |
| Uganik                                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 0                     | 0               | 0       | 586              | 751                      | 751                |
| Northwest Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                   | 0               | 0     | 0      | 0                     | 213             | 0       | 0                | 235                      | 235                |
| Afognak                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 0      | 120                   | 0               | 0       | 0                | 131                      | 131                |
| Eastside Kodiak                                                                                                                                                                                                                                                                                                                                                                                                                    | 0               | 0     | 185    | 153                   | 0               | 0       | 0                | 494                      | 494                |
| Saltery                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 1,681  | 1,780                 | 2,904           | 29,558  | 26,032           | 63,176                   | 63,176             |
| Other Cook Inlet (OCI)                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 114    | 1,196                 | *               | 298     | 3,343            | 5,262                    | 7,078              |
| Susitna                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 62     | 470                   | *               | 2,334   | 5,318            | 8,505                    | 11,440             |
| Kenai                                                                                                                                                                                                                                                                                                                                                                                                                              | 0               | 0     | 1,178  | 6,918                 | *               | 8,874   | 24,262           | 42,846                   | 57,634             |
| Kasilof                                                                                                                                                                                                                                                                                                                                                                                                                            | 0               | 0     | 54     | 914                   | *               | 0       | 159              | 1,352                    | 1,819              |
| PWS                                                                                                                                                                                                                                                                                                                                                                                                                                | 0               | 0     | 42     | 383                   | 125             | 0       | 727              | 1,928                    | 1,928              |
| South of Cape Suckling                                                                                                                                                                                                                                                                                                                                                                                                             | 0               | 0     | 0      | 191                   | 302             | 804     | 1,050            | 2,625                    | 2,625              |
| Unknown (Umsampled)                                                                                                                                                                                                                                                                                                                                                                                                                | 153,272         | 0     | 0      | 0                     | 0               | 0       | 0                | 153,272                  | 133,266            |
| Actual                                                                                                                                                                                                                                                                                                                                                                                                                             | 153,272         | 0     | 20,947 | 33,093                | 109,772         | 125,430 | 136,711          | 584,747                  | 584,747            |
| Total by Sampling Area                                                                                                                                                                                                                                                                                                                                                                                                             | 153,272         | 9,228 | 21,243 | 33,721                | 113,445         | 126,837 | 139,612          | 597,358                  |                    |
| <p><i>Note:</i> Stock-specific harvest estimates may not sum to the total harvest because summed medians are biased low.</p> <p><i>Note:</i> Results for Cook Inlet subregional reporting groups are only reported if the overall contribution to the Cook Inlet group in the stratum or any contributing strata is greater than 5%.</p> <p><i>Note:</i> Actual figures calculated by UCIDA are shown in gray rows and columns</p> |                 |       |        |                       |                 |         |                  |                          |                    |



Table 10A shows the original and the adjusted harvest estimates by year for the four Cook Inlet subregional groups.

| Table 10A (Adjusted for Cook Inlet). Kodiak Management Area, 2014-2016. Median estimates of stock-specific harvest by year across all sampling areas for all subregional reporting groups. Numbers for Unknown (reporting group) and for Total by Year are estimates based on fish ticket information. See Appendices A65-67 for additional stock composition and stock-specific harvest statistics for these years. |           |           |           |           |           |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Reporting Group                                                                                                                                                                                                                                                                                                                                                                                                      | 2014      | 2014      | 2015      | 2015      | 2016      | 2016      |
| West of Chignik                                                                                                                                                                                                                                                                                                                                                                                                      | 20,559    | 20,559    | 873       | 873       | 13,398    | 13,398    |
| Black Lake                                                                                                                                                                                                                                                                                                                                                                                                           | 7,016     | 7,016     | 10,848    | 10,848    | 112,103   | 112,103   |
| Chignik Lake                                                                                                                                                                                                                                                                                                                                                                                                         | 11,579    | 11,579    | 13,014    | 13,014    | 15,267    | 15,267    |
| Upper Station / Akalura                                                                                                                                                                                                                                                                                                                                                                                              | 65,196    | 65,196    | 29,702    | 29,702    | 27,924    | 27,924    |
| Ayakulik / Frazer                                                                                                                                                                                                                                                                                                                                                                                                    | 396,083   | 396,083   | 329,848   | 329,848   | 106,364   | 106,364   |
| Karluk                                                                                                                                                                                                                                                                                                                                                                                                               | 493,692   | 493,692   | 252,170   | 252,170   | 328,862   | 328,862   |
| Uganik                                                                                                                                                                                                                                                                                                                                                                                                               | 47,797    | 47,797    | 46,650    | 46,650    | 96,205    | 96,205    |
| Northwest Kodiak                                                                                                                                                                                                                                                                                                                                                                                                     | 11,895    | 11,895    | 9,569     | 9,569     | 3,938     | 3,938     |
| Afognak                                                                                                                                                                                                                                                                                                                                                                                                              | 7,057     | 7,057     | 7,648     | 7,648     | 5,330     | 5,330     |
| Eastside Kodiak                                                                                                                                                                                                                                                                                                                                                                                                      | 11,300    | 11,300    | 15,339    | 15,339    | 2,988     | 2,988     |
| Saltery                                                                                                                                                                                                                                                                                                                                                                                                              | 305,476   | 305,476   | 297,204   | 297,204   | 175,968   | 175,968   |
| Other Cook Inlet (OCI)                                                                                                                                                                                                                                                                                                                                                                                               | 11,908    | 20,266    | 80,698    | 117,683   | 49,536    | 79,332    |
| Susitna                                                                                                                                                                                                                                                                                                                                                                                                              | 4,466     | 8,175     | 75,989    | 105,726   | 39,440    | 64,573    |
| Kenai                                                                                                                                                                                                                                                                                                                                                                                                                | 60,973    | 113,025   | 365,335   | 513,013   | 272,160   | 453,985   |
| Kasilof                                                                                                                                                                                                                                                                                                                                                                                                              | 36,019    | 62,829    | 103,539   | 154,647   | 22,501    | 33,995    |
| PWS                                                                                                                                                                                                                                                                                                                                                                                                                  | 23,716    | 23,716    | 61,815    | 61,815    | 15,986    | 15,986    |
| South of Cape Suckling                                                                                                                                                                                                                                                                                                                                                                                               | 5,656     | 5,656     | 4,500     | 4,500     | 4,949     | 4,949     |
| Unknown (Unsampled)                                                                                                                                                                                                                                                                                                                                                                                                  | 1,738,649 | 1,647,720 | 1,392,603 | 1,127,095 | 770,647   | 522,399   |
| Total by Year                                                                                                                                                                                                                                                                                                                                                                                                        | 3,259,037 | 3,259,037 | 3,097,344 | 3,097,344 | 2,063,566 | 2,063,566 |
| Note: Stock-specific harvest estimates may not sum to total harvest because summed medians are biased low.                                                                                                                                                                                                                                                                                                           |           |           |           |           |           |           |

Tables 11 and 11A separate out the 4 subregional Cook Inlet stocks that were estimated to have been harvested in the KMA. These harvest estimates are by year, combining all three temporal strata.

| Table 11. Kodiak Management Area 2014-2016. Estimated Cook Inlet Harvests |         |         |         |           |         |
|---------------------------------------------------------------------------|---------|---------|---------|-----------|---------|
| Reporting Group                                                           | 2014    | 2015    | 2016    | Total     | Average |
| Other Cook Inlet (OCI)                                                    | 11,908  | 80,698  | 49,536  | 142,142   | 47,381  |
| Susitna                                                                   | 4,466   | 75,989  | 39,440  | 119,895   | 39,965  |
| Kenai                                                                     | 60,973  | 365,335 | 272,160 | 698,468   | 232,823 |
| Kasilof                                                                   | 36,019  | 103,539 | 22,501  | 162,059   | 54,020  |
| Total                                                                     | 113,366 | 625,561 | 383,637 | 1,122,564 | 374,188 |
| * All data taken from FMS 16-10, Shedd, et al., 2016                      |         |         |         |           |         |

| Table 11A (Adjusted for Cook Inlet). Kodiak Management Area 2014-2016. Estimated Cook Inlet Harvests |         |         |         |           |         |
|------------------------------------------------------------------------------------------------------|---------|---------|---------|-----------|---------|
| Reporting Group                                                                                      | 2014    | 2015    | 2016    | Total     | Average |
| Other Cook Inlet (OCI)                                                                               | 20,266  | 117,683 | 79,332  | 217,281   | 72,427  |
| Susitna                                                                                              | 8,175   | 105,726 | 64,573  | 178,474   | 59,491  |
| Kenai                                                                                                | 113,025 | 513,013 | 453,985 | 1,080,023 | 360,008 |
| Kasilof                                                                                              | 62,829  | 154,647 | 33,995  | 251,471   | 83,824  |
| Total                                                                                                | 204,295 | 891,069 | 631,885 | 1,727,249 | 575,750 |
| * All data taken from UCIDA, 2017                                                                    |         |         |         |           |         |

As can be seen, when Tables 11 and 11A are compared, the estimate of Cook Inlet sockeye harvested in KMA increases. In some years, this adjusted harvests are small (2014 Sustina 4,466 as adjusted is now 8,175. A harvest adjustment of 3,709 additional harvests.) These 3,709 additional sockeye harvests came from the "Unknowns." The largest subregional adjustments come from 2016: Kenai sockeyes are adjusted from 272,160 up to 453,985, an increased harvest adjustment of 181,825 sockeyes in the KMA.

**12A (Adjusted for Cook Inlet). Commercial Harvest of Upper Cook Inlet Sockeye Salmon Stocks 2014-2016**

|                               | <b>UCI<br/>Harvest</b> | <b>KMA % of<br/>UCI Harvest</b> | <b>KMA<br/>Harvest</b> | <b>KMA % of<br/>Total Harvest</b> | <b>Total<br/>Harvest</b> |
|-------------------------------|------------------------|---------------------------------|------------------------|-----------------------------------|--------------------------|
| <b>2014</b>                   |                        |                                 |                        |                                   |                          |
| UCI OCI                       | 262,505                | 7.72%                           | 20,266                 | 7.17%                             | 282,711                  |
| Susitna                       | 123,768                | 6.61%                           | 8,175                  | 6.20%                             | 131,943                  |
| Kenai                         | 1,406,865              | 8.03%                           | 113,025                | 7.44%                             | 1,519,890                |
| Kasilof                       | 327,136                | 19.21%                          | 62,829                 | 16.11%                            | 389,965                  |
| <b>2014 Totals</b>            | <b>2,120,274</b>       |                                 | <b>204,295</b>         |                                   | <b>2,324,509</b>         |
| <b>2015</b>                   |                        |                                 |                        |                                   |                          |
| UCI OCI                       | 225,084                | 52.28%                          | 117,683                | 34.33%                            | 342,767                  |
| Susitna                       | 200,251                | 52.80%                          | 105,726                | 34.55%                            | 305,977                  |
| Kenai                         | 1,657,183              | 30.96%                          | 513,013                | 23.64%                            | 2,170,196                |
| Kasilof                       | 427,733                | 36.16%                          | 154,647                | 26.55%                            | 582,380                  |
| <b>2015 Totals</b>            | <b>2,510,251</b>       |                                 | <b>891,069</b>         |                                   | <b>3,401,320</b>         |
| <b>2016</b>                   |                        |                                 |                        |                                   |                          |
| UCI OCI                       | 138,975                | 57.08%                          | 79,332                 | 24.92%                            | 318,307                  |
| Susitna                       | 124,257                | 51.97%                          | 64,573                 | 34.20%                            | 188,830                  |
| Kenai                         | 1,970,523              | 23.04%                          | 453,985                | 18.72%                            | 2,424,508                |
| Kasilof                       | 146,512                | 23.20%                          | 33,995                 | 18.83%                            | 180,507                  |
| <b>2016 Totals</b>            | <b>2,380,267</b>       |                                 | <b>631,885</b>         |                                   | <b>3,112,152</b>         |
| <b>Grand Totals 2014-2016</b> | <b>7,010,792</b>       |                                 | <b>1,727,249</b>       |                                   | <b>8,837,981</b>         |





## Discussion

There are two ways of calculating percent of harvest. In Table 12, first, the KMA harvests are calculated as a percent of total UCI harvest; second, the KMA harvests are calculated as a percent of the total KMA harvests. When this is done, the significance of the KMA harvests, both in UCI and KMA emerge. For example, in 2015 the KMA harvests of Susitna sockeyes was 52.8% of the total UCI harvests. In Kodiak, the Susitna sockeyes were 34.55% of the total 2015 and 2016 KMA harvest. The point being the harvests of one or all four of the Cook Inlet subregional reporting groups have vastly different significances depending on what area is used as a basis for calculating percentages.

Table 11A has newly constructed estimates for the adjusted sockeye harvests in the 4 Cook Inlet subregional reporting groups for 2014-2016. Table 11A also estimates the 2014-2016 total sockeye harvests in KMA for the 4 Cook Inlet subregions. Lastly, Table 11A provides an estimated harvest of 1,727,249 for these Cook Inlet subregional reporting groups for the 2014-2016 time period.

An estimated harvest of 1,727,000, Cook Inlet sockeye salmon at \$8.00 per fish equates to approximately \$14,000,000 over the 2014-2016 time period. This 1.727 million KMA sockeye harvests do not include the Chinook, coho, chum or pink KMA harvests that are natal to Cook Inlet.



Wallace Fields  
PO Box 1691  
Kodiak, AK 99615

October 2, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon  
in the Kodiak Management Area

Dear Chairman Jensen and Alaska Board of Fisheries members,

I oppose United Cook Inlet Drift Association's Agenda Change Request 11 to adopt a new management plan capping weekly and seasonal commercial sockeye salmon harvest in portions of the Kodiak Management Area. This request does not meet the Board's agenda change request criteria. No new information has been presented by the KMA genetic stock composition study that "corrects an effect on the fishery that was unforeseen when the regulation was adopted." There is no error in regulation that needs correcting nor does Cook Inlet sockeye caught in the KMA create a conservation concern or have a conservation purpose or reason.

For the past 57 years my family has fished salmon in the Kodiak area. We have grown up and raised our families at our setnet locations in Uyak Bay on the West side of Kodiak Island. I have also been a year round commercial fisherman for the past 35 years. The time period identified in ACR 11, June 23 – July 31, is an important time for our family and has been an integral part of our fishing operation. Restricting our fishing during these weeks would be devastating to our overall fishing operation.

The Genetic Stock Composition study was not designed to answer the questions now being raised, and neglected to include much of the necessary information to answer these questions. The natural variability of Kodiak's sockeye runs, or Cook Inlet's, were not addressed. Very unusual weather patterns are not accounted for, nor were the exceptional migration patterns that characterize the years the study was done. The foregone fish that will result from this change in management plan, lost opportunity on Kodiak Regional Aquaculture Association enhanced projects, reallocation of fishing opportunity between gear groups, and over escapement that will result are not addressed by this ACR. Along with a host of other ramifications that need careful consideration, this proposal does not address the economic impact on Kodiak's salmon fishing families, salmon processors and workers, and Kodiak's communities – especially Kodiak villages and small businesses.



The Kodiak's commercial salmon fishery dates to 1883 when the first cannery was established at Karluk. Our fish are processed at a local cannery in Larsen Bay that was built in 1910, and has operated almost continually since then. Since limited entry in the 1970's, little has changed in our fishery. Most of the families that setnet in Uyak Bay have been here since the 1960's or 1970's. Some of the sites we fish have been fished continuously since 1929; others since the 1940's and 1950's.

In 1889 Captain Jefferson Moser reported to congress in his *Report of the Operations of the US Fish Commission Steamer Albatross for the Year ending June 30, 1898* that Cook Inlet sockeye were being caught off of Karluk during the 1898 season. It would be wrong for the Board of Fisheries to restrict this historical fishery to benefit another user group with "common property" sockeye salmon.

The Genetic Stock Composition study does not present any new information and is misleading. UCIDA's request for an agenda change does not meet the Board of Fisheries Agenda Change Request criteria. Please reject this agenda change request.

Sincerely,

*Wallace Fields*

Wallace Fields



William and Kaytlen Roth  
F/V Sea Chantey  
PO Box 3171  
Homer, Alaska 99603

September 29, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.D. Box 115526  
Juneau, AK [99811-5526](mailto:99811-5526)

Re: UCIDA Agenda Change Request and Genetic Stock  
Composition of Sockeye Salmon in the Kodiak Management  
Area

Chairman Jensen,

We appreciate the ability to comment on ACR-11. We oppose this proposed agenda change because it does not meet the Board's agenda change request criteria. The Kodiak Management Area genetic stock composition study does not present new information correcting an effect on a fishery that was unforeseen when the management plan or regulation was adopted, nor does Cook Inlet sockeye caught in Kodiak present a conservation concern or have conservation purpose or reason. In fact, it could have damaging conservation effects on Kodiak salmon runs.

I am a second generation salmon seiner that has just completed my third year with my own vessel in Kodiak. I have recently invested a great deal into my fishing business as a young and beginning fisherman and the thought of not being able to fish for



a large portion of the Kodiak salmon season is very concerning to me and my new wife. We employ at least three crew members every year, and do all of our boat work on the Kenai Peninsula using local marine trades and supply stores. The Kodiak salmon fishery is my main source of income. I have fished my entire salmon career mostly on the West Side of Kodiak. Our livelihood and that of our crew depends on the availability of West Side fishing grounds as that is where my fishing knowledge and expertise lie and is also where our Processor, Icicle Seafoods, is located.



This agenda change request does not address variability in either Kodiak or Cook Inlet sockeye runs. It could also be harmful to local stocks. Neglecting harvest of local Kodiak sockeye runs will cause over-escapement, fleet movement and proposed closures would reallocate catch between seiners and gillnetters and local Pink and Dog harvest being limited to inner bays will result in lower quality of catch for Processors and potentially lower salmon prices for Kodiak fishermen in general. Also important to consider is that many set gillnetters with fish camps near capes - that have been established for generations - do not have the flexibility to move to inner bays and it would present a undue burden on their multi-generational family fishing operations.

This proposal sets an awful precedent, disrupting one area's fishery to only *possibly* provide gains in another management area. We appreciate the responsible and sustainable management by Alaska Department of Fish and Game biologists in Kodiak who have maintaining the future of salmon stocks in mind. We can empathize with the frustrations of our northern neighbors in Cook Inlet, both commercial and recreational fishermen, who have experienced less than satisfactory management of their area. However, salmon are considered common property and do not belong to the management area where they are born and we do not see placing the burden of resolving Cook Inlet management concerns on the Kodiak Management Area as the



answer to their problems. We would not wish, nor expect, such a burden placed on our neighbors and ask that this burden not be placed on us.



This proposal does not take into consideration the economic costs to Kodiak salmon fishing families, Processors, processing workers, or Alaskan coastal communities that benefit from the income of Kodiak salmon fishermen. The proposal does not meet Board of Fish criteria for presenting new information that has unforeseen conservation effects on a fishery and would have immense negative economic and conservation impacts. I hope that the Board sees that there is no error in the current regulation that needs correcting.

With respect and hope for the future fishing families,

William and Kaytlen Roth  
F/V Sea Chantey

Two handwritten signatures in cursive script. The top signature is "William" and the bottom signature is "Kaytlen R.". Both signatures are written in dark ink and are positioned one above the other.



United Fishermen's Marketing Association  
PO Box 1035, Kodiak, AK 99615  
email: <jeff.stephan@me.com>; telephone: 907-350-2088  
October 3, 2017

Mr. John Jensen, Chair  
Alaska Board of Fisheries  
P.O. Box 115526  
Juneau, AK 99811-5526  
Sent to <dfg.bof.comments@alaska.gov>

**Re: 1) UCIDA Agenda Change Request 11; 2) Kodiak Area Red Salmon Management; 3) Kodiak Salmon Genetic Research**

Dear Chairman Jensen & Members of the Alaska Board of Fisheries,

I respectfully submit the following testimony on behalf of the United Fishermen's Marketing Association with respect to UCIDA ACR 11, and other issues that are included on the agenda for the Alaska Board of Fisheries Work Session that is scheduled during October 17 - 19, 2017.

As part of our written testimony to the Alaska Board of Fisheries on the above-indicated topics, I herewith include a Report from Natural Resources Consultants, Inc. (March 10, 1994) entitled "Harvest Rates of Upper Cook Inlet-Bound Sockeye Salmon In The Kodiak Management Area's Commercial Salmon Fishery", hereafter referred to as the "NRC Report" (G. T. Ruggerone: Natural Resources Consultants, Inc., and D.E. Rogers: University of Washington, for The Kodiak Island Borough Salmon Working Group).

The following quote from the "Summary" provides a general sense of the focus of attention and content of the NRC Report: "Beginning in 1988, fishermen from Upper Cook Inlet (UCI) became concerned over the possible increase of UCI sockeye salmon harvested by Kodiak fishermen during July. This concern has led to a proposal by UCI fishermen (Kenai Peninsula Fishermen's Association, KPFA) that would restrict fishing activities in the Kodiak Management Area (KMA) during July. This proposal, if accepted, would likely reduce harvests of non-local salmon, but would also alter fishing patterns for local salmon ... .. In addition to distribution and migration patterns, the abundance of sockeye salmon from areas throughout Alaska will greatly influence numbers of non-local sockeye salmon intercepted by fisheries targeting on local stocks. Sockeye harvest in western and central Alaska have been exceptionally high since 1978 and have included record harvests in recent. Both Kodiak and Upper Cook Inlet have enjoyed relatively large harvests of sockeye salmon in recent years. Given the large runs to UCI, one would expect catches of UCI sockeye to increase in KMA's commercial salmon fishery."

We respectfully request that you

1. Reject UCIDA Agenda Change Request 11 in its entirety during your consideration of Work Session Agenda Item 14 [Agenda Change Requests (ACRs)]. ACR 11 clearly does



not meet the Board's agenda change request criteria. The Kodiak Management Area genetic stock composition study does not present any "new information" that "corrects an effect on the fishery that was unforeseen when the regulation (management plan) was adopted." Cook Inlet sockeye caught in the Kodiak does not create a conservation concern or have a conservation purpose or reason. There is no error in regulation that needs correcting.

2. Do not carry over a consideration of any aspect of ACR 11 to your Agenda Item 16 ("ACRs continued and miscellaneous business, if any"), Agenda Item 17 ("Kodiak Salmon Genetic Research"), or Agenda Item 18 ("Policy for the management of sustainable salmon fisheries overview").

3. Do not schedule a consideration of Kodiak Area Salmon management out-of-cycle; that is, we request that you address the Kodiak Area Salmon fishery as originally planned during the Board's 2019/2020 Cycle.

The management principles that are represented in ACR 11 would unnecessarily cause significant and unwarranted complications to the management and conduct of the Kodiak Area salmon fishery. It is likely that key Kodiak systems would face a higher risk of overescapement (even underescapement) and other stress factors. The quality of Kodiak salmon would be compromised. The existing reasonable and efficient coexistence between Kodiak seine fishermen and setnet fishermen that has evolved over the past 40 years or more would surely be significantly and unnecessarily damaged. Board meetings that addressed the Kodiak salmon fishery would become ever-more contentious, and have to address ever-more conservation and user-conflict issues because of the nature of the management requirements that would result from implementation of an ACR 11-directed management regime. Future Boards and ADF&G Headquarters and Kodiak Area management staffs would be required to unnecessarily spend precious resources dealing with new conservation and user-conflict issues that would otherwise not arise.

Ongoing changes in the climate will continue to cause uncertainty with respect to timing of runs, ocean temperatures, ocean current patterns, and other environmental variables that impact migratory patterns and timing of Cook Inlet, Kodiak and other salmon. ACR 11, or any similar regulatory model, will certainly not address the underlying natural factors that influence salmon migratory patterns and timing. An ACR 11-driven regulatory regime will result in an unnecessary and inefficient redistribution of fishing effort, cause gear and allocation conflicts between seiners and set netters, and create management complexities that are unnecessary and unproductive.

Thank you for the opportunity to provide our comments.

Sincerely,

Jeffrey R. Stephan





**HARVEST RATES OF UPPER COOK INLET-BOUND  
SCKEYE SALMON  
IN THE KODIAK MANAGEMENT AREA'S  
COMMERCIAL SALMON FISHERY**

**PREPARED FOR:**

**THE KODIAK ISLAND BOROUGH  
SALMON WORKING GROUP**

**March 10, 1994**

**PREPARED BY:  
NATURAL RESOURCES CONSULTANTS, INC.  
SEATTLE, WASHINGTON**

Reviewers:





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4 of 31

**HARVEST RATES OF UPPER COOK INLET-BOUND  
SOCKEYE SALMON IN THE KODIAK MANAGEMENT AREA'S  
COMMERCIAL SALMON FISHERY**

by:

**G. T. Ruggerone and D.E. Rogers<sup>1</sup>**

for

**The Kodiak Island Borough Salmon Working Group**

**10 March 1994**

<sup>1</sup>G. T. Ruggerone: Natural Resources Consultants, Inc.  
D.E. Rogers: University of Washington





## ACKNOWLEDGMENTS

We wish to thank the ADF&G biologists in the Kodiak Region for their generous and timely cooperation. We recognize that the ADF&G biologists were diligently preparing numerous reports on the issue involving harvests of UCI-bound sockeye in the Kodiak Management Area, while making historical reports and data available to us.



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## SUMMARY

Beginning in 1988, fishermen from Upper Cook Inlet (UCI) became concerned over the possible increase of UCI sockeye salmon harvested by Kodiak fishermen during July. This concern has led to a proposal by UCI fishermen (Kenai Peninsula Fishermen's Association, KPFA) that would restrict fishing activities in the Kodiak Management Area (KMA) during July. This proposal, if accepted, would likely reduce harvests of non-local salmon, but would also alter fishing patterns for local salmon.

Runs of local Kodiak stocks and UCI stocks have both increased substantially in recent years. Because the KMA has always harvested UCI-bound sockeye salmon and because UCI runs have been exceptional in recent years, we would expect numbers of UCI-bound sockeye salmon harvested in the Kodiak fishery to also increase. However, we believe the important issue is whether the Kodiak fishery has been harvesting proportionately more UCI sockeye in recent years compared to sockeye harvests or runs to UCI and Kodiak.

We compared harvest rate indices of Upper Cook Inlet sockeye salmon captured in the Kodiak Management Area during 6-25 July 1970-1987 and 1988-1993, excluding 1989. A variety of analyses were used. Several analyses suggested harvest rates of UCI-bound sockeye in KMA were not greater than expected during 1988-1993, although one type of analysis indicated the harvest rates in 1988 and 1992 were higher than expected.

Analysis of the percentage of sockeye harvested in areas identified in the KPFA proposal for closure during 6-25 July indicated that harvests in these areas have increased primarily in 1992 and, to a lesser extent, in 1988. Fishing patterns in other years were not unusual. The ADF&G management during most of July is focused on KMA pink salmon stocks.

We reviewed ADF&G reports that estimated numbers of UCI sockeye salmon captured in the Kodiak fishery during 6-25 July. In general, we agree with these reports in that harvests of UCI-bound sockeye salmon by





Kodiak fishermen have been relatively great in recent years. This trend is expected because runs of sockeye salmon to UCI have reached record levels in recent years. Potential sources of error associated with the estimation of UCI sockeye harvested in Kodiak are discussed in the following report.

We conclude, based upon our analyses and our review of the ADF&G reports, that harvests of UCI-bound sockeye salmon in the KMA is highly related to the strength of UCI runs. Higher than expected harvests of UCI-bound sockeye salmon are likely to occur only when runs to UCI are exceptionally large.



## INTRODUCTION

The Kodiak Management Area (KMA) includes inland and State marine waters surrounding the Kodiak Island archipelago and adjacent to the Alaska Peninsula between Kilokak Rocks and Cape Douglas (Exhibits 1 and 2). The area is managed primarily for local stocks, although the Cape Igvak Section of the Mainland District is managed for Chignik sockeye salmon prior to 26 July and the North Shelikof Strait area (NSS) is managed during 6-25 July to restrict harvests of sockeye salmon returning to Upper Cook Inlet (UCI). The NSS sockeye management plan was established in November 1989 by the Alaska State Board of Fisheries after reviewing concerns by UCI fishermen regarding the harvest of UCI-bound sockeye salmon within the NSS.

During 1993, UCI fishermen proposed to the Board of Fisheries that additional restriction be applied to the management of salmon harvests in the Kodiak Management Area. The UCI proposal requests the following areas be closed to fishing during 6-25 July:

- Halibut Bay Section of the Southwest Kodiak District
- Areas 258-10 and 258-40 of the Sitkalidak Section of the Eastside Kodiak District
- Katmai and Alinchak Bay Sections of the Mainland District

Additionally, UCI fishermen propose the Board restrict fishing time, area, and gear within the KMA during 1-25 July. The purpose of the proposal is to reduce the catch of sockeye salmon bound for UCI in the Kodiak Management Area.

Acceptance of the UCI proposal by the Board would lead to reduced harvests by Kodiak fishermen of all salmon species during 1-25 July. Because acceptance of the UCI proposal would lead to reduced harvests of local and non-local salmon, the Kodiak Island Borough Salmon Work Group contracted Natural Resources Consultants to evaluate the harvests of UCI-bound sockeye salmon during KMA's July salmon fishery.



The objectives of this report were to:

1. review general factors influencing harvests of migrating non-local sockeye salmon
2. examine trends in harvest rate indices of UCI-bound sockeye salmon within the KMA during 6-25 July
3. quantitatively examine factors influencing harvest rates of UCI-bound sockeye salmon
4. review reports by ADF&G biologists that attempt to estimate numbers of UCI sockeye salmon harvested by Kodiak fishermen.



## OVERVIEW OF SALMON DISTRIBUTION AND MIGRATION

Sockeye salmon are distributed in the North Pacific Ocean from the Gulf of Alaska to the Aleutian Islands (Exhibits 3 and 4). Salmon actively migrate counterclockwise with the Alaskan Gyre and may travel 2,000 miles in a year (Royce et al. 1968). The distribution center of sockeye stocks from western Alaska tends to be farther west than sockeye stocks from central Alaska, although considerable overlap exists on the high seas among sockeye salmon stocks from all areas of Alaska (French et al. 1976).

The distribution and migration patterns of salmon stocks in the ocean are dynamic. For example, sockeye salmon tend to be further south during winter and farther north during summer (French et al. 1976).

Furthermore, during winters of relatively warm ocean temperatures, salmon tend to be farther north (Exhibit 5, Blackbourn 1987). When Alaskan salmon are distributed farther north during warm winters, they tend to return to their native streams at a slightly earlier date.

Ocean temperatures can have a dramatic effect on the migration route of sockeye salmon. For example, sockeye salmon returning to Fraser River, British Columbia, tend to migrate from the north through Johnstone Strait during warm winters when the sockeye are distributed farther north. During relatively cool winters when the fish are farther south, the fish migrate from the west through the Strait of Juan de Fuca (Groot and Quinn 1987). The dynamic nature of salmon migration patterns can have a substantial effect on the fishing patterns of commercial salmon fishermen.

Mechanisms enabling salmon populations to return to their natal streams within a brief, highly predictable time period after individuals begin their journey from areas up to about 2,000 miles apart are not well understood. In the open ocean, salmon may use ocean currents and compass orientation to navigate back to coastal areas (Royce et al. 1968; Quinn 1982). Once salmon reach coastal waters, they may encounter physical obstacles, such as islands and inlets, a variety of odors from many streams, reversing tidal currents, and vertical and horizontal gradients of water temperature and salinity. Mechanisms that may be used by salmon to navigate through



coastal waters include compass orientation, tidal stream transport, and orientation to homestream odors (Ruggerone et al. 1990). Tracking studies of salmon in coastal waters have demonstrated salmon often meander considerable distances from a direct course leading back to their homestream (Quinn et al. 1989; Ruggerone et al. 1990).

The number of non-local sockeye harvested by Kodiak or other fishermen will depend, in part, on the distribution of the non-local salmon stocks. As described above, salmon migration patterns can change from year to year. Given the location of the Kodiak Management Area in the Gulf of Alaska and the widespread distribution of sockeye salmon stocks from western and central Alaska, sockeye stocks from Bristol Bay and Chignik could be harvested by Kodiak fishermen during June in addition to local stocks. In July, sockeye salmon from UCI and Chignik could also be harvested by Kodiak fishermen. Catch of non-local salmon undoubtedly occurs in most salmon fisheries.

The high seas distribution of Kodiak sockeye compared to Cook Inlet sockeye salmon can be described from an international tag/recovery effort during 1956-1970. During this period 4,846 maturing sockeye salmon were tagged on the high seas and recovered in North America. Of these 4,846 sockeye salmon, 142 fish were recovered in the Kodiak Management Area and 243 fish were recovered in Cook Inlet. Exhibit 5 shows the relative distribution of maturing Kodiak and Cook Inlet sockeye salmon tagged during April, May, and June of the year of recapture. These data show maturing Kodiak sockeye salmon tend to be distributed farther west than Cook Inlet sockeye salmon. An estimated 32.5% of the tagged Kodiak sockeye were east of 150°W, whereas 10.3% of the tagged Cook Inlet sockeye salmon were east of 150°W (Exhibit 6).

A tagging study conducted near Unimak Island and the Shumagin Islands, which are approximately 250-400 miles southwest of Kodiak, can provide additional information on the relative abundance of Kodiak and Cook Inlet sockeye in that area during 1987. A total of 23 tagged sockeye were recovered in Kodiak, but only 4 tagged sockeye were recovered in Cook Inlet (Eggers et al. 1991). The recapture rate of sockeye released in the





Shumagin Islands was approximately 8 times greater for Kodiak compared to Cook Inlet sockeye salmon. For sockeye captured and released near Unimak Island, the recapture rate for Kodiak sockeye was approximately two times greater. The tag data from 1987 and data from the high seas tagging studies suggest Kodiak sockeye tend to be more abundant than Cook Inlet sockeye in areas west of Kodiak Island. These data suggest the majority of sockeye returning to UCI migrate through Kennedy and Stevenson Entrances rather than Shelikof Strait in most years.

In addition to distribution and migration patterns, the abundance of sockeye salmon from areas throughout Alaska will greatly influence numbers of non-local sockeye salmon intercepted by fisheries targeting on local stocks. Sockeye harvest in western and central Alaska have been exceptionally high since 1978 and have included record harvests in recent years. Both Kodiak and Upper Cook Inlet have enjoyed relatively large harvests of sockeye salmon in recent years. Given the large runs to UCI, one would expect catches of UCI sockeye to increase in KMA's commercial salmon fishery.

The important question the Board of Fisheries should ask is whether an increase has occurred in the number of UCI sockeye captured in the KMA compared to harvests or runs in Upper Cook Inlet. In other words, has the harvest rate of these non-local salmon been consistently high in recent years? We address this question in the next section.



## HARVEST RATES OF UCI-BOUND SOCKEYE SALMON

Harvest data for the following analyses were provided in Brennan et al. (1993) and by K. Brennan (pers. comm., ADF&G, Kodiak) (Exhibit 7). The data included all areas of the KMA except the Cape Igvak Section, managed for the harvest of Chignik sockeye salmon. The year 1989 was excluded from analysis because the *Exxon Valdez* oil spill interfered with fishing activities in Kodiak and Upper Cook Inlet. The dataset allowed comparisons of harvests in the KMA during 6-25 July (i.e., the period when most UCI-bound sockeye migrate through the KMA) and the entire season excluding 6-25 July (i.e., "the period when few UCI-bound sockeye migrate through the KMA). Additional analyses were conducted on harvests of sockeye salmon exceeding 6 lbs, which serve as an index of UCI sockeye abundance during July. The analysis will focus on two time periods: 1970-1987 and 1988-1993. The latter period represents the period when UCI fishermen became concerned about catches of UCI sockeye in the Kodiak fishery.

### Harvests of Sockeye Salmon

Sockeye harvests in the KMA have increased substantially during both 6-25 July and during the remaining season since the early 1970s (Exhibit 8). During the 6-25 July period, sockeye harvests averaged 0.2 million during 1970-1987 and 1.4 million during 1988-1993. During the remaining period (mostly June and August), sockeye harvests averaged 0.6 million during 1970-1987 and 2.8 million during 1988-1993. During the entire season, sockeye harvests averaged 0.8 million during 1970-1987 and 4.2 million during 1988-1993.

In the Upper Cook Inlet Management Area, sockeye harvests, on average, increased from 2.4 million during 1970-1987 to 5.2 million salmon during 1988-1993 (Exhibit 8). These data indicate sockeye returning to both the Kodiak and Upper Cook Inlet streams have increased substantially over the



past 20 years. This trend is common to nearly all sockeye systems in Alaska.

If harvest rates of UCI-bound sockeye have increased substantially since 1987, as suggested by the UCI proposal, then the percentage of sockeye taken during 6-25 July compared to the entire season would likely increase during 1988-1993 compared to previous years. As shown in Exhibit 9, the percentage of sockeye taken during the 6-25 July period was similar during 1970-1987 (34%) and 1988-1993 (36%), indicating sockeye harvests during 6-25 July have not increased in recent years relative to harvests for the entire year.

The ratio of sockeye salmon harvested in the KMA compared to UCI should also be relatively high during recent years if the harvest rate of UCI-bound sockeye has increased. The ratio of sockeye taken during the 6-25 July period in the KMA to UCI was higher during 1988-1993 (0.35) than 1970-1986 (0.12) (t-test,  $df=20$ ,  $p<0.01$ ) (Exhibit 10). However, the higher ratios in recent years were due to high ratios during 1990 and 1991 rather than 1988 and 1992, the two years having relatively high catches of UCI sockeye salmon based on ADF&G estimates (Vining and Barrett 1994). Harvest of sockeye salmon in UCI could have been higher in 1987, 1988, 1992, and 1993 because escapement in the Kenai River exceeded the escapement goal. Furthermore, the ratio of sockeye taken during June and August in the KMA compared to UCI was also higher during 1988-1993 (0.76) than 1970-1986 (0.27) (t-test,  $df=20$ ,  $p<0.01$ ) (Exhibit 11), indicating the high ratio in recent years during 6-25 July was related to the large increase in local Kodiak sockeye runs compared to those in UCI.

We attempted to develop a multiple regression model that could predict the harvest of sockeye in the KMA from one or more variables. The independent variables tested included sockeye harvests in the KMA during other periods (mostly June and July), sockeye harvests in UCI, sockeye run size in UCI, pink salmon harvests in the KMA, sockeye salmon harvests of the late run to Chignik Lake, winter sea-surface temperature near Kodiak (November to March), and spring sea-surface temperature (March and April). The regression model was built using data from 1970-1987 so



potential deviation in harvests during recent years (1988-1993) could be examined.

The analysis indicated sockeye catch during 6-25 July was correlated with sockeye catch during June and August ( $r = 0.86$ ), harvests in UCI ( $r = 0.65$ ), and run size to UCI ( $r = 0.65$ ). However, sockeye catch during June and August explained the greatest amount of variability and was the best predictor of sockeye catch during 6-25 July ( $r^2 = 0.74$ ,  $df = 18$ ,  $p < 0.001$ ) (Exhibit 12). Sockeye harvests and run sizes in UCI did not add additional information to the single regression model because sockeye catches during June and August were correlated with them. Thus, harvest of all sockeye during 6-25 July was more dependent on harvests or run strength of Kodiak stocks than on run strength of UCI sockeye salmon. No other variables were statistically significant.

Examination of standardized residuals from the regression shows harvests of sockeye during 6-26 July, 1988-1993, were within the range predicted by the model developed from data during 1970-1987, except for harvests during 1988 and 1992 (Exhibit 13). Harvests during 1988 and 1992 were higher than expected based on harvests during June and August. Potential factors explaining this deviation could be strong UCI runs, greater catchability of UCI stocks, or relatively strong returns of Kodiak stocks during July.

#### Harvests of Sockeye Exceeding 6 lbs

Numbers of sockeye salmon exceeding 6 lbs during 6-25 July can be used as an index of UCI sockeye in the KMA because UCI sockeye tend to be larger than Kodiak sockeye (Vining and Barrett 1994). Brennan et al. (1993) estimated numbers of sockeye >6 lbs by assigning all sockeye from a given fish ticket to this category when the average weight exceeded 6 lbs. Thus, the analysis of fish >6 lbs introduces some error, but the amount of error should be relatively little because the data included nearly all of the KMA for major portions of the season.



During 6-25 July, the number of harvested sockeye >6 lbs was considerably greater during 1988-1993 (avg. 537,000) than during 1970-1987 (avg. 98,000), although year-to-year variability was high in recent years (Exhibit 14). During the remaining season, the number of harvested sockeye >6 lbs averaged approximately 21% less during 1988-1993 (avg. 155,000) than during 1970-1987 (avg. 197,000). This difference was due largely to the great harvest of 6 lb sockeye during the remaining periods (June and August) in 1986. These data suggest that numbers of UCI sockeye harvested in the KMA could be relatively high in recent years. This result was expected, as discussed previously, because runs to UCI have been exceptionally large in recent years.

If harvest rates of UCI-bound sockeye have increased substantially since 1987, then the percentage of sockeye >6 lbs harvested during 6-25 July would likely increase during 1988-1993 compared to previous years. As shown in Exhibit 15, the percentage of sockeye >6 lbs harvested during 6-25 July averaged 26% higher during 1970-1987 than 1988-1993 (44% to 35%). The percentage of sockeye >6 lbs harvested during the entire season declined approximately 51% between 1970-1987 and 1988-1993 (39% to 19%). Although somewhat confounded by the recent decline in the percentage of >6 lb sockeye during the entire season, these data do not suggest an increase in the harvest rate of UCI-bound sockeye salmon.

We developed a multiple regression model that could predict the harvest of >6 lb sockeye in the KMA from one or more variables. The approach was the same as that described above for the prediction of total sockeye catch. The independent variables tested included harvest of 6 lb sockeye in the KMA during other periods (mostly June and July), sockeye harvests in UCI, sockeye run size in UCI, average weight of UCI sockeye, pink salmon harvests in the KMA, sockeye salmon harvests of the late run to Chignik Lake, winter sea-surface temperature near Kodiak (November to March), and spring sea-surface temperature (March and April). The regression model was built using data from 1970-1987 so that potential deviations during recent years could be examined.





The analysis indicated harvests of 6 lb sockeye during 6-25 July was correlated with sockeye harvests in the UCI ( $r = 0.81$ ), sockeye runs in the UCI ( $r = 0.80$ ), harvests of 6 lb sockeye in the KMA during June and August ( $r = 0.71$ ), harvests of all sockeye in the KMA during June and August ( $r = 0.52$ ). The model best explaining harvests of 6 lb sockeye during 6-25 July included harvests in UCI ( $p < 0.001$ ) and harvests of 6 lb sockeye during June and August ( $p < 0.004$ ) (overall  $r^2 = 0.81$ ,  $df = 18$ ,  $p < 0.001$ ) (Exhibit 12). Thus, harvests of 6 lb sockeye during 6-25 July were dependent on both run strength of UCI stocks and run strength of Kodiak 6 lb sockeye salmon during 1970-1987.

Examination of standardized residuals from the regression shows harvests of 6 lb sockeye during 5-25 July, 1988-1993, were within the range predicted by the model developed from data during 1970-1987, except for harvests during 1988 and 1992 (Exhibit 13). Harvest during 1988 and 1992 were higher than expected based on harvests in UCI and harvests of 6 lb sockeye during June and July. Factors explaining the deviation in 1988 and 1992 could be strong UCI runs relative to harvests (overescapement), greater catchability of UCI stocks, greater harvests of other non-local stocks, and relatively poor returns of large local sockeye during June and August compared to July.

An additional regression model was developed to predict the percentage of 6 lb sockeye harvested during 6-26 July, 1972-1987. The final model included average weight of UCI sockeye ( $p < 0.001$ ), the percentage of 6 lb sockeye during June and July ( $p < 0.009$ ), and sockeye harvest in UCI ( $p = 0.030$ ) ( $r^2 = 0.87$ ,  $df = 15$ , overall  $p < 0.001$ ). This model had the greatest precision of the three models described here, explaining 87% of the variability.

Examination of residuals during 1970-1987 and 1988-1993 does not indicate an abnormally high percentage of 6 lb sockeye harvested in the KMA during 1988-1993 (Exhibit 16). Thus, this model indicates harvests of UCI sockeye salmon by Kodiak fishermen have not been unusually high during recent years.

In summary, runs of local Kodiak stocks and UCI stocks have both increased in recent years. The percentage of sockeye harvested during



6-25 July compared to the entire season has not increased in recent years. The ratios of sockeye harvested in Kodiak compared to UCI during both periods (June and August vs. July) did not indicate unusually high harvest rates of UCI-bound salmon during 6-25 July of recent years. Regression and residual analyses suggested harvests of 6 lb and total sockeye salmon during 6-25 July were greater than expected in 1988 and 1992, based on pre-1988 relationships. However, the percentage of 6 lb sockeye harvested in the Kodiak fishery during 6-25 July has not increased more than expected, based on average weight of UCI sockeye, the percentage of 6 lb sockeye in the Kodiak fishery during June and August, and sockeye harvest in UCI. Several analyses conducted here suggested harvest rates of UCI-bound sockeye were not greater than expected during 1988-1993, based on relationships developed from data prior to 1988. One type of analysis suggested that harvest rates of UCI-bound sockeye in 1988 and 1992 were greater than expected.

#### Sockeye Harvests in Areas Targeted For Closure

Fishermen from the UCI Management Area have proposed closure of several sections within the KMA during 6-25 July. These "target areas" are Halibut Bay in the Southwest District, areas 258-10 and 258-40 in the Eastside Kodiak District, and Katmai and Alinchak Sections in the Mainland District (Exhibit 2).

Sockeye harvests in the target areas during 6-25 July of each year have increased from approximately 9,200 sockeye during 1970-1987 to 268,000 sockeye during 1988-1993 (Exhibit 17). Similarly, sockeye harvests in the remaining areas of the KMA have increased from approximately 307,000 sockeye during 1970-1987 to 1.2 million sockeye during 1988-1993. Although sockeye harvests have increased in all areas of the KMA, the percentage of sockeye harvested in the targeted areas has increased from 2% during 1970-1987 to 19% during 1988-1993. Thus, locations of sockeye harvests in the KMA have changed somewhat over the years. Such changes are not uncommon in salmon fisheries.



To examine whether harvest patterns during 1988-1993 were different from previous years, we developed a regression model to predict the percentage of sockeye harvested in the target areas compared to other areas.

Independent variables tested included UCI sockeye harvest, UCI run, Kodiak sockeye harvests during June and August, pink salmon harvests, and sockeye run to Chignik Lake. The only significant variable was Kodiak sockeye harvests during June and August ( $r = 0.60$ ). Examination of residuals indicated the percentage of sockeye harvested in the target areas was higher than expected in only 1992, although the deviation in 1988 was high compared to most but not all prior years (Exhibit 18).

In summary, the percentage of sockeye harvested in areas targeted for closure during 6-25 July has increased primarily in two recent years. The greatest increase occurred in 1992 and, to a lesser extent, in 1988. Fishing patterns in other years were not unusual. Management during July focuses on local pink salmon runs, therefore fishing patterns may be influenced by management of pink salmon runs. This subject needs more attention, but was beyond the scope of the current investigation.



## REVIEW OF ADF&amp;G REPORTS

This section of the report will review and critique draft reports by ADF&G biologists who attempted to estimate numbers of UCI sockeye salmon captured by Kodiak fishermen during 6-25 July. In general, we thought the reports were carefully written, displayed innovative ideas, and clearly identified the assumptions used in their analyses. We acknowledge ADF&G biologists were presented with a difficult task given the amount and type of resources available to them. Many of the problems associated with harvest estimates of UCI-bound sockeye were discussed in the ADF&G reports.

While numerical harvest estimates of UCI-bound sockeye could be useful, the most important estimate is the harvest rate, that is, the percentage of UCI-bound sockeye harvested by Kodiak fishermen or the harvest of UCI-bound sockeye compared to harvest of local Kodiak sockeye salmon. Essentially all of the earlier ADF&G reports dealt with numerical harvest estimates of UCI-bound sockeye rather than harvest rates.

*Vining, I.W., and B.M. Barrett. 1994. The use of average weight to estimate the amount of interception of upper Cook Inlet sockeye salmon within selected areas of the Kodiak management area.*

This report describes an innovative approach to the problem of estimating catches of UCI sockeye during 6-25 July. They use average weights of Kodiak and UCI sockeye salmon to estimate harvests of UCI-bound sockeye salmon. The method uses the following equation:

$$\text{Proportion Non-local} = \frac{\text{Avg. wt IP} - \text{Avg. wt Kodiak}}{\text{Avg. wt UCI} - \text{Avg. wt Kodiak}}$$

where IP is the average weight observed during the 6-25 July. This model could work very well if only two stocks were involved and accurate weights of the two stocks and accurate observed weights in the mixed stock fishery were available.



In general, the model probably identifies years of high compared with low harvests of UCI-bound sockeye salmon, but a number of factors may affect the accuracy of these estimates. The authors note some limitations of the model when they describe the assumptions and conditions for use of the model. Most of the model limitations involve the accuracy or representativeness of weight estimates. If the estimates of weight used in the model are not representative, then the calculated estimates of variance are less meaningful. Potential problems arising from the estimates of weight used in the model can be described by the following questions:

1. How much error is present among estimated average sockeye weights for specific statistical areas?
2. Are sockeye weights from June and August representative of local Kodiak sockeye weights during July?
3. Can sockeye weights generated by purse seine harvests in the KMA, which are relatively non-selective (French et al. 1976), be compared with weights generated by highly selective gillnets in UCI?
4. Are Kodiak and UCI sockeye the only stocks passing through the KMA during July?
5. How much weight do sockeye gain between Kodiak and UCI?
6. How sensitive is the model to small errors in average weight?

Question 1 refers to the fact that the average weight model relies on average weights reported from fish tickets for specific statistical areas. Barrett et al. (1994) demonstrated that average weight derived from fish tickets are reasonably accurate when average weights from many fish tickets are averaged together. However, the difference between fish ticket and ADF&G estimates of average weights for individual landings averaged 0.27 lbs or 4.9%. Absolute differences in average weight estimates for individual landings ranged up to 0.79 lbs or 15%. Thus, the accuracy of average weights derived from fish tickets from individual statistical areas will depend on the number of fish tickets. Accuracy should increase with greater numbers of fish tickets.





Question 2 refers to the use of sockeye weights in June and August as an estimate of local sockeye weight in July. This approach is reasonable if average sockeye weights during June and August are representative of sockeye during July. This assumption should be tested because several factors could cause sockeye weights during June and August not to be representative.

The relative contribution of each local stock to the Kodiak fisheries during June, July, and August is different. Each stock is likely to have a different average weight. Also, weight within each local stock is likely to change through the season. Weight during June, July, and August is related to age composition (e.g., Bristol Bay sockeye spending 3 years at sea (6.9 lbs) averaged 1.8 lbs more than sockeye spending two years (5.1 lbs)), which is different for each local stock and changing within a stock over the course of the season. The assumption that weights during June and August can be used to estimate accurately the weight of local stocks in July should be validated.

Non-local sockeye salmon (e.g., Bristol Bay, Chignik, and Cook Inlet) migrate through Kodiak in June and might influence estimates of average weight. In August, some Chignik sockeye might be harvested in the KMA. The presence of these stocks could affect estimates of average weight, depending on the number of these non-local stocks in the Kodiak harvests and the difference in average weight between the non-local and local sockeye salmon. Tagging studies primarily from the late 1940s and 1981 reported a small percentage of non-local sockeye salmon harvested near Kodiak during June (1.4% to 4.3%, Nicholson 1978, Tyler et al. 1986). Although unequal tag recovery efforts may skew stock composition estimates, these data suggest that error caused by the harvest of non-local sockeye during June may be small.

Question 3 was thought by Vining and Barrett to be a major factor causing the "ridiculous estimated proportions" for some areas and some years. Gillnets, such as those used in UCI, are widely known to select larger than average sockeye salmon, whereas purse seines, the principal gear type in Kodiak, are considered to be non-selective (French et al. 1976). Thus,



weights from UCI harvests are not directly comparable with weights from harvests in Kodiak.

Question 4 refers to the fact that sockeye stocks other than UCI and Kodiak stocks migrate through the Kodiak Management Area during July. Such stocks might include the late run to Chignik and Bear River sockeye salmon. Vining and Barrett noted the presence of stocks other than Cook Inlet and Kodiak stocks during July might have caused unreasonable results in some areas and years.

Question 5 refers to the fact that sockeye grow rapidly during their homeward migration. For example, Alaskan salmon returning to spawn after three winters at sea grow approximately 12.9% by weight per month (Ricker 1962). Thus, a 6 lb sockeye could gain approximately 0.2 lbs in 7-9 days, the time Barrett and Nelson (1994) assumed it would take for sockeye to travel to UCI. However, anecdotal information on salmon (few or no belly burns, or regurgitation of food upon capture) suggests that UCI sockeye salmon are not feeding once they reach the Kodiak area (B. Barrett, ADF&G, pers. comm.). If UCI sockeye are not feeding between Kodiak and Upper Cook Inlet, then average sockeye weight of the sockeye run in UCI would likely be representative.

Question 6 refers to the sensitivity of the model to small errors in average weight. To illustrate the sensitivity of the model to small errors in average weight, we selected three estimates of non-local proportions made by Vining and Barrett, then assumed an average weight error during July of -0.25 lbs, -0.5 lbs, 0.25 lbs, and 0.5 lbs (Exhibit 19). Such errors might arise from fish ticket error and non-representative average weights in June and August. These absolute errors (-0.5 lbs to 0.5 lbs) were equivalent to percent errors in July weight ranging from -9.4% to 11.6%. However, the resulting error in the stock composition ranged from -30% to 738%. Stock composition error (absolute and %) was greater when July weight for Kodiak sockeye was underestimated than when it was overestimated. For the given examples, the percentage of UCI sockeye in Kodiak harvests was overestimated by 22.5% when the July weight of Kodiak sockeye was underestimated by 0.38 lbs. In contrast, the percentage of UCI sockeye in



Kodiak harvests was underestimated by 10.4% when the July weight of Kodiak sockeye was overestimated by 0.38 lbs.

This analysis suggests that (1) error in average weight translates to a relatively larger error in stock composition and (2) errors in the sockeye weight during July may have a biased or unequal effect on stock composition estimates. Biases such as this might explain, in part, why about 12% of the stock proportion estimates exceeded 1.0, values that were impossible. Further research should be conducted to evaluate potential bias in stock composition estimates caused by error in average weight.

Many of the problems described above were known to Vining and Barrett. To correct for some of the problems, they excluded data when they did not meet two criteria. First, if the difference between the average weight in the UCI fishery and the estimated Kodiak local stock average weight did not exceed 0.75 lbs, no estimates of stock composition were made. Second, if the difference between the observed and estimated local average weight in July was not greater than 0.5 lbs, then no estimates were made for that year. These criteria and the frequency with which they eliminated stock composition estimates indicated the problems associated with the application of the average weight model to the Kodiak fishery.

In summary, the average weight model appears to be able to approximate the relative magnitude of UCI sockeye harvested in the KMA. However, further validation of the data used in the model appears to be necessary in order to insure that the input data are accurate and representative.

*Barrett, B.M. and P.A. Nelson. 1994. Estimated run timing of selected sockeye salmon stocks on the west and east sides of Kodiak Island.*

The authors present a logical and reasonable approach to the exploration of run timing of selected salmon stocks, given the data available to them and the objective of the analysis. However, it should be noted that run timing based on escapement timing (as for Kodiak stocks) or harvest timing (as for

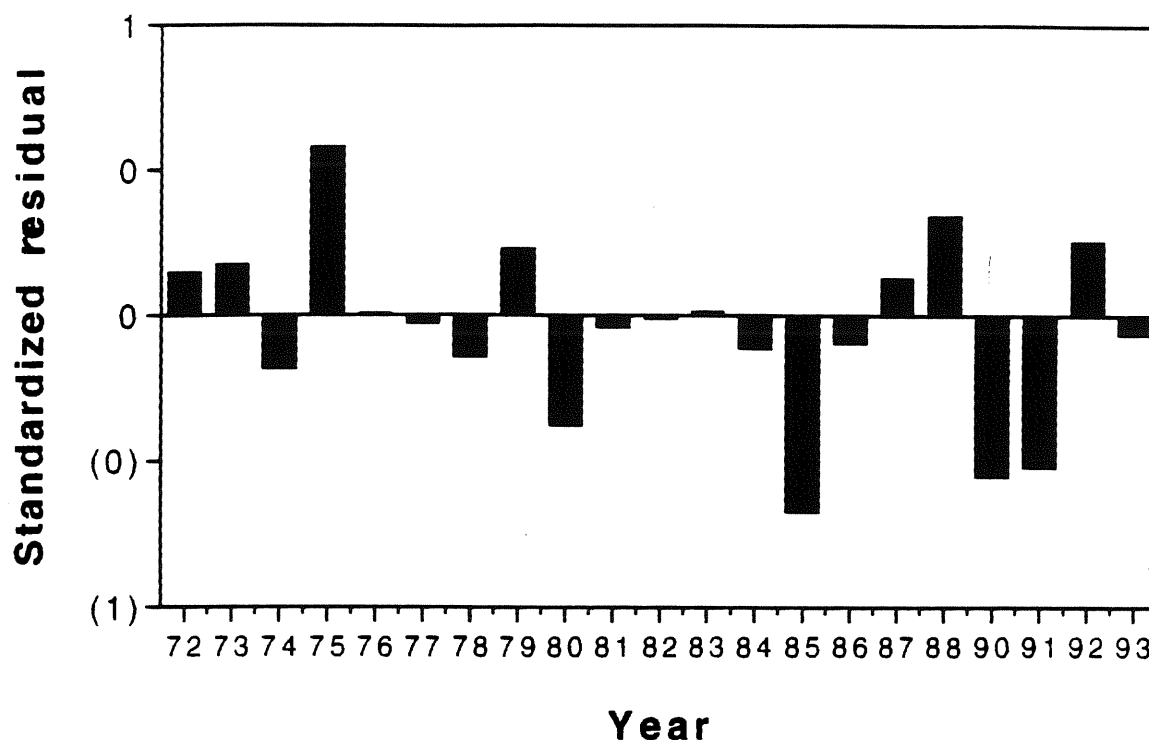


Exhibit 16. Standardized residuals  $((\text{observed} - \text{predicted}) / \text{predicted})$  of the regression to predict the percentage of sockeye >6 lbs during 6-25 July. Multiple regression based on average sockeye weight in UCI harvests, the percentage of sockeye >6 lbs during June and August, and sockeye harvests in UCI during 1972-1987.

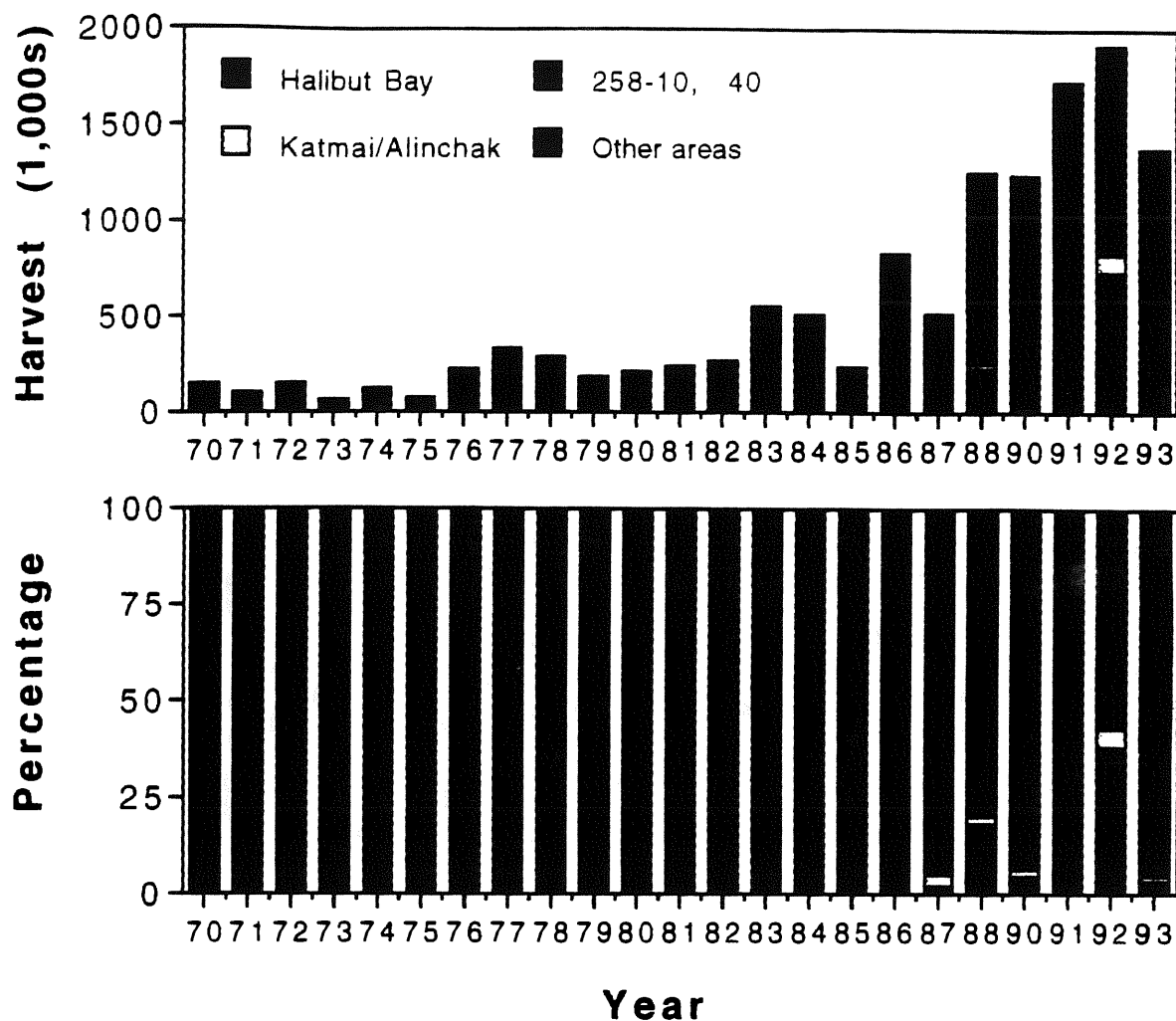


Exhibit 17. Number and percentage of sockeye harvested in areas targeted for closure and the remaining fishing areas in the Kodiak Management Area, 1970-1993.



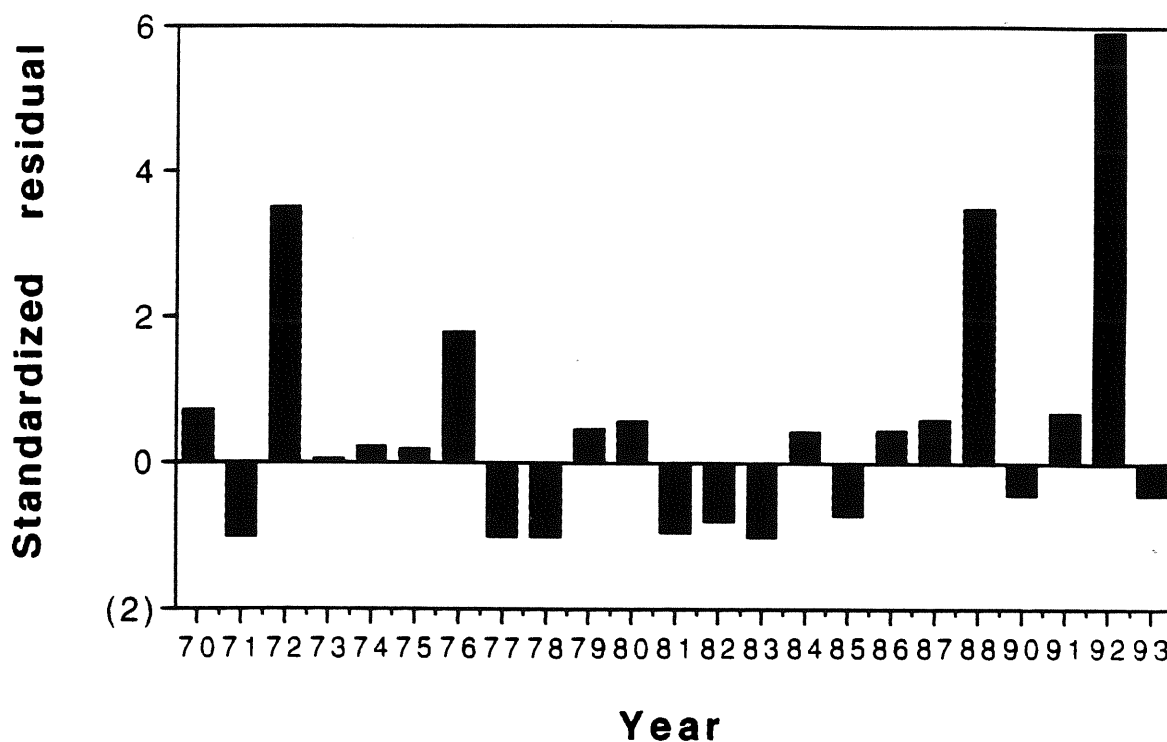


Exhibit 18. Standardized residuals  $((\text{observed} - \text{predicted}) / \text{predicted})$  of regression to predict the percentage of sockeye harvested within areas targeted for closure during 6-25 July. Regression based on harvests of sockeye salmon in all Kodiak areas during June and August, 1970-1987.

Exhibit 19. Three examples showing the sensitivity of the average weight model to small errors in the estimated local sockeye weight during July.

| Year, area | Observed values |              |                 |                      | What If                |                        | Then        |                                                  |
|------------|-----------------|--------------|-----------------|----------------------|------------------------|------------------------|-------------|--------------------------------------------------|
|            | UCI wt.         | Observed wt. | Kodiak Aug. wt. | June/ Estimated %UCI | Kodiak actual July wt. | Assumed July error (%) | Actual %UCI | Est. -Actual %UCI Error in stock composition (%) |
| 1983, 253  | 6.48            | 6.03         | 5.50            | 54.3                 | 5.00                   | 10.0                   | 69.7        | -15.5                                            |
|            |                 |              |                 |                      | 5.25                   | 4.8                    | 63.6        | -9.3                                             |
|            |                 |              |                 |                      | 5.75                   | -4.3                   | 38.6        | 15.7                                             |
|            |                 |              |                 |                      | 6.00                   | -8.3                   | 6.5         | 47.8                                             |
|            |                 |              |                 |                      |                        |                        |             | 738                                              |
| 1993, 253  | 5.89            | 5.59         | 4.81            | 72.4                 | 4.31                   | 11.6                   | 81.2        | -8.7                                             |
|            |                 |              |                 |                      | 4.56                   | 5.5                    | 77.6        | -5.2                                             |
|            |                 |              |                 |                      | 5.06                   | -4.9                   | 64.1        | 8.3                                              |
|            |                 |              |                 |                      | 5.31                   | -9.4                   | 48.5        | 23.9                                             |
|            |                 |              |                 |                      |                        |                        |             | 49                                               |
| 1992, 254  | 6.60            | 5.50         | 4.92            | 34.5                 | 4.42                   | 11.3                   | 49.5        | -15.0                                            |
|            |                 |              |                 |                      | 4.67                   | 5.4                    | 43.0        | -8.5                                             |
|            |                 |              |                 |                      | 5.17                   | -4.8                   | 23.1        | 11.4                                             |
|            |                 |              |                 |                      | 5.42                   | -9.2                   | 6.8         | 27.7                                             |
|            |                 |              |                 |                      |                        |                        |             | 409                                              |





F/V Alaska Lady  
324 Hillside Drive  
P.O. Box 101  
Port Lions, AK. 99550

September 30, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK. 99811-5526

**RE: UCIDA Agenda Change Request and Genetic Stock Composition of  
Sockeye Salmon in the Kodiak Management Area**

Dear Chairman Jensen;

We operate our business in the small community of Port Lions. We are also a family operated vessel. We have been informed of the request by UCIDA to change the agenda. We strongly oppose this change not only because it doesn't meet the change request criteria but also it will adversely affect our family's seasonal income and others alike.

I've personally been a Kodiak Fisherman since 1978 and a permit and vessel owner since 1992. This is our family's main source of income. Employment in our community is scarce and without our business I'm not sure how we'd be able to support our family. Taking valuable fishing time away from us during June 23- July 31 would be detrimental to our family operated business. In the last few years there have been some young fisherman tapping into the industry here and with this proposed change I don't see how they'd be able to make their boat and permit payments with approximately one third of the season taken away.

Furthermore, the proposed change does not take into consideration our local stock whether a major system or a small local stream. Westside closures will certain congest an already competitive fleet. If the board accepts this proposal does it mean that Kodiak Fisherman can propose



the exact same change to other areas such as Chignik and Area M for the take of sockeye and pinks?

In closing, I want to restate that the change request does not meet the Board of Fisheries Agenda Change Request criteria. By accepting this proposal it will terribly upset one area's fishery to slightly advantage another area's harvest. Salmon are considered "common property" and do not "belong to" the management area where they were born.

Sincerely,

F/V Alaska Lady Crew/Family,

*Thomas E. Nelson Sr.* (owner/operator)  
*Dawn Nelson* (co-owner)

Thomas E. Nelson Sr.

Dawn Nelson

Emma Nelson

Korena Nelson

Tommy Nelson

Summer Nelson



Don Bumpas  
P.O. Box 167  
Chignik Lagoon, Alaska 99548  
Tel: (907) 840-4020

October 2, 2017

Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, AK 99811-5526

Re: Dolgoi Island ACR # 12

Dear Honorable Alaska Board of Fisheries Members and Chairman,

Please approve the agenda change request (ACR 12) asking for re-examination of the Dolgoi Island fishery occurring in June and July in the South Alaska Peninsula. At the Board's meeting in Anchorage two years ago it was my understanding and others involved in the Chignik fishery that the Dolgoi fishery would be regulated to where most of the area would be held to a cap of 191k through 25 July. The remaining area as we understood from historic catch data as presented, was not considered an overly productive catch area, accounting for about 20% or so of the historic sockeye catch.

In the last two seasons, the sockeye catch in the Dolgoi Island area has well exceed the 191 thousand cap and not by a mere few thousand fish. In the 2016 fishery more than 500 thousand sockeye were harvested and this year 2017 300,000 sockeye were caught by 25 July, The catch numbers are certainly beyond any level expected and justifies a serious reconsideration of what the Board intended in passing a 191,000 cap on the fishery prior to the 2016 season.

Why the concern? Based on the WASSIP study essentially one-half of the sockeye catch in the Dolgoi fishery are destined for the Chignik River system. Many suspect that on average an even higher percentage occurs. As the Fish and Game will verify the two Chignik runs were not strong and in fact weak in the WASSIP years to the point of closures in the Igvak and SEDM fisheries because of serious shortfalls in the Chignik runs.

I am not asking you to close the Dolgoi fishery but am asking that it be controlled to where the harvest is limited to ensure that excessive sockeye catches do not occur. My recommendation is that the Dolgoi fishery in its entirety, except for terminal harvest areas, through 25 July be shut-down when fish tickets are expected to tally no more than 200,000 sockeye salmon.

Most sincerely,

*Donald Bumpas*





October 3, 2017

Ernie Carlson  
PO Box 21  
Chignik, AK 99564

Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, AK 99811-5526

Subject: **ACR 12**; Area M –Dolgoi Is. June –July 25<sup>th</sup> Fishery

Dear Alaska Board of Fisheries:

As a lifelong Chignik commercial fisherman I respectfully ask that the Board address the Dolgoi Island fishery pertaining to the Board's decision two years ago to limit the sockeye salmon harvest in that fishery through the June through July 25<sup>th</sup> period. At the time the Board's intended action was to ensure that Chignik-bound fish were not excessively harvested knowing that even during weak Chignik-run years about 50% of the catch in the Dolgoi Island Area are Chignik-bound sockeye salmon (WASSIP).

I am aware that Area M fishermen have historically targeted sockeye salmon in June and July in the Dolgoi Area, however not to the extent being sustained now. While the Board wisely set a limit of 191,000 sockeye salmon catch in what was known as the primary harvest area of Dolgoi, the cap did not effectively limit the catch for two reasons. The primary reason was once the cap was reached the fleet moved just outside the closed area to affectively harvest tens of thousands of more sockeye in the remaining open Dolgoi Island Area. The second and to a much lesser extent was that the Department did not immediately close the area once the cap was reached but rather extended fishing time to 12 hours in the first year and six in the most recent fishery 2017.

My suggestion is that the Board impose the 191,000 cap to the entire Dolgoi Island Area through July 25<sup>th</sup>. Hopefully serious consideration to this will be given recognizing that Chignik sockeye need reasonable and consistent protection from interception fisheries. As the Board knows Chignik sockeye salmon are not only harvested in the Dolgoi fishery but in the Shumagins, the SEDM and Igvak fisheries, and Chignik needs your help to maintain a viable local-stock sockeye fishery.

Thank you and sincerely,

Ernie Carlson



Norris Johnson  
275 Mountain View Dr  
Homer Ak 99603  
October 3, 2017

Chairman John Jensen  
Alaska Board of Fisheries Boards Support Section  
P.O. Box 115526 Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area

To Whom it May Concern,

I, Norris Johnson, oppose the UCIDA Agenda Change Request and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area. There is no error in regulation that needs correcting and there is no new information that creates any reason to change the regulation; which is necessary to comply with the Board's 'agenda change request' criteria.

I started fishing Kodiak in 1995 with my dad. I was nine years old and have only missed two summers since. Now I am 31 years old and have been running my own boat in Kodiak for the last four years. I have three brothers that also fish Kodiak. Fishing Kodiak has and always will be my life and my income. I currently live in Homer with my wife Faye, my son Corbin, and my 11 month old daughter Ayla. I am running a wood boat that was built in 1949. It has been a struggle to keep the boat maintained and floating. It is very hard to get started into this industry with the high boat prices, high cost of equipment, and the tough conditions of catching fish around Kodiak i.e. weather, spotty fishing, increased number of boats and so on. A large portion of my income is made during the weeks of June 23<sup>rd</sup> to July 31<sup>st</sup>. If I was to get shut down during these weeks it would be detrimental to my business.

It is not new information that Cook Inlet fish are being caught in Kodiak. Every area catches fish that are heading to the next area i.e. Area M catches Chignik fish and Kodiak fish and so on up the line. We cannot devastate one area with regulation to give another area a slight increase in catch. Cook Inlet doesn't have exclusive rights to the run. They have the right to fish their area and catch whatever fish are going by, just like every other area in Alaska including Kodiak. If Kodiak is regulated for the presence of Cook Inlet sockeye, will the board also regulate Chignik and Area M for the take of Kodiak sockeye and pinks?

Changing Kodiak management plan would not be good for the local runs. If you are fishing in Kodiak according to the escapements of Cook Inlet then the rivers in Kodiak will suffer from over-escapement. Accepting this proposed agenda change request would stop a lot of local Kodiak fish from being caught. We do not always catch Cook Inlet fish during this timeframe. It depends on the year, the run, the weather etc. To shut Kodiak down would not be taking into consideration the local fish that we are primarily catching. It would have a huge impact financially not just on my business but on the fishery as a whole. Also it would hugely impact the canneries, local businesses, and the state economy; a lot of money from Kodiak gets spent all over the state on supplies, gear, sales tax, living expense, etc.

Kodiak fisherman have been fishing the same areas and catching the same runs for 25 years and I know it goes back a lot further than that. There has not been any increase in fisherman in Kodiak targeting Cook Inlet fish. I have seen the Kodiak management plan work my entire life. I have seen good years and bad years. I have not seen a steady incline or decline to the Kodiak runs. So that tells me that the Kodiak management plan is working. The UCIDA request is unjust and without new information. What the UCIDA hopes to gain by this proposal is insignificant to the harm it would cause.

Thank you for your time,

Norris Johnson and Family

Chairman John Jensen  
Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, AK 99811-5526



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Re: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon  
in the Kodiak Management Area

Suzanne Abraham  
PO Box 511  
Kodiak, AK 99615  
[s.b.abraham@att.net](mailto:s.b.abraham@att.net)

October 3, 2017

Alaska Board of Fish:

I would like to express my opposition of the UCIDA agenda change request. The Board's agenda change request criteria does not seem to be applicable to this request as the genetic stock composition study of the Kodiak Management area doesn't bring to light any "new" information that has a "corrective" effect on our fishery from the long term and currently adopted management plan.

I am a 36 year resident of Kodiak, and involved in commercial fishing for 34 of those years. I have owned and operated my own salmon set net site for 29 years, mostly as a single (female) parent. My children were born and raised here, and grew up fishing along side of me. One of them now fishes year round, runs boats, and recently bought his own boat. The other one is considering taking over my fish site when I am ready to retire. When I became a single parent, I chose to stay in Alaska so my children could benefit by being close to both parents. Their father also fishes salmon here. I would not have been able to afford to live and raise my children here without the income I derived from my set net site. I catch all 5 species of salmon at my site, and the sockeye runs in June and July have been crucial to my summer income.

I am concerned because the basis for the agenda change request does not make sense, and also the change request criteria notes it must be "urgent", and "in the public's best interests". The request does not address the natural changes in run sizes of either Kodiak sockeye or Cook Inlet runs. Changing the management plan in Kodiak to reduce harvesting any Cook Inlet sockeye would have a tremendously negative impact on our local stocks through over-escapement; permit holders (seiners) gravitating to open areas and overfishing/overcrowding/individual reduced catches. I would personally see a reduction in my catch/income if seiners moved into my area in large numbers to also pursue catching sockeye. This change could also open up a can of worms for any district/area that feels another district is intercepting "their" fish.



Salmon wander far and wide, and should not “belong” to a management area where they were born.

The economic impact of this proposal on Kodiak would be significantly negative. Reduced fishing time and overall catch for boat owners/permit holders and set net sites would trickle down to cannery workers, marine support services, and even to the rest of the community as a whole. Local spending would suffer and people would not be able to maintain a viable income to stay here, eventually moving away and further impacting our island. On a personal level, if my fishing days are reduced during the June to July sockeye runs, my income will significantly drop to where I would not be able to keep crew members due to lack of income. They already have to buy rain gear, crew licenses, and often air travel to get here, and the reduced income would make it impossible to even find people willing to work for me.

The Kodiak Area Management Plan for Commercial Harvest of Salmon is an incredibly complex plan, and encompasses many different areas. It has been fine tuned to encompass environmental obstacles and has enabled our Kodiak area to keep a viable and sustainable sockeye run for years and years. It works. Drastic changes to our management plan will not bode well for sustaining our salmon runs or for our individual and community economic situation.

Again, in closing I feel that the UCIDA agenda change request does not meet the Board's criteria for implementation. I am opposed to this request. Thank you for your time.

Sincerely yours,

Suzanne Abraham and family



Al Cratty  
P.O. Box 1  
Old Harbor, AK 99643

September 25, 2017

Alaska Board of Fisheries  
Chairman, John Jensen  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: Agenda Change Request #11 and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area Review

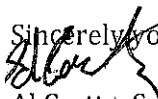
Dear Fisheries Board and Chairman Jensen,

Why are we talking about this Cook Inlet issue again? We went through the whole issue for many years in the early 90s. Yes, there is fish going to Cook Inlet caught in Kodiak and Yes there have always been fish going to Cook Inlet caught in Kodiak. This new genetic study doesn't show anything we didn't already know. I just think that they looked at a couple of higher catch years. The water was abnormally warm in 2015 and 2016 and we saw lots of unusual things like large seabird dieoffs. I'm thinking that these conditions may have moved Cook Inlet fish closer to Kodiak. Nature changes back and forth. I just wish they had taken samples in 2017. I think the 2017 Cook Inlet numbers would have been more like 2014 or even lower.

I have been an Old Harbor fisherman all of my life and now my son is also a full time fisherman. When we had crab and herring seasons and before IFQs I spent about 10 months a year out fishing. Now we're just left with salmon, -- king crab are gone, tanner crab is closed, the herring market is gone and IFQs took away halibut fishing. WE JUST HAVE SALMON LEFT! Now it seems like Cook Inlet fishermen are trying to take away that too. You at the Board of Fisheries need to stop Cook Inlet from taking away the only fishery I have left. I know Cook Inlet is just talking about 5 weeks out of the season, but the reduction of my income by 20-30% would put me out of business. I'm a good fisherman but I can't keep fishing if I lose this amount of my income. That's not BS but it's my reality here in Old Harbor.

I've met most of you during your meetings in Kodiak. I believe you are fair and have listened to the concerns of us rural fishermen from the smaller communities around the island. Please hear me when I say that limiting fishing opportunities for local stocks and whatever Cook Inlet bound sockeye might show up in the Kodiak area will hurt rural fishermen that don't have other jobs more than folks in Kodiak or outsiders.

Please reject ACR#11 and when you get the additional report on Kodiak genetics please see this as more detail about what has been known for generations.

Sincerely,  
  
Al Cratty, Sr.





Bruce Schactler  
PO Box 2254  
Kodiak, Alaska  
October 1, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
PO Box 115526  
Juneau, Ak 99811-5526

**Re: UCIDA Agenda Change Request #11 and Genetic Stock Composition of Sockeye Salmon in the Kodiak Management Area.**

This document is to address ACR #11 that you will be considering at your October 17, work session.

First, let me say that I am against this ACR for many reasons, but specific to your process, it does not meet any of the criteria for a valid ACR.

There is no conservation emergency nor is there any new information that corrects or even addresses the information available or considered when these various salmon management plans were adopted unanimously by the BOF. There is no previously, unknown flaw in a decision by the Board. This ACR is nothing more than an allocative attempt to bring up a subject that was put to bed 25 years ago by numerous Boards of Fish.

As you are all aware, this subject is most likely to be in front of you, in the form of many proposals at your regular cycle meeting in just 2 years. My suggestion is to gather more information through further genetic studies that are, this time, designed to the subject at hand and let science and fisheries management reality run the conversation instead of the present scientific misunderstandings, emotion and opportunistic allocative proposals of it all dominating the process!

I am a Kodiak Salmon purse seiner and have fished here as such since 1978. For as long as I have been involved in the fishery (1975) it has been common knowledge that CI sockeye travel through the Kodiak Management area. For all of these years, it is certain that the ability to target these fish is not possible in any specific manner. With the loss of the herring market, the biological loss of the Tanner Crab fishery and the privatization of Halibut, I make my living and support my family solely from the salmon fishery.

MY BIGGEST FOCUS WITH THIS LETTER, IS TO HELP YOU UNDERSTAND THAT WHILE THE GENETIC STUDY THAT BROUGHT ON THIS ACR HAS SHED A DIFFERENT COLOR OF LIGHT ON THE HARVEST OF CI BOUND



SOCKEYE IN THE KODIAK SALMON MANAGEMENT AREA, THE KNOWN PRESENCE OF THESE FISH IS VERY OLD NEWS AND THE ADFG AND BOF HAS KNOWN ABOUT AND DISCUSSED it FOR A VERY LONG TIME.

The BoF took up this subject in 1989 when they made sever restrictions through the North Shelikof sockeye Management Plan. The BOF deliberated on this same subject several times more through 1996 and still again in 2008 without making further restrictions. That is 20 years of analysis and specific discussion with KMA and UCI stakeholders and ADFG Staff. Every management plan in the KMA has been unanimously adopted and codified with full knowledge of these long and information filled BoF meetings where the harvest of CI bound sockeye was discussed in full detail.

I will not bash the genetic report as invalid or terribly flawed, but I would like to point out some things that will clarify and put into better perspective a few things:

As you will read in other informative submissions, the presence and harvest of CI bound sockeye has been a subject of study since the early 1900s....for a long time these CI bound fish were thought to be a "Middle Run " to Karluk Lake. The many traps (a map is presented for your benefit in several submitted documents) that were used by the early canneries are now used as a place for Set nets to fish. The genetic study that we are considering here used only these setnets for their sampling on the West side of Kodiak Island. For the study as a whole, this is very problematic because of the broad use of large meshed nets that seek to target sockeye and limit the number of pink salmon that they have to pick (one by one) from their nets. This larger meshed gear has the potential to skew the number of larger CI sockeye in the study. **I submit to you that considering that the old traps and the modern setnets are in the same locations, the genetic makeup of the traps in 1910 would be identical to this study that we are discussing now.** The only difference would now be the presence of the "Saltery Lake" stock that is used in our aquaculture association enhancement projects.

The percentages of sockeye stated in the genetic report are NOT percentages of the CI run, but simply of the sockeye sampled during the survey in that particular area! The study also leaves out the inclusion of the massive amount of local stocks of other species that are harvested during the same time period.

I urge caution as we laymen try to absorb and understand all of this technical language without getting confused and misunderstanding what the limited outcome and intent of this stock ID study really is. To do this, I also urge you all to ask a thousand questions of Kodiak staff as have I, to best understand what they did in this study and why and what their take on it is as it may reflect on any management plan.

As a resident of Kodiak and also a salmon fisherman of over 40 years I can tell you that the variability of CI bound Sockeye in the Kodiak Salmon fishery, is extreme. Yes, extreme! From one hour to the next, there is no way to predict where these fish will show up or when or for how long. The truth is that we are targeting our local stocks of sockeye, pinks and chums when these CI fish do show up. The time period represented in this genetic study, is when the Karkuk system is rolling with local sockeye and or pinks and when our daily harvest of sockeye is rarely less than the ACR #11 suggests we should have for the week. These management plans we fish under have been very specifically fine-tuned by ADFG, Industry and BoF action to ensure the escapement, sustainability and quality of our hundreds of local stocks that are all migrating to their streams of origin within the KMA. To assume that ANY particular



component of the CI sockeye run will be harvested in the KMA is contrary to the 100 yr old history of this Kodiak fishery that has shown throughout time that there is no common timing or event that can predict these CI fish and how they move thru the KMA. It is completely random and even in years of strong runs of CI Sockeye, their migration pattern may, for the most part, avoid the near coastal fisheries of the KMA.

It has been proven over these many years that the concern for any UCI conservation or yield concern lies principally there in CI. While it appears that Susitna bound sockeye are caught in the KMA, ADFG data show that more than twice as many of those fish fail to defeat the gauntlet of gillnets in the UCI fishery. This data of course will show that any small savings of Susitna fish from the KMA will more than likely be lost in the UCI fishery. The problem and solution to UCI and Matsu valley fish volumes lies in CI, not 250-300 miles to the west in Kodiak, where we are concentrating on our own local stocks and yes, liking the bonus of a few CI sockeye as they are accidentally caught in Kodiak. We are conducting a very complicated, multi-stock fishery that is successful and proven one of the most comprehensive in the state. Even the smallest of changes to these plans has the extreme potential to harm the fishery and the associated economic engine in the Kodiak area, while showing literally no noticeable benefit to the UCI sockeye resource.

**To help with your technical and historical understanding of this long discussed and considered subject, I attach as an addendum, the KSMG's report to the BoF for their consideration at the 1994 meeting.**

Regards,

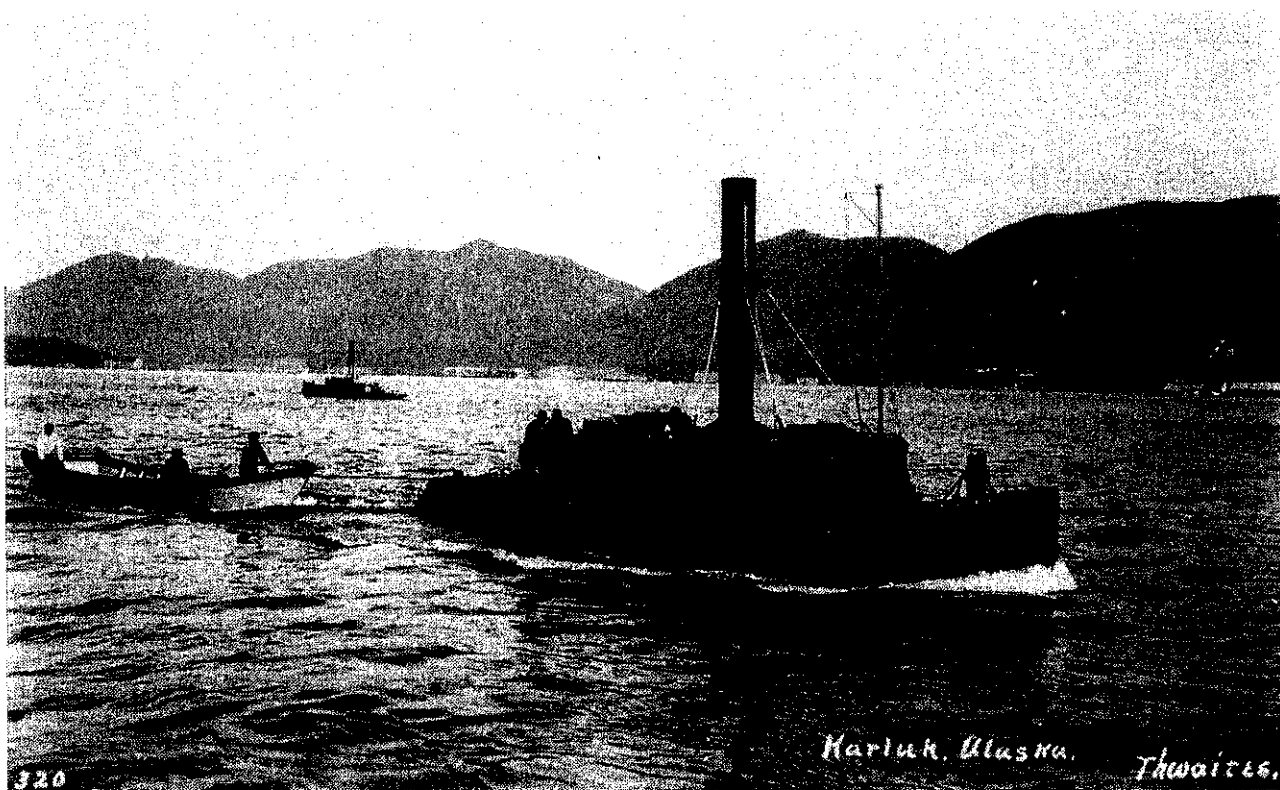
A handwritten signature in black ink, appearing to read "Bruce Schactler", written over the printed name.

Bruce Schactler

# KODIAK'S

## HARVEST OF COOK INLET SOCKEYE

### AN HISTORICAL + ECONOMIC + BIOLOGICAL ANALYSIS





# **KODIAK'S HARVEST OF COOK INLET SOCKEYE:**

**AN HISTORICAL, ECONOMIC**

**AND**

**BIOLOGICAL ANALYSIS**

**Compiled by the Kodiak Salmon Work Group  
March 14, 1994**



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## EXECUTIVE SUMMARY



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This overview of Kodiak's historical fishing practices and bycatch of Cook Inlet sockeye is presented to the Alaska Board of Fisheries by the newly-formed Kodiak Salmon Work Group (KSWG). This advisory group, representing a cross-section of Kodiak's salmon fishing organizations under the sponsorship of the Kodiak Island Borough, came together because of the over-arching reach of the Kenai Peninsula Fishermen's Association's (KPFA) current petition to the Board.

KPFA came to the Board after the 1992 salmon season with a petition to drastically curtail Kodiak fishing efforts, due to their concern about high levels of bycatch of Cook Inlet sockeye in Kodiak waters that year. Aside from KPFA's contention that Kodiak fishermen were unduly targeting upon migrating Cook Inlet sockeye in 1992, KPFA also warned the Board of possible escalation of such targeting in the future and of the poor prognosis for the health of Cook Inlet sockeye stocks.

The Board eventually accepted KPFA's petition in spring of 1993 but, since that time, another fishing season has occurred (1993) without substantial catches of Cook Inlet sockeye by the Kodiak fleet. Further, new information has been compiled regarding the status of Cook Inlet sockeye returns as well as the rates of potential bycatch in Kodiak waters. While the Board may have had cause to originally consider KPFA's petition, the bulk of new information now weighs heavily against the need for the Board to take action, particularly outside of its regular cycle for considering Kodiak fishery issues.

Updated forecasts of the Kenai River sockeye return for 1994, as well as reconsideration of estimates for smolt survival rates in the Kenai system, indicate that there is no conservation emergency, as was once thought. The status of other Upper Cook Inlet (UCI) stocks is also healthy. Therefore, part of KPFA's original concerns are now moot.

More importantly, analyses by the Alaska Department of Fish and Game (ADF&G), corroborated by independent work by Natural Resources Consultants (NRC), strongly indicate that the Kodiak bycatch harvest of Cook Inlet-bound sockeye is directly related to the abundance of Cook Inlet sockeye on an annual basis. Not only does the magnitude of Kodiak's<sub>4</sub>

bycatch go down during years of low Cook Inlet sockeye abundance the rate (e.g., percentage) declines as well, becoming imperceptible at anything less than average Cook Inlet returns.



The Department's methodology, using proportions of average weights in various Kodiak harvests, is augmented by NRC's analysis comparing proportional harvests across many years between the "intercept period" and the non-intercept period. NRC also examined the data for any increase over the years in the proportion of large sockeye taken in Kodiak waters during the intercept period. All three of these analyses concur that there is likely a longstanding, but low level, bycatch of Cook Inlet sockeye in Kodiak waters but, that this bycatch only reaches substantial levels when Cook Inlet is experiencing extremely high sockeye returns as in 1988 and 1992.

Review of historic information also indicates that Kodiak has harvested Cook Inlet sockeye at low levels consistently over the past century. And, while such harvests have been ongoing, the thrust of Kodiak's salmon management program has been to fully exploit, while promoting conservation of its many local mixed stocks. The complex, interlocking nature of Kodiak's management plans has fostered recovery of local stocks, high quality product, and flexibility for the fleets to maximize production - none of which has come at any substantial cost to the returns of Cook Inlet sockeye.

Biological and socioeconomic information shows that Kodiak's reliance upon its longstanding salmon fishing industry is proportionately much greater than that of the Kenai Peninsula region. The Kodiak fishery has a high level of local and village participation, as well as central importance to the state's overall fishing economy. Given that there is no biological hazard posed by Kodiak's harvest of Cook Inlet sockeye, any regulatory action by the Board must rely upon the state's allocation criteria. Examination of current information leads to a conclusion that actions to restrict Kodiak's ability to harvest its local resources and its historic share of Cook Inlet sockeye are not warranted under those criteria.

Finally, examination of the Board's freshly adopted Policy for the Management of Mixed Stock Salmon Fisheries against current information yields two major conclusions. First, the harvest of Cook Inlet sockeye by the Kodiak fleets depends primarily upon natural fluctuations of the Cook<sub>5</sub>



Inlet return. Yet, the mixed stock policy and the Board's findings state that such natural fluctuations will not be used to define a mixed stock fishery as new or expanding. Further, the policy and findings spell out that it is not appropriate to designate a mixed stock fishery as new or expanding on the basis of a single year - yet this is precisely the proposition in KPFA's petition: To use Kodiak's harvest in 1992. Counter to KPFA's claims, Kodiak's mixed stock fishery is not expanding to intercept higher numbers of Cook Inlet sockeye, as shown in 1993, and therefore there is no reason under the mixed stock fish policy for the Board to take any action.

The Kodiak Salmon Work Group believe that the best information currently available, be it regarding the status of Cook Inlet sockeye stocks or the nature of Kodiak's bycatch of those migrating stocks, clearly indicates that low rates of bycatch are not new, that high rates of bycatch occur only during years of exceptional abundance, and that the Kodiak fleet's mobility is used to target changing local stock conditions rather than assault Cook Inlet returns on a consistent basis.

We recommend that the Board of Fisheries closely examine the current information provided by ADF&G, NRC and our reports. We also invite Board members to read and appreciate the large public concern expressed by a tremendous number of Kodiak residents in our companion submission of letters, petitions and affidavits.

On the whole, we believe that the Board should not take action to further limit Kodiak's management regime based upon left-over concerns from 1992. While in 1992 Kodiak's harvest of Cook Inlet sockeye may have been notable, the Cook Inlet harvest was near record levels and accompanied by a continued trend of Kenai over-escapement.





Indian Village at Old Harbor  
Kadiak Showing Waters Method  
of drying Salmon  
Kadiak Isd  
88-89

# PART 1

## Statutory and Regulatory Requirements

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OLD HARBOR





# **Chapter 1**

## **MIXED STOCK SALMON FISHERIES POLICY AND BYCATCH OF COOK INLET-BOUND SOCKEYE SALMON IN THE KODIAK MANAGEMENT AREA**

The Board of Fisheries consideration of KPFA's petition, to control the bycatch of Cook Inlet-bound sockeye in Kodiak's salmon fisheries is the Board's first real test of the new Policy for the Management of Mixed Stock Salmon Fisheries (5 AAC 39.220) passed in March 1993. It is important to judge each of the policies' elements, and those of the associated findings (93-07-FB) against the best available information regarding Kodiak's salmon fishery, the associated take of Cook Inlet sockeye, and the status of Cook Inlet's sockeye stocks.

A sincere evaluation of current information, recent management actions and elements of the Mixed Stock Policy indicate that no further regulatory action is warranted to curb the harvest of Cook Inlet sockeye in the Kodiak management area. Particularly important are the natural fluctuations in the abundance of stocks harvested in a fishery not being the single factor that identifies a fishery as expanding or new. [5ACC39220(d)].

### **Mixed Stock Salmon Fisheries Policy**

As illustrated in Chapter Part 2, Chapter 3 of this document, there is no pressing conservation emergency regarding the 1994 return of Kenai River and Cook Inlet sockeye. In fact, given updates to information and forecasts of the Kenai River run for 1994 by ADF&G, it appears that the return and harvest will be about average. Similarly, there is no indication that other stocks in Cook Inlet are in jeopardy. Therefore, conservation and sustained yield, the highest priorities under the Mixed Stock Policy (paragraph a) are not threatened. This leaves allocation as the major consideration left in the debate between Kodiak and Cook Inlet interests; under the Mixed Stock Policy, such considerations must abide by established allocation criteria.

In response to what appeared to be greater than average Kodiak harvest of Cook Inlet sockeye in 1988, the Board of Fisheries subsequently passed the North Shelikof Strait Sockeye Salmon Management Plan. The purpose of this plan was to restrict what was considered new targeting upon Cook Inlet salmon by Kodiak fishermen. The plan was modified in 1993 to restore historic fishing opportunities while still protecting against targeting of Cook Inlet sockeye when these fish might be present in northern Kodiak waters in July.



In 1988, fishermen were noted to be fishing in what were then thought to be state waters toward the middle of Shelikof Strait. After 1988, ADF&G and the National Marine Fisheries Service clarified that only waters within three miles of either shore in Shelikof Strait were open to salmon fishing. This also had the effect of preventing further targeting upon Cook Inlet sockeye migrating through the area.

The North Shelikof Management Plan, plus refined definition of state waters, serve to satisfy the Board's preference in the Mixed Stock Fish Policy (outlined in paragraph c) that conservation burdens and harvest opportunities are best assigned in regulatory fishery management plans. While some further adjustments in the existing plan may be warranted to restore Kodiak's historic fishing patterns in the future, the plan adequately addresses most if not all reasonable concerns over alleged growth of Kodiak take of Cook Inlet sockeye in recent years.

In lieu of regulatory management plans, the Board intends that the burden of conservation be borne in rough proportion to respective levels of harvest ( Mixed Stock Fish Policy, paragraph b). Most Kodiak salmon fishing is currently regulated by fishery management plans, but only the North Shelikof Plan specifically addresses Cook inlet sockeye. However, it is apparent from ADF&G's and Natural Resource Consultants' recent analysis of the harvest of Cook Inlet sockeye in Kodiak waters, that such bycatch is negligible when Cook Inlet returns are poor to above average. Under conditions when conservation of Cook Inlet's sockeye returns would be a concern, it is not likely that any significant Kodiak bycatch of those sockeye would occur. Therefore, in this case, it is not necessary to assign respective burdens of conservation. Kodiak's catch of Cook Inlet sockeye appears to be self-limiting in years of low or

average run strength; there is no additional burden to bear when harvest are insignificant.



The Board's policy (paragraph d) also aims to restrict new or expanding mixed stock fisheries, unless they are otherwise provided for. The Board's recent actions on the North Shelikof Management Plan both restrict the fishery there and displace the fleet to other districts around the Island. To the extent that such mandated movement of the fleet might now be considered to create new mixed stock fishing opportunities, the Board has reason for pause. However, ADF&G's information plus illustration of historic fishing patterns and management programs (Chapters 2-5) suggest that mixed stock fishing, even on Cook Inlet sockeye, in these other locations is not new.

Most important, however, is the Board's recognition that natural fluctuations in abundance of fish must not be the single factor which identifies a new or expanding mixed stock fishery. In the case of Kodiak's bycatch of Cook Inlet sockeye, it is apparent that the rate and level of that bycatch is almost totally related to natural fluctuations in the Cook Inlet returns.

### **Board Findings on the Mixed Stock Policy**

The Board's findings, associated with passage of the Mixed Stock Policy regulations, not only reiterate specific points of the policy, but amplify and clarify the Board's intent outside of the constraint of regulatory language. Several of these findings apply to consideration of this Kodiak-Cook Inlet sockeye issue.

For example, the Board found that Alaska's salmon industry appropriately relies upon stable existing fisheries, most of which harvest mixed stocks. Certainly, Kodiak's established management program for the harvest and conservation of mixed stocks has been successful in sustaining and promoting Kodiak's century-old industry. Similar to the Board's specific discussion of Southeast Alaska's program to harvest many stocks with an eye towards quality, Kodiak's pattern of managing cape fisheries has promoted protection, rebuilding and high-quality harvests of a large number of stocks of salmon.



The Board's finding also specifies that established regulatory management plans are presumed to already assign proportional burdens of conservation. Given that the Board has established a management plan dealing with Kodiak interception of Cook Inlet salmon, it is arguable that any conservation burden has already been sufficiently assigned. Moreover, there is no indication that 111 years of fishing in Kodiak's waters ever poses any threat to Cook Inlet stocks.

Further, the Board's findings state that definition of new or expanding fisheries will not be based upon natural fluctuations of fish, but rather the specific behavior of fishermen. Of particular interest is the finding that "it is seldom practical to declare a fishery as 'new' or 'expanding' based on a single year's events." But, this is just what happened in creation of the North Shelikof Strait Sockeye Management Plan (based on the 1988 season) to restrict other Kodiak area fisheries.

It is plausible that events in 1988 may have warranted a "seldom" practicality; moreover, the Board was not then bound by the new Mixed Stock Policy. However, outside of North Shelikof Strait, it now is evident that Kodiak's bycatch rates of Cook Inlet salmon are almost totally based upon natural fluctuations in the abundance of the Cook Inlet return-and KPFA's concerns about high levels of bycatch and purported shifts in fishing effort are based upon only one year (1992).

Finally, the Board found that the Mixed Stock Salmon Policy is intended to embody the current practice of salmon management employed in Alaska, specifically existing regulatory management plans. Kodiak Island's salmon fisheries are already managed according to a well-orchestrated series of management plans, none of which need to be amended now to account for harvests of fish that fluctuate on the basis of natural abundance and pose no threat to conservation.

### Summary

The Board of Fisheries took substantial action after the 1988 season to restrict Kodiak harvests of Cook Inlet-bound sockeye in Shelikof Strait. This action was based upon a single year shift in

fishermen's behavior. While such regulatory action might not now be sanctioned by the current Mixed Stock Salmon policy, it did serve to restrict a perceived increase in Kodiak harvest of Cook Inlet sockeye.



Recent information provided by ADF&G indicates that bycatch in remaining sections of the Kodiak management area are related to annually fluctuating abundance of Cook Inlet sockeye. Moreover, estimated rates of bycatch indicate that Kodiak fishermen harvest negligible numbers and proportions of poor to average Cook Inlet runs, therefore conservation is not of concern.

Because major questions of conservation and management are already successfully dealt with in the self-limiting nature of Kodiak's bycatch and existing series of management plans, the only remaining issue for debate is allocation; allocation of salmon resources under this policy will be consistent with allocation criteria set out in 5AAC39.205.

Comparing current information and circumstance, it is apparent that no further limit of Kodiak's bycatch of Cook Inlet sockeye salmon is warranted under the Policy for the Management of Mixed Stock Salmon Fisheries.



## Chapter 2 ALLOCATION CRITERIA



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### Allocation Criteria

The Board of Fisheries may allocate fishery resources among commercial fisheries. The Board shall adopt criteria for the allocation of fishery resources and shall use the criteria appropriate to particular decisions.

Pursuant to AS 16.05.251(c) and AAC39.205, the criteria may include such factors as:

1. the history of each fishery;
2. the number of residents and non-residents who have participated in each fishery in the past and the number of residents and non-residents who can reasonably be expected to participate in the future;
3. the importance of each fishery for providing residents the opportunity to obtain fish for personal and family consumption;
4. the availability of alternative fishery resources;
5. the importance of each fishery to the economy of the state;
6. the importance of each fishery to the economy of the region and local area in which the fishery is located;
7. the importance of each fishery in providing recreational opportunities for residents and non-residents.

### WHAT IS IT ALL ABOUT?

The proposals submitted by Cook Inlet commercial salmon groups to the Board request the Board to reduce the harvest time and area in the Kodiak salmon management area during the period in which Cook Inlet sockeye are present in the Kodiak salmon management area.

The *impetus* behind the proposals is one, an awareness by Cook Inlet fishermen of increased Cook Inlet sockeye catches by Kodiak salmon

fishermen in the years 1988 and 1992 and two, a fear that this increase in catch is a new fishery which will trigger conservation concerns when there are low returns of Cook Inlet sockeye salmon stocks.



The *effect* of the Cook Inlet proposals, if adopted by the Board, will be to allocate a greater percentage of Cook Inlet sockeye to Cook Inlet commercial salmon fishermen, while also reducing Kodiak's historic share and restricting Kodiak's ability to harvest local stocks.

As approval of the Cook Inlet proposals will result in allocation of mixed stock fishery resources between commercial fishermen, the Board is required by law to consider those criteria appropriate to a mixed stock fishery allocation.

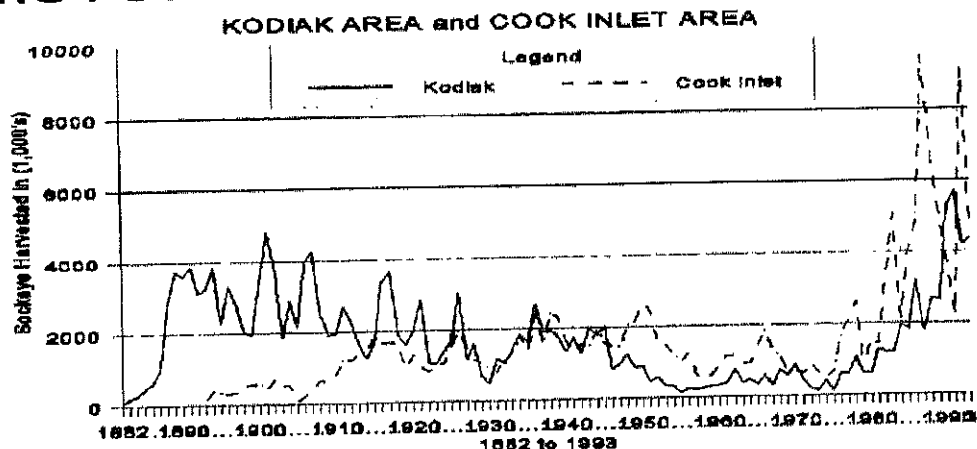
Kodiak fishermen believe that after careful review of the facts, the Board will reject the Cook Inlet proposals. The following allocation criteria are appropriate to the issue before the Board.

## HISTORY OF EACH COMMERCIAL SOCKEYE FISHERY

**Kodiak** has commercially fished sockeye salmon since 1882 - or for 111 years.

**Cook Inlet** has commercially fished sockeye salmon since 1893 - or for 100 years.

## HISTORICAL CATCH OF SOCKEYE





Fish swim, and Cook Inlet salmon are no different than other fish that respect. As a result of Kodiak's geographical location, Cook Inlet sockeye salmon have been traveling through Kodiak waters for thousands of years on their way to and from their spawning grounds. For at least the last 111 years, Kodiak commercial salmon fishermen have fished stocks of Cook Inlet salmon as they pass through Kodiak's waters. In fact, they have been fishing stocks of Cook Inlet salmon at least 11 years longer than Cook Inlet commercial fishermen have fished salmon.

A detailed history of Kodiak's fishery is presented in Chapter 7. It is apparent from the history of the two fisheries that the "new or expanding" fishery identified by Cook Inlet fishermen is a short sighted snapshot of a rather large panorama. 1988 and 1992 are aberrations significantly above historical norms.

As Cook Inlet's proposals are singularly based upon fishing in years of abnormally high fluctuations of Cook Inlet sockeye, the Board's mixed stock fishery policy mandates the fisheries stay at the status quo if not returned to their status as it existed in 1988.

### RESIDENT VS. NON-RESIDENT OF EACH FISHERY PRESENTLY AND IN THE FUTURE

There are 611 Kodiak salmon limited entry permits.

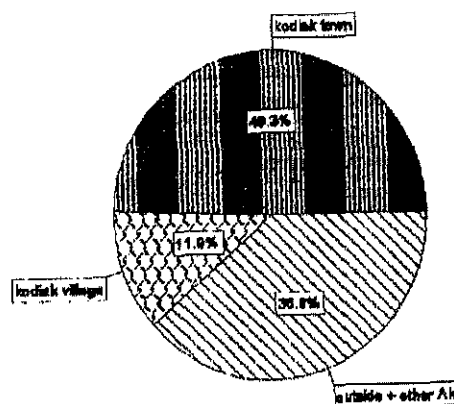
78% or 478 of these permits are owned by Alaska residents.

61% or 374 are owned by residents of Kodiak Island.

11.9% or 79 permits are owned by persons who live in the Kodiak villages of Old Harbor, Larsen Bay, Ouzinkie, Port Lions, Akhiok, and Karluk.

### Kodiak Salmon Limited Entry Permits

Village, local, and non-local ownership





Since the institution of Limited Entry permits for salmon, the majority of Kodiak permits have been owned by Kodiak residents. It is likely that for the near future, if not far future, the majority of Kodiak salmon limited entry permits will continue to be owned by Kodiak and Alaskan residents.

There are 1,328 Upper Cook Inlet salmon limited entry permits.

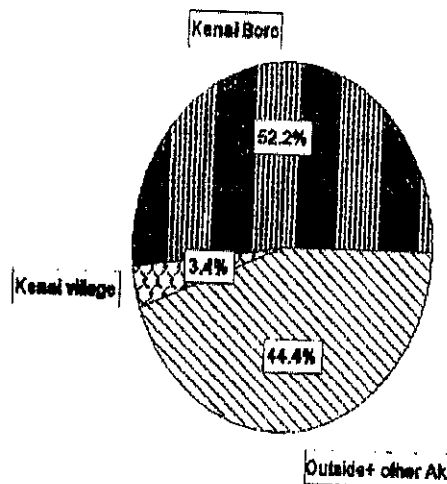
78.7% or 1,139 of the Upper Cook Inlet salmon permits are owned by Alaskan residents.

55.6% or 738 of the Upper Cook Inlet salmon permits are owned by residents of the Kenai Peninsula Borough.

3.9% or 45 of the Upper Cook Inlet salmon permits are owned by residents from the villages of Seldovia, English Bay, and Portlock.

## COOK INLET SALMON PERMITS

Village, Local, and non-local ownership



Less than 4% of Cook Inlet salmon permits are owned by village residents. In contrast, almost 12% of Kodiak's permit holder reside in villages around Kodiak Island. Old Harbor is illustrative of these village's dependence on salmon fishing. There are 31 permits in Old Harbor and out of a population of approximately 300 people, over 120 local residents are employed on salmon vessels and set net sites. There is not a family in Old Harbor that does not have at least one person involved in salmon fishing.

Roughly the same percentage of Kodiak and Upper Cook Inlet permits are owned by Alaska residents. However, a significantly higher percentage of Kodiak's permit holders reside in the local area where they fish. The Board can continue to expect that a greater percentage of Kodiak permit holders will reside in the Kodiak Borough.

Residency data, particularly that of village residents and local residents, supports the Board's weighing of this criteria in Kodiak's favor. The Board should reject Cook Inlet's proposals and ensure Kodiak's historical salmon fishing opportunities.



### **Importance of Each Fishery to Provide Fish for Personal and Family Consumption**

Both Kodiak Island and Cook Inlet have at this time and in the past adequate supplies of salmon to provide for personal and family consumption.

### **Availability of Alternative Fishery Resources**

Both Cook Inlet and Kodiak fishermen depend on salmon resources as well as other available resources. However, there is a portion of the Kodiak salmon fleet, mainly in the Alutiiq villages, which makes up 12% of the permit holders, who only fish salmon. To close down their salmon fishery, especially for three weeks, will decrease these persons income with no alternatives. The Board needs to be acutely aware of this lack of alternative fishery resource for this group of fishermen.

## **IMPORTANCE OF EACH FISHERY TO THE ECONOMY OF THE STATE**

### **Kodiak and the State**

Kodiak's sockeye salmon industry was the seminal commercial salmon fishery for the Territory of Alaska. The fishery began at Karluk in 1882. The importance of Karluk's commercial sockeye industry is reflected in the fact that when Anchorage named its streets, it gave the letter "K" street to Karluk and not Kodiak, Kenai or Kasilof.

Kodiak has always been a huge contributor to the fish economy of the Territory and the State of Alaska. Throughout the last two decades, since Limited Entry, Kodiak has been the number one or number two port in Alaska. In fact, the value of salmon caught in Kodiak has averaged



\$30,000,000.00 annually since 1975. This means \$900,000.00 annually to the state treasury from just the raw fish tax.



Kodiak is a fishing community and lacks the economic diversification of area's connected by roads. As indicated in Dr. PJ Hill's report (see Appendix B), about 30% of the average monthly employment in Kodiak was for seafood processing and fishing generated 20% of Kodiak's person income.<sup>1</sup>

To allocate a percentage of the Kodiak sockeye harvest to Cook Inlet will devalue Kodiak's salmon industry. It will mean fewer jobs, and less revenue for the state. The overall result will be to cause economic damage to Kodiak and its 6 village communities.

### Upper Cook Inlet and the State

The Upper Cook Inlet sockeye fishery started in 1893, 11 years after Kodiak. Throughout the years, Cook Inlet sockeye production has played an important part in the Territory and in the State. In 1990, Cook Inlet fishing contributed \$25 million to the Kenai Peninsula economy.

In the last two decades, fishing has been less important to the Kenai Peninsula economy. Tourism and oil have surpassed fisheries. Today, only 5% of Kenai's \$426 million annual economy is generated by fishing.

### Analysis

Passage of the Upper Cook Inlet proposals will create fleet displacement during periods of closure in the Kodiak Management Area. The displaced fleet will be crowded into smaller areas causing increased competition between commercial salmon users. Increased state revenues will be expended to manage and control such a fishery. In addition, there will be an increased potential for local fish to be unharvested or over-harvested in the inner bays. This will lower the quality of Kodiak's salmon resource.

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<sup>1</sup> PJ Hill, Ph.D, A Comparative Analysis of the Economies of Kodiak and Cook Inlet from the Perspective of Commercial Fishing, March, 1994.

On the other hand, Cook Inlet will increase its harvest of sockeye salmon revenue. The difference is that 5% of that increased revenue will transfer to permit holders who live outside of the Cook Inlet sockeye region and the state. Although the percentage is small, this transfer of fishery resources to outside Alaska is contrary to the state's policy.



## **THE IMPORTANCE OF EACH FISHERY TO THE LOCAL ECONOMY**

### **Kodiak**

Salmon has consistently made up between 30% and 50% of Kodiak's economy, with sockeye as the premier salmon species. This means an average of \$30,000,000.00 flows through Kodiak annually from ex-vessel payments. The salmon industry in Kodiak employs 4,200 to 5,000 workers each year.<sup>2</sup>

### **Cook Inlet**

Salmon is less than 5% of the Kenai Peninsula Borough economy. This comes to around \$20,000,000.00 on an annual basis. It is important to note that 44.4% of that ex-vessel value does not remain in the local economy, but leaves with the non-resident and non-local fishermen.

### **Importance of Each Fishery in Providing Recreational Opportunities for Resident's and Non-Residents**

Currently, both Kodiak and Cook Inlet are enjoying sockeye runs substantially in excess of escapement goals. Ample recreational opportunities are currently provided for residents and non-residents in Cook Inlet, as well as Kodiak.

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<sup>2</sup> Ibid

## Conclusion



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Cook Inlet's proposal must be reviewed in light of the Mixed Stock Fishery Policy. That policy requires the Board to use the pertinent allocation criteria in making a decision. The analysis of each of the relevant criteria previously mentioned weighs heavily toward the Board rejecting the Cook Inlet proposal.

Cook Inlet fishermen claim that Kodiak fishermen have just recently learned how to "intercept" (their word) Cook Inlet sockeye and that this is a new and expanding fishery. They point to the years 1988 and 1992 as proof of this new fishery. A simple glance at the histories of each fishery reveals that those two years were far and above the normal natural harvest for Cook Inlet salmon. The Board's Mixed Stock Fish Policy [5AAC39.230(d)] speaks directly to unexpectedly high return years. Natural fluctuations in the abundance of stocks harvested in a fishery will not be the single factor that identifies a fishery as expanding or new.

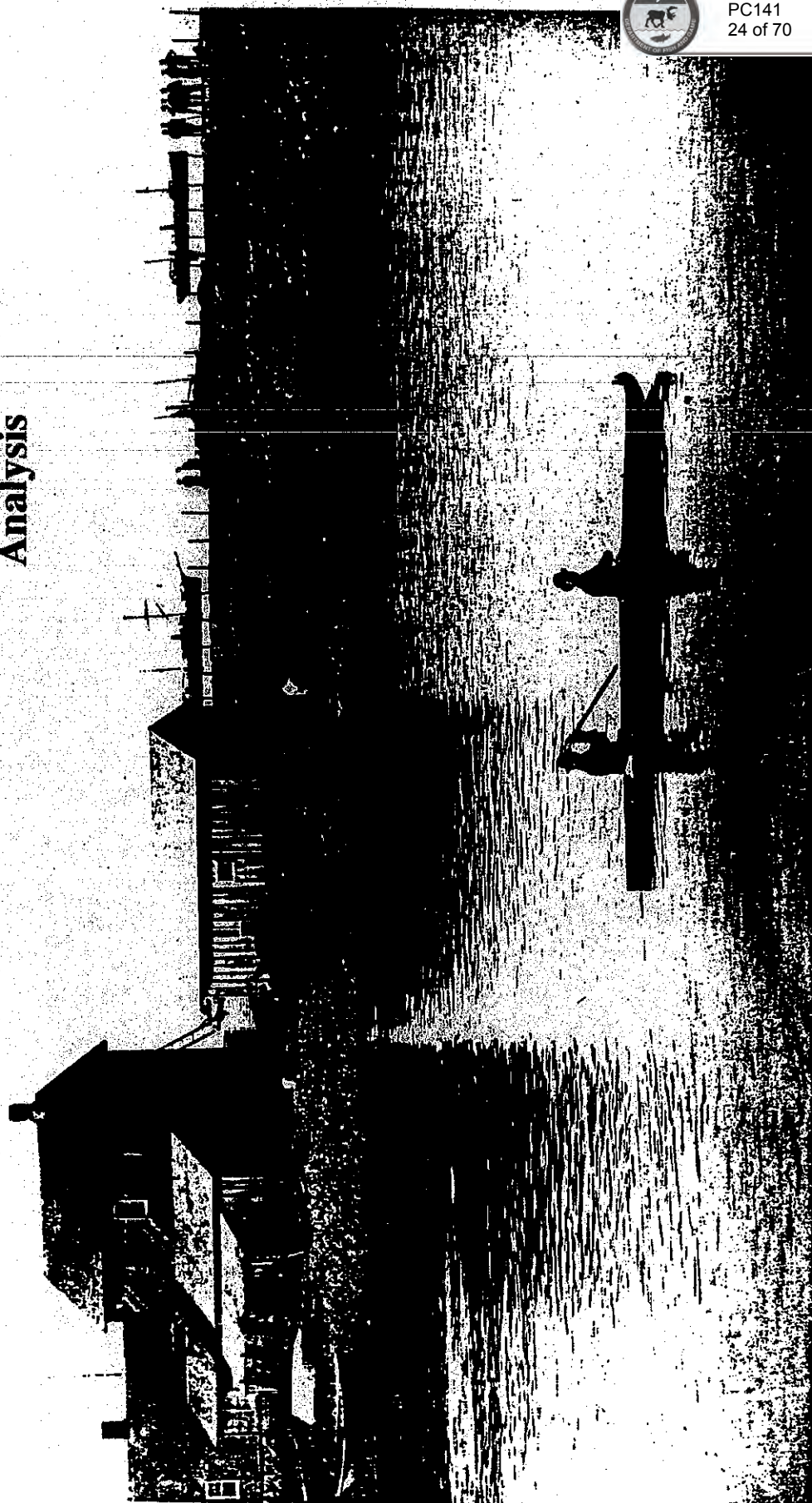
Were it not for favorable environmental conditions which created an extremely abnormal abundance of Cook Inlet sockeye, Kodiak fishermen would have caught their traditional harvest of Cook Inlet sockeye, as Kodiak fishermen have done for the last 111 years. Careful consideration of the relevant allocation criteria and the caveat that natural fluctuations in the abundance of stocks harvested will not be the single factor that identifies a fishery as new and mandates that the Board reject Cook Inlet fishermen's proposals.



*Bidlake in Harluk River*

## PART 2

### Historical, Economic, and Biological Analysis





### Chapter 3

## NO CONSERVATION EMERGENCY EXISTS

Much has changed since the Alaska Board of Fisheries initially agreed to the Change of Agenda request by Kenai Peninsula Fishermen's Association (KPFA) in March of 1993. Paramount to this issue is the forecast revisal increasing the Kenai River commercial harvest from about 300,000 to 1,000,000.

#### 1994 Original Kenai River Forecast (ADF&G Memo of 3/11/92)<sup>1</sup>

|                 |                    |
|-----------------|--------------------|
| Total Run       | 800,000 to 900,000 |
| Escapement Goal | 400,000 to 700,000 |
| Harvest         | 200,000 to 400,000 |

#### 1994 Revised Kenai River Forecast (ADF&G Preliminary Forecast of 1994 Run)<sup>2</sup>

|                 |           |
|-----------------|-----------|
| Total Run       | 1,500,000 |
| Escapement Goal | 500,000   |
| Harvest         | 1,000,000 |

While some arguments could be made that a harvestable surplus of 300,000 sockeye hardly constitutes a conservation problem, certainly a surplus of 1,000,000 sockeye puts that concern to rest. In addition, the biologists suspect incorrect smolt data may have short-changed the run by 1.5 million allowing an actual harvest of 2.5 million in 1994 from Kenai River sockeye.<sup>3</sup> These projections, coupled with biologists' assessments that other Cook Inlet systems appear stable, clearly place the upcoming salmon season within normal historical guidelines. **NO CONSERVATION EMERGENCY EXISTS!**

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<sup>1</sup> ADF&G Memo, November 3, 1992 from Stephen Fried, Regional Research Biologist to Ken Florey.

<sup>2</sup> Upper Cook Inlet Forecast for 1994 by Ken Tarbox, Research Project Leader

<sup>3</sup> Ibid





Recent Kenai River data show Kodiak's catch of Cook Inlet t sockeye indelibly linked with the size of Kenai River run. On those years when the run dips, Kodiak's catch drops proportionately. In fact, the average Kenai River run in 1991 produced a negligible catch of Kenai bound sockeye.<sup>4</sup> This data strongly supports the contention that weak and average Kenai River returns are not adversely affected by Kodiak's incidental take of Kenai River sockeye.

### OTHER UCI SYSTEMS

While the focus of this discussion centers on the Kenai River, it is important to note that the other major UCI systems are also NOT in jeopardy or facing any conservation crisis.

### 1994 FORECAST

|                |           |
|----------------|-----------|
| Crescent River | 140,000   |
| Fish Creek     | 100,000   |
| Kasilof River  | 570,000   |
| Kenai River    | 1,500,000 |
| Packer Creek   | 220,000   |
| Susitna River  | 770,000   |
| <br>           |           |
| Total UCI Run  | 3,300,000 |
| Escapement     | 1,300,000 |
| Harvest        | 2,000,000 |

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<sup>4</sup> Ivan Vining & Bruce Barrett, The Use of Average Weight to Estimate the Amount of Interception of Upper Cook Inlet Sockeye Salmon Within Selected Areas of the Kodiak Management Area, p. 9, 48.



## Summary

If the 1994 Kenai return comes in at projected levels, Kodiak's interception level most likely will mimic 1991's which was negligible. Therefore, any new restrictions imposed on Kodiak seiners for the 1994 salmon harvest will probably not affect the Cook Inlet run.

However, new restrictions always affect the harvest of local stocks in that they redistribute the fish to different user groups. Kodiak, unlike Cook Inlet, has developed a fine-tuned management plan under which seiners, setnetters, beach seiners, and sports fishermen can live without allocative conflicts within the KMA.

Moving seiners off traditional cape hauls in July will tip the balance, resulting in conflicts which will also end up before the Board of Fish. The damage to Kodiak's fishery will be great, while the benefit to Cook Inlet will be minimal.

Both from a conservation stance and a fisheries management stance, the KPFA petition is hollow; it is not valid nor is it necessary.

## Chapter 4

# THE RELATIONSHIP OF KODIAK BYCATCH TO THE COOK INLET RETURN



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During the past decade, returns of sockeye salmon into Upper Cook Inlet reached unusually high numbers.<sup>1</sup> These record returns were instrumental in bringing about the current debate on Upper Cook Inlet sockeye.

Prior to 1982, the highest Cook Inlet commercial sockeye catch was less than 2.7 million fish. From 1982 to 1993, the Cook Inlet sockeye catches have exceeded the prior record catch 10 out of 12 years. 1987 and 1992 Cook Inlet commercial catches were approximately three and a half times greater than 2.7 million. This large increase in Cook Inlet sockeye has made their presence more noticeable in Kodiak catches during this time period. UCI biologists were unsuccessful in their attempts to prevent over-escapement of the most onerous type. In fact, in 9 of the last 12 years, since 1982, the optimum escapement goal for the Kenai River has been exceeded; in-season escapement assessment is determined by sonar indexing which in itself has recently been identified by ADF&G as conservatively biased. UCI in-season harvest strategies, as historically applied and as directed by existing management policies, suggest that when UCI run size exceeds 5 million and all sockeye systems are producing proportional to their potential, over-escapement is unavoidable. Even though over-escapement in 1987 and 1989 were partially influenced by oil spills, the other aforementioned 7 years show that escapements would have been substantially exceeded regardless of the oil spills. Therefore, in lieu of this 12 year average of over-escapement, it would be prudent for the Board of Fisheries to review UCI management policies as it relates to this issue.

Awareness of bycatch in the KMA caused alarm among Cook Inlet fishermen. Based on solely on 1988 data, Cook Inlet fishermen convinced the Board of Fish to adopt the North Shelikof Strait Sockeye Management Plan in 1989. Then, in 1992, only three years later, another near record return of sockeye returned to UCI. Concerned once again, Cook Inlet

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<sup>1</sup> UCI Sockeye Harvest - 100 years

fishermen are asking for further restrictions of Kodiak fishermen. However, this time more than one year's worth of data is available by which to evaluate Kodiak's catch.



Over the years, pressure has been put on ADF&G to try and calculate the amount of non-local sockeye harvested in the KMA when UCI sockeye are assumed to be present. That analysis has been done within the limits of current information and shows the following:

1. UCI sockeye are only present at detectable levels in the KMA during the years that UCI returns are higher than average.
2. Since 1988, the amount of bycatch of UCI sockeye in the KMA correlates directly to run strength in UCI.<sup>2</sup>

In other words, when UCI sockeye returns are very strong, bycatch in the KMA is proportionately higher. This was the case in 1992 when 10.5 million sockeye returned to UCI. Bycatch in the KMA that year only reached a maximum of 9.49%. When the UCI sockeye return was 6.2 million in 1993, bycatch in the KMA fell to 3.15%. Furthermore, when the return was 3.5 million in 1991, there was no discernible bycatch of UCI sockeye in the KMA.

These findings are not surprising. It makes sense that more fish will be caught when more are available and that fewer fish will be caught when fewer are available. In fact, as UCI sockeye approach average levels, the data shows that so few UCI sockeye are harvested in the KMA that their numbers cannot be calculated. The same relationship was concluded in an independent study by Natural Resource Consultants (see Appendix A).

Recent high returns of UCI sockeye and subsequent over-escapement into the Kenai have also alarmed Cook Inlet fishermen. They feared "the decline in adult returns is expected to begin in 1993 and bottom out in 1995 when, according to ADF&G, the total return is expected to 'barely be great enough to meet escapement goals. This will likely mean that no

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<sup>2</sup> Ivan Vining and Bruce Barrett, Use of an Average Weight to Estimate the Amount of Interception of Upper Cook Inlet Sockeye Salmon Within Selected Areas of the Kodiak Management Area, 1994

targeted commercial fishing on the Kenai River sockeye salmon stock be allowed in Cook Inlet in 1995. Minimal fishing time is expected in 1998."<sup>3</sup> However, in 1993 the Kenai was once again over-escaped by 16% and Kodiak's bycatch of non-local stocks was estimated at only 3.15%; this during a year when Kodiak's fleet was allowed a record amount of fishing time to harvest the largest return of local stocks on record. The return to the Kenai River in 1994 is now predicted by ADF&G to be 1,489,000. Total return of UCI sockeye is forecasted to be 3.3 million.



Clearly, cause for alarm by Cook Inlet fishermen was unnecessary in both issues. Rather, the data show that it is the Kodiak fishermen who should be alarmed. Only during high returns of UCI sockeye is there any detectable level of bycatch in the KMA. Yet Cook Inlet fishermen wish to further restrict Kodiak during years of average or below-average sockeye returns and during years of high abundance in the Kenai River which has been consistently over-escaped.

Certainly, large sockeye runs into UCI have created problems in UCI management along with increased bycatch in the KMA. However, it is also clear that as Cook Inlet returns decrease, the KMA has little impact on UCI sockeye. As we look ahead to smaller UCI sockeye returns, we can expect no perceptible impact by Kodiak fishermen.

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<sup>3</sup> Letter to Laird Jones

<sup>4</sup> Ivan Vining & Bruce Barrett, The Use of Average Weights to Estimate the Amount of Interception of Upper Cook Inlet Sockeye Salmon Within Selected Areas of the Kodiak Management Area, 1994



## **Chapter 5**

# **ANALYSIS OF KODIAK HARVEST PATTERNS WITH AREA SPECIFIC DISCUSSIONS**



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With the abnormally abundant runs to Cook Inlet in '87, '88, and '92 large sockeye were apparent in the mid-July catches of many Kodiak management units, particularly in 1992 when the Cook Inlet run was spread out over an unusually long time period. This shouldn't be surprising as these were the three largest returns to Cook Inlet in the entire history of the fishery. Prior to 1982, no commercial Cook Inlet catch had ever exceeded 2.7 million sockeye.

It is hard to think of any fishing area on Kodiak Island in 1992 that didn't have an unusual number of reds show up at some time in July. Even in Chignik, unusual sockeye catches occur in early July on the outer capes. In response to the Kenai Peninsula Fishermens' Association (KPFA) petition that the Board of Fish accepted, ADF&G looked at changes in average weights and attempted to find an identifiable contribution of Cook Inlet bound sockeye in Kodiak's catch. Even with the unusual abundance of Cook Inlet bound fish in 1992, the overall average weight of the Kodiak sockeye catch was well within the historic range. ADF&G analyzed average weight data for the years 1983 to 1993 and found identifiable jumps in July average weights that might indicate the presence of Cook Inlet bound sockeye. The areas identified were the Inner and Outer Ayakulik, Halibut Bay section, the Central Section, the Sitkalidak Section, Cape Alitak Section, Ugak Bay Section and the Katmai/Alinchak Section. Identifiable non-local stocks were not found in any of these areas every year. Most any area around the Island could have non-local reds in July, but the only consistent conclusion is that high numbers of non-local reds are not found except when runs to Cook Inlet are extremely large.

The KPFA petition singled out three areas in the petition for total closure from the 5th through the 25th of July even though these areas have a very inconsistent catch record of Cook Inlet origin sockeye. If the Halibut Bay Section, the outer part of the Sitkalidak Section, and the Katmai/Alinchak Bay Section were all closed as requested in the KPFA petition, most years it would have no measurable impact on the abundance of sockeye reaching Cook Inlet. Yet these closures would displace the

Kodiak seine fleet to other areas creating unnecessary line fisheries crowding and resulting in enforcement problems. These closures would also hamper the Kodiak fleet's ability to capture local stocks



### Halibut Bay Section

The KPFA petition's proposal to close the Halibut Bay Section the 5th through the 25th of July ignores the importance of this area for harvesting local Kodiak sockeye and pinks. In only one year, 1992, did the harvest of non-local sockeye exceed the harvest of local sockeye in this section.<sup>1</sup> The only other year with detectable non-local sockeye was 1988. The Halibut Bay section is important to the seine fleet for harvesting Ayakulik sockeye and, on even years, pinks. When the wind blows hard southwest, the entire fishing area in the Ayakulik Section is exposed to an onshore wind; under these conditions the Halibut Bay Section is the only nearby area with enough shelter to fish safely.

Effort statistics for the Halibut Bay Section are skewed by historic conservation closures of the past aimed at Karluk and Ayakulik stocks and also from a long series of strikes in July which occurred during the seventies through 1982. In 1992, Halibut Bay effort levels were boosted because the Ayakulik Section was closed for awhile during the 5th through the 25th time period. The Ayakulik fleet was displaced into the Halibut Bay Section for awhile until escapements jumped up at Ayakulik and then both sections were open again. Karluk had already exceeded its early run escapement goal.

The Larsen Bay Cannery fleet has a very long history of use of the Halibut Bay section. With the rebuilding of the major sockeye systems on the south end of the Island, the Halibut Bay section is even more important than it was in the past. Of the four major sockeye systems on Kodiak, the only one where the seine fleet regularly has access to the terminal harvest area for sockeye is the Ayakulik. The Ayakulik has a substantial return of sockeye all through July. On even years, substantial catches of Karluk and

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<sup>1</sup> Ivan Vining and Bruce Barrett, The Use of Average Weights to Estimate the Amount of Interception of Upper Cook Inlet Sockeye Salmon Within Selected Areas of the Kodiak Mangement Area, 1994.

Ayakulik pinks are also caught in the Halibut Bay Section. Closure of Halibut Bay Section in July would directly affect the economy of Larsen Bay the most.



### Sitkalidak Section

Another area targeted for closure by KPFA is the outer two stat areas of the Sitkalidak Section. This area is right in the center of the area fished by Old Harbor residents in July. The village of Old Harbor now has 27 seine permits held by village residents. While the Old Harbor fleet often fishes as far away as Alitak and the Ayakulik Section, the Sitkalidak Section is heavily used during the time targeted for closure. Fish haven't always been as abundant in the Sitkalidak Section as they have been recently, but it was a major harvest area in 1969 and in the seventies. With the recent rebuilding of Kodiak sockeye systems, moderate harvest of Kodiak sockeye has occurred.<sup>2</sup> A large harvest of non-local sockeye occurred in the outer Sitkalidak areas 1992, but only 3 other years showed non-local catches out of 11 years analyzed.

Pink and chum harvests were depressed on the East side in the eighties, but have rebounded in the nineties although not as high as earlier years. East side streams have short watersheds which makes them more vulnerable to scouring in wet years and to drought in dry years.

Effort levels were generally higher in the seventies for the Sitkalidak Section taken as a whole than has occurred recently. The outside two stat areas show an increase in '91, '92, and '93, compared to the seventies. Part of this increase is only a function of where the tenders were laying when taking deliveries. In the past, tenders laid in front of the village of Old Harbor and Santa Flavia Bay. Both of these places are reliable anchorages and fairly accessible to all of the area. Fish tickets have only one space for a stat area and commonly the one where the tender was laying was used. More than one stat area might be fished, but it wouldn't seem important to list all adjacent stat areas. 1992 was quite calm in much of July and tenders could safely lay in Boulder Bay and just inside Cape Barnabas. Deliveries there would tend to list the outside stat areas.

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<sup>2</sup> Ibid



In 1992, the North Shelikof Strait Management Plan closed entire outside area along Southwest Afognak when the sockeye cap was reached. A large percentage of the displaced fleet headed east into Marmot Bay and down the East side to Sitkalidak. This caused an increase in the number of landings there although it probably didn't significantly increase the catch. Seine boats are efficient enough that increasing fleet size doesn't continue to increase catch when areas start to get crowded. With more boats, seiners either have to wait turns at the better spots or set closer together which just "corks" off others fishing behind them. There certainly has been enough effort in recent decades in the outside Sitkalidak Section to have caught significant quantities of fish similar to '91, '92 and '93 if the fish had been there.

The outside of the Sitkalidak Section has a sockeye producing stream emptying out on Ocean Beach. Good catches have occurred there in July. The East side has three other sockeye producers in Ugak Bay, only 20 nautical miles north of Cape Barnabas. The Saltery Cove system had an escapement in '93 of 77,186 sockeye. Most of Saltery's production comes in late June and in July. In strong years, Saltery would contribute significantly to East side catches. Saltery Cove sockeye are large for Kodiak and have a strong three ocean component which make them hard to distinguish from Kenai River sockeye. The Saltery weir wasn't manned in 1992.

Unique scale indicators of zero freshwater checks (Upper Station) and three fresh water checks (Karluk) indicate some substantial catches in the Sitkalidak Section in July of Karluk and Upper Station sockeye.<sup>3</sup> Although no unique scales marked these systems, it is reasonable to expect contributions from Ayakulik and Frazer also when those runs are strong. Average weights would indicate that most of the 1991 Sitkalidak sockeye catch was from Ayakulik, Frazer, Upper Station, and Karluk. If Cook Inlet catches were the dominant stock of sockeye present in July, the average weight of the Sitkalidak catch would have been much higher in 1991. By all indicators, sockeye caught in the Sitkalidak Section in 1991 were local stocks.

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<sup>3</sup> Schwanton & Nelson, 1994



The Katmai/Alinchak Sections on the Alaska Peninsula have generally seen less effort and lower catches than the other two sections targeted by KPFA for closure. This area is only open two and a half days per week in early July. 1992 saw a record sockeye catch of a little over 100,000 fish although average weights indicate over one third were of Kodiak origin. Other years had catches of less than 30,000 sockeye. Only 1988 and 1992 show a majority of sockeye catches to be non-local.

The Katmai/Alinchak Sections have chums and pinks in significant volume on some years prior to July 25th. If this area was closed until July 25th, poor quality fish would be caught.

A distinctive component of the Kodiak fleet fishes this remote area which often has bad weather. If the area was closed in July, the displaced boats would have to fish somewhere else. The very short history of 8-12 million fish runs to Cook Inlet (3 years) seems to indicate that anywhere else that the displaced vessels would move to could also have Cook Inlet sockeye present if weather and migration patterns happen to be like 1992 and the run is again huge.

### Conclusion

There are currently no large Cook Inlet runs being forecast. Production levels of 10 million sockeye in the Inlet will be rare. It seems unfair that Kodiak's historic cape fishery should be curtailed just because Cook Inlet has had a few bonanza years.

On the other hand, earlier warnings of disasterously low Cook Inlet/Kenai returns are being modified upward. There is no need to precipitously reduce Kodiak's fishing time and area when there is no apparent conservation problem.

From 1990 to 1993, Kodiak has had a sockeye return per spawners of about 3.6 to 1. Kodiak's catch is about 2.6 to 1 per spawner,



including Igvak. Currently, Cook Inlet expects a return per spawner about 5 to 1.<sup>4</sup> The disparity in returns might suggest that Kodiak sockeye are being intercepted at higher rates than Cook Inlet's.



ADF&G's budget is limited. The North Shelikof Straits Management Plan ties up ADF&G personnel and their boat to monitor catches to initiate closures when the cap is reached. These resources had been used to sample West side chum catches in July to monitor the strength of returns and determine the relative contribution of different age classes. This can no longer be done. Trying to manage Kodiak waters for Cook Inlet stocks won't make any significant difference in Cook Inlet most years, and won't produce any additional fish for the State of Alaska as a whole. Diverting existing funding in this direction does have the potential to reduce production in Kodiak by eliminating weirs and aerial surveys critical to maintaining escapements and fishing opportunities.

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<sup>4</sup> Paul Reusch, March 2, 1994

# KODIAK SOCKEYE RETURN PER SPAWNER



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## HISTORICAL INDEXED ESCAPEMENTS (Approximately 90% hand tallied through weirs)

|      |                  |
|------|------------------|
| 1984 | 1,467,780        |
| 1985 | 2,574,530        |
| 1986 | 2,001,279        |
| 1987 | 1,551,543        |
| 1988 | <u>1,661,532</u> |

9,256,664 divided by 5 years = 1,851,332 average  
sockeye escapement for 1984-1988

|      | CATCH                       | ESCAPMENT                   |
|------|-----------------------------|-----------------------------|
| 1990 | 5,140,294                   | 2,006,241                   |
| 1991 | 5,379,681                   | 2,515,659                   |
| 1992 | 4,015,642                   | 1,968,058                   |
| 1993 | <u>4,077,945</u>            | <u>1,705,440</u>            |
|      | 18,613,562                  | 8,195,398                   |
|      | <u>divided by 4 years =</u> | <u>divided by 4 years =</u> |
|      | 4,653,390 average           | 2,048,850 average           |

6,702,240 average total return  
(excluding 80% Igvak catch)

2.51 catch per spawner

3.62 return per spawner using 5 and 4 year  
blocks rather than age classes

### NOTES:

- 1989 excluded - disrupted fishery
- 1989 just slightly below average for last 4 years, Igvak catch levels not included
- Catch per spawner of 2.63 including Igvak catches

## Chapter 6

# RATIONALE FOR THE CURRENT KODIAK MANAGEMENT PLAN



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Kodiak Management Area's (KMA) current commercial fishing harvest strategy is being evaluated by the Alaska Board of Fisheries due to concerns that KMA's commercial fishery is expanding its historical bycatch rates on Upper Cook Inlet (UCI) bound sockeye. ADF&G's Special Regional Information Report (RIR) 4K94-7 thoroughly reviews KMA's in-season harvest strategies for July 6-25, which is the primary bycatch period. The data summaries in that report provide an accurate geographical history of fishery harvest and effort for a 24 year period (1970-1993). A history of KMA's July sockeye fishery prior to 1970 is presented in Part 2, Chapter 7 of this report. A review of the aforementioned reports is necessary for understanding the basis for KMA's current July harvest strategy.

A thorough review of KMA's entire commercial salmon fishery is provided in ADF&G report RIR 4K94-8. Specifics on fishery history occur on pages 2 through 8 of that report. Also, the nature of KMA's salmon resources, their production potential for both wild and supplemental production is included in pages 15-21 of that report. Understanding the basis for KMA's current overall harvest strategy requires a study of this overview report.

KMA's fishable state waters and their relative location to the Chignik and Cook Inlet management areas are depicted in Figure 1, a generalized composite of coastal sockeye migration pattern derived from

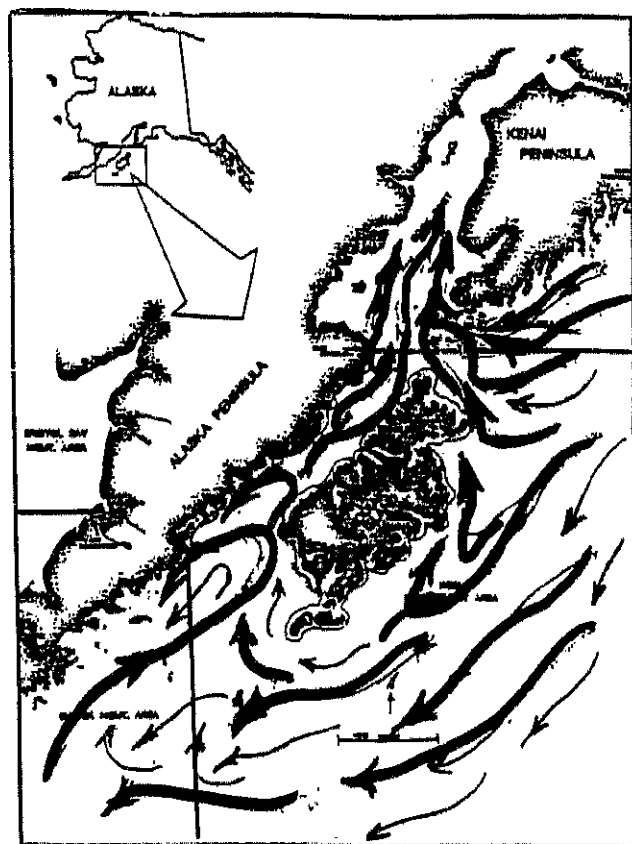


Fig 1 Location of the Kodiak Management Area.

Natural Resource Consultants report<sup>1</sup>, various ADF&G tagging studies commercial fishing patterns. This juxtaposition is noteworthy when considering in-shore migration patterns of returning mature salmon from their pelagic feeding grounds, through near-shore migratory corridors, to their eventual spawning locations.



Natural Resource Consultants' report discusses these migratory routes and the fact that annual variations in these routes can occur.<sup>2</sup> NRC summarizes studies which suggest that the majority of the UCI-bound sockeye enter Cook Inlet through entrances north of the KMA. Of those remaining UCI-bound sockeye migrating through KMA's fishable waters, an historical increment has been a bycatch component of KMA's directed harvest on local stocks. The magnitude of that bycatch varies with UCI-bound sockeye run strength, KMA directed fishing opportunities, and the availability of these sockeye as influenced by migration route variation and daily weather/tide fluctuations. KMA's current harvest strategy was questioned by UCI fishermen when bycatch levels gained widespread notice during the record UCI sockeye production years of 1988 and 1992.

KMA's ADF&G management activities are primarily held accountable by Board of Fisheries review for compliance with statutory and regulatory requirement. This review specifically addresses compliance with biological concerns and allocative criteria. KMA's management is further held accountable by federal, other state agency, and private landowners within the KMA.

Three National Wildlife Refuges, one National Park and two existing State Parks identify and monitor the stock status of salmon runs endemic to their lands. Additionally, KMA's harvest strategy must be sensitive to altered production from habitat modifications on private lands and from supplemental production projects by Kodiak's Regional Aquaculture Association (KRAA). Consequently, KMA's annual salmon harvest strategies have evolved in structure to withstand extraordinary critical review. By most accounts, these strategies are rated as yielding very thorough, relatively precise and highly defensible regulatory activities.

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<sup>1</sup> Natural Resource Consultants Report, 1994, and  
ADF&G and University of Washington Tagging Studies

<sup>2</sup> NRC Report, 1994, pp. 28-31.



ADF&G report RIR 4K94-8, pages 8-15, provides a clear and precise explanation of the premise for KMA's current harvest strategy. Figure 2, from that report, illustrates the run timing of KMA's wild stocks and specifically identifies both the annual management chronology by species and an example of actual harvest timing by species, that of the 1993 KMA salmon run.

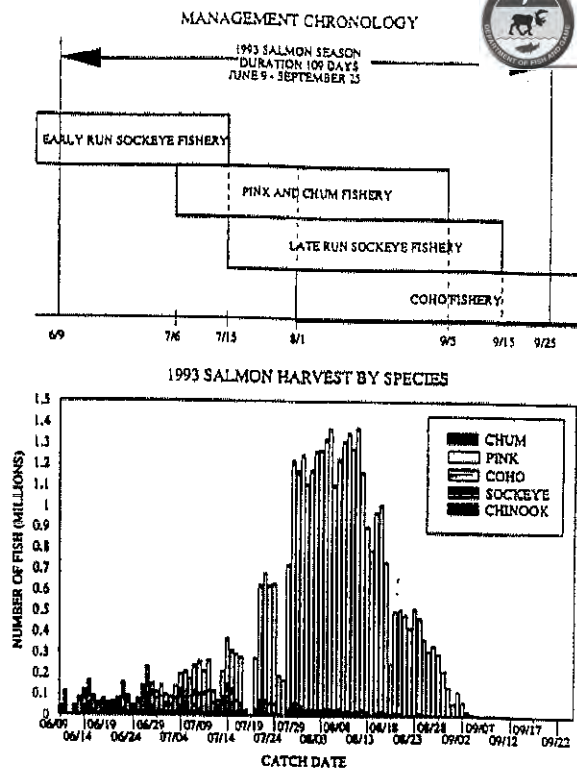


Figure 2. Fishery management and salmon run timing, general chronology of the harvest in the Kodiak Management Area, 1993.

Every regulatory action used to implement KMA's annual harvest strategy must first consider run timing of KMA stocks. All seven of KMA's management plans in Table 1, and forty or more annual in-season Emergency Order regulatory announcements, are based on the predictability of KMA stocks' run timing.

Table 1. Board of Fisheries approved fishery management plans for the Kodiak Management Area, 1993.

| MANAGEMENT PLAN                                      | YEAR INITIATED | MGMT. UNITS AFFECTED                                                                                                                                       | DATES IN EFFECT |
|------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Cape Igvak Salmon Management Plan                    | 1978           | Cape Igvak Section<br>Wide Bay Section                                                                                                                     | 6/5 - 7/25      |
| Aliak Bay District Salmon Management Plan            | 1987           | Aliak Bay District                                                                                                                                         | 6/9 - 10/1      |
| Westside Kodiak Management Plan                      | 1990           | N.W. Kodiak District<br>S.W. Kodiak District<br>S.W. Afognak Section                                                                                       | 6/9 - 10/1      |
| Crescent Lake Coho Salmon Management Plan            | 1990           | Portion of the Central Section in Vicinity of Port Lions                                                                                                   | 8/1 - 9/15      |
| North Shelikof Strait Sockeye Salmon Management Plan | 1990           | S.W. Afognak Section<br>N.W. Afognak Section<br>Shuyak Section<br>Big River Section<br>Halls Bay Section<br>Inner and Outer Kukak Sect.<br>Dekevak Section | 7/6 - 7/25      |
| Eastside Afognak Management Plan <sup>a</sup>        | 1993           | Kitoi Bay Section<br>Ishut Bay Section<br>Duck Bay Section                                                                                                 | 6/9 - 10/1      |
| Spiridon Bay Sockeye Salmon Management Plan          | 1993           | Special Harvest Area in Spiridon Bay Section                                                                                                               | 6/9 - 10/1      |

<sup>a</sup> This management plan has basically been in use since 1981, but was titled the Kitoi Bay Hatchery management plan. In 1993, it was adopted into regulation by the Alaska Board of





KMA's historical harvest trends for all species combined are depicted in Figure 3.<sup>3</sup> Pre-statehood harvest trends by decade identify an initial exploration period in the 1880's, a relatively stable period with slight expansion from approximately 1890 through the 1920's, a peak harvest decade in the 1930's followed by a noticeable decline in the 1940's, and a bottoming out of production in the 1950's.

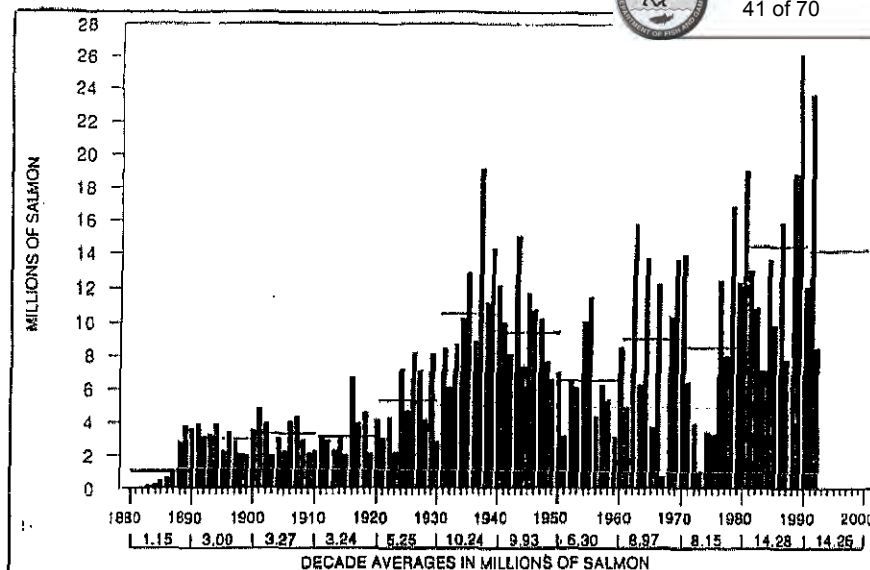


Figure 3 Commercial salmon harvest all species combined in the Kodiak Management Area, 1880-1992.

Post statehood harvest trends reveal rebounding production in the 1960's, a wide oscillation in production during the 1970's followed by record production for the decade of the 1980's and a relatively sustained production at a record average level for the first four years of the 1990's. In consideration of all the factors which contributed to the harvest history of KMA's fishery, it's apparent that KMA's salmon stocks have thrived under state regulation and that they appear stable in terms of having realized their production potential.

KMA's overall production potential is identified in Table 2.<sup>4</sup> The long term average harvest on KMA stocks, when escapement goals are achieved and environmental conditions are consistently average, is expected to be 16.5 million salmon. The fishery performance

Table 2 Potential vs. actual salmon production (wild stock) in the Kodiak Management Area, 1993.

| SPECIES        | PRODUCTION POTENTIAL                  |                                 |                        | HARVEST           |                                          |                                          |
|----------------|---------------------------------------|---------------------------------|------------------------|-------------------|------------------------------------------|------------------------------------------|
|                | LONG TERM AVERAGE                     |                                 |                        | POTENTIAL         | ACTUAL                                   |                                          |
|                | Targeted Escapement Goal <sup>a</sup> | Return per Spawner <sup>b</sup> | Potential Total Return | Long Term Average | 45 Year Average (1948-1993) <sup>c</sup> | 10 Year Average (1982-1993) <sup>c</sup> |
| CHINOOK        | 15,000                                | 2.5                             | 37,500                 | 22,500            | 4,000                                    | 15,000                                   |
| SOCKEYE        | 2,100,000                             | 2.5                             | 5,250,000              | 3,150,000         | 1,184,000                                | 3,220,000                                |
| COHO           | 150,000                               | 2.5                             | 375,000                | 225,000           | 100,000                                  | 255,000                                  |
| Odd Year PINK  | 3,000,000                             | 3.5                             | 10,500,000             | 7,500,000         | 7,182,000                                | 13,535,000                               |
| Even Year      | 4,500,000                             | 3.5                             | 15,750,000             | 11,250,000        | 8,654,000                                | 9,271,000                                |
| CIUM           | 1,020,000                             | 2.8                             | 2,856,000              | 1,836,000         | 785,000                                  | 828,000                                  |
| Odd Year TOTAL | 6,285,000                             | -                               | 19,018,500             | 13,454,000        | 9,255,000                                | 17,853,000                               |
| Even Year      | 7,785,000                             | -                               | 24,268,500             | 16,483,500        | 10,727,000                               | 13,589,000                               |

<sup>a</sup> The expected indexed escapement within the biological escapement goal range. KMA fisheries are normally managed to achieve this level of escapement.

<sup>b</sup> Return per spawner will vary each year. These values are averages around which natural survival and return will fluctuate somewhat (Barrett, Personal Communication, October 1993).

<sup>c</sup> 1989 harvest data not included in estimates.

<sup>3</sup> ADF&G RIR 4K94-7.

<sup>4</sup> ADF&G RIR 4K94-8, p.27.

of the 1980's and 1990's support that projection. This fact further supports the validity of KMA's current harvest strategy which has guided the rebuilding of KMA's depressed stocks since the early 1970's.



Industry's stock-specific knowledge of local run timing and important coastal migration characteristics, coupled with processors' strong demands for quality products, have always been responsible for KMA's fleet distribution. The resulting traditional harvest patterns by both the mobile seine and fixed set gillnet fleets were considerations in the evolutionary development of KMA's current harvest strategy. Figure 4<sup>5</sup> identifies KMA's industry distribution - i.e. gear areas and cannery locations plus all community locations - and it identifies all ADF&G stock monitoring sites such as fish weirs and KRAA's major salmon enhancement and weir locations.

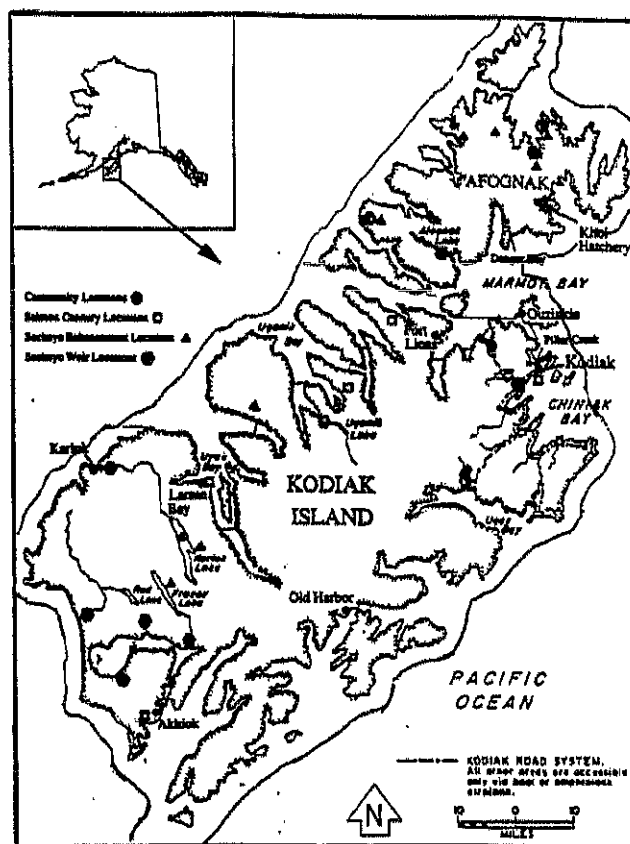


Figure 4 Map of Kodiak Island, showing communities, canneries, and sockeye salmon enhancement and weir locations, of the Kodiak Management Area, 1993.

Understanding the apparent success of post-statehood harvest strategies requires a review of the wide oscillations in production during the 1970's. In 1971, KMA's primary salmon production species, sockeye and pinks, were severely depressed. Strong regulatory measures were implemented to initiate a stock rebuilding plan. KMA's directed June early-run sockeye fishery was completely curtailed in what is now the Northwest Kodiak District. Also, the August late-run sockeye fishery was extremely minimized, because the primary harvest of these stocks was bycatch in KMA's directed July pink fishery. The pink fishery itself experienced record low production in 1973 following unexpected pink

<sup>5</sup> ADF&G RIR 4K94-8, p.65.



run failures in 1971 and 1972. No other time period in KMA's history of commercial fishing has had an impact on developing stock rebuilding and stock stabilization strategies as did the decade of the 1970's. The record production levels of the late 1980's and early 1990 are the result of those strategies which remain active in KMA's current overall harvest strategy.

The development of the existing pink harvest strategy has been in many ways the most successful aspect of KMA's overall harvest strategy. Rebuilding of the depleted stocks of the early 1970's required a drastic attitude adjustment by industry to accept in-season Emergency Order openings of variable time and area fishing opportunities rather than the historical fixed openings for fishing opportunities with variable emergency order closures. As KMA's prolific stocks rebuilt unexpectedly fast, overly restrictive ADF&G experimental harvest strategies yielded poor quality pink harvest, unordered fisheries, and sporadic but noticeable cases of unnecessary over-escapement situations. In response, a more aggressive pink harvest strategy, which initiated directed pink fisheries early in the run (July 6 openings), and which utilized KMA's very reliable pink forecast to pro-rate fishing time and area opportunities, was implemented in the late 1970's. This allowed industry to take full economic advantage of KMA's relatively large pink production through orderly fisheries on very high quality fish. It also restored the full utilization of KMA's fishable waters which had been denied KMA's fleet during the intense stock rebuilding years of the early 1970's.

In summary, KMA's current harvest strategy is the culmination of decades of developing an understanding of what regulatory actions are needed, are acceptable, and are capable of being efficiently implemented to obtain results. Evidence of this strategy's effectiveness are conveyed throughout ADF&G reports RIR 4K94-7 and 8. A knowledge of KMA's

production systems, identified in Table 3<sup>6</sup> lends credence to the data presented earlier in Table 2. The ability of ADF&G to accurately measure stock-specific escapement in the KMA is the foundation of this harvest strategy's success. Other state management areas lack KMA's precision for measuring sockeye escapement. That data, as shown in Figure 5<sup>7</sup>, further justifies KMA's sockeye production potential identified in Table 2. The NRC report even suggests that ADF&G long-term production projections data may be conservative.

The KMA sockeye harvest of the late 1980's and early 1990's as shown in Figure 6<sup>8</sup> tend to support that thought, notwithstanding the contributions of UCI-bound sockeye on record or near-record returns to Cook Inlet.

Table 3 Estimated number of salmon production systems per distribution, in the Kodiak Management Area, 1993.



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| Management District | Number of Streams <sup>a</sup> | Number of Streams with Each Species <sup>b</sup> |           |            |            |            |
|---------------------|--------------------------------|--------------------------------------------------|-----------|------------|------------|------------|
|                     |                                | Chinook                                          | Sockeye   | Coho       | Pink       | Chum       |
| Afognak             | 102                            | 0                                                | 13        | 48         | 102        | 5          |
| Northwest Kodiak    | 63                             | 0                                                | 4         | 22         | 63         | 23         |
| Southwest Kodiak    | 11                             | 2                                                | 2         | 10         | 11         | 6          |
| Alitak              | 30                             | 1                                                | 5         | 15         | 30         | 14         |
| Eastside Kodiak     | 116                            | 1                                                | 8         | 32         | 116        | 47         |
| Northeast Kodiak    | 26                             | 0                                                | 1         | 20         | 26         | 9          |
| Mainland            | 92                             | 0                                                | 6         | 27         | 92         | 46         |
| <b>TOTAL</b>        | <b>440</b>                     | <b>4</b>                                         | <b>39</b> | <b>174</b> | <b>440</b> | <b>150</b> |

<sup>a</sup> The State of Alaska's Habitat Division identifies over 800 streams in the Kodiak Management Area which have documented use by anadromous fish (State of Alaska 1993). Many of these streams are very small and may only be used by pink salmon in years with very large returns. The streams identified in this table are depicted on the 1993 Kodiak Area salmon statistical map, and have documentable use each year.

<sup>b</sup> These estimates are based on current knowledge and, in fact, are expected to change as more system specific data is collected.

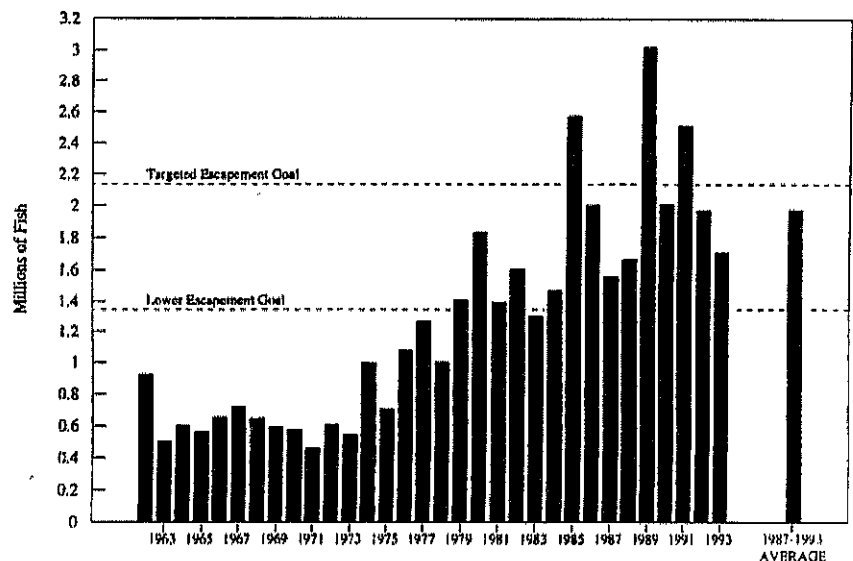


Figure 5 Sockeye salmon escapement in the Kodiak Management Area, 1962 - 1993.

<sup>6</sup> ADF&G RIR 4K94-8

<sup>7</sup> ADF&G RIR 4K94-8

<sup>8</sup> ADF&G RIR 4K94-8

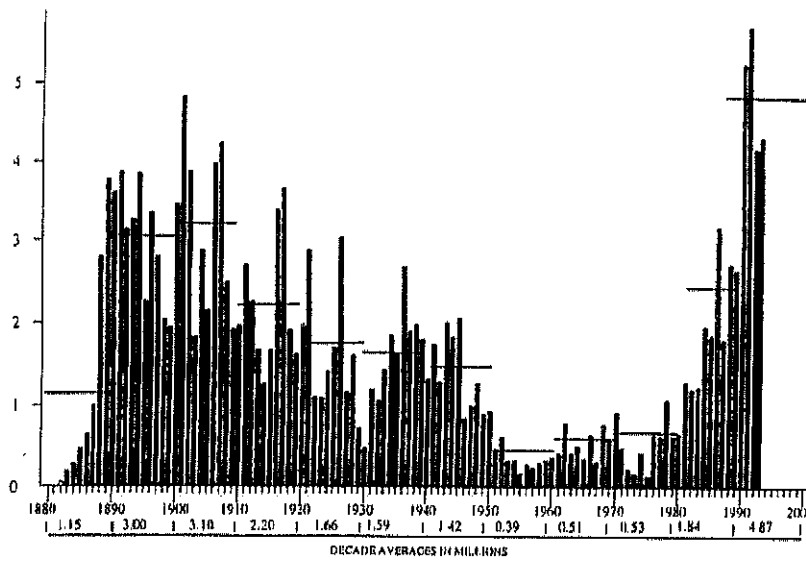


Figure 6 Sockeye salmon harvest, all gear combined, in the Kodiak Management Area, 1882 - 1993.

The UCI sockeye component in KMA's harvest total are only significant on years of exceptionally large returns to UCI. ADF&G RIR 4K94-5 and NRC's previously discussed reports both support that fact.

KMA's fishing industry and its communities have come to understand and support KMA's harvest strategy. It works!!! They've experienced experimental strategies that haven't. They have concluded that this is the most successful and rational strategy for the Kodiak Management Area. Figure 7 from ADF&G RIR 4K94-7 re-emphasizes this fact! Such a successful, well developed, yet complex management program should not be arbitrarily and unnecessarily re-adjusted to accommodate unfounded fears of Cook Inlet-bound sockeye bycatch levels.

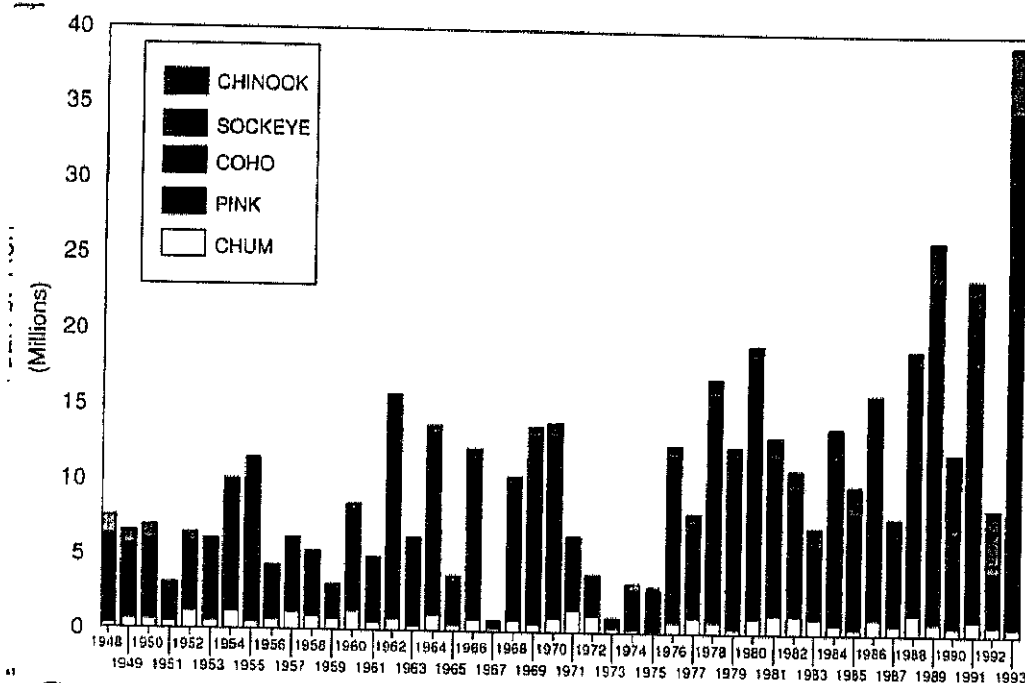


FIGURE 7



## Chapter 7 HISTORIC HARVEST PATTERNS



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### Early Years

Shortly after Russian America was transferred to the United States in 1867, three companies started commercially fishing the Karluk River for sockeye which were salted and dried. The first cannery was established on the Karluk Spit in 1882 with more canneries built along the spit and outside the Karluk District in 1888 and 1889. Eventually a cannery was established in Larsen Bay, two at the head of Afognak Bay, one in Alitak Bay and one in Moser Bay. By 1889, five canneries were located on the spit at Karluk and packed 806,219 cases of sockeye<sup>1</sup> between 1888 and 1890, with half of the fish originating in Karluk Lagoon. Before the turn of the century fishing was prohibited within the lagoon due to conservation concerns.

### 1900 - 1930: Expanding Fishery

By 1915 Kodiak Fisheries, based in Kodiak, had become Kodiak's major purchaser of fish. Also in 1915, the Afognak natives petitioned for the exclusive rights to fish the west side of Afognak Island. Spruce Island natives would only fish the east side of Afognak Island, currently identified as the Southwest Afognak section. Katmai Packing in Ouzinkie was buying fish in 1921 and in 1926 canneries were established in Shearwater Bay, located in the current Sitkalidak section and Uganik Bay now located in the Central Section. By 1930, numerous traps had been constructed off of outer bay capes along the Shelikof Strait side of Afognak and Raspberry Islands. Canned salmon shipped from Kodiak in 1927 was worth \$48,404,279.<sup>2</sup>

The first three decades of Kodiak fishing was primarily identified in terms of case packs by district. In those days, the Karluk district included Uganik and Uyak Bays. The following graphs (Figures 1-5)<sup>3</sup> illustrate that

<sup>1</sup> Patricia Roppel, Salmon from Kodiak: An History of the Salmon Fishery of Kodiak Island, Alaska, 1986.

<sup>2</sup> Ibid

<sup>3</sup> JT Barnaby, U.S. Fish & Wildlife Service Fisheries Bulletin, 50,237-295, 1944.

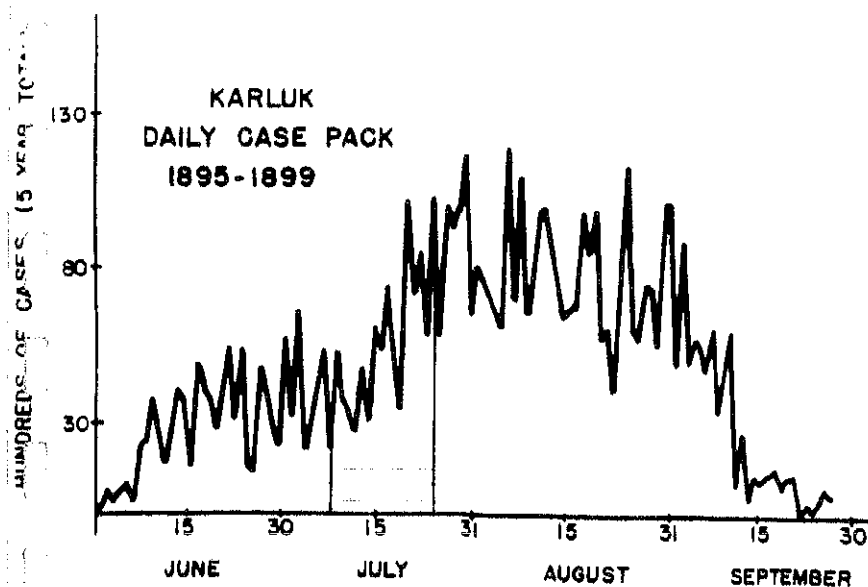


FIGURE 1

between 1895 and 19 approximately 20 to 25% of the total Karluk area, and probably the Kodiak area, run was captured and processed during July. (The shaded areas on the graphs show the bycatch period currently under consideration.)

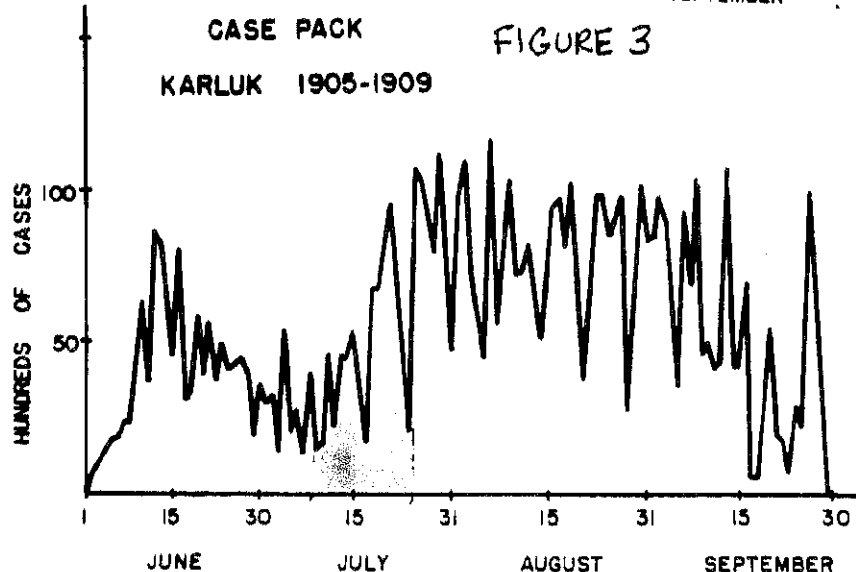
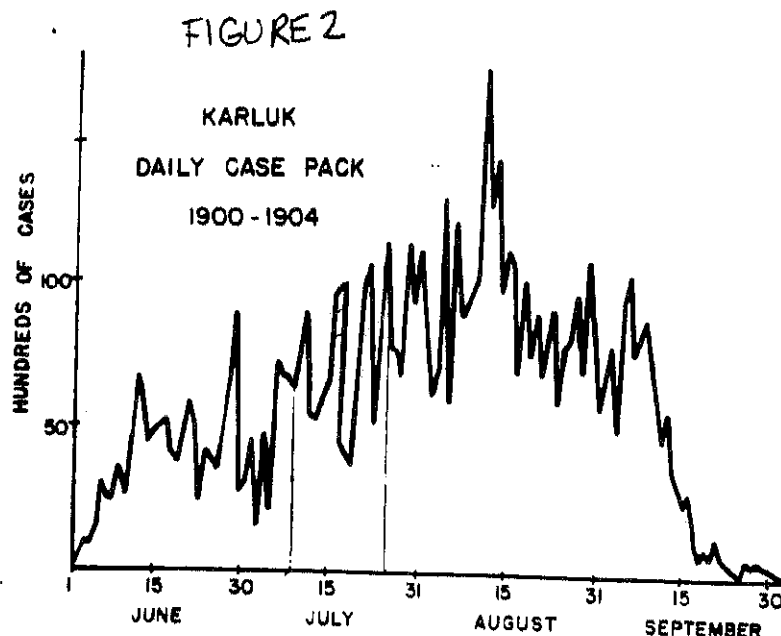
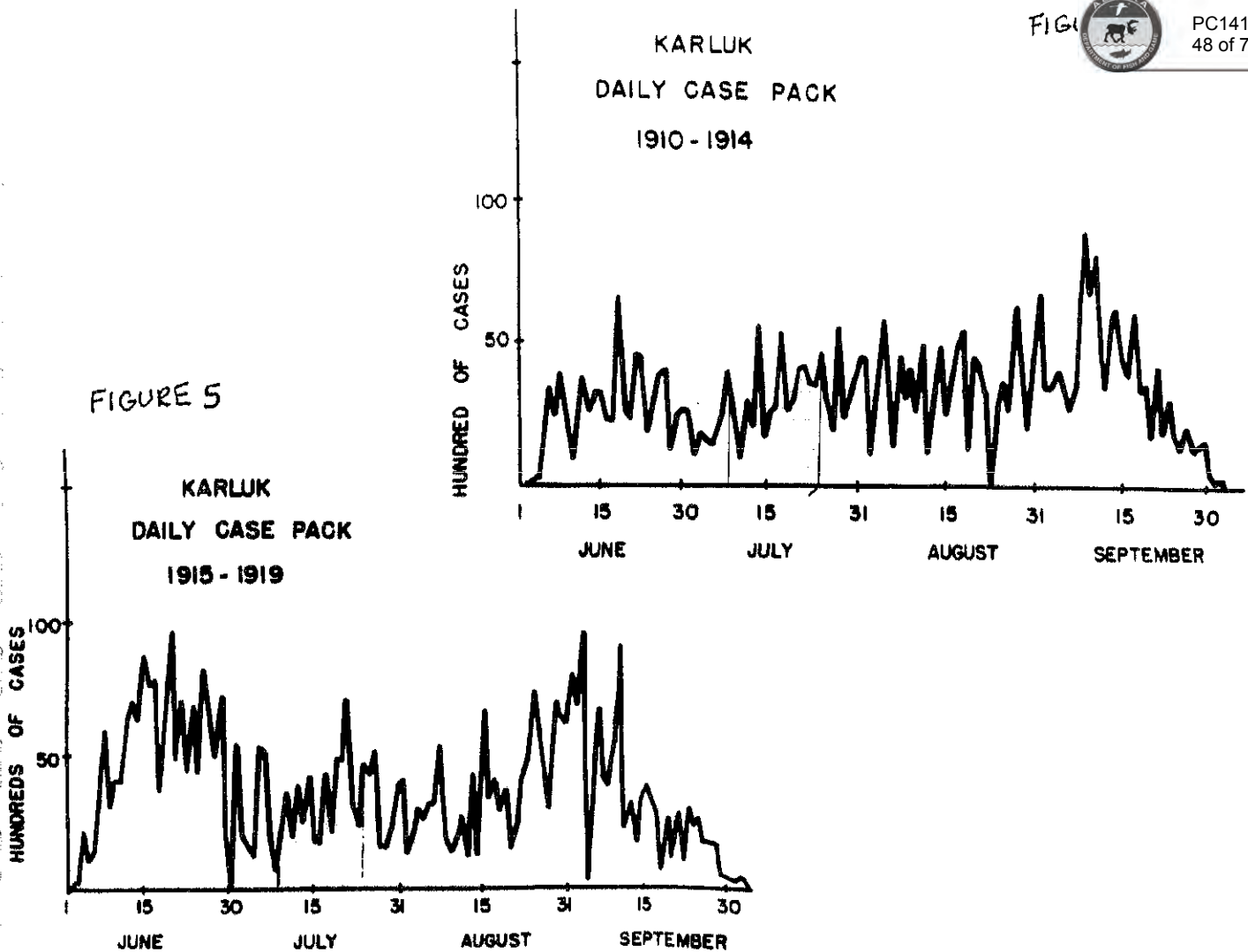


FIGURE 3

FIGURE 5



In the early part of the 20th century, Kodiak's fleet was expanding and capturing sockeye salmon in many locations along the Alaska Peninsula. Between 1909 and 1914, Kafia Bay, currently in the Kukak section of the Mainland District, produced from 33,000 to 84,000 sockeye annually. In 1927, a trap was established at Kiukpalik Island, an outer cape in the Big River section of the Mainland District. The trap captured approximately 2,000 fish in its first season. Moreover, in 1919, a gillnet catch in excess of 6,000 reds was reported at Cape Douglas and Douglas Island.<sup>4</sup> This early expansion of the Kodiak fishery reflects competitiveness and mobility; characteristics that remain present in the Kodiak fleet today.

<sup>4</sup> Wallace Norenberg, A Review of the Salmon Runs and Red Salmon Spawning Grounds Other Than Karluk in the Kodiak Island Area, 1950.



During the next decade, the Kodiak fishery continued to expand. Sockeye were captured along the east side of Kodiak Island and on capes further away from Karluk. In 1929, a two line cannery was established at Three Saints Bay, in the current Sitkalidak section, and two small hand pack canneries went in at Village Islands and Blue Fox Bay. In 1935, a cannery was built in Halibut Bay and sometime in the early thirties, a fishermen's cooperative formed and constructed a cannery at Zachar Bay which is in the current Central section. Much of the fish processed in these plants were sockeye.

With the expanding fishery there were conservation concerns in the Kodiak District. During the 1930's, the fishermen's use of multiple 500 fathom beach seines along the Karluk coast and unlimited gillnets was curtailed. Set nets were reduced to 150 fathoms and beach seines were limited to 250 fathoms. In 1935, the purse seine catch exceeded, for the first time, 50% of the total Kodiak catch. (See the 1930's map of canneries and trap sites at the end of this chapter.)

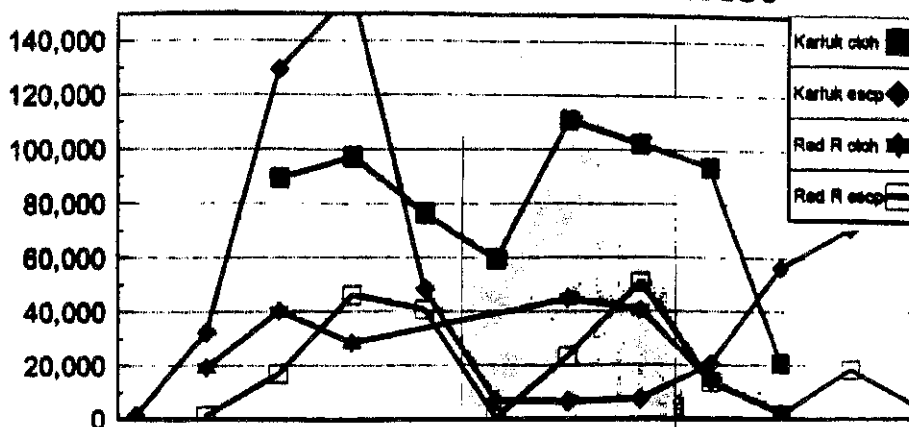
### The 1940's

Kodiak enjoyed significant sockeye harvests throughout the 1940's with an average of 1.5 million fish harvested annually. It was not until 1978 that Kodiak's harvest of sockeye would again exceed 1 million fish. In 1948, there were 186 purse seiners, 67 gill net operations, 8 beach seiners and 23 traps operated in the Kodiak District.

1948 is an illustrative year for the Kodiak salmon fishery. (See Figure 7). The Kodiak sockeye catch was 1.26 million. Of that, 840,000 were captured in the Red River and Karluk Districts, including Halibut Bay. Interestingly, a substantial amount of the 1948 combined Karluk and Red River catch occurred

FIGURE 7

### 1948 Catch and Escapement Karluk and Red River District



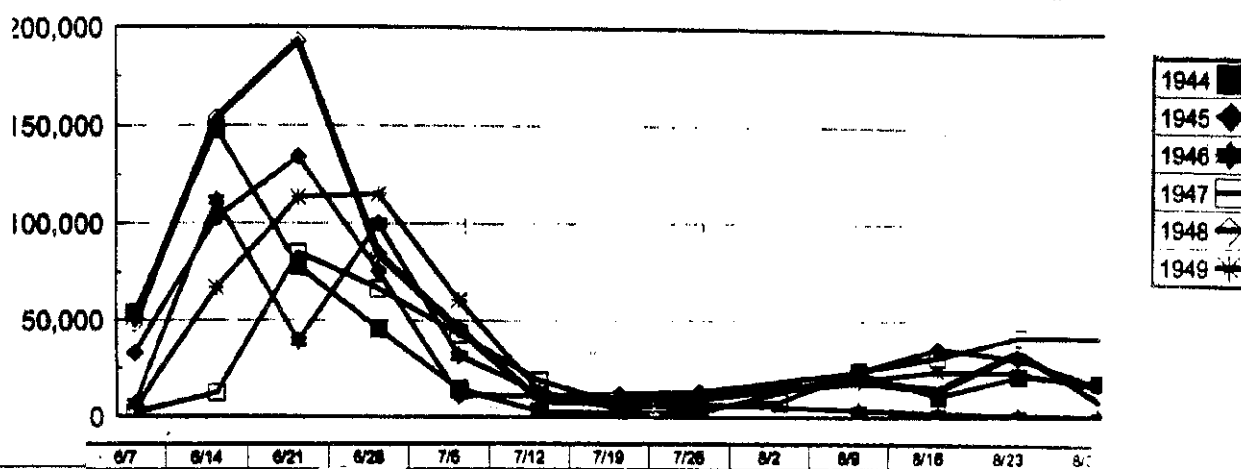


during the last three weeks in July. The 350,000 sockeye captured in these areas in the last three weeks amounted to over 41% of the total yearly catch. This catch rate compares favorably with recent catch rates during July 6-25th.<sup>5</sup> Moreover, the 5 year average during 1944 and 1949 shows that over 30% of the seasons sockeye in Karluk were caught during the last three weeks of July. (See Figure 9, on next page). If Kodiak's fleet was currently catching an increasingly larger percentage of Cook Inlet sockeye, you would expect the current July sockeye catch percentages to be substantially larger than they were 50 years ago. In fact, this is not the case.

Also, in 1948, there were substantial sockeye caught outside of Karluk and Red River. 566,000 sockeye or 44% of the total Kodiak catch were captured away from the traditional sockeye "hot spots" along Kodiak's east side and in the Mainland District. By 1948, Kodiak's fleet was primarily mobile and was capitalizing on sockeye fishing opportunities throughout the Kodiak Management Area as knowledge of local sockeye production became widespread.

A second historical index shows that there has always been a Cook Inlet component to Kodiak's sockeye catches. Kodiak Fisheries' 1940-50 cannery logs indicate that during the second week in July the daily catches in the Karluk traps decreased and the escapement into Karluk River remained low while the catches in traps off Afognak and Raspberry Island held steady or actually increased through the 25th of July. (See Figure 8)

## Karluk River Escapement per Week 1944-1949

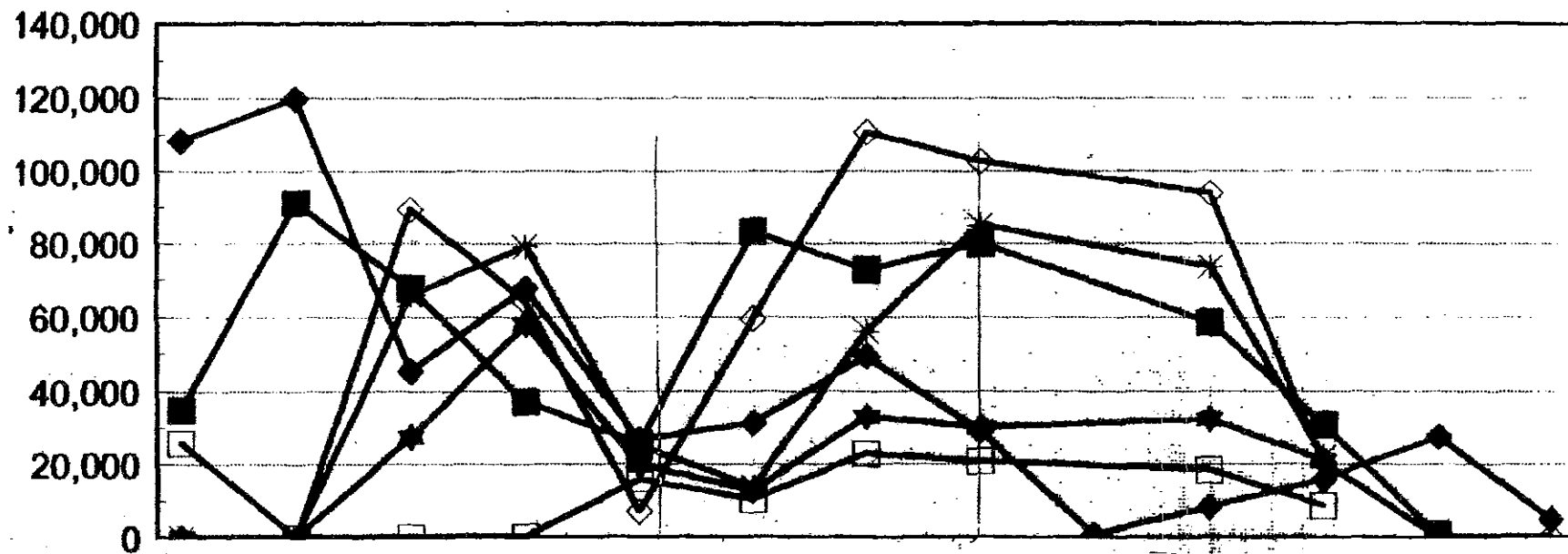


<sup>5</sup> Dave Prokopowich, ADF&G RIR 4K94-7.





# Karluk District Catch per Week 1944-1949



|        | 6/7     | 6/14    | 6/21   | 6/28   | 7/5    | 7/12   | 7/19    | 7/26    | 8/2 | 8/9    | 8/16   | 8/23   | 8/30  |
|--------|---------|---------|--------|--------|--------|--------|---------|---------|-----|--------|--------|--------|-------|
| 1944 ■ | 34,766  | 91,070  | 67,835 | 37,036 | 26,566 | 83,103 | 72,847  | 79,871  |     | 68,546 | 30,776 | 698    |       |
| 1945 ◆ | 108,388 | 119,758 | 45,320 | 67,713 | 26,082 | 31,142 | 49,308  | 29,070  | 532 | 8,211  | 15,727 | 27,403 | 4,586 |
| 1946 ★ | 0       | 0       | 27,394 | 58,112 | 19,627 | 12,677 | 32,949  | 30,023  |     | 32,215 | 20,908 |        |       |
| 1947 □ | 25,806  | 0       | 0      | 0      | 15,614 | 10,224 | 22,790  | 20,810  |     | 18,396 | 8,554  |        |       |
| 1948 ◇ | 0       | 0       | 88,289 | 64,199 | 6,950  | 58,420 | 110,714 | 102,646 |     | 83,729 | 20,466 | 0      | 0     |
| 1949 ★ | 0       | 0       | 65,876 | 79,065 | 25,070 | 13,704 | 56,151  | 85,043  |     | 73,555 | 22,143 |        |       |

FIGURE 7

Extensive tagging studies were also accomplished during 1948 and further show an historical Cook Inlet component to the Kodiak catch. Between June 19th and August 13th, 1948, 7,277 sockeye were tagged. Fish were tagged on the west side of Kodiak Island. Overall, 37% of the tags were recovered and 1.89% were recovered in Cook Inlet. Although this represents about 2% of the Kodiak sockeye catch, it is for a period of 8 weeks from mid-June through mid-August. One would assume that the percentage would be somewhat higher if the tagging study had been condensed into the three later weeks in July. In 1949, another tagging study was conducted in June in which the rate of bycatch to Cook Inlet was much lower. (See Figure 10 below.)<sup>6</sup>

TABLE 2. RECOVERIES MADE OUTSIDE THE KODIAK ISLAND AREA, 1948-49

|       | District         | Number of Recoveries | Per Cent of Tagged | Per Cent of Recoveries |
|-------|------------------|----------------------|--------------------|------------------------|
| 1948  | Cook Inlet       | 28                   | 0.71               | 1.89                   |
|       | Chignik          | 1                    | 0.03               | 0.07                   |
|       | Alaska Peninsula | 2                    | 0.05               | 0.13                   |
|       | Total            | 31                   | 0.79               | 2.09                   |
| 1949  | Cook Inlet       | 13                   | 0.18               | 0.39                   |
|       | Chignik          | 19                   | 0.26               | 0.57                   |
|       | Alaska Peninsula | 3                    | 0.04               | 0.09                   |
|       | Bristol Bay      | 2                    | 0.03               | 0.06                   |
|       | Total            | 37                   | 0.51               | 1.12                   |
| TOTAL |                  | 68                   | 0.61               | 1.42                   |

Most of the fish were traveling south and most tags were recovered along the west side of Kodiak Island.<sup>7</sup>

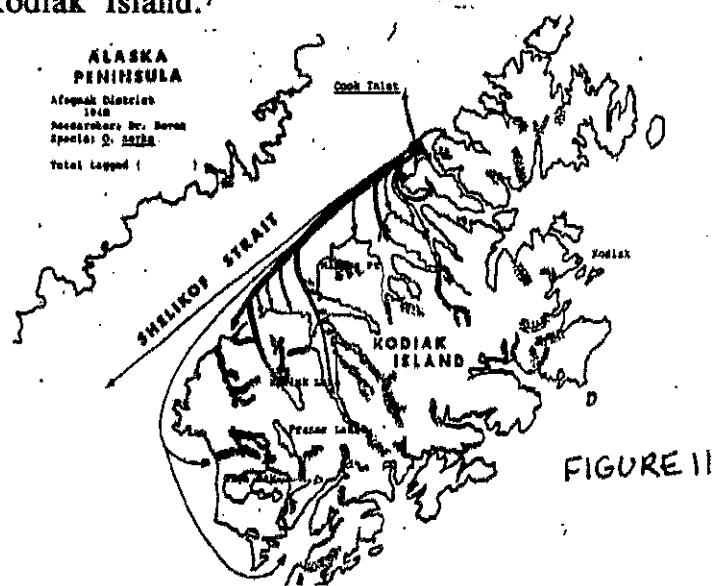


FIGURE 11

<sup>6</sup> Don Bevan, Estimation of the Size of Migrating Salmon Populations in Coastal Waters, 1959.

<sup>7</sup> Ibid

The 1949 Annual Report specifically mentioned an unusual occurrence in the Sitkalidak area. The report observed that there had been a "reported abundance of sockeye passing northward through Sitkalidak Strait during June. It is not exactly known where these fish went, but presumably they spread to various streams along the east shore of Kodiak Island, though no large escapement was observed in any them."<sup>8</sup> We now know that these were probably Cook Inlet sockeye.



### 1957 Tagging Studies: Kenai Bycatch

Kodiak is not the only area that has a bycatch of non-local stocks. Cook Inlet has been shown to have a bycatch of Kodiak salmon. A small tagging study was done in Seldovia Bay in 1957. "During three day tagging, 168 reds were released, of which 55 or 32.7% were returned. The release dates were June 30, July 20 and July 21."<sup>9</sup> Kodiak recoveries of pink salmon amounted to 12.2% of the total number recovered, red recoveries were 7.5% and chum recoveries were 5%. This was in a year when Kodiak only had a catch of 234,000 sockeye!

In addition, Cook Inlet also catches salmon headed for the Alaska Peninsula and as far west as the Shumagin Islands. "Tagging at Chisik Island at the time showed substantial out-migration of red salmon. This was true during late June of 1957 when 25.7% of reds tagged were recovered along the Alaska Peninsula."<sup>10</sup> It is safe to conclude that a mixing of sockeye stocks occurs in both the Kodiak and the Cook Inlet Management Areas.

### Historical Catch Figures

Statistical data from ADF&G catch figures show historical catch data for Kodiak and Cook Inlet. Recent catch data indicates that both Kodiak and Cook Inlet have healthy sockeye stocks. (Please see data sheets after the conclusion of this chapter.)

<sup>8</sup> U.S. Department of the Interior, Fish & Wildlife Annual Report 1949.

<sup>9</sup> Richard Tyler & Wallace Norenberg, Salmon Tagging in Cook Inlet, 1957.

<sup>10</sup> Ibid



Cook Inlet sockeye catches are clearly at all time highs. Prior 1983, Cook Inlet had a 30 year average annual catch rate of about 1.2 million sockeye. This dropped to an all time low of approximately 500,000 in 1974. Then, in 1983, Cook Inlet rebounded with a catch of about 5 million sockeye. The 1983 catch was an all time high almost doubling the 1950 all time record of 2.6 million sockeye. The new 1983 record was exceeded in 1987, 1988, and almost doubled in 1992.

Kodiak has also enjoyed a resurgence in its local sockeye stocks. Kodiak's 1907 catch record of 4.2 million sockeye stood until 1990 when Kodiak captured 5.2 million sockeye. In 1991, the Kodiak catch record increased to 5.7 million while the sockeye catch in 1992 and 1993 exceeded 4 million. The past five Kodiak seasons have substantially exceeded historical averages.

Average weight and total harvest of sockeye salmon from the commercial fisheries of the Kodiak Management Area, 1969 - 1993.

Figure 12<sup>11</sup> shows that the average weight of sockeye caught in the Kodiak area since 1969. (Average weights prior to 1969 are not available.) The historical average Kodiak sockeye weights indicate that there is a trend toward smaller fish. In fact, the 1993 average of 5.1 pounds per sockeye is the second lowest year on record.

FIGURE 12

| YEAR              | AVERAGE WEIGHT <sup>a</sup> | HARVEST <sup>b</sup> |
|-------------------|-----------------------------|----------------------|
| 1969              | 5.4                         | 591,481              |
| 1970              | 6.0                         | 917,045              |
| 1971              | 6.4                         | 478,479              |
| 1972              | 5.9                         | 222,300              |
| 1973              | 6.5                         | 167,341              |
| 1974              | 6.3                         | 418,761              |
| 1975              | 6.1                         | 136,418              |
| 1976              | 6.3                         | 641,484              |
| 1977              | 6.8                         | 623,468              |
| 1978              | 6.4                         | 1,071,782            |
| 1979              | 6.1                         | 631,735              |
| 1980              | 5.4                         | 651,394              |
| 1981              | 5.8                         | 1,288,980            |
| 1982              | 6.0                         | 1,204,793            |
| 1983              | 5.8                         | 1,231,989            |
| 1984              | 5.7                         | 1,950,439            |
| 1985              | 4.7                         | 1,843,185            |
| 1986              | 5.8                         | 3,188,269            |
| 1987              | 6.3                         | 1,792,819            |
| 1988              | 5.7                         | 2,698,637            |
| 1989              | 5.5                         | 2,529,068            |
| 1990              | 5.2                         | 5,248,339            |
| 1991              | 5.5                         | 5,704,041            |
| 1992 <sup>c</sup> | 5.7                         | 4,167,877            |
| 1993 <sup>c</sup> | 5.1                         | 4,377,688            |

<sup>a</sup> Weight in pounds. Data from Kodiak Management Area Annual Reports.

<sup>b</sup> Harvest in number of fish.

<sup>c</sup> Preliminary data.

Kodiak average sockeye weights do not support Cook Inlet's contention that Kodiak is intercepting greater percentages of Cook Inlet fish. Cook Inlet fish are, for the most part, larger than Kodiak stocks. If Kodiak was catching a greater percentage of these fish, the average Kodiak sockeye weights should be going up. However, the opposite is true.

<sup>11</sup> ADF&G RIR, 4K94-8



Even before 1930, the Kodiak fleet was expanding to fish throughout the Kodiak area and on the Alaska Peninsula in the Mainland Districts. The historical records confirm a mobile fleet concentrating wherever fish are found. By 1948, this fleet had standardized 200 fathom purse seines for cape fishing and was taking over 50% of the Kodiak sockeye catch - even while the traps were being fished. By 1950, almost half of the Kodiak sockeye harvest was no longer in the traditional sockeye areas of Red River and Karluk. Clearly, the Kodiak fleet had expanded to capitalize on sockeye fishing opportunities throughout the Kodiak Management Area.

Cook Inlet fish have always been a component of the Kodiak sockeye harvest. Tagging studies and trap records verify the Cook Inlet component. These tools are imprecise as to the exact Cook Inlet contribution. Nevertheless, the tagging studies and trap records suggest that the Cook Inlet component remained fairly constant throughout several decades. (See Figure 13)<sup>12</sup> In addition, the average weight of Kodiak sockeye has been declining. Consequently, it seems unlikely that Kodiak has increased its bycatch of Cook Inlet sockeye during this period in recent years.

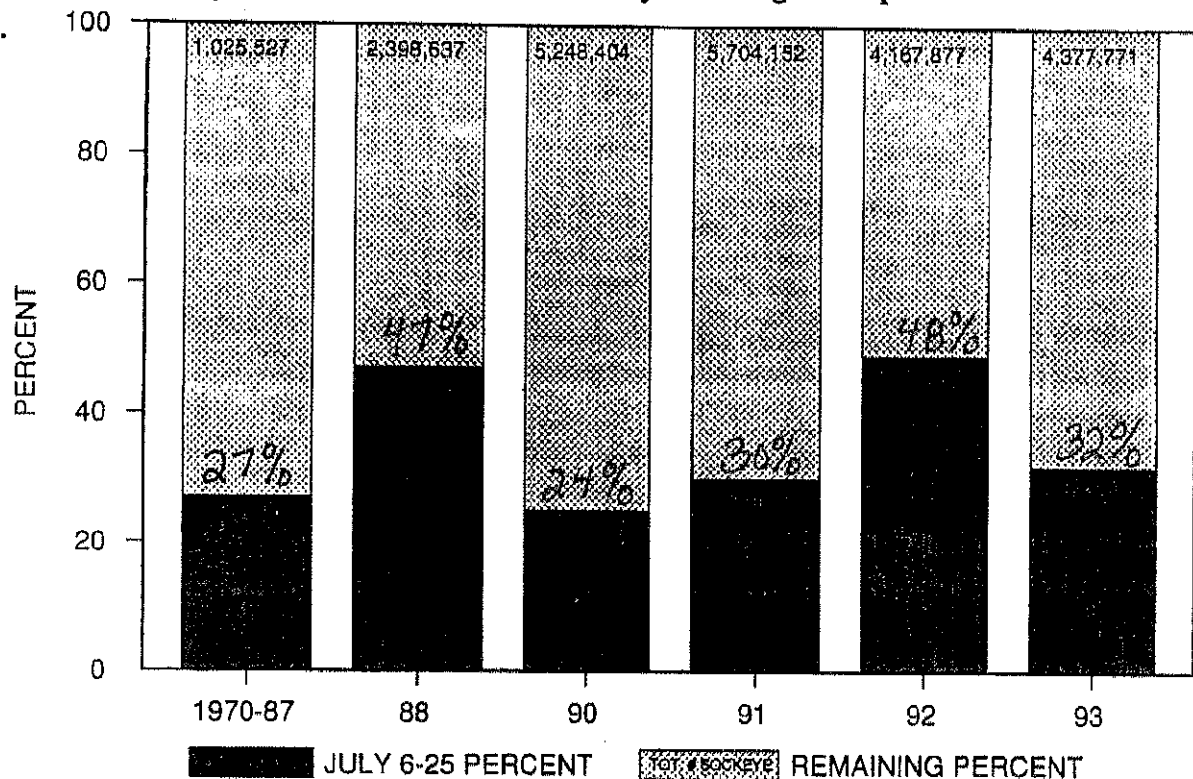


Figure 13. Percent of annual sockeye salmon harvest which occurs - July 6 through July 25, 1970-1993.

<sup>12</sup> ADF&G RIR 4K94-7



Historical tagging studies further show that Cook Inlet fishermen enjoy the bycatch of non-local stocks. Both Kodiak sockeye and sockeye bound for Chignik and the Alaska Peninsula have been tagged in Cook Inlet.



Kodiak and Cook Inlet currently have healthy sockeye stocks which exceed historical averages. Kodiak's hundred plus years of Cook Inlet bycatch has not damaged their sockeye runs. This includes those years, prior to 1989, when Kodiak fishermen enjoyed their historical unlimited access to the North Shelikof and North Mainland sections as well as waters outside the three mile limit.



Table 1. Historical harvest of Cook Inlet salmon in numbers of fish and by species 1893-1982). 1/



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| Date | Chinook | Sockeye   | Coho    | Pink      | Chum    | Total     |
|------|---------|-----------|---------|-----------|---------|-----------|
| 1893 | 30,000  | 170,000   | 34,000  | 0         | 0       | 234,000   |
| 1894 | 15,500  | 406,840   | 19,000  | 0         | 0       | 441,340   |
| 1895 | 25,199  | 324,277   | 0       | 0         | 0       | 349,476   |
| 1896 | 18,076  | 309,863   | 27,600  | 37,800    | 0       | 393,339   |
| 1897 | 14,083  | 354,800   | 28,000  | 0         | 0       | 396,883   |
| 1898 | 16,389  | 551,168   | 83,412  | 0         | 0       | 650,969   |
| 1899 | 17,102  | 558,529   | 54,890  | 0         | 0       | 630,521   |
| 1900 | 26,683  | 585,309   | 20,000  | 0         | 0       | 631,992   |
| 1901 | 34,319  | 482,406   | 8,967   | 5,591     | 0       | 531,283   |
| 1902 | 49,013  | 710,280   | 54,864  | 79,246    | 0       | 893,403   |
| 1903 | 66,023  | 564,189   | 58,968  | 0         | 0       | 689,180   |
| 1904 | 30,073  | 489,348   | 23,800  | 0         | 0       | 543,221   |
| 1905 | 17,668  | 95,547    | 0       | 0         | 0       | 113,215   |
| 1906 | 22,420  | 225,506   | 93,485  | 64,100    | 0       | 405,511   |
| 1907 | 62,944  | 460,620   | 177,276 | 6,420     | 0       | 707,260   |
| 1908 | 33,774  | 670,774   | 94,936  | 375,140   | 0       | 1,174,624 |
| 1909 | 59,624  | 582,562   | 88,350  | 3,740     | 0       | 734,276   |
| 1910 | 49,028  | 840,187   | 79,702  | 217,666   | 1,318   | 1,187,901 |
| 1911 | 55,845  | 1,249,154 | 87,909  | 70,665    | 749     | 1,464,322 |
| 1912 | 47,866  | 1,194,888 | 70,567  | 1,661,874 | 121,628 | 3,096,823 |
| 1913 | 63,652  | 1,369,196 | 81,484  | 10,926    | 10,813  | 1,536,071 |
| 1914 | 47,554  | 1,472,829 | 188,341 | 1,255,798 | 39,905  | 3,004,427 |
| 1915 | 83,793  | 1,860,684 | 122,028 | 19,308    | 27,833  | 2,113,646 |
| 1916 | 62,895  | 1,699,323 | 209,978 | 1,682,672 | 128,322 | 3,783,190 |
| 1917 | 65,499  | 1,659,907 | 60,776  | 54,286    | 78,468  | 1,918,936 |
| 1918 | 34,886  | 1,658,394 | 251,151 | 712,231   | 108,200 | 2,783,862 |
| 1919 | 23,801  | 943,694   | 172,855 | 43,447    | 54,333  | 1,238,130 |
| 1920 | 39,563  | 1,314,916 | 302,353 | 445,524   | 97,541  | 2,199,897 |
| 1921 | 13,946  | 983,625   | 20,519  | 4,717     | 42,409  | 1,065,216 |
| 1922 | 31,030  | 860,019   | 199,923 | 637,405   | 74,389  | 1,802,766 |
| 1923 | 29,911  | 1,099,465 | 142,926 | 39,146    | 23,481  | 1,344,929 |
| 1924 | 27,012  | 1,056,090 | 187,656 | 752,016   | 36,755  | 2,059,529 |
| 1925 | 51,033  | 1,510,861 | 198,146 | 11,828    | 15,064  | 1,786,932 |
| 1926 | 75,620  | 1,999,720 | 353,173 | 586,054   | 118,455 | 3,133,022 |
| 1927 | 87,404  | 1,459,068 | 387,746 | 251,866   | 59,380  | 2,245,464 |
| 1928 | 69,885  | 1,172,959 | 522,509 | 568,052   | 101,086 | 2,434,491 |
| 1929 | 67,694  | 1,049,851 | 184,858 | 376,863   | 134,601 | 1,813,867 |
| 1930 | 72,317  | 917,882   | 498,475 | 1,022,679 | 99,630  | 2,610,983 |
| 1931 | 51,402  | 805,526   | 328,294 | 472,221   | 62,628  | 1,720,071 |
| 1932 | 70,931  | 1,131,958 | 374,976 | 441,125   | 64,749  | 2,083,739 |
| 1933 | 59,281  | 1,336,135 | 187,972 | 118,187   | 57,245  | 1,758,820 |
| 1934 | 72,379  | 1,815,267 | 251,260 | 929,992   | 91,319  | 3,160,217 |
| 1935 | 75,075  | 1,355,787 | 170,438 | 430,540   | 161,424 | 2,193,264 |
| 1936 | 81,062  | 2,390,281 | 328,496 | 852,924   | 264,909 | 3,917,672 |
| 1937 | 85,982  | 1,581,183 | 215,700 | 487,692   | 148,869 | 2,519,426 |
| 1938 | 57,663  | 2,425,253 | 213,804 | 848,733   | 191,328 | 3,736,781 |
| 1939 | 52,726  | 2,334,904 | 163,010 | 319,312   | 231,645 | 3,101,597 |
| 1940 | 63,016  | 1,648,952 | 478,096 | 2,604,235 | 280,831 | 5,075,130 |

-- continued --

| Date | Chinook | Sockeye   | Coho    | Pink      | Chum    | Total     |
|------|---------|-----------|---------|-----------|---------|-----------|
| 1941 | 104,822 | 1,293,234 | 359,224 | 715,211   | 272,345 | 2,744,836 |
| 1942 | 95,180  | 1,540,185 | 644,823 | 965,507   | 400,989 | 3,646,684 |
| 1943 | 111,381 | 1,468,279 | 279,852 | 1,457,161 | 301,899 | 3,618,572 |
| 1944 | 85,210  | 1,989,932 | 256,621 | 1,815,441 | 258,840 | 4,356,044 |
| 1945 | 69,202  | 1,556,713 | 329,828 | 1,367,950 | 305,901 | 3,629,594 |
| 1946 | 64,281  | 1,474,473 | 581,374 | 1,338,731 | 383,563 | 3,842,422 |
| 1947 | 106,804 | 1,473,973 | 443,879 | 681,731   | 279,227 | 2,985,614 |
| 1948 | 105,996 | 2,035,306 | 408,079 | 1,660,147 | 439,314 | 4,648,842 |
| 1949 | 111,281 | 2,153,213 | 279,701 | 443,003   | 238,646 | 3,215,844 |
| 1950 | 162,942 | 2,642,374 | 351,366 | 1,132,164 | 463,507 | 4,752,353 |
| 1951 | 187,511 | 2,481,170 | 271,384 | 408,454   | 290,478 | 3,638,997 |
| 1952 | 74,469  | 1,902,491 | 222,949 | 2,232,630 | 444,592 | 4,477,131 |
| 1953 | 88,429  | 1,488,972 | 224,280 | 546,116   | 533,661 | 2,883,458 |



Table . Upper Cook Inlet commercial salmon harvest by species, 1954-1993.

| Year    | Chinook | Sockeye   | Coho    | Pink      | Chum      | Total      |
|---------|---------|-----------|---------|-----------|-----------|------------|
| 1954    | 63,780  | 1,207,046 | 321,525 | 2,189,207 | 510,068   | 4,291,626  |
| 1955    | 45,926  | 1,027,528 | 170,777 | 101,680   | 248,343   | 1,594,254  |
| 1956    | 64,977  | 1,258,789 | 198,189 | 1,595,375 | 782,051   | 3,899,381  |
| 1957    | 42,158  | 643,712   | 125,434 | 21,228    | 1,001,470 | 1,834,002  |
| 1958    | 22,727  | 477,392   | 239,765 | 1,648,548 | 471,697   | 2,860,129  |
| 1959    | 32,651  | 612,676   | 106,312 | 12,527    | 300,319   | 1,064,485  |
| 1960    | 27,512  | 923,314   | 311,461 | 1,411,605 | 659,997   | 3,333,889  |
| 1961    | 19,737  | 1,162,303 | 117,778 | 34,017    | 349,620   | 1,683,463  |
| 1962    | 20,210  | 1,147,573 | 350,324 | 2,711,689 | 970,582   | 5,200,378  |
| 1963    | 17,536  | 942,980   | 197,140 | 30,436    | 387,027   | 1,575,119  |
| 1964    | 4,531   | 970,055   | 452,654 | 3,231,961 | 1,079,084 | 5,738,285  |
| 1965    | 9,741   | 1,412,350 | 153,619 | 23,963    | 316,444   | 1,916,117  |
| 1966    | 8,544   | 1,852,114 | 289,837 | 2,005,745 | 532,756   | 4,688,996  |
| 1967    | 7,859   | 1,380,062 | 177,729 | 32,229    | 296,837   | 1,894,716  |
| 1968    | 4,536   | 1,104,904 | 469,850 | 2,278,197 | 1,119,114 | 4,976,601  |
| 1969    | 12,397  | 692,175   | 100,777 | 33,383    | 269,847   | 1,108,579  |
| 1970    | 8,336   | 732,605   | 275,399 | 814,895   | 776,229   | 2,607,464  |
| 1971    | 19,765  | 636,303   | 100,636 | 35,624    | 327,029   | 1,119,357  |
| 1972    | 16,086  | 879,824   | 80,933  | 628,574   | 630,103   | 2,235,520  |
| 1973    | 5,194   | 670,098   | 104,420 | 326,184   | 667,573   | 1,773,469  |
| 1974    | 6,596   | 497,185   | 200,125 | 483,730   | 396,840   | 1,584,476  |
| 1975    | 4,787   | 684,752   | 227,379 | 336,333   | 951,796   | 2,205,047  |
| 1976    | 10,865  | 1,664,150 | 208,695 | 1,256,728 | 469,802   | 3,610,240  |
| 1977    | 14,790  | 2,052,291 | 192,599 | 553,855   | 1,233,722 | 4,047,257  |
| 1978    | 17,299  | 2,621,421 | 219,193 | 1,688,442 | 571,779   | 5,118,134  |
| 1979    | 13,738  | 924,415   | 265,166 | 72,982    | 650,367   | 1,926,658  |
| 1980    | 13,798  | 1,573,597 | 271,418 | 1,786,430 | 390,675   | 4,035,918  |
| 1981    | 12,240  | 1,439,277 | 484,411 | 127,164   | 833,542   | 2,896,634  |
| 1982    | 20,870  | 3,259,864 | 793,937 | 790,848   | 1,433,866 | 6,299,185  |
| 1983    | 20,634  | 5,049,733 | 516,322 | 70,327    | 1,114,858 | 6,771,874  |
| 1984    | 10,062  | 2,106,714 | 449,993 | 617,452   | 680,726   | 3,864,947  |
| 1985    | 24,088  | 4,060,429 | 667,213 | 87,828    | 772,849   | 5,612,407  |
| 1986    | 39,240  | 4,787,982 | 756,830 | 1,299,360 | 1,134,173 | 8,017,585  |
| 1987    | 39,661  | 9,500,186 | 451,404 | 109,801   | 349,139   | 10,450,191 |
| 1988    | 29,060  | 6,834,342 | 560,022 | 469,972   | 708,573   | 8,601,969  |
| 1989    | 26,742  | 5,010,698 | 339,201 | 67,430    | 122,027   | 5,566,098  |
| 1990    | 16,105  | 3,604,064 | 500,634 | 603,630   | 351,197   | 5,075,630  |
| 1991    | 13,535  | 2,177,576 | 425,724 | 14,663    | 280,223   | 2,911,721  |
| 1992    | 17,171  | 9,108,340 | 468,911 | 695,859   | 274,303   | 10,564,584 |
| 1993    | 18,719  | 4,754,698 | 306,822 | 100,918   | 122,767   | 5,303,9    |
| Average | 20,605  | 2,286,138 | 316,264 | 760,015   | 613,485   |            |

Table xx. Historical salmon catch (numbers of fish to nearest hundred) by species in the Kodiak Management Area, 1882-1993.<sup>a</sup>

| Year | Chinook | Sockeye   | Coho    | Pink       | Chum      | Total      |
|------|---------|-----------|---------|------------|-----------|------------|
| 1881 |         |           |         |            |           | 0          |
| 1882 |         | 59,000    |         |            |           | 59,000     |
| 1883 |         | 189,000   |         |            |           | 189,000    |
| 1884 |         | 282,000   |         |            |           | 282,000    |
| 1885 |         | 469,000   |         |            |           | 469,000    |
| 1886 |         | 646,000   |         |            |           | 646,000    |
| 1887 |         | 1,005,000 |         |            |           | 1,005,000  |
| 1888 |         | 2,781,000 |         |            |           | 2,781,000  |
| 1889 |         | 3,755,000 |         |            |           | 3,755,000  |
| 1890 |         | 3,593,000 |         |            |           | 3,593,000  |
| 1891 |         | 3,846,000 |         |            |           | 3,846,000  |
| 1892 |         | 3,126,000 |         |            |           | 3,126,000  |
| 1893 |         | 3,245,000 |         |            |           | 3,245,000  |
| 1894 |         | 3,830,000 |         |            |           | 3,830,000  |
| 1895 |         | 2,247,000 | 8,000   |            |           | 2,255,000  |
| 1896 |         | 3,329,000 |         |            |           | 3,329,000  |
| 1897 |         | 2,786,000 | 2,000   |            |           | 2,787,000  |
| 1898 |         | 2,033,000 | 19,000  |            |           | 2,052,000  |
| 1899 | 1,000   | 1,936,000 | 32,000  |            |           | 1,968,000  |
| 1900 | 5,000   | 3,450,000 | 32,000  |            |           | 3,488,000  |
| 1901 | 4,000   | 4,826,000 |         | 2,000      |           | 4,832,000  |
| 1902 | 3,000   | 3,868,000 | 35,000  |            |           | 3,906,000  |
| 1903 | 1,000   | 1,826,000 | 120,000 | 10,000     |           | 1,957,000  |
| 1904 | 3,000   | 2,875,000 | 103,000 | 5,000      |           | 2,987,000  |
| 1905 | 2,000   | 2,142,000 | 87,000  |            |           | 2,232,000  |
| 1906 | 4,000   | 3,980,000 | 24,000  |            |           | 4,008,000  |
| 1907 | 4,000   | 4,232,000 | 38,000  |            |           | 4,275,000  |
| 1908 | 3,000   | 2,488,000 | 74,000  | 286,000    |           | 2,851,000  |
| 1909 | 4,000   | 1,915,000 | 52,000  | 154,000    |           | 2,124,000  |
| 1910 | 2,000   | 1,955,000 | 44,000  | 215,000    |           | 2,216,000  |
| 1911 | 1,000   | 2,686,000 | 22,000  | 230,000    | 6,000     | 2,945,000  |
| 1912 | 1,000   | 2,246,000 | 17,000  | 547,000    | 25,000    | 2,836,000  |
| 1913 | 1,000   | 1,663,000 | 28,000  | 590,000    | 4,000     | 2,286,000  |
| 1914 | 1,000   | 1,255,000 | 32,000  | 1,726,000  | 13,000    | 3,028,000  |
| 1915 | 1,000   | 1,664,000 | 52,000  | 252,000    | 20,000    | 1,990,000  |
| 1916 | 1,000   | 3,373,000 | 50,000  | 3,182,000  | 29,000    | 6,635,000  |
| 1917 | 1,000   | 3,646,000 | 30,000  | 225,000    | 16,000    | 3,919,000  |
| 1918 | 2,000   | 1,894,000 | 78,000  | 2,467,000  | 82,000    | 4,524,000  |
| 1919 | 2,000   | 1,619,000 | 104,000 | 283,000    | 60,000    | 2,068,000  |
| 1920 | 2,000   | 1,958,000 | 89,000  | 1,977,000  | 55,000    | 4,081,000  |
| 1921 | 1,000   | 2,858,000 | 46,000  | 68,000     | 25,000    | 2,997,000  |
| 1922 | 1,000   | 1,097,000 | 120,000 | 2,766,000  | 224,000   | 4,208,000  |
| 1923 | 2,000   | 1,090,000 | 78,000  | 929,000    | 39,000    | 2,137,000  |
| 1924 | 1,000   | 1,408,000 | 121,000 | 5,435,000  | 118,000   | 7,082,000  |
| 1925 | 2,000   | 1,693,000 | 93,000  | 2,674,000  | 212,000   | 4,674,000  |
| 1926 | 1,000   | 3,015,000 | 174,000 | 4,607,000  | 325,000   | 8,122,000  |
| 1927 | 4,000   | 1,155,000 | 152,000 | 5,297,000  | 418,000   | 7,026,000  |
| 1928 | 3,000   | 1,592,000 | 291,000 | 1,535,000  | 726,000   | 4,147,000  |
| 1929 | 3,000   | 712,000   | 144,000 | 6,108,000  | 1,058,000 | 8,026,000  |
| 1930 | 5,000   | 466,000   | 229,000 | 1,651,000  | 419,000   | 2,771,000  |
| 1931 | 2,000   | 1,183,000 | 170,000 | 6,840,000  | 184,000   | 8,378,000  |
| 1932 | 2,000   | 1,059,000 | 52,000  | 4,720,000  | 237,000   | 6,069,000  |
| 1933 | 1,000   | 1,428,000 | 91,000  | 6,574,000  | 537,000   | 8,632,000  |
| 1934 | 1,000   | 1,829,000 | 90,000  | 7,642,000  | 661,000   | 10,223,000 |
| 1935 | 1,000   | 1,614,000 | 77,000  | 10,781,000 | 382,000   | 12,854,000 |
| 1936 | 3,000   | 2,657,000 | 184,000 | 5,648,000  | 328,000   | 8,820,000  |
| 1937 | 1,000   | 1,881,000 | 165,000 | 16,787,000 | 346,000   | 19,181,000 |
| 1938 | 1,000   | 1,966,000 | 155,000 | 8,398,000  | 640,000   | 11,160,000 |

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| Year | Chinook | Sockeye   | Coho    | Pink       | Chum      | Total      |
|------|---------|-----------|---------|------------|-----------|------------|
| 1939 | 2,000   | 1,786,000 | 112,000 | 11,741,000 | 642,000   | 14,284,000 |
| 1940 | 1,000   | 1,318,000 | 148,000 | 9,998,000  | 673,000   | 12,139,000 |
| 1941 | 3,000   | 1,730,000 | 200,000 | 7,602,000  | 445,000   | 9,978,000  |
| 1942 | 1,000   | 1,282,000 | 107,000 | 6,093,000  | 565,000   | 8,047,000  |
| 1943 | 1,000   | 1,991,000 | 60,000  | 12,480,000 | 454,000   | 14,985,000 |
| 1944 | 1,000   | 1,818,000 | 52,000  | 4,955,000  | 507,000   | 7,332,000  |
| 1945 | 2,000   | 2,041,000 | 60,000  | 9,045,000  | 559,000   | 11,707,000 |
| 1946 | 0       | 839,000   | 56,000  | 9,546,000  | 298,000   | 10,740,000 |
| 1947 | 0       | 993,000   | 76,000  | 8,857,000  | 295,000   | 10,221,000 |
| 1948 | 1,000   | 1,260,000 | 32,000  | 5,968,000  | 331,000   | 7,594,000  |
| 1949 | 1,000   | 892,000   | 54,000  | 4,928,000  | 700,000   | 6,574,000  |
| 1950 | 2,000   | 921,000   | 41,000  | 5,305,000  | 685,000   | 6,953,000  |
| 1951 | 2,000   | 468,000   | 49,000  | 2,100,000  | 483,000   | 3,103,000  |
| 1952 | 1,000   | 604,000   | 52,000  | 4,577,000  | 1,243,000 | 6,476,000  |
| 1953 | 3,000   | 317,000   | 42,000  | 5,175,000  | 548,000   | 6,084,000  |
| 1954 | 1,000   | 325,000   | 66,000  | 8,439,000  | 1,251,000 | 10,083,000 |
| 1955 | 2,000   | 164,000   | 35,000  | 10,794,000 | 482,000   | 11,478,000 |
| 1956 | 1,000   | 271,000   | 53,000  | 3,319,000  | 705,000   | 4,349,000  |
| 1957 | 1,000   | 234,000   | 35,000  | 4,716,000  | 1,208,000 | 6,195,000  |
| 1958 | 2,000   | 288,000   | 21,000  | 4,039,000  | 931,000   | 5,280,000  |
| 1959 | 2,000   | 330,000   | 15,000  | 1,967,000  | 734,000   | 3,047,000  |
| 1960 | 1,000   | 363,000   | 54,000  | 6,738,000  | 1,300,000 | 8,456,000  |
| 1961 | 1,000   | 408,000   | 29,000  | 3,926,000  | 519,000   | 4,882,000  |
| 1962 | 1,000   | 785,000   | 55,000  | 14,114,000 | 795,000   | 15,749,000 |
| 1963 | 0       | 407,000   | 57,000  | 5,480,000  | 305,000   | 6,250,000  |
| 1964 | 1,000   | 498,000   | 36,000  | 12,044,000 | 1,134,000 | 13,714,000 |
| 1965 | 1,000   | 346,000   | 27,000  | 2,887,000  | 431,000   | 3,692,000  |
| 1966 | 1,000   | 632,000   | 68,000  | 10,756,000 | 763,000   | 12,218,000 |
| 1967 | 2,000   | 309,000   | 10,000  | 188,000    | 227,000   | 735,000    |
| 1968 | 2,000   | 760,000   | 57,000  | 8,768,000  | 750,000   | 10,338,000 |
| 1969 | 2,000   | 591,000   | 49,000  | 12,501,000 | 535,000   | 13,678,000 |
| 1970 | 1,000   | 917,000   | 66,000  | 12,037,000 | 919,000   | 13,940,000 |
| 1971 | 1,000   | 478,000   | 23,000  | 4,333,000  | 1,541,000 | 6,377,000  |
| 1972 | 1,000   | 223,000   | 17,000  | 2,486,000  | 1,164,000 | 3,890,000  |
| 1973 | 1,000   | 167,000   | 4,000   | 519,000    | 318,000   | 1,008,000  |
| 1974 | 1,000   | 419,000   | 14,000  | 2,646,000  | 249,000   | 3,328,000  |
| 1975 | 0       | 136,000   | 24,000  | 2,943,000  | 84,000    | 3,187,000  |
| 1976 | 1,000   | 641,000   | 24,000  | 11,078,000 | 740,000   | 12,484,000 |
| 1977 | 1,000   | 623,000   | 28,000  | 6,252,000  | 1,072,000 | 7,977,000  |
| 1978 | 3,000   | 1,072,000 | 49,000  | 15,004,000 | 814,000   | 16,942,000 |
| 1979 | 2,000   | 632,000   | 141,000 | 11,288,000 | 358,000   | 12,420,000 |
| 1980 | 1,000   | 651,000   | 139,000 | 17,291,000 | 1,076,000 | 19,157,000 |
| 1981 | 1,000   | 1,289,000 | 122,000 | 10,337,000 | 1,345,000 | 13,094,000 |
| 1982 | 1,000   | 1,205,000 | 344,000 | 8,076,000  | 1,266,000 | 10,892,000 |
| 1983 | 4,000   | 1,232,000 | 158,000 | 4,603,000  | 1,085,000 | 7,082,000  |
| 1984 | 5,000   | 1,950,000 | 230,000 | 10,844,000 | 649,000   | 13,678,000 |
| 1985 | 5,000   | 1,843,000 | 284,000 | 7,335,000  | 431,000   | 9,898,000  |
| 1986 | 4,000   | 3,188,000 | 169,000 | 11,808,000 | 1,135,000 | 16,304,000 |
| 1987 | 5,000   | 1,793,000 | 193,000 | 5,076,000  | 682,000   | 7,748,000  |
| 1988 | 22,000  | 2,699,000 | 303,000 | 14,409,000 | 1,426,000 | 18,860,000 |
| 1989 | 5,000   | 2,629,000 | 141,000 | 22,649,000 | 836,000   | 26,259,000 |
| 1990 | 19,000  | 5,248,000 | 294,000 | 5,984,000  | 578,000   | 12,122,000 |
| 1991 | 22,000  | 5,704,000 | 325,000 | 16,643,000 | 1,029,000 | 23,723,000 |
| 1992 | 24,000  | 4,168,000 | 280,000 | 3,311,000  | 680,000   | 8,462,000  |
| 1993 | 42,000  | 4,378,000 | 313,000 | 34,019,000 | 588,000   | 39,341,000 |

## Chapter 8

# SOCIO-ECONOMIC ASPECTS OF THE KODIAK COMMERCIAL FISHERY



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Kodiak is a widely known as a fishing town. Indeed, it can be stated that the town of Kodiak would not exist were it not for the abundance of salmon and other species historically harvested from the waters of the Archipelago. The Kodiak fishing industry, as outlined in Chapter 7, has evolved into an efficient, multi-tasked harvest and processing sector, operating year-round for numerous species. The City of Kodiak has the largest and most diversified fishing port in Alaska, and has numbered among the top three ports nationwide for both landings and value of landings over the past decade.

Salmon has historically been the mainstay of Kodiak's fishing fleet, stabilizing the economy amid fluctuations of other fish species. For many years salmon has ranked first in both volume and value for landings in Kodiak. During a typical salmon season, from June to September, up to 5,000 workers may be involved in the Kodiak salmon industry. This includes 1,000-2,000 fishers and crew, 200-300 tender operators and crew, and 2,200-2,700 processing personnel. In a community with a summer population of 12,000, this amounts to a significant percentage. "The Kodiak economy ... is completely dominated by fishing and its manufacturing counterpart...".<sup>1</sup>

The economy of the Kenai Peninsula Borough (KPB) presents a much different picture. It has a large tourism industry as well as a large basic industry in petroleum and gas. Both tourism and oil employ more people and generate more income than does fishing.

The following Table 1 represents the relative importance of the fishing industry to the Kodiak economy versus the Kenai Borough economy in terms of employment in the processing sector and per capita personal income from fishing. The raw fish tax and Borough Property taxes for the two regions are also compared.<sup>2</sup>

<sup>1</sup> PJ Hill, PhD, "A Comparative Analysis of the Economies of Kodiak and Upper Cook Inlet From the Perspective of Commercial Fishing 1994", University of Alaska, 1994.

<sup>2</sup> Ibid



Table 1

|                                                        | <u>Kodiak Island<br/>Borough</u> | <u>Kenai Peninsula<br/>Borough</u> |
|--------------------------------------------------------|----------------------------------|------------------------------------|
| Per capita personal income<br>from fishing (1984-1989) | 19.26%                           | 6.31%                              |
| Avg. monthly employment;<br>fish processing (1992)     | 30.67%                           | 7.85%                              |
| Summer months                                          | 38-40%                           | 15%                                |
| -----                                                  |                                  |                                    |
| Raw Fish Tax (FY92)                                    | 4.14%                            | .045%                              |
|                                                        | \$2.26 million                   | \$846,000                          |
| Property tax (FY92)<br>(fishing related)               | 30.42%                           | 2.85%                              |

Revenues from raw fish tax are much more important to Kodiak's economy. In fact, as a percentage of the Kodiak budget, the tax is approximately ten times as important to Kodiak as it is to Kenai. The property tax, typically the largest single source of income for local governments, becomes extremely important for the KIB, with fish related revenues generating nearly one third of the total tax base as opposed to the Kenai Borough's 2.85%.

Clearly, the KPB economy is much more economically diversified and has more employment opportunities than does Kodiak with it's one sector economy. A one sector economy has a much greater risk from economic shocks or downturns than a more diversified economy such as Kenai's, which is able to bounce back more readily in the event of decline or dislocation.<sup>3</sup>

In addition to the primary monetary value of fishing, there is the multiplier effect on the local economies that must be considered. This

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<sup>3</sup> Ibid

includes everything from groceries to household and basic living expenses purchased with money derived from fishing and processing.



In Kodiak, and particularly in the villages, this multiplier effect is significant, as the only opportunities for obtaining goods are local businesses. Because Kodiak is an island, more money is proportionately spent within the community.

In the KPB however, with its larger economy and proximity to Anchorage, people have access to a larger selection and wider variety of goods, at more competitive prices, effectively diluting the "multiplier effect" in the local community. Thus strengthening the argument that the Kodiak economy will be much more vulnerable to an economic setback if these proposed allocative changes are passed.

Also notable is the difference in salmon permit ownership between the KIB and the KPB, as indicated in Table 2:

Table 2

| Ownership of salmon permits | Kodiak Island<br>Borough | Kenai Peninsula<br>Borough |
|-----------------------------|--------------------------|----------------------------|
| Total #                     | 611                      | 1328                       |
| village                     | 11.95%                   | 3.39%                      |
| region                      | 61.21%                   | 55.57%                     |
| other Alaska                | 17.02%                   | 24.40%                     |
| Non-Resident                | 21.77%                   | 20.03%                     |

Of the UCI permits, only 55.57% are held by residents of the local area. For Kodiak, the percent is 61.21%. The conclusion derived from this comparison is that "a larger proportion of the income from salmon fishing stays in Kodiak as compared to Cook Inlet".<sup>4</sup> More dramatic is the portion of permits held by village residents on the Kodiak area versus UCI. Nearly 12% of Kodiak's permits are held by villagers, as compared to just over 3%

<sup>4</sup> Ibid

of the UCI permits. Proportionately four times as many native village dwellers own permits in Kodiak as compared to Cook Inlet."<sup>5</sup>



The importance of the salmon fishery to the Alutiiq people of Kodiak cannot be overstated. Six villages are located on Kodiak Island, all of which are off the road system. Historically, the Alutiiq people have relied on salmon as a primary food source and additionally as a means of monetary support in more recent years. All of the villages rely on salmon as a subsistence food, and most have active salmon fishing fleets which are the only source of income for a significant portion of the residents.

Typically a Kodiak salmon operation will employ three crew persons per permit, not including the skipper, whereas a drift boat employs only one or two. Employment opportunities in villages are extremely limited outside of fishing, government jobs, and a small tourist industry. The impact of the proposed closures would clearly be most severely felt at the Kodiak village level.

In working with the Kodiak Alutiiq villages to oppose this proposal, it became clear how important the traditional salmon fishery is to each of the villages. The usually quiet residents responded vigorously with petitions, affidavits and letters voicing their concern over this proposal. These are included in the following support document.

### Summary

The importance of the salmon fishery to the local and regional economy of Kodiak is far greater than in the Kenai Peninsula Borough. There is an especially high level of dependence on the salmon resource by residents of Kodiak's six Alutiiq villages, who would be severely affected by passage of this proposal. Kodiak is a one-sector economy, and is more vulnerable to the effects of an allocative shift than is the multi-sectored Kenai Borough.

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<sup>5</sup> Ibid





## Chapter 9

# EFFECT OF THE COOK INLET AND KODIAK ENHANCED SCKEYE PRODUCTION ON KODIAK SALMON AREA MANAGEMENT PLAN

Kodiak and Cook Inlet have a relationship that is unique among all other salmon regions of Alaska. Kodiak and Cook Inlet, which are neighboring yet separate management areas, both have active aquaculture associations which are engaged in major enhancement projects for the supplemental production of sockeye salmon. This relationship centers around the fact that some Cook Inlet sockeye stocks migrate past the Kodiak Island management area and that a portion of these stocks are realized as a bycatch in the traditional Kodiak commercial salmon harvest. The result of this relationship has been an active disagreement as to the effect and traditional use of these two stocks.

The Cook Inlet enhancement program has four major hatcheries which produce sockeye for production in 14 different lake systems. Coupled with these hatcheries is a program of natural habitat enhancement.<sup>1</sup>

Enhancement projects for Cook Inlet have been producing a substantial contribution to the Cook Inlet fishery for the last 10 years, averaging returns of approximately 1,054,000 since 1986. These numbers are expected to increase to 1,644,400 as a sustained average by 1996.<sup>2</sup> During the last 3 years, releases including fry, smolt and fingerlings have averaged over 29 million. Using accepted survival rates, the planned average return of 1,644,000 Cook Inlet enhanced sockeye is considered conservative.

On the other hand, Kodiak Regional Aquaculture Association has been in the process of rebuilding its wild stocks through restrictive management to achieve escapement goals and lake fertilization to accelerate rehabilitation of the sockeye fishery since 1985. This has included both habitat evaluation and enhancement, and also the stocking of barren lakes for the development of new supplemental sockeye production. In 1994,

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<sup>1</sup> Cook Inlet Aquaculture Association, Smolt Newsletter, October 1992.

<sup>2</sup> Ibid

the contribution to the Kodiak sockeye fishery from supplemental production was approximately 40,000 fish. As new and ongoing programs come on-line, the number of sockeye produced through supplemental enhancement should grow to about 900,000 by 1999.<sup>3</sup>



The relationship between Cook Inlet and Kodiak aquaculture programs becomes even closer when Cook Inlet fishermen request restriction and modification of Kodiak's salmon management plans, based on a component of Cook Inlet stocks migrating through the Kodiak Salmon Management area.

In 1989 the Alaska State Board of Fisheries implemented the North Shelikof Management Plan which manages and restricts Kodiak fishermen by placing a cap of 15,000 fish on catches within the North Shelikof Management Area. A cap of 50,000 was placed on fishermen within the Southwest Afognak area. Neither of these caps take into consideration the continuing increased production of the two aquaculture associations, which over time could easily trigger either cap regardless of natural production. Similarly, the Kenai Peninsula Fishermens' Association proposed management changes do not take into consideration that there is potential for a volume of fish greater than Cook Inlet's long term average to transit through the Kodiak area as a result of Kodiak and Cook Inlet's two aquaculture programs alone. Planning for enhanced production has not been included in any discussion or implementation of new management restrictions. It is very possible and most probable that the established caps in the North Shelikof and Southwest Afognak will be greatly affected by enhanced production in 1995!

The remainder of the Kodiak Island Management Area is also vulnerable to dramatic effects from the unplanned increase of enhanced fish from Cook Inlet. While Kodiak's enhanced production has been accounted and planned for in ADF&G's management plan, Cook Inlet's enhanced production has increased unfettered by any assessment of its impacts on other fisheries.

To make it very simple, the more fish that Cook Inlet puts into Kodiak waters, the sooner the caps are reached and the sooner Kodiak fishermen are forced to quit fishing. Also, as Kodiak's supplemental

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<sup>3</sup> Kodiak Regional Aquaculture Association unpublished reports

production matures, the sooner the caps will be reached. It is wrong unreasonable to force Kodiak fishermen to quit fishing as a penalty for catching their own fish. The Board should not allow this type of management to expand to the rest of the KMA.



When regulatory review of an area's mixed stock harvest rate is required due to increased catch levels resulting from enhanced production, serious questions arise regarding the role that this type of production plays in allocation issues. When traditional fishing patterns can become endangered as a result of a change in harvest that is due to enhancement, either local or non-local, it is time to seriously question the validity of such production and to consider what regulatory systems are needed to assume ADF&G and public review of potential inter-area conflicts.

If this is what the future holds for traditional fishing patterns and if the Board of Fish is going to be required to review and possibly justify implementing new allocative management plans because of enhanced production, a thorough review of the process allowing for enhancement must be initiated. KMA fishermen have always desired the perpetuation of a stable and predictable common property commercial fishery which targets KMA wild stocks and its discretely occurring enhanced stocks. This allows for traditional fishing patterns whereby individual permit holder's annual economic expectations can be seasonally assured. Enhanced fish from one area should not dictate fishing patterns in another area. If that occurs, enhancement projects interject economic instability into an adjacent area's traditional fishing pattern rather than the increased stability desired.



## **APPENDIX A**

### **"Harvest Rates of Upper Cook Inlet-Bound Sockeye Salmon in the Kodiak Area's Commercial Salmon Fishery"**

**Prepared By:**

**Natural Resource Consultants**



**HARVEST RATES OF UPPER COOK INLET-BOUND  
SCKEYE SALMON  
IN THE KODIAK MANAGEMENT AREA'S  
COMMERCIAL SALMON FISHERY**

PREPARED FOR:

**THE KODIAK ISLAND BOROUGH  
SALMON WORKING GROUP**

March 10, 1994

PREPARED BY:

**NATURAL RESOURCES CONSULTANTS, INC.  
SEATTLE, WASHINGTON**

Reviewers:





October 1, 2017

To the Chairman and Board of Fisheries members

RE: UCIDA ACR #11

The UCIDA ACR fails to address any of the stated BoF criteria to accept it.

The genetic study was not designed to address any management plan, local or in other areas. The true "cost" of misapplied research would be staggering, economically and biologically--if this study *was the sole driver* for changing the Kodiak Area Salmon Management Plan. The study only addresses sockeye in the harvest, never mentioning the harvest magnitude of other salmon species during the mid strata of the study .

The study, as presented, is grossly out of context as to the reality of the salmon harvest in the time period that UCIDA is basing ACR 11 on. In 2015, 17 million salmon (KMA) were caught in the time period of the study that UCIDA is basing ACR 11 on. I will give you a number that is big picture to help you understand the glaring omission of information left out of the ACR & study. Kodiak's salmon harvest in 2015 was 124<sup>0</sup>00,000 lbs all species. The economic multiplier effect on the economy from harvesters, processors throughout the community of that scale is significant, yet overlooked and never mentioned in the study or ACR. What would be the biological consequences on deviating from the current well-managed Kodiak fishery?

There is a rule that states, if you change one thing it changes everything, the rule of "unintended consequences." I would urge the BoF to get thoroughly educated to the magnitude & complexity of Kodiak Island's salmon management & economy.. Volume salmon & ground fish processing are Kodiak's economic life blood. The only town in the state with a year round processing population with all that entails from shipping to the school district.

Please ask the Kodiak ADFG staff to explain with visuals & put the fishery & study into the proper perspective. It would be a heavy lift to attempt a change in Kodiak's salmon management for all involved without damage being done to the stock, quality, & an economy that is built around access to our local stocks.

Sincerely

Chris R Berns

Box 23

Kodiak, Alaska 99615 (53 year resident of Kodiak)



Berns



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2 of 94

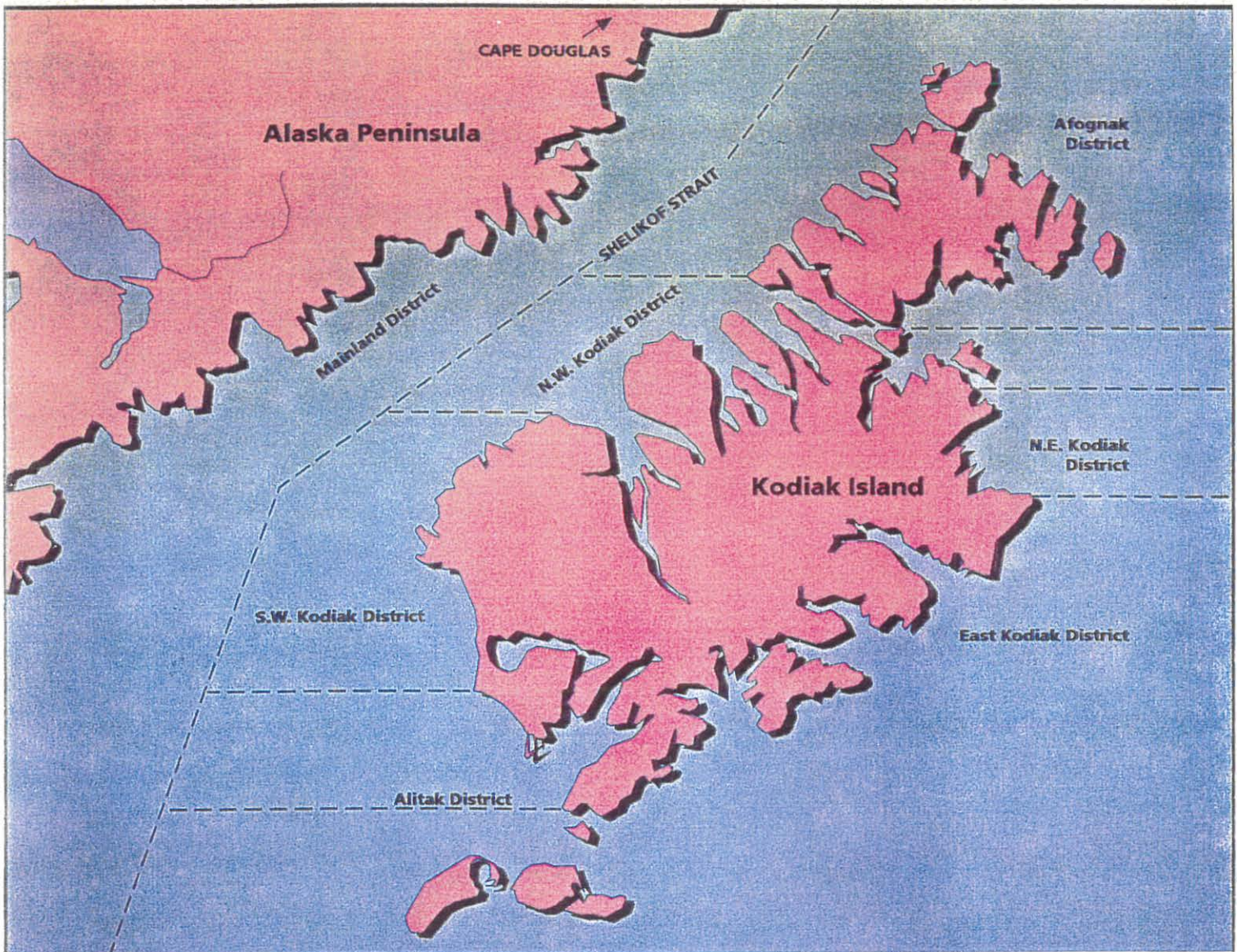
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BOARD OF FISHERIES

Kodiak Management Area



Did This Before -

Kodiak Island Borough Salmon Work Group  
Report #5

for the  
State of Alaska, Board of Fisheries  
Kodiak/Cook Inlet Inter-Area Work Group  
February 21, 1995  
Anchorage, Alaska





## Foreward and Acknowledgments

The Kodiak Salmon Work Group is pleased to submit Report #5, a compilation of four of our previous reports to the Board of Fisheries, all relating to the incidental catch of Cook Inlet sockeye in the Kodiak Management Area, and Proposal #528.

We'd like to express our appreciation to the Alaska Department of Fish and Game, especially Dave Prokopowich, Joanne Shaker, Kevin Brennan, Bruce Barrett, Patti Nelson, Charlie Swanton, for their timely reports and assistance in data summaries.

KSWG also thanks the Kodiak Island Borough Assembly, and Mayor Jerome Selby who have been instrumental in providing support for the group.

And, thanks to the dedicated members of the Kodiak Salmon Work Group who've assisted in the writing, editing, and compilation of this report, and in the work of the past year include: Duncan Fields, Nick Troxell, Oliver Holm, Bruce Schactler, Virginia Adams, Kelly Schactler and Larry Malloy.

Lacey Berns,  
Kodiak Salmon Work Group, Coordinator

# **KODIAK -- HISTORY**



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- ▶ **In the first 30 years of the Kodiak fishery, 1982-1911, sockeye catches exceeded 2 million fish 20 times.** The high catch occurred in 1901 with 4.8 million sockeye harvested. Current catches are well within this historic range.
- ▶ **From 1912 to 1948 the annual Kodiak sockeye harvest exceeded 1 million fish in 33 out of 37 seasons.** The high catch during the period was 1917 with 3.6 million sockeye. As late as 1945 over 2 million fish were captured. This too correlates well with current catches.
- ▶ **1949 through 1977 catch records show a significant decrease in Kodiak's sockeye runs.** Federal management, over fishing and environmental conditions all contributed to the depressed Kodiak sockeye stocks.
- ▶ **Catch data from 1978 through 1986 shows that Kodiak sockeye were rebuilding.** The 1976 Kodiak catch was .6 million and the 1986 harvest exceeded 3.1 million. The 1980-1985 seasons all had catches in excess of 1 million sockeye. Since, Kodiak sockeye are predominately 5 year fish, the 1980 through 1986 catches reflect strong prior Kodiak escapements -- not Cook Inlet fish.
- ▶ **Kodiak sockeye catches from 1987 through 1994 are predominately local stocks.** These are the years Cook Inlet claims Kodiak "learned" to catch their fish. The latest intercept year, 1994, attributed 130,000 Cook Inlet sockeye to Kodiak's catch. This is a mere 4% of the total Kodiak sockeye catch and does not reflect learned (new and expanding") fishing patterns. ( On the highest intercept year, 1992, approximately 1.4 million Cook Inlet sockeye are attributed to the Kodiak catch. This still only represented 34% of the total Kodiak harvest.)
- ▶ **Kodiak's all time record harvests in 1990 and 1991 were comprised of 96% local stocks.** In these years, based on Barrett/Vining, the Cook Inlet incidental catch was around 300,00 sockeye. These fish represent only 4% of the total Kodiak catch.
- ▶ **Kodiak's incidental catch of Cook Inlet sockeye is declining as Cook Inlet sockeye harvests return to average numbers.** Kodiak's incidental catch of Cook Inlet fish exceed 5% of the Cook inlet harvest only when Cook Inlet runs exceeded 3.5 million fish. Moreover, in 1994 with a 5.1 million Cook Inlet catch, the Kodiak bycatch was only 2.5%.
- ▶ **Kodiak's incidental catch of Cook Inlet sockeye is also a function of the abundance of local sockeye.** Cook Inlet harvests in 1990 and 1994 are comparable. The incidental Kodiak catch in 1990 was @ 5.8% but in 1994 the incidental catch in Kodiak was only 2.5%. The amount of local sockeye available for harvest in 1990 and 1994 in Kodiak also declined by about half.



## KODIAK COMMERCIAL SALMON FISHERIES MAJOR HARVEST AREAS

REA 1 - North Shelikof Sections

REA 2 - SW Afognak Section

REA 3 - NW Kodiak District

REA 4 - SW Kodiak District

REA 5 - Alitak Bay District

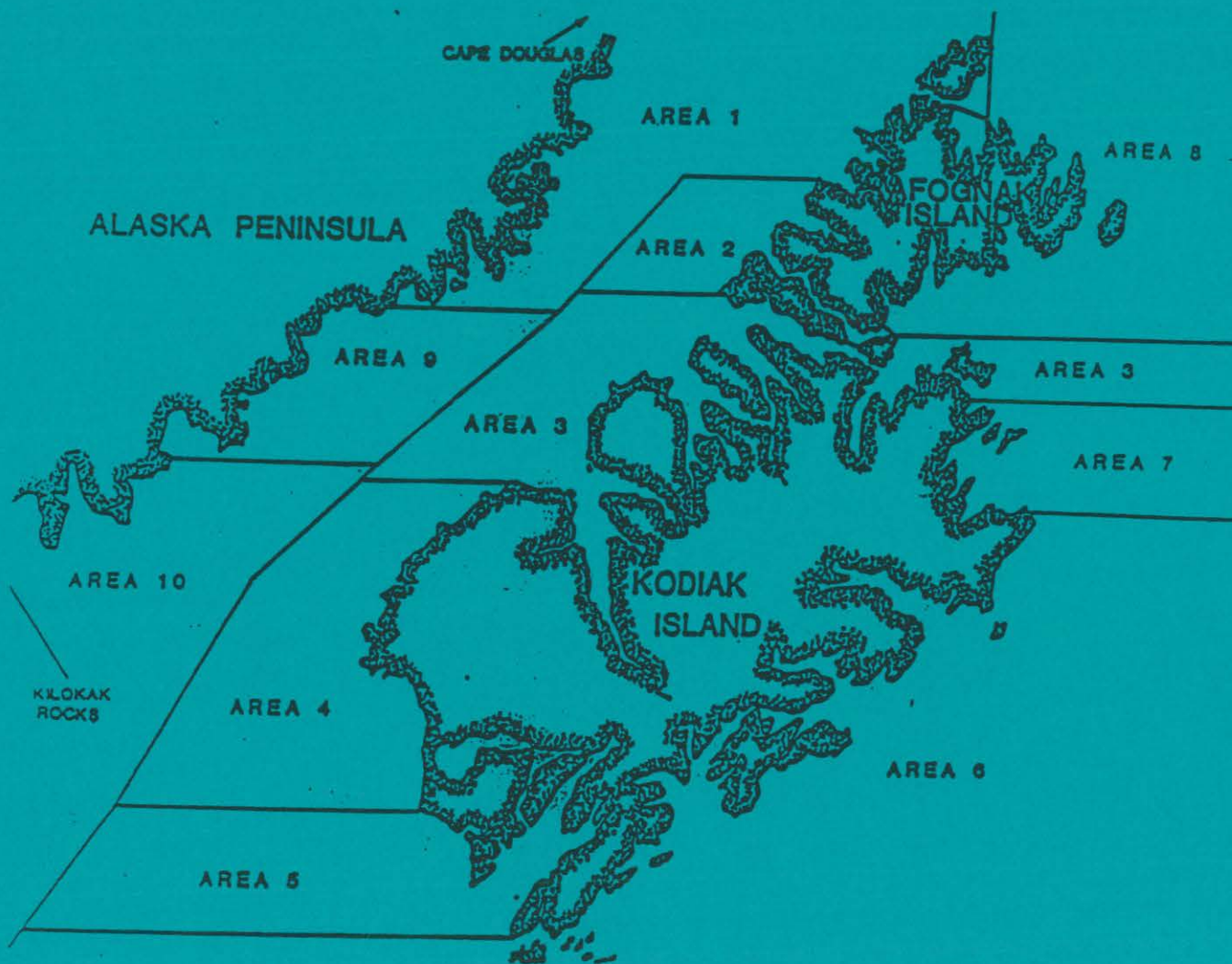
AREA 6 - Eastside Kodiak District

AREA 7 - NE Kodiak District

AREA 8 - Remaining Afognak Sections

AREA 9 - Katmai & Alinchak Sections

AREA 10- Igvak & Wide Bay Sections

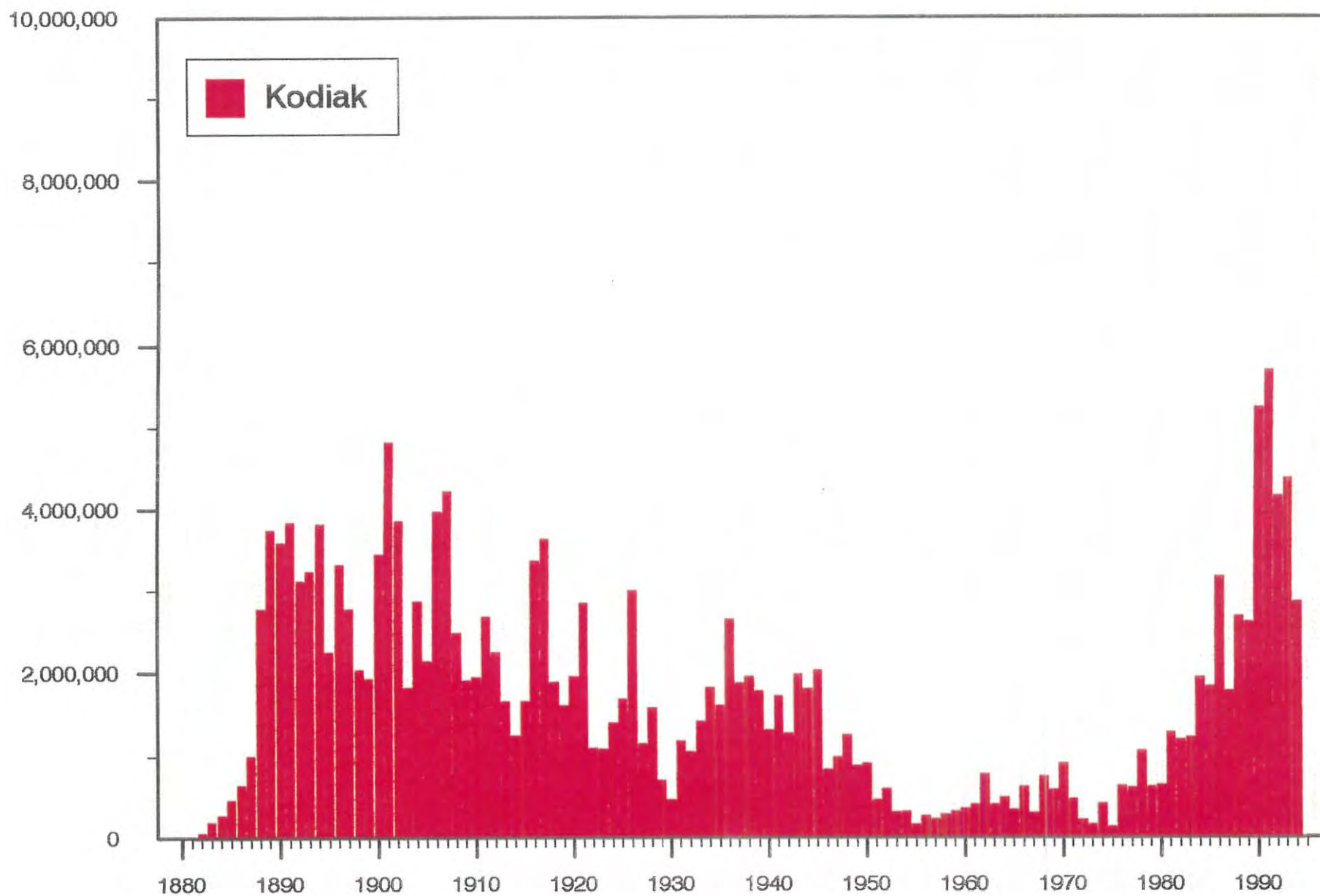


Appendix A.1. Map of 10 major harvest areas.





## Historical Sockeye Salmon Commercial Harvest Kodiak, 1882-1994



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# Historical Sockeye Salmon Commercial Harvest Kodiak vs. Cook Inlet, 1882-1994

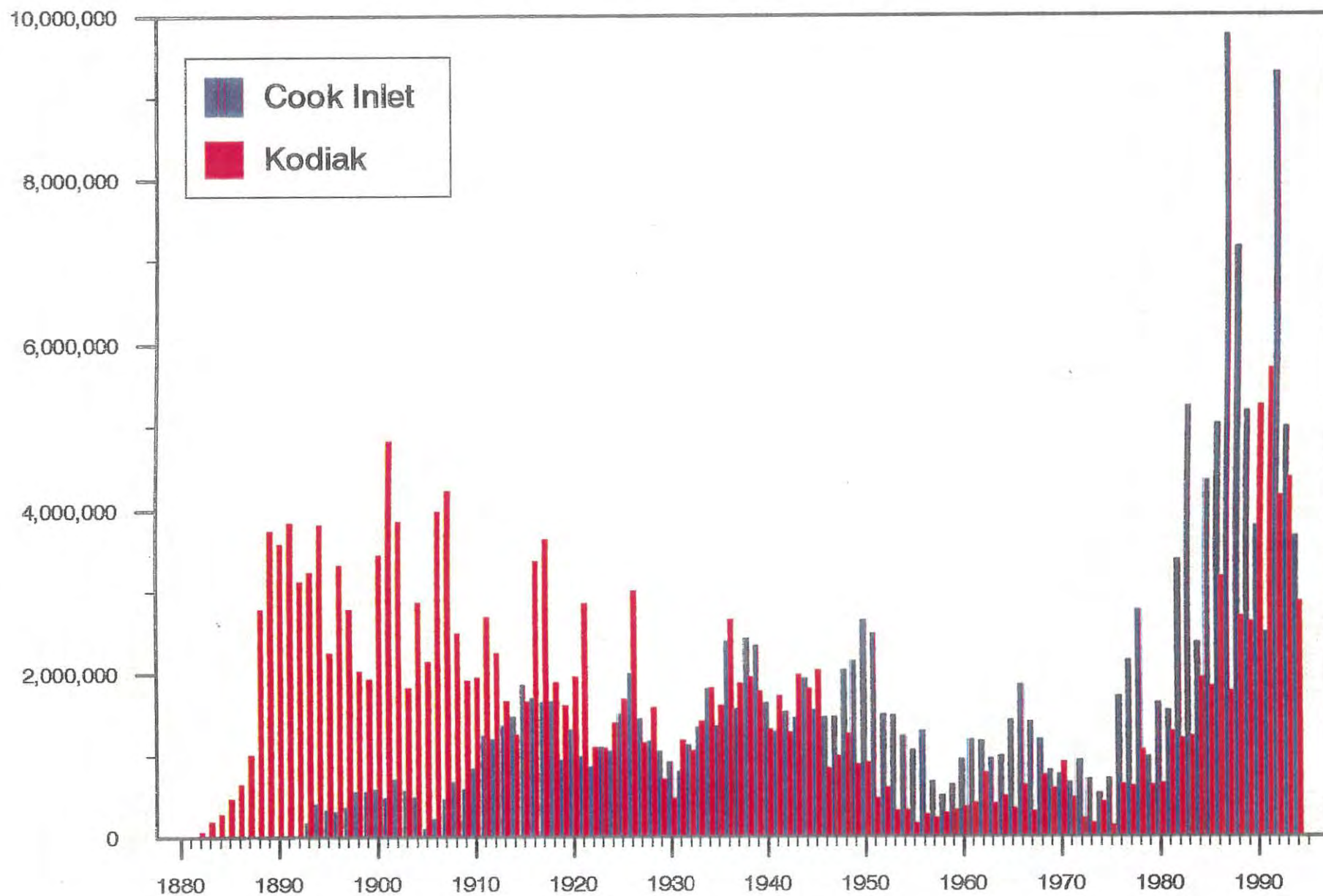




Table xx. Historical salmon catch (numbers of fish to nearest thousand) by species in the Kodiak Management Area, 1882-1994.

| Year* | Chinook | Sockeye   | Coho    | Pink       | Chum      | Total      |
|-------|---------|-----------|---------|------------|-----------|------------|
| 1881  |         |           |         |            |           | 0          |
| 1882  |         | 59,000    |         |            |           | 59,000     |
| 1883  |         | 189,000   |         |            |           | 189,000    |
| 1884  |         | 282,000   |         |            |           | 282,000    |
| 1885  |         | 469,000   |         |            |           | 469,000    |
| 1886  |         | 646,000   |         |            |           | 646,000    |
| 1887  |         | 1,005,000 |         |            |           | 1,005,000  |
| 1888  |         | 2,781,000 |         |            |           | 2,781,000  |
| 1889  |         | 3,755,000 |         |            |           | 3,755,000  |
| 1890  |         | 3,593,000 |         |            |           | 3,593,000  |
| 1891  |         | 3,846,000 |         |            |           | 3,846,000  |
| 1892  |         | 3,126,000 |         |            |           | 3,126,000  |
| 1893  |         | 3,245,000 |         |            |           | 3,245,000  |
| 1894  |         | 3,830,000 |         |            |           | 3,830,000  |
| 1895  |         | 2,247,000 | 8,000   |            |           | 2,255,000  |
| 1896  |         | 3,329,000 |         |            |           | 3,329,000  |
| 1897  |         | 2,786,000 | 2,000   |            |           | 2,787,000  |
| 1898  |         | 2,033,000 | 19,000  |            |           | 2,052,000  |
| 1899  | 1,000   | 1,935,000 | 32,000  |            |           | 1,968,000  |
| 1900  | 5,000   | 3,450,000 | 32,000  |            |           | 3,488,000  |
| 1901  | 4,000   | 4,826,000 |         | 2,000      |           | 4,832,000  |
| 1902  | 3,000   | 3,868,000 | 35,000  |            |           | 3,906,000  |
| 1903  | 1,000   | 1,826,000 | 120,000 | 10,000     |           | 1,957,000  |
| 1904  | 3,000   | 2,875,000 | 103,000 | 5,000      |           | 2,987,000  |
| 1905  | 2,000   | 2,142,000 | 87,000  |            |           | 2,232,000  |
| 1906  | 4,000   | 3,980,000 | 24,000  |            |           | 4,008,000  |
| 1907  | 4,000   | 4,232,000 | 38,000  |            |           | 4,275,000  |
| 1908  | 3,000   | 2,488,000 | 74,000  | 286,000    |           | 2,851,000  |
| 1909  | 4,000   | 1,915,000 | 52,000  | 154,000    |           | 2,124,000  |
| 1910  | 2,000   | 1,955,000 | 44,000  | 215,000    |           | 2,216,000  |
| 1911  | 1,000   | 2,686,000 | 22,000  | 230,000    | 6,000     | 2,945,000  |
| 1912  | 1,000   | 2,246,000 | 17,000  | 547,000    | 25,000    | 2,836,000  |
| 1913  | 1,000   | 1,663,000 | 28,000  | 590,000    | 4,000     | 2,286,000  |
| 1914  | 1,000   | 1,255,000 | 32,000  | 1,726,000  | 13,000    | 3,028,000  |
| 1915  | 1,000   | 1,664,000 | 52,000  | 252,000    | 20,000    | 1,990,000  |
| 1916  | 1,000   | 3,373,000 | 50,000  | 3,182,000  | 29,000    | 6,635,000  |
| 1917  | 1,000   | 3,646,000 | 30,000  | 225,000    | 16,000    | 3,919,000  |
| 1918  | 2,000   | 1,894,000 | 78,000  | 2,467,000  | 82,000    | 4,524,000  |
| 1919  | 2,000   | 1,619,000 | 104,000 | 283,000    | 60,000    | 2,068,000  |
| 1920  | 2,000   | 1,958,000 | 89,000  | 1,977,000  | 55,000    | 4,081,000  |
| 1921  | 1,000   | 2,858,000 | 46,000  | 68,000     | 25,000    | 2,997,000  |
| 1922  | 1,000   | 1,097,000 | 120,000 | 2,766,000  | 224,000   | 4,208,000  |
| 1923  | 2,000   | 1,090,000 | 78,000  | 929,000    | 39,000    | 2,137,000  |
| 1924  | 1,000   | 1,408,000 | 121,000 | 5,435,000  | 118,000   | 7,082,000  |
| 1925  | 2,000   | 1,693,000 | 93,000  | 2,674,000  | 212,000   | 4,674,000  |
| 1926  | 1,000   | 3,015,000 | 174,000 | 4,607,000  | 325,000   | 8,122,000  |
| 1927  | 4,000   | 1,155,000 | 152,000 | 5,297,000  | 418,000   | 7,026,000  |
| 1928  | 3,000   | 1,592,000 | 291,000 | 1,535,000  | 726,000   | 4,147,000  |
| 1929  | 3,000   | 712,000   | 144,000 | 6,108,000  | 1,058,000 | 8,026,000  |
| 1930  | 5,000   | 466,000   | 229,000 | 1,651,000  | 419,000   | 2,771,000  |
| 1931  | 2,000   | 1,183,000 | 170,000 | 6,840,000  | 184,000   | 8,378,000  |
| 1932  | 2,000   | 1,058,000 | 52,000  | 4,720,000  | 237,000   | 6,069,000  |
| 1933  | 1,000   | 1,428,000 | 91,000  | 6,574,000  | 537,000   | 8,632,000  |
| 1934  | 1,000   | 1,829,000 | 90,000  | 7,642,000  | 661,000   | 10,223,000 |
| 1935  | 1,000   | 1,614,000 | 77,000  | 10,781,000 | 382,000   | 12,854,000 |
| 1936  | 3,000   | 2,657,000 | 184,000 | 5,648,000  | 328,000   | 8,820,000  |
| 1937  | 1,000   | 1,881,000 | 165,000 | 16,787,000 | 346,000   | 19,181,000 |
| 1938  | 1,000   | 1,966,000 | 155,000 | 8,398,000  | 640,000   | 11,160,000 |

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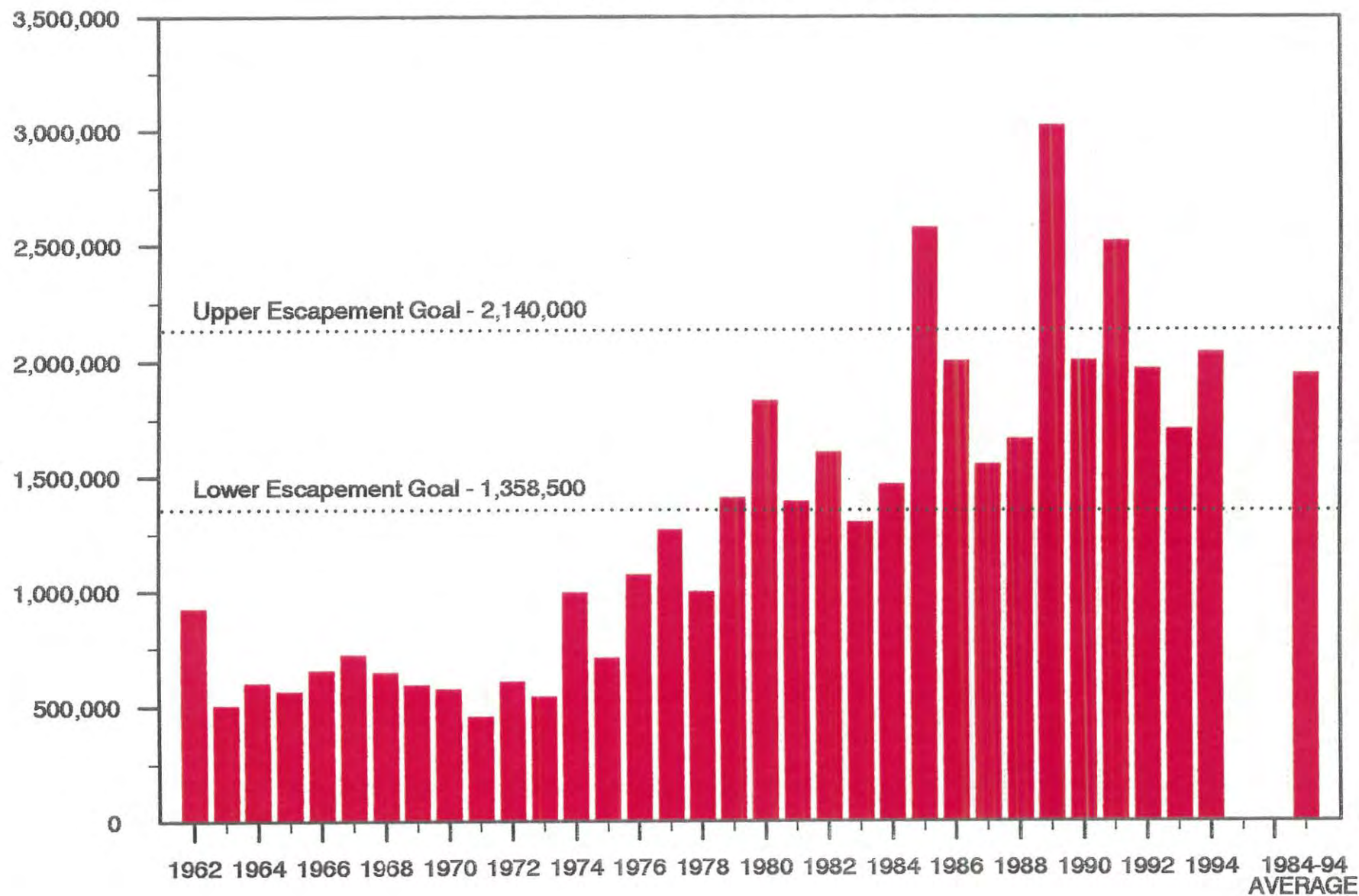
Table xx. (page 2 of 3)

| Year | Chinook | Sockeye   | Coho    | Pink       | Chum      | Total      |
|------|---------|-----------|---------|------------|-----------|------------|
| 1939 | 2,000   | 1,786,000 | 112,000 | 11,741,000 | 642,000   | 14,284,000 |
| 1940 | 1,000   | 1,318,000 | 148,000 | 9,998,000  | 673,000   | 12,139,000 |
| 1941 | 3,000   | 1,730,000 | 200,000 | 7,602,000  | 445,000   | 9,978,000  |
| 1942 | 1,000   | 1,282,000 | 107,000 | 6,093,000  | 565,000   | 8,047,000  |
| 1943 | 1,000   | 1,991,000 | 60,000  | 12,480,000 | 454,000   | 14,985,000 |
| 1944 | 1,000   | 1,818,000 | 52,000  | 4,955,000  | 507,000   | 7,332,000  |
| 1945 | 2,000   | 2,041,000 | 60,000  | 9,045,000  | 559,000   | 11,707,000 |
| 1946 | 0       | 839,000   | 56,000  | 9,546,000  | 298,000   | 10,740,000 |
| 1947 | 0       | 993,000   | 76,000  | 8,857,000  | 295,000   | 10,221,000 |
| 1948 | 1,000   | 1,260,000 | 32,000  | 5,968,000  | 331,000   | 7,594,000  |
| 1949 | 1,000   | 892,000   | 54,000  | 4,928,000  | 700,000   | 6,574,000  |
| 1950 | 2,000   | 921,000   | 41,000  | 5,305,000  | 685,000   | 6,953,000  |
| 1951 | 2,000   | 468,000   | 49,000  | 2,100,000  | 483,000   | 3,103,000  |
| 1952 | 1,000   | 604,000   | 52,000  | 4,577,000  | 1,243,000 | 6,476,000  |
| 1953 | 3,000   | 317,000   | 42,000  | 5,175,000  | 548,000   | 6,084,000  |
| 1954 | 1,000   | 325,000   | 66,000  | 8,439,000  | 1,251,000 | 10,083,000 |
| 1955 | 2,000   | 164,000   | 35,000  | 10,794,000 | 482,000   | 11,478,000 |
| 1956 | 1,000   | 271,000   | 53,000  | 3,319,000  | 705,000   | 4,349,000  |
| 1957 | 1,000   | 234,000   | 35,000  | 4,716,000  | 1,208,000 | 6,195,000  |
| 1958 | 2,000   | 288,000   | 21,000  | 4,039,000  | 931,000   | 5,280,000  |
| 1959 | 2,000   | 330,000   | 15,000  | 1,967,000  | 734,000   | 3,047,000  |
| 1960 | 1,000   | 363,000   | 54,000  | 6,738,000  | 1,300,000 | 8,456,000  |
| 1961 | 1,000   | 408,000   | 29,000  | 3,926,000  | 519,000   | 4,882,000  |
| 1962 | 1,000   | 785,000   | 55,000  | 14,114,000 | 795,000   | 15,749,000 |
| 1963 | 0       | 407,000   | 57,000  | 5,480,000  | 305,000   | 6,250,000  |
| 1964 | 1,000   | 498,000   | 36,000  | 12,044,000 | 1,134,000 | 13,714,000 |
| 1965 | 1,000   | 346,000   | 27,000  | 2,887,000  | 431,000   | 3,692,000  |
| 1966 | 1,000   | 632,000   | 68,000  | 10,756,000 | 763,000   | 12,218,000 |
| 1967 | 2,000   | 309,000   | 10,000  | 188,000    | 227,000   | 735,000    |
| 1968 | 2,000   | 760,000   | 57,000  | 8,768,000  | 750,000   | 10,338,000 |
| 1969 | 2,000   | 591,000   | 49,000  | 12,501,000 | 535,000   | 13,678,000 |
| 1970 | 1,000   | 917,000   | 66,000  | 12,037,000 | 919,000   | 13,940,000 |
| 1971 | 1,000   | 478,000   | 23,000  | 4,333,000  | 1,541,000 | 6,377,000  |
| 1972 | 1,000   | 223,000   | 17,000  | 2,486,000  | 1,164,000 | 3,890,000  |
| 1973 | 1,000   | 167,000   | 4,000   | 519,000    | 318,000   | 1,008,000  |
| 1974 | 1,000   | 419,000   | 14,000  | 2,646,000  | 249,000   | 3,328,000  |
| 1975 | 0       | 136,000   | 24,000  | 2,943,000  | 84,000    | 3,187,000  |
| 1976 | 1,000   | 641,000   | 24,000  | 11,078,000 | 740,000   | 12,484,000 |
| 1977 | 1,000   | 623,000   | 28,000  | 6,252,000  | 1,072,000 | 7,977,000  |
| 1978 | 3,000   | 1,072,000 | 49,000  | 15,004,000 | 814,000   | 16,942,000 |
| 1979 | 2,000   | 632,000   | 141,000 | 11,288,000 | 358,000   | 12,420,000 |
| 1980 | 1,000   | 651,000   | 139,000 | 17,291,000 | 1,076,000 | 19,157,000 |
| 1981 | 1,000   | 1,289,000 | 122,000 | 10,337,000 | 1,345,000 | 13,094,000 |
| 1982 | 1,000   | 1,205,000 | 344,000 | 8,076,000  | 1,266,000 | 10,892,000 |
| 1983 | 4,000   | 1,232,000 | 158,000 | 4,603,000  | 1,085,000 | 7,082,000  |
| 1984 | 5,000   | 1,950,000 | 230,000 | 10,844,000 | 649,000   | 13,678,000 |
| 1985 | 5,000   | 1,843,000 | 284,000 | 7,335,000  | 431,000   | 9,898,000  |
| 1986 | 4,000   | 3,188,000 | 169,000 | 11,808,000 | 1,135,000 | 16,304,000 |
| 1987 | 5,000   | 1,793,000 | 193,000 | 5,076,000  | 682,000   | 7,748,000  |
| 1988 | 22,000  | 2,699,000 | 303,000 | 14,409,000 | 1,426,000 | 18,860,000 |
| 1989 | 5,000   | 2,629,000 | 141,000 | 22,649,000 | 836,000   | 26,259,000 |
| 1990 | 19,000  | 5,248,000 | 294,000 | 5,984,000  | 578,000   | 12,122,000 |
| 1991 | 22,000  | 5,704,000 | 325,000 | 16,643,000 | 1,029,000 | 23,723,000 |
| 1992 | 24,000  | 4,168,000 | 280,000 | 3,311,000  | 680,000   | 8,462,000  |
| 1993 | 42,000  | 4,378,000 | 313,000 | 34,019,000 | 588,000   | 39,341,000 |
| 1994 | 23,000  | 2,877,000 | 296,000 | 8,163,000  | 739,000   | 12,098,000 |

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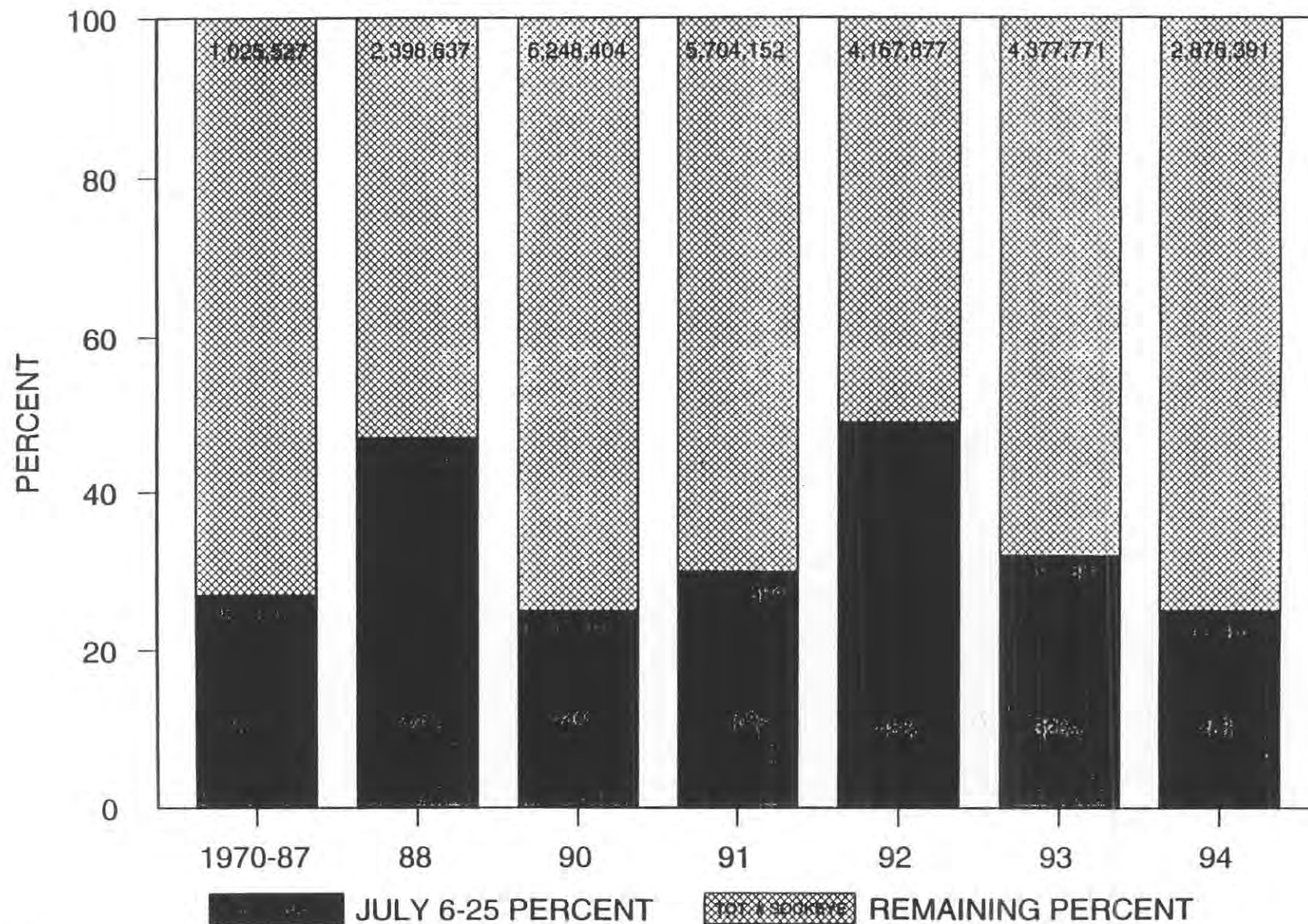
## Sockeye Salmon Escapement Kodiak Management Area, 1962-1994







# KODIAK MANAGEMENT AREA PERCENTAGE OF THE ANNUAL SOCKEYE SALMON HARVEST WHICH OCCURED DURING THE TIME PERIOD JULY 6-JULY 25







(Please refer to Exhibits 8-10, 11-15, & KSWG Charts in this chapter.)

An Analysis of Kodiak's Historical  
Salmon Fishery in the '60's:  
Effort On the Capes

Throughout sessions with the "Kodiak/Cook Inlet Inter-Area Work Group," there has been lengthy discussion about Kodiak's historical salmon fishery. The Kenai contingent seems to believe that a "time-frame" consisting of the years 1978-87 provides a reasonable "window" or can be used as a basis for making comparisons to the harvest activity of the late 80's and early '90's. The Kodiak Salmon Work Group asserts that when making historical reference, one must have a complete understanding of the 112 year history of the island salmon fishery, and must look beyond the 1970-1994 data provided by ADF&G to form an opinion. A brief analysis of the data included in A.D.F.G. Kodiak Area Management Reports dating 1960-1969, reveals several points clearly pertinent to the current debate over the bycatch of Cook Inlet salmon in Kodiak waters:

- 1) The Kodiak salmon fishery has existed on the "capes" for decades. As a mobile fleet, it shifts and migrates in relation to stock abundance, weather patterns, and/or processing capability. The evidence supports this fact.
- 2) Throughout the '60's, the Kodiak ADF&G staff refer to the fleet's mobility, using explicit language to delineate geographic effort during these shifts, as: "CAPE or BAY fisheries."
- 3) Because the Kodiak salmon fleet has utilized the "capes" to harvest mixed or migrating stocks over the decades, there is no evidence that shows "new or expanding fisheries" occurring. The concentration of the fleet is directly linked to the harvest of mixed or migratory stocks, during which in the 60's, runs fluctuated in strength, and fishermen reacted by targetting different species of salmon in different areas.
- 4) Two areas named as "hot spots" in this debate: Halibut Bay, and the Sitkalidak Section, show consistent harvest activities during this decade, and in particular, during the July 6-25 time period.



## Effort in Halibut Bay and the Sitkalidak Section

Particularly noteworthy, are the numbers of landings which occurred primarily during even years of the '60's. In 1962 in the Red River District, which encompassed Halibut Bay, Sturgeon Bay, and Outer Ayakulik until 1968, there were 795 landings for 93,657 sockeye, during the time period July 6-25.<sup>1</sup>

The Sitkalidak Section has long supported the Old Harbor Alutiq village salmon fleet, and provided harvest opportunity for several species of salmon migrating both north and south in close proximity to the village. The data clearly shows historical effort between July 6-25 circumnavigating Sitkalidak Island, with landings reaching 626 in 1969. The village currently holds 27 salmon permits. The salmon fishery is critical to Old Harbor's economy.<sup>2</sup>

### A Glimpse into the '60's: The Transitional Years prior to the Collapse of Kodiak's Salmon Fishery

The 1960's can be characterized as a decade during which there were fairly healthy salmon harvests and escapements around Kodiak Island, but the runs had wild annual fluctuations. For example, in 1962 the total harvest was a whopping 15,750,139 salmon, whereas in 1967, it was described as "the poorest run on record", reaching only 735,354 total salmon.<sup>3,4</sup>

In general, the decade encompassed a transition from federal management and composed the years prior to the collapse of the salmon fishery/rebuilding decade of the '70's, and the advent of the new limited entry program. A consistent level of participation occurred during these years, with the numbers of permits issued ranging from 438 in 1963 to 540 in 1968. Interestingly, the average number of permits fished from 1975 to 1983 is 515—the same level of participation.

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<sup>1</sup> 1962 Kodiak Area Management Report/Univ. of Wash. Fisheries Research Institute Data

<sup>2</sup> Univ. of Wash./Fisheries Research Institute Data

<sup>3,4</sup> Kodiak Area Management Reports/'62 and '67





Effort and behavior in the '60's followed the traditional and historical routine for salmon fishermen in Kodiak--fleet effort shifted according to external changes in the environment: stock abundance, weather patterns, and processing capability. For example, on July 16th, 1962, intense fishing restrictions were placed on fishermen, limiting their catch to 1200 fish per man until August 3rd. This occurred again in 1964. In 1965, fishermen were on strike from June until July 26th. <sup>5</sup>

One can characterize the mobility of the Kodiak fleet in terms of catch effort when analyzing the 1960-69 Annual Management Reports. Very clearly, the reports categorize fleet effort as "cape" or "bay" fishing areas during this decade.

### **The 1962 Kodiak Area Management Report**

For example, the K.A.M.R. (Kodiak Area Management Report) states that in 1962, Red River was indeed, a "cape fishery:"

**"Exceptional production came from the cape fisheries of Marmot Bay, Red River, and the bay fisheries in Alltak, Seven Rivers, Klagnak, Barling Bay and Ugak Bay. West side production was good with the capes producing well and the bay fisheries of Terror Bay and East Arm productive...the fishery began with sizeable catches in the cape fisheries on the south end of Kodiak Island...capes near Karluk....Cape fisheries remained heavy throughout July...did not drop until latter part of the season..." And,**

**"Catches of the Marmot Bay cape fishery, west side cape fishery and the cape and bay fishery on the east side contributed considerably (chum harvest)..."**

### **The 1966 Kodiak Area Management Report**

**"The normally productive cape fishing areas (for pinks) about Red River, Karluk, and Marmot Bay failed to develop strongly. The pinks showed heavily from Paramanoff to Cape Ugat...good weather and abundance of pinks concentrated fleet in these areas...The**

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<sup>5</sup> Kodiak Area Management Reports/1962-65



Sturgeon River (part of the Red River District) closure was relaxed after July 16 in order to allow harvest of heavy return of pinks."

### **The 1968 Kodiak Area Management Report**

"The intensity of the harvest in any one geographic catch area is subject to large amounts of migratory stocks, which were harvested enroute to other areas. An example of this would be the high catches of pink salmon that occurred in the Kiliuda Bay area (Section 258-20) during the '68 season, which appeared to be predominantly migratory stocks bound for other portions of the island.....and....

In 1968, "48.3% of the total pink catch occurred in the Eastside and Uyak-Uganik Bay Area...it should be kept in mind that the higher catches in these districts reflect historic cape fisheries on stocks bound for other portions of the island."

### **Conclusion**

Contrary to Cook Inlet's assertion that Kodiak's salmon fleet has moved from terminal fishing areas onto the capes during the '80's and '90's to harvest migrating sockeye, the data shows otherwise. The Area Management Reports prove that Kodiak fishermen have long utilized capes as well as bays, to harvest all species of salmon. Effort in the Red River District and Sitkalidak Section during the July 6-25 time-frame show consistent patterns of harvesting local and migrating stocks during periods of peak opportunity. Restrictions which might limit our ability to harvest local and enhanced stocks, based on 1970 levels, are clearly unfounded.



## Chapter 6

# RATIONALE FOR THE CURRENT KODIAK MANAGEMENT PLAN

Kodiak Management Area's (KMA) current commercial fishing harvest strategy is being evaluated by the Alaska Board of Fisheries due to concerns that KMA's commercial fishery is expanding its historical bycatch rates on Upper Cook Inlet (UCI) bound sockeye. ADF&G's Special Regional Information Report (RIR) 4K94-7 thoroughly reviews KMA's in-season harvest strategies for July 6-25, which is the primary bycatch period. The data summaries in that report provide an accurate geographical history of fishery harvest and effort for a 24 year period (1970-1993). A history of KMA's July sockeye fishery prior to 1970 is presented in Part 2, Chapter 7 of this report. A review of the aforementioned reports is necessary for understanding the basis for KMA's current July harvest strategy.

A thorough review of KMA's entire commercial salmon fishery is provided in ADF&G report RIR 4K94-8. Specifics on fishery history occur on pages 2 through 8 of that report. Also, the nature of KMA's salmon resources, their production potential for both wild and supplemental production is included in pages 15-21 of that report. Understanding the basis for KMA's current overall harvest strategy requires a study of this overview report.

KMA's fishable state waters and their relative location to the Chignik and Cook Inlet management areas are depicted in Figure 1, a generalized composite of coastal sockeye migration pattern derived from

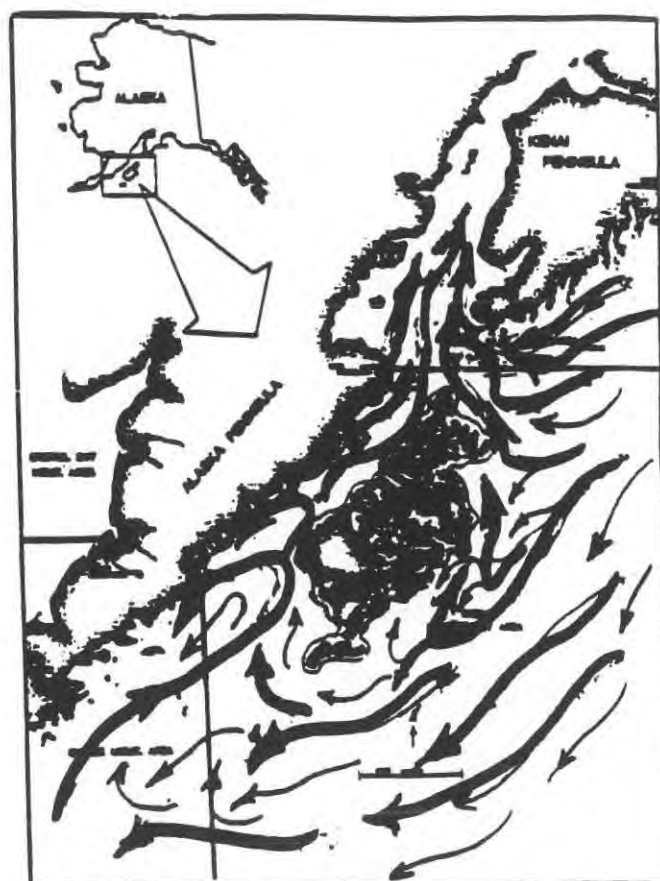


FIG 1 Location of the Kodiak Management Area.





Natural Resource Consultants report<sup>1</sup>, various ADF&G tagging studies, and commercial fishing patterns. This juxtaposition is noteworthy when considering in-shore migration patterns of returning mature salmon from their pelagic feeding grounds, through near-shore migratory corridors, to their eventual spawning locations.

Natural Resource Consultants' report discusses these migratory routes and the fact that annual variations in these routes can occur.<sup>2</sup> NRC summarizes studies which suggest that the majority of the UCI-bound sockeye enter Cook Inlet through entrances north of the KMA. Of those remaining UCI-bound sockeye migrating through KMA's fishable waters, an historical increment has been a bycatch component of KMA's directed harvest on local stocks. The magnitude of that bycatch varies with UCI-bound sockeye run strength, KMA directed fishing opportunities, and the availability of these sockeye as influenced by migration route variation and daily weather/tide fluctuations. KMA's current harvest strategy was questioned by UCI fishermen when bycatch levels gained widespread notice during the record UCI sockeye production years of 1988 and 1992.

KMA's ADF&G management activities are primarily held accountable by Board of Fisheries review for compliance with statutory and regulatory requirement. This review specifically addresses compliance with biological concerns and allocative criteria. KMA's management is further held accountable by federal, other state agency, and private landowners within the KMA.

Three National Wildlife Refuges, one National Park and two existing State Parks identify and monitor the stock status of salmon runs endemic to their lands. Additionally, KMA's harvest strategy must be sensitive to altered production from habitat modifications on private lands and from supplemental production projects by Kodiak's Regional Aquaculture Association (KRAA). Consequently, KMA's annual salmon harvest strategies have evolved in structure to withstand extraordinary critical review. By most accounts, these strategies are rated as yielding very thorough, relatively precise and highly defensible regulatory activities.

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<sup>1</sup> Natural Resource Consultants Report, 1994, and  
ADF&G and University of Washington Tagging Studies

<sup>2</sup> NRC Report, 1994, pp. 28-31.



ADF&G report RIR 4K94-8, pages 8-15, provides a clear and precise explanation of the premise for KMA's current harvest strategy. Figure 2, from that report, illustrates the run timing of KMA's wild stocks and specifically identifies both the annual management chronology by species and an example of actual harvest timing by species, that of the 1993 KMA salmon run.

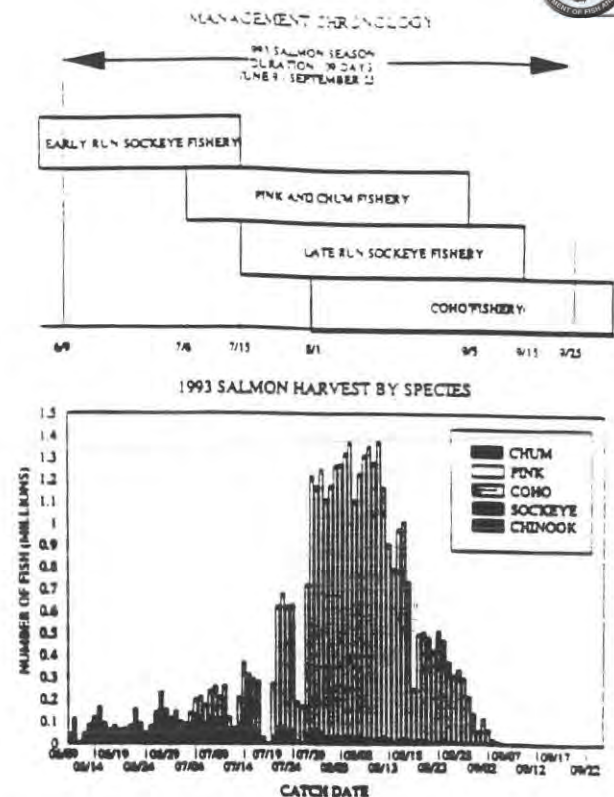


Figure 2. Fishery management and salmon run timing, general chronology of the harvest in the Kodiak Management Area, 1993.

Every regulatory action used to implement KMA's annual harvest strategy must first consider run timing of KMA stocks. All seven of KMA's management plans in Table 1, and forty or more annual in-season Emergency Order regulatory announcements, are based on the predictability of KMA stocks' run timing.

Table 1. Board of Fisheries approved fishery management plans for the Kodiak Management Area, 1993.

| MANAGEMENT PLAN                                       | YEAR INITIATED | MGMT. UNITS AFFECTED                                                                                                                                          | DATES IN EFFECT |
|-------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Cape Igrook Salmon Management Plan                    | 1978           | Cape Igrook Section<br>Wido Bay Section                                                                                                                       | 6/5 - 7/25      |
| Alitak Bay District Salmon Management Plan            | 1987           | Alitak Bay District                                                                                                                                           | 6/9 - 10/1      |
| Westside Kodiak Management Plan                       | 1988           | N.W. Kodiak District<br>S.W. Kodiak District<br>S.W. Afognak Section                                                                                          | 6/9 - 10/1      |
| Crosscut Lake Coko Salmon Management Plan             | 1988           | Portion of the Central Section in Vicinity of Port Loma                                                                                                       | 8/1 - 9/15      |
| North Shishnaof Strait Sockeye Salmon Management Plan | 1988           | S.W. Afognak Section<br>N.W. Afognak Section<br>Shuyak Section<br>Big River Section<br>Hable Bay Section<br>Inner and Outer Kuluk Section<br>Dahlovak Section | 7/6 - 7/25      |
| Eastside Afognak Management Plan <sup>a</sup>         | 1993           | Kitoi Bay Section<br>Lahol Bay Section<br>Deak Bay Section                                                                                                    | 6/9 - 10/1      |
| Spiritden Bay Sockeye Salmon Management Plan          | 1993           | Special Harvest Area in Spiritden Bay Section                                                                                                                 | 6/9 - 10/1      |

<sup>a</sup> This management plan has basically been in use since 1981, but was titled the Kitoi Bay Hatchery management plan. In 1993, it was adopted into regulation by the Alaska Board of





KMA's historical harvest trends for all species combined are depicted in Figure 3.<sup>3</sup> Pre-statehood harvest trends by decade identify an initial exploration period in the 1880's, a relatively stable period with slight expansion from approximately 1890 through the 1920's, a peak harvest decade in the 1930's followed by a noticeable decline in the 1940's, and a bottoming out of production in the 1950's.

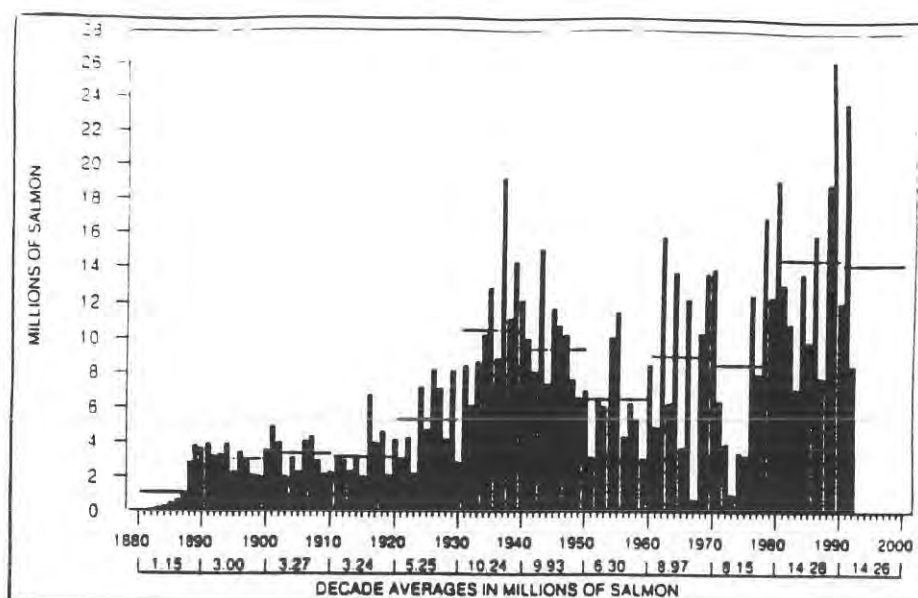


Figure 3 Commercial salmon harvest all species combined in the Kodiak Management Area, 1880-1992.

Post statehood harvest trends reveal rebounding production in the 1960's, a wide oscillation in production during the 1970's followed by record production for the decade of the 1980's and a relatively sustained production at a record average level for the first four years of the 1990's. In consideration of all the factors which contributed to the harvest history of KMA's fishery, it's apparent that KMA's salmon stocks have thrived under state regulation and that they appear stable in terms of having realized their production potential.

KMA's overall production potential is identified in Table 2.<sup>4</sup> The long term average harvest on KMA stocks, when escapement goals are achieved and environmental conditions are consistently average, is expected to be 16.5 million salmon. The fishery performance

Table 2 Potential vs. actual salmon production (wild stock) in the Kodiak Management Area, 1993.

| SPECIES         | PRODUCTION POTENTIAL                  |                                 |                        | HARVEST           |                                          |                                          |
|-----------------|---------------------------------------|---------------------------------|------------------------|-------------------|------------------------------------------|------------------------------------------|
|                 | LONG TERM AVERAGE                     |                                 |                        | POTENTIAL         | ACTUAL                                   |                                          |
|                 | Targeted Escapement Goal <sup>a</sup> | Return Per Spawner <sup>b</sup> | Potential Total Return | Long Term Average | 45 Year Average (1948-1993) <sup>c</sup> | 10 Year Average (1982-1993) <sup>c</sup> |
| CHINOOK         | 15,000                                | 2.5                             | 37,500                 | 22,500            | 4,000                                    | 15,000                                   |
| SOCKEYE         | 2,100,000                             | 2.5                             | 5,250,000              | 3,150,000         | 1,184,000                                | 3,220,000                                |
| COHO            | 150,000                               | 2.5                             | 375,000                | 225,000           | 100,000                                  | 255,000                                  |
| Odd Year        | 3,000,000                             | 3.5                             | 10,500,000             | 7,500,000         | 7,182,000                                | 13,535,000                               |
| PINK Even Year  | 4,500,000                             | 3.5                             | 15,750,000             | 11,250,000        | 8,654,000                                | 9,271,000                                |
| CIUM            | 1,020,000                             | 2.8                             | 2,856,000              | 1,836,000         | 785,000                                  | 828,000                                  |
| Odd Year        | 6,285,000                             | -                               | 19,018,500             | 13,454,000        | 9,255,000                                | 17,853,000                               |
| TOTAL Even Year | 7,785,000                             | -                               | 24,268,500             | 16,483,500        | 10,727,000                               | 13,589,000                               |

<sup>a</sup> The expected indexed escapement within the biological escapement goal range. KMA fisheries are normally managed to achieve this level of escapement.

<sup>b</sup> Return per spawner will vary each year. These values are averages around which natural survival and return will fluctuate somewhat (Barrett, Personal Communication, October 1993).

<sup>c</sup> 1989 harvest data not included in estimates.

<sup>3</sup> ADF&G RIR 4K94-7.

<sup>4</sup> ADF&G RIR 4K94-8, p.27.



of the 1980's and 1990's support that projection. This fact further supports the validity of KMA's current harvest strategy which has guided the rebuilding of KMA's depressed stocks since the early 1970's.

Industry's stock-specific knowledge of local run timing and important coastal migration characteristics, coupled with processors' strong demands for quality products, have always been responsible for KMA's fleet distribution. The resulting traditional harvest patterns by both the mobile seine and fixed set gillnet fleets were considerations in the evolutionary development of KMA's current harvest strategy. Figure 4<sup>5</sup> identifies KMA's industry distribution - i.e. gear areas and cannery locations plus all community locations - and it identifies all ADF&G stock monitoring sites such as fish weirs and KRAA's major salmon enhancement projects.

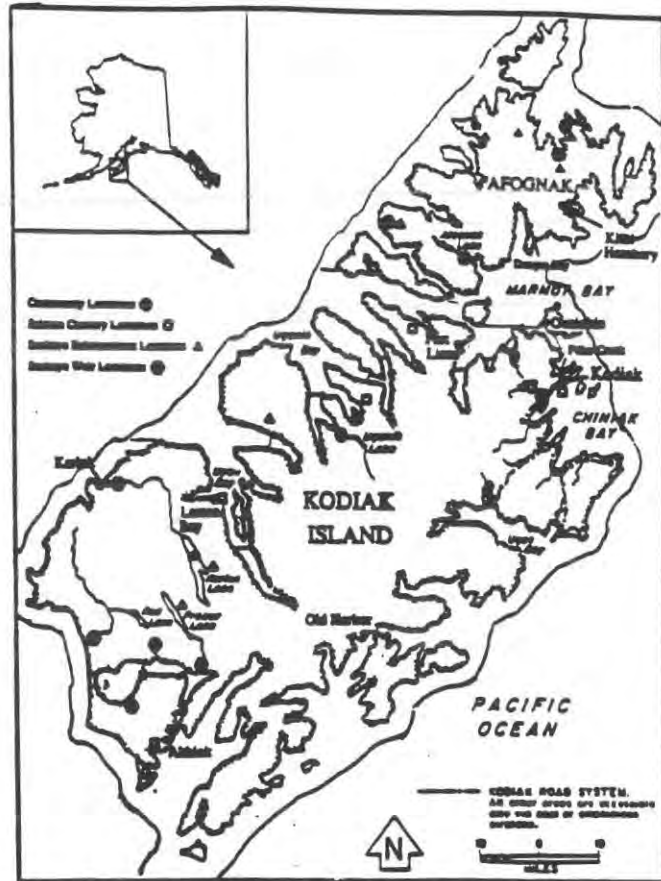


Figure 4 Map of Kodiak Island, showing communities, canneries, and sockeye salmon enhancement and weir locations, of the Kodiak Management Area, 1993.

Understanding the apparent success of post-statehood harvest strategies requires a review of the wide oscillations in production during the 1970's. In 1971, KMA's primary salmon production species, sockeye and pinks, were severely depressed. Strong regulatory measures were implemented to initiate a stock rebuilding plan. KMA's directed June early-run sockeye fishery was completely curtailed in what is now the Northwest Kodiak District. Also, the August late-run sockeye fishery was extremely minimized, because the primary harvest of these stocks was bycatch in KMA's directed July pink fishery. The pink fishery itself experienced record low production in 1973 following unexpected pink

<sup>5</sup> ADF&G RIR 4K94-8, p.65.





run failures in 1971 and 1972. No other time period in KMA's history of commercial fishing has had an impact on developing stock rebuilding and stock stabilization strategies as did the decade of the 1970's. The record production levels of the late 1980's and early 1990 are the result of those strategies which remain active in KMA's current overall harvest strategy.

The development of the existing pink harvest strategy has been in many ways the most successful aspect of KMA's overall harvest strategy. Rebuilding of the depleted stocks of the early 1970's required a drastic attitude adjustment by industry to accept in-season Emergency Order openings of variable time and area fishing opportunities rather than the historical fixed openings for fishing opportunities with variable emergency order closures. As KMA's prolific stocks rebuilt unexpectedly fast, overly restrictive ADF&G experimental harvest strategies yielded poor quality pink harvest, unordered fisheries, and sporadic but noticeable cases of unnecessary over-escapement situations. In response, a more aggressive pink harvest strategy, which initiated directed pink fisheries early in the run (July 6 openings), and which utilized KMA's very reliable pink forecast to pro-rate fishing time and area opportunities, was implemented in the late 1970's. This allowed industry to take full economic advantage of KMA's relatively large pink production through orderly fisheries on very high quality fish. It also restored the full utilization of KMA's fishable waters which had been denied KMA's fleet during the intense stock rebuilding years of the early 1970's.

In summary, KMA's current harvest strategy is the culmination of decades of developing and understanding of what regulatory actions are needed, are acceptable, and are capable of being efficiently implemented to obtain results. Evidence of this strategy's effectiveness are conveyed throughout ADF&G reports RIR 4K94-7 and 8. A knowledge of KMA's



production systems, identified in Table 3<sup>6</sup> lends credence to the data presented earlier in Table 2. The ability of ADF&G to accurately measure stock-specific escapement in the KMA is the foundation of this harvest strategy's success. Other state management areas lack KMA's precision for measuring sockeye escapement. That data, as shown in Figure 5<sup>7</sup>, further justifies KMA's sockeye production potential identified in Table 2. The NRC report even suggests that ADF&G long-term production projections data may be conservative.

The KMA sockeye harvest of the late 1980's and early 1990's as shown in Figure 6<sup>8</sup> tend to support that thought, notwithstanding the contributions of UCI-bound sockeye on record or near-record returns to Cook Inlet.

Table 3 Estimated number of salmon production systems per distribution, in the Kodiak Management Area, 1993

| Management District | Number of Streams <sup>a</sup> | Number of streams with each species <sup>b</sup> |         |      |      |      |
|---------------------|--------------------------------|--------------------------------------------------|---------|------|------|------|
|                     |                                | Chinook                                          | Sockeye | Coho | Pink | Chum |
| Afognak             | 102                            | 0                                                | 13      | 48   | 102  | 5    |
| Northwest Kodiak    | 63                             | 0                                                | 4       | 22   | 63   | 23   |
| Southwest Kodiak    | 11                             | 2                                                | 2       | 10   | 11   | 6    |
| Alitak              | 30                             | 1                                                | 5       | 15   | 30   | 14   |
| Eastside Kodiak     | 116                            | 1                                                | 8       | 32   | 116  | 47   |
| Northeast Kodiak    | 26                             | 0                                                | 1       | 20   | 26   | 9    |
| Mainland            | 92                             | 0                                                | 6       | 27   | 92   | 46   |
| TOTAL               | 440                            | 4                                                | 39      | 174  | 440  | 150  |

<sup>a</sup> The State of Alaska's Habitat Division identifies over 800 streams in the Kodiak Management Area which have documented use by anadromous fish (State of Alaska 1993). Many of these streams are very small and may only be used by pink salmon in years with very large returns. The streams identified in this table are depicted on the 1993 Kodiak Area salmon statistical map, and have documentable use each year.

<sup>b</sup> These estimates are based on current knowledge and, in fact, are expected to change as more system specific data is collected.

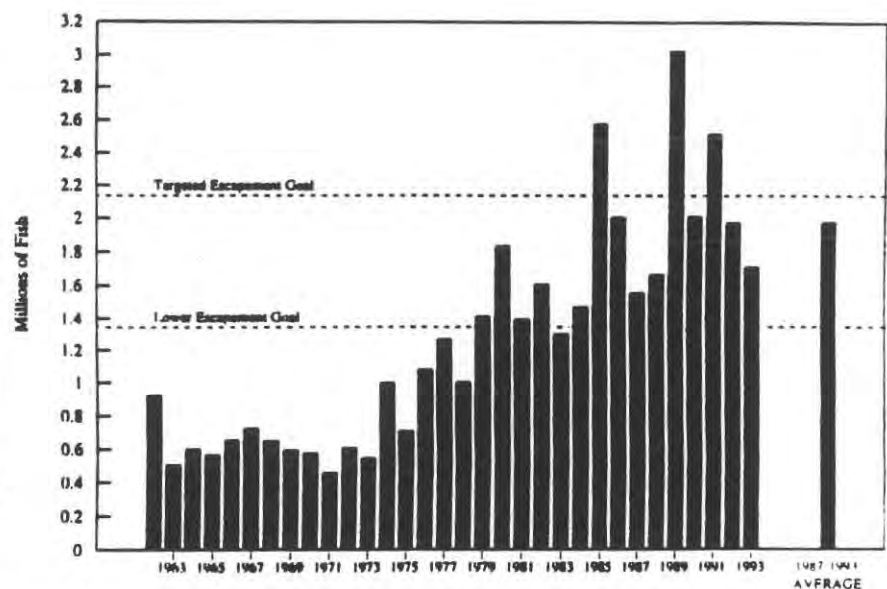


Figure 5 Sockeye salmon escapement in the Kodiak Management Area, 1962 - 1993

<sup>6</sup> ADF&G RIR 4K94-8

<sup>7</sup> ADF&G RIR 4K94-8

<sup>8</sup> ADF&G RIR 4K94-8



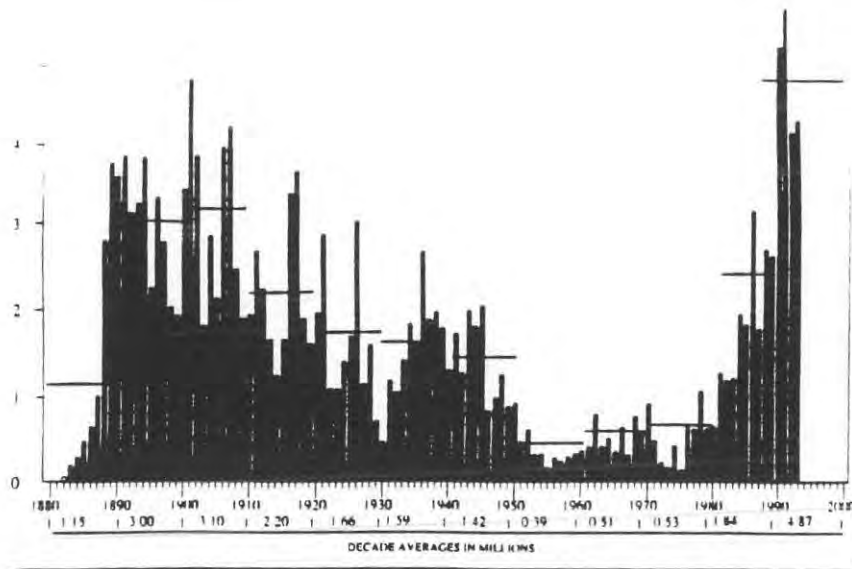


Figure 6 Sockeye salmon harvest, all gear combined, in the Kodiak Management Area, 1882 - 1993.

The UCI sockeye component in KMA's harvest total are only significant on years of exceptionally large returns to UCI. ADF&G RIR 4K94-5 and NRC's previously discussed reports both support that fact.

KMA's fishing industry and its communities have come to understand and support KMA's harvest strategy. It works!!! They've experienced experimental strategies that haven't. They have concluded that this is the most successful and rational strategy for the Kodiak Management Area. Figure 7 from ADF&G RIR 4K94-7 re-emphasizes this fact! Such a successful, well developed, yet complex management program should not be arbitrarily and unnecessarily re-adjusted to accommodate unfounded fears of Cook Inlet-bound sockeye bycatch levels.

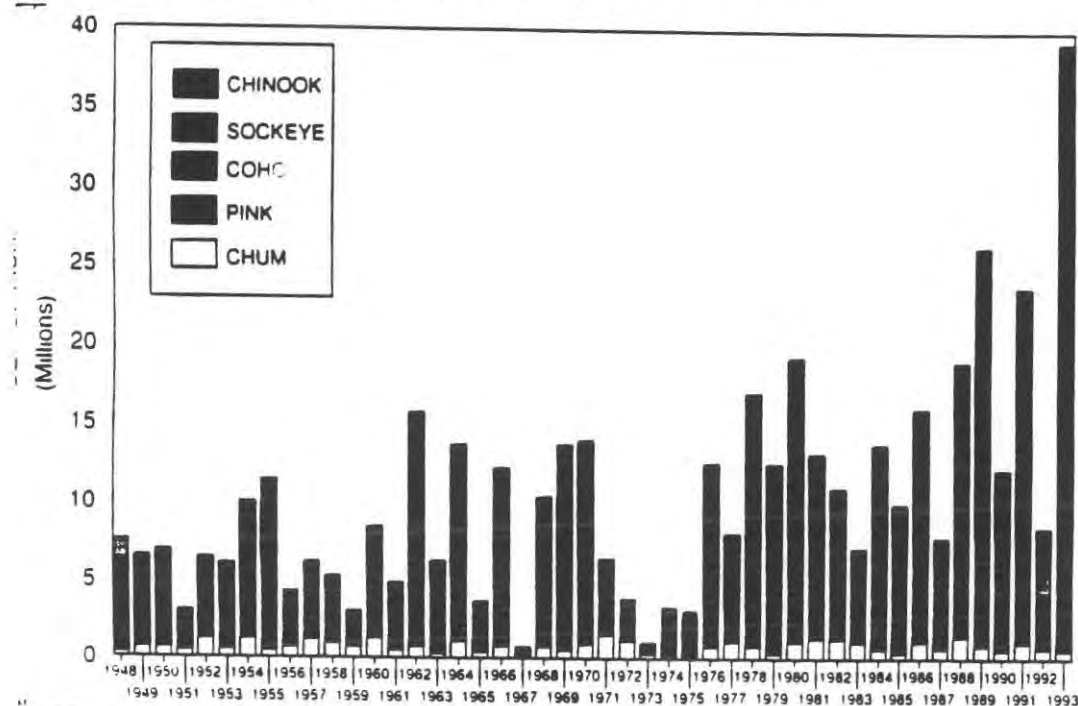


FIGURE 7



## Chapter 7 HISTORIC HARVEST PATTERNS

### Early Years

Shortly after Russian America was transferred to the United States in 1867, three companies started commercially fishing the Karluk River for sockeye which were salted and dried. The first cannery was established on the Karluk Spit in 1882 with more canneries built along the spit and outside the Karluk District in 1888 and 1889. Eventually a cannery was established in Larsen Bay, two at the head of Afognak Bay, one in Alitak Bay and one in Moser Bay. By 1889, five canneries were located on the spit at Karluk and packed 806,219 cases of sockeye<sup>1</sup> between 1888 and 1890, with half of the fish originating in Karluk Lagoon. Before the turn of the century fishing was prohibited within the lagoon due to conservation concerns.

### 1900 - 1930: Expanding Fishery

By 1915 Kodiak Fisheries, based in Kodiak, had become Kodiak's major purchaser of fish. Also in 1915, the Afognak natives petitioned for the exclusive rights to fish the west side of Afognak Island. Spruce Island natives would only fish the east side of Afognak Island, currently identified as the Southwest Afognak section. Katmai Packing in Ouzinkie was buying fish in 1921 and in 1926 canneries were established in Shearwater Bay, located in the current Sitkalidak section and Uganik Bay now located in the Central Section. By 1930, numerous traps had been constructed off of outer bay capes along the Shelikof Strait side of Afognak and Raspberry Islands. Canned salmon shipped from Kodiak in 1927 was worth \$48,404,279.<sup>2</sup>

The first three decades of Kodiak fishing was primarily identified in terms of case packs by district. In those days, the Karluk district included Uganik and Uyak Bays. The following graphs (Figures 1-5)<sup>3</sup> illustrate that

<sup>1</sup> Patricia Roppel, Salmon from Kodiak: An History of the Salmon Fishery of Kodiak Island, Alaska, 1986.

<sup>2</sup> Ibid

<sup>3</sup> JT Barnaby, U.S. Fish & Wildlife Service Fisheries Bulletin, 50.237-295, 1944.



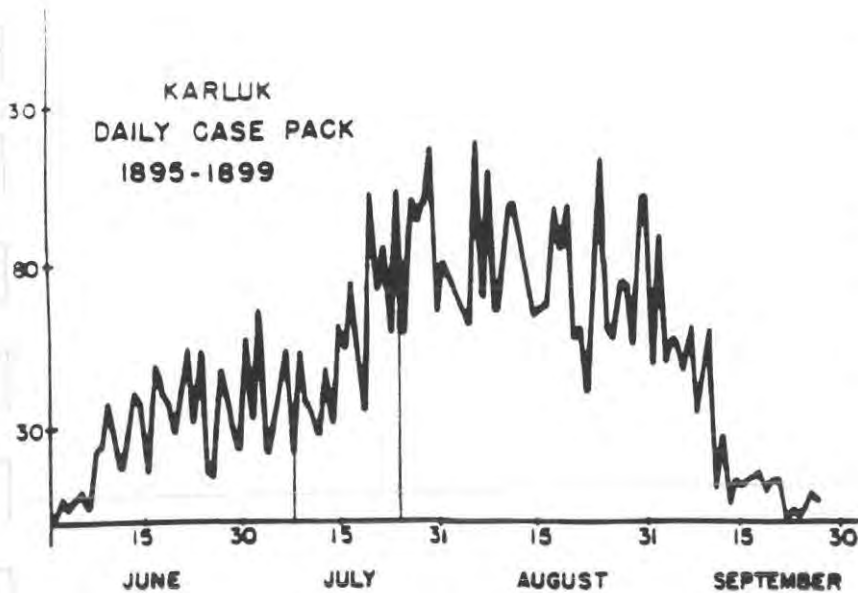


FIGURE 1

between 1895 and 1920, approximately 20 to 25% of the total Karluk area, and probably the Kodiak area, run was captured and processed during July. (The shaded areas on the graphs show the bycatch period currently under consideration.)

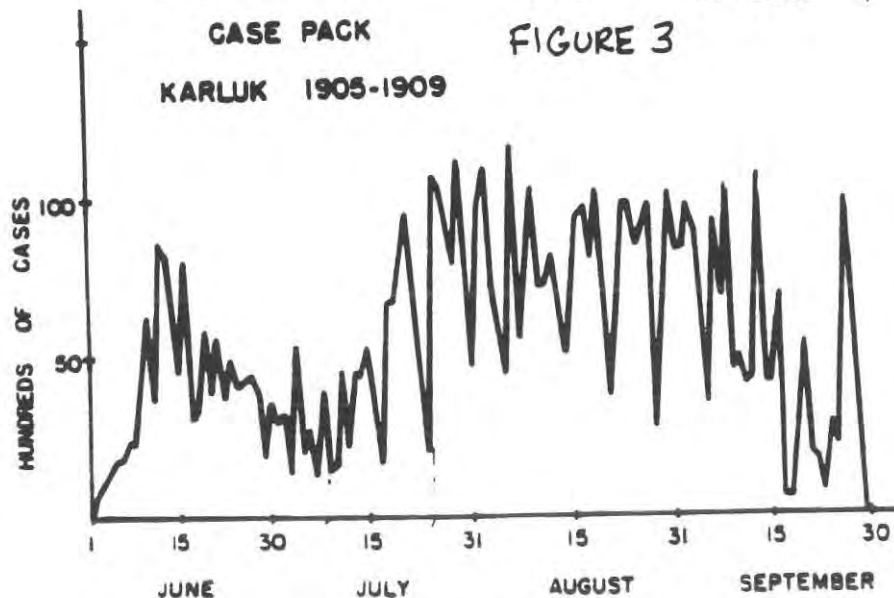
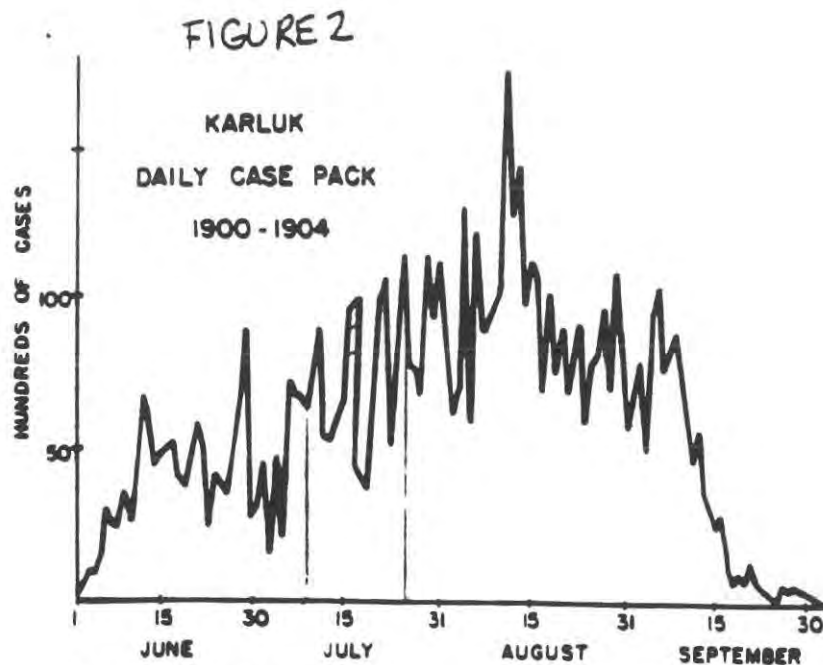


FIGURE 3





FIGURE

KARLUK  
DAILY CASE PACK  
1910 - 1914

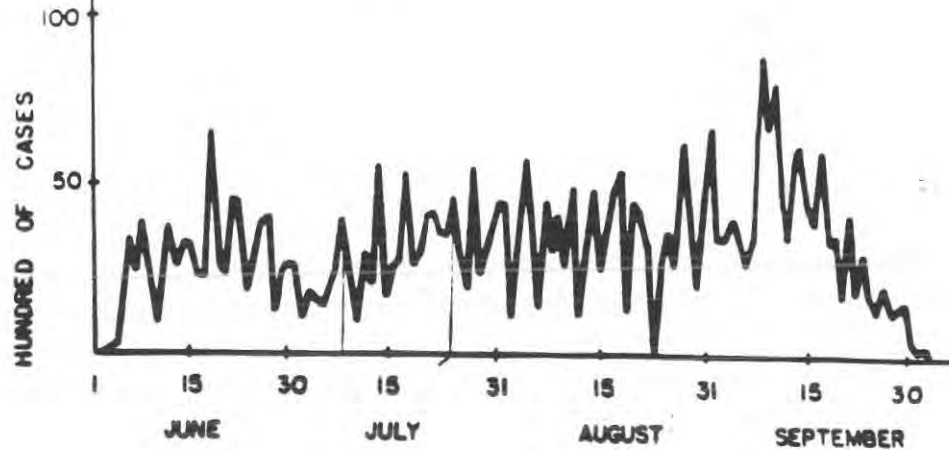
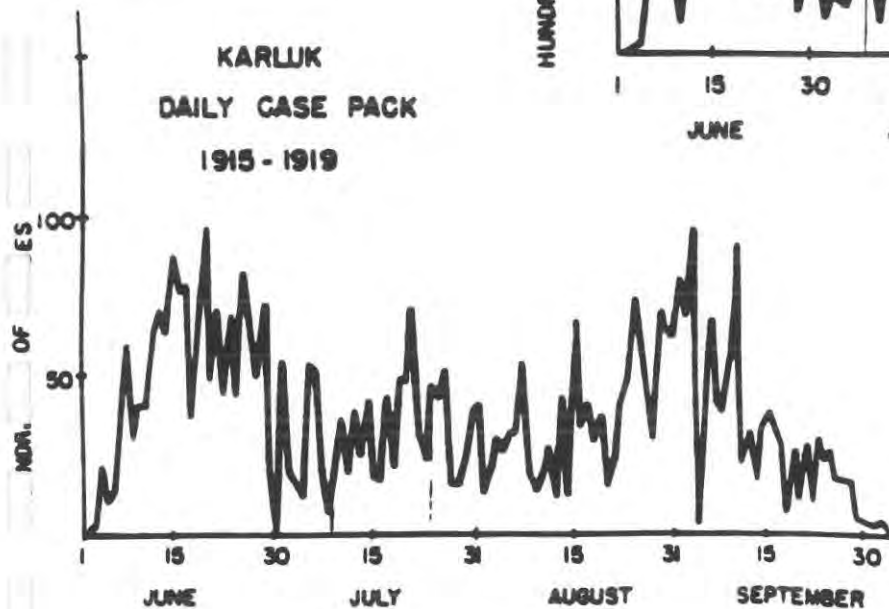


FIGURE 5

KARLUK  
DAILY CASE PACK  
1915 - 1919



In the early part of the 20th century, Kodiak's fleet was expanding and capturing sockeye salmon in many locations along the Alaska Peninsula. Between 1909 and 1914, Kafia Bay, currently in the Kukak section of the Mainland District, produced from 33,000 to 84,000 sockeye annually. In 1927, a trap was established at Kiukpalik Island, an outer cape in the Big River section of the Mainland District. The trap captured approximately 2,000 fish in its first season. Moreover, in 1919, a gillnet catch in excess of 6,000 reds was reported at Cape Douglas and Douglas Island.<sup>4</sup> This early expansion of the Kodiak fishery reflects competitiveness and mobility; characteristics that remain present in the Kodiak fleet today.

<sup>4</sup> Wallace Norenberg, A Review of the Salmon Runs and Red Salmon Spawning Grounds Other Than Karluk in the Kodiak Island Area, 1950.

## The 30's: Moving to the Capes

During the next decade, the Kodiak fishery continued to expand. Sockeye were captured along the east side of Kodiak Island and on capes further away from Karluk. In 1929, a two line cannery was established at Three Saints Bay, in the current Sitkalidak section, and two small hand pack canneries went in at Village Islands and Blue Fox Bay. In 1935, a cannery was built in Halibut Bay and sometime in the early thirties, a fishermen's cooperative formed and constructed a cannery at Zachar Bay which is in the current Central section. Much of the fish processed in these plants were sockeye.

With the expanding fishery there were conservation concerns in the Kodiak District. During the 1930's, the fishermen's use of multiple 500 fathom beach seines along the Karluk coast and unlimited gillnets was curtailed. Set nets were reduced to 150 fathoms and beach seines were limited to 250 fathoms. In 1935, the purse seine catch exceeded, for the first time, 50% of the total Kodiak catch. (See the 1930's map of canneries and trap sites at the end of this chapter.)

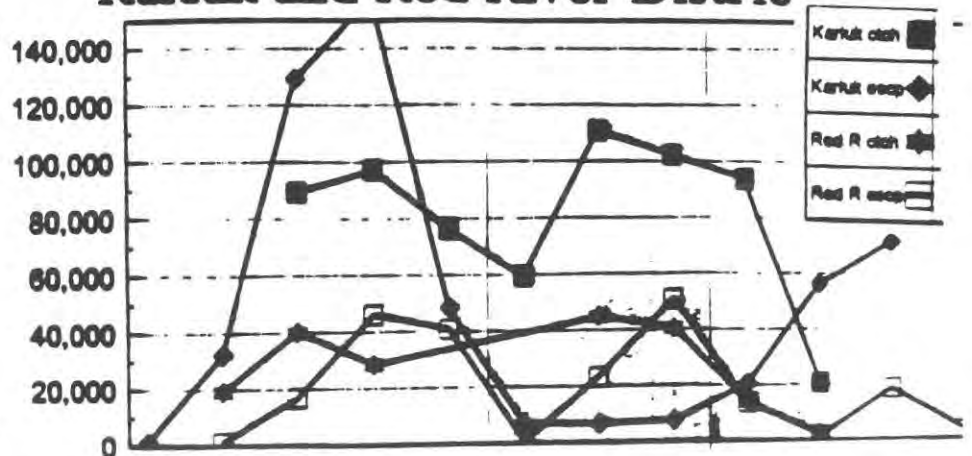
## The 1940's

Kodiak enjoyed significant sockeye harvests throughout the 1940's with an average of 1.5 million fish harvested annually. It was not until 1978 that Kodiak's harvest of sockeye would again exceed 1 million fish. In 1948, there were 186 purse seiners, 67 gill net operations, 8 beach seiners and 23 traps operated in the Kodiak District.

FIGURE 7

1948 is an illustrative year for the Kodiak salmon fishery. (See Figure 7). The Kodiak sockeye catch was 1.26 million. Of that, 840,000 were captured in the Red River and Karluk Districts, including Halibut Bay. Interestingly, a substantial amount of the 1948 combined Karluk and Red River catch occurred

### 1948 Catch and Escapement Karluk and Red River District



(92)



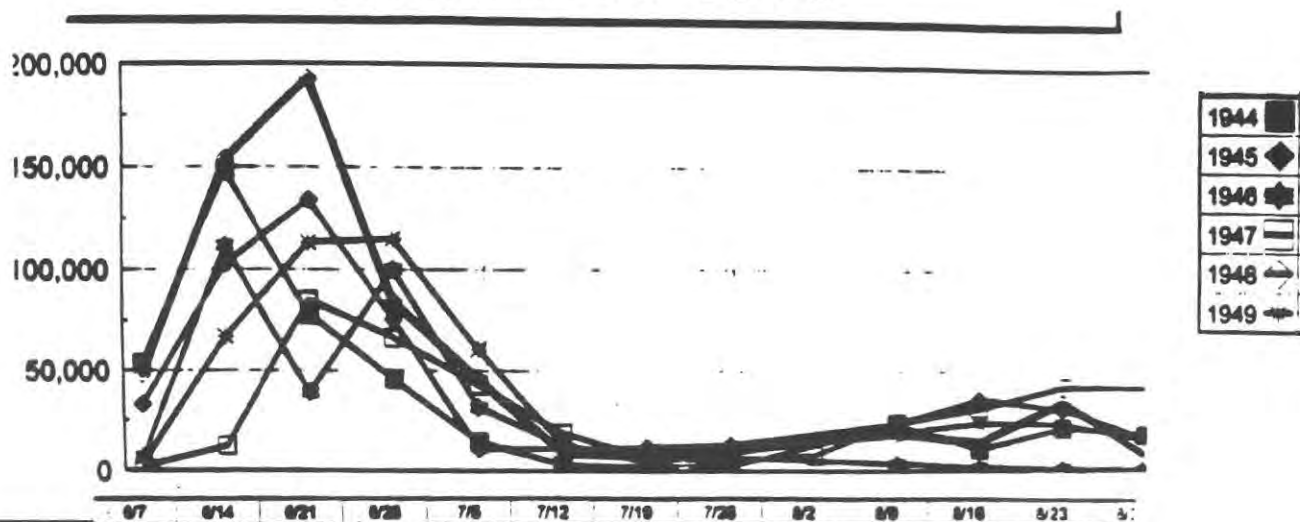


during the last three weeks in July. The 350,000 sockeye captured in these areas in the last three weeks amounted to over 41% of the total yearly catch. This catch rate compares favorably with recent catch rates during July 6-25th.<sup>5</sup> Moreover, the 5 year average during 1944 and 1949 shows that over 30% of the seasons sockeye in Karluk were caught during the last three weeks of July. (See Figure 9, on next page). If Kodiak's fleet was currently catching an increasingly larger percentage of Cook Inlet sockeye, you would expect the current July sockeye catch percentages to be substantially larger than they were 50 years ago. In fact, this is not the case.

Also, in 1948, there were substantial sockeye caught outside of Karluk and Red River. 566,000 sockeye or 44% of the total Kodiak catch were captured away from the traditional sockeye "hot spots" along Kodiak's east side and in the Mainland District. By 1948, Kodiak's fleet was primarily mobile and was capitalizing on sockeye fishing opportunities throughout the Kodiak Management Area as knowledge of local sockeye production became widespread.

A second historical index shows that there has always been a Cook Inlet component to Kodiak's sockeye catches. Kodiak Fisheries' 1940-50 cannery logs indicate that during the second week in July the daily catches in the Karluk traps decreased and the escapement into Karluk River remained low while the catches in traps off Afognak and Raspberry Island held steady or actually increased through the 25th of July. (See Figure 8)

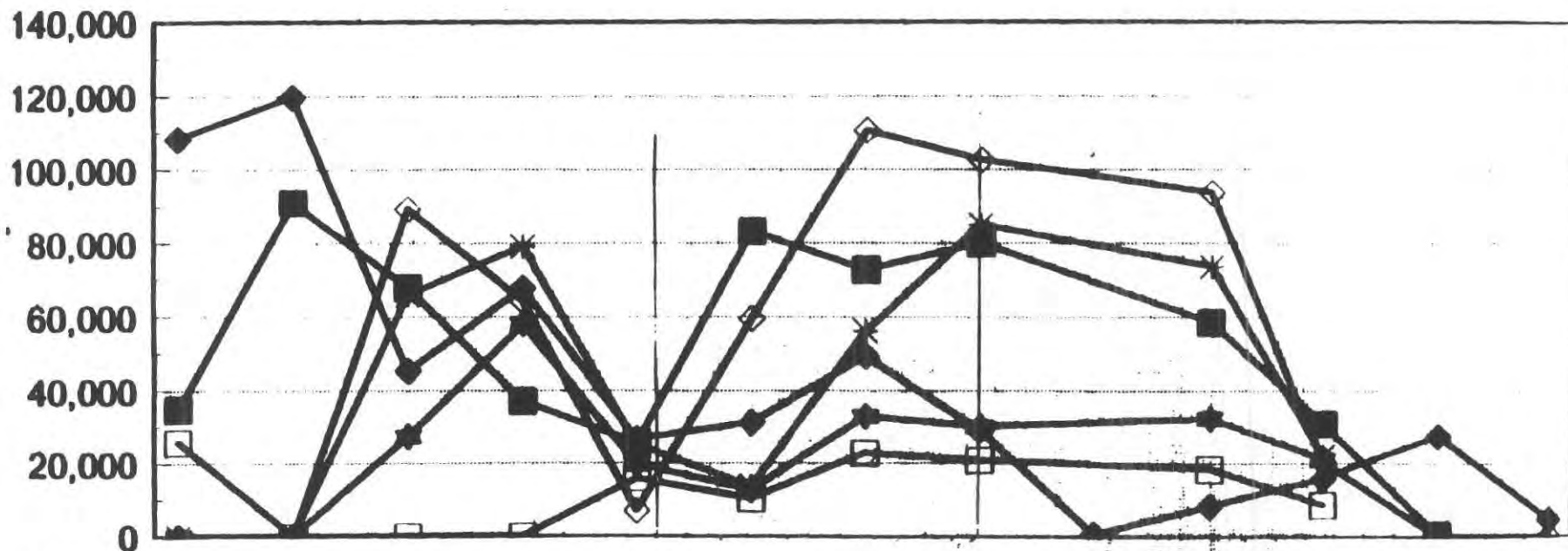
## Karluk River Escapement per Week 1944-1949



<sup>5</sup> Dave Prokopowich, ADF&G RIR 4K94-7.



# Karluk District Catch per Week 1944-1949



|        | 6/7     | 6/14    | 6/21   | 6/28   | 7/5    | 7/12   | 7/19    | 7/26    | 8/2 | 8/9    | 8/16   | 8/23   | 8/30  |
|--------|---------|---------|--------|--------|--------|--------|---------|---------|-----|--------|--------|--------|-------|
| 1944 ■ | 34,798  | 91,070  | 67,835 | 37,888 | 26,588 | 83,103 | 72,847  | 78,871  |     | 68,546 | 30,778 | 888    |       |
| 1945 ◆ | 108,308 | 119,758 | 45,320 | 67,713 | 28,882 | 31,142 | 48,308  | 28,870  | 532 | 8,211  | 15,727 | 27,483 | 4,588 |
| 1946 ✕ | 0       | 0       | 27,394 | 88,112 | 18,827 | 12,877 | 32,848  | 38,823  |     | 32,218 | 20,888 |        |       |
| 1947 □ | 25,808  | 0       | 0      | 0      | 18,814 | 10,224 | 22,780  | 28,810  |     | 18,398 | 8,554  |        |       |
| 1948 ➔ | 0       | 0       | 89,289 | 84,188 | 8,850  | 58,420 | 110,714 | 182,848 |     | 83,729 | 20,488 | 0      | 0     |
| 1949 + | 0       | 0       | 65,878 | 79,885 | 25,070 | 13,704 | 58,151  | 85,843  |     | 73,855 | 22,143 |        |       |

FIGURE 7



Extensive tagging studies were also accomplished during 1948 and further show an historical Cook Inlet component to the Kodiak catch. Between June 19th and August 13th, 1948, 7,277 sockeye were tagged. Fish were tagged on the west side of Kodiak Island. Overall, 37% of the tags were recovered and 1.89% were recovered in Cook Inlet. Although this represents about 2% of the Kodiak sockeye catch, it is for a period of 8 weeks from mid-June through mid-August. One would assume that the percentage would be somewhat higher if the tagging study had been condensed into the three later weeks in July. In 1949, another tagging study was conducted in June in which the rate of bycatch to Cook Inlet was much lower. (See Figure 10 below).<sup>6</sup>

TABLE 2. RECOVERIES MADE OUTSIDE THE KODIAK ISLAND AREA, 1948-49

| District         | Number of Recoveries | Per Cent of Tagged | Per Cent of Recoveries |
|------------------|----------------------|--------------------|------------------------|
| 1948 Cook Inlet  | 28                   | 0.71               | 1.89                   |
| Chignik          | 1                    | 0.03               | 0.07                   |
| Alaska Peninsula | 2                    | 0.05               | 0.13                   |
| Total            | 31                   | 0.79               | 2.09                   |
| 1949 Cook Inlet  | 13                   | 0.18               | 0.39                   |
| Chignik          | 19                   | 0.26               | 0.57                   |
| Alaska Peninsula | 3                    | 0.04               | 0.09                   |
| Bristol Bay      | 2                    | 0.03               | 0.06                   |
| Total            | 37                   | 0.51               | 1.12                   |
| TOTAL            | 68                   | 0.61               | 1.42                   |

Most of the fish were traveling south and most tags were recovered along the west side of Kodiak Island.<sup>7</sup>

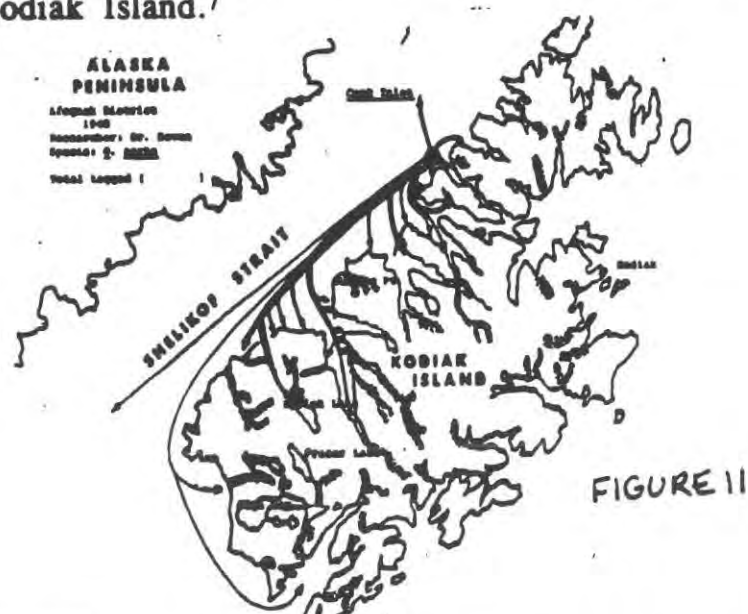


FIGURE 11

<sup>6</sup> Don Bevan, Estimation of the Size of Migrating Salmon Populations in Coastal Waters, 1959.

<sup>7</sup> Ibid





The 1949 Annual Report specifically mentioned an unusual occurrence in the Sitkalidak area. The report observed that there had been a "reported abundance of sockeye passing northward through Sitkalidak Strait during June. It is not exactly known where these fish went, but presumably they spread to various streams along the east shore of Kodiak Island, though no large escapement was observed in any them."<sup>8</sup> We now know that these were probably Cook Inlet sockeye.

### 1957 Tagging Studies: Kenai Bycatch

Kodiak is not the only area that has a bycatch of non-local stocks. Cook Inlet has been shown to have a bycatch of Kodiak salmon. A small tagging study was done in Seldovia Bay in 1957. "During three day tagging, 168 reds were released, of which 55 or 32.7% were returned. The release dates were June 30, July 20 and July 21."<sup>9</sup> Kodiak recoveries of pink salmon amounted to 12.2% of the total number recovered, red recoveries were 7.5% and chum recoveries were 5%. This was in a year when Kodiak only had a catch of 234,000 sockeye!

In addition, Cook Inlet also catches salmon headed for the Alaska Peninsula and as far west as the Shumagin Islands. "Tagging at Chisik Island at the time showed substantial out-migration of red salmon. This was true during late June of 1957 when 25.7% of reds tagged were recovered along the Alaska Peninsula."<sup>10</sup> It is safe to conclude that a mixing of sockeye stocks occurs in both the Kodiak and the Cook Inlet Management Areas.

### Historical Catch Figures

Statistical data from ADF&G catch figures show historical catch data for Kodiak and Cook Inlet. Recent catch data indicates that both Kodiak and Cook Inlet have healthy sockeye stocks. (Please see data sheets after the conclusion of this chapter.)

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<sup>8</sup> U.S. Department of the Interior, Fish & Wildlife Annual Report 1949.

<sup>9</sup> Richard Tyler & Wallace Norenberg, Salmon Tagging in Cook Inlet, 1957.

<sup>10</sup> Ibid



Cook Inlet sockeye catches are clearly at all time highs. Prior to 1983, Cook Inlet had a 30 year average annual catch rate of about 1.2 million sockeye. This dropped to an all time low of approximately 500,000 in 1974. Then, in 1983, Cook Inlet rebounded with a catch of about 5 million sockeye. The 1983 catch was an all time high almost doubling the 1950 all time record of 2.6 million sockeye. The new 1983 record was exceeded in 1987, 1988, and almost doubled in 1992.

Kodiak has also enjoyed a resurgence in its local sockeye stocks. Kodiak's 1907 catch record of 4.2 million sockeye stood until 1990 when Kodiak captured 5.2 million sockeye. In 1991, the Kodiak catch record increased to 5.7 million while the sockeye catch in 1992 and 1993 exceeded 4 million. The past five Kodiak seasons have substantially exceeded historical averages.

Average weight and total harvest of sockeye salmon from the commercial fisheries of the Kodiak Management Area, 1969 to 1993.

Figure 12<sup>11</sup> shows that the average weight of sockeye caught in the Kodiak area since 1969. (Average weights prior to 1969 are not available.) The historical average Kodiak sockeye weights indicate that there is a trend toward smaller fish. In fact, the 1993 average of 5.1 pounds per sockeye is the second lowest year on record.

FIGURE 12

| YEAR              | AVERAGE WEIGHT <sup>a</sup> | HARVEST <sup>b</sup> |
|-------------------|-----------------------------|----------------------|
| 1969              | 5.4                         | 591,481              |
| 1970              | 6.0                         | 917,045              |
| 1971              | 6.4                         | 178,479              |
| 1972              | 5.9                         | 222,800              |
| 1973              | 6.5                         | 167,341              |
| 1974              | 6.3                         | 418,761              |
| 1975              | 6.1                         | 136,418              |
| 1976              | 6.3                         | 641,484              |
| 1977              | 6.8                         | 623,468              |
| 1978              | 6.4                         | 1,071,782            |
| 1979              | 6.1                         | 631,735              |
| 1980              | 5.4                         | 651,394              |
| 1981              | 5.8                         | 1,288,980            |
| 1982              | 6.0                         | 1,204,793            |
| 1983              | 5.8                         | 1,231,989            |
| 1984              | 5.7                         | 1,950,439            |
| 1985              | 4.7                         | 1,843,185            |
| 1986              | 5.8                         | 3,188,269            |
| 1987              | 6.3                         | 1,792,819            |
| 1988              | 5.7                         | 2,698,637            |
| 1989              | 5.5                         | 2,529,068            |
| 1990              | 5.2                         | 5,248,339            |
| 1991              | 5.5                         | 5,704,041            |
| 1992 <sup>c</sup> | 5.7                         | 4,167,877            |
| 1993 <sup>c</sup> | 5.1                         | 4,377,688            |

<sup>a</sup> Weight in pounds. Data from Kodiak Management Area Annual Reports.

<sup>b</sup> Harvest in number of fish.

<sup>c</sup> Preliminary data.

Kodiak average sockeye weights do not support Cook Inlet's contention that Kodiak is intercepting greater percentages of Cook Inlet fish. Cook Inlet fish are, for the most part, larger than Kodiak stocks. If Kodiak was catching a greater percentage of these fish, the average Kodiak sockeye weights should be going up. However, the opposite is true.

<sup>11</sup> ADF&G RIR, 4K94-8



Even before 1930, the Kodiak fleet was expanding to fish throughout the Kodiak area and on the Alaska Peninsula in the Mainland Districts. The historical records confirm a mobile fleet concentrating wherever fish are found. By 1948, this fleet had standardized 200 fathom purse seines for cape fishing and was taking over 50% of the Kodiak sockeye catch - even while the traps were being fished. By 1950, almost half of the Kodiak sockeye harvest was no longer in the traditional sockeye areas of Red River and Karluk. Clearly, the Kodiak fleet had expanded to capitalize on sockeye fishing opportunities throughout the Kodiak Management Area.

Cook Inlet fish have always been a component of the Kodiak sockeye harvest. Tagging studies and trap records verify the Cook Inlet component. These tools are imprecise as to the exact Cook Inlet contribution. Nevertheless, the tagging studies and trap records suggest that the Cook Inlet component remained fairly constant throughout several decades. (See Figure 13)<sup>12</sup> In addition, the average weight of Kodiak sockeye has been declining. Consequently, it seems unlikely that Kodiak has increased its bycatch of Cook Inlet sockeye during this period in recent years.

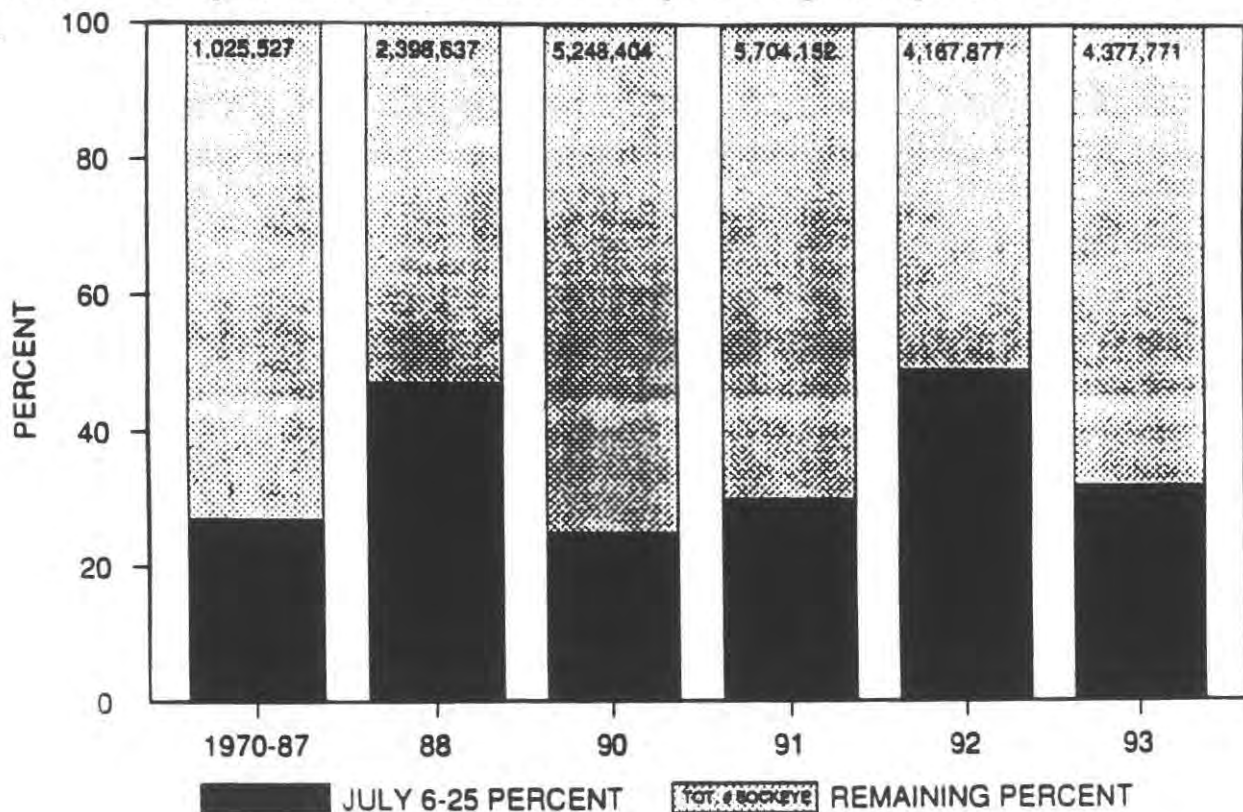


Figure 13. Percent of annual sockeye salmon harvest which occurs - July 6 through July 25, 1970-1993.

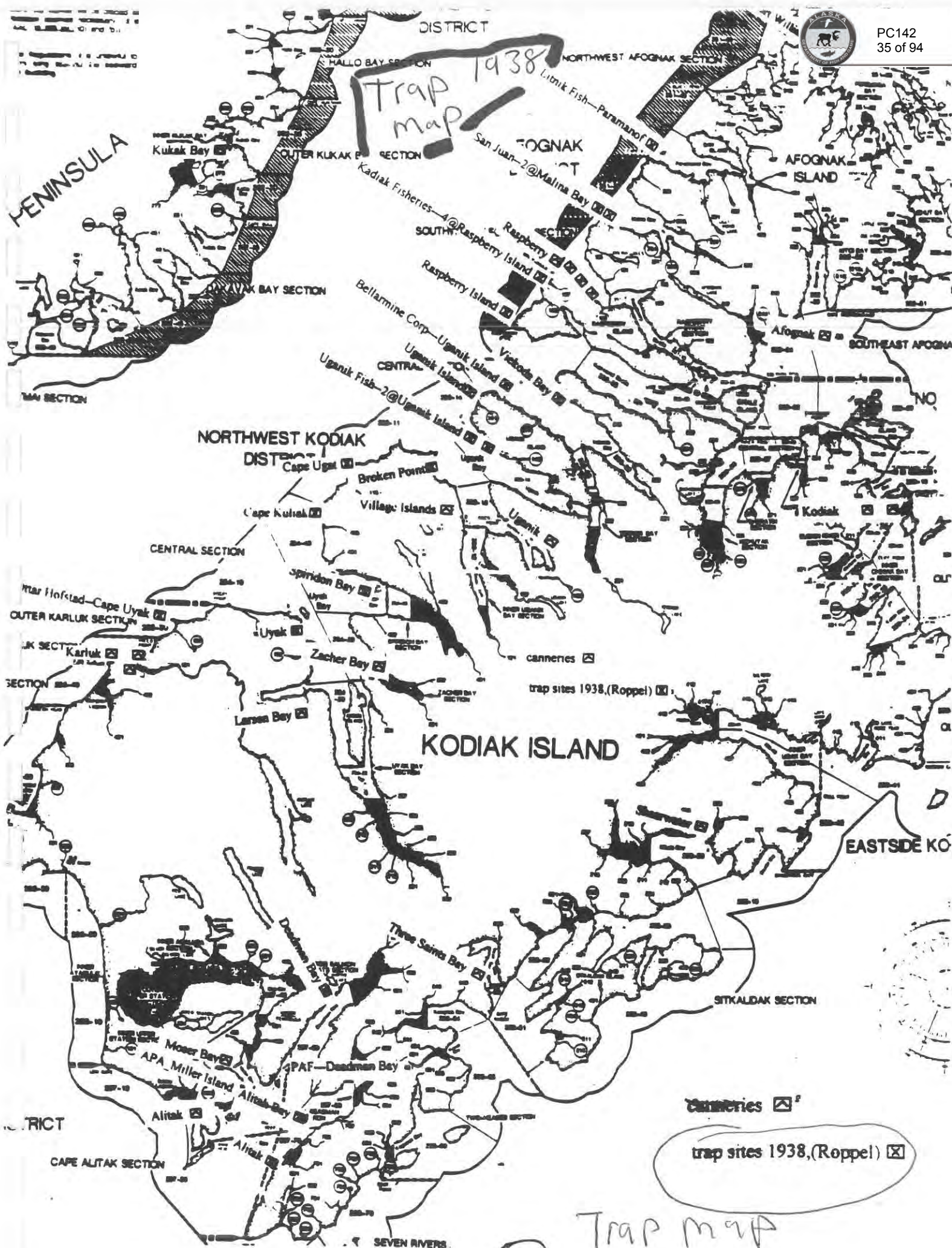
<sup>12</sup> ADF&G RIR 4K94-7



Historical tagging studies further show that Cook Inlet fishermen enjoy the bycatch of non-local stocks. Both Kodiak sockeye and sockeye bound for Chignik and the Alaska Peninsula have been tagged in Cook Inlet.

Kodiak and Cook Inlet currently have healthy sockeye stocks which exceed historical averages. Kodiak's hundred plus years of Cook Inlet bycatch has not damaged their sockeye runs. This includes those years, prior to 1989, when Kodiak fishermen enjoyed their historical unlimited access to the North Shelikof and North Mainland sections as well as waters outside the three mile limit.



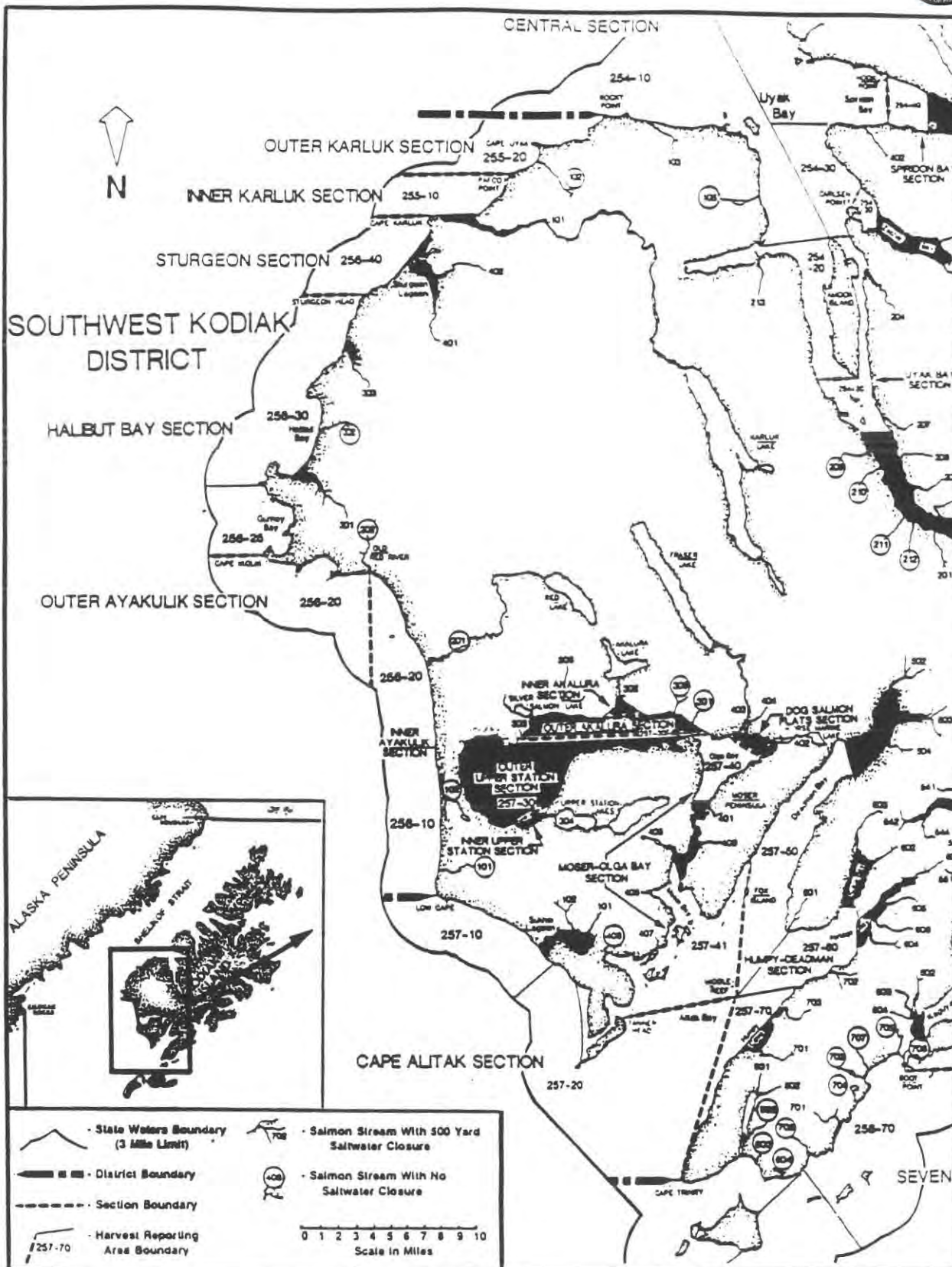






## HALIBUT BAY

- ▶ **Halibut Bay is one of the oldest fisheries on Kodiak Island.** Halibut Bay was fished extensively as early as 1900 and continued to be fished heavily through the 1960's to supply canneries at Karluk and Larsen Bay..
- ▶ **Halibut Bay is exclusively a "cape fishery."** Although there is a slight indentation in Kodiak's coast line and a lagoon behind the gravel bar, there actually isn't a "Bay" in the Halibut Bay section. This is a fishery on capes projecting out into the Shelikof Straits with names like "Tombstone rocks".
- ▶ **Halibut Bay is an essential Kodiak sockeye fishery.** Until 1970 Halibut Bay was managed as part of the Red River District. (Catch data limited to Halibut bay during this time period is not available. ) Nevertheless, catch data from the Red River District shows that as late as 1968 over 286,000 sockeye, or 48% of the Kodiak catch, were captured in the area. From 1946 through 1969 sockeye catches in Halibut Bay exceeded 100,000 fish 6 times and often accounted for more than 25% of Kodiak's total catch.
- ▶ **Extensive fishing closures in Halibut Bay over the past 25 years have been implemented to rebuild local sockeye stocks, these closures substantially altered the "historical" Halibut Bay fishing pattern..** The Ayakulik river on the south and the Karluk river north of Halibut Bay experienced depressed sockeye runs from 1970 until 1990. The area was closed completely for 7 seasons and limited fishing of less than 150 hours occurred during 8 additional years.
- ▶ **The Halibut Bay fishery, even during the July 6 to July 25 time period, is primarily a local stock fishery.** The Barret/Vining report indicates that since 1983, non local sockeye catches in the Halibut Bay area have exceeded the catch of local sockeye twice. In one of those years, 1988, while 52% of the sockeye harvested were non-local stocks only 42% of the total catch was non-local. Illustrating the local fishery is a harvest of 300,000 pinks in 1991.
- ▶ **1992 is a single year anomaly in Halibut Bay.** Increased fishing time for local stocks was necessary because of strong Karluk and Ayakulik runs -- this seldom occurs in the same year. In addition, Cook Inlet enjoyed its second largest run in history. A larger percentage of the 1992 Cook Inlet run swam south around Kodiak Island and were available for harvest in Halibut Bay. This did not occur again in 1993 and 1994. Indeed, based on the past, it is improbable it will occur in the next 100 years of the Cook Inlet fishery.



Appendix A.4. Southwest Kodiak and Alitak Bay Districts of the Kodiak Management Area, 1993.





## HALIBUT BAY--A HISTORICAL PERSPECTIVE

Halibut Bay Section has a long history as an important seine harvest area for both sockeye and pinks in July. This section is recognized in the management plan adopted by the Board of Fisheries as a harvest area for sockeye in July. The sockeye stocks for which this section is managed for are bound for the Ayakulik River and Karluk River which are located on either side of the section. Alitak-bound sockeye are a lesser component of the catch. Ayakulik sockeye predominate.

A sockeye cap is hardly appropriate for an area where Kodiak Island sockeye are expected to be caught. It would make as much sense as closing part of the central Cook Inlet area when a certain number of sockeye were caught. Only in 1992 did Cook Inlet sockeye out-number Kodiak sockeye, although the Kodiak component of the catch was still large. In 1988, another record Cook Inlet year, a portion of the catch in the Halibut Bay section was of Cook Inlet origin, but the majority were of Kodiak origin. Seiners have fished this section for generations and wonder why they should be restricted now, just because Cook Inlet is having record returns and occasionally some of them swim into this area.

Prior to 1968, the Halibut Bay section was part of the Ayakulik section. During the sixties there were high landings and good catches primarily on even years in this area (\*See following graphs) because island sockeye stocks were severely depressed, but even year pink production was good. Considering the depressed state of Kodiak sockeye, catches were relatively good. In the seventies, pink stocks collapsed due to harsh winters and the Department started restricting fishing to rebuild sockeye stocks. For these reasons, as well as a series of strikes, landings and catches were low until after the mid-eighties.

With the successful rebuilding of Kodiak sockeye stocks, the Halibut Bay section is often one of the best sockeye harvesting areas for seiners as well as a good one for pinks. With the 1989 oil spill over-escapement damage, this area probably won't be open much for the next two years.

Access to this area is necessary for seiners to maintain their allocation balance with setnetters. From 1970-1979, setnetters grossed



37% of the average seine gross. From 1980-1988, average setnet gross increased to 50% of the seine gross. From 1988-1993, average setnet gross increased 52% of the seine gross (from Kodiak Mgt. Area 1993/94 Commercial Salmon Fishery Information Pkt.).

Kodiak seiners gave up most of their opportunity to fish at the mouth of the Karluk River in the new management regime that rebuilt the runs and then was adopted by the Board of Fisheries in 1993, as the Westside Management Plan. In 1959, Moser and Olga Bay were closed to seining to rebuild severely depressed sockeye runs. In part of the area setnetting was still allowed.

By the early eighties, the natural runs there had rebuilt to record levels and an entirely new run was started. Seiners were not allowed back into Moser and Olga Bay to benefit from these events. As a result, setnetters average about 60% of the Alitak Bay sockeye catch. Seiners catch most of their 40% on Cape Alitak. There were many bitter battles between setnetters and seiners before the Advisory Committee on this conflict. To maintain equity in the sockeye catches, seiners need to be able to fish on all their traditional capes. Halibut Bay section provides some opportunity to harvest Alitak sockeye, although Ayakulik sockeye predominate.

Cook Inlet groups had plenty of time to put in proposals to restrict fishing in the Halibut Bay section after the record catches of 1990 and 1991. They didn't do it. It is reasonable to conclude that this issue is before the Board now only because of the massive and abnormal Cook Inlet run of 1992. The mixed stock fisheries regulation clearly states that the Board shouldn't take action based on changes of abundance or of only one year's duration.



**HALIBUT BAY SECTION, JULY 6-25.**

| YEAR | LANDINGS | CHINOOK | SOCKEYE | COHO  | PINK    | CHUM   |
|------|----------|---------|---------|-------|---------|--------|
| 70   | 33       | 1       | 3,185   | 256   | 45,206  | 704    |
| 71   | 0        | 0       | 0       | 0     | 0       | 0      |
| 72   | 73       | 11      | 5,812   | 25    | 35,053  | 1,065  |
| 73   | 5        | 0       | 240     | 0     | 197     | 37     |
| 74   | 6        | 0       | 1,166   | 0     | 12,514  | 23     |
| 75   | 6        | 1       | 698     | 0     | 1,132   | 4      |
| 76   | 62       | 6       | 8,815   | 12    | 144,169 | 847    |
| 77   | 0        | 0       | 0       | 0     | 0       | 0      |
| 78   | 50       | 34      | 4,564   | 26    | 18,752  | 452    |
| 79   | 0        | 0       | 0       | 0     | 0       | 0      |
| 80   | 60       | 1       | 6,098   | 87    | 140,806 | 524    |
| 81   | 0        | 0       | 0       | 0     | 0       | 0      |
| 82   | 0        | 0       | 0       | 0     | 0       | 0      |
| 83   | 0        | 0       | 0       | 0     | 0       | 0      |
| 84   | 72       | 27      | 21,889  | 363   | 117,697 | 1,091  |
| 85   | 2        | 0       | 820     | 6     | 128     | 2      |
| 86   | 261      | 92      | 77,894  | 2,482 | 117,205 | 7,565  |
| 87   | 61       | 12      | 10,487  | 116   | 16,611  | 1,394  |
| 88   | 378      | 355     | 187,230 | 265   | 34,962  | 9,627  |
| 89   | 0        | 0       | 0       | 0     | 0       | 0      |
| 90   | 25       | 9       | 7,740   | 223   | 12,494  | 251    |
| 91   | 453      | 508     | 182,063 | 2,726 | 292,170 | 7,481  |
| 92   | 606      | 279     | 349,691 | 490   | 70,406  | 23,538 |
| 93   | 1        | 0       | 11      | 0     | 525     | 6      |
| 94   | 32       | 26      | 14,692  | 110   | 17,077  | 310    |

(106)





## AYAKULIK, HALIBUT BAY, & STURGEON SECTIONS JULY 6-25, 1970-94

| YEAR | LANDINGS | CHINOOK | SOCKEYE | COHO  | PINK    | CHUM   |
|------|----------|---------|---------|-------|---------|--------|
| 70   | 250      | 15      | 23,618  | 303   | 384,480 | 2,188  |
| 71   | 0        | 0       | 0       | 0     | 0       | 0      |
| 72   | 207      | 37      | 23,198  | 37    | 103,031 | 2,481  |
| 73   | 53       | 6       | 5,946   | 2     | 2,666   | 278    |
| 74   | 24       | 0       | 5,024   | 6     | 36,296  | 204    |
| 75   | 6        | 1       | 698     | 0     | 1,132   | 4      |
| 76   | 346      | 23      | 75,408  | 68    | 512,826 | 2,298  |
| 77   | 24       | 2       | 39,663  | 0     | 304     | 1      |
| 78   | 332      | 615     | 46,565  | 57    | 116,703 | 2,083  |
| 79   | 0        | 0       | 0       | 0     | 0       | 0      |
| 80   | 142      | 1       | 75,439  | 98    | 307,705 | 2,806  |
| 81   | 0        | 0       | 0       | 0     | 0       | 0      |
| 82   | 1        | 0       | 67      | 0     | 4,940   | 0      |
| 83   | 0        | 0       | 0       | 0     | 0       | 0      |
| 84   | 618      | 196     | 228,416 | 4,348 | 577,761 | 6,651  |
| 85   | 267      | 37      | 70,999  | 408   | 12,419  | 3,951  |
| 86   | 494      | 159     | 160,920 | 3,187 | 200,195 | 19,307 |
| 87   | 92       | 36      | 13,212  | 139   | 20,973  | 2,626  |
| 88   | 387      | 362     | 192,121 | 265   | 36,116  | 10,019 |
| 89   | 0        | 0       | 0       | 0     | 0       | 0      |
| 90   | 1,188    | 687     | 533,566 | 1,414 | 74,739  | 11,712 |
| 91   | 1,314    | 1,392   | 493,918 | 4,588 | 604,424 | 19,985 |
| 92   | 901      | 429     | 555,255 | 905   | 99,510  | 34,398 |
| 93   | 9        | 5       | 9,779   | 0     | 6,393   | 386    |
| 94   | 57       | 33      | 34,246  | 243   | 24,846  | 627    |

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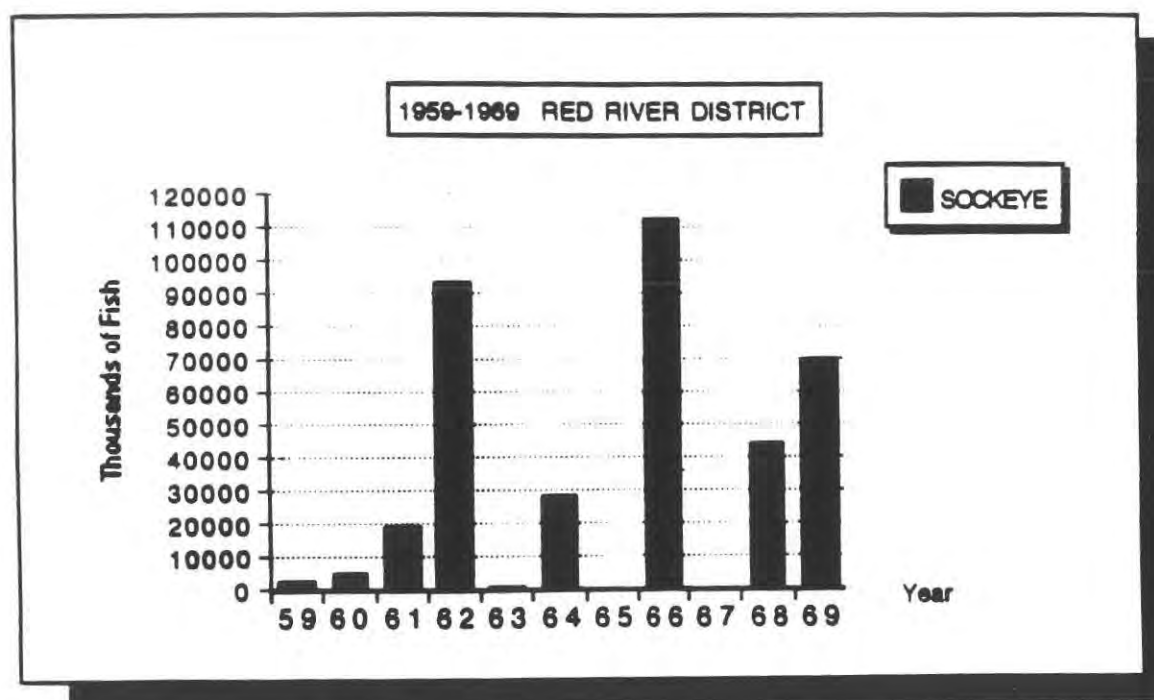
STAT AREA

Red River Dist 256-10 - 256-40  
Hallbut Bay · Sturgeon · Outer Ayakulik

1959 - 1969

July 6-25

| YEAR | LANDINGS | KINGS | REDS   | COHO | PINK    | CHUM |
|------|----------|-------|--------|------|---------|------|
| 1959 | 18       | 9     | 2843   | 16   | 2893    | 276  |
| 1960 | 112      | 6     | 5055   | 196  | 90864   | 3220 |
| 1961 | 48       | 4     | 19028  | 10   | 6741    | 390  |
| 1962 | 795      | 96    | 93657  | 450  | 1952882 | 9064 |
| 1963 | 8        | 0     | 510    | 8    | 1527    | 9    |
| 1964 | 491      | 74    | 28065  | 328  | 1131398 | 4281 |
| 1965 | 0        | 0     | 0      | 0    | 0       | 0    |
| 1966 | 193      | 25    | 112438 | 2656 | 264639  | 1502 |
| 1967 | 0        | 0     | 0      | 0    | 0       | 0    |
| 1968 | 186      | 26    | 43789  | 506  | 364603  | 4511 |
| 1969 | 1        | 0     | 69780  | 0    | 13      | 0    |



Source: Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994

# HISTORIC SOCKEYE CATCHES

1978 - 1994 JULY 6-25

Used to calculate a trigger for zone closures using compromise time period



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(109)

| YEAR                           | SITKALIDAK SECTION  | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|--------------------------------|---------------------|---------------------|--------------------------|
| 1978                           | 2853                | 4564                | 2419                     |
| 1979                           | 19437               | CLOSED              | 1                        |
| 1980                           | STRIKE              | STRIKE              | STRIKE                   |
| 1981                           | STRIKE              | CLOSED              | STRIKE                   |
| 1982                           | STRIKE              | STRIKE              | STRIKE                   |
| 1983                           | 3618                | CLOSED              | 0                        |
| 1984                           | 1851                | 21889               | 55                       |
| 1985                           | 7711                | CLOSED              | 16                       |
| 1986                           | 11643               | 77894               | 2093                     |
| 1987                           | 5759                | 10487               | 15824                    |
| 1988                           | 49165               | 187230              | 27936                    |
| 1989                           | CLOSED              | CLOSED              | CLOSED                   |
| 1990                           | 54871               | CLOSED              | 23276                    |
| 1991                           | 174666              | 182063              | 1570                     |
| 1992                           | 429642              | 349691              | 98051                    |
| 1993                           | 114681              | CLOSED              | 18291                    |
| 1994                           | 36117               | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b>           | <b>912014</b>       | <b>848510</b>       | <b>227475</b>            |
| <b>TOTAL YEARS<br/>AVERAGE</b> | <b>13<br/>70155</b> | <b>8<br/>106064</b> | <b>13<br/>17498</b>      |

Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group



# SOCKEYE CATCHES

1978 - 1987

JULY 6-25

Corrected averages - strikes and closed years



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| YEAR                       | SITKALIDAK SECTION        | HALIBUT BAY SECTION        | KATMAI-ALINCHAK SECTIONS  |
|----------------------------|---------------------------|----------------------------|---------------------------|
| 1978                       | 2853                      | 4564                       | 2419                      |
| 1979                       | 19437                     | CLOSED                     | 1                         |
| 1980                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1981                       | STRIKE                    | CLOSED & STRIKE            | STRIKE                    |
| 1982                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1983                       | 3618                      | CLOSED                     | 0                         |
| 1984                       | 1851                      | 21889                      | 55                        |
| 1985                       | 7711                      | CLOSED                     | 16                        |
| 1986                       | 11643                     | 77894                      | 2093                      |
| 1987                       | 5759                      | 10487                      | 15824                     |
| <b>TOTAL SOCKEYE CATCH</b> | <b>52872</b>              | <b>114834</b>              | <b>20408</b>              |
| <b>TOTAL YEARS</b>         | <b>7</b>                  | <b>4</b>                   | <b>7</b>                  |
| <b>AVERAGE</b>             | <b>7553</b>               | <b>28708</b>               | <b>2915</b>               |
| <b>RUN INCREASES</b>       | <b>7553 X 3.2 = 24170</b> | <b>28708 X 3.2 = 91867</b> | <b>29408 X 3.2 = 9329</b> |

Catch information numbers are from most recent ADF & G tables  
Dec. 1994 Kodiak Salmon Work Group

# HISTORIC SOCKEYE CATCHES

1985 - 1994

July 6-25

Used to calculate as a proposed trigger for zone closures



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| YEAR                 | SITKALIDAK SECTION | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|----------------------|--------------------|---------------------|--------------------------|
| 1985                 | 7711               | CLOSED              | 16                       |
| 1986                 | 11643              | 77894               | 2093                     |
| 1987                 | 5759               | 10487               | 15824                    |
| 1988                 | 49165              | 187230              | 27936                    |
| 1989                 | CLOSED             | CLOSED              | CLOSED                   |
| 1990                 | 54871              | CLOSED              | 23276                    |
| 1991                 | 174666             | 182063              | 1570                     |
| 1992                 | 429642             | 349691              | 98051                    |
| 1993                 | 114681             | CLOSED              | 18291                    |
| 1994                 | 36117              | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b> | <b>884255</b>      | <b>822057</b>       | <b>225000</b>            |
| <b>TOTAL YEARS</b>   | <b>9</b>           | <b>6</b>            | <b>9</b>                 |
| <b>AVERAGE</b>       | <b>98250</b>       | <b>137009</b>       | <b>25000</b>             |

Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994

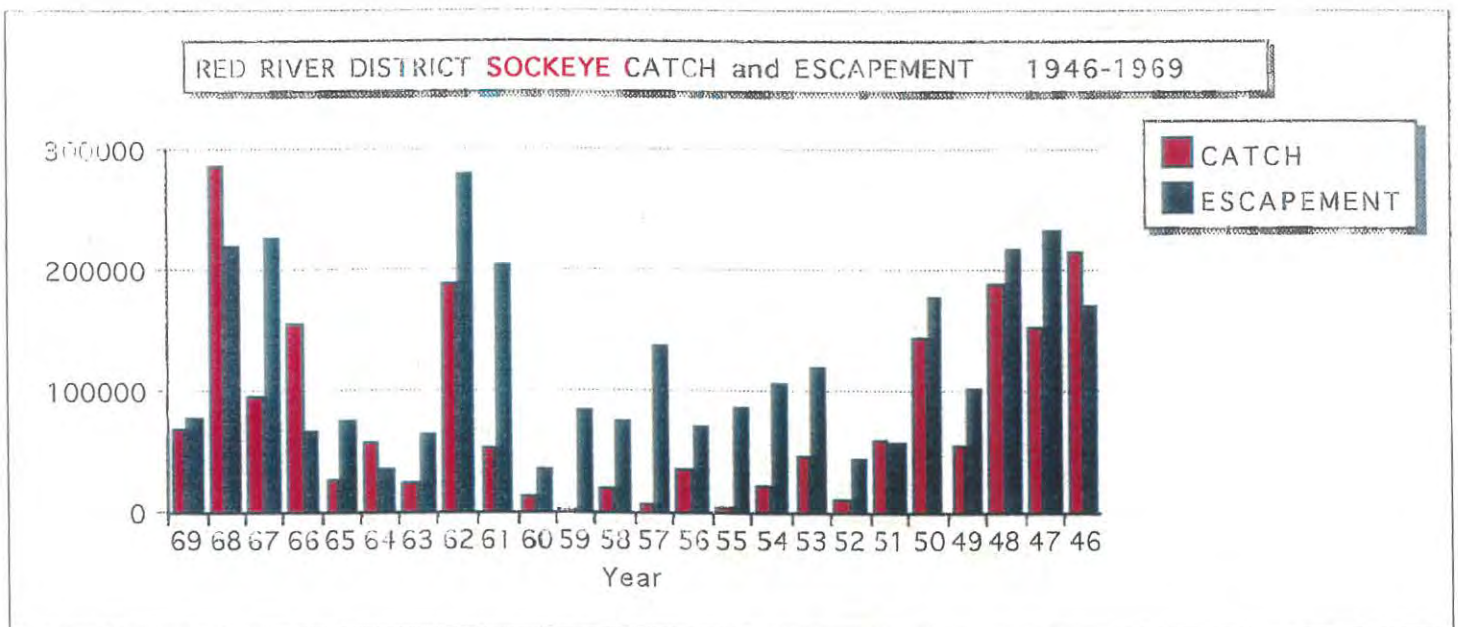
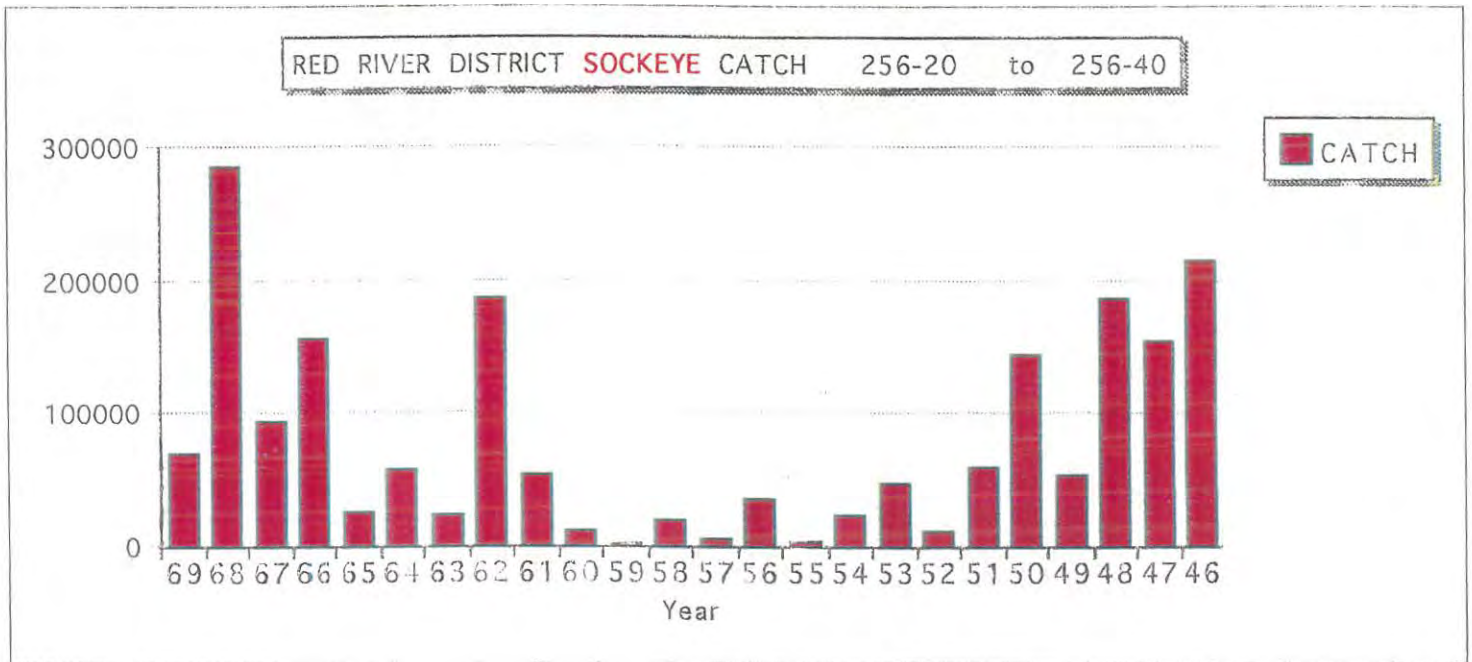


TOTAL RUN  
RED RIVER DISTRICT **SOCKEYE** CATCH  
1946-1969



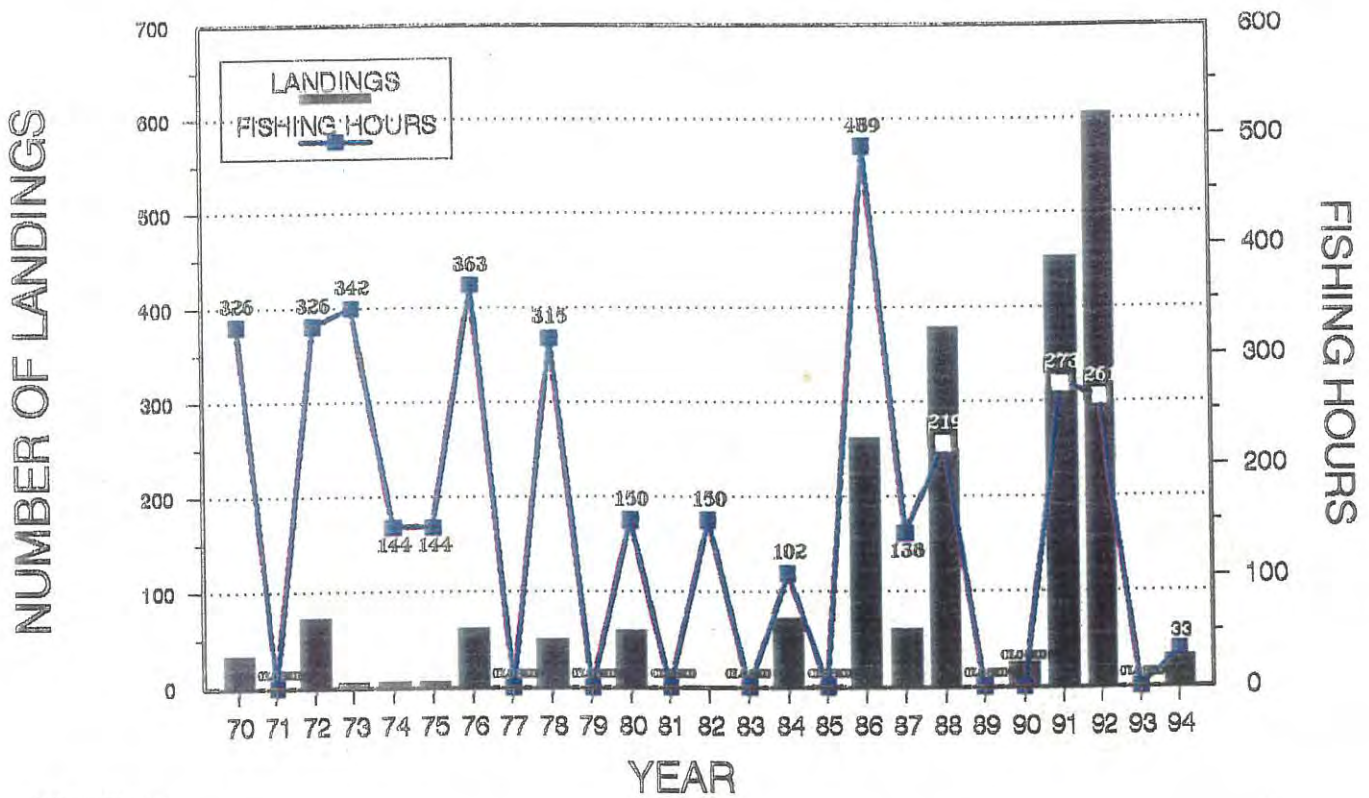
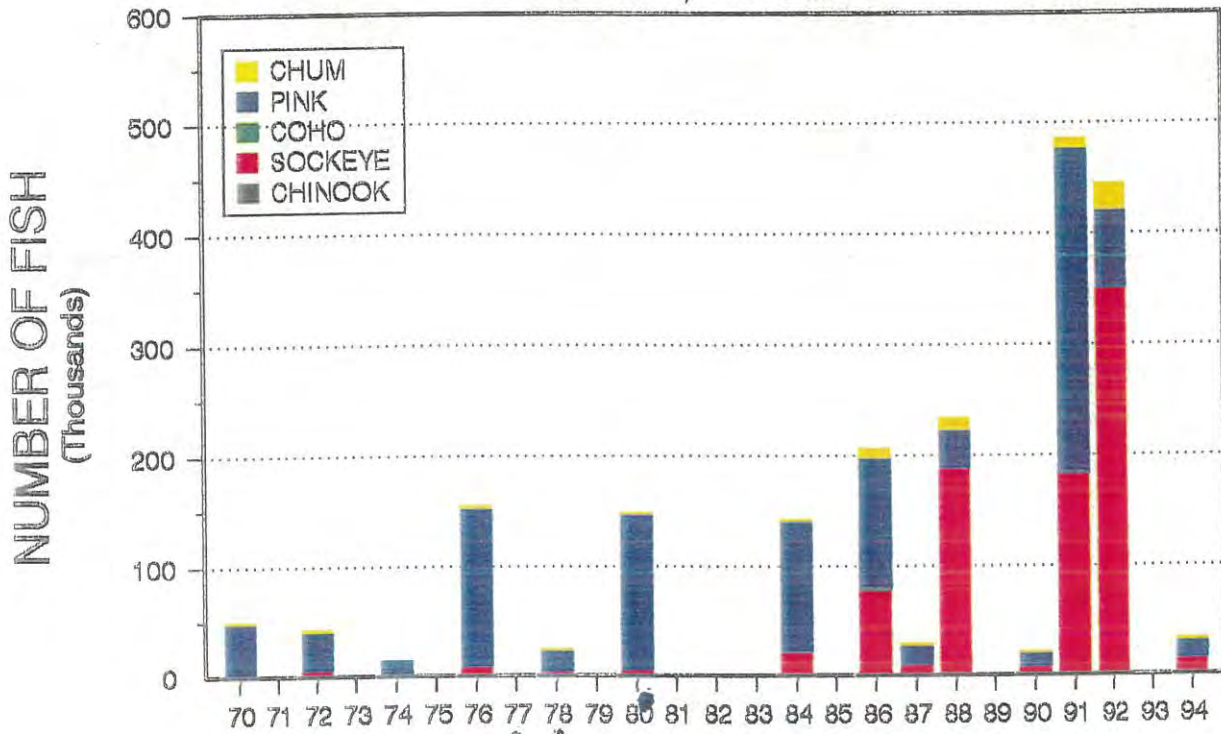
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Stat. Areas      256-20   Outer Ayakulik  
                     256-30   Halibut Bay  
                     256-40   Sturgeon





# KODIAK MANAGEMENT AREA HALIBUT BAY SECTION JULY 6-25, 1970-94

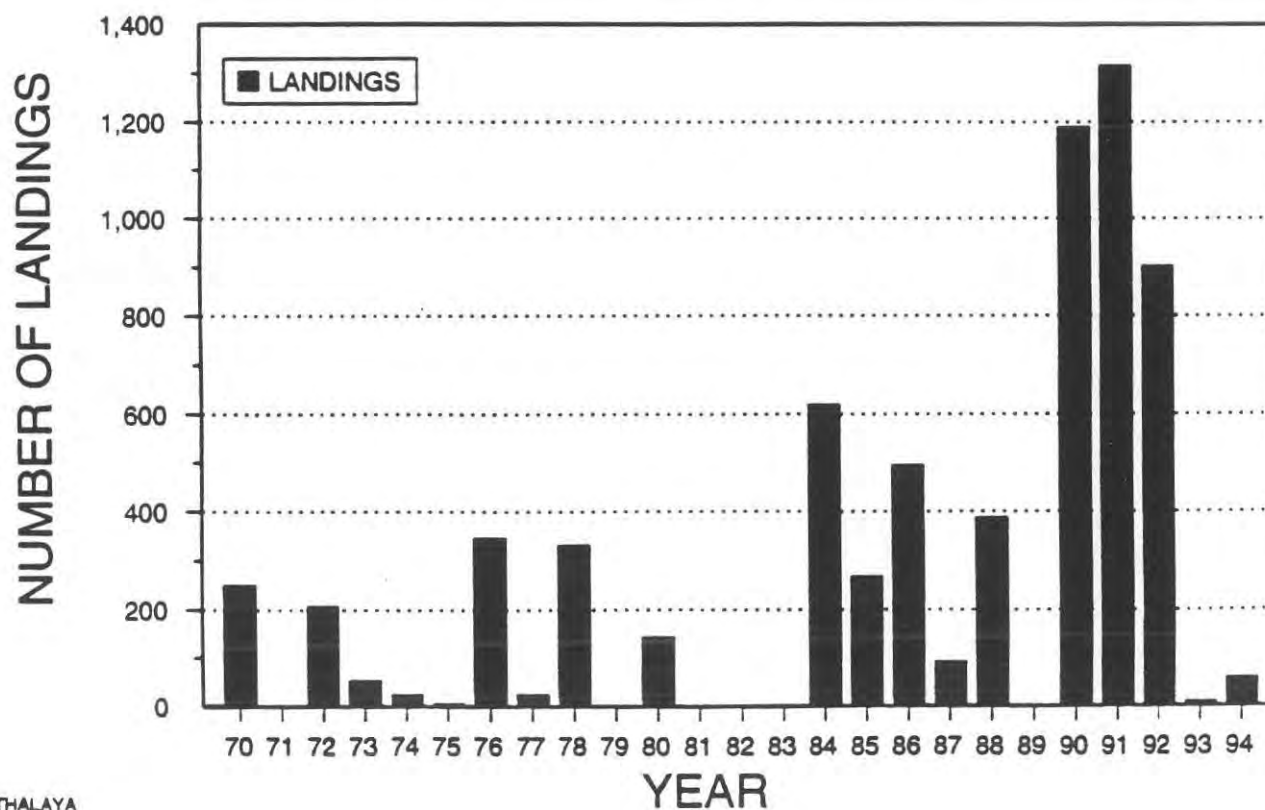
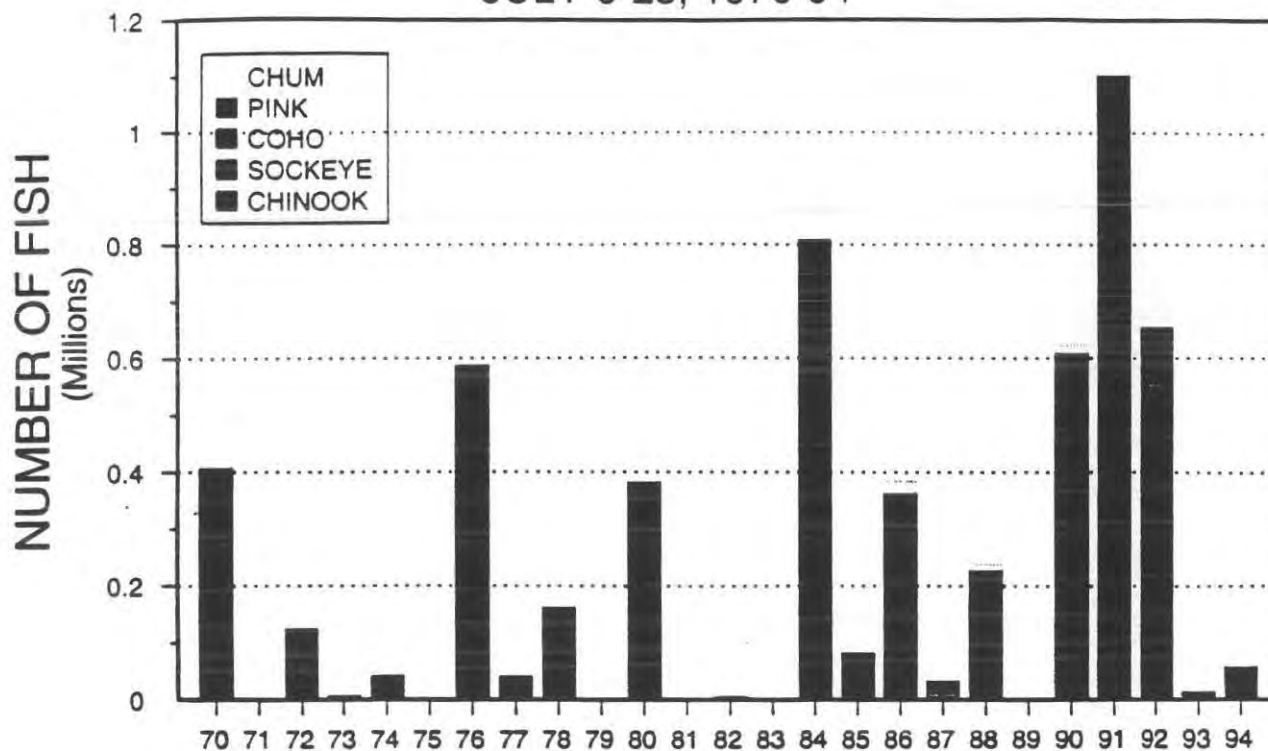


K93-70HALIBT  
11-30-94





# KODIAK MANAGEMENT AREA AYAKULIK, HALIBUT BAY, & STURGEON SECTIONS JULY 6-25, 1970-94



# RED RIVER CATCH - ESCAPEMENT SOCKEYE

By week June 30 - Aug. 2

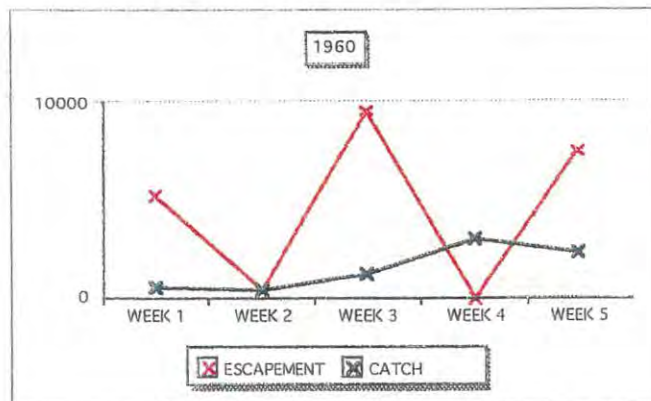


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Stat Area Halibut Bay 256-30  
Sturgeon 256-40  
Outer Ayakulik 256-20

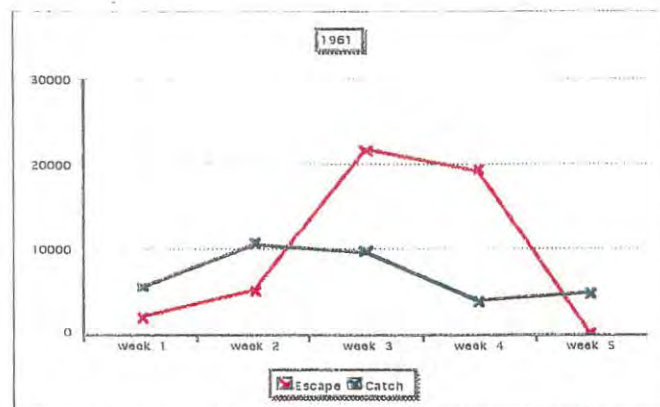
1960

| WEEK           | ESCAPEMENT | CATCH |
|----------------|------------|-------|
| June 26-July 2 | 5167       | 528   |
| July 3 - 9     | 400        | 341   |
| July 10 -16    | 9539       | 1194  |
| July 17- 23    | 43         | 2942  |
| July 24-30     | 7472       | 2313  |



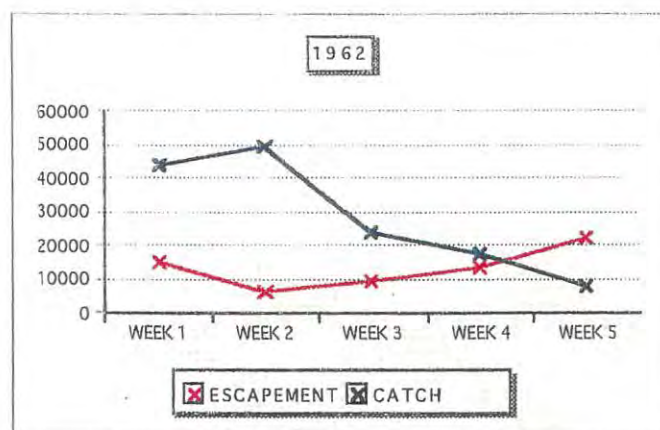
1961

| DATE          | ESCAPEMENT | CATCH |
|---------------|------------|-------|
| July 1-7      | 2043       | 5603  |
| July 8-14     | 5127       | 10737 |
| July 15-21    | 21725      | 9717  |
| July 22-28    | 19413      | 3916  |
| July 29-Aug 4 | 319        | 4807  |



1962

| WEEK          | ESCAPEMENT | CATCH |
|---------------|------------|-------|
| July 1-7      | 14823      | 44672 |
| July 8-14     | 6637       | 50025 |
| July 15-21    | 9326       | 23893 |
| July 22-28    | 13422      | 17792 |
| July 29-Aug 4 | 22847      | 7554  |



Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994

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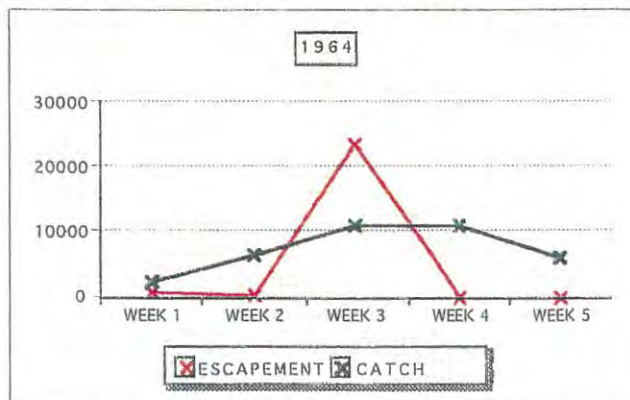
# RED RIVER CATCH - ESCAPEMENT SOCKEYE

By week June 30 - Aug. 2

Stat Area Halibut Bay 256-30 Sturgeon 256-40  
Outer Ayakulik 256-20

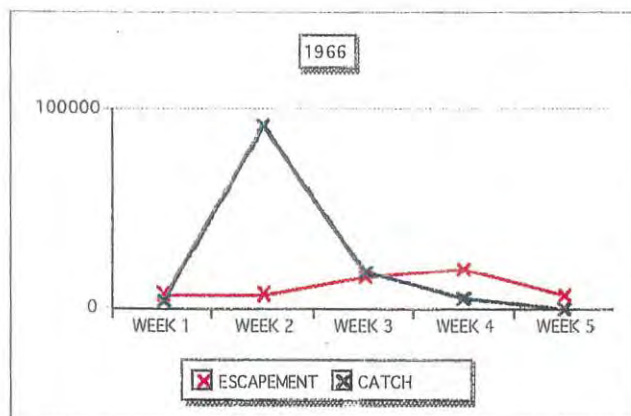
1964

| YEAR           | ESCAPEMENT | CATCH |
|----------------|------------|-------|
| June 29-July 5 | 456        | 2461  |
| July 6-12      | 144        | 6516  |
| July 13-19     | 23470      | 11183 |
| July 20-26     | 76         | 10947 |
| July 27-2      | 6          | 6065  |



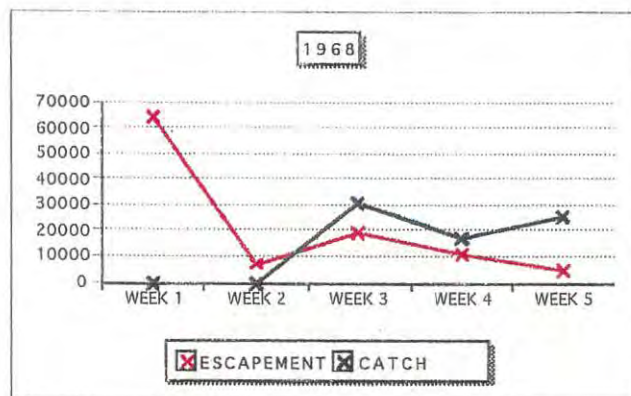
1966

| WEEK          | ESCAPEMENT | CATCH |
|---------------|------------|-------|
| July 3-9      | 7258       | 4514  |
| July 10-16    | 7633       | 90597 |
| July 17-23    | 15187      | 18749 |
| July 24-30    | 20187      | 5012  |
| July 31-Aug 6 | 6233       | 176   |



1968

| YEAR           | ESCAPEMENT | CATCH |
|----------------|------------|-------|
| June 30-July 6 | 63761      | 11    |
| July 7-13      | 7210       | 0     |
| July 14-20     | 19571      | 30803 |
| July 21-27     | 11533      | 17120 |
| July 28-Aug 3  | 4432       | 25045 |



1963 Low # Sockeyes Island-wide  
1965 Strike: Early June-July 26  
1967 Closed  
1969 Closed

Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group

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Appendix D.6. Estimated average weight of local (Kodiak) and UCI sockeye salmon and corresponding seine harvest stock composition estimates, July 6-25, based on average weight difference, for the Sturgeon and Halibut Bay Sections (statistical areas 25625-25640), 1983-1994, except 1989.

| Year | Estimated Average Weight<br>(pounds) |                 |                 | Estimated<br>Non-local<br>Catch<br>Proportion(%) | Estimated Stock Composition<br>(Number of Fish) |         |            | Catch<br>Total |
|------|--------------------------------------|-----------------|-----------------|--------------------------------------------------|-------------------------------------------------|---------|------------|----------------|
|      | UCI                                  | Local           | Difference      |                                                  | Non-local                                       | Local   | Unassessed |                |
| 1983 | 6.48                                 | NA <sup>a</sup> | NA <sup>a</sup> | NA <sup>a</sup>                                  | 0                                               | 0       | 0          | 0              |
| 1984 | 5.95                                 | 5.66            | 0.29            | Unassessed                                       | 0                                               | 0       | 21,889     | 21,889         |
| 1985 | 5.66                                 | 4.53            | 1.13            | 52%                                              | 427                                             | 393     | 0          | 820            |
| 1986 | 5.77                                 | 6.15            | -0.38           | Unassessed                                       | 0                                               | 0       | 77,894     | 77,894         |
| 1987 | 6.74                                 | 5.87            | 0.86            | 11%                                              | 1,157                                           | 9,330   | 0          | 10,487         |
| 1988 | 6.64                                 | 4.93            | 1.71            | 52%                                              | 98,093                                          | 89,137  | 0          | 187,230        |
| 1990 | 6.44                                 | 5.34            | 1.10            | -5%                                              | 0                                               | 7,740   | 0          | 7,740          |
| 1991 | 5.65                                 | 5.03            | 0.61            | 44%                                              | 80,297                                          | 101,766 | 0          | 182,063        |
| 1992 | 6.60                                 | 4.93            | 1.67            | 77%                                              | 267,689                                         | 82,002  | 0          | 349,691        |
| 1993 | 5.89                                 | 4.89            | 1.00            | 404%                                             | 11                                              | 0       | 0          | 11             |
| 1994 | 5.69                                 | 5.01            | 0.68            | -12%                                             | 0                                               | 14,692  | 0          | 14,692         |

<sup>a</sup> No sockeye harvested for that year.

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# SITKALIDAK



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**The Outer Sitkalidak fishery predates commercial fishery records.** Many of the people in the villages Old Harbor, Akhiok, and Kaguyak remember the old traditions of fishing on the outside of Sitkalidak Island for mid-summer sockeye.

▶ **The Outer Sitkalidak area has always been a cape fishery with limited near shore harvest opportunities.** Most of the area is rocky exposed cliffs with reefs off shore. The one small indentation, Ocean Bay, is completely exposed to the North Pacific---uninterrupted to S.E. Alaska.

▶ **Catch date for the Sitkalidak area from 1959 through 1979 establishes it as one of Kodiak's most important fisheries.** In 15 of the 20 years catches of local pinks, chums, coho and kings exceeded 100,000 fish during the July 6th to 25th time period. In 1970, 1.2 million "non-sockeye" were caught in the area.

▶ **The Outer Sitkalidak fishery is particularly important to the village of Old Harbor.** The village is less than 10 miles from this area and the village fleet, currently about 20 permit holders, constantly fishes their "backyard". Old Harbor's economy is fishing. Forcing the local fleet out of the Outer Sitkalidak area will result in the lost use of fishing knowledge regarding tides and currents that made the Old Harbor fleet competitive in the area. Learning to be competitive in other areas is not easy. Old Harbor will suffer a disproportionate economic loss.

**The Outer Sitkalidak fishery is primarily a local stocks fishery.** From 1970 through 1994 pink salmon catches, (not counting chums, coho and kings), have exceed sockeye catches in all but one year, 1992. In 1991 -- a year Cook Inlet contends Kodiak was targeting Cook Inlet sockeye -- over 1 million local fish were captured in the area during the July 6th to July 25th time period!

✓ **Outer Sitkalidak is not an expanding fishery, effort in the area reflects abundance of local stocks.** Even in years of relatively low salmon abundance, in 1983 for example, 55 vessels made 254 landings. This was not exceeded until the 1,000,000+ local stock catch in 1991 when 109 vessels made 409 landings. In 1993, with a local stock catch in excess of 500,000 fish, 106 vessels made 439 landings. In 1994, with limited local stocks, 66 vessels made 181 landings. Fishing time in the area has remained almost constant since 1986.

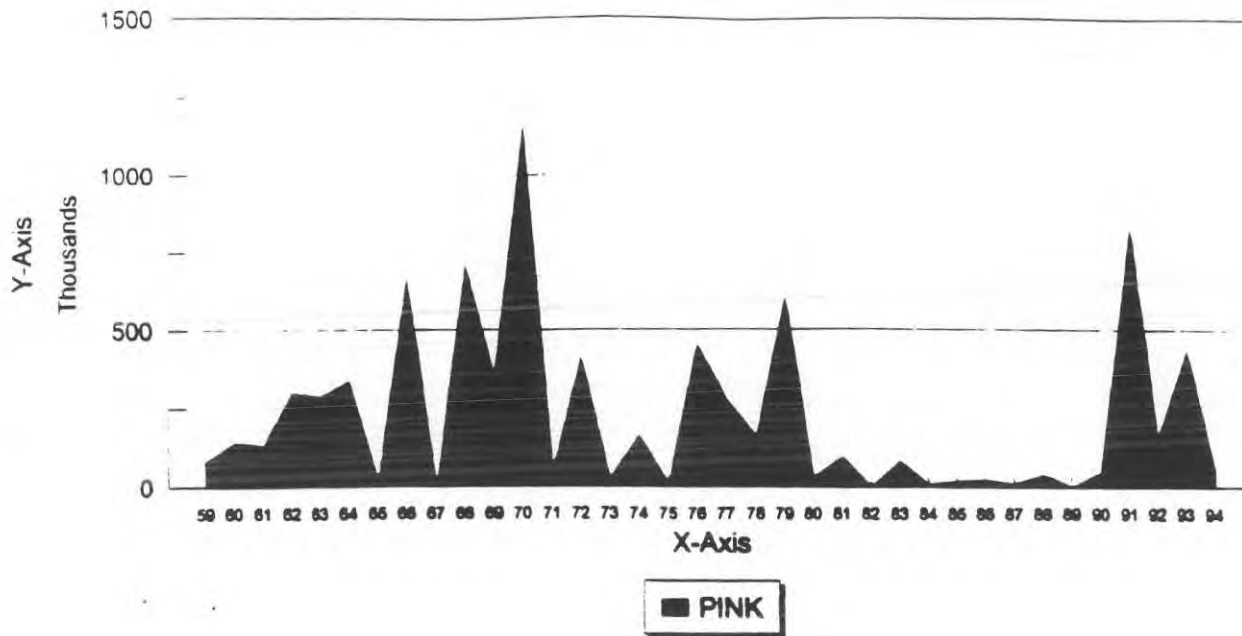
▶ **1992 is a single year anomaly in Outer Sitkalidak.** The harvest of over 300,000 local pinks, chums, coho and kings, as well as 85,000 local sockeye, justified the normal fishing openings in the area. Cook Inlet enjoyed the second largest salmon return in the history of their fishery. Consequently, a larger percentage of this run turned south along Kodiak Island and became available to Kodiak fishermen. In addition, the North Shelikof plan closed vast fishing areas in the Shelikof Strait and much of the fleet in that area moved to the Outer Sitkalidak section. These factors did not occur in 1993 and 1994.





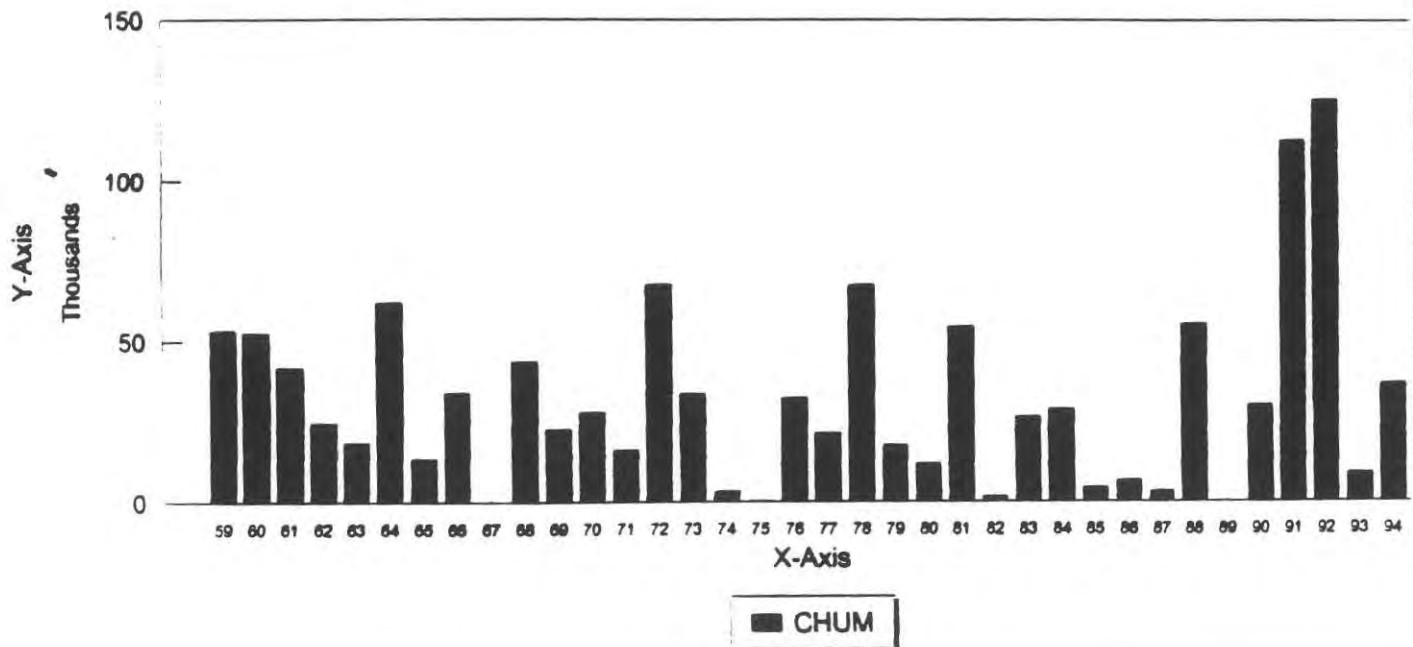
## SITKALIDAK SECTION, JULY 6-25

1959-1994



## SITKALIDAK SECTION JULY 6-25

1959 -1994





| A  | A                                   | B           | C | D           | E           | F |
|----|-------------------------------------|-------------|---|-------------|-------------|---|
| 1  | <b>SITKALIDAK SECTION JULY 6-25</b> |             |   |             |             |   |
| 2  | <b>1970-1994</b>                    |             |   |             |             |   |
| 3  | <b>YEAR</b>                         | <b>PINK</b> |   | <b>YEAR</b> | <b>CHUM</b> |   |
| 4  | 59                                  | 79,882      |   | 59          | 53,190      |   |
| 5  | 60                                  | 139,012     |   | 60          | 52,513      |   |
| 6  | 61                                  | 128,926     |   | 61          | 41,549      |   |
| 7  | 62                                  | 297,682     |   | 62          | 24,328      |   |
| 8  | 63                                  | 285,472     |   | 63          | 18,317      |   |
| 9  | 64                                  | 337,076     |   | 64          | 61,999      |   |
| 10 | 65                                  | 21,690      |   | 65          | 13,407      |   |
| 11 | 66                                  | 659,330     |   | 66          | 33,859      |   |
| 12 | 67                                  | 0           |   | 67          | 0           |   |
| 13 | 68                                  | 708,497     |   | 68          | 43,633      |   |
| 14 | 69                                  | 348,865     |   | 69          | 22,497      |   |
| 15 | 70                                  | 1,156,913   |   | 70          | 27,720      |   |
| 16 | 71                                  | 54,480      |   | 71          | 16,231      |   |
| 17 | 72                                  | 410,028     |   | 72          | 67,475      |   |
| 18 | 73                                  | 27,312      |   | 73          | 33,483      |   |
| 19 | 74                                  | 160,692     |   | 74          | 3,208       |   |
| 20 | 75                                  | 9,318       |   | 75          | 164         |   |
| 21 | 76                                  | 448,283     |   | 76          | 32,140      |   |
| 22 | 77                                  | 274,990     |   | 77          | 21,193      |   |
| 23 | 78                                  | 158,882     |   | 78          | 67,243      |   |
| 24 | 79                                  | 601,604     |   | 79          | 17,522      |   |
| 25 | 80                                  | 32,594      |   | 80          | 11,865      |   |
| 26 | 81                                  | 94,353      |   | 81          | 54,178      |   |
| 27 | 82                                  | 449         |   | 82          | 1,525       |   |
| 28 | 83                                  | 80,420      |   | 83          | 26,175      |   |
| 29 | 84                                  | 7,970       |   | 84          | 28,640      |   |
| 30 | 85                                  | 18,604      |   | 85          | 4,338       |   |
| 31 | 86                                  | 20,969      |   | 86          | 6,571       |   |
| 32 | 87                                  | 9,775       |   | 87          | 3,212       |   |
| 33 | 88                                  | 37,811      |   | 88          | 55,139      |   |
| 34 | 89                                  | 0           |   | 89          | 0           |   |
| 35 | 90                                  | 45,860      |   | 90          | 30,015      |   |
| 36 | 91                                  | 830,884     |   | 91          | 112,466     |   |
| 37 | 92                                  | 151,741     |   | 92          | 125,274     |   |
| 38 | 93                                  | 432,587     |   | 93          | 8,806       |   |
| 39 | 94                                  | 53,465      |   | 94          | 36,774      |   |



## SITKALIDAK SECTION, JULY 6-25.

| YEAR | LANDINGS | CHINOOK | SOCKEYE | COHO   | PINK      | CHUM    |
|------|----------|---------|---------|--------|-----------|---------|
| 70   | 641      | 31      | 6,883   | 404    | 1,156,913 | 27,720  |
| 71   | 473      | 209     | 11,527  | 140    | 54,480    | 16,231  |
| 72   | 730      | 99      | 3,742   | 660    | 410,028   | 67,475  |
| 73   | 326      | 253     | 1,415   | 199    | 27,312    | 33,483  |
| 74   | 157      | 65      | 1,450   | 36     | 160,692   | 3,208   |
| 75   | 32       | 1       | 420     | 1      | 9,318     | 164     |
| 76   | 427      | 59      | 6,520   | 625    | 448,283   | 32,140  |
| 77   | 215      | 8       | 1,241   | 74     | 274,990   | 21,931  |
| 78   | 398      | 93      | 2,853   | 50     | 158,882   | 67,243  |
| 79   | 601      | 181     | 19,437  | 2,689  | 601,604   | 17,522  |
| 80   | 44       | 5       | 771     | 10     | 32,594    | 11,865  |
| 81   | 195      | 20      | 3,460   | 639    | 94,353    | 54,178  |
| 82   | 3        | 2       | 718     | 105    | 449       | 1,525   |
| 83   | 254      | 56      | 3,618   | 528    | 80,420    | 26,175  |
| 84   | 82       | 15      | 1,851   | 39     | 7,970     | 28,641  |
| 85   | 82       | 43      | 7,711   | 256    | 18,604    | 4,338   |
| 86   | 65       | 24      | 11,643  | 269    | 20,969    | 6,571   |
| 87   | 52       | 63      | 5,759   | 266    | 9,775     | 3,212   |
| 88   | 186      | 196     | 49,165  | 5,816  | 37,811    | 55,139  |
| 89   | 0        | 0       | 0       | 0      | 0         | 0       |
| 90   | 231      | 1,048   | 54,871  | 13,980 | 45,860    | 30,015  |
| 91   | 486      | 2,535   | 174,666 | 30,408 | 830,884   | 112,466 |
| 92   | 526      | 812     | 429,642 | 27,456 | 151,741   | 125,274 |
| 93   | 439      | 4,149   | 114,681 | 29,631 | 432,587   | 8,806   |
| 94   | 181      | 363     | 36,117  | 11,656 | 53,465    | 36,774  |

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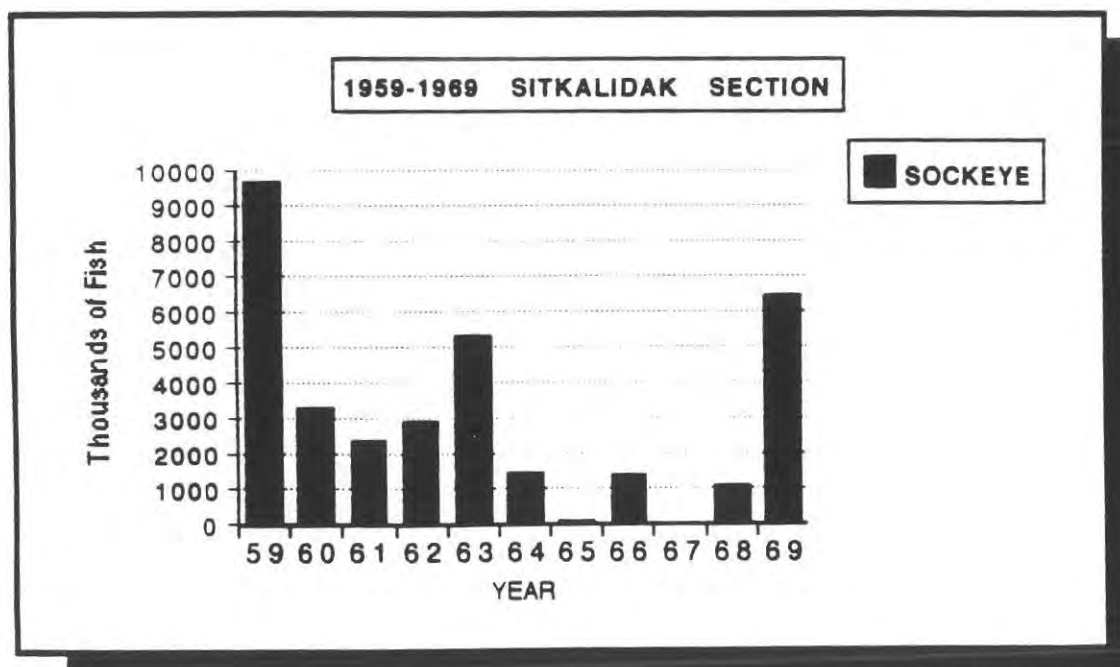
STAT AREA

**258-10 - 258-50**  
**Sitkalidak Section**

1959 - 1969

July 6-25

| YEAR | LANDINGS | KINGS | REDS | COHO | PINK   | CHUM  |
|------|----------|-------|------|------|--------|-------|
| 1959 | 570      | 102   | 9697 | 684  | 79882  | 53190 |
| 1960 | 364      | 49    | 3298 | 1344 | 139012 | 52513 |
| 1961 | 349      | 45    | 2392 | 762  | 128926 | 41549 |
| 1962 | 298      | 17    | 2897 | 1017 | 297682 | 24328 |
| 1963 | 425      | 28    | 5285 | 1671 | 285472 | 18317 |
| 1964 | 311      | 142   | 1490 | 2240 | 337076 | 61999 |
| 1965 | 35       | 8     | 85   | 420  | 21690  | 13407 |
| 1966 | 361      | 16    | 1369 | 903  | 659330 | 33859 |
| 1967 | 0        | 0     | 0    | 0    | 0      | 0     |
| 1968 | 344      | 67    | 1060 | 887  | 708497 | 43633 |
| 1969 | 626      | 103   | 6472 | 1090 | 348865 | 22497 |



Source: Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994

# HISTORIC SOCKEYE CATCHES

1978 - 1994

JULY 6-25

Used to calculate a trigger for zone closures using compromise time period



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| YEAR                 | SITKALIDAK SECTION | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|----------------------|--------------------|---------------------|--------------------------|
| 1978                 | 2853               | 4564                | 2419                     |
| 1979                 | 19437              | CLOSED              | 1                        |
| 1980                 | STRIKE             | STRIKE              | STRIKE                   |
| 1981                 | STRIKE             | CLOSED              | STRIKE                   |
| 1982                 | STRIKE             | STRIKE              | STRIKE                   |
| 1983                 | 3618               | CLOSED              | 0                        |
| 1984                 | 1851               | 21889               | 55                       |
| 1985                 | 7711               | CLOSED              | 16                       |
| 1986                 | 11643              | 77894               | 2093                     |
| 1987                 | 5759               | 10487               | 15824                    |
| 1988                 | 49165              | 187230              | 27936                    |
| 1989                 | CLOSED             | CLOSED              | CLOSED                   |
| 1990                 | 54871              | CLOSED              | 23276                    |
| 1991                 | 174666             | 182063              | 1570                     |
| 1992                 | 429642             | 349691              | 98051                    |
| 1993                 | 114681             | CLOSED              | 18291                    |
| 1994                 | 36117              | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b> | <b>912014</b>      | <b>848510</b>       | <b>227475</b>            |
| <b>TOTAL YEARS</b>   | <b>13</b>          | <b>8</b>            | <b>13</b>                |
| <b>AVERAGE</b>       | <b>70155</b>       | <b>106064</b>       | <b>17498</b>             |

Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group

# **SOCKEYE CATCHES**

1978 - 1987

JULY 6-25

Corrected averages - strikes and closed years



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| YEAR                       | SITKALIDAK SECTION        | HALIBUT BAY SECTION        | KATMAI-ALINCHAK SECTIONS  |
|----------------------------|---------------------------|----------------------------|---------------------------|
| 1978                       | 2853                      | 4564                       | 2419                      |
| 1979                       | 19437                     | CLOSED                     | 1                         |
| 1980                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1981                       | STRIKE                    | CLOSED & STRIKE            | STRIKE                    |
| 1982                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1983                       | 3618                      | CLOSED                     | 0                         |
| 1984                       | 1851                      | 21889                      | 55                        |
| 1985                       | 7711                      | CLOSED                     | 16                        |
| 1986                       | 11643                     | 77894                      | 2093                      |
| 1987                       | 5759                      | 10487                      | 15824                     |
| <b>TOTAL SOCKEYE CATCH</b> | <b>52872</b>              | <b>114834</b>              | <b>20408</b>              |
| <b>TOTAL YEARS</b>         | <b>7</b>                  | <b>4</b>                   | <b>7</b>                  |
| <b>AVERAGE</b>             | <b>7553</b>               | <b>28708</b>               | <b>2915</b>               |
| <b>RUN INCREASES</b>       | <b>7553 X 3.2 = 24170</b> | <b>28708 X 3.2 = 91867</b> | <b>29408 X 3.2 = 9329</b> |

Catch information numbers are from most recent ADF & G tables  
Dec. 1994 Kodiak Salmon Work Group



# HISTORIC SOCKEYE CATCHES

1985 - 1994

July 6-25

Used to calculate as a proposed trigger for zone closures



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| YEAR                 | SITKALIDAK SECTION | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|----------------------|--------------------|---------------------|--------------------------|
| 1985                 | 7711               | CLOSED              | 16                       |
| 1986                 | 11643              | 77894               | 2093                     |
| 1987                 | 5759               | 10487               | 15824                    |
| 1988                 | 49165              | 187230              | 27936                    |
| 1989                 | CLOSED             | CLOSED              | CLOSED                   |
| 1990                 | 54871              | CLOSED              | 23276                    |
| 1991                 | 174666             | 182063              | 1570                     |
| 1992                 | 429642             | 349691              | 98051                    |
| 1993                 | 114681             | CLOSED              | 18291                    |
| 1994                 | 36117              | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b> | <b>884255</b>      | <b>822057</b>       | <b>225000</b>            |
| <b>TOTAL YEARS</b>   | <b>9</b>           | <b>6</b>            | <b>9</b>                 |
| <b>AVERAGE</b>       | <b>98250</b>       | <b>137009</b>       | <b>25000</b>             |

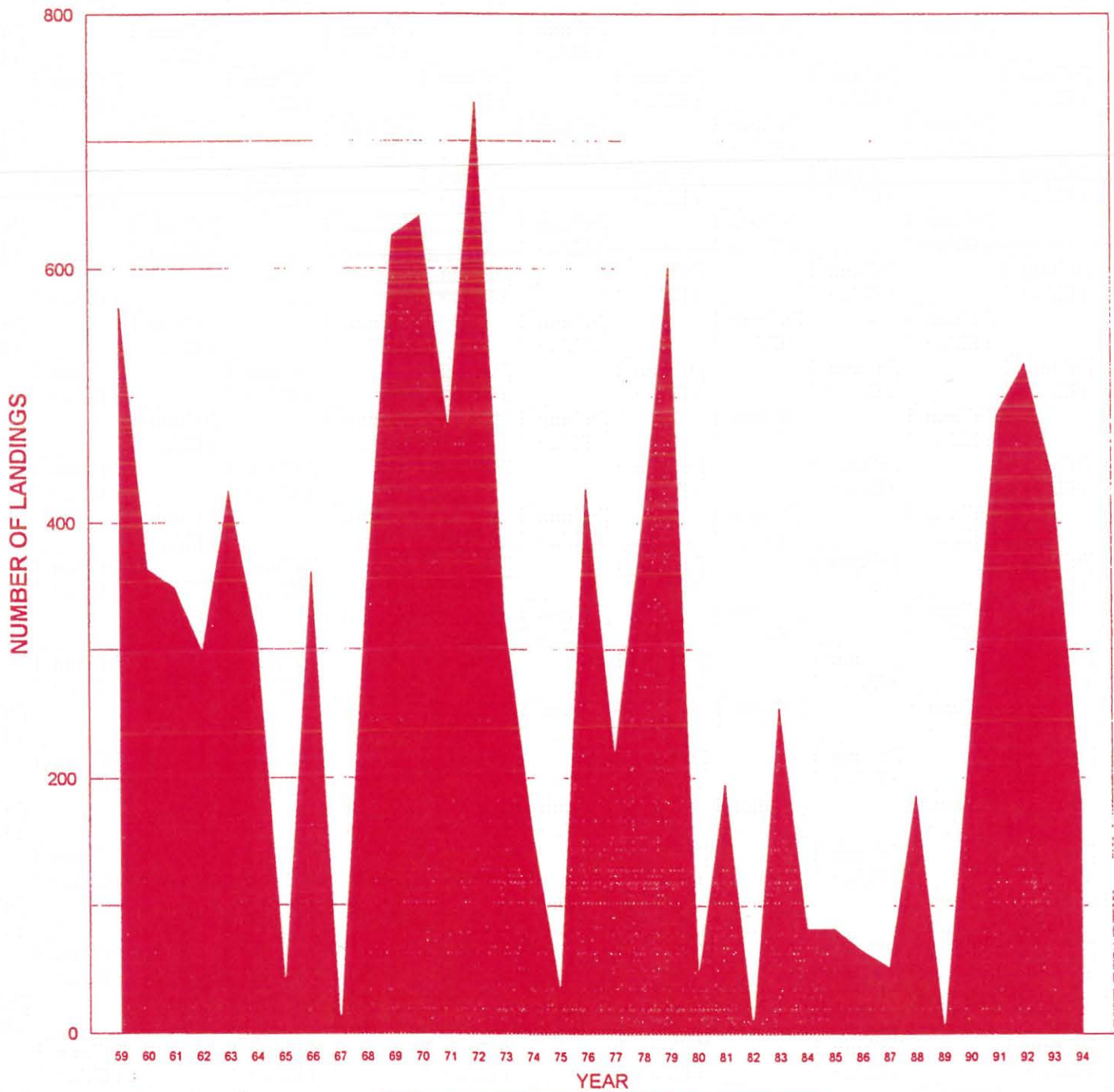
132

Source: Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994



## Sitkalidak Section 1959-1994

Landings July 6-25

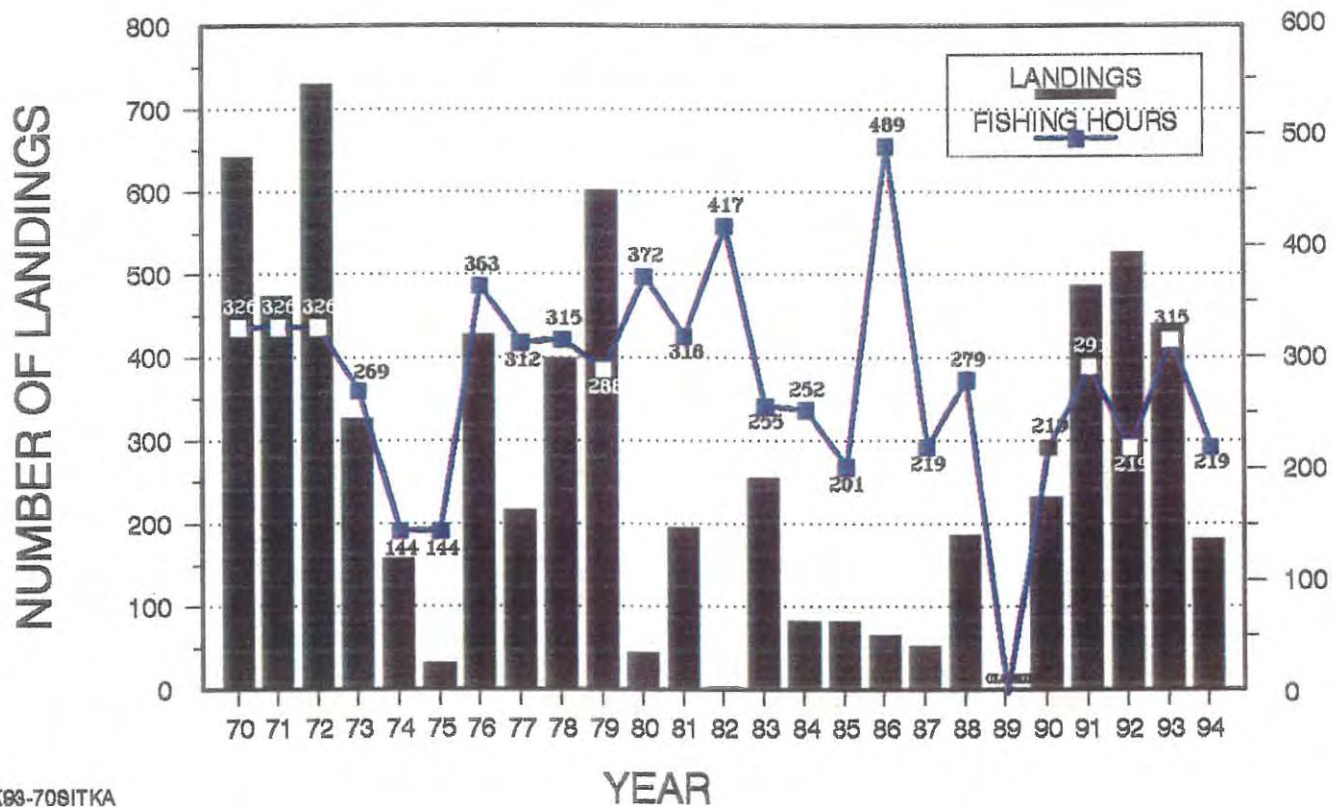
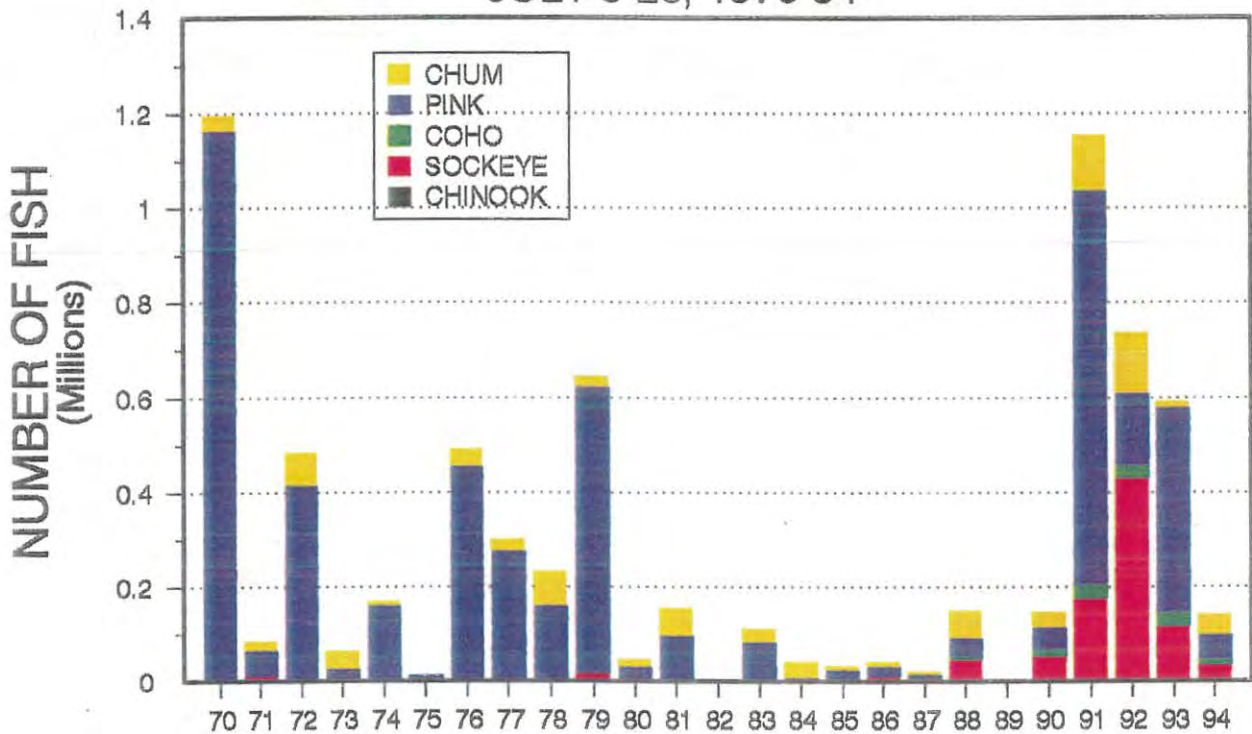


■ TOTAL LANDINGS JULY 6-25





# KODIAK MANAGEMENT AREA SITKALIDAK SECTION JULY 6-25, 1970-94







## **KATMAI\ALINCHAK**

- ▶ **The Katmai\Alinchak fishery developed over 30 years ago during the late 1950's.** The area was fished prior to this, for example between 1909 and 1914 between 33,000 and 84,000 sockeye were annually captured in Kafia Bay, but really didn't have a focused effort until Kodiak's sockeye stocks begin to decline.
- ▶ **The Katmai\Alinchak fishery is a remote cape fishery.** Most of the fishery is at the northern end of the management section at Cape Iktugitak or at the southern end at Cape Kekurnoi. There are some indentations in the coast line at Katmai Bay and Alinchak Bay, however, all of this area is shallow with extensive mud flats, shoals and reefs. It will not accommodate a purse seine.
- ▶ **Katmai\Alinchak is a local stock fishery.** In 1962 almost 300,00 local pinks and chums were harvested and in 1964 over 200,000 local "non-sockeye" were captured. Both of these years had over 90 landings. Pink and chum harvests in the area are sporadic because of the short shallow streams which scower easily. Note: fishing time in the area has remained almost constant since 1983.
- ▶ **A small portion of the Kodiak fleet is "resident" on the mainland.** During the 1960's and 1970's, these fishermen stayed over in the mainland districts and learned how and where to fish. Although they can fish elsewhere within the Kodiak Management Area, they have made mainland their "niche" for earning a living. Additional closures on the mainland will eliminate their fishery.
- ▶ **Catch data during the 1970's and 1980's does not accurately reflect the actual effort in the area.** In many of these years Kodiak processors didn't provide tenders to the mainland. Fishermen either delivered their fish to tenders anchored in more protected areas or ran their fish across to Kodiak Island. In either case, the fish were reported as being caught where they were delivered.
- ▶ **The North Shelikof Management Plan has had a substantial impact on the Katmai\Alinchak area.** Some of the "mainland fleet" is annually displaced by the North Shelikof Management plan and moves south to fish in this area. This does not represent a "new" or an "expanding" fishery. It simply reflects the regulatory movement of the Kodiak fleet.
- ▶ **1992 is a single year anomaly in Katmai\Alinchak.** The harvest of over 25,000 local pinks, chums, coho and kings justified the normal 171 fishing time. Cook Inlet enjoyed the second largest salmon return in the history of the fishery. Consequently, a larger portion of the fish were available in the Kodiak Management Area.
- ▶ **Preliminary scale analysis indicates that most of the sockeye captured in the Katmai\Alinchak area are not Cook Inlet fish.**

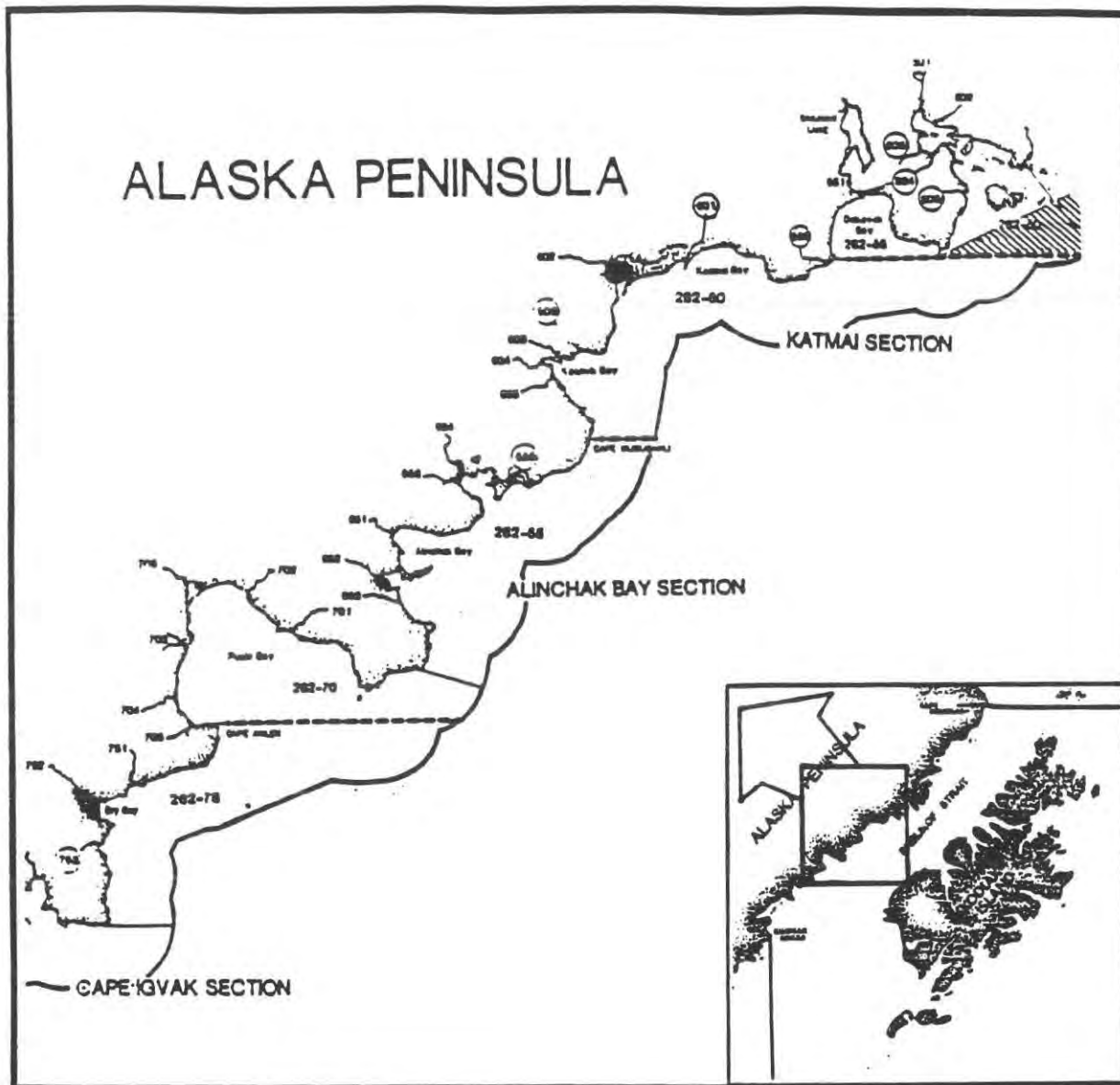


Figure 17. Map of Alinchak and Katmai Bay Sections.



**KATMAI & ALINCHAK SECTIONS, JULY 6-25.**

| YEAR | LANDINGS | CHINOOK | SOCKEYE | COHO  | PINK   | CHUM   |
|------|----------|---------|---------|-------|--------|--------|
| 70   | 0        | 0       | 0       | 0     | 0      | 0      |
| 71   | 0        | 0       | 0       | 0     | 0      | 0      |
| 72   | 2        | 0       | 0       | 0     | 2,429  | 212    |
| 73   | 3        | 1       | 265     | 0     | 427    | 158    |
| 74   | 1        | 0       | 301     | 0     | 0      | 0      |
| 75   | 0        | 0       | 0       | 0     | 0      | 0      |
| 76   | 0        | 0       | 0       | 0     | 0      | 0      |
| 77   | 0        | 0       | 0       | 0     | 0      | 0      |
| 78   | 17       | 1       | 2,419   | 0     | 102    | 61     |
| 79   | 2        | 0       | 1       | 0     | 3,671  | 148    |
| 80   | 0        | 0       | 0       | 0     | 0      | 0      |
| 81   | 9        | 0       | 354     | 0     | 1,900  | 7,937  |
| 82   | 1        | 0       | 806     | 0     | 0      | 0      |
| 83   | 0        | 0       | 0       | 0     | 0      | 0      |
| 84   | 18       | 1       | 55      | 0     | 18,239 | 24,218 |
| 85   | 4        | 1       | 16      | 4     | 451    | 2,311  |
| 86   | 3        | 18      | 2,093   | 40    | 329    | 638    |
| 87   | 69       | 745     | 15,824  | 2,423 | 7,689  | 4,486  |
| 88   | 53       | 385     | 27,936  | 118   | 5,417  | 12,667 |
| 89   | 0        | 0       | 0       | 0     | 0      | 0      |
| 90   | 34       | 106     | 23,276  | 3,266 | 14,071 | 7,076  |
| 91   | 13       | 76      | 1,570   | 22    | 1,369  | 102    |
| 92   | 85       | 440     | 98,051  | 1,676 | 13,775 | 8,792  |
| 93   | 36       | 278     | 18,291  | 563   | 7,945  | 1,289  |
| 94   | 81       | 394     | 37,943  | 1,182 | 16,288 | 10,915 |

(hh)



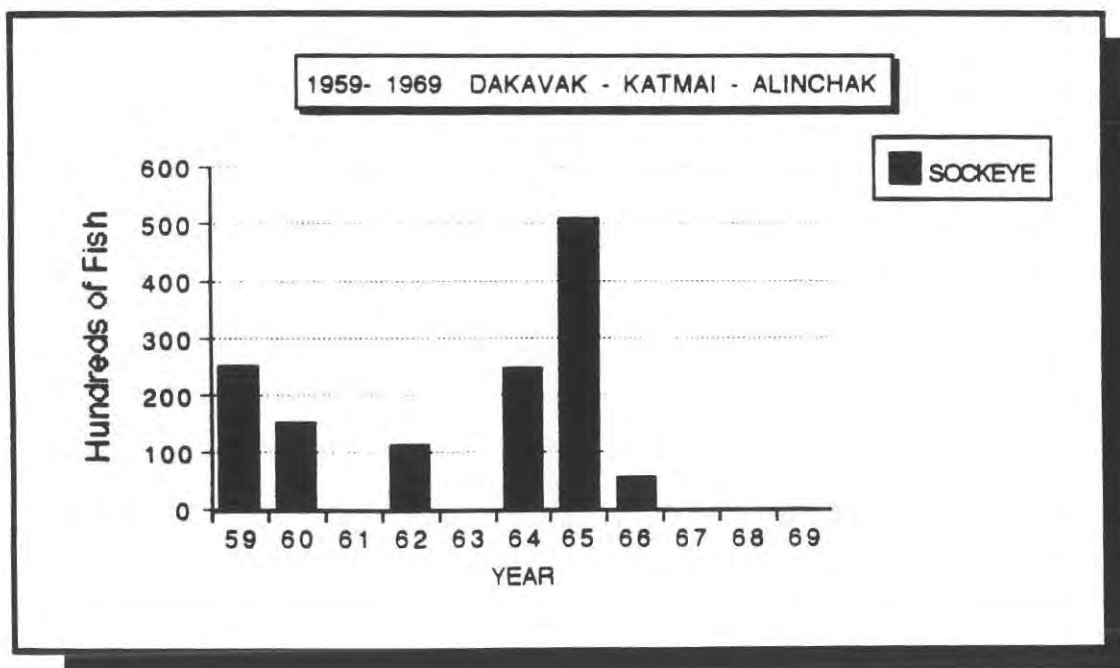
STAT AREA

**Dakavak • Katmai Bay •  
Alinchak**  
**262-5 262-6**

**1959 - 1969**

**July 6-25**

| YEAR | LANDINGS | KINGS | REDS | COHO | PINK   | CHUM  |
|------|----------|-------|------|------|--------|-------|
| 1959 | 14       | 4     | 254  | 7    | 2027   | 706   |
| 1960 | 5        | 2     | 153  | 0    | 3004   | 400   |
| 1961 | 2        | 0     | 0    | 0    | 2315   | 12    |
| 1962 | 92       | 3     | 115  | 5    | 281923 | 8815  |
| 1963 | 0        | 0     | 0    | 0    | 0      | 0     |
| 1964 | 100      | 6     | 248  | 29   | 196685 | 10130 |
| 1965 | 1        | 0     | 511  | 0    | 1541   | 0     |
| 1966 | 45       | 1     | 57   | 0    | 29491  | 1484  |
| 1967 | 0        | 0     | 0    | 0    | 0      | 0     |
| 1968 | 1        | 0     | 0    | 0    | 133    | 108   |
| 1969 | 0        | 0     | 0    | 0    | 0      | 0     |



Source: Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994



# HISTORIC SOCKEYE CATCHES

1978 - 1994 JULY 6-25

Used to calculate a trigger for zone closures using compromise time period



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| YEAR                 | SITKALIDAK SECTION | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|----------------------|--------------------|---------------------|--------------------------|
| 1978                 | 2853               | 4564                | 2419                     |
| 1979                 | 19437              | CLOSED              | 1                        |
| 1980                 | STRIKE             | STRIKE              | STRIKE                   |
| 1981                 | STRIKE             | CLOSED              | STRIKE                   |
| 1982                 | STRIKE             | STRIKE              | STRIKE                   |
| 1983                 | 3618               | CLOSED              | 0                        |
| 1984                 | 1851               | 21889               | 55                       |
| 1985                 | 7711               | CLOSED              | 16                       |
| 1986                 | 11643              | 77894               | 2093                     |
| 1987                 | 5759               | 10487               | 15824                    |
| 1988                 | 49165              | 187230              | 27936                    |
| 1989                 | CLOSED             | CLOSED              | CLOSED                   |
| 1990                 | 54871              | CLOSED              | 23276                    |
| 1991                 | 174666             | 182063              | 1570                     |
| 1992                 | 429642             | 349691              | 98051                    |
| 1993                 | 114681             | CLOSED              | 18291                    |
| 1994                 | 36117              | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b> | <b>912014</b>      | <b>848510</b>       | <b>227475</b>            |
| <b>TOTAL YEARS</b>   | <b>13</b>          | <b>8</b>            | <b>13</b>                |
| <b>AVERAGE</b>       | <b>70155</b>       | <b>106064</b>       | <b>17498</b>             |

Source: Kodiak Area Management Reports  
by Kodiak Salmon Work Group

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# SOCKEYE CATCHES

1978 - 1987 JULY 6-25

Corrected averages - strikes and closed years



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| YEAR                       | SITKALIDAK SECTION        | HALIBUT BAY SECTION        | KATMAI-ALINCHAK SECTIONS  |
|----------------------------|---------------------------|----------------------------|---------------------------|
| 1978                       | 2853                      | 4564                       | 2419                      |
| 1979                       | 19437                     | CLOSED                     | 1                         |
| 1980                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1981                       | STRIKE                    | CLOSED & STRIKE            | STRIKE                    |
| 1982                       | STRIKE                    | STRIKE                     | STRIKE                    |
| 1983                       | 3618                      | CLOSED                     | 0                         |
| 1984                       | 1851                      | 21889                      | 55                        |
| 1985                       | 7711                      | CLOSED                     | 16                        |
| 1986                       | 11643                     | 77894                      | 2093                      |
| 1987                       | 5759                      | 10487                      | 15824                     |
| <b>TOTAL SOCKEYE CATCH</b> | <b>52872</b>              | <b>114834</b>              | <b>20408</b>              |
| <b>TOTAL YEARS</b>         | <b>7</b>                  | <b>4</b>                   | <b>7</b>                  |
| <b>AVERAGE</b>             | <b>7553</b>               | <b>28708</b>               | <b>2915</b>               |
| <b>RUN INCREASES</b>       | <b>7553 X 3.2 = 24170</b> | <b>28708 X 3.2 = 91867</b> | <b>29408 X 3.2 = 9329</b> |

Catch information numbers are from most recent ADF & G tables  
Dec. 1994 Kodiak Salmon Work Group

# HISTORIC SOCKEYE CATCHES

1985 - 1994 July 6-25

Used to calculate as a proposed trigger for zone closures

| YEAR                 | SITKALIDAK SECTION | HALIBUT BAY SECTION | KATMAI-ALINCHAK SECTIONS |
|----------------------|--------------------|---------------------|--------------------------|
| 1985                 | 7711               | CLOSED              | 16                       |
| 1986                 | 11643              | 77894               | 2093                     |
| 1987                 | 5759               | 10487               | 15824                    |
| 1988                 | 49165              | 187230              | 27936                    |
| 1989                 | CLOSED             | CLOSED              | CLOSED                   |
| 1990                 | 54871              | CLOSED              | 23276                    |
| 1991                 | 174666             | 182063              | 1570                     |
| 1992                 | 429642             | 349691              | 98051                    |
| 1993                 | 114681             | CLOSED              | 18291                    |
| 1994                 | 36117              | 14692               | 37943                    |
| <b>TOTAL SOCKEYE</b> | <b>884255</b>      | <b>822057</b>       | <b>225000</b>            |
| <b>TOTAL YEARS</b>   | <b>9</b>           | <b>6</b>            | <b>9</b>                 |
| <b>AVERAGE</b>       | <b>98250</b>       | <b>137009</b>       | <b>25000</b>             |

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Source Kodiak Area Management Reports  
by Kodiak Salmon Work Group 1994





# KODIAK MANAGEMENT AREA KATMAI & ALINCHAK SECTIONS JULY 6-25, 1970-94

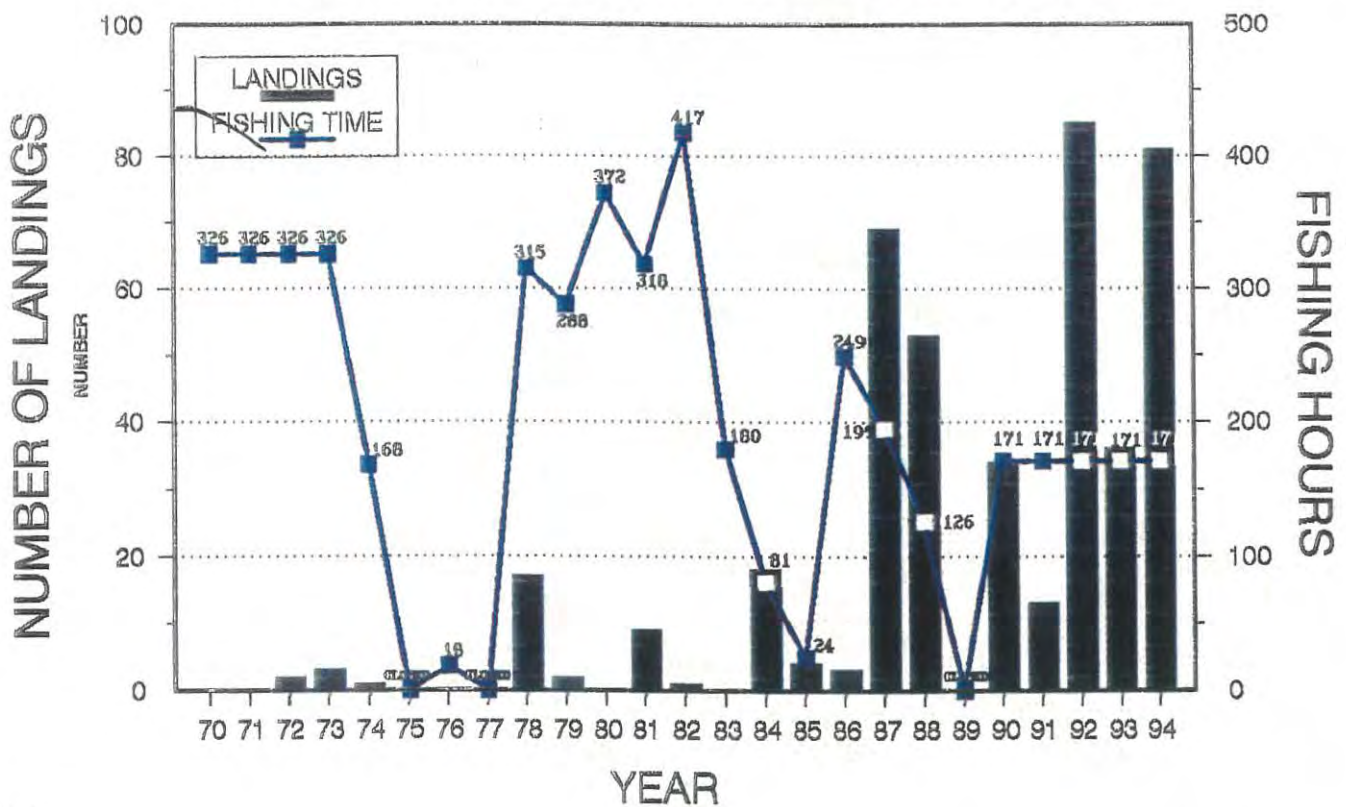
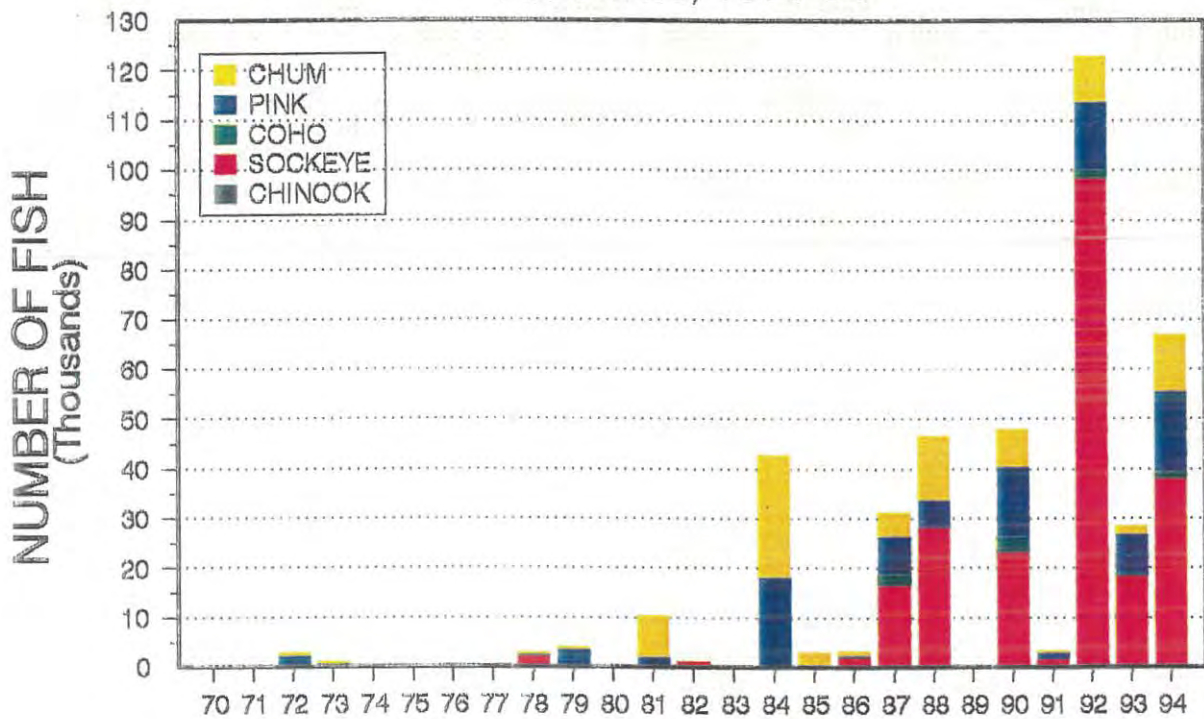


Table 7. The Sitkalidak and Katmai/Alinchak Section's sockeye salmon commercial catch apportioned to stock or stock of origin, by week, 1994.



| Catch           |         |         | Commercial Catch Assigned by Stock |                |        |                |            |                |         |                |        |                |         |                |                         |                |
|-----------------|---------|---------|------------------------------------|----------------|--------|----------------|------------|----------------|---------|----------------|--------|----------------|---------|----------------|-------------------------|----------------|
| Area            | Date    | Numbers | Upper Station                      |                | Karluk |                | Cook Inlet |                | Chignik |                | Frazer |                | Afognak |                | Unassigned <sup>a</sup> |                |
|                 |         |         | No.                                | % <sup>b</sup> | No.    | % <sup>b</sup> | No.        | % <sup>b</sup> | No.     | % <sup>b</sup> | No.    | % <sup>b</sup> | No.     | % <sup>b</sup> | No.                     | % <sup>b</sup> |
| Sitkalidak      | 7/5-11  | 17,209  | 605                                | 4.8            | 305    | 2.4            | 1,627      | 12.9           | 4,702   | 37.2           | 1,473  | 11.7           | 3,914   | 31.0           | 4,583                   | 26.6           |
|                 | 7/12-18 | 15,963  | 420                                | 3.4            | 223    | 1.8            | 4,807      | 38.9           | 4,115   | 33.2           | 1,505  | 12.2           | 1,295   | 10.5           | 3,598                   | 22.5           |
|                 | 7/19-25 | 2,913   | 47                                 | 2.4            | 126    | 6.5            | 945        | 49.0           | 634     | 32.9           | 110    | 5.7            | 67      | 3.5            | 984                     | 33.8           |
| Katmai/Alinchak | 7/5-11  | 26,550  | 279                                | 1.4            | 668    | 3.2            | 1,792      | 8.7            | 8,564   | 41.6           | 2,127  | 10.3           | 7,146   | 34.8           | 5,974                   | 22.5           |

- <sup>a</sup> Commercial catch assignment based on age-1.2, -2.2, and -2.3 fish in proportion to the age-1.3 component of the catch which was completed using estimates derived from SPA.
- <sup>b</sup> Each stocks contribution percent was calculated after subtracting the unassigned catch component from the total weekly catch.
- <sup>c</sup> Unassigned represents both local and non-local stock contributions.



| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total          | 0       | 0        | 0                 | 0                 | 0                 | 0                 | 0              | 0              | 0              | 0              | 0              | 0              |



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Year 1984

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/15           | 2       | 3        | 0                 | 0                 | 0                 | 0                 | 0              | 0              | 1162           | 4360           | 5402           | 47340          |
| 7/17           | 1       | 1        | 1                 | 25                | 15                | 85                | 0              | 0              | 148            | 469            | 648            | 4784           |
| 7/21           | 2       | 2        | 0                 | 0                 | 0                 | 0                 | 0              | 0              | 1090           | 3860           | 4480           | 38620          |
| 7/22           | 1       | 1        | 0                 | 0                 | 20                | 100               | 0              | 0              | 588            | 2236           | 675            | 6081           |
| 7/24           | 1       | 6        | 0                 | 0                 | 20                | 100               | 0              | 0              | 8944           | 33519          | 7401           | 59873          |
| 7/25           | 2       | 5        | 0                 | 0                 | 0                 | 0                 | 0              | 0              | 6307           | 23103          | 5612           | 45684          |
| Total          | 5       | 18       | 1                 | 25                | 55                | 285               | 0              | 0              | 18239          | 67547          | 24218          | 202382         |

Year 1985

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/24           | 3       | 4        | 1                 | 34                | 16                | 65                | 4              | 40             | 451            | 1751           | 2311           | 21537          |
| Total          | 3       | 4        | 1                 | 34                | 16                | 65                | 4              | 40             | 451            | 1751           | 2311           | 21537          |

Year 1986

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/09           | 3       | 3        | 18                | 53                | 2093              | 13311             | 40             | 244            | 329            | 1106           | 638            | 4697           |
| Total          | 3       | 3        | 18                | 53                | 2093              | 13311             | 40             | 244            | 329            | 1106           | 638            | 4697           |

Year 1987

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/08           | 12      | 13       | 49                | 323               | 2615              | 16081             | 3              | 19             | 735            | 2501           | 963            | 6594           |
| 7/09           | 24      | 41       | 620               | 2234              | 7749              | 49364             | 236            | 1217           | 1990           | 6441           | 1530           | 11017          |
| 7/20           | 4       | 4        | 14                | 124               | 568               | 3671              | 383            | 2486           | 956            | 3358           | 363            | 2719           |
| 7/21           | 6       | 6        | 57                | 513               | 2234              | 14673             | 1206           | 7765           | 2598           | 9259           | 736            | 4982           |
| 7/22           | 5       | 5        | 5                 | 84                | 2658              | 18323             | 595            | 3809           | 1410           | 4605           | 894            | 6429           |
| Total          | 26      | 69       | 745               | 3278              | 15824             | 102112            | 2423           | 15296          | 7689           | 26164          | 4486           | 31741          |

Year 1988

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/06           | 5       | 5        | 16                | 187               | 2125              | 13625             | 9              | 61             | 191            | 589            | 519            | 4659           |

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|       |    |    |     |      |       |        |     |     |      |       |       |        |
|-------|----|----|-----|------|-------|--------|-----|-----|------|-------|-------|--------|
| 7/07  | 7  | 7  |     | 539  | 94    | 0      | 1   | 69  |      |       |       |        |
| 7/08  | 7  | 7  |     | 870  | 854   | 44928  | 14  | 78  | 839  | 3615  | 3104  | 30252  |
| 7/09  | 7  | 7  | 51  | 290  | 7615  | 56411  | 33  | 228 | 1206 | 4397  | 2423  |        |
| 7/11  | 6  | 6  | 14  | 865  | 3156  | 21492  | 11  | 88  | 567  | 2031  | 981   |        |
| 7/12  | 9  | 9  | 114 | 39   | 3294  | 23288  | 15  | 155 | 430  | 1505  | 840   |        |
| 7/13  | 4  | 4  | 2   | 0    | 868   | 6440   | 0   | 0   | 77   | 331   | 286   |        |
| 7/14  | 2  | 2  | 0   | 0    | 261   | 1700   | 8   | 56  | 50   | 190   | 110   |        |
| 7/15  | 1  | 1  | 0   | 0    | 793   | 6371   | 14  | 111 | 123  | 469   | 154   | 1460   |
| 7/16  | 1  | 1  | 40  | 603  | 99    | 717    | 3   | 24  | 120  | 487   | 1286  | 14065  |
| 7/18  | 2  | 2  | 2   | 26   | 707   | 4649   | 5   | 45  | 122  | 472   | 117   | 924    |
| 7/19  | 1  | 2  | 0   | 0    | 4     | 22     | 0   | 0   | 200  | 854   | 1026  | 10778  |
| 7/20  | 1  | 1  | 2   | 55   | 33    | 179    | 0   | 0   | 1287 | 5097  | 151   | 1538   |
| 7/25  | 1  | 1  | 0   | 0    |       |        |     |     |      |       |       |        |
| Total | 30 | 53 | 385 | 3330 | 27936 | 193154 | 118 | 885 | 5417 | 20692 | 12667 | 124347 |

Year 1989

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total          | 0       | 0        | 0                 | 0                 | 0                 | 0                 | 0              | 0              | 0              | 0              | 0              | 0              |

Year 1990

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/15           | 2       | 2        | 0                 | 0                 | 4011              | 16849             | 90             | 639            | 117            | 355            | 524            | 4723           |
| 7/20           | 11      | 11       | 6                 | 41                | 1962              | 12774             | 378            | 2719           | 2678           | 8046           | 2730           | 25015          |
| 7/21           | 9       | 9        | 69                | 564               | 8034              | 50780             | 959            | 5833           | 3665           | 11063          | 1240           | 9099           |
| 7/22           | 6       | 6        | 22                | 220               | 6761              | 42607             | 1233           | 8612           | 4961           | 10964          | 1600           | 12273          |
| 7/23           | 5       | 5        | 9                 | 88                | 2203              | 13403             | 556            | 3618           | 2050           | 5807           | 905            | 7624           |
| 7/24           | 1       | 1        | 0                 | 0                 | 305               | 1612              | 50             | 292            | 600            | 1653           | 77             | 527            |
| Total          | 26      | 34       | 106               | 913               | 23276             | 138025            | 3266           | 21713          | 14071          | 37888          | 7076           | 59261          |

Year 1991

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/06           | 5       | 5        | 6                 | 48                | 695               | 3583              | 9              | 41             | 518            | 1122           | 22             | 191            |
| 7/07           | 4       | 4        | 25                | 325               | 695               | 3677              | 8              | 55             | 680            | 1572           | 67             | 470            |
| 7/08           | 4       | 4        | 45                | 377               | 180               | 904               | 5              | 33             | 171            | 353            | 13             | 106            |
| Total          | 8       | 13       | 76                | 750               | 1570              | 8164              | 22             | 129            | 1369           | 3047           | 102            | 767            |

Year 1992

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook<br>Number | Chinook<br>Pounds | Sockeye<br>Number | Sockeye<br>Pounds | Coho<br>Number | Coho<br>Pounds | Pink<br>Number | Pink<br>Pounds | Chum<br>Number | Chum<br>Pounds |
|----------------|---------|----------|-------------------|-------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 7/06           | 8       | 8        | 71                | 866               | 2240              | 13681             | 7              | 57             | 679            | 2746           | 307            | 2606           |
| 7/07           | 18      | 20       | 194               | 2704              | 17547             | 112672            | 75             | 524            | 3140           | 13486          | 2721           | 21891          |
| 7/08           | 9       | 12       | 17                | 208               | 7967              | 50257             | 57             | 377            | 2119           | 7340           | 1157           | 9629           |
| 7/15           | 4       | 6        | 4                 | 18                | 11938             | 70845             | 67             | 423            | 1442           | 5798           | 377            | 2874           |
| 7/20           | 6       | 6        | 11                | 40                | 6967              | 44726             | 147            | 1281           | 615            | 2387           | 248            | 1885           |
| 7/21           | 12      | 12       | 20                | 344               | 16268             | 106427            | 319            | 2407           | 2110           | 8479           | 1277           | 9866           |
| 7/22           | 10      | 11       | 27                | 373               | 16848             | 102490            | 254            | 1870           | 1460           | 5707           | 1181           | 8523           |
| 7/23           | 9       | 9        | 96                | 883               | 18114             | 111065            | 640            | 3980           | 1604           | 6327           | 1448           | 10874          |
| 7/24           | 1       | 1        | 0                 | 0                 | 162               | 1000              | 110            | 726            | 606            | 2061           | 76             | 429            |



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Year 1993

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook |        | Sockeye |        | Coho   |        | Pink   |        | Chum   |        |
|----------------|---------|----------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
|                |         |          | Number  | Pounds | Number  | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 7/06           | 5       | 5        | 18      | 145    | 2074    | 11642  | 36     | 230    | 287    | 879    | 138    | 660    |
| 7/07           | 10      | 12       | 96      | 1088   | 3678    | 20283  | 56     | 330    | 691    | 2225   | 216    | 1262   |
| 7/08           | 3       | 3        | 40      | 491    | 358     | 1984   | 13     | 78     | 85     | 317    | 43     | 284    |
| 7/09           | 1       | 1        | 80      | 747    | 995     | 5802   | 33     | 197    | 370    | 990    | 77     | 488    |
| 7/10           | 2       | 2        | 3       | 50     | 1260    | 6951   | 0      | 0      | 200    | 585    | 76     | 356    |
| 7/13           | 1       | 1        | 2       | 17     | 965     | 5918   | 0      | 0      | 260    | 846    | 92     | 593    |
| 7/15           | 3       | 4        | 22      | 212    | 7287    | 41848  | 123    | 685    | 1187   | 3922   | 194    | 1038   |
| 7/21           | 6       | 6        | 16      | 123    | 1547    | 9101   | 275    | 1687   | 1465   | 4777   | 170    | 960    |
| 7/22           | 2       | 2        | 1       | 3      | 127     | 715    | 27     | 156    | 3400   | 10544  | 283    | 1937   |
| Total          | 17      | 36       | 278     | 2876   | 18291   | 104244 | 563    | 3363   | 7945   | 25085  | 1289   | 7578   |

Year 1994

Conditions used: monthday between 706 and 725 and gear in (1, 2) and StatArea between 26260 and 26270

| Catch<br>MM/DD | Permits | Landings | Chinook |        | Sockeye |        | Coho   |        | Pink   |        | Chum   |        |
|----------------|---------|----------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
|                |         |          | Number  | Pounds | Number  | Pounds | Number | Pounds | Number | Pounds | Number | Pounds |
| 7/06           | 8       | 8        | 38      | 392    | 4418    | 21247  | 15     | 121    | 1101   | 3587   | 916    | 6731   |
| 7/07           | 17      | 17       | 176     | 2233   | 9145    | 51884  | 74     | 483    | 3830   | 12637  | 3566   | 23009  |
| 7/08           | 13      | 16       | 90      | 1248   | 8055    | 44335  | 60     | 448    | 2853   | 9532   | 2211   | 17515  |
| 7/09           | 5       | 5        | 17      | 243    | 4520    | 23458  | 29     | 239    | 1555   | 4860   | 930    | 6828   |
| 7/10           | 1       | 1        | 1       | 15     | 412     | 2060   | 0      | 0      | 120    | 300    | 63     | 505    |
| 7/13           | 11      | 11       | 39      | 545    | 3614    | 21973  | 247    | 1540   | 1818   | 5552   | 1280   | 9674   |
| 7/14           | 10      | 10       | 14      | 200    | 4194    | 23855  | 442    | 3401   | 2766   | 8923   | 973    | 7929   |
| 7/15           | 3       | 3        | 6       | 67     | 1773    | 9301   | 126    | 873    | 1234   | 4498   | 338    | 2502   |
| 7/19           | 9       | 9        | 13      | 195    | 1686    | 9323   | 178    | 1319   | 1011   | 3195   | 638    | 4928   |
| 7/21           | 1       | 1        | 0       | 0      | 126     | 754    | 11     | 90     | 0      | 0      | 0      | 0      |
| Total          | 47      | 81       | 394     | 5138   | 37943   | 208190 | 1182   | 8514   | 16288  | 53084  | 10915  | 79621  |

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Appendix D.19. Estimated average weight of local (Kodiak) and UCI sockeye salmon and corresponding seine harvest stock composition estimates, July 6-25, based on average weight difference, for the Katmai and Alinchak Bay Sections (statistical areas 26260-26270), 1983-1994, except 1989.

| Year | Estimated Average Weight<br>(pounds) |       |            | Estimated<br>Non-local<br>Catch<br>Proportion (%) | Estimated Stock Composition<br>(Number of Fish) |        |            | Catch<br>Total |
|------|--------------------------------------|-------|------------|---------------------------------------------------|-------------------------------------------------|--------|------------|----------------|
|      | UCI                                  | Local | Difference |                                                   | Non-local                                       | Local  | Unassessed |                |
| 1983 | 6.48                                 | 6.25  | 0.23       | NA <sup>a</sup>                                   | 0                                               | 0      | 0          | 0              |
| 1984 | 5.95                                 | 6.04  | -0.09      | Unassessed                                        | 0                                               | 0      | 55         | 55             |
| 1985 | 5.66                                 | 4.83  | 0.83       | -92%                                              | 0                                               | 16     | 0          | 16             |
| 1986 | 5.77                                 | 4.53  | 1.25       | 147%                                              | 2,093                                           | 0      | 0          | 2,093          |
| 1987 | 6.74                                 | 6.32  | 0.42       | Unassessed                                        | 0                                               | 0      | 15,824     | 15,824         |
| 1988 | 6.64                                 | 5.52  | 1.12       | 124%                                              | 27,936                                          | 0      | 0          | 27,936         |
| 1990 | 6.44                                 | 5.37  | 1.07       | 52%                                               | 12,216                                          | 11,060 | 0          | 23,276         |
| 1991 | 5.65                                 | 5.61  | 0.03       | Unassessed                                        | 0                                               | 0      | 1,570      | 1,570          |
| 1992 | 6.60                                 | 5.51  | 1.10       | 68%                                               | 66,979                                          | 31,072 | 0          | 98,051         |
| 1993 | 5.89                                 | 5.49  | 0.39       | Unassessed                                        | 0                                               | 0      | 18,291     | 18,291         |
| 1994 | 5.69                                 | 5.00  | 0.69       | 70%                                               | 26,732                                          | 11,211 | 0          | 37,943         |

<sup>a</sup> No sockeye harvest during July 6-25 for that year.

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# ISSUES STATEMENT

(Kodiak Salmon Working Group)



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The largest single variable that has occurred in the past 10 years regarding the bycatch of Cook Inlet sockeye in the Kodiak area is the size of the Cook Inlet salmon returns.

Sockeye catches in Kodiak, even in 1988 and 1992, have remained within the 100 year historical range of Kodiak sockeye catches. Cook Inlet runs, however, have exceeded any historical precedent.

In any given year only a portion of the total Cook Inlet run is actually available to Kodiak fishermen. Most of the run enters Cook Inlet from the Gulf of Alaska through the Kennedy and Stevenson entrances north of Kodiak Island.

Cook Inlet sockeye are not available to Kodiak in the same percentages every year. 1994, for example, showed a very small percentage of the Cook Inlet run available to Kodiak fishermen while Cook Inlet fishermen enjoyed the 10th largest run in history. For a similar size Cook Inlet run in 1990, the Kodiak bycatch rate was approximately 5.5%. The 1994 bycatch rate was approximately 1.8%.

When Cook Inlet sockeye are available to Kodiak fishermen they are generally only available for a period of 7 days or less in any one district or section of the Kodiak Management Area.

The July 6th to July 25th time period covers virtually all of the instances when unusual catches of large Cook Inlet fish have occurred anywhere in the Kodiak Management area. Nevertheless, in all of Kodiak's 7 districts and 52 management sections, catches of Cook Inlet fish have never occurred throughout the entire 21 day time period and are generally confined to 7 day period in the first 10 days or the last 10 days of the regulatory time frame.

Impact on Kodiak's harvest of local stocks and reallocation of the Kodiak fishery should be balanced with the utility of any regulatory proposal. Any regulation should be tailor fit to reduce what is considered "new and expanding" not to reduce the local, historical, fishery that existed before the expansion took place.

The North Shelikof Management Plan has had a significant impact on the Kodiak Management Area. Closures imposed by the North Shelikof management plan have shifted the Kodiak fishing fleet. This is not "new or expanding" effort, it is an existing historical effort fishing in different locations.





## THE LIMITED AVAILABILITY OF COOK INLET-BOUND SOCKEYE TO KODIAK'S COMMERCIAL SALMON FISHERY

Salmon actively migrate counter-clockwise with the Alaskan gyre. (Natural Resources Consultants, 3/94).<sup>1</sup>

Salmon use ocean currents and compass orientation to navigate back to coastal areas.

Tagging studies indicate that the majority of sockeye returning to Upper Cook Inlet migrate through Kennedy and Stevenson entrances.

Only a portion of the remaining UCI-bound sockeye migrating around Kodiak Island and up Shelikof Strait are exposed to Kodiak's fishable waters inside three miles.

Further, only a portion of the UCI sockeye in fishable waters are potentially exposed to Kodiak's salmon net fishery, depending on time and area openings.

The dynamic nature of salmon migration patterns can have a noticeable effect on fishing patterns.

The UCI sockeye component of Kodiak's sockeye harvest is highly related to the strength of Upper Cook Inlet sockeye runs.

Kodiak's harvest rate on UCI sockeye has oscillated with UCI run strength. High harvest levels occur only when UCI sockeye runs are exceptionally large.

Kodiak's harvest rates on UCI sockeye have varied from 1% to 12% and averaged 5.6% for the years 1983-1994.

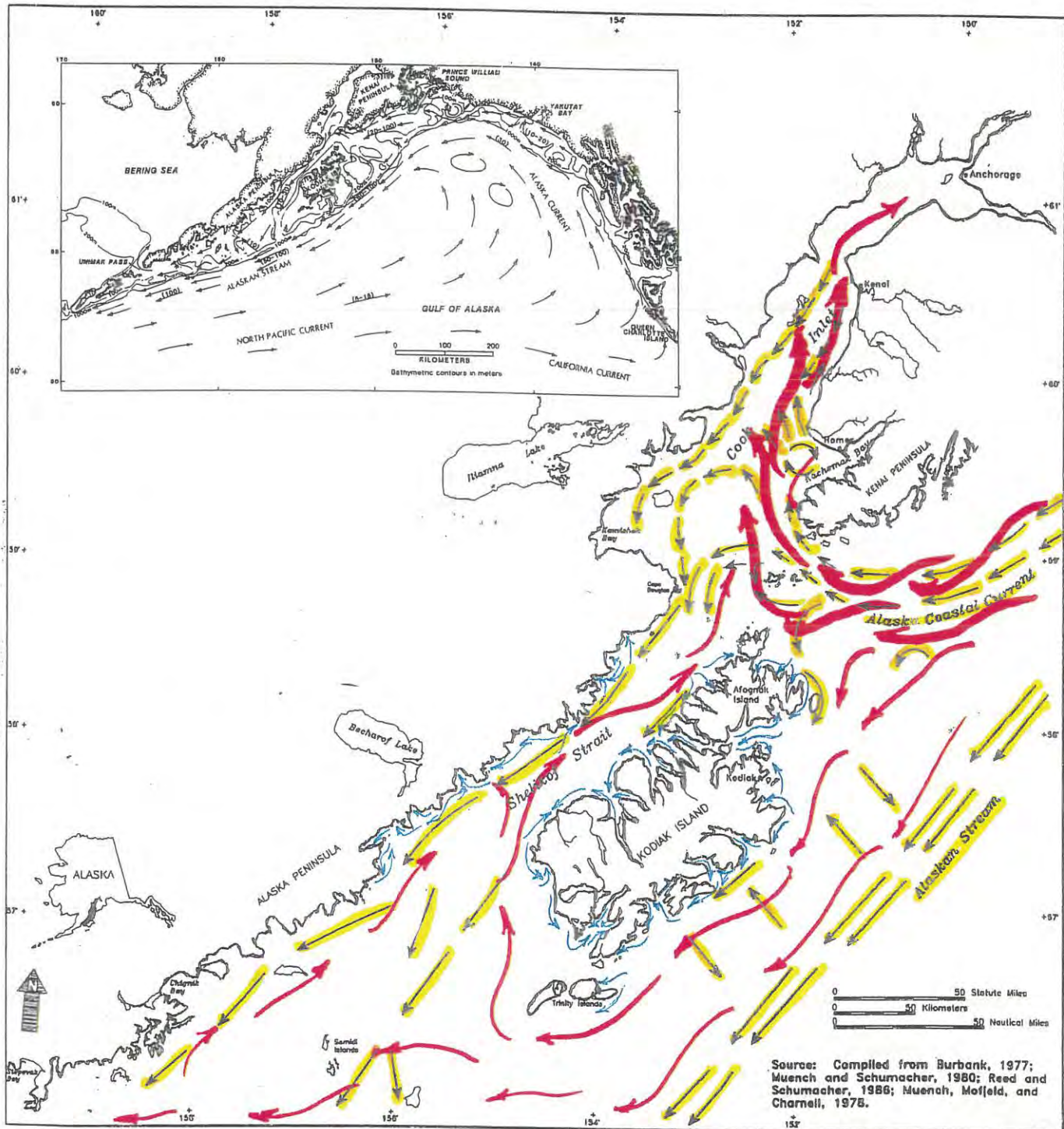
The recent three year trend in rates has decreased from approximately 12% in the near-record 1992 season to 8.5% in 1993 and then to a below-average rate of 1.8% in 1994. Both 1993 and 1994 were above average UCI sockeye production years.

Interestingly, the rate also decreased between two comparative production years of Cook Inlet, 1990 and 1994, from 5.5% to 1.8%. The total Cook Inlet run size for both years was 5.2 million sockeye.

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<sup>1</sup> Sources: "Harvest Rates of Cook Inlet-bound Sockeye Salmon in the Kodiak Area's Commercial Salmon Fishery," prepared for the Board of Fisheries, by Natural Resources Consultants, 3/94  
ADF&G, RIR 4K94-6; ADF&G Annual Mgt. Reports; ADF&G Tagging Studies





Schematic of mean spring-summer surface circulation in Lower Cook Inlet/Shelikof Strait region (see source reference insert)



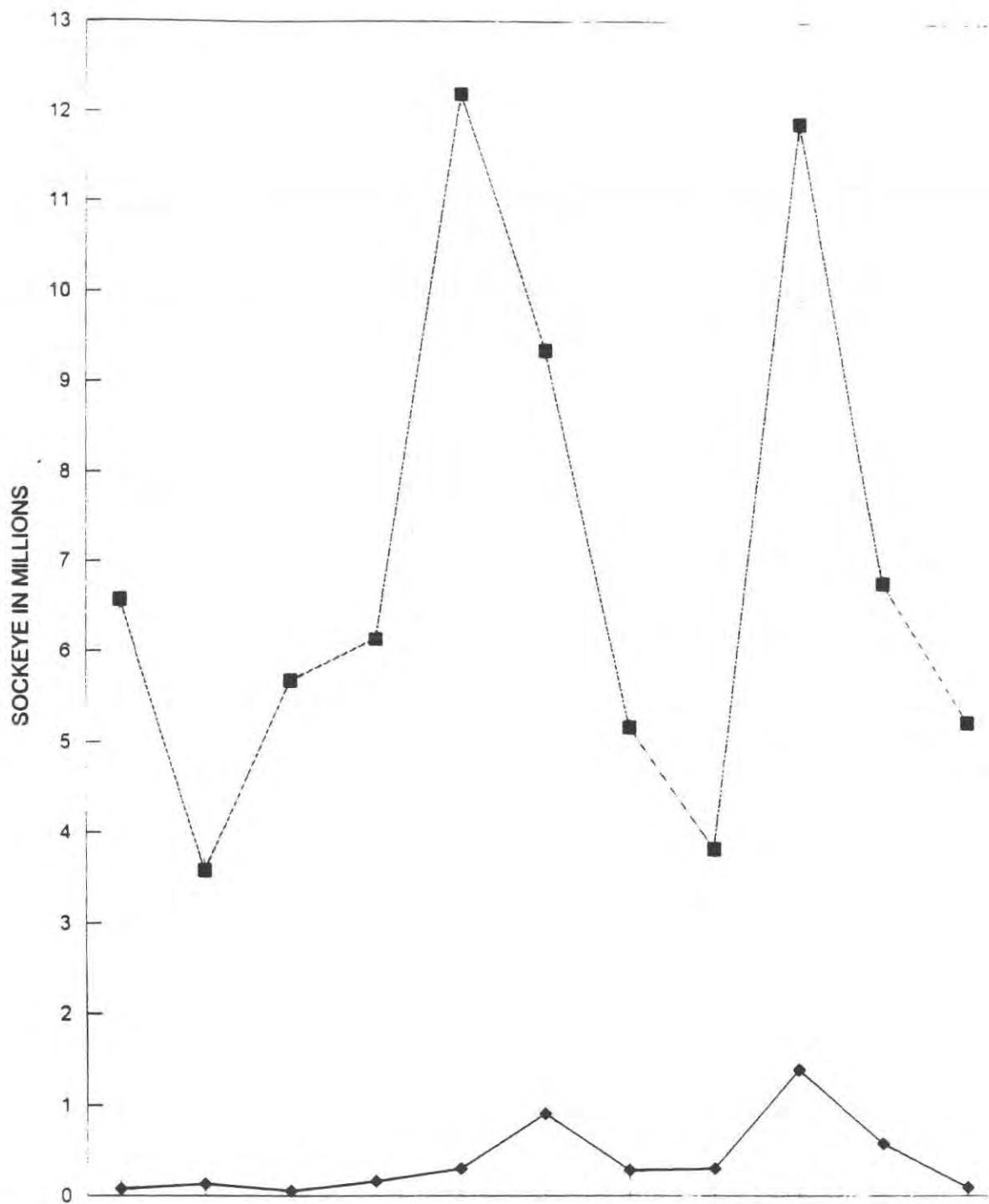
An overlay of inferred near-shore migration patterns of Cook Inlet-bound sockeye (Natural Resources Consultants Report, 3/94)



General inshore migration patterns of local Kodiak-bound sockeye (Kodiak Area Management Reports; Historical ADF&G Tagging Studies)



# TRENDS IN KODIAK MANAGEMENT AREA BYCATCH LEVELS OF UPPER COOK INLET SOCKEYE IN RELATION TO UPPER COOK INLET RUN SIZE



| YEAR         | 1983  | 1984  | 1985  | 1986  | 1987   | 1988  | 1990  | 1991  | 1992   | 1993  | 1994  |
|--------------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|
| ■ U.C.I. RUN | 6.571 | 3.584 | 5.669 | 6.134 | 12.193 | 9.338 | 5.174 | 3.826 | 11.869 | 6.771 | 5.233 |
| ◆ BYCATCH    | 0.08  | 0.138 | 0.057 | 0.167 | 0.303  | 0.91  | 0.286 | 0.3   | 1.397  | 0.578 | 0.095 |





(Please refer to Exhibits 5, 6, 7, and the ADF&G Table 1 Estimated Stock Composition July 6-25 Barrett), included are Graphs 1 and 2.

**A Review of the Barrett/Vining Memo Dated 11/14/94**

- 1) **A.D.F.&G. Memo by Barrett and Vining provided to Kodiak/Cook Inlet Salmon Work Group.**
  - A.) Memo contains table providing estimate of UCI-bound sockeye harvested as bycatch in KMA during 7/6-25 period for years 1983-94.
  - B.) Data set in memo was originally defined in Barrett, ADF&G R.I.R. 4K94-5 as a ten year data set for 3/94 Board of Fisheries review.
    - 1.) 1994 Data added for 3/95 Board of Fisheries review
- 2) **Summary table in memo identifies presence of UCI-bound sockeye in KMA harvest for each year of data set.**
  - A.) Historical harvest data base for both KMA and UCI, as graphically depicted in other tables of this report, shows proportional sockeye harvests between KMA and UCI from 1883 to 1994, a 112 year period.
  - B.) UCI-bound sockeye have most likely always been an annual component of KMA's total sockeye harvest and that contribution can best be identified and expressed as bycatch rate instead of bycatch level.
- 3) **A peak bycatch period of 7/6-25 has been identified, reviewed, and accepted by ADF&G utilizing the 1983-1994 data set.**
  - A.) The Board of Fisheries approved North Shelikof Straits Sockeye Management Plan applies explicitly to the 7/6-25 time period.



B.) Almost all ADF&G data presentations for Board of Fisheries review since 1989 have data summarized to reflect the 7/6-25 time-period.

- 4). Bycatch rates of UCI-bound sockeye in KMA's fishery have varied from 1% to 12% for the years 1983-1994.

A.) The average bycatch rate has been 5.6% for that 11 year period.

- 5). Bycatch rate variability, in general, reflects UCI sockeye availability to KMA fisheries, and that availability seems to oscillate primarily with UCI sockeye run size.

A.) Since 1982, UCI sockeye production appears to have increased by at least 3.5 times historical levels.

1.) The UCI total run has averaged 6.9 million sockeye from 1983-1994, as compared to an estimated average of 2.0 million sockeye run from 1972-1982.

B.) During the four year period, 1983-1986 when UCI sockeye run size averaged a very healthy 5.5 million sockeye, the KMA bycatch rate averaged 2.2 % and ranged from 1.0 % to 3.8 %.

C.) During the two year period, 1987-1988 when UCI sockeye run size averaged a record 8.2 million sockeye, KMA's average bycatch rate increased to 6.1 % while ranging from a noteworthy low 2.5 % during the record 1987 UCI sockeye run to a conversely noteworthy high bycatch rate of 9.8 % during a near-record UCI run in 1988.

D.) The 1989 season date has limited utility because of the Exxon Valdez Oil Spill and subsequent disrupted harvest patterns in both KMA and UCI.





E.) During the two year period, 1990-91, when UCI sockeye run size averaged 4.5 million sockeye, the KMA bycatch rate averaged 6.7 %, ranging from 5.5 % to 7.8 % respectively.

1.) KMA fishing opportunities were average during the peak bycatch period, especially in 1991 as odd-year cycle pink production became the dominant cycle.

F.) The 1992 season identifies both a near-record UCI sockeye run of 11.9 million and a record KMA bycatch rate of 11.8%.

1.) The increased availability of UCI sockeye in 1992, a year of comparative magnitude to the record 1987 run yielded a record bycatch rate.

G.) During the last two years, 1993 and 1994, when UCI sockeye run size averaged an historically very healthy 6.0 million sockeye, the KMA bycatch rate averaged 5.2 %, but ranged through a significantly decreasing bycatch trend from 8.5 % in 1993 to 1.8 % in 1994.

1.) KMA fishing opportunities in 1993 were at all time record levels during the peak bycatch period in order to begin prosecution of the harvest of a 30 million-plus record pink salmon run.

2.) Most noteworthy was the extremely low 1994 bycatch rate on UCI's above-average sockeye run when KMA fishing opportunities during the peak bycatch period were equal to those experienced in 1990 and 1992, even cycle years.



Table 4. UCI sockeye salmon run number, the estimated number of UCI sockeye salmon harvested within the KMA (excluding Cape Igvak) July 6-25 fisheries, and estimates of the percent of the UCI run harvested within the KMA during July 6-25 period, for 1983-1994 (except 1989).

| Year | Terminal<br>Run | UCI                                            |                     |                     |                                                    |                     |                     |
|------|-----------------|------------------------------------------------|---------------------|---------------------|----------------------------------------------------|---------------------|---------------------|
|      |                 | Estimated Kodiak July 6-25<br>(Number of Fish) |                     |                     | Estimated Kodiak July 6-25<br>(Percent of UCI Run) |                     |                     |
|      |                 | Point                                          | Relative<br>Minimum | Relative<br>Maximum | Point                                              | Relative<br>Minimum | Relative<br>Maximum |
| 1983 | 6,490,514       | 82,740                                         | 68,063              | 132,381             | 1.3%                                               | 1.0%                | 2.0%                |
| 1984 | 3,445,940       | 75,054                                         | 1,600               | 84,623              | 2.1%                                               | 0.0%                | 2.4%                |
| 1985 | 5,612,154       | 51,634                                         | 31,055              | 61,444              | 0.9%                                               | 0.6%                | 1.1%                |
| 1986 | 5,967,514       | 76,401                                         | 19,145              | 91,006              | 1.3%                                               | 0.3%                | 1.5%                |
| 1987 | 11,890,444      | 267,806                                        | 246,798             | 295,144             | 2.2%                                               | 2.0%                | 2.4%                |
| 1988 | 8,428,431       | 927,002                                        | 866,614             | 966,445             | 9.9%                                               | 9.3%                | 10.3%               |
| 1990 | 4,888,057       | 303,322                                        | 119,976             | 403,826             | 5.8%                                               | 2.4%                | 7.6%                |
| 1991 | 3,526,609       | 252,177                                        | 74,989              | 352,921             | 6.7%                                               | 2.1%                | 9.1%                |
| 1992 | 10,472,085      | 1,448,165                                      | 1,389,119           | 1,497,744           | 12.1%                                              | 11.7%               | 12.5%               |
| 1993 | 6,193,275       | 625,624                                        | 423,320             | 692,937             | 9.2%                                               | 6.7%                | 10.1%               |
| 1994 | 5,136,077       | 130,225                                        | 66,993              | 219,276             | 2.5%                                               | 1.3%                | 4.1%                |

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# KODIAK WEIR COUNTS SHOW DRAMATIC INCREASE IN KODIAK CHINOOK STOCKS



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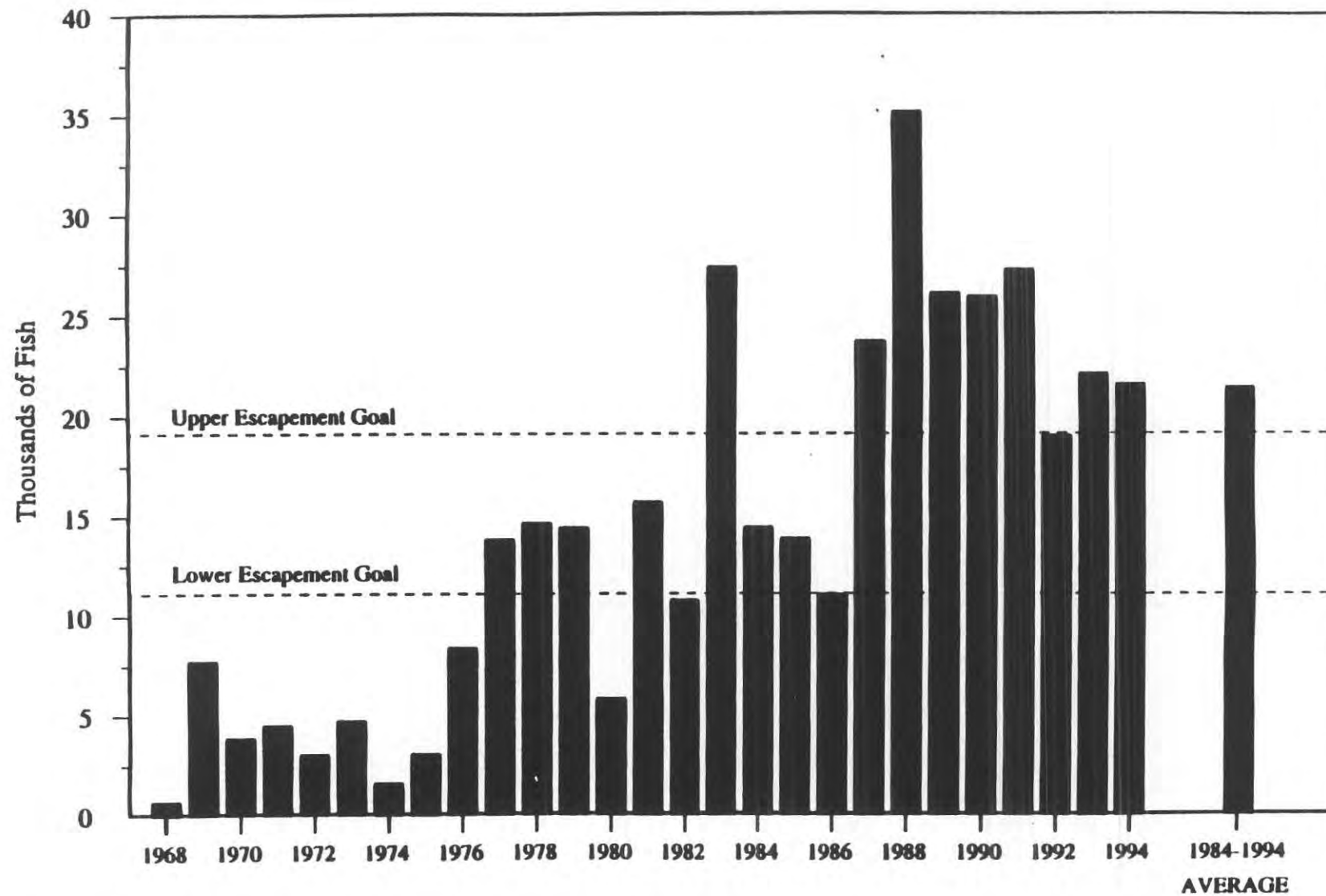
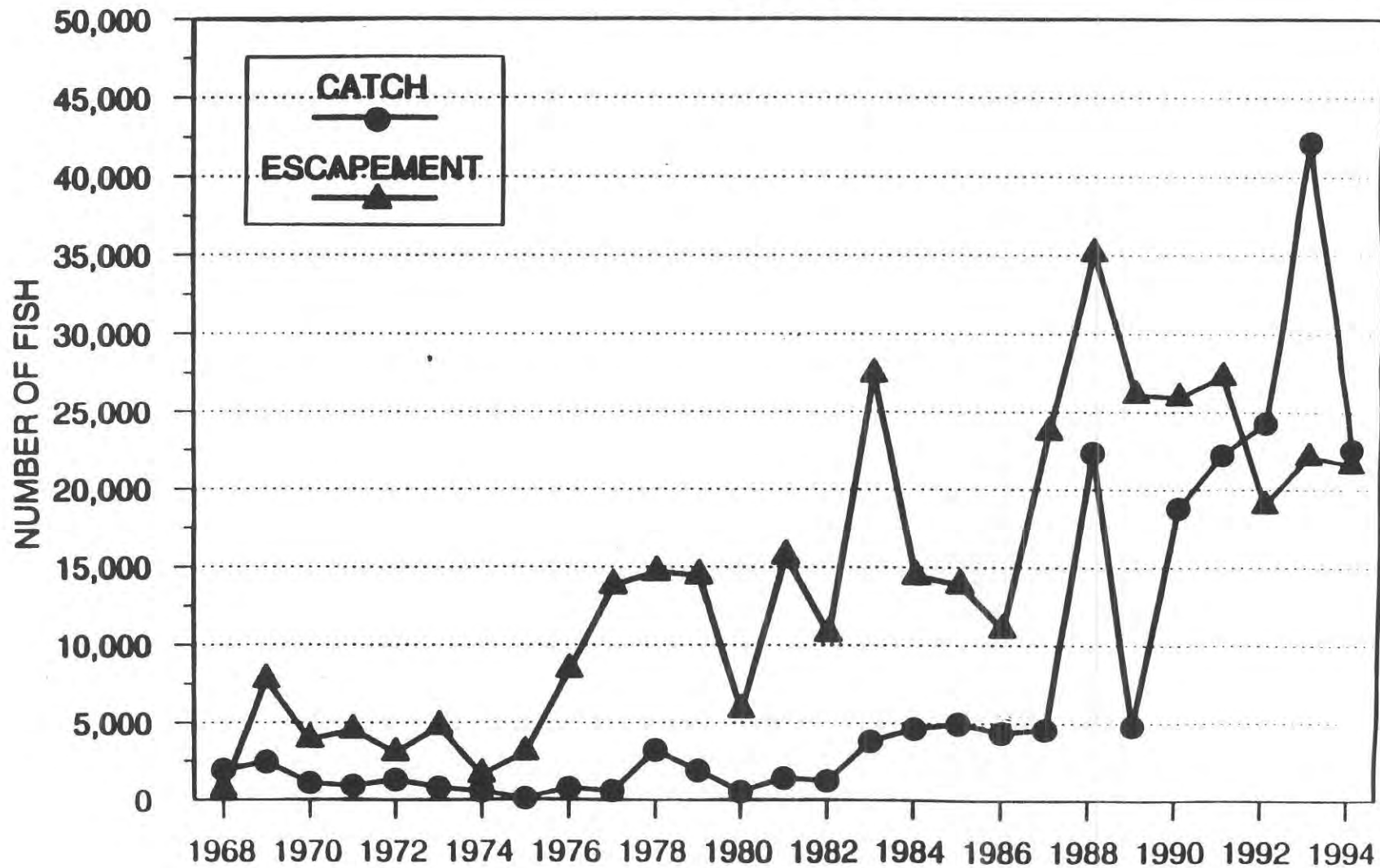


Figure 10. Chinook salmon escapement in the Kodiak Management Area, 1968-1994.





KODIAK MANAGEMENT AREA  
CHINOOK SALMON CATCH & ESCAPEMENT  
1968 - 1994





# **ISSUES STATEMENT**

(Kodiak Salmon Working Group)



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The July 6th to July 25th time period covers virtually all of the instances when unusual catches of large Cook Inlet fish have occurred anywhere in the Kodiak Management area. Nevertheless, in all of Kodiak's 7 districts and 52 management sections, catches of Cook Inlet fish have never occurred throughout the entire 21 day time period and are generally confined to 7 day period in the first 10 days or the last 10 days of the regulatory time frame.

Impact on Kodiak's harvest of local stocks and reallocation of the Kodiak fishery should be balanced with the utility of any regulatory proposal. Any regulation should be tailor fit to reduce what is considered "new and expanding" not to reduce the local, historical, fishery that existed before the expansion took place.

The North Shelikof Management Plan has had a significant impact on the Kodiak Management Area. Closures imposed by the North Shelikof management plan have shifted the Kodiak fishing fleet. This is not "new or expanding" effort, it is an existing historical effort fishing in different locations.





## TERMINAL HARVEST FISHERIES

### WHY KODIAK MANAGEMENT TRIES SO HARD TO AVOID THEM

Kodiak management is strongly influenced by geography. Salmon production is spread all around the perimeter of the island and the length of the Alaska Peninsula coast with over 350 streams. Many productive streams empty out on the outside coast. Two of the most productive pink and sockeye rivers on the island flow into Shelikof Strait, the Karluk and Ayakulik. These facts dictate that a high percentage of the Kodiak harvest will occur on the capes, as has been the case since the nineteenth century beginning of the commercial fishery here.

Escapements to some of the larger streams are monitored by weir counts but most systems have to be monitored by aerial survey and performance of the fishery. Management in July is focused primarily on pinks, but sockeye and chums are also involved. Historically, about 25% of the total sockeye harvest occurs between the 6th to the 25th of July. Karluk, Ayakulik, Halibut Bay, and the Cape Alltak-Moser-Olga Bay areas are managed exclusively for sockeye until mid-July.

For the areas primarily managed for pinks, initial openings are based on forecasted run strength. Kodiak has one of the best pink forecasts in the state. It is based on pre-emergent fry sampling, along with winter temperatures and weather conditions. There is a wide range of run timing for Kodiak pink stocks. As the fishery progresses, managers can assess the accuracy of the prediction and adjust fishing time to fit the overall abundance of the return.

The escapement needs of individual streams are partially assured by the size of the closed waters at the terminus. Closed water areas have evolved over many years of staff experience. Since all streams and all areas don't produce equally, concurrent openings of districts are preferred to spread harvesting capacity. The seine fleet naturally tends to move to the most productive areas. This protects weaker systems. Later in July, when a higher percentage of the return has arrived, adjustments in fishing time are made to further target the seine fleet on stronger stocks and



away from weaker stocks. If necessary, special "mop-up" sections close some river mouths can be used, but their use has allocative consequences



If fishing time weren't allowed early in July, some early stocks would get by the setnetters. Seine gear may be able to harvest some of the fish build-up, but quality would diminish. For example, in 1977 the pink fishery was delayed by a strike. The early return to Uyak was strong and went mostly unharvested until fish built up in the head of the bay. Many of the fish were harvested when the strike was settled, but the quality was very poor and some product was rejected by processors.

In 1989, the fishery on the capes that normally occurs near Kitoi Bay was cancelled due to the presence of Exxon Valdez crude oil. Six and one half million pinks were successfully harvested in Kitoi Bay behind oil booms but about one million were wasted because the quality had deteriorated too much by the time the last of the run had arrived in the terminal area. Not long afterward Prince William Sound experienced a similar disaster when their early mixed stock harvest was precluded by a weak wild stock return.

Strong Kodiak pink production has exceeded processing capacity many times in the past. Boats were put on limit and fish went unharvested while their quality declined. To make best use of processing capacity, fishing has to occur throughout the Kodiak Management Area on the front end of the run while most of the available fish are on the capes.

Fisheries which occur in nearshore closed areas tend to be disorderly and dangerous. In 1985 or 1986 a build up opening at Ayakulik was videotaped for national TV to illustrate serious problems with safety at sea. Three boats ended up stuck in the surf on the exposed Red River beach. The scenes from this opening were partly responsible for the implementation of fishing boat safety regulations by Congress.

Build-ups often occur very rapidly when the outside fishery is closed. Management precision is lost as weather is often unflyable and it is hard to predict the behavior of fish. In 1987, the outside areas on the westside were closed for several days because of a generally weak pink return and a weak late run Karluk sockeye showing. It turned out that the late pink return to Uganik was moderately strong. By the time managers spotted the build up and announced an opening, most of the return was in

the head of the bay. Even though the markers were specially adjusted the opening, the fish backed out further than anticipated and an over-harvest occurred. Over and over, in the history of Kodiak's salmon fishery, nearshore management has created effort, escapement, and quality problems.



The first fish back to the streams are primarily males. Because of this, it is a management goal to distribute fishing effort over the entire return so escapement includes both males and females. It has proven best to spread harvests out both in time and place to achieve escapement goals and provide orderly harvest of high quality fish in the Kodiak Management Area.





# **REALLOCATION**

## **Restructuring of the Kodiak Fishery**

All of Kodiak's seven management districts and fifty two management sections are inter-related. Closures in any district or section impacts fishing effort in the remaining fishery. Moreover, local stocks destined for one or more district or section are frequently intercepted on the capes of another district or section. Perhaps the best illustration of this historical truth is the Outer Sitkalidak section of the East Side District. The Outer Sitkalidak/Cape Baranabus fishery is an integral part of the Alitak Bay sockeye fishery. The primary purse seine harvest area for Alitak Bay bound sockeye is along Sitkalidak Island.

The February, 1994, Barret-Nelson estimated run timing report provides the statistical verification of this known connection. During the period July 6-25 approximately 5% of the Akalura run, 13% of the Fraiser Lake run, 1% of the early Upper Station run and 16% of the late Upper Station run are available in the Kodiak fishery. Based on potential average run strength, these percentages account for in excess of 150,000 local sockeye available annually. Actual returns to these systems, during the past few years, have provided in excess of 200,000 sockeye available during this time period. A substantial portion of these sockeye, as well as sockeye bound for Ayakulik, Karluk, and the 40 plus Kodiak sockeye systems, are traveling along Sitkalidak Island between July 6th and July 25th.

The Alitak sockeye are different from the other local sockeye available for capture in the Sitkalidak section. Once the Alitak sockeye pass by Sitkalidak Island, there are only three hook haul spots, Hawk pt., Cape Hepburn, and Fox Island, where Kodiak seiners even have a chance at these fish. All of these hooking points are less productive than the numerous hook haul spots around Sitkalidak Island. The net result of the limited Alitak Bay sockeye seining opportunities outside the Sitkalidak Section is an annual reallocation of a substantial portion of 200,000 sockeye from purse seiners to setnetters. In a year like 1994, this would amount to almost 12 % of the total sockeye captured by Kodiak purse seiners.

Reallocation between Kodiak gear types of this many sockeye, representing in 1994 in excess of \$1,000,000, will cause continued conflict and a morass of proposals trying to reallocate Kodiak sockeye fishing opportunities between setnetters and seiners. In the Alitak Bay District alone, between 1959 and the late 1980's there was a continuous, bitter, heated battle for access to Alitak fish. Changing the fishery in the Sitkalidak area will again embroil the Board in this inter-area gear conflict---- which may last another 25 years.

Reallocation within Kodiak resulting from regulations imposed to protect Cook Inlet fish is a serious and important issue for the Board to consider. Before the Board acts to limit the Kodiak fishery, all of the costs, and potential casualties, should be counted.





**"IF IT AIN'T BROKE.....DON'T FIX IT:"  
Changing Management Plans in three areas can  
create havoc throughout an already complex  
Management System**

The October meeting of the Kodiak-Cook Inlet Inter-Area Work Group ended with the understanding that there would be discussion of management options in other Kodiak management units not identified in the North Shelikof Plan or K.P.F.A's proposal to the Board of Fisheries. The Kodiak Salmon Work Group feels strongly that Board action to alter management in these areas can't be justified on a biological basis, under the "Mixed Stock Fishery" regulation, or under the Board of Fisheries' Allocation Criteria.

In general, these island fishing districts have a very long history of use and most of the salmon stocks caught are of Kodiak origin. Limited Entry has kept overall effort levels capped for over 20 years. Recent years have seen substantially fewer than the maximum permits fished. In 1978 there were 372 purse seine, 29 beach seine, and 160 setnet permits fished. In 1994, 286 purse seine, 5 beach seine, and 169 setnet permits were fished. Gear length has been frozen for over 30 years and gear maximum depth was reduced in 1989.

**THE ALITAK BAY DISTRICT MANAGEMENT PLAN**

This plan was adopted by the Board of fisheries in 1987 and covers set gill net and seine fishing that started in the 1880's. Cape Alitak and Alitak beach are the primary harvest areas for seiners to catch Olga Bay red salmon. Setnetters fish in an exclusive setnet area in the Alitak District. Any new regulatory action would upset the hard fought management and allocation scheme now in place.

**THE WESTSIDE KODIAK MANAGEMENT PLAN**

This plan was adopted by the Board of Fisheries in 1990. The Management Plan formalized a management regime that had existed for decades with some recent changes to accomodate management of rebuilt



red salmon stocks. The Northwest Kodiak District, Southwest Kodiak District, Southwest Afognak Section covered by the plan are among the historically most used and significant fishing districts in the Kodiak Management Area. These fishing areas were exploited commercially beginning in the 1880's. The annual management reports from the 1960's repeatedly reference the performance of the Westside cape fisheries in July. The Central Section of the N.W. Kodiak District is utilized by both set gill nets and beach and purse seines and is designated the primary harvest area for Karluk sockeye. The SW Kodiak and SW Afognak areas are seine only. Any alteration to the overall management plan would change allocation to the different gear types.



The SW Kodiak District including the Halibut Bay Section has been an important harvest area for sockeye in July. The Halibut Bay Section was open in conjunction with the Ayakulik Section in the 1960's and before. (Refer to Kodiak Area Management Reports 1960-69). Very substantial percentages of the total Kodiak sockeye catch occur in the SW Kodiak District. In only one year, 1992, for a few days, were catches here dominated by Cook Inlet sockeye. Restrictions in the Halibut Bay Section would interfere with the ability of Kodiak seiners to catch their historic share of Kodiak sockeye. Alitak-bound sockeye foregone by seiners at Halibut Bay, would predominantly be caught by set gillnetters in Alitak, and Moser-Olga Bay.

## THE EASTSIDE AFOGNAK MANAGEMENT PLAN

This plan, adopted in 1993, covers areas where Kitoi Bay hatchery production is the primary contributor. Sockeye have not been abundant in these sections even though this area has been intensively fished since 1980. Sockeye are currently being raised and released at Kitoi Bay hatchery.

## OTHER ISLAND AREAS

The Perenosia and Tonki Bay areas have been fished for a long time. Tonki Bay is one of the earliest places where Kitoi pinks can be intercepted. Sockeye have not been caught here in large numbers in July. Stocked sockeye will start returning in 1995.



The Northeast Kodiak District has a long history of landings in and in only one year, 1992, were significant numbers of sockeye ca



While the Eastside is not covered by a Board-approved management plan, it is being managed in the same manner as it has been for decades. Shearwater Cannery started in 1926 and was destroyed by the 1964 tsunami. Area Management Reports in the 1960's cite the strength of the July cape catches. Very large catches of pink salmon have occurred here in the July 6-25 time period. Eastside pink salmon catches for July 6-25 totalled 1, 866,875 in 1970 and 1,322,468 in 1979. (ADF&G Catch Tables)

There was a period in the '80's when catches and effort were relatively low due to poor in-stream survival of eggs and fry. Effort in the '90's has not been more than what occurred in the 60's and early '70's. Effort on the Eastside in the July time-period in the years 1970, 1972, and 1979, exceeded 1000 landings. Landings in the '90's have been less than 750 per year, during the same time-frame. (Refer to ADF&G Report-Salmon Harvest Summary/12/8/94). Landings were also high in the '60's during July 6-25. (Refer to K.S.W.G. Exhibits 8,9, &10).

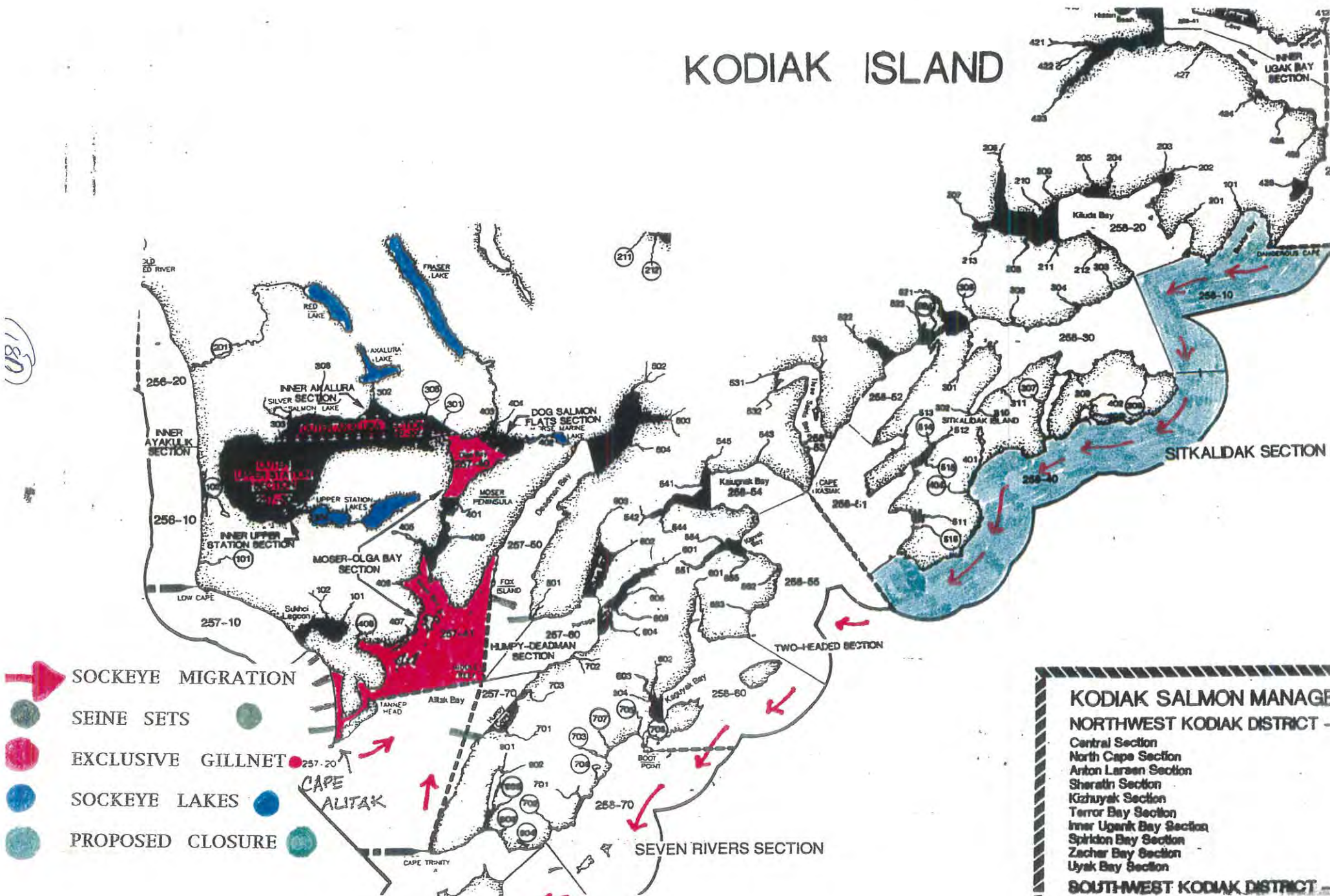
Rebuilding of Kodiak southend sockeye stocks and Saltery Lake sockeye have increased the number of sockeye caught on the eastside in July. Most of the Saltery Lake sockeye are caught between the 5th and 25th of July. Ayakulik, Frazer, Karluk and Later Upper Station sockeye are available for harvest in July on the eastside.

The Alutiq village of Old Harbor, which currently holds 27 salmon permits, would have a much-reduced opportunity to harvest sockeye from Kodiak's major systems if they they couldn't fish the Eastside capes in July. Most of the enhanced Frazer Lake sockeye run that is available on the Eastside in July wouldn't be available to seiners in Alitak. The Old Harbor fleet has a long history of fishing south of the Sitkalidak Section as well as in the Sitkalidak Section.

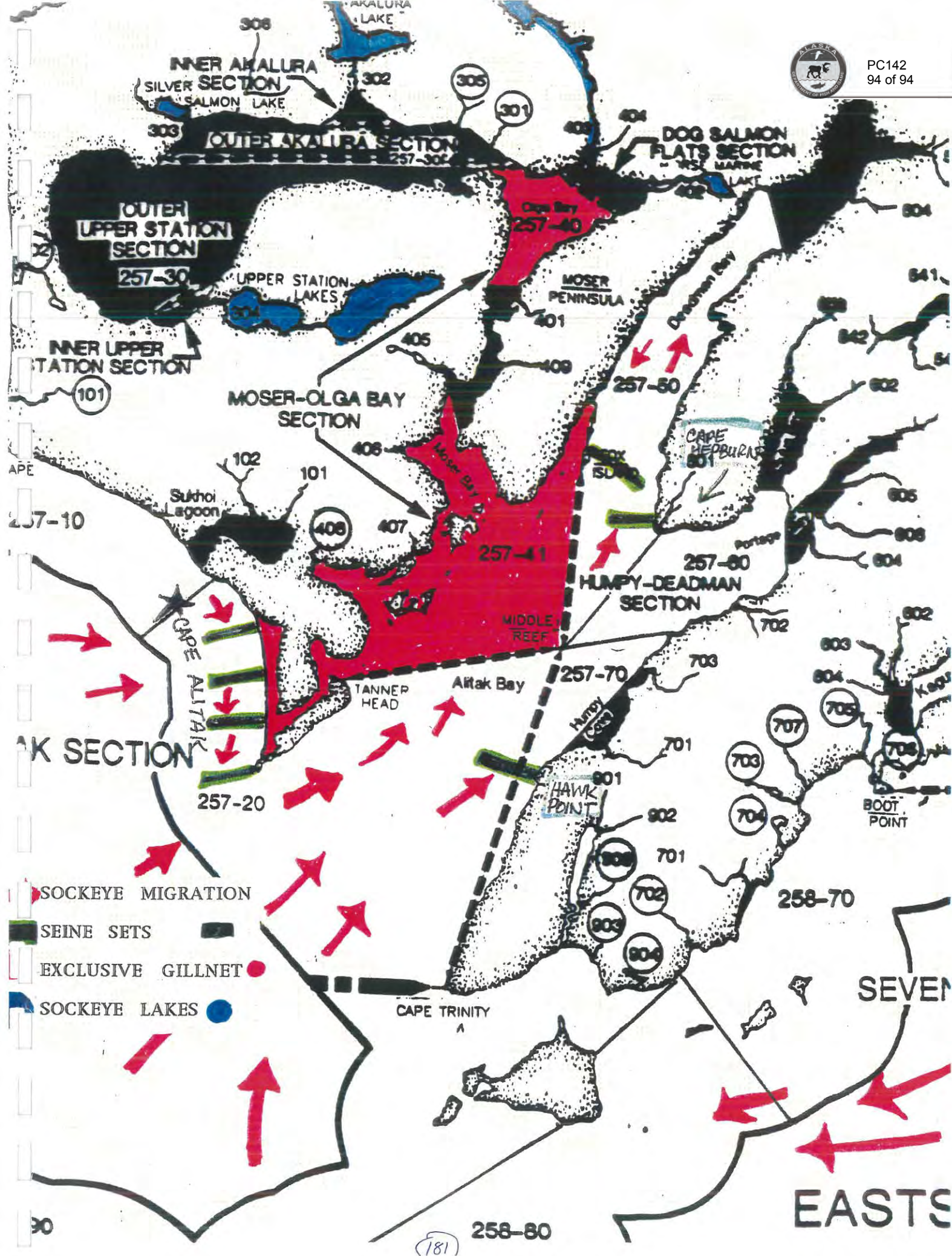




# KODIAK ISLAND









Dear Board of Fish

As a local businesswoman, I am very aware of the influence a salmon season has on the local economy and in particular upon my business.

The ballet studio and dance/fitness attire clothing store is quite profitable during good salmon seasons when fishing families can afford to send their children to dance classes.

Taking away vital fishing days would adversely affect my business and the other businesses in Kodiak because salmon catches affect everyone. We are an island dependent on fishing.

Thank you

Debra Nielsen

*DN*

Oxations Dance and Fitness

4050 Parkside Dr

Kodiak AK 99615

539 - 8996 (907)



Chairman John Jensen

Alaska Board of Fisheries

Board Support Section

PO Box 115526

Juneau, AK 99811-5526

RE: UCIDA ACR, Kodiak Management Area

Sept 27, 2017

Dear Chairman Jensen & Board of Fishery Members,

My name is Gabriel Edwards, I am 28 years old, and have spent my entire adult working life as a commercial salmon set net fisherman on the West side of Kodiak Island.

I am writing to express my concern over the proposed changes to Kodiak Island's salmon management plan. If enacted, the restriction on fishing time would mean a substantial adverse economic effect on me and many other fishermen. Fish from Cook Inlet have comprised a (usually small) portion of our overall catch but that has been the case for decades, so what necessitates these changes? Migratory patterns of salmon fluctuate regularly, and the proposal in question effectively prevents fishermen from harvesting fish bound for other Kodiak systems. The positive gains affected by this drastic proposal are speculative but the destructive aspects are a certainty. In summary, I am not convinced that the proposed changes are necessary from a scientific and/or conservationist standpoint but I am very much convinced that they will be harmful from an economic standpoint. It is in every Kodiak fisherman's interest to oppose this measure.

Sincerely,

*Gabriel Edwards*  
Gabriel Edwards

Box 8905

Kodiak, AK 99615

James Skonberg  
P.O. Box  
Ouzinkie, AK 99644



PC145  
1 of 1

September 22, 2017

Chairman John Jensen  
Alaska Board of Fisheries  
Boards Support Section  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: UCIDA Agenda Change Request and  
Genetic Stock Composition of Sockeye Salmon in  
the Kodiak Management Area

Dear Chairman Jensen and Board Members,

I am a lifelong fisherman from Ouzinkie Alaska and an active leader in the Community. I also have been a board member on the Ouzinkie Native Corporation since it started in the 1970s. I've seen seasons when Cook Inlet fish were present on the east side of Kodiak Island, seasons when they were present on the west side of Kodiak island and many seasons when we didn't seem to catch any at all. As I understand it, the genetic study just confirms what we already knew. I don't know why you would consider an agenda change request to address something that has occurred for as long as Kodiak fishermen have been fishing.

I was involved the last time Cook Inlet fishermen tried to close down Kodiak. I understood that the Kodiak fleet, at that time, was fishing outside of 3 miles and sometimes changed fishing locations to move to the North Shelikof area in hopes that Cook Inlet fish would be there. The N. Shelikof plan was developed but the Board went too far with their closures. I worked with some fishermen to persuade the Board that we needed to re-adjust the plan for fishing local stocks in the S.W. Afognak district. With that change, I think the N. Shelikof plan is working now. I don't believe the Kodiak fleet is now targeting Cook Inlet fish. We're fishing for local stocks and Cook Inlet fish occur randomly and occasionally.

For those of us that fish in Kodiak --- and I've been fishing here for more than 50 years--- the UCIDA agenda change request is extreme and does not merit any consideration. It would really hurt and change Kodiak's salmon fishery. I know that it would take away 20-25% of my income. Most of the fish I would miss catching would end up in local streams, not Cook Inlet.

In summary, please reject the UCIDA agenda change request and wait until January 2020, your regular board cycle meeting, to have discussion on the Cook Inlet issue.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "James Skonberg", with a long horizontal flourish extending to the right.

James Skonberg



Chairman John Jensen  
Alaska Board of Fisheries  
Board Support Section  
PO Box 115526  
Juneau, AK 99811-5526

RE: UCIDA ACR, Kodiak Management Area, Sockeye


Sept. 27, 2017

Dear Mr. Jensen & BoF Members,

My name is Jonathan Edwards, I reside on Kodiak Island, and myself and my family have been set netting on the west side of Kodiak for 36 years. I oppose the UCIDA agenda change request. There is no new information regarding the Kodiak Area's catch of Cook Inlet bound sockeye. This issue was resolved by the BOF in 1996 by the Alaska BOF after exhaustive testimony and data analysis.

The premise that we are going to throw out our Kodiak Area Salmon Management Plan from June 23 to July 31 for the benefit of Cook Inlet fisherman is absurd. That time period is a substantial part of our season. We catch early Kodiak Karluk sockeye, Kodiak chums, Kodiak pinks, and it is prime time for us catching Kodiak Spiridon sockeye. And yes, we do get some Cook Inlet bound fish, sometimes. As these fish are still a long way from their river, their travel path and timing is very unpredictable. They can show up in the inner bays, Eastside, Westside, South end, North end, and their timing can be as late as mid August. Trying to manage our fishery for these fish is a fools errand, and will only greatly harm my family's set net operation, as well as others. Any scheme to keep outside areas closed and harvest in the inner bays would have a negative effect on fish quality, but more importantly, it would be a massive reallocation of fish from the set netters to the seiners, as the set netters are not allowed in the inner bays.

In closing, this is a very complex issue. The solution created at the Alaska BOF in January of 1996 was a compromise solution that has been working. There's no need to dredge this contentious issue back up.

Thank you for your time,  
  
Jonathan Edwards

Box 8905

Kodiak, AK 99615





September 27, 2017

Chairman John Jensen

Alaska Board of Fisheries

Board Support Section

PO Box 115526

Juneau, AK 99811-5526

RE: UCIDA ACR, Kodiak Management Area

Dear Chairman Jensen & Board of Fishery Members,

My name is Virginia Adams. My family and I have owned and operated our set net site with 3 permits for 37 years on Uganik Island on the West Side of Kodiak.

**DOUBLE JEOPARDY**

I worked tirelessly for several years preparing for the Alaska Board of Fishery meeting in 1995-1996 where the "interception" of Cook Inlet bound sockeye in the Kodiak Management Area was discussed, analyzed and decided upon. I was and am now AGAIN a member of the Kodiak Salmon Work Group (KSWG). The recent genetic study and scale analysis shows nothing new that we have not dealt with before. These are new tools being used to tell the same story. Cook Inlet bound sockeye have been traveling around Kodiak since there have ever been salmon and Cook Inlet bound sockeye have been caught in Kodiak waters ever since there were fish traps in the early 1900's.

June 23-July 31 is the heart of the Kodiak mixed stock harvest time. Millions of dollars' worth of Kodiak sockeye, pink and chum salmon are harvested and processed during this time period by seiners and set netters. Any closures during this time period for a perceived interception of Cook Inlet sockeye would severely impact Kodiak's economy, from fishermen to processor to businesses. Closures would also create a huge reallocation amongst Kodiak gear types as seiners would inevitably harvest salmon in the heads of bays after set net fishermen lost their harvest opportunities. The set net fishery is not allowed in inner bay areas. Much attention was spent developing the KMA harvest strategy to harvest bright fish in outside bay and Cape areas. Kodiak seiners harvesting inner bay salmon (dark) is going back in time and terrible for the Alaskan salmon market.

This is such an enormous issue. Kodiak's management areas and harvest strategies are the most complex in the State of Alaska. Any decision by the Alaska Board of Fisheries to minimize Kodiak's mixed stock harvest opportunities in order to allow a small amount of Cook Inlet bound sockeye to travel towards Cook Inlet would be precedent setting. Should Kodiak attempt to alter Area M's harvest strategies as Kodiak salmon travel by??



This ACR should be soundly rejected and the present BoF should take the time to review the extent that this issue has been dealt with in the past. We were directed by former AK BoF to form "study groups" which we did before the 1995-1996 Board meetings. Formation of the North Shelikof Straight Sockeye Management Plan came out of many hours of discussion and compromise relating to this Cook Inlet intercept issue. The new tool of genetic sampling, which in this case was not even directed at identifying Cook Inlet stocks, is simply a tool that was not used in the past. The answer remains the same, yes Kodiak catches some Cook Inlet bound sockeye, but has never caught Cook Inlet bound sockeye on a level that would alter Cook Inlets management plans or jeopardize escapement levels.

In closing I would like to think that the present Board would honor the tremendous amount of time, energy and work that has already been expended on this issue.

Sincerely,

Virginia C. Adams

*Virginia C. Adams*  
Box 8908

Kodiak, AK 99615