Submitted By
Lynn
Submitted On
1/22/2020 9:06:00 AM
Affiliation

I am writing in opposition to proposals 78,88 and 104 recently presented to the Upper Cook Inlet Board of Fish meeting consideration. Because of our family has operated a fishery business registered in the State of Alaska for over 50 years. Throughout this long history of setnet fishing on Salamatof Beach (East Side setnetting), we are very familiar with the MANY times the fishery has adjusted seasonal regulations based on data and in-river conditions. We support the board's current allocation criteria and the board's ability to equally balance all of the relevant criteria when making an allocative decision. We support the board having flexibility to consider the most appropriate criteria for each proposal under consideration while seeking to preserve the health of the fish runs. We recognize it is a complex river system. A seasonal plan should never rank one resource group over the other, but consider the health of the run because that is an advantage for ALL user groups. We believe that propositions 78, 88,and 104 are offered to take away the livelihood and businesses of setnet fisherman in particular and ultimately will be harmful to the Kenai River sockeye fishing run. Please call for defeat of propositons 78,88 and 104

Submitted By
Marina Boaick
Submitted On
1/23/2020 11:22:47 AM
Affiliation

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I am writing these comments to address proposal 169 prohibiting motorized vessels on a portion of the Kasilof River. I have lived on the Kasilof River for nearly 60 years. During this time I have seen it go from a pristine river teaming with life, to a river more and more heavily trafficked by boats with motors every year. I did not object to the drift boats with clients getting the opportunity to enjoy this river and catching the amazing salmon who run in it. I do however, object to the guides and private operators who are increasingly using motors to go up and down the river. The objective of these guides using their motors is purely because of greed. They use motors to go down river to be able to have time to take a second or third load of customers in a day. The other part of the problem is their lack of discernment in using these motors. They motor to the outside of the bends which causes more wake damage to the fragile outside shoreline. These guides yell and scream about the impact that commercial fisheries have on the resource, and particularly the kings, but they fail to see their own involvement in the demise of the resource. How can using a motor in critical king salmon spawning habitat be good for this species?

As land owners on the river we have tried to mitigate the erosion these motors, coupled with high water levels have caused.. We have partnered with the Alaska Department of Fish and Wildlife, the Kenai River Center, and Soil and Water Conservation to create fish habitat and restoration of the banks of our property 500 feet along the river. We obtained three different permits and followed a very specific protocol for our bank restoration involving excavation, root wads, biodegradable coconut wrap, gravel and replanting of grasses and willows on top of it all. The cost of the project was approximately $200,000. After finishing the project I have had the satisfaction of seeing baby salmon taking refuge among the root wads..I have also been horrified to witness these baby salmon being washed out of their happy hiding place by an unsuspecting guide's wake as he motored down river. The damage being caused by the wakes of motors is already apparent in this recent restoration project. What is the purpose of spending all of these dollars to restore banks to not have them serve their habitat purpose, and to only have them washed out again?

I am not sure why this proposal only limits motor use through September 15tth , as the fall is when water levels are highest and wakes from motors cause the greatest damage to the banks. Outboard motors should never be allowed on this river.

Please take careful consideration of this proposal. I ask that you take these necessary steps to protect the Kasilof Rver and the salmon that run in it above a user group that uses the river for personal financial gain. Salmon can still be successful caught from a drift boat, but if habitat is not preserved, salmon will not be successfully caught at all by anyone.

Thank you,

Marina Bosick

Submitted By
Mark Wackler
Submitted On
1/23/2020 4:00:59 PM
Affiliation

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Soldotna, Alaska 99669

My name is Mark Wackler and I became a fishing guide on the Kenai Peninsula in 1996 after growing up in Soldotna, Alaska. I currently own and operate a guide service and fishing lodge on the banks of the Kenai River. I have a bachelor's degree in Fisheries sciences, and a master's degree in Science Education. I feel as if I have a good understanding of the complicated dynamics involved in the management of Cook Inlet fisheries, especially the Kenai and Kasilof Rivers.

Speaking in general, I support management strategies that are conservation minded with the long-term health of our fisheries in mind. I believe that when the Alaska Constitution says to manage fisheries for the maximum benefit of its people, our children & the future should be considered, perhaps above all else. I ask you to see through the personal interests of groups that always selfishly ask for more, and fail to put the fish as the top priority.

My interests are rooted in conservation. I support those proposals that are aimed at increasing goals and protect species of low abundance, most especially genetically unique Kenai and Kasilof River King Salmon. Below are some specific proposals I'd like to comment on:

Proposal 104- An increase in the escapement goal is long overdue for these region-defining fish, and moving from the MSY to the more sustainable OEG would do just that. A plan that aims for MSY doesn't work well with complex stocks that overlap, and "yield" should not be the focus. After a decade of low abundance and a massive decrease in the large king salmon that make the Kenai and Kasilof Rivers so special, it's time to take BIG steps to protect what's left. Adding the 36" rule will also serve as a valuable tool in the toolbox of fisheries managers, and I believe it's imperative that tool be included in the new management plan.

Proposal 84- I was told not to take this proposal seriously, but I feel compelled to comment on it because it really worries me. The goal of this proposal is supposedly to protect king salmon, but I can say with utmost confidence that it DOES NOT do that in any way. Simply unhooking and dumping a tired king salmon back into the heavy current is anything but beneficial, not to mention that there's absolutely no science to support it. Common sense says that taking time to revive your fish using the current to provide oxygenated water is best practice for catch & release on big king salmon. Mandating that a fish must be released immediately from a boat that's floating with the current doesn't allow the angler to take advantage of the current in order to revive their fish properly. It also creates safety issues in which the boat operator must turn their back in order to deal with the fish while their boat floats aimlessly down a swift, busy, obstacle filled, glacial river… It's a recipe for disaster! Please deny this proposal or any version of it immediately.

Proposal 121- To say managing mixed stock fisheries using harvest methods that are non-discriminatory is difficult would be a massive understatement, but it's the job ADF&G has been cursed with. There's no choice but to make the impossible decision of which species is more important. But given the circumstances and the choice you are forced to make, it's sensible to say that Kenai River king salmon escapements should be prioritized over Kasilof River sockeye salmon escapements. This proposal should be passed without a doubt.

Proposal 129- Adding more tools to the toolbox is exactly what ADF&G fisheries managers need. This proposal provides one more tool that can be utilized under certain circumstances to save a few king salmon. I don't see any reason to oppose this proposal.

Proposal 195- This proposal is conservation-minded in nature and will allow more silver salmon and king salmon into the Kenai River. Both are desperately needed from a sustainability perspective. I fully support this proposal.

In summary, as you go through this rigorous and often-ugly process, I ask you to do your very best to not allow the special interest of a small & vocal minority to sway your decision making. Despite what some organizations & individuals that blatantly misrepresent thier user groups might say, it's abundantly clear that right now Alaskans are asking to give rather than take. Alaskans are asking for a conservation-minded approach that keeps our children and grandchildren in the forefront of our minds. Alaskans are asking to put the fish first.

Thank you for your dedication to our resource.

Mark Wackler

MATANUSKA-SUSITNA BOROUG

Fish & Wildlife Commission
Planning and Land Use Department
Planning Division
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To: Alaska Board of Fisheries

From: Matanuska-Susitna Borough Fish and Wildlife Commission

Date: January 23, 2020

Re: Comments on 2020 Upper Cook Inlet Finfish Proposals

The following comments are submitted on behalf of the Matanuska-Susitna Borough's Fish and Wildlife Commission. Proposals were evaluated in committee and comments generated based on goals the Commission has established for the upcoming Board of Fisheries UCI meeting:

- Enhance the Conservation Corridor
- Continue protections for Stocks of Concern
- Increase in-river returns of coho salmon to Mat-Su systems
- Amend and adopt Chinook salmon management plan for Northern Cook Inlet
- Maintain or extend Personal Use fishing opportunities

These goals are detailed in a publication you received entitled "It Takes Fish to Make Fish 2020 *The Corridor is working- Enhance it"*.

Summary of FWC Positions:

Proposal-Position	**Proposal-Position**	**Proposal-Position**
78 – Support	218 – Support	104 – Oppose
88 – Support	219 – Support	145 – Oppose
124 – Support	221 – Support	200 – Oppose
127 – Support	222 – Support	201 – Oppose
129 – Support	225 – Support	202 – Oppose
133 – Support	227 – Support	203 – Oppose
199 – Support	232 – Support	239 – Oppose
205 – Support	234-238 - Support	243 – Oppose
214 – Support	240 – Support	
215 – Support	242 – Support	
217 – Support		

Following are our comments on each proposal we took a position on.

Thank you for considering these comments, and we look forward to fully participating in the Board process in February.

MSB Fish and Wildlife Commission Proposal Positions

Process: BOF proposals of interest were evaluated in a FWC committee, and the vote of this committee (indicated below for each proposal) was forwarded to the full FWC. In all cases the FWC concurred with the committee majority's choice to support or oppose.

SUPPORT THE FOLLOWING PROPOSALS:

Proposal 133. 5 AAC 21.353. Central District Drift Gillnet Fishery Management Plan. Amend the Central District Drift Gillnet Fishery Management Plan with additional mandatory area restrictions to regular fishing periods.

This proposal amends the Central District Drift Gillnet Fishery Management Plan in order to increase passage of salmon into the Northern District. This proposal would eliminate the option for a District-wide opening during the July 16 through July 31 period and would further replace District-wide openings from August 1 through August 15 with more restricted fishing opportunities. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 133.***

Proposal 127. 5 AAC 21.353. Central District Drift Gillnet Fishery Management Plan.
Amend the Central District Drift Gillnet Fishery Management Plan to allocate 60-80% of northern-bound sockeye and coho salmon harvests to Northern Cook Inlet fisheries.

This proposal addresses the provided inadequate passage of Northern sockeye and coho salmon to provide reasonable harvest opportunity for Northern Cook Inlet User Groups by establishing a harvest allocation target within the Central District Drift Gillet Fishery Management Plan. Northern sport, commercial, and personal use fisheries have been restricted and/or closed and subsistence fisheries have experienced low harvests when the largest share of northern-bound sockeye and coho salmon has been harvested by the Central District drift gill net fishery. We respectfully requests a harvest allocation of northern-bound sockeye and coho salmon to provide shared reasonable harvest opportunity for Northern Cook Inlet user groups. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 127.***

PROPOSAL 124. 5 AAC 21.353. Central District Drift Gillnet Fishery Management Plan.
Amend the purpose of the Central District Drift Gillnet Fishery Management Plan to include in-river users.

This proposal addresses inadequate allocation of harvestable salmon for sport, personal use, and guided sport in the Susitna River drainage. The population of in-river anglers in the Mat-Su Borough has grown along with the census figure of over 100,000 residents. The increased demand for harvestable salmon is not currently being met. ***FWC SUPPORTS proposal 124.***

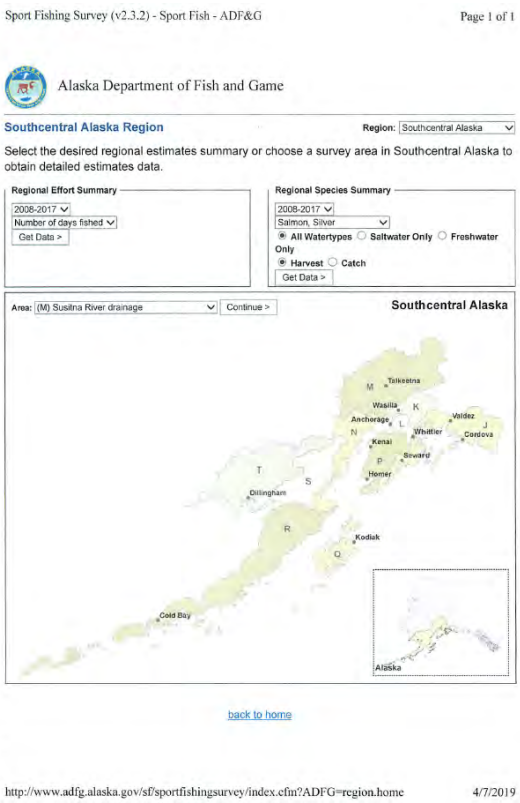
Proposal 204. **5 AAC 21/358. Northern District Salmon Management Plan.**

If resources are to be shared in an area, then we need to mention all users. Following several years with restriction and closures to Northern Cook Inlet in-river users, we support this proposal to include their reasonable use of the resource as a listed purpose of the Northern District Salmon Management Plan. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 204.***

Proposal 205. **5 AAC 21.358. Northern District Salmon Management Plan.** Clarify the definition of "minimize" in the Northern District Salmon Management Plan.

The term "minimize" has never been defined in regulation, however one of the stated purposes of the management plan is to minimize the harvest of Coho salmon bound for the Northern District of Upper Cook Inlet and to provide the department direction for management of salmon stocks.

To effectively implement this directive we believe the terms must be clearly defined in the form of a specified percentage of the harvestable surplus, or it could be a specific cap number based on the five-year average of sport harvested silvers in the Northern District, or more specific restrictions on time and area for the commercial fishery than currently exist. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 205.***



Alaska Sport Fishing Survey harvest data for all water types for Southcentral Region, survey areas K, L, M, and N for Coho salmon for the years 2008 to 2017.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
K	35996	37380	26369	8484	5014	12335	16180	17800	7962	6232
L	17996	10805	4466	7405	4187	6190	9430	15099	5069	13049
M	41708	31193	30327	21806	17063	25594	25654	29234	9921	23597
N	14673	9801	9030	6292	7813	7698	7320	12849	6015	4828
	110373	89179	70192	43987	34077	51817	58584	74982	28967	47706

K: Knik survey area
L: Anchorage survey area
M: Susitna River Drainage survey area
N: West Cook Inlet Drainage survey area

Data from: Alaska Sport Fishing Survey database [Internet]. 1996-- . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited April 7, 2019).

Fishery Management Report No. 18-10

Upper Cook Inlet Commercial Fisheries Annual Management Report, 2017

by
Pat Shields
and
Alyssa Frothingham

May 2018
Alaska Department of Fish and Game — Divisions of Sport Fish and Commercial Fisheries

Appendix B3.–Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966–2017.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,053	32.8	18,988	18.9	28,231	28.0	20,412	20.3	100,684
1970	110,070	40.0	30,114	10.9	52,299	19.0	82,722	30.1	275,205
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,577	26.7	24,673	30.5	15,300	18.9	19,346	23.9	80,896
1973	31,784	30.4	23,901	22.9	24,784	23.7	23,951	22.9	104,420
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,579	39.0	46,209	20.3	59,537	26.2	33,051	14.5	227,376
1976	80,712	38.7	47,873	22.9	42,243	20.2	37,835	18.1	208,663
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,259	34.8	34,134	15.6	61,711	28.2	47,089	21.5	219,193
1979	114,496	43.2	29,284	11.0	68,306	25.8	53,078	20.0	265,164
1980	89,510	33.0	40,281	14.8	51,527	19.0	90,098	33.2	271,416
1981	226,366	46.7	36,024	7.4	88,390	18.2	133,625	27.6	484,405
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,965	63.3	37,694	7.3	97,796	18.9	53,867	10.4	516,322
1984	213,423	47.4	37,166	8.3	84,618	18.8	114,786	25.5	449,993
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,818	66.9	76,495	10.1	85,932	11.4	88,108	11.6	757,353
1987	202,506	44.8	74,981	16.6	75,201	16.6	97,062	21.9	449,750
1988	278,828	49.6	54,975	9.9	77,503	13.8	149,742	26.7	561,048
1989	856	0.2	82,333	24.1	81,004	23.9	175,738	51.8	339,931
1990	247,453	49.3	40,351	8.0	73,429	14.6	140,506	28.0	501,739
1991	176,245	41.2	30,436	7.1	87,515	20.6	132,302	31.0	426,498
1992	267,300	57.0	57,078	12.2	53,419	11.4	91,133	19.4	468,930

-continued-

Appendix B3.–Page 2 of 2.

	Central District						Northern District		
	Drift Gillnet		Upper Subdistrict Set		Kalgin/West Side Set		Set Gillnet		
Year	Number[b]	%	Number[b]	%	Number[b]	%	Number[b]	%	Total
1993	121,829	39.7	43,098	14.0	35,661	11.6	106,294	34.6	306,882
1994	310,114	52.7	68,449	11.9	61,166	10.5	144,064	24.8	583,793
1995	241,473	54.0	44,751	10.0	71,606	16.0	89,300	20.0	447,130
1996	171,434	53.3	40,724	12.6	31,405	9.8	78,105	24.3	321,668
1997	78,666	51.6	19,668	12.9	16,705	11.0	37,369	24.5	152,408
1998	83,338	51.9	18,677	11.6	24,286	15.1	34,387	21.4	160,688
1999	64,814	51.5	11,923	9.3	17,725	14.1	31,643	25.1	126,105
2000	131,478	55.5	11,078	4.7	22,840	9.6	71,475	30.2	236,871
2001	39,418	34.8	4,246	3.7	23,719	20.9	45,928	40.5	113,311
2002	125,831	51.1	35,153	14.3	35,005	14.2	50,292	20.4	246,281
2003	52,432	51.5	10,171	10.0	15,138	14.9	24,015	23.6	101,756
2004	199,587	64.2	30,154	9.7	36,498	11.7	44,819	14.4	311,058
2005	144,753	64.4	19,543	8.7	29,502	13.1	30,859	13.7	224,657
2006	98,473	55.4	22,167	12.5	36,845	20.7	20,368	11.5	177,853
2007	108,703	61.3	23,610	13.3	23,495	13.2	21,531	12.1	177,339
2008	89,428	52.0	21,823	12.7	18,441	10.7	42,177	24.5	171,869
2009	82,096	53.6	11,435	7.5	22,050	14.4	37,629	24.6	153,210
2010	110,275	53.2	32,683	15.8	26,281	12.7	38,111	18.4	207,350
2011	40,858	42.9	15,560	16.3	16,760	17.6	22,113	23.2	95,291
2012	74,678	69.9	6,537	6.1	12,354	11.6	13,206	12.4	106,775
2013	184,771	70.8	2,266	0.9	31,513	12.1	42,413	16.3	260,963
2014	76,932	56.0	5,908	4.3	19,379	14.1	35,200	25.6	137,419
2015	130,720	60.5	17,948	8.3	20,748	9.6	46,616	21.6	216,032
2016	90,242	61.2	11,606	7.9	15,171	10.3	30,476	20.7	147,495
2017	191,490	63.1	29,916	9.9	29,535	9.7	52,701	17.4	303,642
1966-16 Avg *	144,812	48.6	34,329	12.6	47,787	16.8	61,902	22.0	288,830
2007-16 Avg	98,870	58.1	14,938	9.3	20,619	12.6	32,947	19.9	167,374

Note: Harvest data prior to 2017 reflect minor adjustments to historical catch database.

* 1989 not used in average because the drift fleet did not fish due to the Exxon Valdez oil spill; this had an effect on all other fisheries.

Proposals 234, 235, 236, 237, 238. 5 AAC 77.540. Upper Cook Inlet Personal Use Salmon Fishery Management Plan.

These proposals seek to provide an opportunity for a personal user salmon dip net fishery on the Susitna River. The importance of providing Alaska residents an opportunity to harvest salmon for personal consumption cannot be overstated. We support the development of Personal Use fisheries regulation that affords for sustainable opportunity, conservation and the prosecution of an orderly fishery. We believe concepts from each of these proposals may be used in developing a reasonable personal use fishery.

Residents of the Mat-Su Valley would like the option of a PU fishery on the Susitna River, and not having to travel hundreds of miles away to the Kenai or Copper Rivers. The most recent ADFG abundance estimates indicate there are in-river fish to harvest. Recent abundance and harvest of these stocks indicate to us there is a harvestable surplus of salmon in-river and a limited PU fishery is warranted. If there is not a harvestable surplus of salmon in river then the BOF needs to shift the allocations slightly and direct the commercial fishery to share in the harvest (or lack of harvest) with other users and uses. Committee vote: 2 for, 1 against. ***FWC SUPPORTS proposals 234 - 238.***

PROPOSAL 199. 5 AAC 21.366. Northern District King Salmon Management Plan.
Amend the Northern District King Salmon Management Plan.

Proposed amendments to the Northern District King Salmon Management Plan strengthen paired restrictions between the sport fishery and set net fishery to more equitably spread the burden of conservation among users. This proposal corrects past practice that has resulted in unequal sharing of conservation burdens that has generated emergency petitions submitted to the Board of Fisheries. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 199.***

PROPOSAL 215. 5 AAC XX.XXX. New section. Create a Susitna and Yentna Rivers King Salmon Fishery Management Plan

We are proposing that the Board adopt a Susitna and Yentna Rivers King Salmon Fishery Management Plan. Following the downturn in Susitna/Yentna River king salmon production, from 2013-2018 the Alaska Department of Fish and Game has increasingly been managing this sport king salmon fishery by preseason and in-season emergency orders. In 2019, for the first time in over 40 years, the Susitna and Yentna River drainage king salmon fishery was entirely closed by preseason emergency order.

This plan incorporates management actions currently used in management by the Department, prescribes when specific actions may occur, and provides for the use of size restrictions in the sport fishery as an additional tool.

Adoption of this plan will provide a more predictable framework for management and a basis on which to refine and improve future management. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 215.***

PROPOSAL 217. 5 AAC XX.XXX. New section. Create a Deshka River King Salmon Fishery Management Plan

Adoption of a Deshka River King Salmon Management plan is necessary to guidance to the Department and predictability to the affected users in how the fishery will be managed. In 2018 the fishery was restricted to catch-and-release only fishing for the entire season before a season ending closure. In 2019 the fishery was closed entirely by preseason emergency order.

This plan incorporates management actions currently used in management by the Department, prescribes when specific actions may occur, and provides for the use of size restrictions in the sport fishery as an additional tool.

Adoption of this plan will provide a more predictable framework for management and a basis on which to refine and improve future management. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 217.***

PROPOSAL 219. 5 AAC XX.XXX. New section. Create a Little Susitna River King Salmon Fishery Management Plan

With the downturn in Little Susitna River king salmon production, from 2013 - 2018 the Alaska Department of Fish and Game has increasingly been managing the Little Susitna River sport king salmon fishery by preseason and inseason emergency orders. In 2019 for the first time in over 40 years the Little Susitna River king salmon fishery was entirely closed by preseason emergency order. This management plan proposal is an attempt to document actions currently used in management by the Department, showing when specific actions may occur, and also an attempt to provide an additional tool (the use of a size restriction in the management of the sport fishery). With such a plan sport users will have the opportunity to examine specific management actions the Department has taken or may likely take in the future when managing this resource. In addition, with a plan in regulation, fishermen and other users will have the opportunity to propose changes or tools to use in future Little Susitna River king salmon management. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 219.***

PROPOSAL 78. 5 AAC 21.363. Upper Cook Inlet Salmon Management Plan. Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources.

The State of Alaska, through the Alaska Board of Fisheries, is not fulfilling its Constitutional obligation to maximize the benefit of the fisheries resource to the people of the State by continuing to restrict sport, guided sport and personal use salmon fisheries in Upper Cook Inlet

in favor of the commercial salmon fisheries. Allocation criteria were adopted in 1991 and have not been addressed since to accommodate changing demands and fishery values. Particularly in the area of priority for providing residents the opportunity to harvest fish for personal and family consumption and weighting the importance of the fishery to the economy of the state. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 78.***

PROPOSAL 88. 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan. Amend the Kenai River Late-Run Sockeye Salmon Management Plan.

Recent data on production from large escapements of Kenai River late run sockeye indicates that maximum sustained yield is produced at levels greater than previously thought. Accordingly, ADF&G has recently increased the SEG from 700,000 – 1,200,000 to 750,000 – 1,300,000. The ADF&G analysis actually indicated that maximum yield is produced by escapements around 1.2 million.

Increasing escapement goals as proposed will enhance future Kenai River sockeye returns and yields and will also likely help pass additional Northern Cook Inlet salmon stocks through the Central District. This would help to better achieve appropriate northern spawning escapement levels, while also providing for reasonable harvests by Northern Cook Inlet commercial, subsistence, sport, and personal use user groups. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 88.***

PROPOSAL 242. 5 AAC 01.593. Upper Yentna River subsistence salmon fishery. Allow two additional fishing days per week in the Upper Yentna River subsistence salmon fishery.

This proposal calls for two more days of fishing time per week, a 60% increase for Upper Yentna Subsistence fishery. Subsistence use has a priority and while there are conservation concerns with king salmon during the June 1 - 30 fishery we believe the additional time is sustainable. We have no such reservations concerning the additional time during the July 15 - August 7 portion of the season. We believe that additional requested subsistence fishing time for the July 15 – August 7 period would provide for more reasonable harvest levels for subsistence users and is sustainable. We support providing additional subsistence fishing time from July 15 – August 7. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 242.***

PROPOSAL 129. 5 AAC 21.353. Central District Drift Gillnet Fishery Management Plan. Allow the commissioner to limit Central District drift gillnets to less than 150 and 200 fathoms in length and 29 meshes in depth.

We support the added authority for ADF&G to limit drift net length and depth. This added flexibility will allow for continued drift fishing during times of lower abundance while "rightsizing" fishing power to run strength. Northern set netters and Eastside central district set netter already have these type restrictions. Another option would be to allow shorter commercial

periods by emergency order — something that currently is used in the Northern District set net fishery. Shorter periods could be less of a burden to the commercial fishery compared to an entirely different set of gear. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 129.***

PROPOSAL 218. 5 AAC XX.XXX. New section.
Create an optimal escapement goal for McRoberts Creek coho salmon of 450-1,400 fish.

We support the creation of an OEG of 450-1,400 coho salmon for McRoberts Creek. This is in line with the current goal and could be replaced when ADF&G comes up with a weir goal for entire Jim Creek system.

We recognize that the McRoberts Creek goal is a post-season target, not available for in-season management, but important nonetheless, in monitoring Jim Creek coho salmon sustainability. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 218.***

PROPOSAL 214. 5 AAC 59.120. General provisions for the seasons, bag, possession, and size limits, and methods and means for the Anchorage Bowl Drainages Area; and 5 AAC 60.120. General provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainage Area.
Prohibit live release of northern pike in the Anchorage Bowl and Knik River drainages.

Northern pike are a predatory and invasive species that pose a significant threat to salmon and other resident native species. Expanding mandatory retention throughout the southcentral Alaska promotes consistency in regulation between adjacent management areas and reduces predation through pike suppression.

Better wording would be in the Northern Cook Inlet Management Area and Anchorage Management Area. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 214.***

PROPOSAL 232. 5 AAC 62.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for the West Cook Inlet Area.
Close a section of the south fork of Big River to sport fishing.

This proposal provides protection to spawning beds that are vulnerable to fishing exploitation on the South Fork of the Big River upstream from the island approximately 3/4 mile from the confluence with Otter Lake.

Would allow fishing in 3-mile Creek and 3-mile Lake for other species than salmon (pike). We support a similar regulation be developed for Susitna River Drainage. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 232.***

PROPOSAL 240. 5 AAC 77.5xx. New section.
Create a personal use northern pike gillnet fishery in the Susitna River drainage.

Northern pike are a predatory and invasive species that pose a significant threat to salmon and other resident native species. Providing for a personal use gillnet fishery in the Susitna drainage will afford an opportunity to harvest and will help in reducing pike numbers. The Alaska Department of Fish and Game currently conducts pike control netting in the Susitna River drainage. Because of concerns for impacts on other native fish species, we prefer any personal use pike netting be permitted with locations and conditions set by the department before adoption by the Board of Fisheries. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 240***

PROPOSAL 222. 5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area.
Allow fishing for resident species on days closed to king salmon fishing in Unit 2.

This proposal provides for fishing for resident species during times when king salmon fishing is closed. Other salmon species (all fish species) should be allowed to fish for and harvest — wording need to be changed. Dates need be changed to acknowledge fishery is open through 3rd Monday in June as well. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 222.***

PROPOSAL 221. 5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area.
Extend the use of bait to September 11 in Unit 2 of the Susitna River Drainage Area sport fishery.

This proposal extends the use of bait while fishing through September 10 in Susitna River drainage Unit 2. When restricted to single-hook artificial lures after August 31, sportfishing effort and harvests plummet, even though harvestable coho salmon remain available. Susitna River drainage sport anglers should be allowed to fish with bait for coho through September 10 in order to more fully utilize this fishery resource. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 221.***

PROPOSAL 225. 5 AAC 60.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area.
Open more area in the Eklutna Tailrace/Knik River sport king salmon fishery, with harvestable king salmon (in the additional area) limited to only hatchery fin-clipped king salmon.

If adopted this proposal would allow very limited harvest beyond the present area for the first few years, as few of the hatchery king salmon released in previous years, at this location, were fin clipped. It would also remain to be seen how successful anglers could be at catching king salmon in the deeper and more glacially turbid mainstream Knik River. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 225.***

PROPOSAL 227. 5 AAC 60.122. Special provisions for the seasons, bag, possession, annual, and size limits, and methods and means for the Knik Arm Drainages Area.

Open additional days in the sport fishery in the Fish Creek drainage.

A harvestable surplus occurs within the Fish Creek drainage, even though escapement numbers remain lower in nearby streams. Additional fishing days could be added to better utilize harvestable surplus coho and sockeye salmon. Fish Creek has been making goal on a regular basis with emergency orders at times expanding the fishery. This proposal will afford additional and sustainable opportunity for people to fish. Committee vote: 3 for, 0 against. ***FWC SUPPORTS proposal 227.***

OPPOSED TO THE FOLLOWING PROPOSALS:

PROPOSAL 145. 5 AAC 57.120. General provisions for seasons, bag, possession, annual, and size limits, and methods and means for the Kenai River Drainage Area; and 77.540. Upper Cook Inlet Personal Use Salmon Fishery Management Plan.
Allow sport, personal use, and subsistence fishing for sockeye salmon on the Kenai River until August 15.

Kenai sockeye are fully utilized and the extension of the personal use dip net fishery to August 15th is unnecessary. A delicate balance between user groups exists and this extension could upset that. Personal use, commercial, and sport user groups would all like to see their opportunity to harvest Kenai River sockeye salmon, a fully utilized resource, maintained or expanded. With differing viewpoints on allocation of Kenai River sockeye salmon between user groups, we oppose this proposal. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 145.***

PROPOSAL 104. 5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan. Adopt an optimal escapement goal and amend the paired restrictions in the Kenai River Late-Run King Salmon Management Plan.

Increasing Kenai River goals would cause more fishing restrictions and closures to Kenai River sport users, Kenai River dip netters, and Eastside set netters —especially during times of low king salmon production. Harvesting surplus Kenai sockeyes without set netters increase interception of Northern bound salmon stocks. Committee vote: 0 for this proposal, 3 against. ***FWC OPPOSES proposal 104.***

PROPOSAL 243. 5 AAC 01.595. Subsistence bag, possession, and size limits.
Allow the harvest of other salmon in place of king salmon in the Tyonek Subdistrict subsistence fishery.

This proposal requests an increase in other salmon limit as a replacement for king salmon — but the wording removes the king salmon cap of 4,200 fish. This could have the effect of increasing the king salmon harvest rather than lowering it. If participation is primarily in early May and June most of the harvest will be king salmon. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 243.***

PROPOSAL 200. 5 AAC 21.366. Northern District King Salmon Management Plan.
Close the Northern District commercial king salmon fishery when the sport fishery in the Susitna or Knik Arm drainages are restricted.

Would close the Northern District king salmon fishery when sport fishery in Susitna drainage or Knik Arm was restricted. More restrictive than Commission has supported this year. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 200.***

PROPOSAL 201. 5 AAC 21.366. Northern District King Salmon Management Plan.
Amend paired restrictions in the Deshka River king salmon sport and commercial fisheries.

Would expand the Northern District king salmon fishery during times of king salmon shortages. In the case where the sport fishery is closed and then reopened to catch and release the subsequent catch and release mortality is considered in the decision. That level of mortality is sustainable while the fishing power of the commercial fishery is not. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 201.***

PROPOSAL 202. 5 AAC 21.366. Northern District King Salmon Management Plan.
Amend the Northern District King Salmon Management Plan to allow operation of one set gillnet per permit.

If adopted this proposal would expand commercial king salmon harvest opportunity by 100% for those who owned 2 permits. Regulations are inconsistent throughout Upper Cook Inlet. Some regulations allow the use of some additional net — but not the full amount for double permit holders. King salmon are in low abundance. Sport licensees are not allowed to catch more king salmon by purchasing and additional king salmon stamp. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 202.***

PROPOSAL 203. 5 AAC 21.366. Northern District King Salmon Management Plan.
Provide additional fishing periods in the Northern District king salmon commercial fishery when the Deshka River king salmon sport fishery is liberalized.

This proposal would allow expansion of Northern District king salmon openers by one per week and expand hours by up to 50% if the sport bag limit on Deshka River was increased to 2 king salmon per day. Will result in a higher allocation for the set netters of a limited resource. King salmon escapement goals are currently being missed in lots of rivers. Committee vote: 1 for this proposal, 2 against. ***FWC OPPOSES proposal 203.***

PROPOSAL 239. 5 AAC 77.540. Upper Cook Inlet Personal Use Salmon Fishery Management Plan.
Establish a personal use gillnet pike fishery in the Matanuska-Susitna Valley.

Pike are an invasive and predatory species. They persist in waters where desired native species exist. As written this proposal is too liberal and will result in indiscriminate killing of desirable species. Committee vote: 0 for this proposal, 3 against. ***FWC OPPOSES proposal 239.***

July 2019

Contribution of recreational fishing in the Matanuska-Susitna Borough to the local economy

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Introduction

A study of the economic contributions that accrue to the Cook Inlet region from sportfishing activity was conducted in 2017.[1] The project was conducted in cooperation with the Alaska Department of Fish & Game with funding provided by the Matanuska-Susitna (Mat-Su) Borough and the Department of Commerce, Community, and Economic Development. The Mat-Su Fish and Wildlife Commission now has interest in understanding the economic contributions of spending by anglers who fish within the Mat-Su Borough.

Methodology

The 2017 study surveyed Alaska's licensed anglers to learn where they fished and determine how much money was spent anywhere in the Cook Inlet region for fishing trip-related and equipment purchases. The study did not ask anglers to identify the specific boroughs where the money was spent. Moreover, the economic contributions were estimated across the broader geographical region of the Cook Inlet. Because of this, a specialized approach to allocate the region-wide spending estimates to the Mat-Su Borough is needed and described below.

Quantifying days of fishing specific to the Mat-Su Borough

The Alaska Department of Fish & Game (ADF&G) conducts an annual statewide harvest survey (SWHS) that includes estimated numbers of anglers and days of fishing effort for many small sub-state regions. We obtained from ADF&G the estimated numbers for the fishing sub-areas within the Mat-Su Borough for 2017. Every effort was taken to define the Mat-Su Borough in the same way that it was defined in the 2009 report by ISER, including the programming code that was used to retrieve the data from the SWHS.[2] A full list of sites is included in Table A1 of the Appendix.

The fishing day data for the Mat-Su Borough from the SWHS do not provide detail regarding the proportion of days which are resident versus nonresident. As a proxy, we apply the proportion of resident to nonresident fishing days available

[1] Southwick Associates. 2019. Economic Contributions of Sportfishing in the Cook Inlet Region. Prepared for the Matanuska-Susitna Borough Fish and Wildlife Commission. The Cook Inlet is defined to include the Anchorage, Kenai , and Mat-Su Boroughs.

[2] Colt, S. and T. Schwoerer. 2009. Economic Importance of Sportfishing in the Matanuska-Susitna Borough. Prepared for Matanuska-Susitna Borough Economic Development Department.

from the broader geographical region of the Cook Inlet to the total days fished within the Mat-Su Borough.

Angler spending profile development

From the raw data in our 2017 study, we estimated average spending during a day spent fishing in the Mat-Su Borough which contributes to the local economy. To do this, we initially converted both annual trip-related and annual equipment & real estate spending to an average spending per fishing day using the estimate of total fishing days from the SWHS.

Separate expenditure profiles were constructed for resident and nonresident sportsmen. It is important to note that not all spending occurs where the fishing activity takes place. As a result, we allocate the trip-related and equipment spending differently to estimate the spending that takes place within the Mat-Su borough by anglers who fished in the region. **Equipment** spending was allocated to the Mat-Su borough proportional to retails sales of sporting goods across the entire Cook Inlet that occurs in Mat-Su.[3] This assumes that fishing equipment purchases are made in essentially the same places that most retail sporting goods are sold. Most **trip-related** spending takes place close to where the fishing occurs. We allocated the destination spending (e.g., lodging, guide fees) to the Mat-Su borough on the basis of days of fishing taking place in the region. However, a portion of some **trip-related** spending also takes place closer to home (e.g., groceries, gasoline). That spending was split between the sportsmen's place of residence and where the activity occurred.[4] For this spending, one-half of the expenditure was allocated using the destination spending methodology and one-half was allocated using the residential spending methodology. More detail is provided in Table A2 in the Appendix.

With regards to total estimated fishing days in the Mat-Su Borough, we define two groups, local and nonlocal, for both Alaska residents and nonresidents. Among Alaska residents, 'local' fishing days are those associated with anglers who reside in the Mat-Su Borough and 'nonlocal' fishing days are those associated with anglers who reside outside of the Borough. It is not possible to determine the local to nonlocal proportion from the SWHS data specific to the Mat-Su Borough. Instead, we apply the proportion of local to nonlocal fishing days available from the broader geographical region of the Cook Inlet to the total days fished within the Borough.

Among nonresidents of Alaska, 'local' fishing days are associated with anglers who stayed in Mat-Su during the course of their visit and 'nonlocal' fishing days are those associated with anglers who stayed outside of Mat-Su during their visit

[3] Retail sales data for Alaska was estimated using the regional purchase coefficient from IMPLAN©.

[4] The allocation procedure varied somewhat for Alaska residents and nonresidents to account for the different places where nonresidents stay when visiting Alaska. See Appendix Table A2 for a detailed explanation.

but fished somewhere in the Mat-Su Borough. These allocations are done using data from Alaska's Visitor Statistics Program (AVSP).[5] The AVSP provides information about visitor destinations, including overnight stays for boroughs within the Cook Inlet. From that, the proportion of nonresidents who likely stayed in Mat-Su Borough ('local') can be estimated and used to apportion fishing days to define local and nonlocal groups among nonresidents.

Economic Modeling

Background and Metrics

The economic contributions of fishing-related spending on the Mat-Su Borough are estimated with an input-output model of the regional economy and IMPLAN Pro© impact analysis software.

Input-output models are driven by some change in economic activity, usually spending (also known as the direct effect). The **direct effect** refers to the initial stimulus to the economy. In this study, it refers specifically to the dollars spent by anglers for trip-related purchases, fishing equipment, and other spending that is immediately attributable to their fishing activity. In the strictest sense, the direct effect does not always equate with angler spending due to economic leakages. For example, some of the equipment purchased by anglers is manufactured outside of the region and those dollars (except for associated retail/wholesale/transportation activity) leak immediately beyond the region's borders and do not have a direct effect on the regional economy. In that case, angler spending may not equal direct effect in the language of input-output models. In other cases, the amount of angler spending is the direct effect. For example, spending for lodging and restaurant meals represents purchases of goods and services that are produced entirely where they are bought, and the entire purchase is captured in the direct effect on the regional economy.

The total economic contributions of sportfishing on the Mat-Su Borough are based on the spending described above plus the multiplier effect of that spending. The input-output model produces estimates of the total multiplier effects (indirect and induced) that arise from the spending by anglers (the direct effect).

Indirect effect refers to the economic activity (e.g., output, employment, income) in the businesses that supply the industries stimulated by the direct effect. Those indirectly affected industries, in turn, stimulate additional activity among their

[5] McDowell Group. 2016. AVSP 7-Section 5: Visitor Profile-Destinations and Activities. Available: https://www.alaskatia.org/marketing/AVSP%20VII/5.%20AVSP%207%20Vis%20Profile%20Destinations%20Activities.pdf

local suppliers, and so on. For example, if an angler spent $100 to purchase the services of a guide, the guide uses a portion of the $100 paid by the angler to purchase boat fuel, equipment, bait, utilities, etc. from local sources. In addition, a portion of the $100 pays for goods and services from out-of-state providers. In the next round, the in-state business that supplies bait to the guide (as well as all of the other in-state businesses that supply goods and services to the guide), in turn, must use part of the money that it receives from the guide to pay its own business expenses (e.g., fuel, gear, utilities). Their suppliers, in turn, also pay in-state and out-of-state suppliers to support their increased business activity. This indirect activity continues in this way until the effect becomes negligible as a portion of each round of payments for goods and services eventually leaks out of the local economy.

The **induced effect** measures the economic activity that results from the household spending of salaries and wages that were generated from the business activity associated with the direct and indirect effects.

The interpretation of the results of the economic models depends on the changes that drive the model. The term “economic impact” is normally reserved to describe some level of economic activity that would not occur except for the initial economic activity. In the case of recreational activities like sportfishing, it is generally agreed that economic impact comes from spending by visitors to the region. If not for their presence, their spending would not occur. If quality sportfishing was no longer available in the Mat-Su Borough, for example, nonresident anglers may choose to fish (and spend) elsewhere, and thus not generate economic contributions to the regional economy. Most resident anglers, on the other hand, choose fishing as an activity on which to spend their recreational dollars, locally. If quality sportfishing was no longer available, some residents would likely choose some other local recreational activity on which to spend their money in place of fishing and their spending would remain in the regional economy.

It is generally acknowledged that retained economic activity can also represent a real economic impact. For example, the quality of fishing opportunities in the Mat-Su Borough is such that some anglers choose to fish in Alaska rather than go elsewhere. If the quality of fishing were to decline, then some dedicated resident anglers may choose to travel outside of the region for sportfishing and their dollars would be lost to the region’s economy. It is unclear what portion of resident anglers would fall into that category. It was beyond the scope of this study to investigate retention scenarios.

The focus of this study was on the total economic activity associated with sportfishing as a measure of its overall contribution to the Mat-Su Borough economy. In that case, it was appropriate to include all spending for sportfishing, including both resident and nonresident anglers. That measure is alternately called “economic contribution” or “economic significance”, among others. This

study was concerned with measuring the economic significance of sportfishing and therefore includes resident spending as part of the direct effect. To help understand the relative contributions that residents and nonresidents make to the economy, results in this report were broken out separately by residency.

Separate models based on residency were created to estimate the associated contributions of sportfishing. IMPLAN economic data are available for each of the boroughs in Alaska, including the Mat-Su Borough, and are based on 2016 economic model data. Deflators included within the modeling software were employed to account for inflation effects between the model year data (2016) and the year of reported angler expenditures (2017).

Economic activity can be measured in several different ways. The most common way to portray how expenditures on sportfishing affect the economy include the following metrics. **These descriptions explicitly include the multiplier effects of angler spending.**

Retail Sales – These include expenditures made by anglers for equipment, travel expenses and services related to their sportfishing activities over the course of the year. These combined initial retail sales are the stimulus that trigger the multiplier effects in the regional economy.

Output – This measure reports the volume of economic activity within the local economy that is related to sportfishing. Because it does not discount the value of raw materials as they move through the production of goods or services, this measure double-counts a portion of the output of the industries in the value chain.

Labor Income – This figure reports the total salaries and wages paid in all sectors of the regional economy as a result of sportfishing activities. These are not just the paychecks of those employees directly serving anglers or manufacturing their goods, it also includes portions of the paychecks of all employees affected by the direct, indirect and induced effects. For example, it would include a portion of the dollars earned by the truck driver who delivers food to the restaurants serving anglers and the accountants who manage the books for companies down the supply chain, etc.

Employment – Much like Labor Income, this figure reports the total jobs in all sectors of the economy as a result of the sportfishing activity and includes both full-time and part-time jobs. These are not just the employees directly serving anglers or manufacturing their goods but can also include employees of industries impacted by the direct, indirect and induced effects.

Federal, State, and Local Tax Revenues – Including all forms of personal, business and excise taxes, the IMPLAN model estimates the tax revenues collected by the local, state and federal governments as a result of the initial expenditures by anglers.

Results

Angler Days

Anglers spent 155,000 days sportfishing in the Mat-Su Borough in 2017 (Table 1). Alaska residents accounted for the majority of days fished (57% or 88,100) while nonresidents fished 67,300 days (43%). Local residents contributed the overwhelming majority (94%) of the resident angler days. The minority of days were contributed by Alaskan residents who live outside of the Mat-Su Borough. Conversely, the majority (81%) of nonresident days were contributed by visitors to the state who fished in the Mat-Su Borough but stayed in locations outside of the area. Less than 20% of nonresident days were contributed by visitors who both fish and stay in the region.

Table 1. Angler days by residency in the Mat-Su Borough (2017)

	Residents		**Nonresidents**		**All Anglers**
	Angler-Days (thous.)	%	Angler-Days (thous.)	%	Angler-Days (thous.)
Local	83.0	94%	12.7	19%	95.7
Nonlocal	5.1	6%	54.6	81%	59.6
Total	**88.1**	**100%**	**67.3**	**100%**	**155.4**

Angler Spending

Average spending per fishing day within each of the major expense categories is shown in Table 2. On the whole, anglers spent between $67 and $343 in the Mat-Su Borough on trip-related purchases in 2017. Estimated equipment-related spending per day was $241 and $170, for residents and nonresidents, respectively.

Table 2. Average sportfishing expenditures in the Mat-Su Borough, by residency and category

	Resident Anglers		**Nonresident Anglers**	
	Local	Nonlocal	Local	Nonlocal
Trip Expenditures	$89.78	$67.25	$272.30	$181.10
Package Expenditures	$ -	$-	$70.20	$49.73
Total trip spending	**$89.78**	**$67.25**	**$342.50**	**$230.84**
Equipment Expenditures	$136.13	$136.13	$31.75	$31.75
Real Estate Expenditures	$104.85	$104.85	$138.38	$138.38
Total equipment & real estate spending	**$240.98**	**$240.98**	**$170.12**	**$170.12**

Sportfishing trip and package spending encompasses a wide variety of items from fuel and oil to support the trip; from groceries to restaurants to sustain the angler; and from derby tickets to rentals to support the day on the water. The common theme is that trip-related items are services or items considered non-durable and purchased specifically for the trip. The full list of items and the amount spent in the region by resident and nonresident anglers are presented in Table 3.

Table 3. Total trip-related spending in the Mat-Su Borough, by residency and detailed categories (thousands)

	Resident Anglers	Nonresident Anglers	All Anglers
Trip Expenditures			
Fuel and oil for transportation	$2,271.6	$797.0	$3,068.6
Guide and charter fees	$1,042.3	$6,474.1	$7,516.4
Air travel	$0.0	$0.0	$0.0
Transportation services	$103.3	$311.0	$414.3
Boat launch & dockage fees	$497.2	$132.2	$629.3
Ice	$139.2	$77.9	$217.2
Bait	$219.5	$146.2	$365.7
Groceries	$1,340.0	$786.4	$2,126.3
Restaurants	$884.8	$768.6	$1,653.4
Heating & cooking fuel	$69.1	$32.8	$101.9
Fish processing	$261.5	$1,124.1	$1,385.5
Rentals	$123.7	$1,340.9	$1,464.6
Overnight accommodations	$652.7	$558.1	$1,210.8
Derby	$21.5	$28.5	$50.0
Souvenirs & gifts	$48.8	$577.9	$626.7
Other entertainment expenses	$37.8	$110.0	$147.8
Other	$12.7	$83.8	$96.5
Sub-Total	$7,725.8	$13,349.4	$21,075.2
Package Expenditures	na	$3,607.6	$3,607.6
Total Trip & Package	$7,725.8	$16,957.0	$24,682.8

Sportfishing equipment spending encompasses a diverse list of items from rods and tackle (specific to sportfishing) to boats and apparel (which can be used for multiple purposes). In contrast to trip or package related items, equipment items are durable in nature and typically used for more than one trip. Table 4 presents the full list of items and the total spending in the region by Alaska resident and nonresident anglers that is attributable to fishing in the Mat-Su Borough.

Table 4. Total equipment spending in the Mat-Su Borough, by residency and detailed categories (thousands)

	Resident Anglers	Nonresident Anglers	All Anglers
Equipment expenditures			
Rods, reels, and components	$767.4	$346.5	$1,113.9
Fishing tackle	$444.4	$229.8	$674.2
Tackle boxes or cases	$75.4	$29.7	$105.1
Electronics	$261.2	$56.7	$317.9
Nets	$155.1	$30.7	$185.8
Miscellaneous fishing equipment	$174.5	$81.5	$256.0
Shellfish equipment	$28.8	$3.3	$32.1
Taxidermy	$102.5	$49.8	$152.3
Books and magazines	$25.0	$16.5	$41.5
Items to store/preserve fish	$266.4	$103.2	$369.5
Coolers, fish boxes	$129.9	$117.3	$247.2
Clothing	$70.3	$52.2	$122.5
Boots, shoes, waders	$322.9	$136.6	$459.5
Life jackets	$67.6	$6.6	$74.2
Boats, canoes, rafts, etc.	$1,426.0	$43.9	$1,469.9
Boat motors	$898.4	$7.1	$905.5
Trailers, hitches	$147.2	$7.2	$154.4
Bear spray, bug spray, sun screen	$47.0	$37.8	$84.8
Firearms	$309.7	$65.3	$375.0
Cameras, binoculars, sunglasses	$148.9	$52.7	$201.6
Tents, screen rooms, tarps, backpacks, sleeping bags	$136.2	$25.5	$161.7
Camping trailer	$558.6	$54.5	$613.1
Other camping equipment	$140.4	$14.4	$154.7
Vehicles	$3,818.0	$239.2	$4,057.3
Airplanes and related equipment	$23.6	$55.3	$79.0
ATVs, snow machines	$766.7	$53.9	$820.6
Boat/camper registrations and excise taxes	$63.8	$7.4	$71.2
Vehicle, boat, or airplane repair/maintenance	$588.6	$161.4	$749.9
Other	$26.6	$50.7	$77.3
Total	$11,991.0	$2,136.6	$14,127.6

The reported dollar figures in Table 4 reflect total spending on fishing equipment and only that portion of multi-use equipment items anglers report was used specifically for the purpose of sportfishing in the Mat-Su Borough. Resident purchases amount to $12.0 million and nonresident purchases amount to $2.1 million.

Annual real estate spending estimates are presented in Table 5. The real estate category captures spending on the purchase or lease of existing structures, on-site construction or maintenance of structures, and purchases of structures constructed off-site. Spending by both residents and nonresidents sums to $18.5 million. Almost the entirety is associated with purchases or leases of land and existing houses. Despite the sizable amount of spending, only a small portion generates economic activity and primarily in the real estate and finance sectors.

Table 5. Total real estate spending in the Mat-Su Borough, by residency and detailed categories (millions)

	Resident Anglers	Nonresident Anglers	All Anglers
Real Estate Expenditures (millions)			
Purchases of lots, existing houses and cabins, and/or land	$2.8	$8.2	$11.1
Leases of land, cabins, boat slips, and storage	$0.1	$0.8	$1.0
Construction of houses and cabins, and repair or maintenance expenses	$5.8	$0.2	$6.0
Purchase or construction of boat docks, sheds, or outbuildings	$0.5	$0.0	$0.5
Total	$9.2	$9.3	$18.5

Collectively, an estimated $57.4 million was associated with sportfishing activity in the Mat-Su Borough (Table 6). Total spending was estimated to be relatively balanced between Alaska residents and nonresidents ($29.0 million and $28.4 million). Thirty seven percent ($21.1 million) of total spending was trip-related spending.

A portion of nonresident anglers, traveling to the region to fish, pre-purchase a package experience from one of the many outfitters or guides operating in the Mat-Su Borough, securing a range of services for the one fixed price. Overall, 6% ($3.6 million) of total spending was package-related spending.

One quarter ($14.1 million) of all sportfishing related spending that occurs in Mat-Su was associated with equipment. Finally, another third ($18.5 million) was associated with sportfishing-related real estate spending.

Table 6. Total spending in the Mat-Su Borough, by residency and expenditure type (millions)

Expenditures	Resident		Nonresident		All	
	Angler Spending	%	Angler Spending	%	Angler Spending	%
Trip	$7.7	26.7%	$13.3	47.0%	$21.1	36.7%
Package	$0.0	0.0%	$3.6	12.7%	$3.6	6.3%
Equipment	$12.0	41.4%	$2.1	7.5%	$14.1	24.6%
Real Estate	$9.2	31.9%	$9.3	32.8%	$18.5	32.3%
Total	$29.0	**100%**	$28.4	**100%**	$57.4	**100%**

Distribution across the four spending category types is quite different between the two groups. Among resident anglers, spending on sportfishing-related equipment and real estate accounted for 73% ($21.2 million) of total spending. Equipment and real estate spending accounted for less than half of spending (40% or $11.4 million) among nonresident anglers. The proportion associated with trip and package spending among nonresidents was twice as large as residents (27% or $7.7 million relative to 60% or $16.9 million).

Economic Contributions

The angler spending discussed in the previous section, known as the direct effects, cycles through the regional economy generating additional rounds of economic activity. These extra rounds include indirect effects driven by businesses who provide supporting services and goods to anglers as well as induced effects resulting from household spending by employees of these businesses, known together as the multiplier effects. The three effects as a collective comprise the total economic contribution effects. The IMPLAN model is used to track the flow of these multiple rounds of spending.

Anglers spent an estimated $57.4 million in Mat-Su across all expenditure categories (Table 6). After adjustments to isolate the portion of spending that actually generated economic activity within the borough, the direct contribution to the region's economic output was $33.7 million (Table 7). That activity supported more than 378 full and part-time jobs and $10.9 million in household income.

Spurred by the initial spending of anglers, the economic output attributable to the supporting industries, or multiplier effect, was $10.9 million. The indirect and induced activity supported 96 jobs and $3.3 million in household income. Together, the total effects of the spending activity generated $44.6 million in economic output and supported more than 474 jobs that provided $14.3 in household income.

Table 7. Economic contributions of all sportfishing spending in the Mat-Su Borough, by residency

	Resident Anglers	Nonresident Anglers	All Anglers
Direct effect			
Output (millions)	$18.6	$15.0	$33.7
Labor Income (millions)	$6.2	$4.8	$10.9
Employment	177	201	378
Multiplier effects			
Output (millions)	$5.3	$5.6	$10.9
Labor Income (millions)	$1.6	$1.7	$3.3
Employment	47	49	96
Total effect			
Output (millions)	$23.9	$20.7	$44.6
Labor Income (millions)	$7.8	$6.4	$14.3
Employment	224	250	474

Table 8 presents the economic contributions from trip and package related spending by residency. The total effects of trip and package spending activity generated $25.8 million in output, more than 307 jobs, and $7.8 million in household income. The majority of these effects came from nonresident spending.

Table 8. Economic contributions of sportfishing trip and package spending in the Mat-Su Borough, by residency

	Resident Anglers	Nonresident Anglers	All Anglers
Direct effects			
Output (millions)	$6.6	$12.6	$19.2
Labor Income (millions)	$1.7	$4.1	$5.8
Employment	74	175	249
Multiplier effects			
Output (millions)	$1.8	$4.9	$6.7
Labor Income (millions)	$0.5	$1.5	$2.0
Employment	15	43	58
Total effects			
Output (millions)	$8.3	$17.5	$25.8
Labor Income (millions)	$2.2	$5.6	$7.8
Employment	89	218	307

Table 9 presents the economic contributions from equipment and real estate related spending by residency. The total effects of equipment and real estate spending activity generated $18.8 million in output, more than 167 jobs, and $6.5

million in household income. In this case, the majority of these effects came from resident spending.

Table 9. Economic contributions of sportfishing equipment and real estate spending in the Mat-Su Borough, by residency

	Resident Anglers	Nonresident Anglers	All Anglers
Direct effects			
Output (millions)	$12.1	$2.4	$14.5
Labor Income (millions)	$4.5	$0.7	$5.1
Employment	103	26	129
Multiplier effects			
Output (millions)	$3.6	$0.7	$4.3
Labor Income (millions)	$1.1	$0.2	$1.3
Employment	32	6	38
Total effects			
Output (millions)	$15.6	$3.2	$18.8
Labor Income (millions)	$5.6	$0.9	$6.5
Employment	135	32	167

The economic activity generated in the region also produced tax revenues at the local, state, and federal level. The IMPLAN modeling produced generalized region-specific estimates of tax revenues based on existing ratios of output, income, and employment to tax revenues. It was estimated that angler spending in the region in 2017 generated $2.9 million and $3.1 million in state/local and federal tax revenue, respectively (Table 10).

Table 10. Tax revenues generated from the economic contributions of sportfishing in the Mat-Su Borough (millions)

	State and Local Tax	Federal Tax	Total Tax
Resident anglers			
Trip & Package Expenditures	$0.9	$0.5	$1.5
Equipment & Real Estate Expenditures	$0.6	$1.1	$1.7
Subtotal	**$1.5**	**$1.7**	**$3.2**
Nonresident anglers			
Trip & Package Expenditures	$1.2	$1.2	$2.4
Equipment & Real Estate Expenditures	$0.2	$0.2	$0.4
Subtotal	**$1.4**	**$1.4**	**$2.8**
All anglers			
Trip & Package Expenditures	$2.1	$1.7	$3.8
Equipment & Real Estate Expenditures	$0.8	$1.3	$2.1
Total	**$2.9**	**$3.1**	**$5.9**

Summary and Discussion

This study was conducted in order to provide current estimates of the economic contributions made by sportfishing activity on the Mat-Su Borough. We find that more than 155,000 days were spent fishing in the region. Anglers who fished in the region and anglers who traveled to the region to purchase items used for sportfishing spent a total of $57.4 million. The majority of those retail dollars were retained in the local economy supporting more than 370 jobs and providing $10.9 million in labor income. A regional level input-output model was used to track the collective economic contributions of the direct spending and the multiplier effects created as the angler dollars moved from business to business in the Mat-Su economy. The total contributions generated by angler spending was estimated to be $44.6 million in economic output, which supported more than 470 jobs and $14.3 million in labor income.

Another objective of this study was to provide estimates for comparison to the 2009 report by ISER. The methodological approach of this study captured spending that remains within the Mat-Su economy based on secondary data available from IMPLAN© and the AVSP. In that regard, it differs somewhat from the approach utilized for the 2009 ISER report. Additionally, we remind readers who wish to make comparisons that adjustments should be made to the 2009 spending estimates to account for inflation over the ten-year period. We also encourage readers making comparisons between the two studies to explore the changes in fishing conditions and the regional economy between the two periods, as it may provide context for differences in participation, spending, and economic contributions.

Table 11. Summary results: Current study and previous ISER study

	Results from current study	ISER study scenarios Low	Medium	High
Mat-Su angler days (thousands)	155.4	296.0	296.0	296.0
Direct spending (millions)	$57.4	$74.7	$140.6	$193.6
Average spending				
$ per angler day	$369	$252	$474	$654
Total economic contributions				
Employment	474	904	1,180	1,900
Income (million)	$14.3	$37.3	$47.7	$75.8
Local & state taxes (millions)	$5.9	$7.3	$9.2	$17.8

Note: Comparison of the results from the two studies need to account for the methodologies utilized in each study and how they differ. All monetary values reported in the table reflect 2017 dollars. Total economic contributions include direct and multiplier effects.

Appendix

Table A 1. ADF&G Statewide Harvest survey fishing sites included within the area of focus

Site Names		
Alexander Creek	Goose Creek	Mud Lake (Mirror Lake-between Big Lake and Flat Lake)
Alexander Lake	Hayes River	Nancy Lake
Amber Lake	Hewitt Creek	Nancy Lake State Recreation Area
Anderson Lake	Hewitt Lake	No Name Lake (Arrowhead Lake)
Answer Creek	Hidden Lake	North Friend Lake (Montana Lake, Little Bill Lake)
Barley Lake	Honeybee Lake	North Rolly Lake (Nancy Lake State Rec Area)
Bear Creek (into Alexander Lake)	Honolulu Creek	Oshetna River
Beaver Lake (U)	Horseshoe Creek	Other lakes (within area)
Beluga River	Horseshoe Lake (north of Big Lake)	Other streams
Bench Lake (Glenn Highway, fly-in)	Hourglass Lake	Otter Lake
Bench Lake (N. of Little Su)	Ida Lake (Thirtymile Lake)	Peters Creek (near Willow)
Benka Lake	Indian River (into Susitna)	Peters Creek (Petersville Road)
Beverly Lake (by Kalmbach Lake)	Irene Lake (Kepler Lake Complex)	Peters Creek (U)
Big Lake	Jim Creek (into Knik River)	Pierce Creek
Birch Creek	Jim Lake	Rabideux Creek
Blodgett Lake	Johnson Creek	Rainbow Lake (Nancy Lake State Rec Area)
Bonnie Lake (30 miles NE Palmer) (Lower Bonnie)	Judd Lake	Rainbow Lake (Talkeetna Mountains)
Bonnie Lake, Upper	Kalmbach Lake (Baptist Lake)	Ravine Lake
Bradley Lake (Kepler Lake Complex)	Kashwitna River	Red Shirt Lake (Nancy Lake State Rec Area)
Butte Creek	Kepler Lake (Kepler Lake Complex)	Reed Lake
Butte Lake	Kepler Lake Complex	Reflections Lake (Palmer Hay Flats)
Butterfly Lake (U)	Kichatna River	Rhein Lake (Nancy Lake State Rec Area)
Byers Creek	Kings Lake	Scotty Lake
Byers Lake	Knik Arm (Shore)	Sevenmile Lake
Camp Creek	Knik Lake	Seventeenmile Lake
Canoe Lake (Kepler Lake Complex)	Knik River	Seymour Lake (Herning Lake)
Canyon Creek	Knik River and tributaries inc. Jim Creek	Sheep Creek
Canyon Lake	Knob Lake (Glenn Highway mile 119)	Sheep Creek Slough
Caribou Creek (into Matanuska River)	Kroto Slough	Shell Lake
Carpenter Lake	Ladyslipper Lake	Shirley Lake
Caswell Creek	Lake Creek	Skwentna River
Caswell Lake	Lake Louise (off Glenn Highway)	South Friend Lake (Montana Lake)
Chelatna Lake	Lane Creek	South Rolly Lake (Nancy Lake State Rec Area)
Cheri Lake	Larson Creek	Stephan Lake
Christiansen Lake	Larson Lake	Sucker Lake
Chulitna River	Little Clearwater Creek (Denali Highway)	Sunbeam Lake
Chulitna River East Fork	Little Lake Louise	Sunshine Creek
Clarence Lake	Little Susitna River (reach unspecified)	Susitna Lake
Clear Creek (Chunilna Creek)	Little Susitna River above weir	Susitna River
Clearwater Creek (Denali Highway)	Little Susitna River below weir	Swan Lake

TABLE A1 (cont)

Coal Creek (into Beluga Lake)	Little Willow Creek	Talachulitna Creek
Coffee Creek (into Chelatna Lake)	Loberg Lake (Junction)	Talachulitna River
Cornelius Lake	Lockwood Lake	Talkeetna Lakes
Cottonwood Creek	Long Lake (9 miles SE Talkeetna)	Talkeetna River
Cottonwood Lake	Long Lake (Kepler Lake Complex)	Tigger Lake (Talkeetna Lakes)
Crooked Lake	Long Lake (Mile 86 Glenn Highway)	Trapper Lake
Crystal Creek	Long Lake (near Big Lake)	Troublesome Creek
Deception Creek	Long Lake (near Willow, Nancy Lake State Rec Area)	Tsisi Creek
Denali Highway streams and lakes	Long Lake (U)	Twin Island Lake
Deshka River (Kroto Creek)	Lorraine Lake	Tyone Creek
Deshka River (Kroto Creek) above weir	Lost Lake	Tyone Lake
Deshka River (Kroto Creek) below weir	Lucille Lake	Visnaw Lake
Diamond Lake	Lucy Lake	Walby Lake
East Butterfly Lake (Nancy Lake State Rec Area)	Maclaren River	Wasilla Creek (Rabbit Slough)
Echo Lake (Kepler Lake Complex)	Matanuska Lake (Kepler Lake Complex)	Wasilla Lake
Eightmile Creek	Matanuska River	Weiner Lake
Eklutna Power Plant Raceway	Meadow Lakes	West Beaver Lake
Eska Lake (Slipper Lake)	Meirs Lake (McLeod Lake)	West Lake (West Horseshoe Lake, Barbara Lake)
Figure Eight Lake	Memory Lake	Willow Creek
Finger Lake	Mile 180 Lake	Willow Lake
Fish Creek (Big Lake drainage)	Monsoon Lake	Windy Creek
Fish Creek (into Kroto Slough)	Montana Creek	Wishbone Lake
Fish Creek (U)	Moose Creek (Deshka-Oilwell Rd)	Wolf Lake
Fish Lake (Glenn Highway)	Moose Creek (into Yentna)	X and Y Lakes (Talkeetna Lakes)
Fish Lake Creek and Fish Lakes (Yentna drainage)	Moose Creek (near Palmer)	Yentna River
Flat Horn Lake	Moose Creek (U)	
Florence Lake	Morvro Lake	

Spending profile development detail

Angler trip-related spending profiles were developed to reflect only those expenditures which contribute to the Mat-Su Borough's economy and vary based upon the 'local' versus 'nonlocal' distinction. For the 'local' group, whether resident or nonresident, 100% of the respective average angler spending per fishing day is included within the profile. Table A2 provides added detail about spending category treatments for the 'nonlocal' groups, again whether resident or nonresident.

Table A 2: Treatment of trip-related spending to capture economic activity within the Mat-Su Borough

	Resident		Nonresident	
	Local	Nonlocal	Local	Nonlocal
Fuel and oil for your transportation	100%	50%	100%	50%
Guide and charter fees	100%	100%	100%	100%
Air travel	0%	0%	0%	0%
Transportation services	100%	50%	100%	50%
Boat launch & dockage fees	100%	100%	100%	100%
Ice	100%	100%	100%	100%
Bait	100%	100%	100%	100%
Groceries	100%	50%	100%	50%
Restaurants	100%	100%	100%	50%
Heating & cooking fuel	100%	100%	100%	100%
Fish processing	100%	100%	100%	50%
Rentals	100%	100%	100%	100%
Overnight accommodations	100%	100%	100%	0%
Derby	100%	100%	100%	100%
Souvenirs & gifts	100%	100%	100%	100%
Other entertainment expenses	100%	100%	100%	100%
Other	100%	100%	100%	100%

From:	Theodore Eischeid
To:	DFG, BOF Comments (DFG sponsored)
Cc:	Karol Riese
Subject:	BOF Booklet Comment for UCI Finfish Meeting covering proposals 133, 199, 215, 217, 219.
Date:	Thursday, January 23, 2020 3:35:45 PM
Attachments:	It Takes Fish to Make Fish 2020.pdf

I am attaching a booklet for the Board of Fisheries Upper Cook Inlet Finfish meeting as a public comment on behalf of the Matanuska-Susitna Borough's Fish and Wildlife Commission. We would like to have this booklet made available to each BOF member, and in that regard we mailed seven copies that should have arrived at the BOF office today.

The following information should accompany the attachment comment:

Proposals covered by the comment: 133, 199, 215, 217, 219.

Board Meeting: Board of Fisheries – Upper Cook Inlet Finfish

Name: Ted Eischeid for the MSB Fish and Wildlife Commission.
Affiliation: Matanuska-Susitna Borough.
Phone: 907.861-8606
Email: ted.eischeid@matsugov.us
Address:
Matanuska-Susitna Borough
Dorothy Swanda Jones Building
350 E. Dahlia Ave
Palmer AK 99645

We consent to this contact information being included on printed copies of the attachment.

Thank you.

Ted
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Ted Eischeid
Planner II
Providing Environmental Planning and Mat-Su Fish & Wildlife Commission services
--
https://www.matsugov.us/planning
https://www.matsugov.us/boards/fishcommission
https://www.matsugov.us/fishhub#commission
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--
Office Ph. (907) 861-8606
MSB Cell Ph. (907) 795-6281
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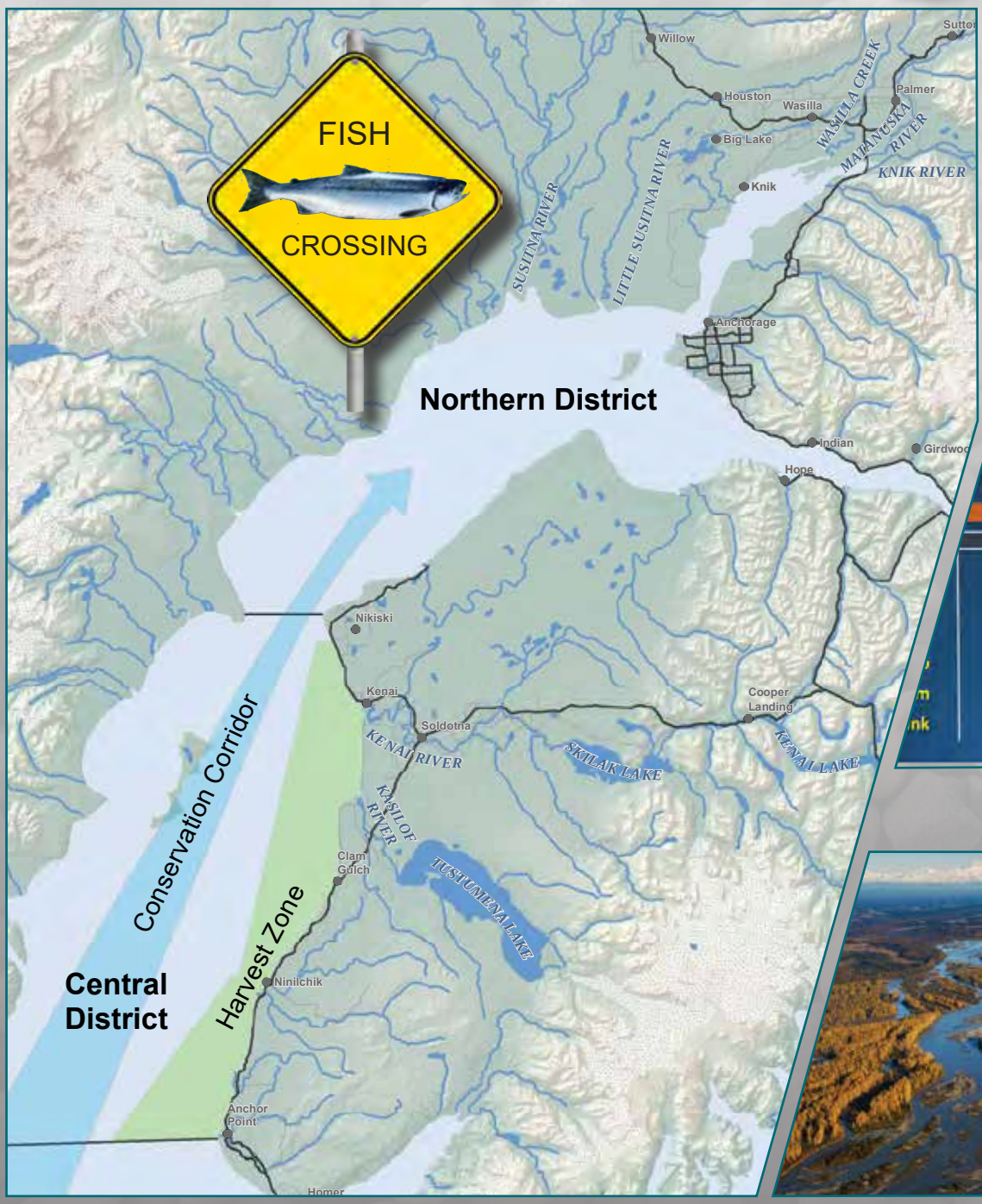
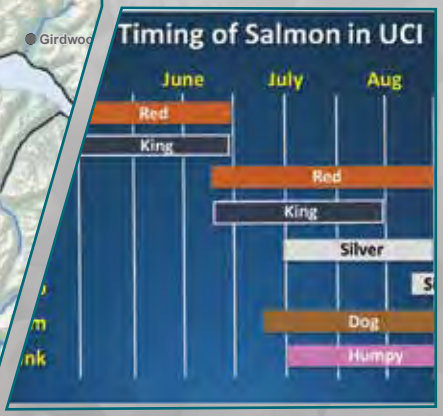
Matanuska-Susitna Borough

It Takes Fish To Make Fish 2020

The Corridor is W





Matanuska-Susitna Borough Fish and Wildlife Commission

MSB Fish and Wildlife Commission

Matanuska-Susitna Borough Fish & Wildlife Commission: Left to right: Howard Delo, Larry Engel, Amber Allen, Assemblymember Tamara Boeve, Assemblymember Dan Mayfield, Chair Mike Wood, Andy Couch
Commissioners not pictured: Bob Chlupach and T. Bruce Knowles

Our Experience

- 8-member volunteer board, appointed by the Mayor, including two Borough Assembly Members
- 12 years of combined experience on the Alaska Board of Fisheries with three years as Chair, 70+ years of combined expertise as State biologists, 35+ years combined experience as fishing guides and nine years as a commercial setnetter
- Directed $9.5 million in Borough, State, and Federal appropriations toward science, genetic research, and fish passage improvements

Our Goals

- Enhance the Conservation Corridor in the Central District Drift Gillnet Fishery Management Plan in July and early August (Proposals 129, 133) with mandatory area restrictions to regular fishing periods.
- Continue protection for identified Stocks of Concern – particularly Susitna Sockeye.
- Increase inriver returns of coho salmon to Northern Cook Inlet river systems by establishing an orderly transition from sockeye management to coho management.
- Adopt Chinook (King Salmon) management plans and strategies that address early run King salmon in the Northern Cook Inlet (Proposals 199, 215, 217, 219)
- Personal Use Fishery: Maintain or extend personal use fishing opportunity for Alaskan residents of the Northern Cook Inlet who choose to harvest salmon with net gear. (Proposal 234-238)
- Establish inriver or OEG (Optimal Escapement Goals) for salmon escapement in the Northern Cook Inlet

Table of Contents

The Corridor is Beginning to Work

Let's Refine It

It Takes Fish to Make Fish—Keep the Corridor Open

For decades commercial fisheries management of Kenai River sockeye has driven Upper Cook Inlet with little regard to appropriate harvest levels of Northern Cook Inlet stocks. As a result, salmon stocks in the Northern Cook Inlet suffered drastic declines, local fishing opportunities were restricted or eliminated, and residents of the Mat-Su Borough watched helplessly as their commercial, personal use, and sport fishing needs took a back seat to Central District commercial interests.

Building off the highly successful terminal stock fisheries management program in Bristol Bay, the concept of a conservation corridor is designed to enable the commercial fisherman to target Kenai sockeye closer to shore while allowing northern bound coho and sockeye to pass through the corridor to reach Upper Cook Inlet. When the Conservation Corridor was estabilised in 2011, the Northern Cook Inlet streeams were almost universally in decline. Since the Corridor began, however, upticks in coho escapement in 2014 and 2015, and sockeye escapement in 2015 on some of the key rivers and creeks has shown promise. In the report,

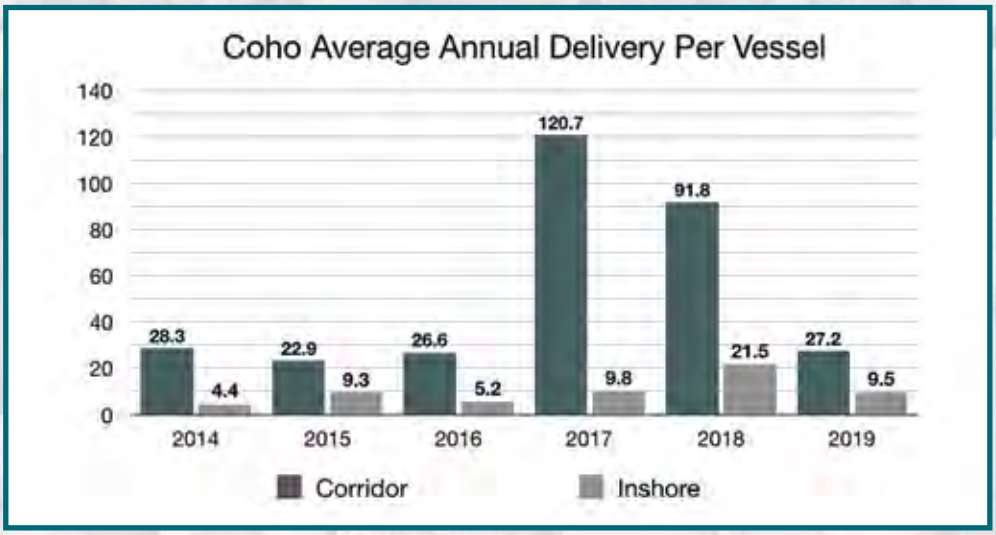
"Temporal and Spatial Distributions of Kenai River and Susitna River Sockeye Salmon and Coho Salmon in Upper Cook Inlet: Implications for Management" - *ADF&G*

confirms the need for the Conservation Corridor. Fishing for Kenai sockeye in the terminal harvest zones, closer to shore, will harvest fewer Susitna sockeye and coho because these northern salmon are mostly running up the middle of the Central District.

The Matanuska-Susitna Borough supports fisheries management using the best available science. Harvesting Northern Cook Inlet salmon stocks primarily within the district where directed harvests can best match individual stock production and abundance level will minimize inseason restrictions and closures. This management approach will miximize the benefit for the state, the fishing economy, and the health of the fishery.

BEFORE THE CORRIDOR

- ***Angler days for sportsfishing sank to the lowest level in 34 years***
- ***Escapement goals—the bedrock of fisheries management—had met chronic failure in Northern Cook Inlet sockeye and coho streams, while in the south the sockeye commercial harvest often had successive emergency openings to catch more fish***
- ***Coho returns in Northern Cook Inlet*** *streams reached* ***record lows in 2011-2012***
- ***8 of the State's 16*** *Stocks of Concern are right here for sockeye and kings*



Annual Average Drift Fleet Per Vessel Coho Delivery, July 16-31

Source: Larry Engel

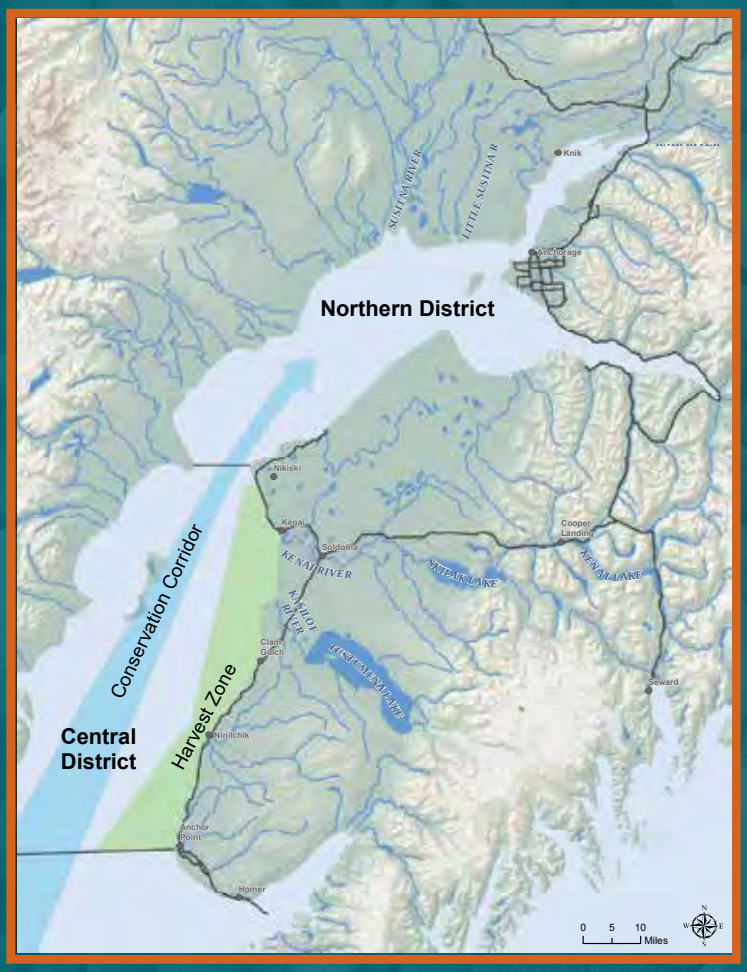
Maintaining the Corridor

A Reasonable Opportunity

In 2014, because of a 7 to 0 vote by the Alaska Board of Fisheries, a sea change occurred. A second iteration of a Conservation Corridor enforced a clear directive that had been side-stepped for more than 35 years. The Central District Drift Gillnet Management Plan ensures "adequate escapement of salmon into the Northern District drainages" and the drift gillnet **fishery is managed "to minimize the harvest of Northern District and Kenai River coho salmon in order to provide sport and guided sport fishermen a reasonable opportunity to harvest these salmon stocks over the entire run..."**
However, from 2000-2016, the drift harvest had averaged more than 100,000 coho per year, while the Mat-Su sport fishery had harvested 65,000 per year until 2015. With the Corridor, during much of July the drift fleet is restricted to fish inshore near rivers where Kenai and Kasilof sockeye originate, allowing northern bound coho to pass north. This practice is proven. The most successful fishery in the world, Bristol Bay sockeye, is regulated this way with terminal fishing districts.

Hold Tight to Escapement Goals

Kenai sockeye returns often drive the sockeye escapement goals and outcomes for Northern Cook Inlet. There has been a history of the commercial drift fishery driving the Northern Cook Inlet fisheries. In 2005, for example, on the Yentna River, the optimum escapement goal (OEG) for a depressed sockeye fishery was set by the Board of Fisheries lower than what is normally considered scientifically sustainable. It was done in order to maximize the harvest of a large Kenai sockeye run. The result: in 2005—the Yentna escapement was, by far, the lowest ever while the Cook Inlet sockeye harvest exceeded 5.3 million. This escapement goal reduction is still going on today and needs to be addressed. By reducing the escapement goals on a struggling stock, the returns appear healthy but are simply meeting a lower goal.



Kenai Sockeye Are More Productive

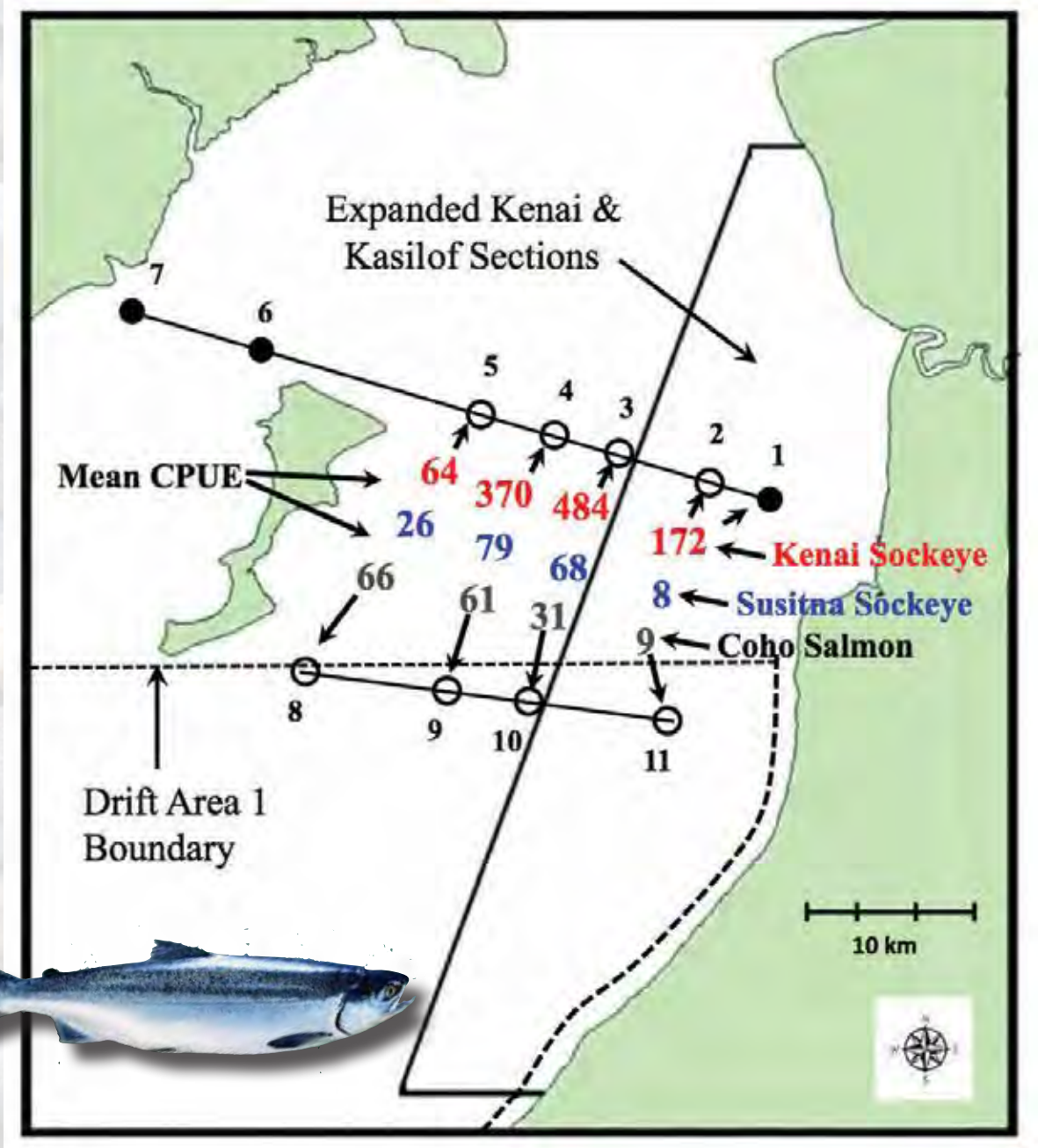
Kenai sockeye are highly productive (4.5 fish returned per spawner) and can be harvested heavily but Susitna sockeye are less productive (less than 1.5 fish per spawner*) and cannot withstand the appropriate harvest rate of Kenai sockeye, yet this is what occurs. The Central District commercial fishery is overfishing Susitna sockeye and has historically overexploited Susitna coho beyond a fair share in the sport fishery directive. The differential between the sustainable exploitation rates clearly contributes to the complex fishery management challenges in Upper Cook Inlet. The solution is a logical and time-tested focus on terminal stock fisheries management strategy, for enhancing the protections afforded by a Conservation Corridor.

*Source: ADF&G**

Successful Test Fishery Suspended

North Offshore Test Fishery Falls to State Budget Ax

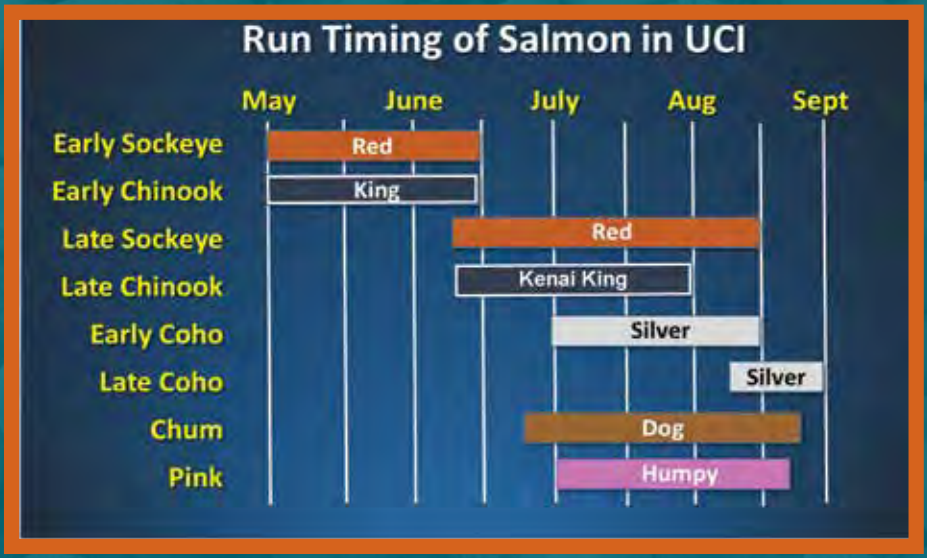
Results of the recent ADF&G study on distributions of Kenai River and Susitna River sockeye and coho in Upper Cook Inlet prove the concept of the Conservation Corridor. More data is desirable from the offshore test fishery in the Central District, but the program is suspended due to a State budget shortfall.



Data collected 2012-2014 proved conservation corridor is working

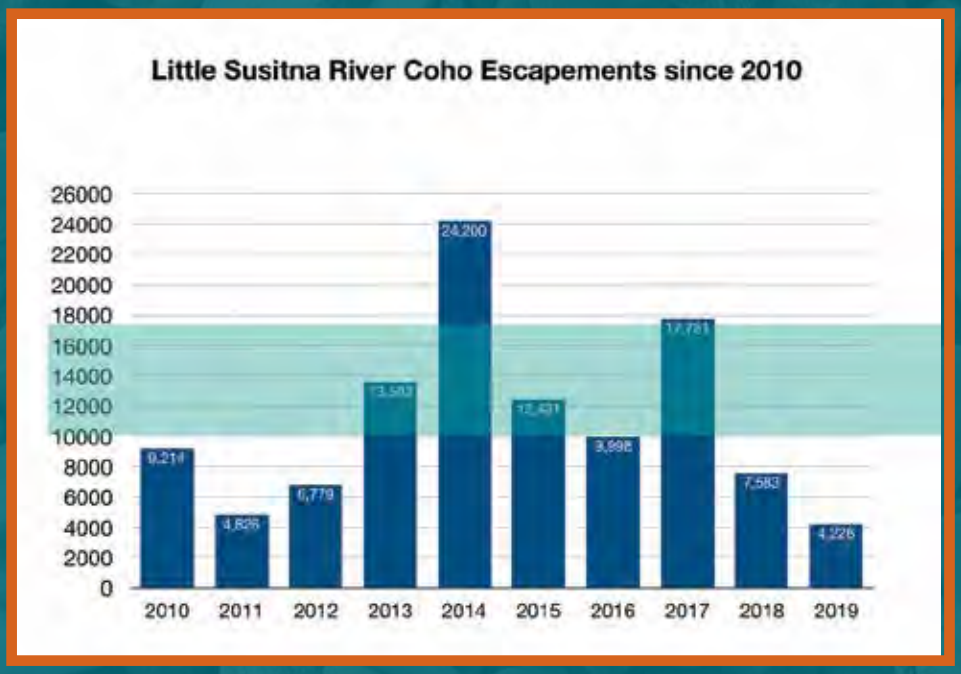
Mixed Stock Fishery Complexity

Every July, five different species of salmon and numerous different stocks of salmon come through about the same time in Upper Cook Inlet. Among the salmon, are the Kenai sockeye, the Kenai kings, the Northern cohos, and the Northern sockeye all swimming in the same saltwater with commercial boats after them. This is a mixed stock commercial fishery. Farther up stream are the northern set gillnets. Still farther north are subistence users, and finally the sport fishery in the Mat-Su Basin.



This overlapping run timing makes the commercial fishery difficult and complex to manage. How does a drift gillnet boat target Kenai sockeye, and let the northern-bound cohos pass? Adding to it is the hardiness of the fish. Kenai sockeye produce more returning offspring than Northern sockeye: 4.5 fish per spawner to Susitna's less than 1.5 fish per spawner. This means that only one Susitna sockeye offspring can be harvested if the stock will sustain itself versus the seven eligible Kenai offspring. The less productive stocks cannot sustain the same high harvest rates as the strong Kenai stock.

Management of the Inlet's weak- and strong-stock "mix" and for the different species, often results in substantial conflict among user groups. When commercial fishermen have a banner year for sockeye, sportfishermen often face closures because of few returning cohos. By studying when and where specific stocks and species are located, hotly contested harvest practices may be fine-tuned to benefit all users of this common property resource. The MSB Fish & Wildlife Commission has a genetic study for coho to improve this management.



Stocks of Concern

8 of the State's 16 Are Here in the Northern Cook Inlet

Stocks of Concern are fish that are struggling to maintain their harvest, their population stability, and in some cases their survival. Stock of Concern designations are assigned by the Alaska Board of Fisheries based on recommendations from the Alaska Dept. of Fish & Game.

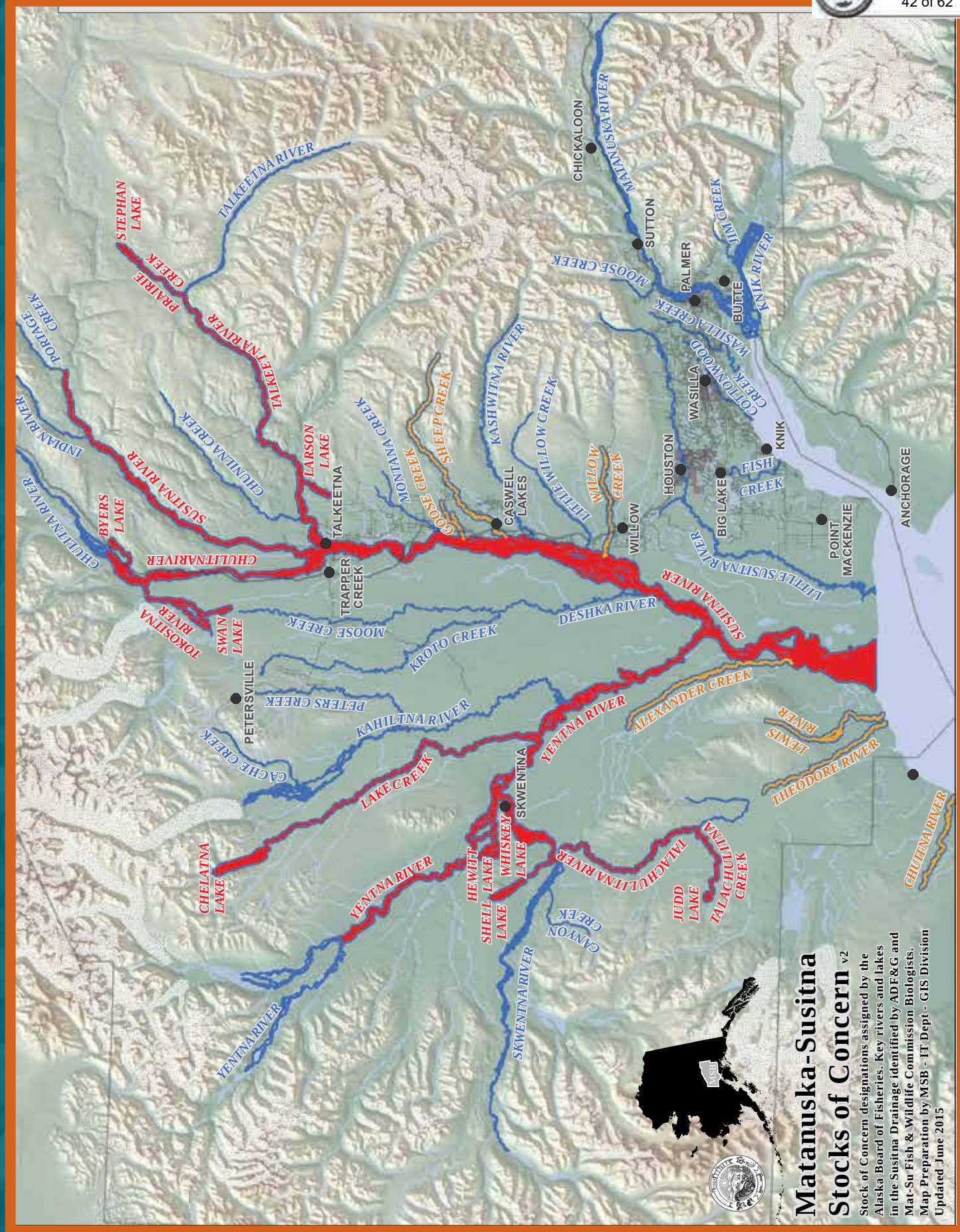
Some Northern Cook Inlet sockeye and king salmon stocks have plummetted to such low levels that their reproduction is at risk. Issues on the high seas are likely major factors affecting king salmon not the interception in the Conservation Corridor. Factors affecting sockeye occur both in fresh water with habitat and in Cook Inlet marine waters from interception by fishing.

Issues on the high seas are likely major factors affecting king salmon, not the interception in the Conservation Corridor

Fishing for kings on the Deshka River in 2016, a year that saw an uptick in escapement.

The Stocks of Concern are

- ***Sockeye across the Susitna River drainage***
- ***Kings in Alexander Creek***
- ***Kings in Chuitna River***
- ***Kings in Goose Creek***
- ***Kings in Lewis River***
- ***Kings in Sheep Creek***
- ***Kings in Theodore River***
- ***Kings in Willow Creek***



Kings' Stocks of Concern shown in orange. Sockeye Stocks of Concern shown in red.

Kenai Drives Management

(Bigger Projections = Smaller Protections)

When ADF&G forecasts a big Kenai sockeye run, less northern fish make it to spawn

Historically, under State regulations called the Central District Drift Gillnet Management Plan, the bigger the projection of Kenai sockeye made by ADF&G, the fewer the Susitna coho and sockeye went north. Big runs brought a more aggressive fishing rate. The drift fleet has the capability of harvesting more than half a million salmon in a single day during the peak of a strong run.

Over the last six years, however, major regulation changes have been introduced with the concept of the Conservation Corridor, the terminal Harvest Zones, and actual restrictions on where and when to commercial fish in July when Northern coho and sockeye are running north, and the Kenai sockeye are returning home.

Prior to the development of the Conservation Corridor, during a large run, drift fisherman could fish often in an area of their choice. Today during a strong sockeye run with a projected escapement of 4.6 million fish, drifters are permitted only one 12-hour period per week in the mixed stock waters of the corridor from July 16-31. In 2017, the BOF added one additional district wide fishing period in late July.

> ***It's understandable that drift fishermen are upset. Just like Bristol Bay Drifters, they have to fish twice as hard, pay twice as much for the same number of fish. It's no longer their favorite fishing hole they work in and they're jockeying for position with other boats. These are important considerations. However, the Drift Plan is a compromise. It recognizes the importance of catching Kenai sockeye and also of passing fish to the north, which historically hadn't been done satisfactorily until 2011. Moving the drifters out of the Corridor during late July allows the Northern coho and sockeye to pass. It gets the Drifters' targeted sockeye away from the mixed stock fishery that is swimming in the middle of the Central District.***
> *— Larry Engel, Mat-Su Borough Fish & Wildlife Commissioner*

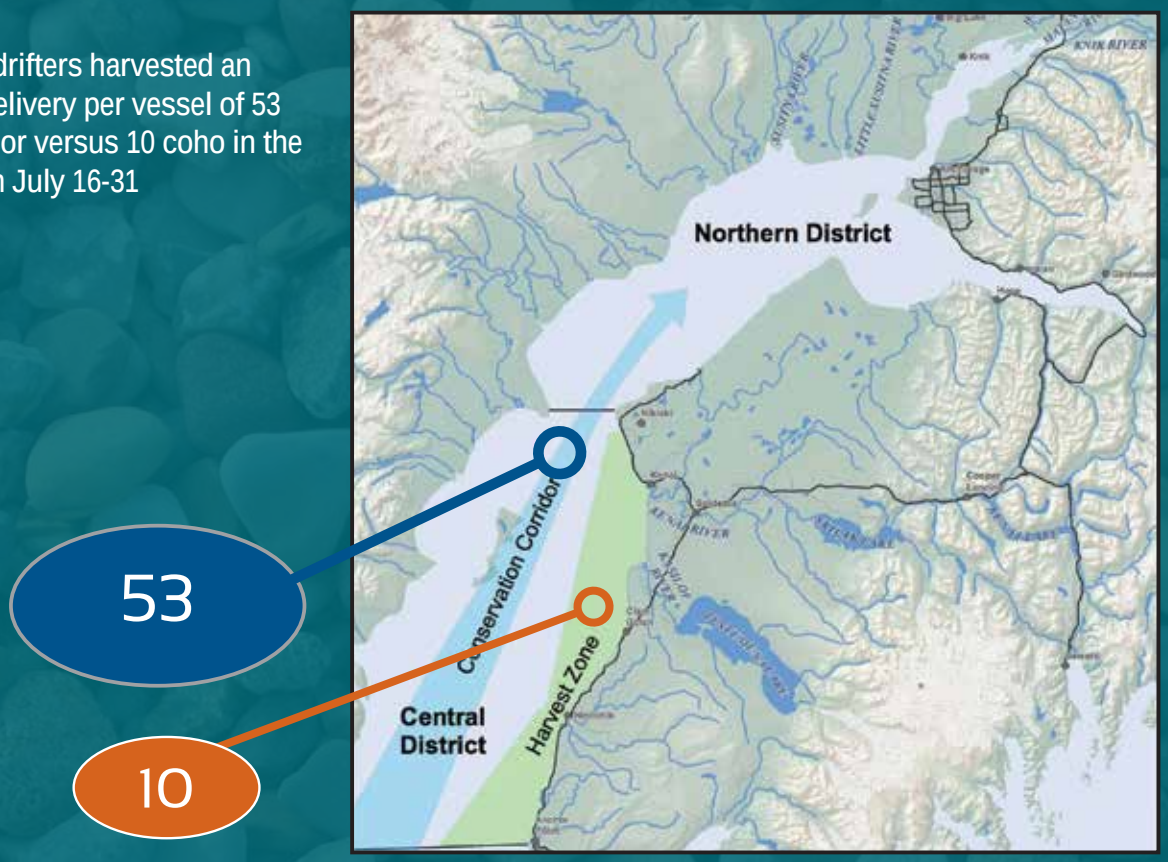
Although it takes more effort, large numbers of fish are still harvested in the commercial fishery. Since the corridor was established, the drift net fishery has harvested some of its most successful seasons of the last two decades. The 2014 harvest is the 9th highest value in the Upper Cook Inlet commercial fishery since 1960.

An important change suggested for the 2020 Board cycle is applying the vast knowledge on stock productivity for Kenai sockeye and the clear knowledge that concerns for "over escapement" have been drastically overstated. Proposals before the Board will significantly change management targets for Kenai sockeye and will provide managers additional flexibility as they apply managment prescriptions.

This compromise is a work in progress and still needs fine-tuning. A bias in methodology still exists toward maximizing the very productive Kenai commercial harvest at the expense of the ailing Susitna coho and sockeye escapements.

From 2014-2019, drifters harvested an average annual delivery per vessel of 53 coho in the corridor versus 10 coho in the harvest zone from July 16-31

Source: Larry Engel



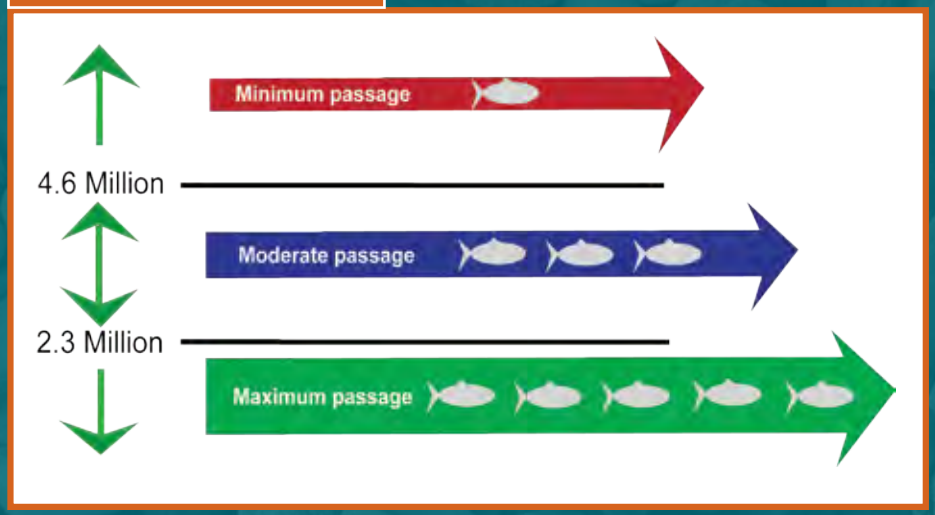
The projections trigger the amount of fishing

- *At a projection over 4.6 million Kenai sockeye, the drift fleet may fish a single day a week district wide during July 16-31. The rest of the week, they fish in the harvest zone.*

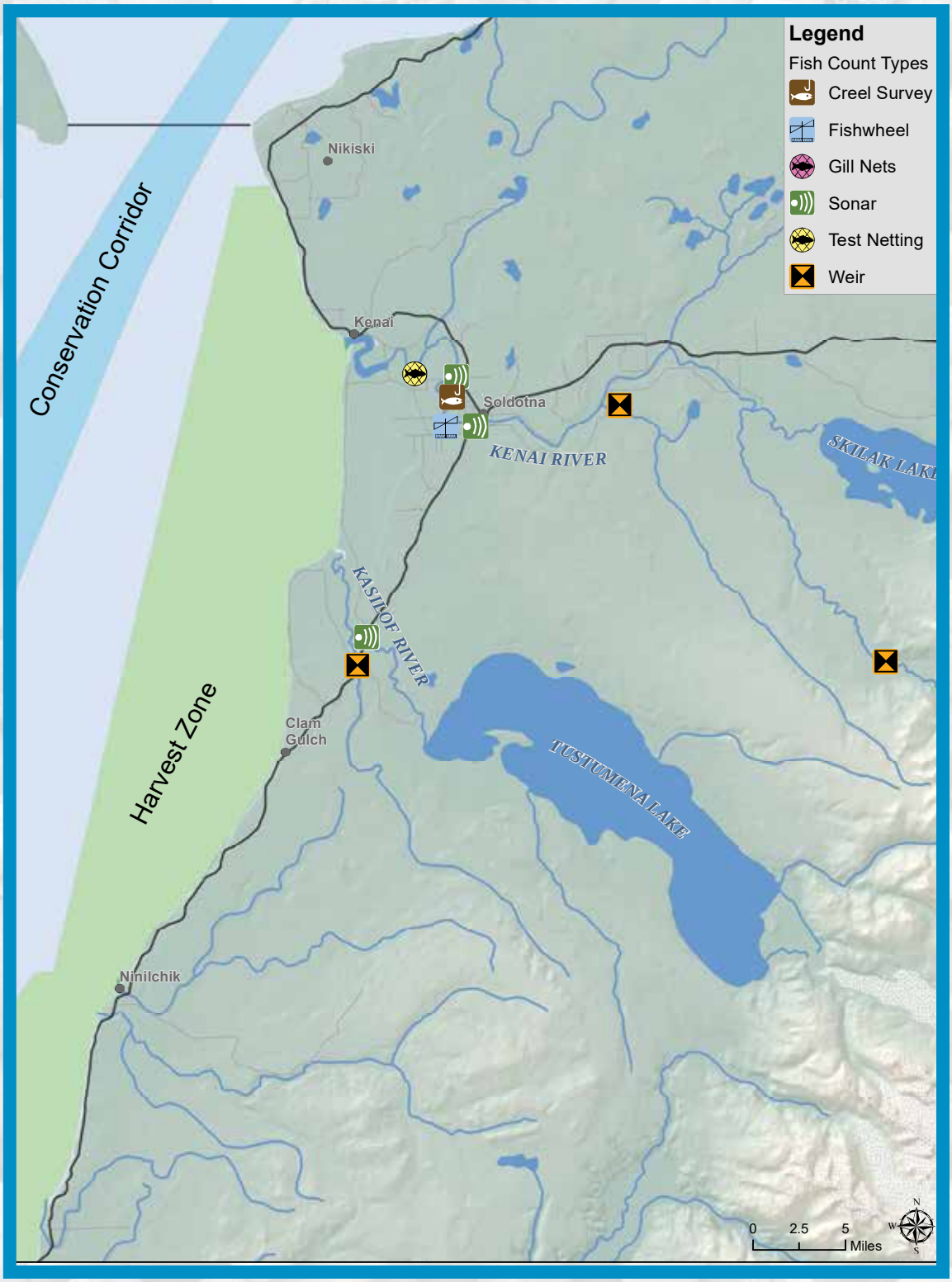
- *In 2017, the BOF added one additional district wide fishing period in late July.*

- *At a projection below 2.3 million Kenai sockeye, the drift fleet only drops nets inside the harvest zone. No fishing allowed in the corridor during the early coho run, July 16-31.*

Northern Bound Salmon

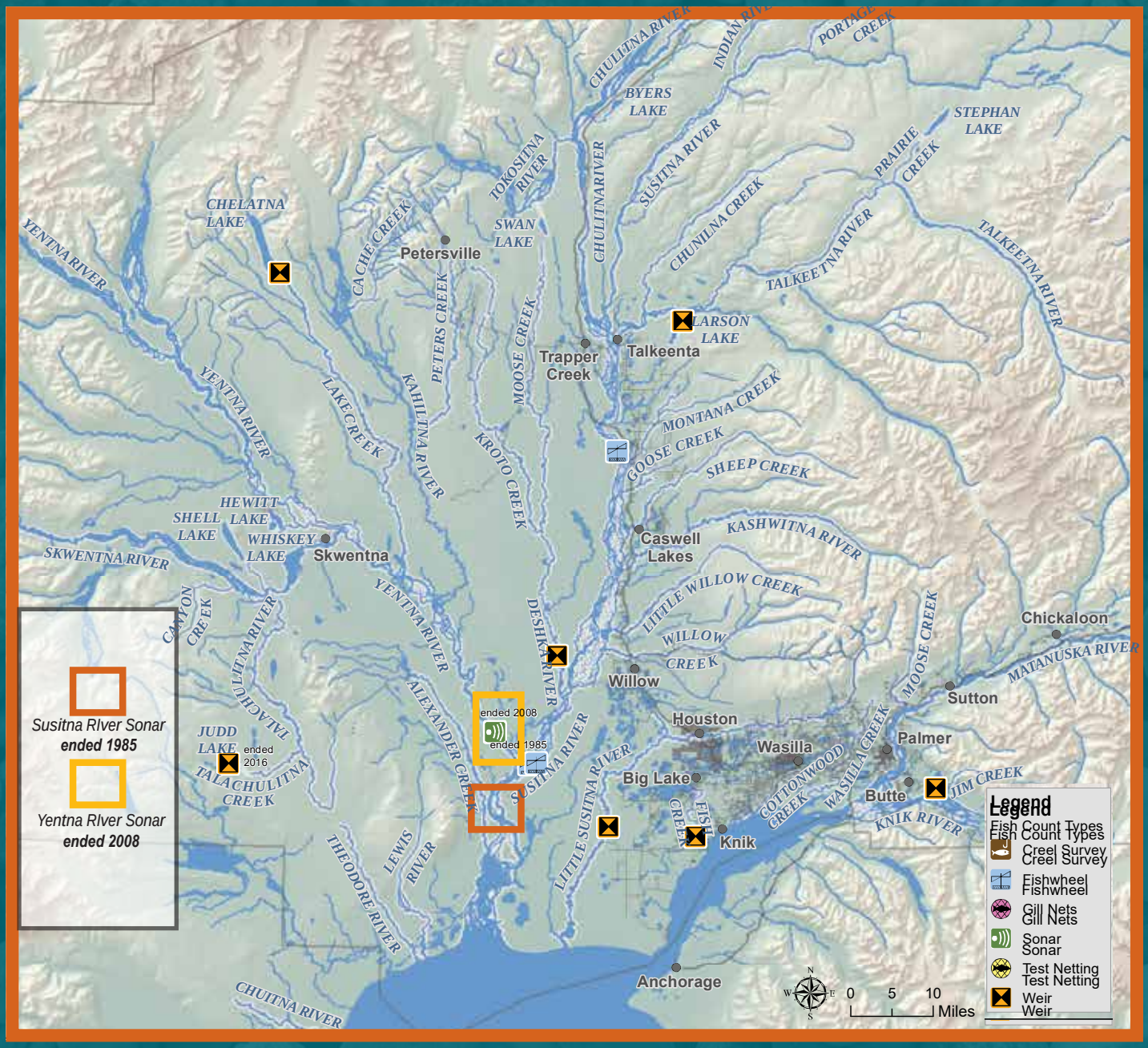


Kenai has Inseason Management Tools



Kenai weirs and sonar are close to the fishery and provide real time feedback. When a weir on the lucrative Kenai sockeye fishery was malfunctioning, it was repaired.

NCI has only Post-Season Mangement Tools



The Susitna counters are far up the Inlet and farther still up Mat-Su rivers and streams, and don't provide real time data that can be used for management in season. The data mostly helps with post season management. Beginning in 1985, ADF&G ended a few programs for fish counting in the Mat-Su Basin. In 1985, sonar ended on the Susitna River. In 2008, a malfunctioning sonar on the Yentna River was removed. This shows we do not have inseason management; other than the use of commercial harvest rates. So, we need to use the precautionary principle management strategy; which is provided for in the Conservation Corridor.

Non-Traditional Environment

A less productive stock exposed to the same high harvest rate

Mat-Su Basin

A baby salmon in the 2,739-acre Chelatna Lake would have to travel more than 100 miles to reach the ocean. The Chelatna is the largest lake in the Mat-Su region but much smaller than Kenai Lake. Half of the sockeye fry in the Mat-Su Basin don't rear in lakes at all like most sockeye salmon; but in sloughs and volatile braided river channels that are shallow and susceptible to flooding and freezing to the bottom. These scrappy salmon have adapted to marginal conditions.

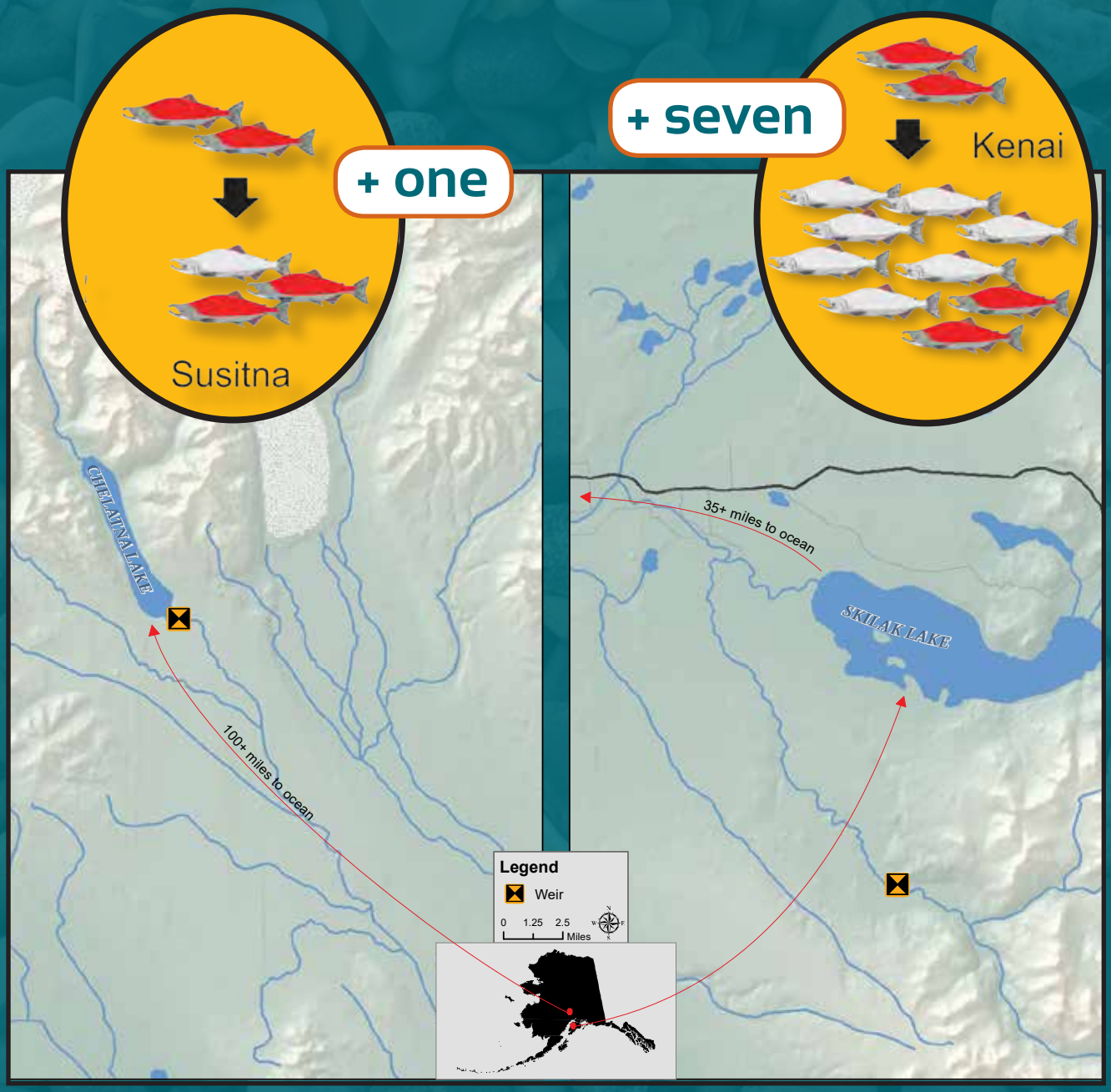
Kenai

A baby salmon safely at the bottom of the 24,512-acre Skilak Lake may have no idea if a deep freeze hits. The lake is 15 miles long and up to 4 miles wide. Skilak Lake is part of the Kenai River system. The fry has access to food readily and lives in a very stable environment. Getting to the ocean is a 36-mile swim.

A Naturally Less Productive Stock

Kenai sockeye produce more returning offspring than Northern sockeye, **4.5 fish per spawner to Susitna's less than 1.5 fish* per spawner. This** means that only one Susitna sockeye offspring can be harvested if the **stock will sustain itself versus the seven eligible Kenai offspring. The** less productive stocks cannot sustain the same high harvest rates as can the strong Kenai stock.

*Source: ADF&G



Northern District Set Gillnet Fishery

Setnetters picking the net at the mouth of the Ivan River, two miles west of the Susitna River toward the Lewis River.

Photo Joshua Foreman

The Conservation Corridor benefits northern commercial users. The Northern Cook Inlet begins at the narrowest part of Cook Inlet and extends to the Susitna River, Knik, and Turnagain Arm. This is a setnet fishery, a small-scale family run fishery with many difficulties including the long transport of catch to a processor in the Kenai or Anchorage. Many fishermen have adapted by direct marketing to residents.

About 90 Northern District set gillnet permits are registered on average and 80 are fished.

Sockeye harvests have been in steady decline for the Northern District setnetter. However, there has been a slight upward trend in harvest numbers since the implementation of the Conservation Corridor in 2014.

Unprecedented Fish Habitat Improvements

From 2001 through 2019, the number of culverts replaced for salmon passage reached 111 within the Matanuska-Susitna Borough on state, local government, Alaska Railroad, and private land; the work continues with additional culverts being replaced in 2020. No other local government in Alaska has such an aggressive replacement program. **The Mat-Su is lauded in Washington, D.C. by the U.S. Fish & Wildlife Service for doing it right. Three national awards have been credited to the Mat-Su and its partners.** This local prioriity on fish passage has reopened well over 100 miles of riverine habitat and acres of lake habitat for salmon spawning. Millions of dollars have been spent on this effort, shared by the Mat-Su Borough and the U.S. Fish and Wildlife Service. These serious efforts to open up and improve Mat-Su Basin salmon habitat need one final component - returning fish to their natal streams to spawn.

Likewise, other partners have invested in projects that improve and enhance salmon habitat within the Mat-Su Borough. For example, Great Land Trust since the year 2000 has completed 19 projects that have conserved nearly 9,000 acres of fish habitat, and 40 anadromous stream miles.

"The scale of the fish passage program in the Mat-Su is pretty unprecedented in the commitment to really seeing through and improving fish passage boroughwide."
—Alaska Dept. Fish & Game, summer 2016

$2.5 M to Salmon Research

The MSB` Fish & Wildlife Commission directed $2.5 million in State appropriations toward science, genetic research, and fish passage. In 2015, the Commission led a stakeholder effort to prioritize research needs for Upper Cook Inlet. It's the first time a research plan has been completed for the Inlet despite decades of fishing.

One of the research projects was genetic identification of coho in Upper Cook Inlet. Data has been collected on Kenai sockeye for more than ten years. With enough comparative data base compiled on coho, scientists have a better understanding of where coho travel and when through the Conservation Corridor. The genetic data on coho and sockeye shows a need to adjust fishing time in the Conservation Corridor.

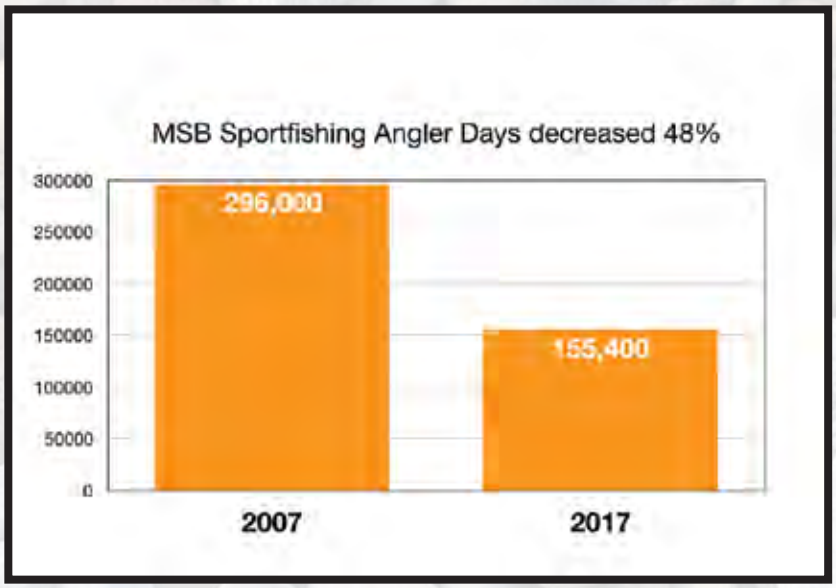
King Salmon Improving at Alexander Creek

Bad Habitat Happens

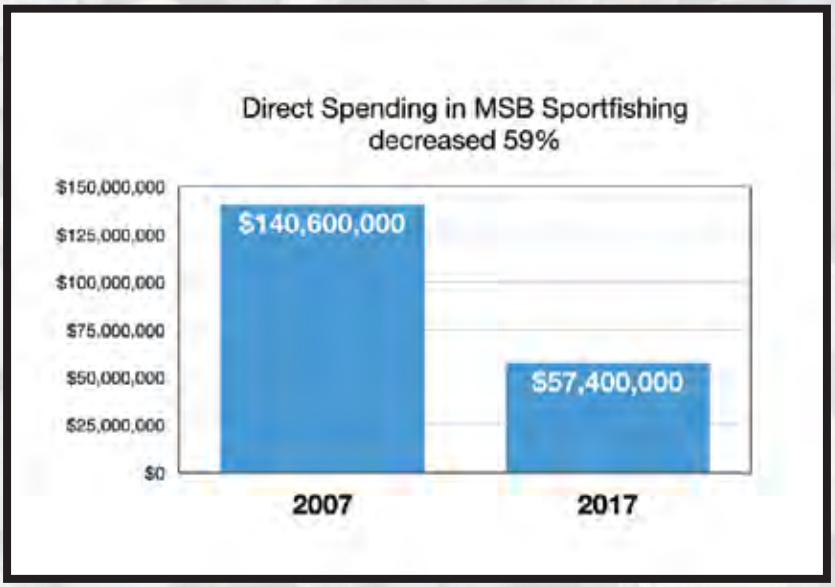
Problems with habitat exist here as they do in all parts of Alaska. Beaver dams, invasive weeds, and of course pike, a salmon predator. All-out warfare has occurred at Alexander Creek, one of the most troublesome pike areas. King Salmon returns from Alexander Creek have shown some improvement but escapements are still well below goals.

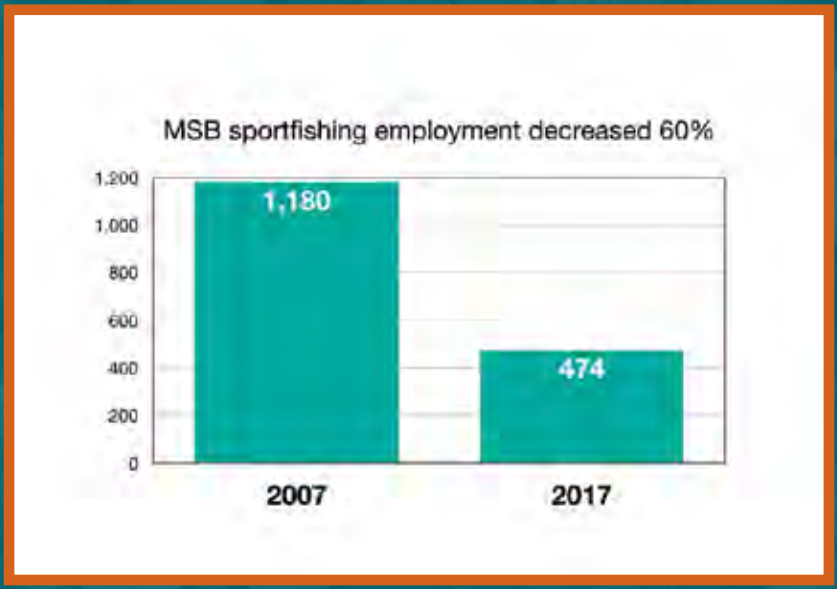
Fish Economics

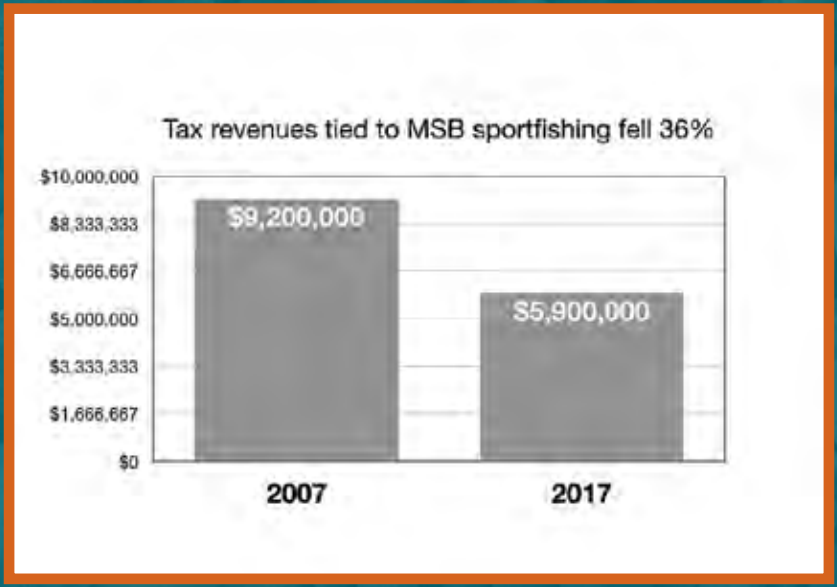
Two economic studies on sportfishing in Cook Inlet show the significant impact of and the recent decline in sportfishing in the Mat-Su Borough. This correlates with shrinking salmon returns to their natal streams in the area. In 2007 and 2017, these economic studies looked at sportfishing in the Mat-Su in terms of angler days, direct spending, employment, and tax revenue generated. In all cases, there were significant declines as follows:



Sport fisheries are disproportionately shouldering the conservation burden of Norern Cook Inlet salmon declines







Take Aways:

1. The **economic impact of sportfishing in the MSB is significant** in terms of direct economic impact, jobs, and tax revenues.

2. As **salmon returns to the MSB have fallen from 2007 to 2017, so has angling effort** in the Mat-Su Borough and the consequent lack of economic infusion of money to the local economy.

3. The solution: Have the State Board of Fisheries **adopt salmon management plans that return more fish to Northern Cook Inlet streams** so the full historic economic impacts of sportfishing can be realized again, here in the Mat-Su as well as other Northern Cook Inlet locations like Turnagain Arm and Anchorage Management Area.

4. **It takes fish to make fish, and it takes fish returning to natal streams in Northern Cook Inlet to support sportfishing economies.**

The Proposals

Matanuska-Susitna Borough Fish & Wildlife Commission

PROPOSAL 133 – Central District Drift Gillnet Fishery Management (5 AAC 21.353)

Amend the Central District Drift Gillnet Fishery Management Plan with additional mandatory area restrictions to regular fishing periods, as follows:

The Changes to the existing plan are as follows:

(A)(iv) Drift Gillnet Area 1; [NOTWITHSTANDING THE PROVISIONS OF SUBPARAGRAPH (d)(2)(A) OF THIS SECTION, ONE REGULAR 12-HOUR FISHING PERIOD FROM JULY 16 THROUGH JULY 31 MAY OCCUR IN THE CENTRAL DISTRICT INSTEAD OF IN DRIFT GILLNET AREA 1;]

(e) From August 1 through August 15, [THERE ARE NO MANDATORY AREA RESTRICTIONS TO REGULAR FISHING PERIODS]

(1) fishing during both regular 12 hour fishing periods per week will be restricted to one or more of the following sections and areas: (A) Expanded Kenai Section: (B) Expanded Kasilof Section (C) Anchor Point Section (D) Drift Gillnet Area 1, except that if the Upper Subdistrict set gillnet fishery is closed under 5 AAC 21.310(b)(2)(C)9iii), or the department determines that less than one percent of the seasons total drift gillnet sockeye salmon harvest has been taken per fishing period for two consecutive fishing periods in the drift gillnet fishery, regular fishing periods will be restricted to Drift Gillnet Area 3 and 4. [IN THIS SUBSECTION "FISHING PERIOD" MEANS A TIME PERIOD OPEN TO COMMERCIAL FISHING AS MEASURED BY A 24-HOUR CALENDAR DAY FROM 12:01 AM UNTIL 11:59 P.M.]

(2) additional fishing time under this subsection is allowed only in one or more of the following sections: (A) Expanded Kenai Section: (B) Expanded Kasilof Section: (C) Anchor Point Section.

(f) From August 16 until closed by emergency order, Drift Gillnet Areas 3 and 4 are open for fishing during regular fishing periods.

PROPOSAL 199 – Northern District King Salmon Management Plan (5 AAC 21.366) Amend the Northern District King Salmon Management Plan, as follows:

(a) The purpose of this management plan is to ensure an adequate escapement of king salmon into the Northern District drainages and to provide management guidelines to the department. The department shall manage the Northern District king salmon stocks primarily for sport and guided sport uses in order to provide sport and guided sport fishermen with a reasonable opportunity to harvest these salmon over the entire run as measured by the frequency of inriver restrictions. The department shall manage the Northern District for the commercial harvest of king salmon as follows:

[(10) IF THE DESHKA RIVER IS CLOSED TO SPORT FISHING, THE COMMISSIONER SHALL CLOSE, BY EMERGENCY ORDER, THE COMMERCIAL KING SALMON FISHERY THROUGHOUT THE NORTHERN DISTRICT FOR THE REMAINDER OF THE FISHING PERIODS PROVIDED FOR UNDER THIS SECTION;]

(10) If the sport fishery on the Deshka River

(A) is closed or if retention of king salmon is prohibited, the commissioner shall, by emergency order, close the commercial king salmon fishery throughout the Northern District for the remainder of the fishing periods provided for under this section; or

(B) is restricted to retention of king salmon under 28 inches or less in length as measured from the tip of snout to tin of tail, the commissioner shall, by emergency order, reduce the time allowed per fishing period provided for in this section to no more than six hours in duration.

(12) If the sport fishery on the Little Susitna River

(A) is closed or if retention of king salmon is prohibited, the commissioner shall, by emergency order, close the commercial king salmon fishery in the General Sub-district of the Northern District including areas 247-41, 247-42, and 247-43, for the remainder of the fishing periods provided for under this section; or

(B) is restricted to retention of king salmon under 28 inches or less in length as measured from the tip of snout to tip of tail, the commissioner shall, by emergency order, reduce the time allowed per fishing period provided for in this section to no more than six hour provision in the General Sub-district of the Northern District including areas 247-41, 247-42, and 247-43.

(13) If the inseason Deshka River run projection is below the sustainable escapement goal; the commissioner may, by emergency order, close the commercial king salmon fishery throughout the Northern District for the remainder of the fishing periods provided for under this section.

(14) If the inseason Little Susitna River run projection is below the sustainable escapement goal the commissioner may, by emergency order, reduce the time allowed per fishing period provided for in this section to no more than six hours in duration throughout the Northern District.

PROPOSAL 215
5 AAC XX.XXX. New section.
Create a Susitna and Yentna Rivers King Salmon Fishery Management Plan, as follows:

5 AAC 61.XXX Susitna and Yentna Rivers King Salmon Management Plan.

(a) The purpose of this management plan is to ensure an adequate escapement of king salmon into the rivers and streams of the Susitna and Yentna river drainages, to provide management guidelines and tools to the department and to provide predictability in management. The intent of the board is that the department will consider the management Upper Cook Inlet Finfish Proposals 121 Northern Cook Inlet Sport, Personal Use and Subsistence (31 proposals) Back to Top options listed in this plan prior to considering any other available options for managing the fishery.

(b) The department shall initiate management of the sport fisheries for king salmon in the Eastside Susitna management area (Unit 2 of the Susitna River) based on the preseason forecast for the Deshka River and other available abundance indices.

(1) If the pre-season forecast for the Deshka River projects the run to be below the sustainable escapement goal or if other available abundance indices indicate a high probability of runs below the escapement goal for other systems within the Eastside Susitna management area, the commissioner may, by emergency order,

(A) Close the sport fishery to the taking of king salmon; or

(B) Prohibit the retention of king salmon;

(2) If the pre-season forecast for the Deshka River projects the run to be within the sustainable escapement goal or if other available abundance indices indicate a high probability of inriver runs within established escapement goal for other systems within the East side Susitna management area, the commissioner may, by emergency order,

(A) Prohibit the retention of king salmon;

(B) Establish a maximum size limit of 28 inches as measured from tip of snout to tip of tail;

(C) Reduce the annual limit;

(D) Close one or more weekends of fishing;

(E) Start the fishery as described in 5 AAC 61.110 - 5 AAC 61.123;

(3) If, based on assessment based of available abundance indices, the inseason projection of escapement at any location within the Eastside Susitna management area is below the sustainable escapement goal, the commissioner may close, by emergency order, the sport fishery to the taking of king salmon; forecast for the Deshka River and other available abundance indices.

(4) If the inseason escapement projection based on available abundance indices at any location within the Eastside Susitna management area is assessed to be within the sustainable escapement goal the commissioner may, by emergency order,

(A) Conduct the season as described in 5 AAC 61.110 - 5 AAC 61.123;

(B) Modify the maximum size limit allowed for retention.

PROPOSAL 215 Continued

(5) If the inseason escapement projection based on available abundance indices at any location within the Eastside Susitna management area is accessed to be greater than the sustainable escapement goal the commissioner may, by emergency order,

(A) Increase hours to 24 hours per day;

(B) Add a 3-day weekend of fishing;

(c) The department shall initiate management of the sport fisheries for king salmon in the Talkeetna River management area (Unit S of the Susitna River) based on the preseason forecast for the Deshka River and other available abudance indices.

(6) If the pre-season forecast for the Deshka River projects the run to be below the sustainable escapement goal or if other available abundance indices indicate a high probability of runs below the escapement goal ranges for other systems within the Talkeetna River management area, the commissioner may, by emergency order,

(A) Close the sport fishery to the taking of king salmon; or

(B) Prohibit the retention of king salmon;

(7) If the pre-season forecast for the Deshka River projects the run to be within or above the sustainable escapement goal, or if other available abundance indices indicate a high probability of inriver runs within established escapement goal ranges for other systems within the Talkeetna River management area, the commissioner may, by emergency order,

(A) Prohibit the retention of king salmon;

(B) Establish a maximum size limit of 28 inches as measured from tip of snout to tip of tail;

(C) Reduce the annual limit;

(D) Restrict fishing to Saturdays - Mondays;

(E) Start the fishery as described in 5 AAC 61.110 - 5 AAC 61.123;

(8) If, based on assessment of available abundance indices, the inseason projection of escapement at any location within the Talkeetna River management area is below the sustainable escapement goal, the commissioner may close, by emergency order, the sport fishery to the taking of king salmon;

(9) If the in-season escapement projection based on available abundance indices at any location within the Talkeetna River management area is accessed to be within the sustainable escapement goal the commissioner may, by emergency order,

(A) Conduct the season as described in 5 AAC 61.110 - 5 AAC 61.123;

(B) Modify the maximum size limit allowed for retention.

(C) Increase hours to 24 hours per day;

(D) Allow use of bait;

(10) If the inseason escapement projection based on available abundance indices at any location within the Talkeetna River management area is accessed to be greater than the sustainable escapement goal the commissioner may, by emergency order,

(A) Increase hours to 24 hours per day;

(B) Allow use of bait;

PROPOSAL 215 Continued

(d) The department shall initiate management of the sport fisheries for king salmon in the Yentna River management area (unit 4 of the Susitna River) based on the preseason forecast for the Deshka River and other available abundance indices.

(11) If the pre-season forecast for the Deshka River projects the run to be below the sustainable escapement goal or if other available abundance indices indicate a high probability of runs below the escapement goal ranges for other systems within theYentna River management area, the commissioner may, by emergency order,

(A) Close the sport fishery to the taking of king salmon; or

(B) Prohibit the retention of king salmon;

(12) If the pre-season forecase for the Deshka River projects the run to be within or above the sustainable escapement goal or if other available abundance indices indicate a high probability of inriver runs within or above established escapement goal ranges for systems within the Yentna River management area, the commissioner may, by emergency order,

(A) Prohibit the retention of king salmon;

(B) Establish a maximum size limit of 28 inches as measured from tip of snout to tip of tail;

(C) Reduce the annual limit;

(D) Restrict days harvest is allowed to Fridays - Mondays;

(E) Start the fishery as described in 5 AAC 61.110 - 5 AAC 61.123;

(13) If, based on assessment of available abundance indices, the inseason projection of escapement at any location within the Yentna River management area is below the sustainable escapement goal, the commissioner may close, by emergency order, the sportfishery to the taking of king salmon;

(14) If the inseason escapement projection based on available abundance indices at any location within the Yentna River management area is accessed to be within the sustainable escapement goal the commissioner may, by emergency order,

(A) Conduct the season as described in 5 AAC 61.110 - 5 AAC 61.123;

(B) Modify the maximum size limit allowed for retention.

(15) If the inseason escapement projection based on available abundance indices at any location within the Yentna River management area is accessed to be greater than the sustainable escapement goal the commissioner may, by emergency order,

(A) Increase hours to 24 hours per day;

(B) Allow use of bait;

(e) At any such time that the retention of king salmon is prohibited or a maximum size limit is established the use of multiple-hooks is prohibited.

(a) Nothing in this management plan is to be construed as diminishing or affecting the commissioner's authority to modify bag, possession, and annual limits and methods and means by emergency order under 5 AAC 75.003.

PROPOSAL 217
5 AAC XX.XXX. New section.
Create a Deshka River King Salmon Fishery Management Plan, as follows:

5 AAC 61.XXX. Deshka River King Salmon Management Plan.
(a) The purpose of this management plan is to ensure an adequate escapement of king salmon into the Deshka River, to provide management guidelines and tools to the department, and to provide predictability in management. The intent of the board is that the department will consider the management options listed in this plan prior to considering ani other available options for managing the fishery.
(b) The Department shall manage the Deshka River king salmon sport and guided sport fisheries to achieve the sustainable escapement goal and to provide reasonable harvest opportunities over the entire run.
(c) In the Deshka River,
(1) The seasons, bag, possession, and size limits, and other special provisions for king salmon are set out in 5 AAC 61.110 -5 AAC 61.112;
(2) From January 1-July 13, from its mouth upstream to ADF&G regulatory markers near Chijuk Creek (river mile 17), and in all waters within a one-half mile radius of its confluence with the Susitna River,
(A) If the pre-season forecast projects the run to be below the sustainable escapement goal, the commissioner may, by emergency order,
(i) Close the sport fishery to the taking of king salmon; or
(ii) Prohibit the retention of king salmon;
(B) If the pre-season forecast projects the run to be within the sustainable escapement goal the commissioner may, by emergency order,
(i) Prohibit the retention of king salmon;
(ii) Establish a maximum size limit of 28 inches as measured from tip of snout to tip of tail;
(iii) prohibit the use of bait;
(iv) Reduce the annual limit;
(v) Start the fishery as described in 5 AAC 61.112;
(C) If the pre-season forecast projects the run to be above the sustainable escapement goal the commissioner may, by emergency order,
(i) Start the fishery as described in 5 AAC 61.112;
(ii) allow the use of bait prior to June 1;
(iii) Increase hours to 24 hours per day.
(3) If the inseason escapement projection is below the sustainable escapement goal, the commissioner may close, by emergency order, the sport fishery to the taking of king salmon;
(4) If the inseason escapement projection is within the sustainable escapement goal, the commissioner may, by emergency order,
(A) Increase hours to 24 hours per day;
(B) Increase bag and possession limits;
(d) When retention of king salmon is prohibited or a maximum size limit is in effect the use of bait and multiple hooks are prohibited.
(e) Nothing in this management plan is to be construed as diminishing or affecting the commissioner's authority to modify bag, possession, and annual limits and methods and means by emergency order under 5 AAC 75.003.

PROPOSAL 219
5 AAC XX.XXX. New section.
Create a Little Susitna River King Salmon Fishery Management Plan, as follows:

5 AAC 60.XXX. Little Susitna River King Salmon Management Plan.
(a) The purpose of this management plan is to ensure an adequate escapement of king salmon into the Little Susitna River to provide management guidelines and tools to the department Upper Cook Inlet Finfish Proposals 127 Northern Cook Inlet Sport, Personal Use and Subsistence (31 proposals) Back to Top and to provide predictability in management. The intent of the board is that the department will consider the management options listed in this plan prior to considering any other available options for managing the fishery.
(b) The Department shall manage the Little Susitna River king salmon sport and guided sport fisheries to achieve the sustainable escapement goal and to provide reasonable harvest opportunities over the entire run. The department shall initiate management of the sport fishery for king salmon in the Little Susitna River based on run sizes of immediate past years and other available abundance indices while minimizing the effects of conservation actions for the Susitna River on the Little Susitna River.
(c) In the Little Susitna River.

(1) The seasons, bag, possession. and size limits, and other special provisions for king salmon are set out in 5 AAC 60.120 -5 AAC 60.122;
(2) From January 1 - July 13, from its mouth upstream to the Parks Highway,
(A) If pre-season, the run is anticipated to be below the sustainable escapement goal, the commissioner may, by emergency order,
(i) Close the sport fishery to the taking of king salmon; or
(ii) Prohibit the retention of king salmon;
(B) If the pre-season, the run is anticipated to be within or above the sustainable escapement goal the commissioner may, by emergency order,
(i) Prohibit the retention of king salmon;
(ii) Establish a maximum size limit of 28 inches as measured from tip of snout to tip of tail;
(iii) Reduce the annual limit;
(iv) restrict days harvest is allowed;
(v) Start the fishery as described in 5 AAC 61.112;
(3) If the inseason escapement projection is below the sustainable escapement goal, the commissioner may close, by emergency order, the sport fishery to the taking of king salmon;
(4) If the inseason escapement projection is within the sustainable escapement goal, the commissioner may, by emergency order,
(A) Conduct the season as described in 5 AAC 61.112;
(B) Modify the maximum size limit allowed for retention;
(5) If the inseason escapement projection is greater than the sustainable escapement goal, the commissioner may, by emergency order, allow use of bait;

(d) When retention of king salmon is prohibited or a maximum size limit is in effect the use of multiple-hooks is prohibited.
(e) Nothing in this management plan is to be construed as diminishing or affecting the commissioner's authority to modify bag, possession, and annual limits and methods and means by emergency order under 5 AAC 75.003.

Recommendations

The Commission recommendations to the 2020 Board of Fisheries

1. Enhance the Conservation Corridor in the Central District drift gillnet fishery—it is working as designed

The Conservation Corridor provides strategic time and area closures in the center of Cook Inlet and expands use of terminal fishing areas based on abundance of the Kenai and Kasilof sockeye. Following corridor adoption, significant increases were observed in sockeye and coho salmon runs to the Mat-Su, local sport fisheries and escapements. The uptick in salmon numbers is part of what we, the Commission, were asking for when the 2014 Alaska Board of Fisheries adopted the current drift gillnet fishery management plan.

2. Continue to protect Stocks of Concern—particularly Susitna sockeye

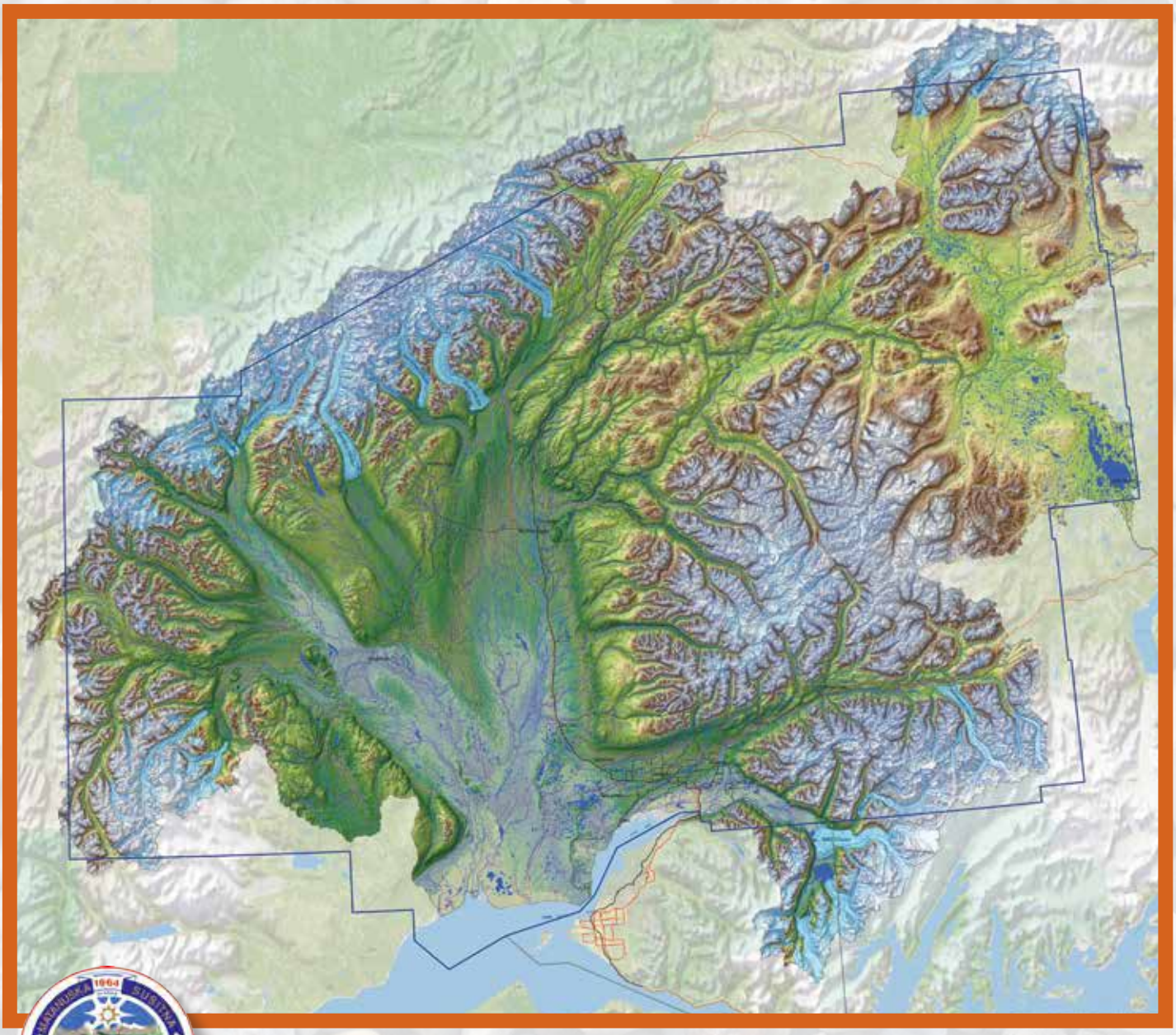
Susitna sockeye are currently a Stock of Yield Concern. Continuing declines and chronic escapement failures also qualify this stock for listing as a stock of management and conservation concern. Susitna sockeye are tremendously diverse but inherently less productive than Kenai and Kasilof populations which drive Upper Cook Inlet commercial fisheries. Freshwater productivity of Susitna sockeye also appears to be declining. The combination of declined productivity and continuing high harvest rates are a recipe for extinction. Freshwater production problems are imperative for limiting exploitation, not an excuse for continued over fishing in the mixed stock commercial fishery.

3. Limit commercial drift gillnet fishing in August to avoid excessive coho harvest

Most of the commercial drift gillnet fishery is closed by regulation in August when less than 1% of the season's total sockeye harvest is caught on two consecutive fishery openers. This rule provides flexibility to extend the commercial fishing season when the sockeye run is late and signicant numbers continue to be available for harvest. The rule also ensures that commercial harvest of sport-priority coho and Kenai kings is limited after the sockeye run winds down. This closure rule, as adopted, was meant to be absolute except as otherwise provided under the commissioner's authority to manage to meet escapement goals as a first priority.

4. Continue to provide robust personal use opportunities where stocks permit

Over 25,000 to 30,000 households now participate in the UCI personal use fishery, harvesting approximately 325,000 or more sockeye salmon for the period 2013 to 2018, primarily from Kenai or Kasilof rivers. The majority of participation comes from residents of areas outside the Kenai Peninsula including the Mat-Su as other regional personal use opportunities are quite limited. The Commission supports maintaining and enhancing personal use fishery opportunities wherever possible. Commercial fishery limitations including closure "windows" are essential for delivering fish to the rivers when sockeye are running. The Commission also supports proposals to increase inriver goals for Kenai late-run sockeye for consistency with current inriver harvest levels.



The Nature Conservancy

Designed by Mat-Su Borough Public Affairs
Stefan Hinman
with the MSB Fish & Wildlife Commission, Ted Eischeid & Karol Riese
Maps by Heather Kelley & Carla Goers, GIS

Matanuska-Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645

Submitted By
Ted Eischeid for MSB Fish and Wildlife Commission
Submitted On
1/23/2020 4:47:43 PM
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Matanuska-Susitna Borough

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The following web links contain information in support of the MSB Fish and Wildlife Commission's proposals before the BOF UCI meeting, #133, 199, 215, 217, and 219:

FWC's Board of Fisheries Proposals: https://www.matsugov.us/projects/board-of-fisheries

Mat-Su Borough's Fish Hub: https://www.matsugov.us/fishhub

MSB FWC: https://www.matsugov.us/boards/fishcommission

Economics of Sportfishing in Cook Inlet: https://www.matsugov.us/projects/economic-contributions-of-sportfishing-in-cook-inlet

Mat-Su Borough Fish Projects:https://www.matsugov.us/projects?project_type=Salmon+Research&search=projects&task=search

Submitted By
Matt Haakenson
Submitted On
1/23/2020 11:22:33 AM
Affiliation
Alaska Salmon Alliance

Mr. Chairman, Members of the Board,

I respectfully submit this comment in opposition to Proposal 79, which would make Personal Use fishing a priority above Subsistence, Commercial, or Sport harvests in our state. The state holds subsistence as the highest priority. I believe this is appropriate. The people who harvest fish as a means to survive, without other good options, need the fish more than the rest of us. Giving the highest priority to the user group with the least regulation, least management, least accountability, and the highest number of people involved, the Personal Use segment, may be popular, but it is a recipe for disaster. Aside from the small portion of those who subside on fish, there are those whose livelihood depends on fishing. Commercial fishing has been a way of life for many Alaskans since before statehood. The vast majority of Upper Cook Inlet commercial fishermen are local residents. The industry creates tens of thousands of jobs, worth many of millions of dollars, and produces significant revenue for the state. I am attaching a link to a study, released January, 2020, by the McDowell Group, ***The Economic Value of Alaska's Seafood Industry.***

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□□□□□□□□ □□□□□□□□ □□□□□□□□□ https://uploads.alaskaseafood.org/2020/01/McDowell-Group_ASMI-Economic-Impacts-Report-JAN-2020.pdf

Matthew S. King

01/12/2020 05:26 PM AKST

RE: PROPOSAL 163 Prohibit guiding in the Kenai and Kasilof Rivers personal use dip net fishery

If not for the guided services offered to provide access to the Kenai personal use dip net fishery, my wife would not have been able to participate in this fishery due to physical limitations. The guide service that we utilize also provides the following benefits: They reduce vessel congestion on the river. They enforce legal and ethical practices while engaging in the fishery. They promote boater safety and assure that the Rules and Regulations for operating a vessel on navigable waters are adhered too. They maintain a higher level of ecological awareness on the environment by self regulating the amount of time they are on the water, daily. Due to the nature of this fishery, they uphold the Rules and Regulations of the Personal Use Fishery in general, and do so with greater respect, on account of the liability of involving a commercial operation. They serve as a "Kid's Don't Float" companion to provide PFDs to children who are not wearing them while in a boat on the Kenai River.

Submitted By
Max Durtschi
Submitted On
1/23/2020 8:02:26 PM
Affiliation

Phone
907-442-6290
Email
maxdurt@gmail.com
Address
PO Box 1012
Girdwood, Alaska 99587

I would like to voice my opposition to proposal 78 which seeks to include weighted criteria when allocating fishery resources in the Cook Inlet. I believe the board already has the powers nessisary to make decisions on allocative issue based on which criteria they think to be most important. This proposal will limit the boards authority and sets a dangerous precedent for all of Alaska's fisheries. This proposal unfairly favors the personal use and sport fishing user groups. As a small Alaskan business owner the proposal could have a significant negative effect on my livelyhood.

Submitted By
Mel Erickson
Submitted On 1/22/2020 8:35:33 PM
Affiliation Mr.
Phone 9073981744
Email gamefish@alaska.net
Address Po Box 1127
Soldotna, Alaska 99669
From : Mel Erickson
Proposal 14.
I am the Author of proposal 14, and i support this proposal., adopting this proposal would just make legal what every body is already doing. It is common practice worldwide in several fisheries for one person to hook a fish and hand the rod off to another person to reel in. small childeren, many times have their parents or sibling help them in hooking a fish, and then pass the rod off to the child, same thing with older anglers, disabled anglers, or just plain inexpierieneced anglers. Guides, & deckhands not only in Alaska but world wide also many times hook or assist in hooking fish and handing the rod off for an angler to reel in and land the fish.

Proposal 15

I am the author of this proposal, & i support this proposal. This proposal is long overdue. I have been a fishing guide for 32 years, & over all these years it it very common for anybody & everybody that can create a website, & market, to sell guided fishing trips, without actually being a licensed, permited fishing guide. These fake fishing guide businesses with websites protray themselves to the consumer as a real fishing guide when they are not. They sell the trip then unbeknownest to the client they reesell , & sub-contract the trip out without a contract to a licensed guide that they may or may not know. many times the consumer is overpaying for the trip and many times the terms and conditions of fishing trip such as deposits, payments, cancellation policies, length of trip, and other aspects of the trip are very contridicting between the seller, the buyer, and the actual guide performing the trip. alos many times the licensed guide doing the trip doesnt even get paid. It is also very unfair competition for a licensed guide to compete on the open market for clients against unlicesned guides advertizing themselves as fishing guides when they are not.

Proposal 115

I am the author of proposal 115, & i support this proposal , mortality rates are very low in a catch and release king fishery, and allowing bait will increase opportunity for anglers to at least catch fish when they have to release them. Ther department needs more options with EO's when harvest needs to be reduced.

Proposal 139, I am the author of proposal 139, and i support this proposal, I travel to chinitna bay several days every year doing bear viewing tours, 4-5 years ago there were lots of salmon in chinitna bay in August, the last few years there have been very few salmon in the bay from what i have witnessed. The bears in the bay depend heavily on these fish to fatten up for the winter, each year there are less and less bears in the bay due to the lack of fish, also Clear creek in the back of the bay is closed to sportfishing due to lake of fish. The commercial drifters in the bay put their nets right on the beach and in shallow water and the fish dont have a chance at all to get to the streams.

Proposal 158, I oppose this proposal, as a guide for 32 years, it is an important aspect of our trips to interact with our clients and fishing along side them is very benificial to our clients, many dont know how to flip for reds, and it takes soem time for them to get the hang of it, the guide being allowed to fish helps the client learn how to do it, if this proposal is adopted it is going to extend the time onshore for a guided group and the bank spacve wont open up as quickly for another group to fish that space.

Proposal 159

i am the author of this proposal and i support this proposal, It was ridiculous that this rule was implemented back at the 1999 BOF meeting, there was no good reason for it and it has accomplished nothing, It does not increase effort, because a group of 5 will all go fishing anyway its just that they get split up into 2 boats. the rule allowing oinly 4 anglers just splits up groups of 5 many times families, 3 in one boat and 2 in another, and now instead of all families fishing together in one boat they end up fishing with strangers when seperated in 2 boats. I have had parents and grandparents miss out on their family members miss out on their childeren or grandchilderen catching a fish of a life time because of this ridculous rule of only 4 anglers per boat.

Submitted By
Mel Erickson
Submitted On 1/23/2020 3:00:17 PM
Affiliation Mr.
Phone 9073981744
Email gamefish@alaska.net
Address Po Box 1127
Soldotna, Alaska 99669
from Mel Erickson
Proposal 104
I oppose this proposal as written, having 32 years of guiding on the Kenai River under my belt, I have learned salmon runs have up and down cycles. The sport fish division of ADFG has done a excellent job of managing the king salmon fishery in years of abundance with their EO's Kenai river sportfishing wants to start the late run with no bait and catch and release, I strongly oppose this. the 50% point of the run isnt even until about July 25th, and the season closes July 31. The Kenai is already heavily restricted by regulation and needs no more regulation, continue with start the season with bait and full harvest, and if the department feels it needs to reduce harvest then let them to continue to manage the fishery in season by EO.

Submitted By

Mel Erickson

Submitted On 1/22/2020 8:37:32 PM

Affiliation Mr.

Phone 9073981744

Email gamefish@alaska.net

Address Po Box 1127

Soldotna, Alaska 99669

From Mel Erickson

Proposal 160,

i am the author of proposal 160 and i support this proposal, for the same reason as proposal 159, however this is a little different than 159 in case proposal 159 fails, the original restriction on only allowing 4 anglers per guide vessel was intended for king fishing from a boat, but it has an unintended outcome of also preventing a guide to transport a group of 5 anglers to the shore for sockeye fishing.

Proposal 161

I am the author of this proposal and i support this proposal, the monday closure for guded anglers on mondays in august was implemented way back years ago in a conservation concern for kenai river silvers, when the conservation concern eneded and the stocks recovered, the guided angler never got this day of fishing back, there is no longer a conservation concern omn kenai silvers and monday fishing for silvers for guided anglefrs should be allowed, if ther is another conservation issue with kenai silvers in the future the deparment has several tools to issue EO's to reduce harvest.

proposal 162

I am the author of 162 and i support this proposal, in years past when the late run of kenai kings have been closed due to low returns, regulations intended for the king fishery have remained in effect, regulations such as the 6am to 6pm closure for guided anglers, the sunday and monday closure, and the prohibition of a 5th angler, all these regulations should be lifted if the late run king salmon fishery is closed. the closure usually hits guides and their anglers hard, but at least we can try to save as many trips as possible fishing for trout, pinks or silvers.

Proposal 230

i support this proposal, the fly in sockeye fishery at wolverine creek at big river lakes is a snag fishery plain and simple, & currently all anglers and guides fishing there are illegally fishing as 99% of all salmon caught in this fishery are hooked elsewhere than the mouth. keep the gear restrictions the same but allow fish that not hooked in the mouth to be legally retained. this is a clam water lake with no current and it is impossible to hook the fish in the mouth. in my opinion the BOF only has 2 choices, allow

retention of sockeyes not hooked in the mouth, or close the fishery since the fishery cannot be conducted legally with current rules.

Thank you for your consideration of all these proposals, and im sorry i cannot personally be at the meeting to explain in person, But i need to work in the winter also.

Mel Erickson

Submitted By

Mel Erickson

Submitted On 1/22/2020 8:29:34 PM

Affiliation

Phone 907-398-1744

Email gamefish@alaska.net

Address Po Box 1127

Soldotna , Alaska 99669

From Mel Erickson

Proposal 210

I am the author of this proposal and i support this proposal.

There has been a huge problem at the mouth of silver salmon creek , with drift gillnetters, fishing right on shore, the brown bears have learned to catch fish from there nets at low tide, this is dasngerous for the bears, and it also ahs caused problems with the gillneters shooting at the bears towards shore when there are people and bear viewing guides and national park service rangers on shore in the line of fire, also the bears get scared and then run straight at the people on shore that are bear viewing, silver salmon creek is a very popular location for guided bear viewing tours. I have pictures of bears stealing fish out of the gillnets. this issue can be solved buy moving the gillnetters 1 mile offshore, besides the bear problems the other problem is the nets are choking off the stream mouths and blocking the passage of salmon into the streams.

Submitted By
Michael Crookston
Submitted On
1/21/2020 6:25:24 PM
Affiliation

Dear representatives,

Thank you for your service and for taking time to hear comments on these issues that are immensely important to many families. Please **oppose KRSA proposals 78, 88 and 104**, the primary goal of these proposals is to cripple Cook Inlet commercial fisheries which has been a goal of the IN RIVER commercial fishermen for years now. My family has been fishing for four generations in Cook Inlet- a place I hold dear to my heart and hoped that my children might also learn to love through working alongside their family. Your educated vote being made in our confidence is the hope of many you don't see or hear from often. We look to you and thank you for your work.

Submitted By
Michael Hanson
Submitted On
1/23/2020 8:02:35 PM
Affiliation

Phone
9073010938
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Address
5211 Mockingbird Dr
Unit 12
Anchorage, Alaska 99507

I oppose Proposition 163. As a disabled sportsman, access to the dipnet fishery is difficult at best, the services provided by guides allow me equal access to the river. Similarly, many Alaskans are afforded the opportunity to engage with the personal use fishery without the burden of procuring and maintaining expensive equipment. There is also the economic concern of eliminating the guiding industry that supports these activities. At a time when Alaska needs all the economic growth it can sustain. For these reasons, I wholeheartedly oppose proposition 163

Michael J. Hondel

01/07/2020 11:32 AM AKST

RE: PROPOSAL 163 Prohibit guiding in the Kenai and Kasilof Rivers personal use dip net fishery

I oppose this proposal because: Guided dipnetting, like non-guided dipnetting, is limited to residents of Alaska. So it does not expand the beneficiaries of dipnetting. The proposal states "the intent of these fisheries which are implemented to allow Alaskan residents the opportunity to harvest larger quantities fish that are in surplus of escapement needs". Guided dipnetting does not infringe upon this intent. Rather, guided dipnetting enables more Alaskan residents to harvest salmon, and/or allows those Alaskan residents an alternate means of dipnetting. Thank you, -Mike Hondel

Submitted By
Michael Schechter
Submitted On
1/17/2020 8:29:45 PM
Affiliation

I OPPOSE Proposal 163. Professional guides in the Kenai and Kasilof personal use fisheries allow access to citizens who may not otherwise have the opportuity to participate. Motorized access to these fisheries should not be restricted to only those with the means to purchase boats. The option for guided access to the motorized areas enhances access, which should be a key goal for these particular fisheries.

Submitted By
Nathan widmann
Submitted On
1/23/2020 5:03:44 PM
Affiliation
Fisherman/Alaskan

I oppose proposal 78 which seeks to reallocate the Cook Inlet fisheries. This proposal has implications beyond Cook Inlet and would lead to a dangerous precedence for other fisheries around the state of Alaska.

NATIVE VILLAGE OF
Port Lions

Traditional Tribal Council
P.O. Box 69, Port Lions, Alaska 99550
PORTLIONSTRIBE.NET

December 23, 2019

Alaska Board of Fisheries
1255 West 8th St.
P.O. Box 115526
Juneau, AK 99811

Re: Maintain Kodiak's Salmon Fishery
Oppose Proposals: 58,59,60,61,62,63,64,65,37 &66

Dear Alaska Board of Fisheries:

I am the President of the Port Lions Traditional Tribal Council and I represent Native Village of Port Lions (Tribe) in the community of Port Lions. Our community's economy is entirely based on fishing and on Kodiak's salmon fishery in particular. Loss of salmon fishing opportunities will have a direct impact on Port Lions.

We wonder what Kodiak fishermen have done that would justify changing our management plans. Our salmon fishery has not expanded, in fact there are fewer permits fishing now than were fishing five and ten years ago. We don't see any "new" fisheries for Kodiak salmon developing. Kodiak's management plans cover the entire Island and the Mainland and they only allow fishing openings based on the presence of local stocks. These plans have been in place for more than 25 years and have precluded expansion of salmon fishing that is not based on the presence of local stocks.

The 2014-1016 genetic study authored by Kyle Shedd in not "new" information in the sense that the conclusions were not previously known. The genetic study provides additional snapshots of detail illustrating the information and conclusions reached by the Department during the 1990-1995 time-frame. Namely, **"The incidence of Cook Inlet sockeye in KMA fisheries varies widely. It is inconsistent as to area, annual timing, and between years."** Moreover, the percentage of the Cook Inlet run incidentally captured in the Kodiak fishery during the 2014-16 time period is well with the ranges suggested by these earlier studies.

The Cape Igvak Management Plan has been in place for 40 years. The reason for the plan was conservation --- to protect Chignik's late run. Prior to the plan, Kodiak fished at Cape Igvak "day for day" when the Chignik fishery was open. While Chignik was fishing on the "early run", it was thought that Kodiak could be impacting the "late run". Consequently, the Cape Igvak management plan insured both escapement into the Chignik system and an economic safety net for Chignik fishermen by limiting Kodiak. Kodiak's catch percentage of the Chignik run prior to the Cape Igvak Management Plan was about 15%. Under the plan, Kodiak has averaged about 12%. (During years when fishing has occurred.) Finally, the conservation aspects of the Cape Igvak Management plan were highlighted with Chignik's recent run failures. There was no fishing at Cape Igvak! Why change a balanced plan that is accomplishing its intended purposes?

In summary, the Native Village of Port Lions request that the Board of Fisheries take no action on Proposals 58, 59,60,61,62,63,64, 65, 37 & 66!

Respectfully,

Nancy M Nelson

Nancy Nelson
President

Neil DeWitt
Self
12/09/2019 08:32 PM AKST

RE: PROPOSAL 145 Allow sport, personal use, and subsistence fishing for sockeye salmon on the Kenai River until August 15

If the BOF adopts this proposal dip neters and personal use fishermen can continue to fish after the July 31 closer. If either of these user groups start to catch Coho silvers we can release them unharmed immediately and at that time ADF&G can E.O.close to these user groups. We always hear from the commercial fleet were over escaping the Kenai River and this way other user groups can help and there wont be any heart ache. It's a win win situation for all. ADF&G's numbers show over escapement so I dont see why you'd be against this idea. Personal use and Sport will know that the fish if any that come in are theirs and there helping to sustain the fishery. Commercial fleet can still fish with NO closers to them. Other in river groups will get the scrapes so to speak.

Submitted By
Paul Crookston
Submitted On
1/21/2020 5:55:43 PM
Affiliation

Phone
907-283-6480
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Address
53509 Veco Ave
Kenai, Alaska 99611

OPPOSE proposal 78: Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources.

- The proposal takes away the Board of Fish members' discretion and independence. Current regulation recognizes a list of factors that a board member "may" take into consideration. This phrasing allows latitude for board members to consider which elements are appropriate to which circumstances. Proposal 78 seeks to take that latitude away and to dictate the factors that the board member "shall" use to decide while mandating the weight that each element must be given, instead of considering each proposal based upon all evidence and circumstance. If the board passes this proposal, it will be abdicating its authority now, and for all future BOF members, to ethically conduct the responsibilities of the board of fish.
- We support the board's current allocation criteria and the board's ability to equally balance all of these criteria when making an allocative decision. When the Alaska Board of Fisheries was established at statehood by the legislature, the founding language gave the board the flexibility to consider the most appropriate criteria for each proposal under consideration. The intent of KRSA's arbitrary ranking of the allocation criteria, which favor personal use, and sportfishing groups, is to regulate our setnet community out of business.

OPPOSE proposal 88: Amend the Kenai River Late-Run Sockeye Salmon Management Plan to increase in-river goal ranges.

- The current in-river goal ranges already allow for expansion and increased harvest for the in-river sockeye sport fishery above the counter.
- The current in-river goals provide more fish to the in-river sport fishery above the sonar than can currently be harvested. The in-river sport fishery, even when liberalized, does not exploit the fish they are already allocated. This results in exceeding in-river goals, exceeding escapement goals, and foregone harvest.

OPPOSE proposal 104: Adopt an optimal escapement goal and amend the paired restrictions in the Kenai River Late-Run King Salmon Management Plan.

- We oppose this arbitrary and premature change to the scientifically established SEG. The big king goal was an attempt to revive the struggling king runs, and setnet fishermen have shouldered the majority of the conservation burden since it was established. ADF&G set the goal just three years ago at the 2017 meeting, so recently that not even one king salmon lifecycle has been completed. The efficacy of the new goal has yet to be established, and changing it now is premature. The result will be further unnecessary restrictions to the commercial setnet fishery.

Paul Wichorek

01/14/2020 09:45 AM AKST

RE: PROPOSAL 169 Prohibit motorized vessels on a section of the Kasilof River January 1—September 15

As a landowner on the Kasilof River, I support this proposal to limit the use of motorized boats on the Kasilof River. If the proposal is not adopted in full, then I believe there should be at a minimum, certain days when motorized boats are not allowed. The river is too small to allow un-limited motorized boat activity during the salmon runs.

Submitted By
Ray and Gertrude Leonard
Submitted On
1/17/2020 6:06:22 PM
Affiliation

Thank you for contacting us on this problem. We are on the bank of the Kasilof River, We have lived in Alaska since 1941, We have watched the bank washed away 21 feet in front of our place for years Even more so for the last two years with the motors. Contact us if you want mote information.

Reed Lane
NA
11/10/2019 07:17 PM AKST

RE: PROPOSAL 80 Prohibit retention of king salmon greater than 36” in the Upper Cook Inlet commercial gillnet fisheries

I support this proposal because science has shown that larger fish reproduce more effectively. Also large salmon are more valuable to the sports fishing industry than to the commercial fishing industry. as to the statement that 'large salmon may be easier to remove from gill nets', I hope that is true and would like regulations to encourage nets to selectively target only smaller fish.

Reed Lane
NA
11/10/2019 07:11 PM AKST

RE: PROPOSAL 87 Eliminate the personal use salmon dip net fishery and prohibit catch and release fishing for salmon in the Kenai Peninsula area

I do not believe there is any scientific merit to the claim that catching too many sockeye salmon causes ocean acidification. So I do not believe that closing the dip net fishery will have any impact on ocean acidification. Ocean acidification is mainly due to CO2 levels in the atmosphere. The CO2 dilutes in the ocean as carbonic acid. This may impair the growth of plankton. I think that actually, people eating locally harvested foods decrease greenhouse effects compared to other less sustainable foods. So I support Dipnetting for salmon by residents. I do think catch and release fishing is hard on fish and should be considered carefully.

Submitted By
Richard McGahan
Submitted On
1/21/2020 8:30:34 AM
Affiliation

I oppose Proposal #78. It changes the word "may" to "shall" and takes away the Board Members ablility to be flexible and think on their own.

Submitted By
Richard McGahan
Submitted On
1/21/2020 9:22:51 AM
Affiliation

I oppose Proposal #88.

The in-river goals are so high now that they cannot be harvested.

Submitted By
Richard McGahan
Submitted On
1/21/2020 9:37:30 AM
Affiliation

I oppose Proposal #104.

First of all, "paired restrictions" are not based on science or on the biologists recommendations.

ADF&G set the goal just three years ago at the 2017 meeting, so recently that not even one king salmon lifecycle has been completed. The efficacy of the new goal has yet to be established, and changing it now is premature.

Submitted By
RICHARD PERSON
Submitted On
1/23/2020 2:49:45 PM
Affiliation

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Address
24120 Rambler Rd
Chugiak, Alaska 99567

PROPOSAL 78 - OPPOSE: Current allocation criteria are much more inclusive of all users and should not be slanted to benefit in-river users.

PROPOSAL 88 - OPPOSE: Current management allows for more than adequate escapement and in-river use. Escapement numbers are already exceeding needs and uses in many years.

PROPOSAL 104 - OPPOSE: Setnet families already shoulder most of the burden of conservation while harvesting a minimal amount of kings, let the current regulations remain at least through one king salmon life cycle in order to assess their effectiveness.

PROPOSAL 183 - SUPPORT: In the current regulatory environment, i.e. Chinook Plan, the heart of the setnet season (July) is already tending to fall under extreme restrictions. Sockeye run timing has also tended to show later returns. By extending the season five (5) days to August 20th, it would give those setnetters who are able to fish that late a chance to harvest excess sockeye. Effort would be a fraction of the mid-season participation and the affects on coho returns should be minimal.

PROPOSAL 185 & PROPOSAL 182 - SUPPORT: The Kasilof River has over escaped nearly every year for the last 25 years. ADF&G is proposing to lower the escapement goals in this system which could exacerbate the situation. An earlier opening in the Kasilof section would provide a tool to harvest these fish and since ESSN has endured consistent restrictions during the month of July for Chinook conservation, this would be an appreciated concession for the ESSN fleet. Staff comments indicate 18-85 King Salmon from all origins could be caught during this early opening. These numbers are insignificant compared to the increased harvest of sockeyes which could result from this regulatory change. If the board chooses to be conservative in this decision, Proposal 185 still requires a 20,000 red salmon trigger in the Kasilof River.

Thank you for your consideration of these proposal comments.

Submitted By
Rita Spann
Submitted On
1/23/2020 6:56:45 PM
Affiliation
Cordova District Fisherman's Union Member

Phone
9078889228
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rita.spann@outlook.com
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P.O. Box 374
Ester, Alaska 99725

I am a Prince William Sound commercial fisherman. I am writing to oppose Proposal 78. It seeks to prioritizes the goals of sports fisherman over those who subisistance and commercial fish. It would set a negative precedent for all state fisheries.

Submitted By
Robert
Submitted On
1/16/2020 9:01:29 AM
Affiliation
Resident Kasilof/Home Owner

Phone
9072296814
Email
rs01berube@gmail.com
Address
1325 O Street
Anchorage, Alaska 99501

Pertaining to Proposal 169

Dear Bpard of Fisheries:

I am in agrement with Proposal 169. Since the Kasilof River water heights have been higher than normal this last year it has allowed numerous high powered motorized boats to travel up and down the river. It is only a matter of time before one of the boats motors hits a rock and causes harm to them and others. The Kasilof River is not built by nature to support this activity as it surely also causes harm to the spawninh salmon species in the bosts path. I am in support of Proposal 169.

Submitted By
Robert Achin
Submitted On
1/23/2020 2:05:22 PM
Affiliation

Phone
9073943171
Email
Rachinsnap@aol.com
Address
Power box 796
Kasilof, Alaska 99610

The safety of all the other fisherman in drifts should be an important part of this decision too. I have watch powerboat race down the river almost swamping and running into other drift boats some personal and some guide boats.

Submitted By
Robert Dragnich
Submitted On
1/22/2020 9:44:49 AM
Affiliation

I support Proposal 104 for the *Kenai River Late-Run King Salmon Management Plan* submitted by the Kenai River Sportfishing Association and urge the Board of Fisheries to adopt this proposal.

Submitted By
Robert Knobf
Submitted On
1/22/2020 12:30:15 PM
Affiliation

Phone
9072626635
Email
robert.knobf@acsalaska.net
Address
23300 Kasilof River rd
Kasilof, Alaska 99610

In the last few years motorboat activity on the Kasilof River has become intolerable.
Not only endangering a valuable fishery, the noise and speed of these boats is far too much for the waterway.

Ron carmon
None
12/11/2019 09:15 AM AKST

RE: PROPOSAL 15 Prohibit reselling of guide services by anyone other than licensed guides

Glen Haight comment on re selling guide services. Guide don't buy a license.they have nothing's to sell. Guide ,are registered, they fish for free. Bof should not ,let Commerical guides fish in Alaska. The guide fee ,is waived. The fee is 1760 dollars, they've had the privilege of a wavier for 20 years now. Guides must buy a license.

Ron carmon
None
12/11/2019 07:21 AM AKST

RE: PROPOSAL 92 Reduce the Kenai River late-run sockeye salmon escapement goal range to 450,000-750,000 salmon

Guides don't have a license to fish salmon on the Kenai peninsula. They had there licenses waived for over 20 years. Guides fish for free, the state receives nothing for the fish. Remember guides need to have a license. 1760 dollars is the wavered fee . All this fish , dieing to Commerical guides. And the state receives nothing in return.

Roni carmon
None
01/08/2020 05:20 PM AKST

RE: PROPOSAL 163 Prohibit guiding in the Kenai and Kasilof Rivers personal use dip net fishery

Proposal 163, Should eliminate guides fishing , on the Kenai Pennisula and any state waters . Till guide pay for a guide license. They fish ,and take this resource from Alaskan waters. For free without a license or permit. Often the guides are from out of state. They fish as registered guide, They have a wavier from the state of Alaska. They fish for free. Not only ,do they need a license, They should not be able to participate in any allocation till they are licensed. Currently they owe Alaska ,44billion dollars . Please license guides before doing any future , negotiation for fish or fishing time in Alaskan waters. This need to happen today.

Ronicarmon
No organization
11/10/2019 10:13 AM AKST

RE: PROPOSAL 78 Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources

The 65 years older, receive proxy cards for king salmon,they fish their five king, Salmon. Starting April, Some go to the neighbors,they receive the neighbor proxy cards,and continue fishing kings. After that proxy card full they go to another neighbor ,and fish some more. So ,Commerical, fishery can't fish till their enough kings . To fish sockeye. We will never have enough king ,unless , We protect kings. Baisily the kings are being over fish by proxy. I summit the use of proxy ,is away to cheat,and destroy the kings salmon. And it keeps the Commerical fishery closed to sockeye fishing . The use of proxy cards ,should not be used,if your not going to enforce the intent. Please remember this wasn't voted on ,65 year old proxy was written in as a idea. And summit Ed. Without though.

Roni carmon
None
12/27/2019 07:47 PM AKST

RE: PROPOSAL 78 Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources

The sport guides fishery, on the Kenai peninsula ,and the state. They fish with wavier, no licenses, They are registered. They pay nothing ,toward a license. They take the resource from Alaska waters. I believe ,the guides needs to get licensed ,before fishing our oceans lakes and stream s be fore next year. The license ,publish is 1760 dollars. Please license guides be fore ruling on any proposal before the 2020 year begins.

Submitted By
Roni Carmon
Submitted On
10/23/2019 9:23:25 PM
Affiliation

Phone
19079530238
Email
Dallasak789@hotmail.com
Address
51995arness rd Kenai alaska
Kenai , Alaska 99611

Personal use ,for senior, fishing king salmon , must be stopped. Commerical fishermen can't fish sockeye salmon , if king numbers are low. The seniors take kings before the season for reds start, and if not enough kings get into the rivers we can't fish sockeye salmon. Guides with a boat load of seniors , that often carry proxy cards. If they take what's left of the kings, and over fish them . The Commerical fisherman can't fish reds. Is it a conservation threat yes. Is it a allocation problem yes.

Is it a legal ,regulation problem yes. Is it a abuse of a threatens spices yes. And it need to be stopped.

What's

From: Roni Carmon
To:
Subject: Fwd: Land-based Salmon Farms Set to be a Game Changer in Alaska Source: Fish Radio with Laine Welch By Laine Welch October 22, 2019 This is Alaska Fish Radio. I'm Laine Welch – Land-based salmon farms will be a game changer. More after this -- IMS ...
Date: Tuesday, October 22, 2019 12:40:35 PM

Tap on the blue.
Is this the goal , gmo ,farmed fish?
Is this the real reason.

To destroy the sockeye salmon?

Begin forwarded message:

> **From:** Roni Carmon <dallasak789@hotmail.com>
> **Date:** Oct 22, 2019 at 11:53 AM
> **To:** Roni Carmon <dallasak789@hotmail.com>
> **Subject: Land-based Salmon Farms Set to be a Game Changer in Alaska Source: Fish Radio with Laine Welch By Laine Welch October 22, 2019 This is Alaska Fish Radio. I'm Laine Welch – Land-based salmon farms will be a game changer. More after this -- IMS is offe...**
>
> Farmed fish
>
> https://m.facebook.com/story.php?story_fbid=2904810859543485&id=220520644639200&ref=m_notif¬if_t=photo_reply

Submitted By
Roni Carmon
Submitted On
10/23/2019 9:41:48 PM
Affiliation

Phone
19079530238
Email
Dallasak789@hotmail.com
Address
51995 Arness rd
Kenai, Alaska 99611

The dipnet fisherman, when caught over fishing, or not clipping tails. Or fishingwithout a license. When sited , adfg, Will site then for the violation, they won't s take there fish, the dipnet, their car.they give them a citation, for either a 100 dollars, or 200 dollars. The taking of a natural resource, illegal,the pentely needs to be a forfite of the fish, the taking of the dipnet pole and vechile. Every 100 fish is 10250 dollars,at 20 dollars a pound. And that grand theft,anywhere but in Alaska. Our fishery worth more than that. Is it a conservation problem yes. Is it's a regulation problem ?yes is it a board of fish problem ?yes is it a legal problem ? Yes This has been going on now ,30 years. Dipnet fishery is not a personal use fishery ,it is not legal,sponsored by adfg. For lobbyist money.

KENAI LEGISLATIVE INFORMATION OFFICE
Email: Kenai_LIO@akleg.gov
Phone: 907-283-2030 / Fax: 907-283-3075

WRITTEN TESTIMONY

NAME: Letter to
REPRESENTING: the Senate and House
BILL # or SUBJECT: Why not stop the board
COMMITTEE: of Fish **DATE:** 9/23/2019

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

While the Guide fishing, sport fishing, personal use. goes un regulated

The Commercial fishery, Gives a income to the state 146 million last year.
And if the Cook inlet fisherman could fish, another 70 million to the General Fund or 216 million.

The Senate + the house now knows this.
You all should be ashamed of your Selves.
To do this to our fish, our people, our Schools.
We are broke, as a state.
only 770,000 people in Alaska and broke.

I'm hoping you Senators, and the house of Rep. stop the Guiding and personal use this year.
Till you Get a Guiding License in Place
And till you all, Recover Some ~~take~~ taxes for the resource. I recommend about 44 billion dollars for the last 30 years.

KENAI LEGISLATIVE INFORMATION OFFICE

Email: **Kenai_LIO@akleg.gov**

Phone: **907-283-2030** / Fax: **907-283-3075**

WRITTEN TESTIMONY

NAME: _____

REPRESENTING: _____

BILL # or SUBJECT: _____

COMMITTEE: _____ **DATE:** _____

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

The Guide hit all waters in alaska 300 days a year if not more.

The Guide hit the Kenai peninsula and other areas 175 Days, for Salmon.

Never ever would you do that in a Commerical fishing Envicament.

Board of fish, didn't hese my plea.
The Governer didnt hese my plea.
They dance to a different kind of music

Their ears are tuned to sport fishing, Guide fishing Substance fishery.
Commerical fishecy a dirty word.

But the Commerical fishery managed correctly. is balanced, fair, Good for the fishes future

KENAI LEGISLATIVE INFORMATION OFFICE
Email: Kenai_LIO@akleg.gov chair se
Phone: 907-283-2030 / Fax: 907-283-3075

comittee
Sen Burch
Sen. Scott Kawasaki
@Akleg.go

WRITTEN TESTIMONY

NAME: Roni Lee Cacmon

REPRESENTING: Self

BILL # or SUBJECT: SB 90

COMMITTEE: DATE: 4/2/2019

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

So as you can see today's In the paper Governor Dunbevey appointed new board of fish members. Some done with their 3 years, So maybe not.

But I urge you to Look at whats happening. Boarad of fish has their own set of rules. fish and Game has theire own set of rules.

Senate Law makers have a set of rules.

But the board of fish, and the Governor rules us Commerical fisherman. And fish and Game takes their rules and the board of fish rules, and they control us fishermans.

But over the Last 30 years, the fish stocks seem to be going down. The sockeye Salmon are the targeted fish now that the King stocks have been depleted.

KENAI LEGISLATIVE INFORMATION OFFICE
Email: Kenai_LIO@akleg.gov
Phone: 907-283-2030 / Fax: 907-283-3075

WRITTEN TESTIMONY

NAME: _____

REPRESENTING: _____

BILL # or SUBJECT: _____

COMMITTEE: _____ **DATE:** _____

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

I'm Saying it again, As I Just left testimony last week.

But the Governor, appointed a new board of fish a new set of rules will be Coming, And it's going to be against the Commerical fisherman.

I believe if you Stop the 300 days of fisLing around the Clock on Slaught of fishing Stocks will rebound.

The riversybe Come a Womb for spawning fish not the blood Spot of Catch an release.

at the Same time you Can recieve money to the General fund. By letting the Commeical fleet fish.

None of this, is in the minds of the Governor or the board of fish, or fish + Game.

But you Lajrsators, Got to Stop this raping of Alaska ~~was~~ and the raping of the fish stock and Zero in Come to the State.

KENAI LEGISLATIVE INFORMATION OFFICE

Email: **Kenai_LIO@akleg.gov**

Phone: **907-283-2030** / Fax: **907-283-3075**

WRITTEN TESTIMONY

NAME: ______________________

REPRESENTING: ______________________

BILL # or SUBJECT: ______________________

COMMITTEE: ______________ **DATE:** __________

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

Please remember; Fish and Game, never Collected
a License fee from Guides; And sunset rules are in place
1760 Dollars for the full License, with requirements
for 6.4 million Guide's possable.

on the Kenai river alone 870 Guide's
on the pennisula a total of 1082 Guides
in alaska unknown But all hit the water 300 days a year

But 13 million fish on the Kenai pennisula, has
tranfered from the Commercical fishery
to Guide's, sport, and dipnet fisherman.

You stop the Guide, + Dipnet fishery till You figure
away to re Coup the Lost income.

Let Give the fish a rest.
If you get back the 22 billion you Could have
earn from the sport fishery (Guides) and the
dipnet fishery, Things Could Change alot. for
the state. nobody that deals with revenue, would give
away so meny dollars. Just plan dumb.

KENAI LEGISLATIVE INFORMATION OFFICE
Email: Kenai_LIO@akleg.gov
Phone: 907-283-2030 / Fax: 907-283-3075

WRITTEN TESTIMONY

NAME: _____

REPRESENTING: _____

BILL # or SUBJECT: _____

COMMITTEE: _____ **DATE:** _____

NOTE: This testimony is considered part of the official record and will be posted online with the hearing documents

The board of fish.
The Governor, has no intention of regulating any one but the people that are doing the fishery Correctly, and by law.

And every fair trade agreement, if there is such a thing for a Commerical Fisherman

their's no intention of Changing a thing.

I ask the Senate and the house.

To stop Guides till they Get a Licenses.

I ask the Senate and the house, to recover the resources income, mover Collected.

I ask you take that money the resource earned and pay off all the bond debt.
and balance the budget

Ron Carmon October 2

Ron Carmon ATT.
51995 Arness Rd.
Kenai, AK 99611
(907)953-0238
Dallasak789@hotmail.com

Board of Fisheries

I have previously written the Board of Fisheries regarding the Kenai Peninsula Borough's fish resources and some of my concerns. On the last day of your three-day meeting, I would like to summarize the environmental, economic, legal, and moral impact of your decision and offer a solution that would make the Kenai Peninsula and the State of Alaska proper caretakers of our precious resource.

First, I'd like to discuss the environment of the ocean in relationship to acidity and the importance of plankton eaters, such as sockeye salmon, to the spawning grounds in the rivers and the impact of the ecosystem in the ocean. Secondly, I'd like to discuss is the economic impact of the fishing regulations on the Kenai Peninsula borough. Over the last 30 years, the dipnet fishery on the peninsula has taken $542 million each year in fish from just the two rivers, Kenai and Kasilof. They also fish other rivers on the peninsula. Thirdly, I would like to explore the moral responsibility of the State of Alaska to manage our fishery. Finally, I would like to present a solution that would ensure the viability of all parties in the industry and a sustained fishery.

The Sport Fishing Association and Coastal Conservation take $300 million retail value off these two rivers. Almost zero dollars of income goes to the Kenai Borough, the State of Alaska, or its citizens. The amount of the Alaska general fund in the last 30 years has been down by $70 million each year. This is a result of the fish going to the dip net fishery and sport guide fishery and not the commercial fishery- who pays into the general fund.

This has been done now for 30 years. Kenai Borough's revenue could be drastically improved. I believe the Sport Fishing Association has removed a total of $44 billion of fish off the Kenai Peninsula alone over the past 30 years. We can do better than that. Selling the fish saves the Kenai Peninsula and the State of Alaska thus providing an improved income source.

For a long time, ADF&G has managed our fishery- our commercial fishery, our sport fishery, subsistence fishery, and personal use fishery. In 1984, Tony Knowles came up with the idea to start the Board of Fisheries to efficiently manage the types of fishing statewide.

The people who live on the Kenai Peninsula want the practice of catch and release stopped. It's killing the prime targeted fish. The people on the Kenai Peninsula want the dipnet fishery discontinued. If the practice of dip netting fish cannot be ceased, the people of the Kenai Peninsula would like the number of allowed fish to be decreased.

The Sports Fishermen Guide Association is allowed over 300 days of sport fishing on the ocean around the Kenai Peninsula. They are allowed 150-170 days on the Kenai and Kasilof rivers alone. The Sport Fishing Guide Association can have 6.4 million guides in the United States, and they frequent the Kenai Peninsula. They fish all species of fish on the peninsula. In 2018, sports fishermen took 179,000 halibut, 229,000 sockeye salmon, 31,400 king salmon, 60,000 silver, 40,000 non-pelagic cod, and 40,000 pelagic

cod. According to the logs noted from the Department of Fish and Game, in 1984, 85 and 86, the guides took 3 to 4 million sockeye salmon, plankton eaters, just off the Kenai River alone. In 1984, they took 110,000 king salmon. There is a moral obligation that the state must take to save our fishery and they are not doing it.

There's a legal obligation to the other fisheries also. The Sport Fishing Guide Association is fighting for the personal use fishery. Why would the Sport Fishing Guide Association want personal use? I believe that's a personal attack against the commercial fishery. The more fish they get up the river the better for the sports fishermen. Over the years 110,000 people come down from Anchorage and other parts of Alaska to harvest 7 million fish a year by dip netting on the Kasilof and Kenai Rivers. There is also a legal battle that has been won by the commercial fishermen. Federal laws state you cannot ruin a fishery to support another fishery. This has been going on for 30 years now. There are many reasons change these practices from the last 30 years.

The ocean's acidity level is up. The taking of sockeye salmon, crab, and pollock has taken a toll. These fish and crab are critical in balancing the acidity level in the ocean. Killing sockeye salmon in the river has a criminal effect on the ecosystem. Overpopulation of the river with too many sockeye salmon will also kill the river salmon run. It's important to ensure the ecosystem of the rivers is maintained for the salmon fry to leave the river. The Kenai River sonar is the only sonar system that's proven not to work. Sonar systems worldwide have been proven better than the sonar system used in the Kenai River. There are better ways to count fish and monitor what's going up and down the river. But most importantly, we need sockeye salmon to have a safe space safe place to stay- not a playground for the practice of the blood sport of catch and release.

The practice of catch and release was put in so the guides could work their boats 18 hours each day, every day of the week. This must stop. The commercial fisherman fishery in Cook Inlet is allowed anywhere from one to 15 days to fish. Our canneries and processing plants can't get enough fish to economically stay running. The costs to clean up these sites, after the canneries are no longer viable, will be in the billions of dollars due to environmental clean-up. They are falling apart every day. The canneries are right on the edge of the water and they are a mess- an ecological nightmare waiting to happen. ADF&G and the Board of Fisheries will be to blame.

This was a vibrant fishery. In fact, it was the second biggest fishery in the world. It generated over 100 million dollars of income in the 1980s and it will all be wiped out. The $68 billion that the state has in its Permanent Fund account will go to clean up these dilapidated canneries on the river.

Remember, a lawsuit has already been won and the people of the Kenai Peninsula are asking the Board of Fisheries to step up and stop this practice. There are better ways to run this fishery. It's not about who gets the fish, or who the fish belong to, but who has killed the Alaskan salmon industry. Over the last 30 years, we had the freshest market salmon sold in the United States. It was proudly on display and sold daily. We've lost that part of the market because the politicians and the State of Alaska have taken our marketing away along with the industry. Again, I say there's a better way to manage our fishing industry

My solution is to ask the Coastal Conservation Association, Bass Pro Shop and the 20,000 other box store vendors who supply the commercial guide-sport industry to pay back the money owed to the other fishermen in the Cook Inlet fishery. The price would be $44 billion.

Ron Carmon October 23

I believe each fisherman, set netter, and drift fisherman needs 3 million dollars tax-free money (j just to catch up what has been lost over the last 30 years for these approx. 2000 fishermen. By doing this, the state of Alaska could take away commercial fishing permits. Some people paid up to $260,000 for these permits years ago. I personally paid $83,120 in permits and licenses in the past 6 years. The practice of purchasing permits would no longer be necessary. Commercial fishermen could fish without purchasing a costly permit. I think the retailers would be willing to pay the $44 billion because they need to sell their fishing supplies, boats, and equipment to the local sport commercial fishermen who would now have more liquid funds.

These vendors have already collected 30 years of income from expert guides who have not paid any funds for the Alaskan fish. They fish for free, reap the bounty of the Alaskan waters. They have not been required to obtain a license for the last 30 years. With my plan, the Sports Guide Association must purchase a license. Not one single user group would be impacted as the cost would be spread throughout the industry. The only significant impact would be if the fishery dies off completely due to poor management.

I believe it will get better, though. The Sport Guide Association will have to buy a license and sport guides will have to catch their fish in oceans rather than the river, just like commercial fishermen do. But as the river becomes healthy, so will the fishery. The environmental damage from the canneries will be fixed by their own dollars. Commercial fishing will improve, and the cannery industry will survive. Using personal fishing as a way of subsistence is a lie. This must stop. Subsistence fishing can be regulated. Only set-net and drift-net fishermen who want to fish can fish, but I believe most of them will quit. The market will determine this outcome.

The sockeye salmon, plankton eaters, must have a safe place in the river to spawn. It must be protected like a sanctuary. I believe you can sport fish the river, but I don't believe it should be open for commercial fishing. The industry of commercial sport guides is a commercial business. They take a lot of our fish. The rest of the money, the $40 billion the state gets from Bass Pro Shops, the box stores, and Coastal Conservation, which was taken off of the ocean floor, belongs to the state of Alaska.

Thank you for your time to read this letter. I appreciate your consideration and look forward to a sustained, healthy fishery for generations to come.

Sincerely, is it a Conservation allocation yes
is it a regulation Problem yes
is it a legal Problem yes
is it a Environmental problem yes
Ron Carmon is it a board of fish promblem yes

Kenai, Alaska

From: Roni Carmon
To: Maybe it's time.
Subject: Saturday, October 19, 2019 9:53:04 AM
Date:

You've had been running the bof ,
In the upper cookinlet fishery , like the democratic,been running the government.

Trump (the president) draining the swamp daily.
He's watching ,Alaska adfg, the bof, he's seen the un fair assault on the Commerical fisherman.

I've been telling ,everyone I know about the un fair practices ,him included.

About how 542 million dollars of fish ,go to the Alaskan welfare program ,(dipnet) fishery.

About the un fair practice of ,coastal conservation and the bof,working together,to destroy one fishery for another.

About the way,you count fish going up a river, how different it is done ,than any other river system in America .

He watching you folks.
Are you going to be dumb enough to do the same old scams you been doing, year after year.
Mostly for lobbyist money.

44billion ,the pay back he sees. Needs to go back to the Commerical fisherman.
And he seen the 300 days of sport fishing ,verse the 12 day ,or even one day ,the Commerical fisherman get.

Think about it .
The cookinlet inlet restriction
Has never saved a fish .

Or changed a run to any other river system.

It been fake ,for 30 years now. Trump loves fake news. He knows what's been happening!
Will you continue ?
And the bof ,needs to go away.
Ron carmon

From: Roni Carmon
To: DFG, BOF Comments (DFG sponsored)
Subject: Last comment of the Jan 23period.
Date: Thursday, January 23, 2020 9:52:35 AM

Proposal,87
Stop catch and release on the Kenai Pennisula.
Stop the dipnet fishery on the Kenai Pennisula.

Reason red salmon are plankton eaters.
And plankton eaters are being killed in river.
By Commerical guide fisherman.
And the dipnet fishery.

I've forward a letter to the ombudsman's court system.

Hopefully to rule ,
These fish ,are not common use fish.
These fish are being illegally divided.
The guide don't have a license to fish these fish!

The dip net fishery ,is unregulated,and un enforced.
By adfg.

So the sockeye salmon,plankton eaters.
That are needed to support our ocean ph levels.
Are being wiped out ,in river.

By illegally fishing them ,and killing the spawn of eggs.

These sockey salmon need to be given a safe place to spawn.

This is happening way to much.
As population ,and guide activity in crease.
The fish ,spawn will deplete.
Over crowding the river with extra sockeye ,and pinks .
Deplete the egg quality.

The ombudsman letter ,if they rule it not fair.
Will be a plus for our salmon ,on the Kenai Peninsula.

So please ,stop the blood sport of catch and release.
Stop the unregulated slaughter of personal use fishing on the Kenai Peninsula.

Please license guides ,before you make any rulings on sport fishing ,in Alaska waters.

They are taking fish from Alaskan waters, they fish this fish for free.
They owed the state and the Commerical fishery ,44 billion
Dollars ,this next year it will be 70 million. More
Roni Carmon

From: Dallasak789
To: DFG, BOF Comments (DFG sponsored)
Subject: Fwd: Pacific Salmon Commission Completes Negotiations on New Coast Wide Conservation and Harvest Sharing Agreement: Press Release, Alaska Department of Fish and Game
Date: Monday, December 30, 2019 4:00:58 PM

Tap on the blue ,to read the story!
Not a good story,
Government ,just tries to give fish away.
25 dollars a lb retail,
All Alaska fish 25 to 30 dollars a lb.
And you want to open up more substance,More personal use.

We need jobs, not welfare.
We need to sell these fish.

The time is right!
Oil not going to pay the way.
Fish is going to have too!

So quit , personal use,
License guides, stop catch and release.

I told you ,George soaros,paying adfg , to break ,mining ,timber, and commercial fishing.

And with the help of bass pro ,
You guys are ruining our state of Alaska ,and the Pacific Ocean.

Is this letter a threat to Alaska yes.
Is this letter a threat to Alaska future yes.
Is this letter, a practice of pure stupidity. Yes
Will it hurt all of Alaska yes.

If you don't change your way of thinking, it will destroy our economy,yes

Begin forwarded message:

From: Dallasak789 <dallasak789@hotmail.com>
Date: Dec 18, 2019 at 10:44 PM
To: Bbird <bbird@radiokenai.com>
Subject: Pacific Salmon Commission Completes Negotiations on New Coast Wide Conservation and Harvest Sharing Agreement: Press Release, Alaska Department of Fish and Game

Can you believe this :
What stupidity,two whole countries,doing substance,personal use, sporting,and commercial fishing.

And the dumb ass regret,he has to regulate the taking of fish.

Did the bears get any?
Did the other predators get any?
Did they ever think ,regulating
Wasn't going to happen.

 Time to put jobs ,and future
Back into the equation,rather than using our fish to buy political votes.

Adfg needs to go away.

http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2018_09_17

From: Dallasak789
To: DFG, BOF Comments (DFG sponsored)
Subject: Re: Upper cookinlet.
Date: Thursday, January 2, 2020 12:21:41 PM

Re write amend the old request,add this one

On Jan 2, 2020 at 12:23 PM, <Dallasak789> wrote:

Looks like we are now into ,a 5year window,
Pushing it now into April.

It a play with words, feb 7 to the 14,
Meeting ,about Commerical fishing.
And then you will decide,about sport fishing.
Sport fishing guides fish with out a license.
I hope nothing gets decided till guide get a license to fish.

1760 dollars a guide license should cost ,or no fishing.
Substance , none till they buy a license.
Personal use , we need to make every fish count,
Doing away with personal use /won't hurt anyone .
We need to save the fish.

From: Dallasak789
To: DFG, BOF Comments (DFG sponsored)
Subject: Is there hope for the future of Alaska's fisheries? - Anchorage Daily News
Date: Wednesday, January 1, 2020 7:41:30 PM

Tap the blue to read please!
This story the same!
As the cookinlet story I 'm telling you.

The times are changing, and trump draining all the swamps.
We have a big swamp,

Our fish ,will be our live ring.
Alaska economy , free ride with oil is over.

George soaros, agenda , to break mining, timber, and the Commerical fishery , through bass pro ,coastal conservation,
Might of worked, for awhile .

But it will change now,
Adfg : got to get on board,
And start to run this fishery ,correctly, and the board of fish ,you have to do it.

It's no secret,
Personal use,substance, guides ass.
Through conservation,and feeding people free food ,to break the economy of Alaska.
Been the normal for 30 years.

But now , the triple A bond rating gone now, Alaska can't bourgh money any more.

The selling of ,oil company assest, broke Alaska ,wanting to use our pfd to pay state employees.

It a no brainer ,we got to treat our fish better.
It will be ,the only income soon.

https://www.adn.com/opinions/2019/12/31/is-there-hope-for-the-future-of-alaskas-fisheries/
https://www.adn.com/opinions/2019/12/31/is-there-hope-for-the-future-of-alaskas-fisheries/?utm_medium=email&email=146503319&utm_source=second-street&utm_campaign=Newsletter%3a+Opinions

From: Dallasak789
To: DFG, BOF Comments (DFG sponsored)
Subject: Fwd: I think your missing a few things
Date: Friday, January 3, 2020 3:14:08 PM
Attachments: Letter to Board of Fisheries.docx

Begin forwarded message:

From: Dallasak789 <dallasak789@hotmail.com>
Date: Nov 4, 2019 at 9:37 PM
To: Forrest Bowers <forrest.bowers@alaska.gov>
Subject: Fwd: I think your missing a few things

Begin forwarded message:

From: Dallasak789 <dallasak789@hotmail.com>
Date: Nov 4, 2019 at 8:42 PM
To: Forest Bowers <forest.bowers@alaska.gov>
Subject: I think your missing a few things

Forrest,we give away 543 millions dollars to the dipnet fishery.
These aren't figured in sockeye.
We give the guides, 300 million dollars of sockeye salmon,
Kings,even more,silvers, and these are un accounted for fish.
The total last year was
Chinooks 31400 to guides
Sockeye was 222 ooo to guides
Silvers60 thousand, to guides
179000 halibut to guides
40000 black cod to guides
40 ooo to non plageic to guides.

1 million 400 thousand allocated to Commerical fishermen.

Telling half truths ,
Report the guide catches, they don't even pay for the resource.
They take.
You think your doing a good job .
In reality your killing the ocean

Ron Carmon
51995 Arness Rd.
Kenai, AK 99611
(907)953-0238
Dallasak789@hotmail.com

Attn: Board of Fisheries

I have previously written the Board of Fisheries regarding the Kenai Peninsula Borough's fish resources and some of my concerns. On the last day of your three-day meeting, I would like to summarize the environmental, economic, legal, and moral impact of your decision and offer a solution that would make the Kenai Peninsula and the State of Alaska proper caretakers of our precious resource.

First, I'd like to discuss the environment of the ocean in relationship to acidity and the importance of plankton eaters, such as sockeye salmon, to the spawning grounds in the rivers and the impact of the ecosystem in the ocean. Secondly, I'd like to discuss is the economic impact of the fishing regulations on the Kenai Peninsula borough. Over the last 30 years, the dipnet fishery on the peninsula has taken $542 million each year in fish from just the two rivers, Kenai and Kasilof. They also fish other rivers on the peninsula. Thirdly, I would like to explore the moral responsibility of the State of Alaska to manage our fishery. Finally, I would like to present a solution that would ensure the viability of all parties in the industry and a sustained fishery.

The Sport Fishing Association and Coastal Conservation take $300 million retail value off these two rivers. Almost zero dollars of income goes to the Kenai Borough, the State of Alaska, or its citizens. The amount of the Alaska general fund in the last 30 years has been down by $70 million each year. This is a result of the fish going to the dip net fishery and sport guide fishery and not the commercial fishery- who pays into the general fund.

This has been done now for 30 years. Kenai Borough's revenue could be drastically improved. I believe the Sport Fishing Association has removed a total of $44 billion of fish off the Kenai Peninsula alone over the past 30 years. We can do better than that. Selling the fish saves the Kenai Peninsula and the State of Alaska thus providing an improved income source.

For a long time, ADF&G has managed our fishery- our commercial fishery, our sport fishery, subsistence fishery, and personal use fishery. In 1984, Tony Knowles came up with the idea to start the Board of Fisheries to efficiently manage the types of fishing statewide.

The people who live on the Kenai Peninsula want the practice of catch and release stopped. It's killing the prime targeted fish. The people on the Kenai Peninsula want the dipnet fishery discontinued. If the practice of dip netting fish cannot be ceased, the people of the Kenai Peninsula would like the number of allowed fish to be decreased.

The Sports Fishermen Guide Association is allowed over 300 days of sport fishing on the ocean around the Kenai Peninsula. They are allowed 150-170 days on the Kenai and Kasilof rivers alone. The Sport Fishing Guide Association can have 6.4 million guides in the United States, and they frequent the Kenai Peninsula. They fish all species of fish on the peninsula. In 2018, sports fishermen took 179,000 halibut, 229,000 sockeye salmon, 31,400 king salmon, 60,000 silver, 40,000 non-pelagic cod, and 40,000 pelagic

cod. According to the logs noted from the Department of Fish and Game, in 1984, 85 and 86, the guides took 3 to 4 million sockeye salmon, plankton eaters, just off the Kenai River alone. In 1984, they took 110,000 king salmon. There is a moral obligation that the state must take to save our fishery and they are not doing it.

There's a legal obligation to the other fisheries also. The Sport Fishing Guide Association is fighting for the personal use fishery. Why would the Sport Fishing Guide Association want personal use? I believe that's a personal attack against the commercial fishery. The more fish they get up the river the better for the sports fishermen. Over the years 110,000 people come down from Anchorage and other parts of Alaska to harvest 7 million fish a year by dip netting on the Kasilof and Kenai Rivers. There is also a legal battle that has been won by the commercial fishermen. Federal laws state you cannot ruin a fishery to support another fishery. This has been going on for 30 years now. There are many reasons change these practices from the last 30 years.

The ocean's acidity level is up. The taking of sockeye salmon, crab, and pollock has taken a toll. These fish and crab are critical in balancing the acidity level in the ocean. Killing sockeye salmon in the river has a criminal effect on the ecosystem. Overpopulation of the river with too many sockeye salmon will also kill the river salmon run. It's important to ensure the ecosystem of the rivers is maintained for the salmon fry to leave the river. The Kenai River sonar is the only sonar system that's proven not to work. Sonar systems worldwide have been proven better than the sonar system used in the Kenai River. There are better ways to count fish and monitor what's going up and down the river. But most importantly, we need sockeye salmon to have a safe space safe place to stay- not a playground for the practice of the blood sport of catch and release.

The practice of catch and release was put in so the guides could work their boats 18 hours each day, every day of the week. This must stop. The commercial fisherman fishery in Cook Inlet is allowed anywhere from one to 15 days to fish. Our canneries and processing plants can't get enough fish to economically stay running. The costs to clean up these sites, after the canneries are no longer viable, will be in the billions of dollars due to environmental clean-up. They are falling apart every day. The canneries are right on the edge of the water and they are a mess- an ecological nightmare waiting to happen. ADF&G and the Board of Fisheries will be to blame.

This was a vibrant fishery. In fact, it was the second biggest fishery in the world. It generated over 100 million dollars of income in the 1980s and it will all be wiped out. The $68 billion that the state has in its Permanent Fund account will go to clean up these dilapidated canneries on the river.

Remember, a lawsuit has already been won and the people of the Kenai Peninsula are asking the Board of Fisheries to step up and stop this practice. There are better ways to run this fishery. It's not about who gets the fish, or who the fish belong to, but who has killed the Alaskan salmon industry. Over the last 30 years, we had the freshest market salmon sold in the United States. It was proudly on display and sold daily. We've lost that part of the market because the politicians and the State of Alaska have taken our marketing away along with the industry. Again, I say there's a better way to manage our fishing industry

My solution is to ask the Coastal Conservation Association, Bass Pro Shop and the 20,000 other box store vendors who supply the commercial guide-sport industry to pay back the money owed to the other fishermen in the Cook Inlet fishery. The price would be $44 billion.

I believe each fisherman, set netter, and drift fisherman needs 3 million dollars tax-free money (permits will go away) just to catch up what has been lost over the last 30 years for these approx. 2000 fishermen. By doing this, the state of Alaska could take away commercial fishing permits. Some people paid up to $260,000 for these permits years ago. I personally paid $83,120 in permits and licenses in the past 6 years. The practice of purchasing permits would no longer be necessary. Commercial fishermen could fish without purchasing a costly permit. I think the retailers would be willing to pay the $44 billion because they need to sell their fishing supplies, boats, and equipment to the local sport commercial fishermen who would now have more liquid funds.

The annual income collected from permits whose funds go toward Coastal Conservation can be passed onto Bass Pro Shops and the local vendors. These vendors have already collected 30 years of income from expert guides who have not paid any funds for the Alaskan fish. They fish for free, reap the bounty of the Alaskan waters. They have not been required to obtain a license for the last 30 years. With my plan, the Sports Guide Association must purchase a license. Not one single user group would be impacted as the cost would be spread throughout the industry. The only significant impact would be if the fishery dies off completely due to poor management.

I believe it will get better, though. The Sport Guide Association will have to buy a license and sport guides will have to catch their fish in oceans rather than the river, just like commercial fishermen do. But as the river becomes healthy, so will the fishery. The environmental damage from the canneries will be fixed by their own dollars. Commercial fishing will improve, and the cannery industry will survive. Using personal fishing as a way of subsistence is a lie. This must stop. Subsistence fishing can be regulated. Only set-net and drift-net fishermen who want to fish can fish, but I believe most of them will quit. The market will determine this outcome.

The sockeye salmon, plankton eaters, must have a safe place in the river to spawn. It must be protected like a sanctuary. I believe you can sport fish the river, but I don’t believe it should be open for commercial fishing. The industry of commercial sport guides is a commercial business. They take a lot of our fish. The rest of the money, the $40 billion the state gets from Bass Pro Shops, the box stores, and Coastal Conservation, which was taken off of the ocean floor, belongs to the state of Alaska.

Thank you for your time to read this letter. I appreciate your consideration and look forward to a sustained, healthy fishery for generations to come.

Sincerely,

Ron Carmon

Kenai, Alaska

From: Dallasak789
To: DFG, BOF Comments (DFG sponsored)
Subject: Fwd: Alaska Board of Fisheries Call for Proposals 2020-2021
Date: Wednesday, January 8, 2020 5:27:54 PM

Proposal 15
Sport guide license.

Sport guides have no license.
The state ,issues 20 years now or more.
Sport guides need to be licensed.
Charter boats needs a license.
All waviered.
Please require guide to purchase a license, the advertised price is 1760 a year.
No more guide fishing till they get licensed.

Please no board of fish negotiations till guide get licensed.

They taken over 44billion out of Alaska , they need to pay that back to Alaska ,before they can fish again.

Guides need to be licensed.
Ron carmon

Begin forwarded message:

From: Alaska Department of Fish and Game <adfg@public.govdelivery.com>
Date: Dec 27, 2019 at 5:15 PM
To: Dallasak789 <dallasak789@hotmail.com>
Subject: Alaska Board of Fisheries Call for Proposals 2020-2021

Ron Carmon
51995 Arness Rd.
Kenai, AK 99611
(907)953-0238
Dallasak789@hotmail.com

Attn: State of Alaska Department of Fish and Game Ombudsman

It is time to look at the impact of personal use fisheries and the impact it has on our local waters, state economy, and the worlds waters.

First, I'd like to discuss the environment of the ocean in relationship to acidity and the importance of plankton eaters, such as sockeye salmon, to the spawning grounds in the rivers and the impact of the ecosystem in the ocean. Secondly, I'd like to discuss is the economic impact of the fishing regulations on the Kenai Peninsula borough. Over the last 30 years, the dipnet fishery on the peninsula has taken $542 million each year in fish from just the two rivers, Kenai and Kasilof. They also fish other rivers on the peninsula. Thirdly, I would like to explore the moral responsibility of the State of Alaska to manage our fishery. Finally, I would like to present a solution that would ensure the viability of all parties in the industry and a sustained fishery.

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110,000 king salmon. There is a moral obligation that the state must take to save our fishery and they are not doing it.

There's a legal obligation to the other fisheries also. The Sport Fishing Guide Association is fighting for the personal use fishery. Why would the Sport Fishing Guide Association want personal use? I believe that's a personal attack against the commercial fishery. The more fish they get up the river the better for the sports fishermen. Over the years 110,000 people come down from Anchorage and other parts of Alaska to harvest 7 million fish a year by dip netting on the Kasilof and Kenai Rivers. There is also a legal battle that has been won by the commercial fishermen. Federal laws state you cannot ruin a fishery to support another fishery. This has been going on for 30 years now. There are many reasons change these practices from the last 30 years.

The ocean's acidity level is up. The taking of sockeye salmon, crab, and pollock has taken a toll. These fish and crab are critical in balancing the acidity level in the ocean. Killing sockeye salmon in the river has a criminal effect on the ecosystem. Overpopulation of the river with too many sockeye salmon will also kill the river salmon run. It's important to ensure the ecosystem of the rivers is maintained for the salmon fry to leave the river. The Kenai River sonar is the only sonar system that's proven not to work. Sonar systems worldwide have been proven better than the sonar system used in the Kenai River. There are better ways to count fish and monitor what's going up and down the river. But most importantly, we need sockeye salmon to have a safe space safe place to stay- not a playground for the practice of the blood sport of catch and release.

The practice of catch and release was put in so the guides could work their boats 18 hours each day, every day of the week. This must stop. The commercial fisherman fishery in Cook Inlet is allowed anywhere from one to 15 days to fish. Our canneries and processing plants can't get enough fish to economically stay running. The costs to clean up these sites, after the canneries are no longer viable, will be in the billions of dollars due to environmental clean-up. They are falling apart every day. The canneries are right on the edge of the water and they are a mess- an ecological nightmare waiting to happen. ADF&G and the Board of Fisheries will be to blame.

This was a vibrant fishery. In fact, it was the second biggest fishery in the world. It generated over 100 million dollars of income in the 1980s and it will all be wiped out. The $68 billion that the state has in its Permanent Fund account will go to clean up these dilapidated canneries on the river.

Remember, a lawsuit has already been won and the people of the Kenai Peninsula are asking the Board of Fisheries to step up and stop this practice. There are better ways to run this fishery. It's not about who gets the fish, or who the fish belong to, but who has killed the Alaskan salmon industry. Over the last 30 years, we had the freshest market salmon sold in the United States. It was proudly on display and sold daily. We've lost that part of the market because the politicians and the State of Alaska have taken our marketing away along with the industry. Again, I say there's a better way to manage our fishing industry

My solution is to ask the Coastal Conservation Association, Bass Pro Shop and the 20,000 other box store vendors who supply the commercial guide-sport industry to pay back the money owed to the other fishermen in the Cook Inlet fishery. The price would be $44 billion.

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By doing this, the state of Alaska could take away commercial fishing permits. Some people paid up to $260,000 for these permits years ago. I personally paid $83,120 in permits and licenses in the past 6 years. The practice of purchasing permits would no longer be necessary. Commercial fishermen could fish without purchasing a costly permit. I think the retailers would be willing to pay the $44 billion because they need to sell their fishing supplies, boats, and equipment to the local sport commercial fishermen who would now have more liquid funds.

The annual income collected from permits whose funds go toward Coastal Conservation can be passed onto Bass Pro Shops and the local vendors. These vendors have already collected 30 years of income from expert guides who have not paid any funds for the Alaskan fish. They fish for free, reap the bounty of the Alaskan waters. They have not been required to obtain a license for the last 30 years. With my plan, the Sports Guide Association must purchase a license. Not one single user group would be impacted as the cost would be spread throughout the industry. The only significant impact would be if the fishery dies off completely due to poor management.

I believe it will get better, though. The Sport Guide Association will have to buy a license and sport guides will have to catch their fish in oceans rather than the river, just like commercial fishermen do. But as the river becomes healthy, so will the fishery. The environmental damage from the canneries will be fixed by their own dollars. Commercial fishing will improve, and the cannery industry will survive. Using personal fishing as a way of subsistence is a lie. This must stop. Subsistence fishing can be regulated. Only set-net and drift-net fishermen who want to fish can fish, but I believe most of them will quit. The market will determine this outcome.

The sockeye salmon, plankton eaters, must have a safe place in the river to spawn. It must be protected like a sanctuary. I believe you can sport fish the river, but I don't believe it should be open for commercial fishing. The industry of commercial sport guides is a commercial business. They take a lot of our fish. The rest of the money, the $40 billion the state gets from Bass Pro Shops, the box stores, and Coastal Conservation, which was taken off of the ocean floor, belongs to the state of Alaska.

When considering how to manage these fish, who are a lifeline in our oceans, we must ask ourselves these questions:

Is personal use fishing,

A threat to our immediate environment and our planet? Yes.

A threat to our economy? Yes.

Unregulated? Yes.

Unenforced? Yes.

Overall, detrimental not to have? No.

Commercial fishing for sockeye salmon has been the primary source of income for much of the Kenai Peninsula and other areas in Alaska. Politicians are raiding the Permanent Fund because our state is an economic crisis. Changing policies towards protecting these sanctuaries and regulating the harvesting of the fish will certainly create a revenue source that is untapped at this time.

I urge you to let these fish come back to the rivers, spawn, and grow the population allowing for an improved balance in the oceans. Allow fishing to only be in the oceans, prevent the blood sport of catch and release to occur. There is a grander picture and the opportunity is now to change the world's waters for the better.

Ombudsman, I would like you to rule this personal use fishery as illegal. The federal courts have already ruled that guide fishing is illegal and took away profits from the commercial fishery. A striving, premiere commercial fishery has now been degraded into common use and guide industry.

Sincerely,

Ron Carmon

Kenai, Alaska

Submitted By
Roni Carmon
Submitted On
1/16/2020 5:50:38 PM
Affiliation

Phone
9079530238
Email
Dallasak789@hotmail.com
Address
51985 Arness rd
Kenai, Alaska 99611

proposal 15 Most guides ,don't have a license. They are registered ,but not licensed . They fish for free, They been fishing wavier for 30 years now. Please ,no license, no fishing . Adfg ,not good Stuart's of our fishery. Giving a sport organization all out fish ,for free. Please they do not have a say in our upper cookinlet fishery . Till they buy a 1760 dollar license.

Submitted By
Roni Carmon
Submitted On
1/16/2020 6:09:25 PM
Affiliation

Phone
9079530238
Email
Dallasak789@hotmail.com
Address
51985 Arness rd
Kenai, Alaska 99611

when proxy cards ,are used by 65 year old senior in the spring. They take king salmon, and after they get there limit. They get somebody else's proxy, and they get another limit. What the issue? We can't catch Commerical sockeye. If the king runs low. So proxy for kings must stop. I know guys , that fish April and may , and take 20 kings. To many kings , stop the proxy fishing.

Southeast Alaska Fishermen's Alliance

1008 Fish Creek Rd
Juneau, AK 99801

Email: seafa@gci.net

Phone: 907-586-6652 Cell Phone: 907-465-7666
Fax: 907-917-5470 Website: http://www.seafa.org

January 23, 2020

Boards Support Section
PO Box 115526
Juneau, AK 99811-5526
Submitted via Comment Website Portal/email

RE: Opposition Proposals 78, & 79

Dear Chairman Morisky, and Board of Fisheries Members,

Southeast Alaska Fishermen's Alliance (SEAFA) is a non-profit membership-based organization representing our 330+ members involved in the Salmon, crab, shrimp and longline fisheries of Southeast Alaska.

PROPOSAL #78: OPPOSE

SEAFA opposes weighting the allocation criteria for Cook Inlet. If this proposal was to pass for Cook Inlet every region of the state would then fight to weight allocation for their region causing mass confusion about the allocation policy. **The current allocation criteria allows for each board member to emphasize the criteria that they deem important and weight them as appropriate for the proposal and area**. This proposal is a back-door grab of the resource by eliminating the commercial fishery.

The commercial fishery provides fresh Alaska seafood to Alaskan residents and non-resident who don't wish to or are unable to fish for themselves, restaurants, grocery stores as well as to markets across the globe. The 2020 update of the "Economic Value of Alaska's Seafood Industry" reports, "The state's seafood industry employs nearly 60,000 workers annually in Alaska, and contributes $2.1 billion of labor income, second only to the oil and gas among

private sector industries. Seafood is the state's largest international export by volume and value and is the largest manufacturing sector in Alaska.[1]"

We oppose this proposal and ultimately find it redundant to develop allocation criteria different from the rest of the State for Cook Inlet. The current policy is guided by Statute developed by the Legislature.

PROPOSAL #79 – OPPOSE

SEAFA opposes this proposal to establish a personal use priority for Cook Inlet salmon fisheries. The Alaska State Legislature determined that subsistence fisheries are the only fishery that has a priority over other uses. State law (AS 16.05.258(c)) requires the Joint Board of Fisheries and Game to identify "nonsubsistence areas" where subsistence is not "a principal characteristic of the economy, culture, and way of life."[2] Anchorage does not meet the criteria to be a subsistence area, this has been challenged in the past and failed to qualify as a subsistence area. Allocation between personal use, sport and commercial fisheries is to be determined according to Alaska Statute and Board of Fish allocation policy. This proposal as written has a statewide effect and therefore should be considered at a statewide meeting where all affected parties would be aware of the proposal. For these reasons, SEAFA opposes designating personal use fisheries in the five non-subsistence urban areas.

For both of the above proposals SEAFA feels that significantly changing the policies and designation of subsistence areas has significantly statewide impacts that reach far beyond a Cook Inlet regional board meeting.

Sincerely,

Kathy Hansen
Executive Director

[1] https://www.undercurrentnews.com/2020/01/17/new-alaskan-study-shows-importance-of-seafood-to-economy/?fbclid=IwAR3RxbyCQ9-_wDCVFxuRjlTdgLbElEHD0eVgQu2iorqNKhB4uYUWIJOFEJY
[2] https://www.adfg.alaska.gov/static/home/subsistence/pdfs/subsistence_update_2017.pdf

Shaun Sexton
Alaska Resident
01/09/2020 01:46 PM AKST

RE: PROPOSAL 163 Prohibit guiding in the Kenai and Kasilof Rivers personal use dip net fishery

My experience with dip netting guiding services on the Kenai have been most enjoyable. Without those services, I would not have the opportunity to dip net in a manner I find productive and enjoyable. Outlawing such services would be a mistake. It would be better to encourage such services so that fewer people overcrowd the Kenai River and dock facilities with their own watercraft, vehicle and trailer. The current overcrowding and low level of competence of non-professional "skippers" leads to hazardous conditions for all dip netters. More people using professionals will help to reduce the mayhem so prevalent on the Kenai River during dip netting season. Reduction in beach erosion is another likely benefit.

Submitted By
Shawna Arend
Submitted On
1/17/2020 8:51:15 PM
Affiliation

Phone
9079808990
Email
Shawnaarend@live.com
Address
Po box 90774
Anchorage , Alaska 99509

I oppose proposal 163. As a single woman, who counts on dipnetting to feed myself through out the year, taking away my ability to use a charter source to help me do it, would be literally be taking food from me. There should be multiple ways people can harvest good, sustainable Alaskan salmon, and using a charter service is one of them.

Southeast Alaska Guides Organization

January 23, 2020

Alaska Board of Fisheries
PO Box 115526
Juneau, AK 99811

Re: Proposal 9, Resurrection Bay winter king limits.

Chair Morisky and members of the board,

Southeast Alaska Guides Organization (SEAGO) is a non-profit group advocating for the interests of Southeast, Alaska's recreational fishing industry. We promote sustainable management and fair allocation of fisheries as the foundation of a healthy Alaskan sport fleet.

Between 70% and 99% of chinook harvest in Lower Cook Inlet (LCI), Upper Cook Inlet (UCI), and North Gulf Coast (NGC) marine fisheries are of outside origin. Primarily from Southeast Alaska, British Columbia, and West Coast U.S. This is regardless of summer or winter harvest.

Sport regulations in Southeast Alaska, which also depend on these same stocks, are increasingly stringent, regulated to less than 26,000 fish for the Southeast management area annually for the past several years. During these low abundance regimes, residents are regulated to a one fish daily bag limit, and non-residents are regulated to one fish a day with a 3, 2, 1, or 0 fish annual limit depending on time of year. Residents and non-residents have suffered full non-retention periods through mid-June or mid-July to protect primary Southeast systems that are below escapement.

Though LCI, UCI, and NGC (also the Kodiak management areas) have right to harvest from these transient stocks, there should be sensitivity to overall abundance and some parity between regulations when setting sport limits across management areas.

We encourage the public, and the board to consider the origin and health of the stocks that are contributing to the bulk of this harvest as you address this proposal.

Respectfully,

Forrest Braden
Executive Director, SEAGO
forrest@seagoalaska.org

From: sue
To: DFG, BDS Webmaster (DFG sponsored)
Subject: Rainbow Trout Catch and Release proposal for Lake CK
Date: Thursday, March 7, 2019 8:44:42 AM

RE: Log RF-F19-003 I heartily support the proposed designation of Lake Creek to a catch and release trophy trout fishery and the suggested changes to bait restrictions. Thank you. Susan Kruse

DETAILS:

Management Unit or Area (if applicable):
Topic (if applicable): Sport
Additional Topics (if applicable):
Meeting Name: Upper Cook Inlet Finfish

AAC: 5 ACC ? Yentna unit 4 lake creek drainage or

Issue:

To make Lake Creek a designated trophy fishery for Rainbow trout similar to what's been done on the Talachulitna river. I've been a property owner on Bulchitna Lake since 1987, and the last several years have noticed a severe decline in the number and size of Rainbow trout. Although the waters 1/4 mile above bulchitna lake are designated catch and release for rainbow trout, the lower Two miles of the river below bulchitna lake allow for retention of trout. This area receives a lot of pressure due to ease of access, and with the restrictions imposed on the King Salmon fishery, and inconsistent runs of Sockeye and Silver salmon, there is more of a tendency to retain rainbow trout. With the expense involved of getting there via air, or hiring a guide, people want to take something home to justify the expense. During the period July 13 thru August 15 bait is allowed and this contributes to high mortality rates for Rainbow trout even when released, as trout have a tendency to swallow the bait.

Solution:

c

Designate the entire Lake Creek drainage as catch and release for Rainbow trout, no retention allowed.

Restrict the use of bait to 1/2 mile above the confluence of Lake Creek and the Yentna River . All areas above the marker 1/2 mile above the confluence would incorporate the same regulations for trout that currently exist 1/4 mile above the outlet of Bulchitna Lake. Allowing the use of bait to the area below the marker during the time frame allowed for the use of bait, would minimize any negative impacts to the commercial lodges and guide services which rely heavily on the use of bait to catch Silver salmon.

On the other hand the chance to land a trophy Rainbow Trout would be an incentive for many sport anglers. With most Taxidermists utilizing molds and photographs and measurements of trophy fish to reproduce an exact replica of the fish without having to kill the fish to do so. I believe instituting these changes would enhance the number and size of Rainbow trout and

protect the resource for future generations. It would also be a positive step for the commercial lodges and guide services, and air taxi operators, if trophy trout were readily available, without incurring the huge expense of a trip to Bristol Bay or western Alaska.

Name: Susan Kruse
Address: 10400 Blackwolf Cir
City: Anchorage
State: Ak
Zip Code: 99507
Phone: 907-444-5449
Email: Susanlkruse@aol.com

Submitted By
Taylor Evenson
Submitted On
1/23/2020 10:56:59 PM
Affiliation

Phone
9076020520
Email
taylorevenson10@gmail.com
Address
4020 CROSSON DR
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Proposal 78, Oppose

I oppose proposal 78, which reallocates fisher resources in upper cook inlet, because this will limit the board of fishes ability to weigh criteria as they see fit. Why would the board of fish want to take away their own power, to give a wide sweeping priority to certain user groups?

The goal of this proposal is to set priority to personal use and sport fishing and limit access to commercial fisheries; as the historic position of the fishery will be given less weight then the population mass of a given fishery.

This is another attempt by KRSA to make allocation the focal point of board of fish conversations, continuing a divisive dialogue that does not benefit Alaskans or the salmon resource. The board of fish should send a clear message that science will dictate policy, and that inclusive, ethical, and holistic voices will carry the most weight as we try to create a future for salmon that is as bountiful as the past.

I have positions on other submitted proposals, but this proposition is so heinous and has such a broad state-wide effect that I will not be commenting in hopes of making my opposition incredible clear to this proposal 78.

Submitted By
Teague Vanek
Submitted On
1/23/2020 1:37:39 PM
Affiliation

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I have several proposals to the BOF for the Upper Cook Inlet and would like to make some comments for your consideration.

As always, the issue of appropriate escapement levels is a big topic. I would like the BOF and ADF+G staff to really take an honest look at what the huge increase to the escapement into the Kenai and Kasilof Rivers over the years has done to the harvest levels of sockeye in Cook Inlet. My proposal 91 addresses this problem. Escapement goals should be set based on the past long-term average escapement levels which produced the best long-term average harvests. By increasing escapement levels and restricting the fishing fleet so that even these high escapement goals are regularly exceeded, the BOF has had a ruinous effect on our fishery and caused greatly depressed harvests. It's time for you to manage the fisheries with the goal of high production and harvest levels instead of high escapement levels and return to being the BOF with the goal of providing for increased harvest levels, not reducing them!

I have also submitted Proposal 188, to remove the 1% rule. My only income is from commercial fishing, and I try to "stick it out" for the latter part of the salmon season. A few others do the same, but the fleet is greatly reduced from what goes on in the middle of the season. It's very unreasonable to expect a reduced fleet to catch an arbitrary minimum amount of fish, yet the harvest is still very important to those of us still doing the harvesting. The 1% rule is like saying all sport fishing should be closed when the tourists go home in the fall because there isn't as much effort or as many fish being caught- that would be insane! Change back to again be the BOF which promotes high production in our fisheries and remove the ruinous 1% rule.

The area restrictions that have been imposed on the drift fleet over the years by the BOF have truly been ruinous. The restrictions in the middle of the Inlet during the month of July were installed to protect northern district stocks, but those stocks are healthy and many are grossly underutilized. The restrictions have actually curtailed the harvest of many healthy stocks and led to over-escapement and underutilization of salmon in Cook Inlet. My Proposal 131 asks you to again be the BOF which strives to provide for healthy harvests not just inflated escapement goals. Please remove these ruinous restrictions on the drift fleet.

Finally, please consider and pass my Proposal 130, which would have a set date of Aug. 15 to begin the fishery in Chinitna Bay. The way it has worked recently is that we've been at the whims of the weather and ADF+G's funding to get plane surveys of Chinitna Bay streams. We've had start dates so late that nearly the entire run was over simply because the survey doesn't get done or it is done when the creeks have flooded and fish can't be seen from the air. A start date of Aug. 15 allows for the majority of the chums, which seem to be ADF+G's main concern, to have already passed, yet the bulk of the silver run would be available for harvest.

Submitted By
Theresa Josephson
Submitted On
1/16/2020 6:31:51 PM
Affiliation

I do not support no motor boats on the Kadilof River.

Submitted By
Thomas Knowles
Submitted On
1/22/2020 12:12:30 AM
Affiliation
Self

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Bruce Knowles's Comments to 2020 Board of Fisheries hearings on Cook Inlet Issues.

This is one of the few times in over 20 years, that I've been working with the Board of Fisheries. That I'm as optimistic that something positive will be accomplished that will benefit, salmon resources in all of Upper Cook Inlet. There are numerous items that should be considered during this board cycle that if acted upon can resolve many problems.

A. Define Over Escapement and other nebulas terms that have been use for decades to control noncommercial access.

B. Need for definitions used routinely writing and management of Salmon harvest.

C. Establish personal user salmon dip net fishery on the Susitna River

D. Increase Kenai sockeye escapement goal and maintaining the Susitna River sockeye salmon stock of concur status.

E. Establish an Optimal Escapement Goals for Northern District Sockeye and Coho salmon. To assist in rebuilding stock and allowing for additional consumptive users harvest.

F. Establish a working group to update Policy 5 AAC 39.222 Policy for the management of sustainable salmon fisheriesy policies. This regulation has not been updated since it's completion over 20 years ago.

G. Expand time for the Fish Creek salmon sport fishery.

H. Decouple multilabel limited permit fisheries.

I. There are untold number of discreet salmon stocks in and around Upper Cook Inlet that have disappeared in the last 30 years. There doesn't seem to be a up to date inventory of these losses.

J. Degraded salmon spawning, incubating, rearing, and migratory habitats should be restored to natural levels of productivity where known and desirable. 5 AAC 39.222

1. At statehood Federal Authorities were concerned about a fair allocation of fish and game between user groups. The Federal managers required that the State established a committee to equally manage Alaska's wildlife and fish resources among the varies user groups and share equally in the management. This mandate isn't very well-known by todays Alaskans. This mandate caused mayhem a infant state government and would eventually delay statehood. When the members of the first board were appointed by the infant state government, it was disapproved by the Federal Government due to the board being made up of commercial fishermen. There had been no subsistence users, sport fishers or hunters assigned to the Board. Statehood was held up for a year. Before a Board of Fish and Game were finally approved and seated, all new members had Sport Fishing and Hunting licenses. The new members had a strong back ground in commercial fishing.

2. I've watched in dismay at the actions of the Board of Fisheries since I first became involved with the salmon management process. The Board of Fisheries members were made up primarily of commercial operators, processors and the commercials fishing division, were advising the entire process. They were dedicated to providing the most salmon possible with little to no regards to the streams of origin.

3. Another unbelievable action was taken by the Chief science officer of the Alaska Department of Fish and Game. He published an ill-advised letter stating that all goals for Northern District salmon should be removed and the Northern District stocks fished to a point where no management actions would be needed in the Central District to protect northern bound stocks. Since Alaska Department of Fish and

Game is mandate to provide for sustainability of all Alaskan resources. This type of actions was and still is unconstitutional. There are more stocks of concerns in Cook Inlet that any other region of Alaska!

4. One night while I was chairing a meeting of Valley residents concerning low king salmon returns the group consisted of Alaska State legislators, sporting fishing guides and local citizens concerned with low king return in the Northern District. A commercial fisheries biologist had been sent to explain the king salmon shortages, told the room full Valley residence***. That it was his job to see that his commercial fishing clients got the most salmon possible and he didn't care where the salmon came from! This is harvest attitude is still problem with management of the various salmon species in intercept fisheries.***

5. At one Cook Inlet Board of Fisheries hearings, an Unconstitutional Sockeye Salmon management plan was developed for the for managing Central District Sockeye Salmon. This plan had a trigger point included that directed when the Commercial Fishing Division forecast a sockeye returns in excess 4,000,000 sockeyes. To prevent over escapement sockeye salmon to the Kenai River. Northern District sockeye escapement goals would be reduce allowing, nearly unrestricted commercial fishing Central District. As a direct result Northern District sockeye experienced historically low returns! As a direct result of this type of actions and other, ill advised actions led directly to the longest lasting sockeye salmon Stock of Concern lasting more than seven years. Northern District sockeye are probably at the lowest point in state history. The department has not published a status report on the number of streams, creeks and river, that has lost their sockeye salmon returns in Upper Cook Inlet!

6. The Matanuska-Susitna Borough requested and received a $2,500,000 grant from the state legislature. This money was to be provided to the Sport Fish Division to conduct much need studies on Northern District salmon stocks. Most of the money achieved the intended goals such as culvert replacement, base line data for genetic identification, salmon return data. One major exception to this corporation has been assisting the depart with a mandated state wide economic survey that is required every five years the most recent survey had been conducted was in 2007 and it was the first survey on record. The departed hasn't been able a get or maintain the funds to conduct a state wide surveys. Matanuska-Susitna Borough Fish and Wildlife Commission offered to fund a survey of Upper Cook Inlet, using the department standards with the ***Southland Associates*** had conducted the 2007 survey. After negations between the Matanuska-Susitna Borough Fish and Wildlife Commission and the Sport Fish Division agreed to conduct the survey, and publish the results jointly as an official state document. The survey was conducted and paid for by the Matanuska-Susitna Borough Fish and Wildlife Commission. At the fall how goes it report presented to legislators, Borough official's and the public. The depart failed to live up to their agreement support the economic survey. Even thou their standards and personal coordinated in the survey process. The information, on the spending of sport fishers can't be used by the state to determine the economic valve of sportfish and related expenses to Alaska.

7. In the ***2014*** Board of Fisheries hearings a long anticipated goal was achieved, the board approved a Conservation Corridor in the Central District management plan. This planned required that no commercial fishing would be allowed in this new corridor. Allowing Northern District stocks to migrate through Central District with little commercial fishing pressure. During the first year of the new Corridor Plan the department, was convinced to delay the new conservation corridor protection by issuing an emergency order allowing commercial fishing in the Conservation Corridor. The following year the commercial fishermen, petition the court was approved to stop the use of the new Conservation Corridor Plan established by the Board of Fisheries. The conservation plan was modified at a subsequence Board of Fisheries meeting. Opening up the central district to drifters harvesting primarily northern bound stocks! The reestablishment of this conservation corridor, and eliminating any commercial fishing in the conservation corridor is a ***Primary Goal this year***!

Thank you

Bruce Knowles 907-357-4965 907-232-5873

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Submitted On
1/22/2020 1:13:56 PM
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I am in opposition of proposal 104. We need at least one cycle to occur in order to deem the science correct. Changing regs so early only leaves management to guessing, not biology.

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1/22/2020 1:10:02 PM
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I oppose prop 78. Allocation should most definitely NOT favor sport fishing or personal use.

Submitted By
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1/22/2020 1:11:43 PM
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I oppose prop 88. The inriver goal should not be amended or increased, it is already far too high to be effective and leaves many fish unharvested.

Submitted By
Travis Every
Submitted On
1/23/2020 2:19:22 PM
Affiliation

Members of the Alaska Board of Fisheries thank you for the opportunity to comment on the following proposals.

PROPOSAL 79- Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources, as follows**:** ***OPPOSE*** We oppose proposal 78. This proposal takes away the BOF members discretion and judgment replacing the "may", with a "shall" when it comes to the criteria for the allocation of this fishery resource. When the Alaska Board of Fisheries was established at Statehood by the legislature, the language gave the board the flexibility to consider the most appropriate criteria for the proposal under consideration. The intent of the arbitrary ranking of the allocation criteria, which favor personal use, and sport fishing groups, is to regulate the commercial fishery out of business.

PROPOSAL 88- Amend the Kenai River Late-Run Sockeye Salmon Management Plan to increase in-river goal ranges, as follows*:* ***OPPOSE*** We oppose proposal 88. The current in-river goals, even in the lowest tier, provide more sockeye to the in-river sport fishery above the sonar than can currently be harvested. The in-river sport fishery, even when liberalized, does not exploit the fish they are already allocated. This results in the continued exceeding of in-river goals, exceeding escapement goals, and economic loss due to forgone harvest. This proposals sole intent is to allocate fish processors and the commercial fishery out of business.

PROPOSAL 104- Adopt an optimal escapement goal and amend the paired restrictions in the Kenai River Late-Run King Salmon Management plan, as follows: ***OPPOSE*** We oppose proposal 104. This proposal makes arbitrary and premature changes to the KRLRK plan. A plan that was totally changed at the 2017 UCI BOF meeting where the SEG was transitioned from an all king goal into a large king goal. The large king goal was established by the department, using the best science and studies available to revive struggling king runs. Making changes to these goals before we have any returns off of the large king escapements is premature and purely allocative.

PROPOSAL 110- Modify "paired" restrictions to limit gear in the Upper Subdistrict set gillnet fishery only when retention of king salmon is prohibited in the Kenai River Sport Fishery, as follows*:* ***SUPPORT*** We support proposal 110. At the 2014 UCI BOF "paired" restrictions were established based on an SEG for ALL sizes of Chinook Salmon. At the 2017 UCI BOF ADFG changed the SEG for Late-Run King Salmon to only include chinook 75cm and longer. From 2005 to 2018 the in-river sport fishery has been the primary harvester of 75cm and longer chinook salmon taking 71% of the harvest of large kings during that time period. According to the sustainable salmon fisheries policy the burden of conservation shall be shared among all fisheries in close proportion to each fisheries' respective use. There should be no restrictive action within the set gill net fishery until the In-River sport fishery is restricted to no retention.

PROPOSAL 180- Allow regular weekly fishing periods after August 15 in the Upper Subdistrict sockeye salmon set gillnet fishery based on abundance, as follows: ***SUPPORT*** We support proposal 180. In 8 out of the last 10 years both the in-river goal in the Kenai River and the BEG in the Kasilof River were exceeded. Allowing for extra harvest flexibility once all management objectives have been met, and or, exceeded, would provide area managers with more tools to meet escapement goal objectives.

Thank you for your time and service,

Travis & Amber Every

Kenai, AK

Submitted By
Troy Hollier
Submitted On
1/23/2020 4:09:23 PM
Affiliation
set netter

I'm Troy Hollier. I am 8 years old and am looking forward to commercial fishing this summer with my family. Its fun to go down the beach on the tractor and pull nets in out of the water and pick the salmon out. We work hard and make money selling fish that I will use for college one day. I oppose # 78, 88, and 104.

Proposals 88, 89 and 90

UCIDA opposes these proposals.

Increasing the in-river goals in the Kenai River will waste surplus salmon, exacerbate the ongoing excessive escapements of salmon into the Kenai (reducing future runs) and place the entire Cook Inlet commercial fishing industry at grave risk.

Table 1 compares the in-river sport harvest numbers with the upper limit of the in-river goals for the Kenai River from 1987 through 2018. The difference between the actual sport harvest and the upper limit of the in-river goal represents an empirical surplus in-river allocation. The annual surplus in-river allocation over those years has a range of 101,042 to 387,019 and an average of 230,982 sockeye salmon. These fish comprise a number in excess of escapement needs and in excess of the actual sport harvest.

What possible justification could there be for raising the in-river escapement goals when the in-river harvest has always been over 100,000 fish less than the surplus? The highest sport catch reported by ADF&G is 379,685.

Proposals 89 and 90 claim that:

- "The current late run sockeye salmon management plan is failing to provide adequate opportunity for inriver users." Not True. ADF&G's generous in-river goals have provided far more opportunity than anglers have utilized. In 2019 ADF&G issued EO 2-RS-1-42-19 and EO 2-RS-1-41-19 to increase the sockeye salmon bag and possession limits to 6 per day and 12 in possession, and open the personal use dipnet fishery at the mouth 24 hours per a day, effective July 24 downstream of Skilak Lake.

- "The Kenai River is the primary source for salmon for southcentral Alaska, the states most populated area by far." Southcentral Alaskans are reporting annual dipnet harvests of around a quarter-million sockeye salmon. Kenai River anglers are reporting annual harvests averaging a quarter-million sockeye.

- "Inriver salmon contribute vastly more revenue to the state than commercially caught fish and the Kenai River can no longer support the demands of so many user groups." This is debatable, and just how much more opportunity for sport and personal use are you willing to trade for the entire value of the Cook Inlet commercial fishing industry?

- Proposal 88 claims that "Recent data on production from large escapements of Kenai River late run sockeye indicates that maximum sustained yield is produced at levels greater than previously thought." We absolutely disagree with this statement. It is based on theoretical computations and is contradicted by empirical, historical data.

The annual surplus in-river allocation of hundreds of thousands of sockeye salmon is of critical importance to maintaining a Cook Inlet commercial fishing industry. The CFEC report to the Board (CFEC Permit Holdings and Estimates of Gross Earnings in the Cook Inlet Commercial Salmon Fisheries, 1975-2018: CFEC Report Number 19-7N, November 2019), Tables 2-15 and 3-12 show the dire decline of gross income for commercial fishers. Seafood processing companies here are very close to the point of abandoning business in Cook Inlet. Is the loss of this entire industry worth increasing the already excessive in-river goals? At this point, an extra allocation of in-river salmon (that won't be harvested by anglers) may well be the tipping point.

Moving Forward

We would recommend taking the current in-river goal allocations and reducing the upper and lower boundary by 200,000 at all tier levels.

The new in-river goal allocations would be:

5AAC 21.360(c)(1)	Less than 2.3 mil	700,000 – 900,000
5AAC 21.360(c)(2)	2.3 – 4.6 mil	800,000 – 1,100,000
5AAC 21.360(c)(3)	Greater than 4.6 mil	900,000 – 1,300,000

The above in-river allocations address the 1987-2018 surplus.

Table 1. Surplus In-River Allocation

Data courtesy of ADF&G published reports

Year	Actual Run Size[5]	Inriver Goal	BEG/SEG	In-River Goal Allocation[1, 2]	Sport Harvest Above Sonar	Surplus In-River Allocation[3]	Surplus Allocation % of Actual Run[4]
1987	8,600,000	400,000-700,000	330,000-600,000	70,000-370,000	233,958	136,042	1.58%
1988	5,800,000	400,000-700,000	330,000-600,000	70,000-370,000	144,093	225,907	3.89%
1989	5,900,000	400,000-700,000	330,000-600,000	70,000-370,000	268,958	101,042	1.71%
1990	2,700,000	400,000-700,000	330,000-600,000	70,000-370,000	155,742	214,258	7.94%
1991	1,700,000	400,000-700,000	330,000-600,000	70,000-370,000	227,697	142,303	8.37%
1992	7,700,000	400,000-700,000	330,000-600,000	70,000-370,000	222,482	147,518	1.92%
1993	3,900,000	400,000-700,000	330,000-600,000	70,000-370,000	137,229	232,771	5.97%
1994	3,400,000	400,000-700,000	330,000-600,000	70,000-370,000	102,378	267,622	7.87%
1995	2,300,000	450,000-700,000	330,000-600,000	120,000-370,000	108,076	261,924	11.39%
1996	3,200,000	550,000-800,000	330,000-600,000	220,000-470,000	166,166	303,834	9.49%
1997	3,900,000	550,000-825,000	330,000-600,000	220,000-495,000	147,057	347,943	8.92%
1998	1,500,000	550,000-850,000	330,000-600,000	220,000-520,000	155,905	364,095	24.27%
1999	2,500,000	750,000-950,000	500,000-800,000	250,000-450,000	187,725	262,275	10.49%
2000	1,400,000	600,000-850,000	500,000-800,000	100,000-350,000	203,801	146,199	10.44%
2001	1,800,000	600,000-850,000	500,000-800,000	100,000-350,000	168,104	181,896	10.11%
2002	3,000,000	750,000-950,000	500,000-800,000	250,000-450,000	213,066	218,934	7.30%
2003	3,800,000	750,000-950,000	500,000-800,000	250,000-450,000	253,734	196,266	5.16%
2004	5,000,000	850,000-1,100,000	500,000-800,000	350,000-600,000	254,836	345,164	6.90%
2005	5,600,000	850,000-1,100,000	500,000-800,000	350,000-600,000	254,818	345,182	6.16%
2006	2,500,000	750,000-950,000	500,000-800,000	250,000-450,000	172,638	277,362	11.09%
2007	3,400,000	750,000-950,000	500,000-800,000	250,000-450,000	265,702	184,298	5.42%
2008	2,300,000	650,000-850,000	500,000-800,000	150,000-350,000	208,334	141,666	6.16%
2009	2,400,000	650,000-850,000	500,000-800,000	150,000-350,000	241,938	108,062	4.50%
2010	3,300,000	750,000-950,000	500,000-800,000	250,000-450,000	256,582	193,418	5.86%
2011	6,200,000	1,100,000-1,350,000	700,000-1,200,000	400,000-650,000	318,484	331,516	5.35%
2012	4,700,000	1,100,000-1,350,000	700,000-1,200,000	400,000-650,000	368,720	281,280	5.98%
2013	3,500,000	1,000,000-1,200,000	700,000-1,200,000	300,000-500,000	379,685	120,315	3.44%
2014	3,300,000	1,000,000-1,200,000	700,000-1,200,000	300,000-500,000	301,998	198,002	6.00%
2015	3,900,000	1,000,000-1,200,000	700,000-1,200,000	300,000-500,000	309,004	109,996	2.82%
2016	3,500,000	1,100,000-1,350,000	700,000-1,200,000	400,000-650,000	262,981	387,019	11.06%
2017	2,900,000	1,000,000-1,300,000	700,000-1,200,000	300,000-600,000	235,208	364,792	12.58%
2018	1,600,000	900,000-1,100,000	700,000-1,200,000	200,000-400,000	147,493	252,507	15.78%
2019	3,500,000	1,000,000-1,300,000	700,000-1,200,000	400,000-600,000			
				1987-2018 Total	**7,074,594**	**7,391,408**	
				1987-2018 Average	**221,081**	**230,982**	

1. Lower boundary in-river allocation is derived from deducting the lower bound of the BEG/SEG from the lower boundary of the in-river allocation (Ex. 1987: 400,000 - 330,000 = 70,000)

2. Upper boundary in-river allocation is derived from deducting the lower bound of the BEG/SEG from the upper boundary of the in-river allocation (Ex. 1987: 700,000 - 330,000 = 370,000)

3. Surplus in-river allocation is derived from deducting the sport harvest above River Mile 19.5 from the Upper boundary of in-river goal allocation (Ex. 1987: 370,000 - sport harvest = surplus in-river allocation)

4. UCIDA calculations

5. 1987-2010 are Bendix Sonar numbers, 2011-2019 are DIDSON Sonar numbers

Proposals 88, 89 and 90 all suggest the Board of Fish (BOF) **increase** the in-river goals in the Kenai River Late-Run Sockeye (KRLRS) salmon management plan. If the BOF were to adopt proposals 88, 89 or 90 in any fashion, the commercial fishing industry in Cook Inlet will be put at serious financial risk.

We can predict the consequences using recent data. Since 1987, there have been 5 times that the KRLRS total return been less than 2.0 or 2.3 million.

Table 1 lists and describes these 5 events.

Table 1. Kenai River Late-Run Sockeye Salmon Returns less than 2.0 or 2.3 Million

Year	Enumeration Type	Comfish Harvest	% of Total Return	In-River Goals	Total Return
1991	Bendix	1,007,434	59.3%	400,000-700,000	1,700,000
1998	Bendix	592,965	39.5%	500,000-850,000	1,500,000
2000	Bendix	617,873	44.1%	750,000-950,000	1,600,000
2001	Bendix	946,010	52.6%	600,000-850,000	1,800,000
2018	DIDSON	353,564	22.1%	900,000-1,000,000	1,600,000
Average	Bendix	703,569	43.5%		1,640,000

You can see the relationship between the harvests and the increases in the in-river goals. Please note that in the first 4 events of less than 2,000,000 KRLRS Returns (Bendix counts), the average commercial harvests were 791,071, 48.8% of the total return. In the 2018 KRLRS, the commercial harvest was 353,564, or 22.1 % of the total return. The commercial harvest is less than half of the prior 1991, 1998, 2000 and 2001 KRLRS Returns.

Proposal 88 asks the BOF to increase the in-river goal as follows:

Run strength	Existing	Proposed	Increased Allocation
< 2.3 mil	900,000 – 1,100,000	1,000,000 – 1,400,000	100,000 – 300,000
2.3-4.6 mil	1,000,000 – 1,300,000	1,200,000 – 1,600,000	200,000 – 300,000
> 4.6 mil	1,100,000 – 1,500,000	1,400,000 – 1,800,000	300,000 – 300,000
		1,400,000 – 2,000,000*	

* *Proposed OEG in years of KRLRS run sizes greater than 5 million.*

If Proposal 88, the new in-river goals, are applied to the 2018 KRLRS Return, the following would have occurred:

1. Lower bound of in-river goal would be increased from 900,000 to 1,000,000 – an increased in-river allocation of 100,000 sockeye.
2. This increase of 100,000 in-river sockeye would most likely come from the commercial sector. In 2020, the increased allocation of 100,000 sockeye to the in-river users would result in immediate, and possibly irretrievable, economic harm to the commercial sector.

3. The upper bound of the in-river goal would be increased from 1,100,000 to 1,400,000 – an increased in-river allocation of 300,000 sockeye.
4. This increase of 300,000 sockeye will most likely come from the commercial sector. The loss of 300,000 sockeye to the commercial industry in 2020 would cause its economic collapse.

To adopt the new proposed in-river goals as presented in proposals 88, 89 and 90, would destroy the commercial fishing industry.

The Solution

It's quite simple: adopting proposals 88, 89 and 90 will result in less commercial harvest and the commercial industry essentially collapses. In the alternative, adopt the proposed in-river goals that **partially** restore the historic harvest. In-river goals are economically devastating to the commercial fishing industry. Status-quo in the existing in-river goals is not an option for the commercial industry.

Existing In-River Allocations

Run strength	BEG/SEG	In-River Goal[1]	In-River Allocation[2]
< 2.3 mil	700,000 – 1,200,000	900,000 – 1,100,000	200,000 – 400,000
2.3-4.6 mil	700,000 – 1,200,000	1,000,000 – 1,300,000	300,000 – 600,000
> 4.6 mil	700,000 – 1,200,000	1,100,000 – 1,500,000	400,000 – 800,000

[1.] In-river goals are the escapements set by the BOF, measured at River Mile (RM) 19.5. These numbers do not include personal use or sport fish harvests that occur below the sonar site at RM 19.5.

[2.] Calculated by subtracting the BEG/SEG from the in-river goals. Lower boundary of in-river goal of 900,000 less 700,000 BEG/SEG equals a minimum of 200,000 in-river allocation. Upper boundary of 1,100,000 less 700,000 BEG/SEG equals 400,000 maximum in-river allocation. The 2.3-4.6 and > 4.6 million were also calculated in a similar fashion.

Proposed In-River Goals – Above River Mile 19.5

In order for the commercial industry to survive, **the following in-river goals are proposed**:

Run strength	BEG/SEG	Proposed Goals[1]	In-River Allocation[2]
< 2.3 mil	700,000 – 1,200,000	750,000 – 900,000	50,000 – 200,000
2.3-4.6 mil	700,000 – 1,200,000	800,000 – 1,000,000	100,000 – 300,000
> 4.6 mil	700,000 – 1,200,000	900,000 – 1,100,000	200,000 – 400,000

These revised in-river goals, along with pro-active adaptive management, may allow for sufficient commercial harvest to sustain the industry in Cook Inlet.

History of Kenai River sockeye salmon personal use/subsistence, educational, and sport harvest and escapement goals, 1987-2019

• Data courtesy of ADF&G published reports • Modified by UCIDA as noted

Year	Personal Use Dip Net, and Educational Harvest [a]	Sport Harvest Below Sonar [b]	Kenai River Sonar Count [c]	Sport Harvest Above Sonar	ComFish Harvest[1]	% of Total Run[1]	Spawning Escapement	Inriver Goal	BEG/SEG	Preseason Forecast	Actual Run Size
1987	24,090	50,274	1,596,871	233,958	6,928,765	80.6%	1,362,913	400,000-700,000	330,000-600,000	3,500,000	8,600,000
1988	16,880	29,345	1,021,469	144,093	4,732,306	81.6%	877,376	400,000-700,000	330,000-600,000	5,000,000	5,800,000
1989	51,192	66,162	1,599,959	268,958	4,182,687	70.9%	1,331,001	400,000-700,000	330,000-600,000		5,900,000
1990	3,477	19,640	659,520	155,742	2,017,363	74.7%	503,778	400,000-700,000	330,000-600,000	4,700,000	2,700,000
1991	13,433	31,536	647,597	227,697	1,007,434	59.3%	419,900	400,000-700,000	330,000-600,000		1,700,000
1992	30,454	47,622	994,798	222,482	6,627,126	86.1%	772,316	400,000-700,000	330,000-600,000	4,200,000	7,700,000
1993	35,592	27,717	813,617	137,229	3,023,074	77.5%	676,388	400,000-700,000	330,000-600,000	1,900,000	3,900,000
1994	15,804	17,954	1,003,446	102,378	2,362,796	69.5%	901,068	400,000-700,000	330,000-600,000	1,500,000	3,400,000
1995	15,720	29,451	630,447	108,076	1,624,382	70.6%	522,371	450,000-700,000	330,000-600,000	2,300,000	2,300,000
1996	104,110	39,810	797,847	166,166	2,258,233	70.6%	631,681	550,000-800,000	330,000-600,000	2,500,000	3,200,000
1997	116,107	43,642	1,064,818	147,057	2,675,433	68.6%	917,761	550,000-825,000	330,000-600,000	4,000,000	3,900,000
1998	105,497	33,980	767,558	155,905	592,965	39.5%	611,653	550,000-850,000	330,000-600,000	1,700,000	1,500,000
1999	150,993	46,043	803,379	187,725	1,499,585	60.0%	615,654	750,000-950,000	500,000-800,000	1,600,000	2,500,000
2000	99,571	57,978	624,578	203,801	617,873	44.1%	420,777	600,000-850,000	500,000-800,000	2,500,000	1,400,000
2001	152,580	51,374	650,036	168,104	946,010	52.6%	481,932	600,000-850,000	500,000-800,000	2,400,000	1,800,000
2002	182,229	46,693	957,924	213,066	1,813,154	60.4%	744,858	750,000-950,000	500,000-800,000	1,700,000	3,000,000
2003	227,207	60,722	1,181,309	253,734	2,330,762	61.3%	927,575	750,000-950,000	500,000-800,000	2,000,000	3,800,000
2004	266,937	62,397	1,385,981	254,836	3,284,685	65.7%	1,131,145	850,000-1,100,000	500,000-800,000	3,200,000	5,000,000
2005	300,105	58,017	1,376,452	254,818	3,865,426	69.0%	1,121,634	850,000-1,100,000	500,000-800,000	3,300,000	5,600,000
2006	130,486	30,964	1,499,692	172,638	838,858	33.6%	1,327,054	750,000-950,000	500,000-800,000	1,800,000	2,500,000
2007	293,941	60,623	867,572	265,702	2,177,864	64.1%	601,870	750,000-950,000	500,000-800,000	2,400,000	3,400,000
2008	236,355	46,053	614,946	208,334	1,402,646	61.0%	406,612	650,000-850,000	500,000-800,000	3,100,000	2,300,000
2009	343,302	45,868	745,170	241,938	1,265,660	52.7%	503,232	650,000-850,000	500,000-800,000	2,400,000	2,400,000
2010	393,317	59,651	970,662	256,582	1,876,370	56.9%	714,080	750,000-950,000	500,000-800,000	1,700,000	3,300,000
2011	543,043	92,225	1,599,217	318,484	3,965,515	64.0%	1,280,733	1,100,000-1,350,000	700,000-1,200,000	3,900,000	6,200,000
2012	530,128	102,376	1,581,555	368,720	2,485,941	52.9%	1,212,835	1,100,000-1,350,000	700,000-1,200,000	4,000,000	4,700,000
2013	350,302	78,837	1,359,893	379,685	1,710,968	48.9%	980,208	1,000,000-1,200,000	700,000-1,200,000	4,400,000	3,500,000
2014	384,018	78,057	1,520,340	301,998	1,317,586	39.9%	1,218,341	1,000,000-1,200,000	700,000-1,200,000	3,800,000	3,300,000
2015	384,095	83,112	1,709,051	309,004	1,723,742	44.2%	1,400,047	1,000,000-1,200,000	700,000-1,200,000	3,600,000	3,900,000
2016	264,900	79,465	1,383,692	262,981	1,771,943	50.6%	1,120,711	1,100,000-1,350,000	700,000-1,200,000	4,700,000	3,500,000
2017	304,632	67,233	1,308,498	235,208	1,219,637	42.1%	1,073,290	1,000,000-1,300,000	700,000-1,200,000	2,200,000	2,900,000
2018	169,553	41,122	1,035,761	147,493	353,564	22.1%	888,268	900,000-1,100,000	700,000-1,200,000	2,500,000	1,600,000
2019			1,849,054		1,650,946	47.2%		1,000,000-1,300,000	700,000-1,200,000	3,800,000	3,500,000

1996; Reimer and Sigurdsson 2004, Dunker and Lafferty 2007, Dunker 2010, 2013, K. J. Dunker, Sport Fish biologist, Anchorage, personal communication; King 1995, 1996; Pappas and Marsh 2004; Shields and Dupuis 2016;

Note: ND = no data available

[a] Personal use (1987-1995), Subsistence dip net harvest (1991-1995), and Kenaitze educational harvest (1989-1995) from Brannian and Fox,1996. From 1994 to present, the educational harvest is the total late-run harvest.

[b] In 1994 and 1995 a creel survey was conducted to estimate harvest below the sonar. In 1994, 49.7% of the below Soldotna Bridge harvest was taken below the sonar. In 1995, 68.6 % was taken below the sonar. The average of

[c] Bendix sonar counts for 1987-2010; DIDSON counts beginning in 2011.

[1] Calculations added by UCIDA

§ 600.345 National Standard 8—Communities.

(a) *Standard 8.* Conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to:

(1) Provide for the sustained participation of such communities; and

(2) To the extent practicable, minimize adverse economic impacts on such communities.

(b) *General.* (1) This standard requires that an FMP take into account the importance of fishery resources to fishing communities. This consideration, however, is within the context of the conservation requirements of the Magnuson-Stevens Act. Deliberations regarding the importance of fishery resources to affected fishing communities, therefore, must not compromise the achievement of conservation requirements and goals of the FMP. Where the preferred alternative negatively affects the sustained participation of fishing communities, the FMP should discuss the rationale for selecting this alternative over another with a lesser impact on fishing communities. All other things being equal, where two alternatives achieve similar conservation goals, the alternative that provides the greater potential for sustained participation of such communities and minimizes the adverse economic impacts on such communities would be the preferred alternative.

(2) This standard does not constitute a basis for allocating resources to a specific fishing community nor for providing preferential treatment based on residence in a fishing community.

(3) The term “fishing community” means a community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and fish processors that are based in such communities. A fishing community is a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries-dependent services and industries (for example, boatyards, ice suppliers, tackle shops).

(4) The term “sustained participation” means continued access to the fishery within the constraints of the condition of the resource.

(c) *Analysis.* (1) FMPs must examine the social and economic importance of fisheries to communities potentially affected by management measures. For example, severe reductions of harvests for conservation purposes may decrease employment opportunities for fishermen and processing plant workers, thereby adversely affecting their families and communities. Similarly, a management measure that results in the allocation of fishery resources among competing sectors of a fishery may benefit some communities at the expense of others.

(2) An appropriate vehicle for the analyses under this standard is the fishery impact statement required by section 303(a)(9) of the Magnuson-Stevens Act. Qualitative and quantitative data may be used, including information provided by fishermen, dealers, processors, and fisheries organizations and associations. In cases where data are severely limited, effort should be directed to identifying and gathering needed data.

(3) To address the sustained participation of fishing communities that will be affected by management measures, the analysis should first identify affected fishing communities and then assess their differing levels of dependence on and engagement in the fishery being regulated. The analysis should also specify how that assessment was made. The best available data on the history, extent, and type of participation of these fishing communities in the fishery should be incorporated into the social and economic information presented in the FMP. The analysis does not have to contain an exhaustive listing of all communities that might fit the definition; a judgment can be made as to which are primarily affected. The analysis should discuss each alternative's likely effect on the sustained participation of these fishing communities in the fishery.

(4) The analysis should assess the likely positive and negative social and economic impacts of the alternative management measures, over both the short and the long term, on fishing communities. Any particular management measure may economically benefit some communities while adversely affecting others. Economic impacts should be considered both for individual communities and for the group of all affected communities identified in the FMP. Impacts of both consumptive and non-consumptive uses of fishery resources should be considered.

(5) A discussion of social and economic impacts should identify those alternatives that would minimize adverse impacts on these fishing communities within the constraints of conservation and management goals of the FMP, other national standards, and other applicable law.

[63 FR 24234, May 1, 1998]

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Issues Concerning Salmon Yields in Upper Cook Inlet, Alaska

United Cook Inlet Drift Association

September 2019

Abstract

This report presents new biological and economic information and analysis concerning sockeye salmon stocks of Upper Cook Inlet. Other Upper Cook Inlet salmon populations are also referenced. In the last decade, the commercial drift fleet has seen a drastic reduction in both the annual and daily catch per unit of effort. The Kenai River sockeyes now have a pronounced August entry timing pattern. The mid-eye to mid-fork tail length, as measured by the offshore test fishery, drift fleet and the Kenai River Mile 19.5 counter all demonstrate a 5cm (2 inch) shorter sockeye at age 1.3 and 2.3. The corresponding weights are .5k (1 lb) less at the same ages. Excess spawning escapements and changing environmental conditions are discussed as forcing, perturbing and stochastic drivers of these smaller and later entry patterns. The economics associated with these decade-long trends are identified and discussed. Recommendations are put forward concerning revised escapement goals involved incorporating ecosystem approaches, multi-empirical and modeling-based approaches.

Acknowledgements

UCIDA recognizes the following for reviewing drafts, providing suggestions, introducing new material and on-the-water observations. Many of these individuals and their families have been involved with the UCI Fisheries for over 30 years.

Dan Anderson – F/V Paragon
Nate Berga – Processor
Jeff Berger – Processor
Catherine Cassidy – F/V Williwaw
Jeff Fox – Fisheries Biologist
Bruce Gabrys – F/V Blue Chip II
John Gucer – F/V Talisman
Erik Huebsch – F/V Williwaw
Wes Humbyrd – F/V Maria B
Ilia Kuzmin – F/V Currency
David Martin – F/V Kaguyak
Adam Maw – F/V Ryan J
Robert Maw – F/V Ocean Cat
Roland Maw – F/V Americanus
John McCombs – F/V Rayo Verde
Matt Oxford – F/V Blue Ox
Ian Pitzman – F/V Stephanie Anne
Brian Ranguette – F/V Jade X
Eric Ranguette – F/V Jade IV
Audrey Salmon – UCIDA Office
Scott Steger – F/V Sea Venture
Dino Sutherland – F/V Rivers End
Ken Tarbox – Fisheries Biologist
Steve Tvenstrup – F/V Alaskan Lady
Dyer VanDevere – F/V Swift Arrow
Steve Vanek – F/V Monica J
Teague Vanek – F/V Proud Mary
Paul Warner – F/V Papa Whiskey
Marty Weiser - Processor
Brent Western – F/V Roulette
Tony Western – F/V Roulette
Bob Wolfe – F/V Aghileen
Fr. Nikolai Yakunin – F/V Little Dolphin

Errata

The majority of the data for this paper comes from ADFG. A portion is the annual management reports. In some selected figures, this will be an original presentation.

In the figures and tables, the 2019 data has been included. However, much of the 2019 data was unavailable at the time of this printing as the Cook Inlet commercial salmon season was still open. The sport fish harvests will not be available until the fall of 2020. Some of the 2018 sport fish harvest data is included, but only as estimates.

Glossary of Acronyms

ADFG – Alaska Department of Fish & Game
Area H – Federally designated fishing area encompassing Cook Inlet
BEG – Biological Escapement Goal
BOF – Board of Fisheries
CIAA – Cook Inlet Aquaculture Association
CPUE – Catch Per Unit of Effort
DIDSON – Dual-frequency IDentification SONar
EGC – Escapement Goal Committee
EZD – Euphotic Zone Depth in meters
FMP – Fishery Management Plan
GHL – Guideline Harvest Level
KasR – Kasilof River
KR – Kenai River
KRLRS – Kenai River Late-Run Sockeye (July & August)
lbs – Imperial Pounds, 16oz = 1 pound
m – meters
MEFL – Mid-Eye to Mid-Fork Tail Length in millimeters
mg - milligrams
mm – millimeters
MSA – Magnuson Stevens Act
MSY – Maximum Sustained Yield
NGOs - Non-Governmental Organizations
NMFS – National Marine Fisheries Association
OTF – Offshore Test Fishery
OY – Optimum Yield
RM – River Mile
R/S – Return per Spawner
SAC – Salmon Advisory Committee
UCI – Upper Cook Inlet
Zoop Biomass – Zooplankton Population Biomass in mg/m^3

Table of Contents

I. Introduction

This paper presents historical, biological, yield and harvest data concerning the 23 major sockeye salmon populations that are natal to UCI, Alaska. Currently, there are federal, state, municipal and legally recognized subsistence stakeholders that are involved in salmon management, research and allocation discussions and decisions.

In addition, there are numerous NGOs and several user groups in the fishery that have historic and legal rights to harvest these salmon stocks of UCI. Indeed, the legal harvesting of these salmon stocks are complex due to the myriad of overlapping contradictory regulatory environments created by the various levels of government, including respective agencies. These governments and respective agencies often compete and push back on each other. In this myriad of competing, often contradictory legal and regulatory environment, there are two victims: the fish and the commercial fishing industry. Without exception, every level of government, elected and appointed agency officials, proffer a preferred action to salmon management issues in UCI.

The fishing industry is seeking to bring science, clarity and hopefully meaningful solutions so that these salmon, a national treasure of UCI, can, once again, achieve MSY/OY outcomes. This will fulfill the national mandate of MSY, incorporating OY as Congress has mandated in the MSA. It is difficult for the fishing industry to achieve the MSY/OY mandate of Congress when those involved have unique or conflicting personal or agency opinions.

This paper will deal with harvesting (food production) and biological (MSY/OY) issues.

There are a number of assumptions that are often made when managing salmon populations, not exhaustive, but rather obvious include:

1. Independent spawning events, year-to-year. Spawning events and subsequent progeny do interact with each other and prior years' fry.
2. Mathematical relationship between spawners, eggs, fry, smolt and returning adults.
3. Food – quantity, quality, temporal and spacial distribution and size is understandable and somewhat constant.
4. Parasites, disease, virus and bacterial effects are known and constant (no thresholds).
5. Predator-Prey complexes are understood and or constant.
6. Forcings and Perturbations: ecosystem stability has had no forcing functions or random perturbation
7. Stochastic: ecosystem stability may have stochastic changes that have no, or a minor, effect.

II. History of Area H: Cook Inlet

To get an appreciation of the overlapping, regulatory mechanisms, reference is made to Figures 1 – 4.

Area H is the original Federal Commercial Fisheries Bureau map from the late 1940s. Area H designation precedes Alaska Statehood in 1959. Shortly after 1959, alpha designations were incorporated statewide. The Central Region was designated as Area H – Cook Inlet, Area E – Prince William Sound and Area K – Kodiak.

In Area H, there were federally designated districts, Northern and Central, see Figures 1 & 2. The State also adopted these federal districts. Additionally, each district has sub-districts and individual fishing areas. Some of the sub-districts were created by the Federal Government and some new fishing areas were added by the State of Alaska.

The State, to further complicate these area designations, created management plans that have new/revised/combined fishing areas, see Figure 3. Then, if the foregoing isn't enough, the State has created new fishing areas called "Corridors" and Sections, see Figure 4.

One of the points to be made is that over the last 140 years, area designations, revisions and new fishing areas have made it impossible to separate harvest, economic and biological data relative to the EEZ boundary. Since the 1880s, this EEZ boundary has been non-existent in the management of this fishery. However, the Set Net fishery has been relatively stable during this same 140 year history.

Figure 1. Area H: Cook Inlet

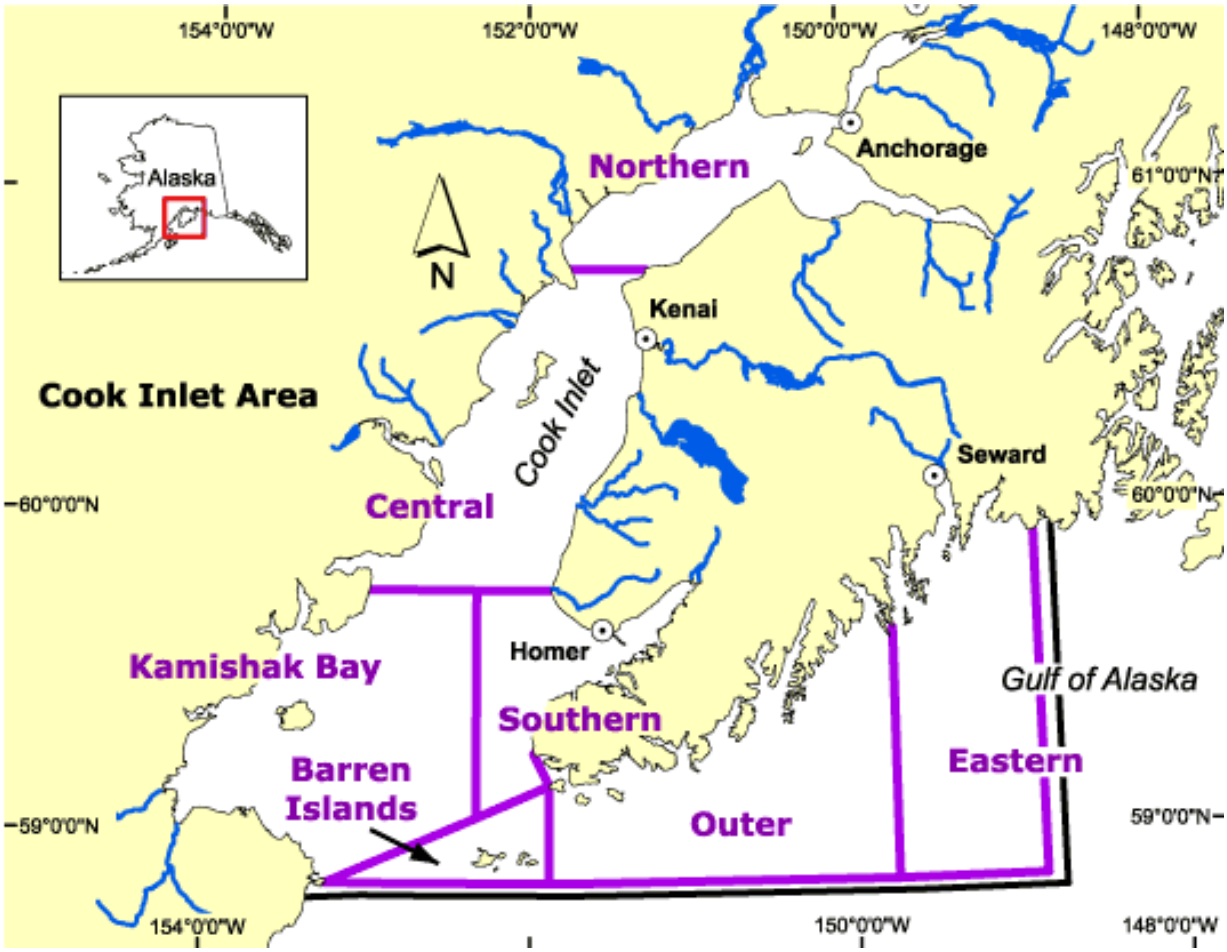


Figure 2. Central District Statistical Areas

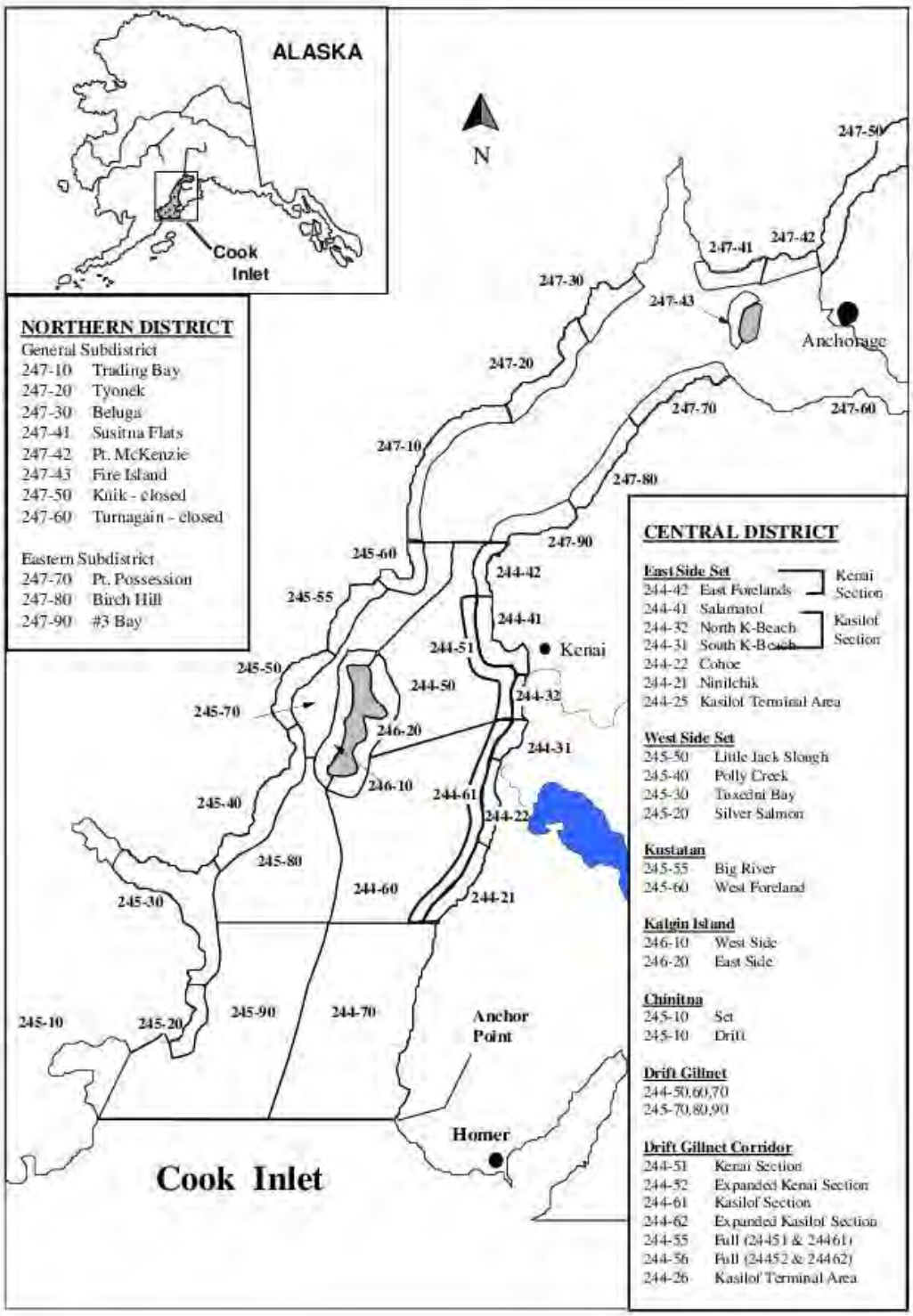


Figure 3. Drift Gillnet Area Waypoints

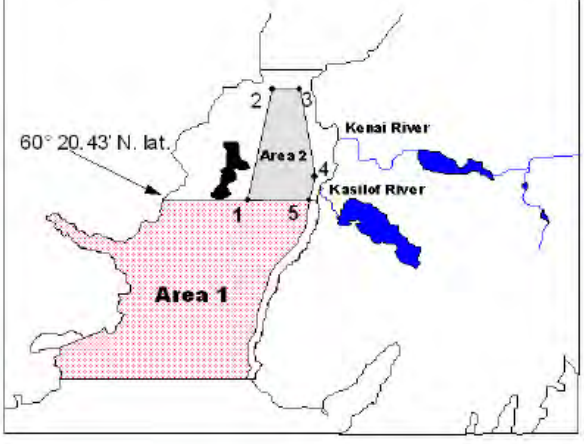
	Latitude	Longitude
N Boundary – Boulder Pt	60°46.39'	
NW Kenai Section	60°40.35'	151°26.33
SW Reg Kenai Section	60°27.10'	151°25.70'
SW Exp Kenai Section	60°27.10'	151°33.76'
Midpoint Reg Kasilof Section	60°12.75'	151°32.05'
SW Kasilof Section	60°04.02'	151°46.60'
Shell C Platform (approx.)	60°45.60'	151°30.40'
West Foreland (approx.)	60°42.75'	151°43.00'
East Foreland	60°43.20'	151°24.30'
Drift River Terminal	60°33.25'	152°08.00'
Harriet Point	60°23.70'	152°14.40'
Kalgin Buoy	60°04.70'	152°09.90'
NW AP/SW Exp Kasilof Section	60°04.02'	151°49.00'
SW Anchor Point Section	59°46.15'	152°15.80'
S Boundary – Anchor Pt Light	59°46.15'	151°52.06'

UCIDA presents the accompanying graphics as a convenience to drift fishermen. UCIDA accepts no liability for any actions where an individual makes a judgment based upon information provided by these graphics and coordinates.

Cook Inlet, Alaska ~ 2019

Drift Gillnet Area 1 & Area 2 Descriptions

AREA 2 DESCRIPTION	COORDINATES
1. Southwest Corner	60° 20.43' N. lat., 151° 54.83'W. long.
2. Northwest Corner	60° 41.08' N. lat., 151° 39.00'W. long.
3. Northeast Corner	60° 41.08' N. lat., 151° 24.00'W. long.
4. Blanchard Line Corridor Boundary	60° 27.10' N. lat., 151° 25.70'W. long.
5. Southeast Corner	60° 20.43' N. lat., 151° 28.55'W. long.



Drift Gillnet Areas 3 & Area 4

AREA 4 LOCATION	COORDINATES
A. SW Corner	A. 59° 46.15' N 153° 00.20' W
B. NW Corner	B. 60° 04.70' N 152° 34.74' W
C. NE Corner (Kalgin Buoy)	C. 60° 04.70' N 152° 09.90' W
D. SE Corner	D. 59° 46.15' N 152° 18.62' W

Area 3 – West Side
Those waters within one mile of mean lower low water (zero tide) South of a point on the West Foreland at 60° 42.70', 151° 42.30'

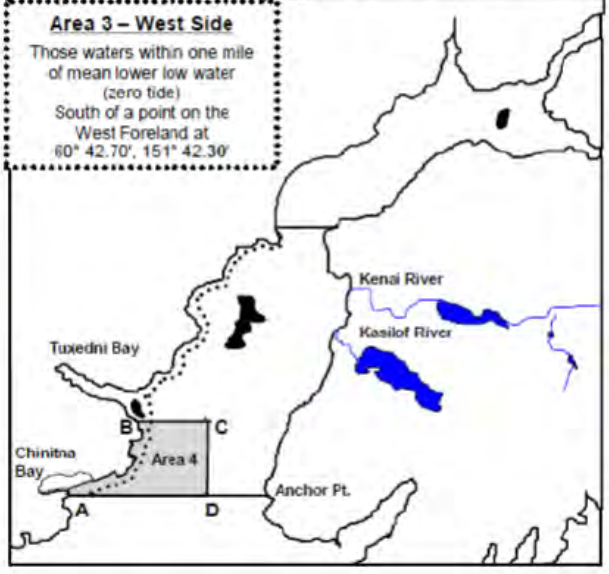
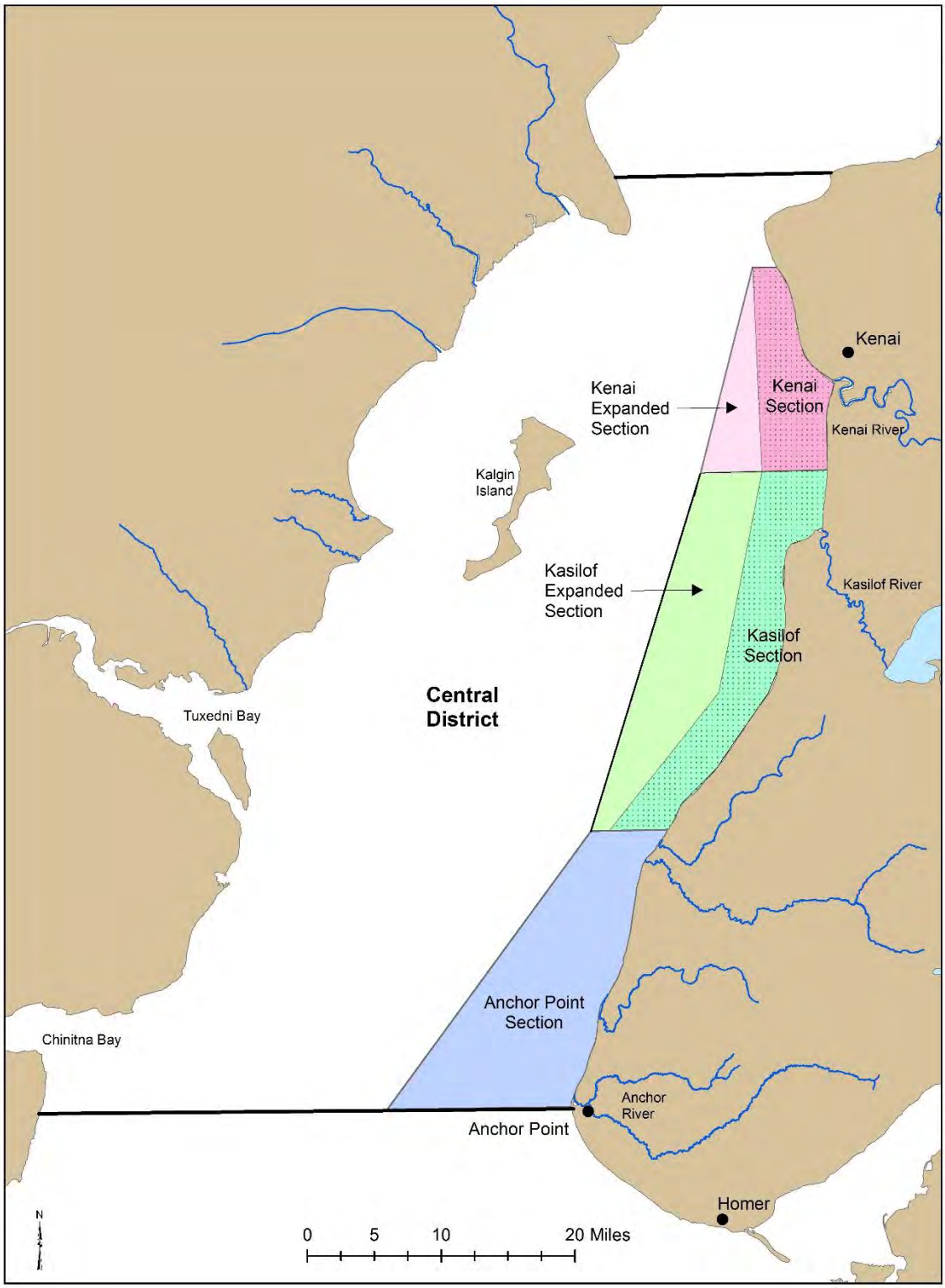


Figure 4. Central District Drift Gillnet Sections



III. KRLRS and KasR Sockeye Salmon Brood Tables, 1968 – 2019

Table 1A-1C, Figure 1A-1B

1. Brood Tables

Table 1A is one of many brood tables reported by ADFG. This particular brood table omits the fry abundance, weights, EZD, and Zoop Biomass. Table 1A does not subtract Hidden Lake enhanced spawners.

Table 1A: Explanation of Column Data, left to right:

A. YEAR OF THE SPAWNING EVENT, 1968-2019
B. SPAWNER ESTIMATES, not an actual fish count, only an index
C. AGE of returning adults 0.2 – 3.3, fourteen possible age combinations
The first number indicates the number of years in fresh water, the second indicates the number of years in saltwater. Lastly, there needs to be one (1) year added to arrive at the total age of the fish since being spawned and fertilized.
   - EXAMPLE: An adult returning salmon designated as a 0.2 would be 0 years in freshwater and 2 years in saltwater, then add the year it was spawned and fertilized. The life sequence would be: spawned & fertilized in August 2016, emerge from gravel in May 2017 and immediately go to the ocean (smolt). Spend 2 years in the ocean, from May 2017 until July 2019, return as an adult to its natal stream and spawn in August 2019. Total age 3 years from spawned egg to spawning eggs. The 3 year life cycle is designated, for the purposes of this brood table, as a 0.2 adult return. To get the time, number of years from spawned to spawning, add one year to all the adult return age class designations.
   - EXAMPLE: 1.2 is one year spawn, plus one year freshwater, plus two years in the ocean for a 4 year old sockeye.
   - EXAMPLE: 2.2 is one year spawn, plus two years in freshwater, plus two years in the ocean for a 5 year old sockeye.
   - EXAMPLE: 2.3 is one year spawn, plus two years in freshwater, plus three years in the ocean for a 6 year old sockeye.
D. RETURN is the additive sum of all the age classes that came back as adult sockeyes from that spawn or brood year.
E. THE RETURN PER SPAWNER is the number of adults returning from a particular spawning year. Expressed as a positive value, see 1968 – 8.3 returning adults per spawning adult. See Table 1A, year 1968.
   - EXAMPLE: 1968: 115,545 spawners produced 960,169 returning adults. Divide 960,169 by 115,545 for a total of 8.3 returning sockeye adults per spawning adult.

F. RUN is the total number of sockeye that returned in a calendar year. The run has multiple age classes from different brood, or spawn years.
G. TOTAL HARVEST is the number of sockeye harvested in that calendar year, by all user groups.
H. HARVEST RATE is the exploitation rates of the run for that year.
   - EXAMPLE: In 1975, the harvest rate was .62, or 62% of the run. The remaining .38, or 38% went on to spawn. Mean, 1975-2011, provides the reader and average number for the columns.
I. MEAN 1975-2011 is the adult return by age class. Located at bottom of page
   - EXAMPLE: The 1.2 age class has contributed 10.6% of the annual returns.
   - EXAMPLE: The 1.3 age class has contributed 60.5% of the annual returns.

2. Observations from the KR Brood Table 1975-2018

   A. From 2010 thru 2019, the number of spawners has exceeded or been near one million. See Table 16

3. Table 1B. KRLRS Salmon Brood Table

   Table 1B included the fall fry abundances, fall fry weight, EZD and Zoop Biomass.

   Explanation of column data:

   A. FALL FRY ABUNDANCE – age 0. These values are the fall fry estimates arrived at thru conducting hydro-acoustic surveys and net sampling techniques. These age 0 fry are from the prior years' spawning event.
   B. FALL FRY ABUNDANCE – age 1. The numeric values are the fall fry estimates.
   C. FALL FRY WEIGHTS – units are expressed in grams of body weight. Age 0 has the same age meaning as above. Table 1B.
   D. EZD in the euphotic zone depth recorded in meters using a 30cm black & white quadrant secchi disk.
   E. ZOOPLANKTON BIOMASS is the milligrams per cubic meter of water volume, expressed in mg/m^3. This value is an average of numerous samples taken throughout Skilak Lake.
   F. ADULT RETURN – Return per spawner, run, total harvest and harvest rate. (0.2 thru 3.3 age classes have the same meaning as described in Table 1A descriptions.)

      Discussion/Observation: In 1989, the largest number of spawners, 2,026,637 produced 24,601,413 age 0 and 387,673 age 1 fall fry. In 2011, 1,280,733 spawners produced 23,560,643 age 0 and 2,857,684 age 1 fall fry. There were 745,000 fewer spawners in 2011 as compared to 1989, yet the fry numbers are nearly the same. There were 745,000 sockeye lost to yield/harvest.

Brood year interactions. During the months of April, May and June, there are four brood years of fry competing for the same resources, food, space and escape cover in Skilak Lake.

Three different spawn years are in Skilak Lake during this April, May and June period. These fry are competing for every necessary resource. Both depredation and predation are occurring.

**** Nearly all of the models currently being used do not include a variable or mix of variables identified for this brood year interaction. Skilak and Kenai Lakes as well as the KR are both unique in the brood year interactions.**

4. In Table 1A, the 35-year (1975-2010) yearly average return for the 1.3 age class is 2,292,896 sockeye (highlighted in yellow for the reader's reference). That is to say, over the last 35 years of various escapement/spawner counts, this sockeye population has, on average, returned 2,292,896 age 1.3 (5 year old) sockeyes.

5. In 2018, the age 1.3 sockeye return was 699,561. (Highlighted in yellow for reader's reference). This is to say, that in 2018, 699,561 age 1.3 sockeyes returned in comparison to 35-year average return of 2,292,896. The age 1.3 return of 699,561 is 30.5 % of the 35-year average of 2,292,896. In a less positive light, 1,593,355, or 70%, of the 1.3 age class were simply missing in 2018.

6. In 2018, the 2.3 age class, or 6 year old sockeye return was 69,055. The 35-year average return is 766,088 (highlighted in yellow for reader's ease). In 2018, 766,088 sockeyes were expected, however, 69,055 were determined to be in the return. There were 697,073, or 91%, of the 2.3 age class of sockeyes missing in the 2018 return.

7. In 2018, there were two significant age class failures: 1.3 and 2.3. Together, these two age class failures represent 2,300,000 sockeye salmon that failed to return, when compared to the 35-year historic averages.

8. In further examination of Table 1A, note the erratic age classes: 0.2, 0.2, 0.4, 3.1, 3.2, 2.4 and 3.3. These age classes potentially provide ecological plasticity and ecological diversity. In recent years of over one million spawners, these age classes have nearly disappeared in the KRLRS runs.

9. It is unknown how the above diminished age classes are distributed in the KR Watershed. It needs to be noted that some tributary waterways have had no, or very little, spawning activity for over a decade. The ecological roles, spacial or temporal distributions of these diminished age classes are not known. The point being, some discrete stocks may have already been extirpated from UCI.

10. Table 1C. Kasilof sockeye salmon brood table.

    It is interesting to note that in this brood table, there are two age classes that are 34% and 32% of the runs, ages 1.4 and 1.3 respectively, while age 2.2 contributes 23% of the annual run. Collectively, these three age classes contribute 89% of the annual run. There are no missing sockeye age classes in the Kasilof River as is seen in the Kenai River.

Table 1A.	Late-run Kenai sockeye salmon brood table. Note: Hidden enhanced was not subtracted to estimate spawners.																			
Brood		Adult Return														Return	Return per		Total	Harvest
Year	Spawners	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3		Spawner	Run	Harvest	Rate
1968	115,545			0	169,641	894	0	657,176	77,265	0	1,456	53,737	0	0	0	960,169	8.3			
1969	72,901	0	894	0	37,929	7,740	0	209,347	94,190	0	10,719	66,771	3,356	0	0	430,947	5.9			
1970	101,794	0	1,548	0	65,999	6,143	0	195,322	136,422	0	0	136,620	8,869	0	0	550,923	5.4			
1971	406,714	0	4,472	0	57,003	10,019	0	338,382	299,954	0	10,340	266,227	0	0	0	986,397	2.4			
1972	431,058	0	5,738	0	564,078	17,738	0	1,656,310	182,117	0	1,140	120,729	0	0	0	2,547,851	5.9			
1973	507,072	0	8,966	0	153,573	0	0	1,825,724	87,313	0	0	50,410	0	0	0	2,125,986	4.2			
1974	209,836	0	0	0	59,726	1,710	0	488,947	94,517	0	0	143,167	0	0	0	788,067	3.8			
1975	184,262	0	0	0	162,573	0	0	623,465	209,203	0	0	60,132	0	0	0	1,055,373	5.7	485,350	301,088	0.62
1976	507,440	0	1,391	0	457,669	6,092	0	804,033	95,053	1,142	2,930	136,815	0	888	0	1,506,012	3.0	1,374,607	867,167	0.63
1977	951,038	0	41,798	0	212,799	3,251	0	2,421,274	67,308	0	18,530	347,053	0	0	607	3,112,620	3.3	2,268,567	1,317,529	0.58
1978	511,781	0	0	0	136,820	0	0	3,250,866	67,217	0	38,048	285,747	6,343	0	0	3,785,040	7.4	2,096,342	1,584,561	0.76
1979	373,810	0	1,295	29,452	259,051	4,699	0	565,799	149,644	0	11,216	292,947	4,810	2,125	0	1,321,039	3.5	797,838	424,028	0.53
1980	615,382	0	3,655	18,199	218,853	2,613	690	1,597,876	271,442	0	14,942	545,024	0	0	0	2,673,295	4.3	1,481,394	866,012	0.58
1981	535,524	825	0	7,818	301,195	2,217	0	1,244,961	295,294	0	6,783	605,230	0	0	0	2,464,323	4.6	1,176,410	640,886	0.54
1982	755,672	4,413	1,392	36,636	803,813	1,950	2,978	7,661,502	297,352	0	23,314	744,869	0	9,482	0	9,587,700	12.7	2,766,442	2,010,770	0.73
1983	792,765	1,216	0	22,901	795,150	0	0	4,465,204	262,695	0	49,747	3,878,906	0	10,975	0	9,486,794	12.0	3,981,411	3,188,646	0.80
1984	446,297	0	0	2,383	547,407	4,517	0	1,662,723	701,759	7,674	19,946	905,800	6,291	609	0	3,859,109	8.6	1,286,678	840,381	0.65
1985	573,761	0	4,130	4,862	314,370	20,065	0	1,568,911	297,302	0	4,858	372,746	678	0	0	2,587,921	4.5	2,496,016	1,922,255	0.77
1986	555,207	1,727	4,959	15,702	390,370	3,222	2,037	834,890	140,049	0	11,395	752,587	0	8,200	0	2,165,138	3.9	2,945,961	2,390,754	0.81
1987	2,011,657	0	5,664	48,620	771,535	4,509	0	7,009,121	300,271	0	105,416	2,096,054	1,114	14,322	0	10,356,627	5.1	9,391,896	7,380,239	0.79
1988	1,212,865	405	1,146	0	150,926	7,079	0	1,491,076	292,223	596	21,861	573,931	2,853	4,544	0	2,546,639	2.1	6,054,519	4,841,654	0.80
1989	2,026,619	3,919	0	16,807	352,278	77,839	0	2,469,188	555,383	1,407	17,207	948,211	0	16,440	0	4,458,679	2.2	6,656,274	4,629,655	0.70
1990	794,616	1,133	3,459	5,931	222,285	13,834	0	771,248	189,043	0	10,973	283,961	2,423	3,405	0	1,507,693	1.9	3,224,183	2,429,567	0.75
1991	727,146	1,592	4,331	10,275	662,798	22,619	0	2,764,304	251,886	1,839	17,583	689,932	2,928	2,958	3,030	4,436,074	6.1	2,182,082	1,454,936	0.67
1992	1,207,382	0	2,610	8,468	345,350	10,423	0	3,442,905	140,639	0	19,992	293,917	2,775	4,497	0	4,271,576	3.5	8,235,298	7,027,916	0.85
1993	997,693	0	0	14,950	288,883	7,055	0	816,311	196,799	1,642	12,461	330,508	14,864	6,306	0	1,689,779	1.7	4,446,195	3,448,502	0.78
1994	1,309,669	0	1,762	0	484,075	77,318	0	1,727,282	439,229	1,822	17,644	291,648	9,532	0	2,322	3,052,634	2.3	3,886,918	2,577,249	0.66
1995	776,847	0	3,402	8,637	429,006	16,262	0	1,039,246	154,484	0	15,060	230,897	0	2,266	610	1,899,870	2.4	2,628,555	1,851,708	0.70
1996	963,108	0	0	13,177	254,663	26,314	0	1,532,580	157,933	0	25,384	246,751	2,554	2,402	0	2,261,757	2.3	3,696,067	2,732,959	0.74
1997	1,365,676	0	1,765	0	230,281	16,857	0	2,141,616	327,086	1,220	16,829	873,668	0	10,985	6,095	3,626,402	2.7	4,610,042	3,244,366	0.70
1998	929,090	0	3,740	3,017	701,989	12,436	0	2,710,969	314,136	1,356	30,290	677,566	6,351	3,477	0	4,465,328	4.8	1,902,219	973,129	0.51
1999	949,276	1,833	0	11,713	499,236	4,232	0	3,957,730	426,477	0	18,160	807,582	14,996	10,825	2,279	5,755,063	6.1	2,984,568	2,035,292	0.68
2000	696,899	4,396	634	19,641	562,552	7,454	0	4,988,074	123,670	0	67,227	1,253,952	2,279	23,772	4,682	7,058,333	10.1	1,814,779	1,117,880	0.62
2001	738,229	0	0	12,693	133,740	4,837	0	1,102,407	103,974	0	52,226	279,858	4,682	3,540	0	1,697,957	2.3	2,189,670	1,451,441	0.66
2002	1,126,616	1,906	38	13,104	281,726	10,825	0	2,837,840	156,677	0	95,584	227,610	0	3,403	0	3,628,712	3.2	3,466,762	2,340,146	0.68
2003	1,402,292	0	0	4,682	213,585	23,772	0	1,267,159	150,560	0	20,902	235,750	3,403	0	0	1,919,813	1.4	4,439,571	3,037,279	0.68
2004	1,690,547	0	0	7,289	315,905	14,785	0	1,764,966	239,153	0	8,272	858,115	4,316	8,142	15,658	3,236,600	1.9	5,705,141	4,014,594	0.70
2005	1,654,003	0	0	3,403	148,984	3,403	0	1,598,266	168,314	0	23,800	2,857,849	0	0	0	4,804,018	2.9	6,109,173	4,455,170	0.73
2006	1,892,090	0	7,048	4,316	841,212	101,060	0	2,438,848	340,712	0	79,654	1,172,388	0	21,043	0	5,006,280	2.6	2,848,597	956,507	0.34
2007	964,243	4,316	8,272	0	498,542	71,399	0	2,151,603	739,778	0	21,043	876,917	0	0	6,808	4,378,678	4.5	3,601,777	2,637,535	0.73
2008	708,805	0	8,142	0	591,917	11,447	0	1,987,848	261,588	0	0	519,456	0	0	0	3,380,397	4.8	2,082,431	1,373,626	0.66
2009	848,117	0	22,894	0	438,640	14,150	0	2,160,200	246,112	0	14,894	903,197	0	9,368	0	3,809,455	4.5	2,430,414	1,582,297	0.65
2010	1,038,302	0	6,893	13,616	416,994	27,232	0	1,671,965	314,687	0	21,515	1,121,581	0	28,965	1,939	3,625,388	3.5	3,596,458	2,558,156	0.71
2011	1,280,733	0	13,616	0	895,559	18,713	0	2,119,496	185,225	0	45,340	1,221,727	3,113	9,777	1,248	4,513,815	3.5	6,263,091	4,982,359	0.80
2012	1,212,921	0	0	2,230	240,206	10,283	0	1,057,626	75,078	0	29,565	69,055	0			1,484,043		4,769,681	3,556,760	0.75
2013	980,208	0	1,938	992	147,848	8,094	0	699,561	220,225	0						1,078,658		3,628,121	2,647,914	0.73
2014	1,218,342	1,530	3,468	0	790,594	44,325												3,404,034	2,185,693	0.64
2015	1,400,047	1,050	2,598															3,819,016	2,418,969	0.63
2016	1,118,155																	3,711,842	2,593,688	0.70
2017	1,056,773																	2,595,720	1,538,947	0.59
2018	831,096																	1,867,998	1,036,902	0.56
Mean (1975-2010)	967,631	769	3,901	9,953	401,033	17,660	158	2,292,896	262,365	519	25,991	766,088	2,589	5,915	1,223	3,791,059	4.4	3,370,572	2,402,941	0.68
Percentage of Return					**11%**			**61%**	**7%**			**20%**								
Values less than 1% not shown																				
3.1 + 3.2 + 3.3 less than 1%														Data Source: ADF&G						

Table 1B. Late-run Kenai sockeye salmon brood table. Note: Hidden enhanced was not subtracted to estimate spawners.

Brood		Fall Fry Abundance		Fall Fry Weight		EZD	Zoop Biomass	Smolt Abundance		Smolt Weight		Adult Return															Return per		Total	Harvest
Year	Spawners	Age 0	Age 1	Age 0	Age 1	(m)	(mg/m2)	Age 1	Age 2	Age 1	Age 2	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	3.1	1.4	2.3	3.2	2.4	3.3	Return	Spawner	Run	Harvest	Rate
1968	115,545													0	169,641	894	0	657,176	77,265	0	1,456	53,737	0	0	0	960,169	8.3			
1969	72,901											0	894	0	37,929	7,740	0	209,347	94,190	0	10,719	66,771	3,356	0	0	430,947	5.9			
1970	101,794											0	1,548	0	65,999	6,143	0	195,322	136,422	0	0	136,620	8,869	0	0	550,923	5.4			
1971	406,714											0	4,472	0	57,003	10,019	0	338,382	299,954	0	10,340	266,227	0	0	0	986,397	2.4			
1972	431,058											0	5,738	0	564,078	17,738	0	1,656,310	182,117	0	1,140	120,729	0	0	0	2,547,851	5.9			
1973	507,072											0	8,966	0	153,573	0	0	1,825,724	87,313	0	0	50,410	0	0	0	2,125,986	4.2			
1974	209,836											0	0	0	59,726	1,710	0	488,947	94,517	0	0	143,167	0	0	0	788,067	3.8			
1975	184,262											0	0	0	162,573	0	0	623,465	209,203	0	0	60,132	0	0	0	1,055,373	5.7	485,350	301,088	0.62
1976	507,440											0	1,391	0	457,669	6,092	0	804,033	95,053	1,142	2,930	136,815	0	888	0	1,506,012	3.0	1,374,607	867,167	0.63
1977	951,038											0	41,798	0	212,799	3,251	0	2,421,274	67,308	0	18,530	347,053	0	0	607	3,112,620	3.3	2,268,567	1,317,529	0.58
1978	511,781											0	0	0	136,820	0	0	3,250,866	67,217	0	38,048	285,747	6,343	0	0	3,785,040	7.4	2,096,342	1,584,561	0.76
1979	373,810											0	1,295	29,452	259,051	4,699	0	565,799	149,644	0	11,216	292,947	4,810	2,125	0	1,321,039	3.5	797,838	424,028	0.53
1980	615,382											0	3,655	18,199	218,853	2,613	690	1,597,876	271,442	0	14,942	545,024	0	0	0	2,673,295	4.3	1,481,394	866,012	0.58
1981	535,524											825	0	7,818	301,195	2,217	0	1,244,961	295,294	0	6,783	605,230	0	0	0	2,464,323	4.6	1,176,410	640,886	0.54
1982	755,672											4,413	1,392	36,636	803,813	1,950	2,978	7,661,502	297,352	0	23,314	744,869	0	9,482	0	9,587,700	12.7	2,766,442	2,010,770	0.73
1983	792,765											1,216	0	22,901	795,150	0	0	4,465,204	262,695	0	49,747	3,878,906	0	10,975	0	9,486,794	12.0	3,981,411	3,188,646	0.80
1984	446,297		2,536,536									0	0	2,383	547,407	4,517	0	1,662,723	701,759	7,674	19,946	905,800	6,291	609	0	3,859,109	8.6	1,286,678	840,381	0.65
1985	573,761	22,217,486	0	1.7		8.9	560.6			4.5		0	4,130	4,862	314,370	20,065	0	1,568,911	297,302	0	4,858	372,746	678	0	0	2,587,921	4.5	2,496,016	1,922,255	0.77
1986	555,207	10,182,400	94,089			8.3	615.4					1,727	4,959	15,702	390,370	3,222	2,037	834,890	140,049	0	11,395	752,587	0	8,200	0	2,165,138	3.9	2,945,961	2,390,754	0.81
1987	2,011,657	37,071,211	11,066,228	0.9	2.8	12.4	586.0			2.1	3.2	0	5,664	48,620	771,535	4,509	0	7,009,121	300,271	0	105,416	2,096,054	1,114	14,322	0	10,356,627	5.1	9,391,896	7,380,239	0.79
1988	1,212,865	13,987,502	782,393	1.2	4.0	10.5	693.2			3.0	4.9	405	1,146	0	150,926	7,079	0	1,491,076	292,223	596	21,861	573,931	2,853	4,544	0	2,546,639	2.1	6,054,519	4,841,654	0.80
1989	2,026,619	24,601,413	387,673	1.3	4.7	5.5	495.4			3.3	5.9	3,919	0	16,807	352,278	77,839	0	2,469,188	555,383	1,407	17,207	948,211	0	16,440	0	4,458,679	2.2	6,656,274	4,629,655	0.70
1990	794,616	7,126,711	104,391	1.5	7.0	6.3	368.8			3.9	9.0	1,133	3,459	5,931	222,285	13,834	0	771,248	189,043	0	10,973	283,961	2,423	3,405	0	1,507,693	1.9	3,224,183	2,429,567	0.75
1991	727,146	9,540,536	1,732,650	1.8	4.5	9.2	557.9			4.8	5.6	1,592	4,331	10,275	662,798	22,619	0	2,764,304	251,886	1,839	17,583	689,932	2,928	2,958	3,030	4,436,074	6.1	2,182,082	1,454,936	0.67
1992	1,207,382	35,687,389	1,280,854	1.2	3.6	7.0	761.9			3.0	4.3	0	2,610	8,468	345,350	10,423	0	3,442,905	140,639	0	19,992	293,917	2,775	4,497	0	4,271,576	3.5	8,235,298	7,027,916	0.85
1993	997,693	11,159,398	473,111	1.4	5.7	5.6	428.2			3.6	7.2	0	0	14,950	288,883	7,055	0	816,311	196,799	1,642	12,461	330,508	14,864	6,306	0	1,689,779	1.7	4,446,195	3,448,502	0.78
1994	1,309,669	8,812,895	368,644	1.7	4.0	8.0	507.0			4.5	4.9	0	1,762	0	484,075	77,318	0	1,727,282	439,229	1,822	17,644	291,648	9,532	0	2,322	3,052,634	2.3	3,886,918	2,577,249	0.66
1995	776,847	5,582,452	239,582	1.6	3.1	3.5	378.6			4.2	3.7	0	3,402	8,637	429,006	16,262	0	1,039,246	154,484	0	15,060	230,897	0	2,266	610	1,899,870	2.4	2,628,555	1,851,708	0.70
1996	963,108	25,316,385	2,459,746	0.9	1.7	5.5	342.5			2.1	1.7	0	0	13,177	254,663	26,314	0	1,532,580	157,933	0	25,384	246,751	2,554	2,402	0	2,261,757	2.3	3,696,067	2,732,959	0.74
1997	1,365,676	21,193,560	629,011	0.7	4.0	4.2	273.4			1.5	4.9	0	1,765	0	230,281	16,857	0	2,141,616	327,086	1,220	16,829	873,668	0	10,985	6,095	3,626,402	2.7	4,610,042	3,244,366	0.70
1998	929,090	8,330,506	472,469	1.3	4.1	7.4	421.7			3.3	5.0	0	3,740	3,017	701,989	12,436	0	2,710,969	314,136	1,356	30,290	677,566	6,351	3,477	0	4,465,328	4.8	1,902,219	973,129	0.51
1999	949,276	19,950,396	520,673	1.2	3.2	6.7	489.8			3.0	3.8	1,833	0	11,713	499,236	4,232	0	3,957,730	426,477	0	18,160	807,582	14,996	10,825	2,279	5,755,063	6.1	2,984,568	2,035,292	0.68
2000	696,899	22,509,586	3,342,145	1.0	2.6	8.6	386.3			2.4	2.9	4,396	634	19,641	562,552	7,454	0	4,988,074	123,670	0	67,227	1,253,952	2,279	23,772	4,682	7,058,333	10.1	1,814,779	1,117,880	0.62
2001	738,229	8,748,692	434,724	1.0	2.8	9.0	535.5			2.4	3.2	0	0	12,693	133,740	4,837	0	1,102,407	103,974	0	52,226	279,858	4,682	3,540	0	1,697,957	2.3	2,189,670	1,451,441	0.66
2002	1,126,616	12,750,428	711,475	1.3	2.1	4.1	344.9			3.3	2.3	1,906	38	13,104	281,726	10,825	0	2,837,840	156,677	0	95,584	227,610	0	3,403	0	3,628,712	3.2	3,466,762	2,340,146	0.68
2003	1,402,292	27,574,335	106,971	0.6	1.5	5.9	407.1	25,676,000	269,000	1.1	1.8	0	0	4,682	213,585	23,772	0	1,267,159	150,560	0	20,902	235,750	3,403	0	0	1,919,813	1.4	4,439,571	3,037,279	0.68
2004	1,690,547	41,936,000	7,859,788	0.5	2.0	6.0	489.9	10,000,000	5,000,000	1.3	1.9	0	0	7,289	315,905	14,785	0	1,764,966	239,153	0	8,272	858,115	4,316	8,142	15,658	3,236,600	1.9	5,705,141	4,014,594	0.70
2005	1,654,003	29,563,865	8,945,317	0.7	1.8	6.6	592.6	10,000,000	7,195,124	1.3	4.5	0	0	3,403	148,984	3,403	0	1,598,266	168,314	0	23,800	2,857,849	0	0	0	4,804,018	2.9	6,109,173	4,455,170	0.73
2006	1,892,090	9,138,282	186,842	0.9	4.0	5.4	563.9	3,421,732	5,489,669	3.0	5.0	0	7,048	4,316	841,212	101,060	0	2,438,848	340,712	0	79,654	1,172,388	0	21,043	0	5,006,280	2.6	2,848,597	956,507	0.34
2007	964,243	20,154,463	688,401	1.3	4.8	10.9	834.7	2,457,046	7,643,437	2.7	6.0	4,316	8,272	0	498,542	71,399	0	2,151,603	739,778	0	21,043	876,917	0	0	6,808	4,378,678	4.5	3,601,777	2,637,535	0.73
2008	708,805	10,755,096	460,689	1.6	3.4	9.4	987.4	6,321,696	4,773,071	5.1	4.1	0	8,142	0	591,917	11,447	0	1,987,848	261,588	0	0	519,456	0	0	0	3,380,397	4.8	2,082,431	1,373,626	0.66
2009	848,117	17,778,081	3,796,914	1.2	3.4	6.1	509.6	11,005,963	7,630,742	2.7	4.1	0	22,894	0	438,640	14,150	0	2,160,200	246,112	0	14,894	903,197	0	9,368	0	3,809,455	4.5	2,430,414	1,582,297	0.65
2010	1,038,302	11,809,877	5,442,363	1.2	3.6	7.8	573.2	8,301,983	5,591,152	2.6	4.2	0	6,893	13,616	416,994	27,232	0	1,671,965	314,687	0	21,515	1,121,581	0	28,965	1,939	3,625,388	3.5	3,596,458	2,558,156	0.71
2011	1,280,733	23,560,643	2,857,684	1.2	3.3	6.9	778.8	8,326,589		2.5		0	13,616	0	895,559	18,713	0	2,119,496	185,225	0	45,340	1,221,727	3,113	9,777	1,248	4,513,815	3.5	6,263,091	4,982,359	0.80
2012	1,212,921	9,515,604	1,402,592	1.1	2.7	5.4	391.7					0	0	2,230	240,206	10,283	0	1,057,626	75,078	0	29,565	69,055	0	5,062	1,029	1,490,134	1.2	4,769,681	3,556,760	0.75
2013	980,208	16,200,661	996,398	0.8	2.4	4.3	507.1					0	1,938	992	147,848	8,094	0	699,561	220,225	0								3,628,121	2,647,914	0.73
2014	1,218,342	22,171,908	1,405,944	1.0	2.5							1,530	3,468	0	790,594	44,325												3,404,034	2,185,693	0.64
2015	1,400,047	26,128,228	3,751,209	0.8	3.2							1,050	2,598															3,819,016	2,418,969	0.63
2016	1,118,155	19,730,476	4,997,740	1.1	4.2																							3,711,842	2,593,688	0.70
2017	1,056,773	14,383,343		1.4																								2,595,720	1,538,947	0.59
2018	831,096																											1,867,998	1,036,902	0.56
Mean (1968-2018)	897,606	18,634,524	2,450,467	1.1	3.1	6.6	515.8	9,501,223	5,449,024			644	3,908	7,692	374,879	16,201	124	1,995,481	236,901	406	22,983	660,169	2,412	5,062	1,029	3,352,720	4	3,440,912	2,442,434	0.68
Percentage of Return	Values less than 1% not shown														11%			61%	7%		1%	20%								
	Genetic estimates of stock-specific harvests.																													
	Preliminary age composition catch allocation model estimates of stock-specific harvests.																													
	1968-2012 average was used as an estimate in order to complete 2012 brood year for the EG analysis in 2019																											Data Source: ADF&G		

Table 1C. Kasilof sockeye salmon brood table.

Brood		Smolt Abundance			Smolt Weight (g)		Adult Return														Return per		Total	Harvest
Year	Spawners	Age 1	Age 2	Total	Age 1	Age 2	0	1	0	1	2	0	1	2	3	1	2	3	2	3	Return	Spawner	Run	Harvest	Rate
1968	90,958				.	.			0	86,418	115	0	42,653	14,079	0	0	2,588	0	0	0	145,853	1.6			
1969	46,964				.	.	0	231	0	12,833	204	0	85,255	6,389	0	0	5,484	0	522	0	110,919	2.4			
1970	38,797				.	.	0	0	0	38,507	299	0	8,744	69,392	0	0	51,297	0	0	0	168,239	4.3			
1971	91,887				.	.	0	0	0	36,811	268	0	107,438	101,308	0	0	49,258	0	0	0	295,083	3.2			
1972	115,486				.	.	49	494	0	115,995	0	0	103,393	114,377	0	0	38,332	0	0	0	372,639	3.2			
1973	40,880				.	.	0	473	0	119,001	2,433	0	176,558	38,748	0	0	4,521	0	0	0	341,734	8.4			
1974	71,540				.	.	0	2,753	0	206,299	0	0	80,966	34,636	0	1,350	16,890	0	0	0	342,896	4.8			
1975	48,884				.	.	0	0	0	180,735	0	0	111,456	20,631	0	0	8,677	0	0	0	321,500	6.6	121,242	72,358	0.60
1976	142,058				.	.	440	1,801	0	246,019	0	0	368,132	33,934	0	0	41,369	0	0	0	691,693	4.9	377,033	234,975	0.62
1977	158,410				.	.	0	4,087	0	149,225	0	0	358,492	51,558	0	0	46,809	0	0	0	610,171	3.9	391,215	232,805	0.60
1978	119,165		401,000		.	5.1	0	0	0	172,123	465	0	364,997	104,687	0	0	53,408	0	0	0	695,679	5.8	459,937	340,772	0.74
1979	155,527	1,865,000	1,010,000	2,875,000	2.8	4.8	0	2,465	0	407,690	0	0	204,991	112,060	0	2,937	52,479	0	1,199	0	783,821	5.0	303,099	147,572	0.49
1980	188,314	4,140,000	1,328,000	5,468,000	2.9	5.0	0	0	0	264,207	577	0	485,118	258,171	0	3,504	71,144	0	0	0	1,082,721	5.7	400,433	212,119	0.53
1981	262,271	6,817,000	2,869,000	9,686,000	2.9	5.2	0	0	0	854,061	1,742	0	679,270	220,031	0	0	95,613	236	2,489	0	1,853,442	7.1	559,968	297,697	0.53
1982	184,204	11,390,000	4,001,000	15,391,000	3.3	4.3	0	2,187	0	529,984	267	0	345,805	266,602	0	1,718	141,028	0	0	0	1,287,592	7.0	626,472	442,268	0.71
1983	215,730	12,580,000	2,223,000	14,803,000	2.6	4.6	748	0	0	348,596	484	0	353,642	239,227	0	244	65,366	0	0	0	1,008,308	4.7	924,183	708,453	0.77
1984	238,413	5,268,000	3,540,000	8,808,000	2.6	3.4	0	709	0	255,882	382	0	163,788	252,891	0	1,476	90,632	934	0	0	766,694	3.2	635,243	396,830	0.62
1985	512,827	1,074,000	2,549,000	3,623,000	2.2	3.6	0	143	0	62,021	129	0	133,572	123,311	0	769	49,795	0	0	0	369,740	0.7	1,656,695	1,143,868	0.69
1986	283,054	2,056,000	3,009,000	5,065,000	2.5	4.1	0	0	596	101,750	0	0	232,645	189,244	0	0	150,016	0	0	0	674,252	2.4	1,506,147	1,223,093	0.81
1987	256,707	3,109,000	3,521,000	6,630,000	2.7	4.4	0	656	775	133,031	162	0	330,225	248,546	0	0	174,387	0	0	0	887,782	3.5	1,058,045	801,338	0.76
1988	204,336	3,961,000	2,320,000	6,281,000	2.6	4.0	214	0	0	159,892	738	0	197,694	173,302	0	0	133,336	0	0	0	665,176	3.3	994,511	790,175	0.79
1989	164,952	2,353,000	1,973,000	4,326,000	2.6	5.3	0	0	0	63,863	590	0	189,085	145,680	0	0	113,166	0	0	0	512,385	3.1	544,439	379,487	0.70
1990	147,663	2,058,000	1,833,000	3,891,000		4.2	0	567	0	147,703	0	0	110,369	174,950	0	0	68,223	0	0	0	501,812	3.4	452,927	305,264	0.67
1991	233,646	7,189,000	1,717,000	8,906,000	2.6	4.9	0	0	0	222,798	0	0	414,977	205,588	0	0	102,874	0	0	0	946,237	4.0	606,635	372,989	0.61
1992	188,819	7,174,000	2,342,000	9,516,000	2.8	4.4	0	386	0	185,940	0	0	453,802	122,402	0	1,496	51,892	0	0	0	815,919	4.3	889,417	700,598	0.79
1993	151,801	4,593,000	1,041,000	5,634,000	2.8	4.7	0	0	0	145,659	0	0	155,518	125,775	0	1,801	92,168	441	0	0	521,361	3.4	610,403	458,602	0.75
1994	218,826	3,924,000	1,617,000	5,541,000	3.2	5.2	0	0	0	195,201	1,883	0	297,531	196,873	0	0	74,041	0	0	0	765,529	3.5	615,804	396,978	0.64
1995	202,428	2,971,000	942,000	3,913,000	3.9	5.4	682	388	0	237,182	373	0	190,926	56,162	0	1,141	42,235	1,019	491	0	530,599	2.6	621,669	419,241	0.67
1996	264,511	3,654,000	1,026,000	4,680,000	3.8	5.8	0	0	0	208,276	1,202	0	377,605	109,373	0	1,958	53,153	0	0	0	751,566	2.8	874,728	610,217	0.70
1997	263,780	3,474,000	804,000	4,278,000	3.9	5.0	0	403	0	217,593	707	0	279,338	118,996	0	0	65,542	0	0	0	682,580	2.6	824,737	560,957	0.68
1998	259,045	3,496,000	2,025,000	5,521,000	3.2	5.1	0	1,386	0	206,816	4,941	0	264,189	248,417	0	1,194	65,365	0	0	0	792,308	3.1	532,835	273,790	0.51
1999	312,481	3,217,000	2,121,000	5,338,000	3.3	5.2	0	1,542	0	279,767	1,343	0	224,666	511,584	0	0	139,448	538	0	0	1,158,888	3.7	826,369	513,888	0.62
2000	263,631	1,379,000	3,328,000	4,707,000	3.7	7.2	0	2,972	0	614,279	1,272	0	468,763	191,547	0	0	109,599	0	0	0	1,388,432	5.3	531,010	267,379	0.50
2001	318,735	9,572,000	2,245,760	11,817,760	4.8	6.6	966	1,287	0	420,057	1,918	0	573,939	515,285	0	0	114,216	0	0	0	1,627,669	5.1	751,059	432,324	0.58
2002	235,732	4,127,860	1,010,152	5,138,012	4.3	6.4	0	4,747	0	663,235	7,708	0	292,890	222,994	0	0	58,449	0	0	0	1,250,022	5.3	667,235	431,503	0.65
2003	353,526	10,213,764	255,924	10,469,688	3.9	7.4	0	10,152	0	517,851	1,852	0	603,710	282,320	0	1,989	142,431	0	0	0	1,560,304	4.4	862,230	508,704	0.59
2004	523,653	2,587,676	710,558	3,298,234	4.5	5.9	0	7,406	0	622,458	2,836	0	501,436	298,674	0	0	58,286	0	0	0	1,491,097	2.8	1,420,613	896,960	0.63
2005	360,065	3,029,221	1,137,780	4,167,001	3.5	7.1	0	5,672	0	128,287	24,088	0	255,738	255,738	0	0	209,155	0	0	0	878,678	2.4	1,227,018	866,953	0.71
2006	389,645	4,280,220	1,517,880	5,798,100	3.9	6.8	0	8,066	0	226,513	12,034	0	249,075	207,535	0	0	41,424	0	0	0	744,647	1.9	1,879,917	1,490,272	0.79
2007	365,184	2,096,120	240,000	2,336,120	4.7	9.0	1,719	8,596	0	110,448	21,782	0	66,847	237,982	0	0	37,013	0	0	0	484,387	1.3	1,157,209	792,025	0.68
2008	327,018	1,760,000			5.0	12.0	0	11,741	0	215,278	28,080	0	268,221	318,776	0	0	31,544	0	0	0	873,640	2.7	1,575,445	1,248,427	0.79
2009	326,283		2,488,632		5.9	12.3	0	42,815	0	346,060	11,636	0	324,152	227,315	0	0	83,653	0	0	0	1,035,630	3.2	1,104,972	778,689	0.70
2010	295,265	5,288,344	3,047,410		5.8	9.6	1,906	19,460	0	467,313	29,448	0	409,452	415,209	0	720	32,518	639	929	0	1,377,594	4.7	818,623	523,358	0.64
2011	245,721	4,039,590			5.4		4,191	18,970	0	246,611	12,219	0	97,688	188,641	0	954	117,098	0	0	0	686,373	2.8	809,736	564,015	0.70
2012	374,523		4,522,960			7.6	2,232	5,522	0	143,497	9,406	0	152,743	191,458	0	0	4,579	0	128	0	509,565	1.4	632,426	257,903	0.41
2013	489,654	5,309,562			5.2		0	7,664	0	284,613	32,073	0	73,061	242,906	0								1,003,071	513,417	0.51
2014	440,192		901,464			6.6	0	22,034	0	368,806	9,001												1,102,934	662,742	0.60
2015	470,677	2,854,638	1,326,426		4.6	11.4	0	4,649															1,174,899	704,222	0.60
2016	239,981	3,080,305			5.9																		480,774	240,793	0.50
2017	358,724																						801,902	443,178	0.55
2018	388,009																						703,002	314,993	0.45
Mean (1968-2018)	247,855	4,134,409	1,510,353	5,777,846	3.7	5.8	254	3,780	31	253,870	3,959	0	272,835	182,976	0	528	73,771	87	128	0	792,127	3.9	816,737	563,161	0.66
Percentage of Return	Values less than 1% not shown									**32%**			**34%**	**23%**			**9%**								

Genetic estimates of stock-specific harvests.

Preliminary age composition catch allocation model estimates of stock-specific harvests.

1968-2012 average was used as an estimate in order to complete 2012 broody year for the EG analysis in 2019

Data Source: ADF&G

Figure 5A. KRLRS Smolting in May, June and July 2020

		Number of Age Classes
Spawned in 2019 ⟷	0.2, 0.3, 0.4	3
Spawned in 2018 ⟷	1.1. 1.2, 1.3, 1.4	4
Spawned in 2017 ⟷	2.1, 2.2, 2.3, 2.4	4
Spawned in 2016 ⟷	3.1, 3.2, 3.3	3
Total number of fry age groups from the four spawn years		14

The Age 1.3, 2.3 and 1.2 comprise 92% of the Kenai River Sockeye Returns

IV. UCI Drift Gillnet Sockeye Salmon Annual CPUE, 1999-2019

Figure 6

Figure 6 displays the annual CPUE for the entire UCI Drift Fleet by year from 1999-2019. This CPUE includes all districts, all sub-districts, all areas and all sections. One drift gillnet vessel is one 'Unit of Effort'. The mean of the annual average CPUE figure is 3,239 sockeye salmon. This does not include any kings, chums, cohos or pinks harvested in any single year.

It is readily observable that since the 6,944 CPUE in 2011, there has been a steady decline to where in 2018, the UCI Drift Fleet's CPUE was **900 sockeye per vessel for the entire salmon season**. The UCI drift gillnet season starts the third Monday in June or June 19th, whichever is later. The vast majority of the drift area closes August 15th. A small portion of the drift area, basically confined to within 1 mile of the west shoreline, closes by emergency order, usually in October.

In 2019, the annual CPUE for the UCI drift fleet was 1,710 sockeye salmon, all 23 major stocks included.

The UCI Drift Fleet harvest CPUE of 1,710 in 2019 was below the average CPUE of 3,239, which is economically unstable.

With an annual sockeye CPUE of less than 3,239, the drift fleet is below marginal costs of operation. The costs of securing a vessel, maintenance, insurance, fuel, oil, nets, deckhands and permit purchase or lease, are about equal to the revenue generated by the harvest and sale of approximately 3,000 sockeye salmon.

For the major processors, hiring staff, trucks, forklifts, scale systems, totes, ice machines and permits, $1.5 to $2.5 million is a marginal start-up cost for the season.

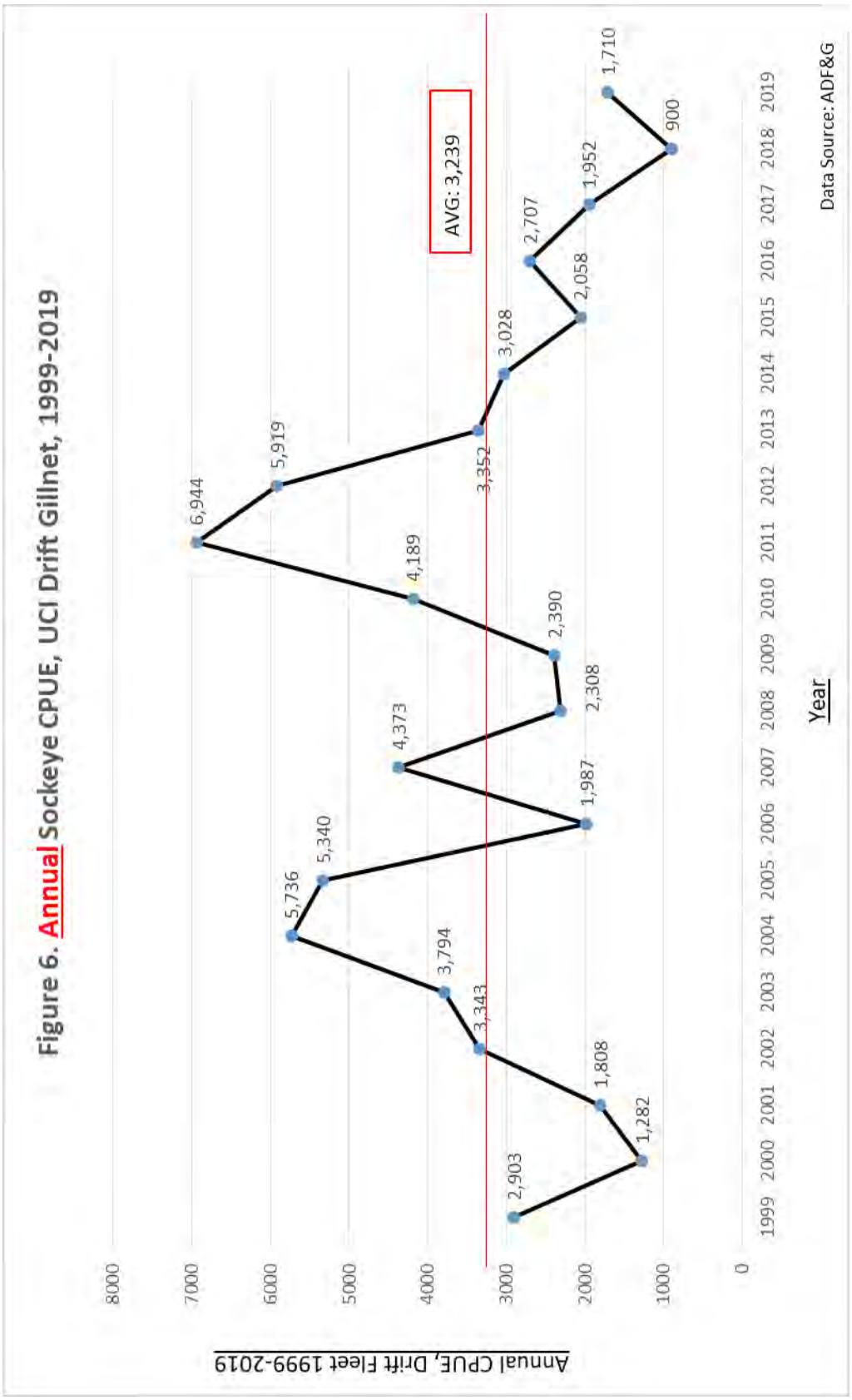


Figure 6. Annual Sockeye CPUE, UCI Drift Gillnet, 1999-2019
Annual CPUE, Drift Fleet 1999-2019
Year
Data Source: ADF&G
AVG: 3,239
2,903
1,282
1,808
3,343
3,794
5,736
5,340
1,987
4,373
2,308
2,390
4,189
6,944
5,919
3,352
3,028
2,058
2,707
1,952
900
1,710
0
1000
2000
3000
4000
5000
6000
7000
8000
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

V. Highest Daily CPUE, UCI Drift Gillnet Sockeye Salmon District Wide and Area 1, 2010-2019

Figure 7 provides the highest daily, regular, 12-hour fishing period CPUE catches by the UCI Drift Fleet, District Wide or Area 1.

Beginning in 2010, the highest, single day, 12-hour fishing period CPUE were as follows:

- 1,328 on July 12, 2010;
- 1,687 on July 14, 2011;
- 1,399 on July 19, 2012; and
- 929 on July 15, 2013.

In 2012, the UCI Set Net fishery was restricted or closed due to the low return of Chinook salmon to the KR.

Beginning in 2014, the highest, single day, 12-hour CPUE were as follows:

- 556 on July 17, 2014;
- 276 on July 20, 2015;
- 355 on July 18, 2016;
- 471 on July 13, 2017;
- 323 on July 12, 2018 and
- 331 on July 18, 2019.

One drift gillnet vessel is equal to one unit of effort. It should be noted that the highest, single 12-hour CPUE was 1,687 in 2011, while a CPUE of just 323 occurred in 2018. That is a reduction of 1,364 sockeyes harvested per drift vessel in a 12-hour fishing period. Economically, this reduced CPUE represents over $15,000 per vessel in just this single best day CPUE comparison.

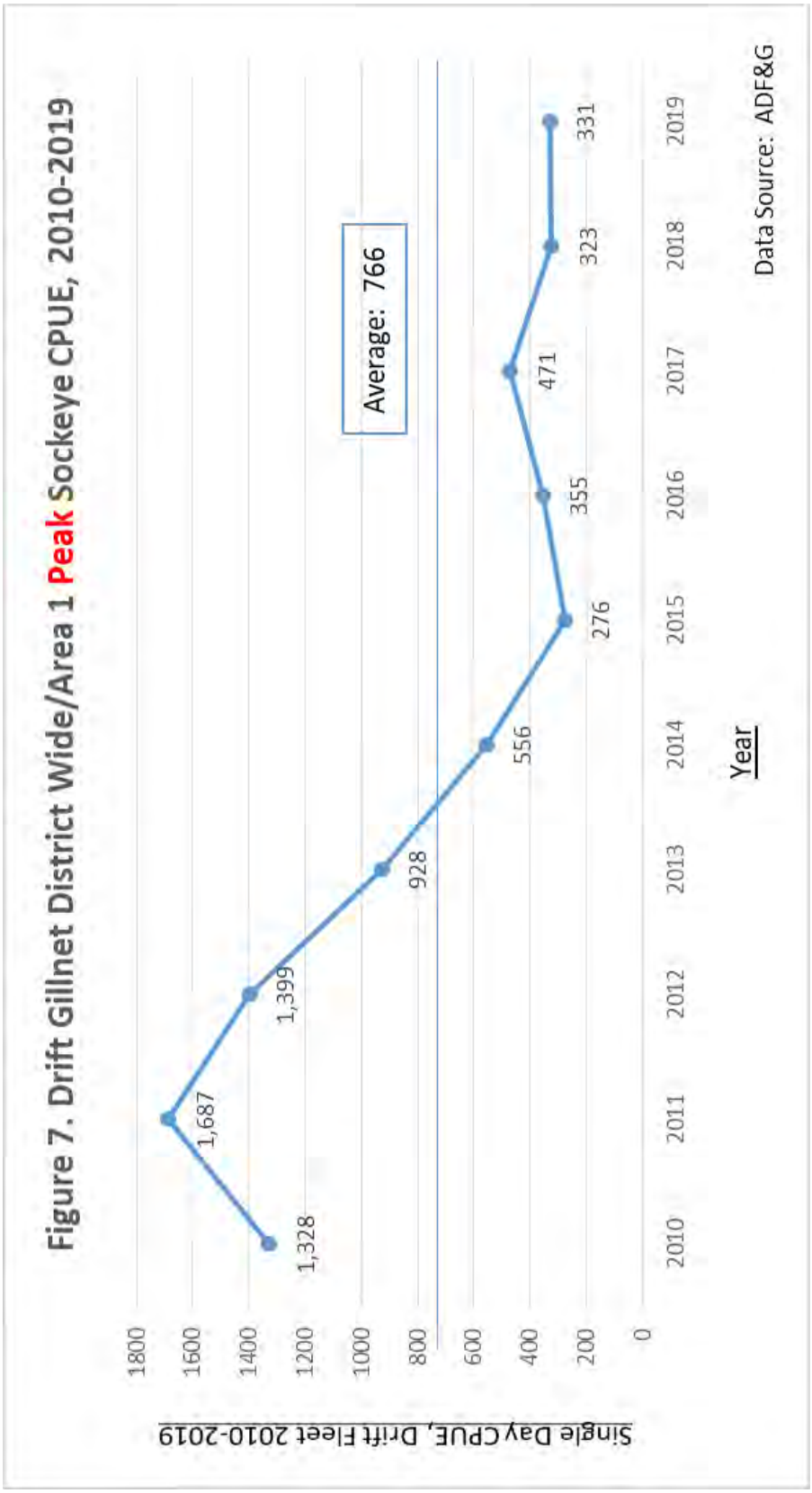


Figure 7. Drift Gillnet District Wide/Area 1 Peak Sockeye CPUE, 2010-2019
Single Day CPUE, Drift Fleet 2010-2019
1800
1600
1400
1200
1000
800
600
400
200
0
1,328
1,687
1,399
928
556
276
355
471
323
331
Average: 766
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Year
Data Source: ADF&G

VI. Sockeye Salmon Run Timing to the KR Mouth, 2010 – 2018

Figures 8A – 8E

There are three figures, 8A, 8B and 8C, which display the late-run sockeye salmon entry patterns, sonar counts and sockeye movements into the KR. Information in each figure is the result of applying appropriate shifts to sonar counts and sockeye movements in the KR.

Figure 8A displays the run timing for the years 2010-2013 into the KR. It is readily apparent that in the 2010-2013 timeframe, there were large, daily entry patterns of 250,000-300,000 between July 14 and July 18.

Figure 8B displays the run timing for the years 2014-2019 into the KR. It is readily apparent that there are no single-day, large sockeye salmon entry patterns into the KR. There is only one 90,000-plus day entry into the KR.

Figure 8C displays the daily entry patterns into the KR for the entire 2010-2019 time frame. Even the casual observer can see that the daily sockeye entry patterns have changed. Also note the later entry patterns into the end of August in the later years, 2014-2019.

Figures 8D & 8E display the total seasonal KR sonar passage percentages and numbers for sockeye salmon. Figures 8D & 8E also display the August component in percentages and numbers, as well as the last day the counter was operating. It is rather obvious that there is a trend toward increasing percentages and numbers of sockeye are entering the KR in August.

In the 1980s, an average of 7% of the KRLRS entered the river in August. In the last five years, 2014-2019, 46% of the sockeye entered the KR in August. While not a direct year by year analysis, the 2014-2019 time period represents over a six-fold, or 600%, increase in the August entry pattern when compared to the early 1980s. The reasons and consequences of this 46% August component are real and have socio-economic-biological consequences for the entire Kenai, Alaska and national economies.

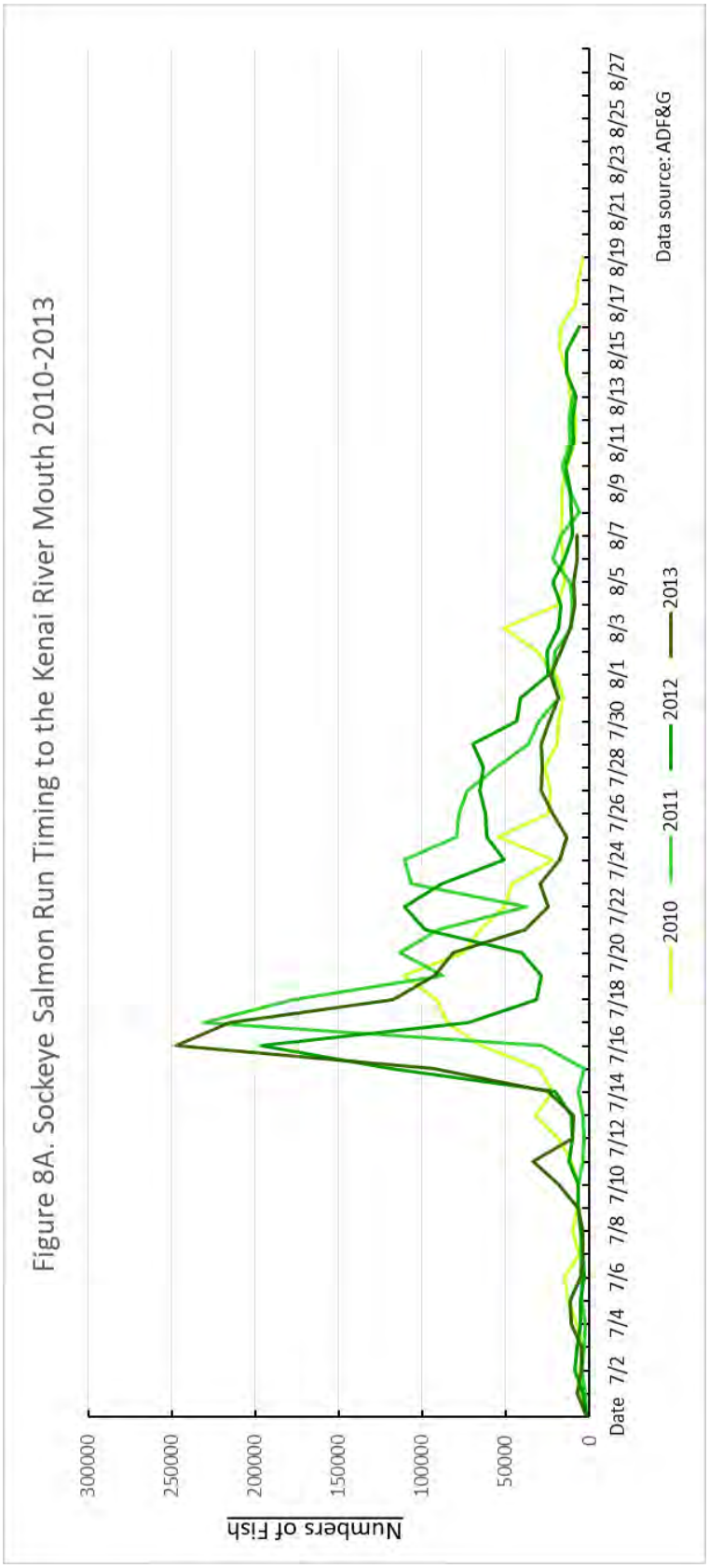


Figure 8A. Sockeye Salmon Run Timing to the Kenai River Mouth 2010-2013
Numbers of Fish
300000
250000
200000
150000
100000
50000
0
Date 7/2 7/4 7/6 7/8 7/10 7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27
2010 2011 2012 2013
Data source: ADF&G

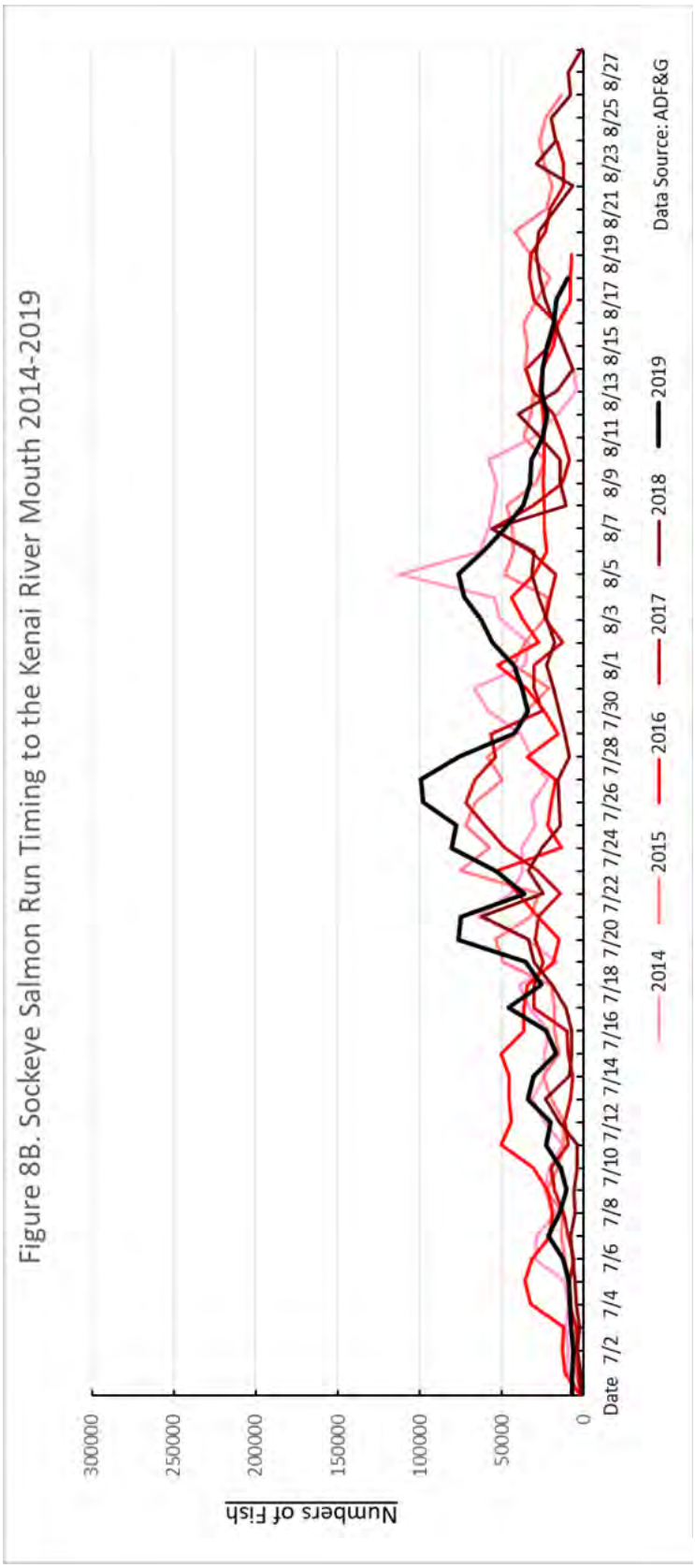


Figure 8B. Sockeye Salmon Run Timing to the Kenai River Mouth 2014-2019
Numbers of Fish
300000
250000
200000
150000
100000
50000
0
Date 7/2 7/4 7/6 7/8 7/10 7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27
2014 2015 2016 2017 2018 2019
Data Source: ADF&G

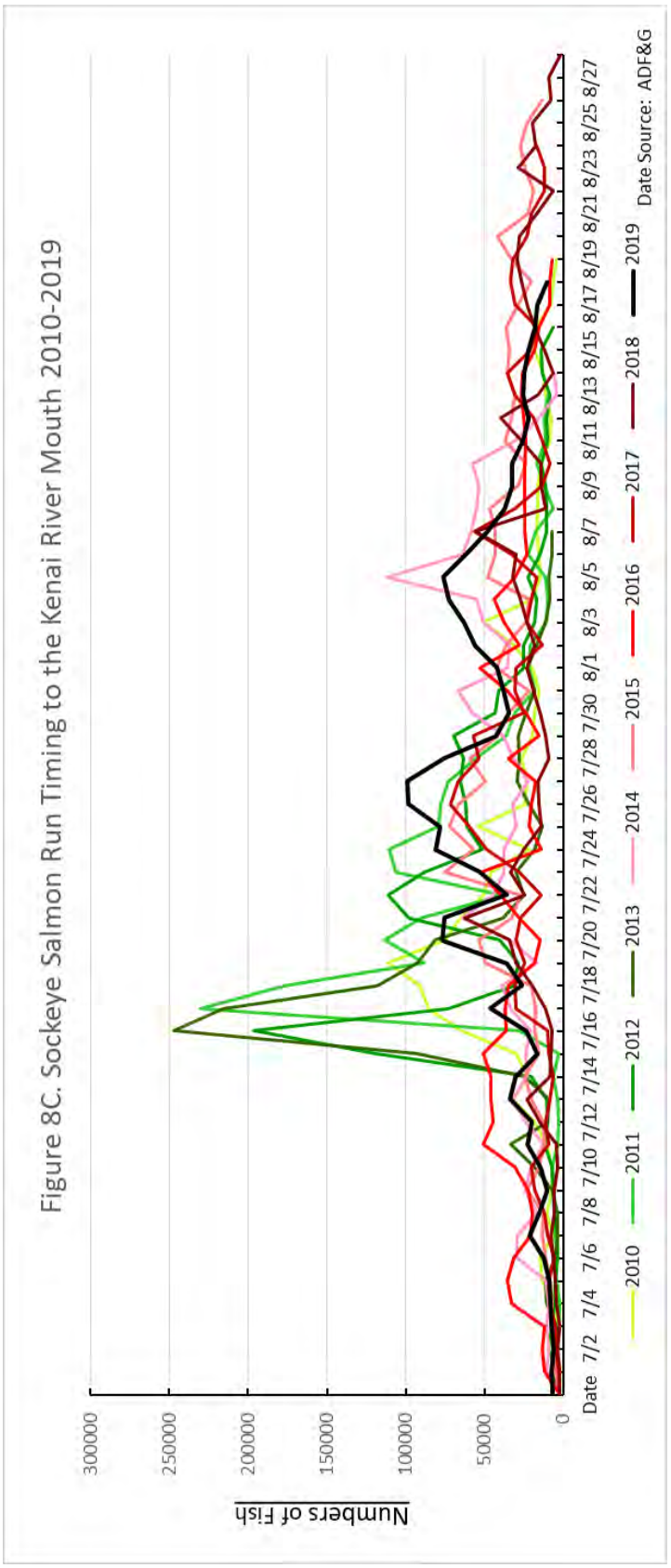


Figure 8C. Sockeye Salmon Run Timing to the Kenai River Mouth 2010-2019
Numbers of Fish
300000
250000
200000
150000
100000
50000
0
Date
7/2 7/4 7/6 7/8 7/10 7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
Date Source: ADF&G

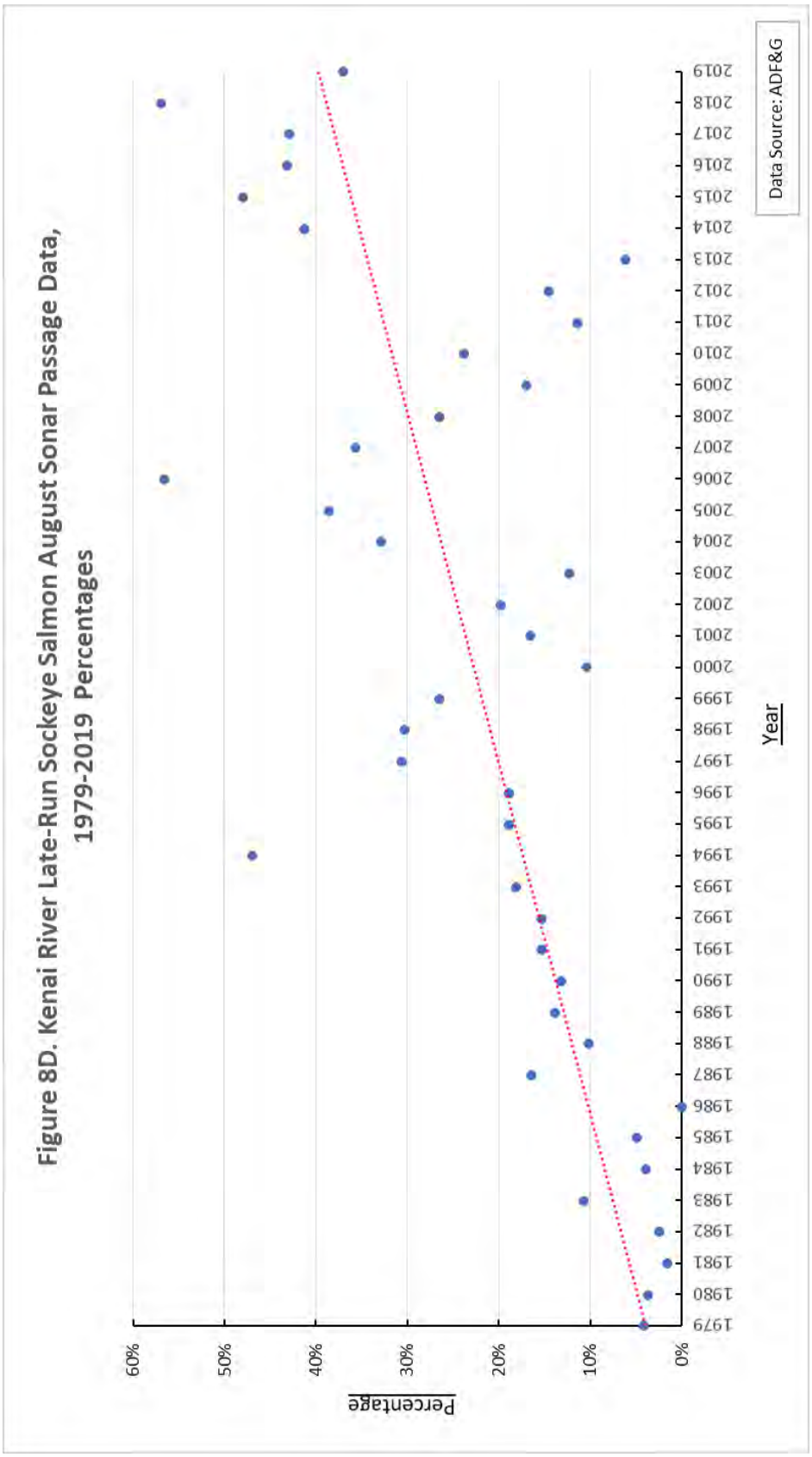


Figure 8D. Kenai River Late-Run Sockeye Salmon August Sonar Passage Data,
1979-2019 Percentages
Data Source: ADF&G
Year
Percentage
60%
50%
40%
30%
20%
10%
0%
2019
2018
2017
2016
2015
2014
2013
2012
2011
2010
2009
2008
2007
2006
2005
2004
2003
2002
2001
2000
1999
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1984
1983
1982
1981
1980
1979

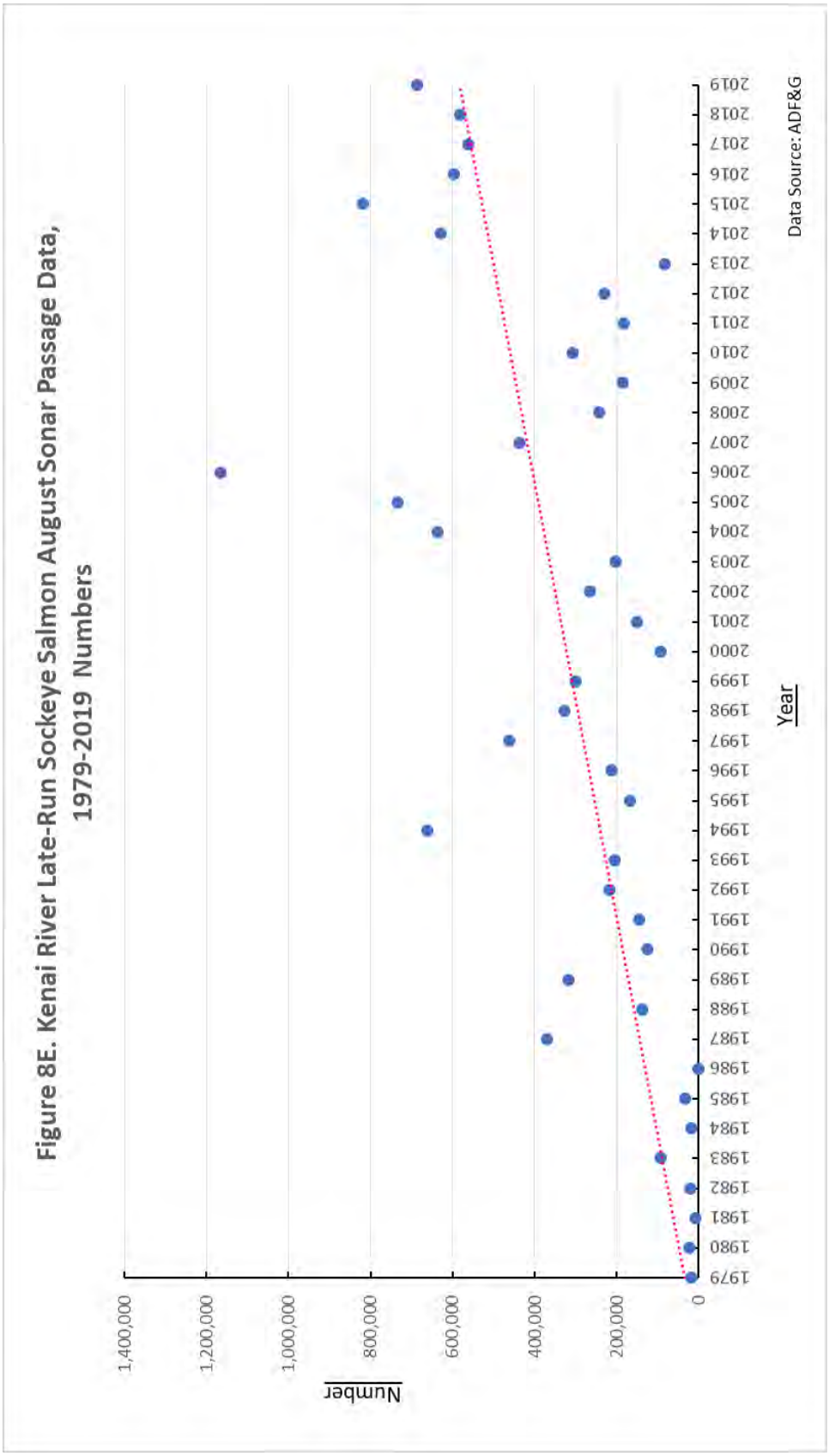


Figure 8E. Kenai River Late-Run Sockeye Salmon August Sonar Passage Data, 1979-2019 Numbers
Number
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Year
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Data Source: ADF&G

VII. Anchor Point OTF Average Sockeye Salmon MEFL

Figures 9 & 10

Figure 9 displays the MEFL data that comes from the OTF that operates during the month of July. The MEFLs represent data from all the 23 major sockeye stocks occurring in UCI. The OTF vessel has been operating since the early 1980s. Currently, there are six prescribed locations where a 200 fathom, 45 mesh deep, 5 1/8" drift gillnet is set for 30 minutes and retrieved back on the vessel. At each of these six locations, salmon may be caught, see Figure 10. These salmon, all species, are assessed and sampled with various biological data recorded. Figure 9 is the historic data for the MEFL by year. Each year in July, a daily MEFL is calculated for a monthly average.

As you can observe, there may be some length variability from year to year. For instance, in 1992, the July average was 570 mm MEFL. In 1994, the July average was 538 mm MEFL.

* Note: 570 mm MEFL = 22.4 inches

538 mm MEFL = 21.2 inches

Please note, the OTF reported MEFL in 2012, 581 mm (22.87 inches), decreasing in 2019 to 532 mm (20.94 inches). Also note the returning sockeye MEFLs have steadily declined over the most recent eight year period. The OTF MEFLs declining since 2012 most likely occurred prior to 2012, as these sockeye salmon are the returning adults.

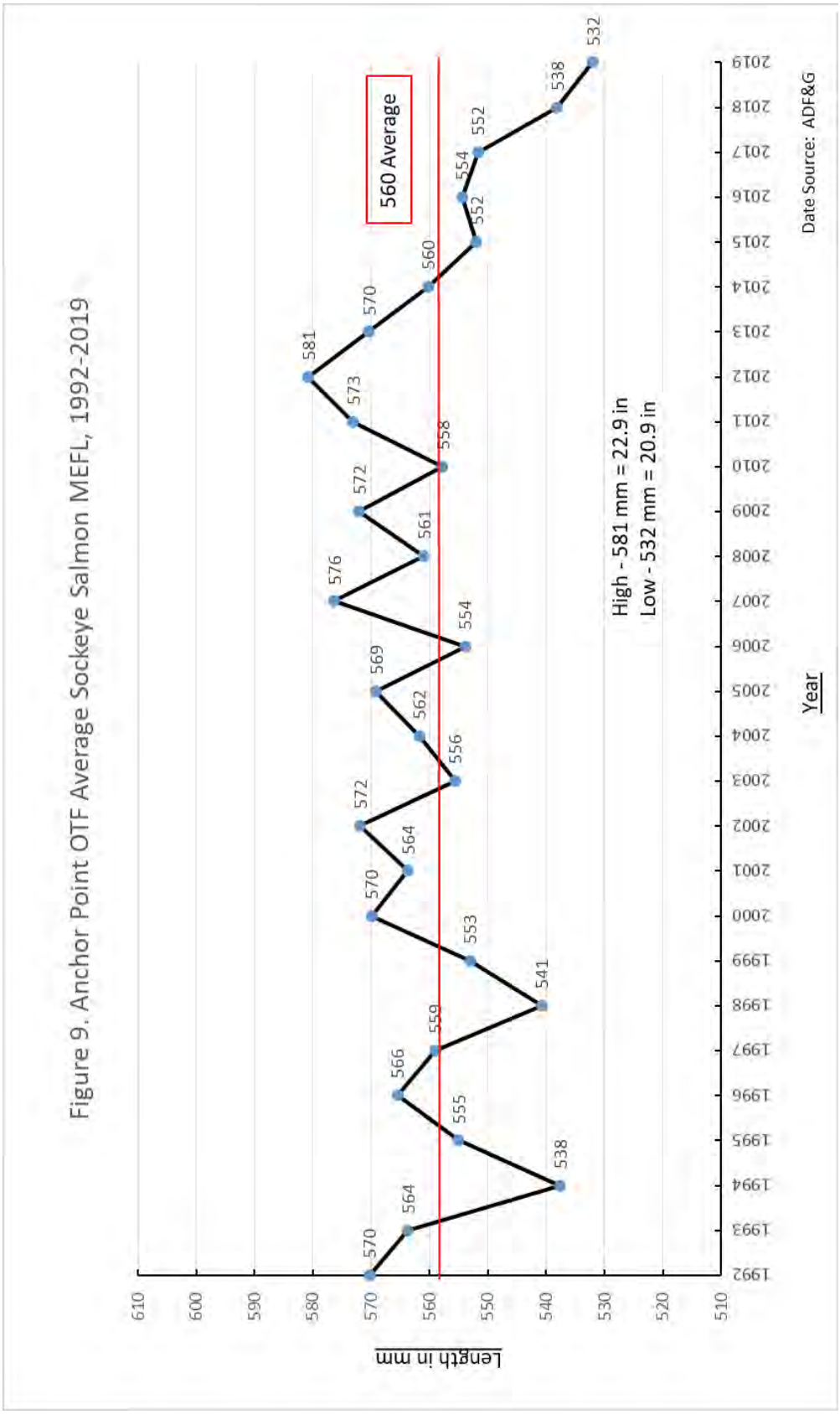
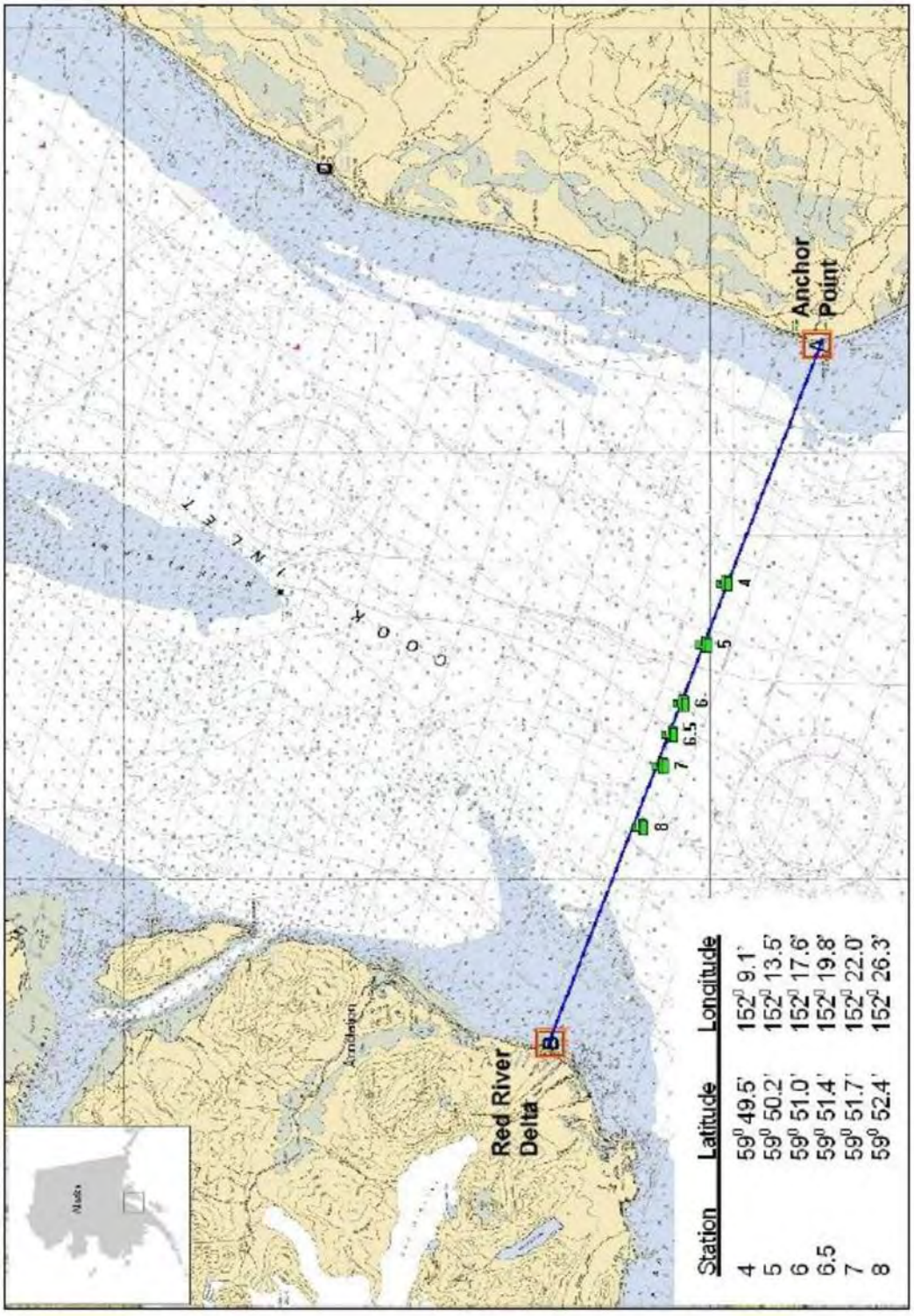


Figure 9. Anchor Point OTF Average Sockeye Salmon MEFL, 1992-2019
560 Average
High - 581 mm = 22.9 in
Low - 532 mm = 20.9 in
Date Source: ADF&G
Length in mm
Year
610
600
590
580
570
560
550
540
530
520
510
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
570
564
538
555
566
559
541
553
570
564
572
556
562
569
554
576
561
572
558
573
581
570
560
552
554
552
538
532

Figure 10. Location of the Upper Cook Inlet offshore Test Fishing Stations



Data Source: ADFG

VIII. Sockeye Salmon MEFL, Drift Gillnet Fishery, 1992-2018

Figures 11A – 11C

Figure 11A is the MEFL for the 1.3 (5 year) age class. Figure 11A displays 5-year old sockeyes taken from the drift fleet harvests that include all 23 UCI stocks. The 1.3 age class that returned in 2006 were from the 2001 brood year.

Figure 11B is the MEFL for the 2.3 (6 year) age class. Figure 11B displays 6 year-old sockeyes taken from drift fleet harvests and includes all 23 UCI sockeye stocks. The 2.3 age class in 2006 show some minor changes in MEFL. However, in the 2006 run, these reduced lengths of 564 mm in the 2.3 age class is not as pronounced when compared to the length of 549 mm in the 1.3 age class. The 1.3 and 2.3 age classes are from different brood years. However, both of these brood years smolted and reared in ocean environments at the same time.

Figure 11C displays the MEFL taken from the drift gillnet harvest for the age class 1.3 and the 2.3 sockeye salmon 1992 – 2018. This 1.3 age class of sockeye salmon averaged 571 MEFL during this time period. All 23 major sockeye salmon stocks natal to UCI are included. The average MEFL of 571 applies to both age classes. Even though there is some yearly variations between the two age classes, the average MEFL is nearly identical.

These two age classes smolted with different weights and lengths only to return as adults with virtually identical MEFL of 571.

The 2006 and 2015 through 2019 runs all had large August sonar passage patterns. Since 2012, there has been a significant decline in the MEFLs.

It has been reported by many fishermen and processors that the 2019 sockeye salmon had numerous (10-200) red-colored, maybe infected, spotted areas randomly occurring on the sides of these fish. Additionally, less than 10% of these spotted sockeyes had gray-colored, mushy flesh. These spotted sockeye appeared to show up in the August 2019 catches.

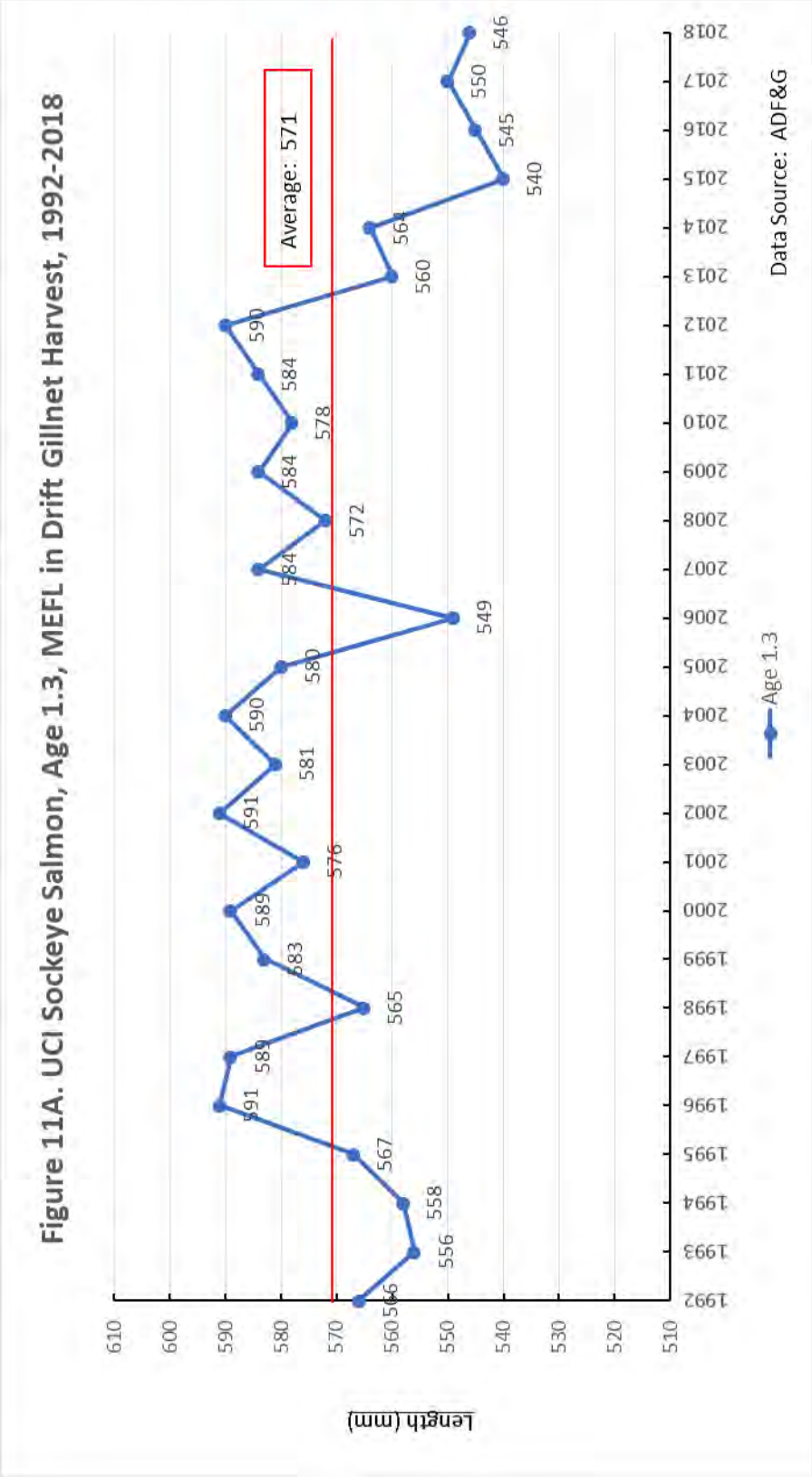


Figure 11A. UCI Sockeye Salmon, Age 1.3, MEFL in Drift Gillnet Harvest, 1992-2018
Average: 571
Age 1.3
Data Source: ADF&G
Length (mm)
610
600
590
580
570
560
550
540
530
520
510
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
566
556
558
567
591
589
565
583
589
576
591
581
590
580
549
584
572
584
578
584
590
560
564
540
545
550
546

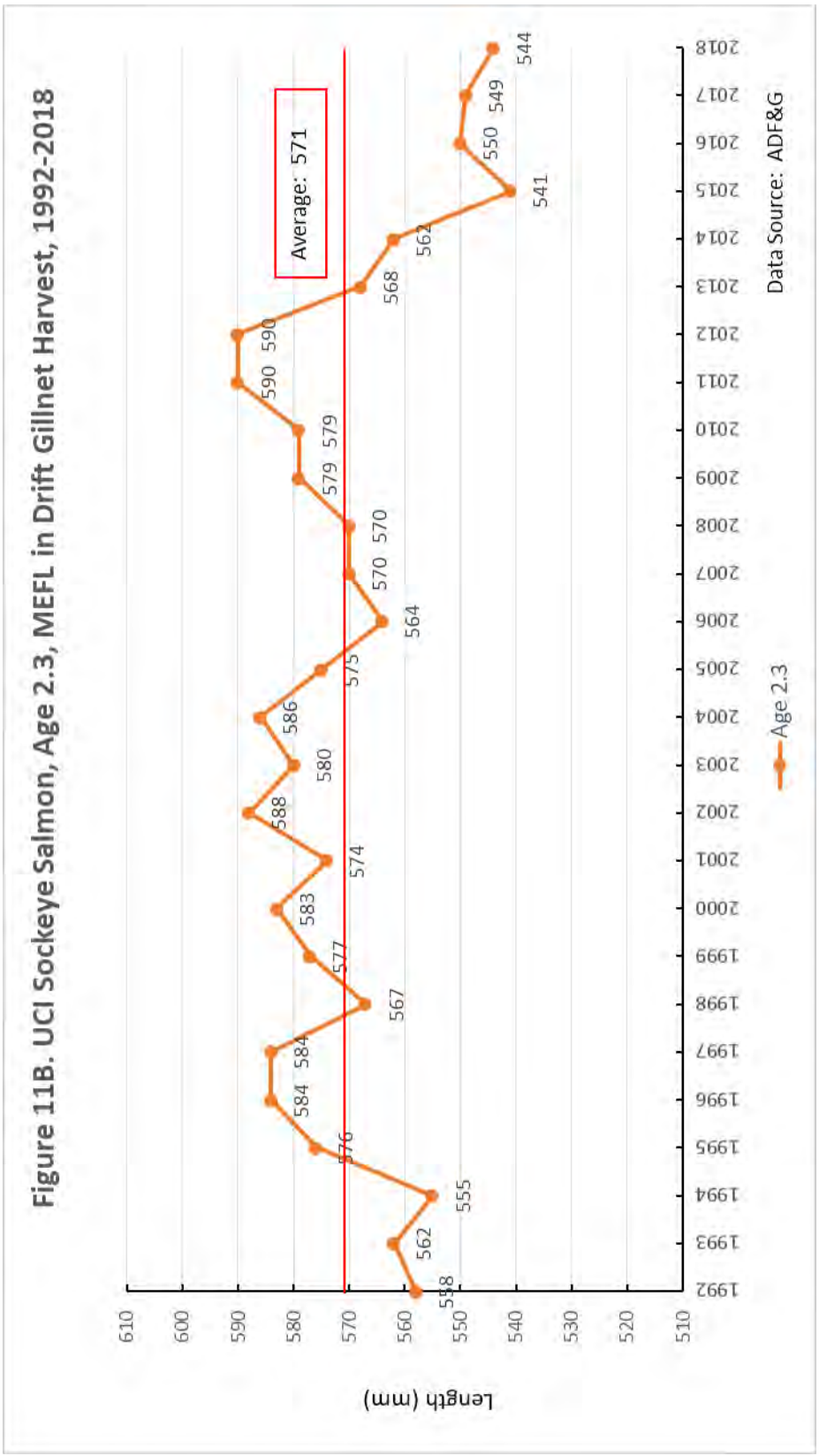


Figure 11B. UCI Sockeye Salmon, Age 2.3, MEFL in Drift Gillnet Harvest, 1992-2018
Average: 571
Age 2.3
Data Source: ADF&G
Length (mm)
610
600
590
580
570
560
550
540
530
520
510
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
558
562
555
576
584
584
584
567
577
583
574
588
580
586
575
564
570
570
579
579
590
590
568
562
541
550
549
544

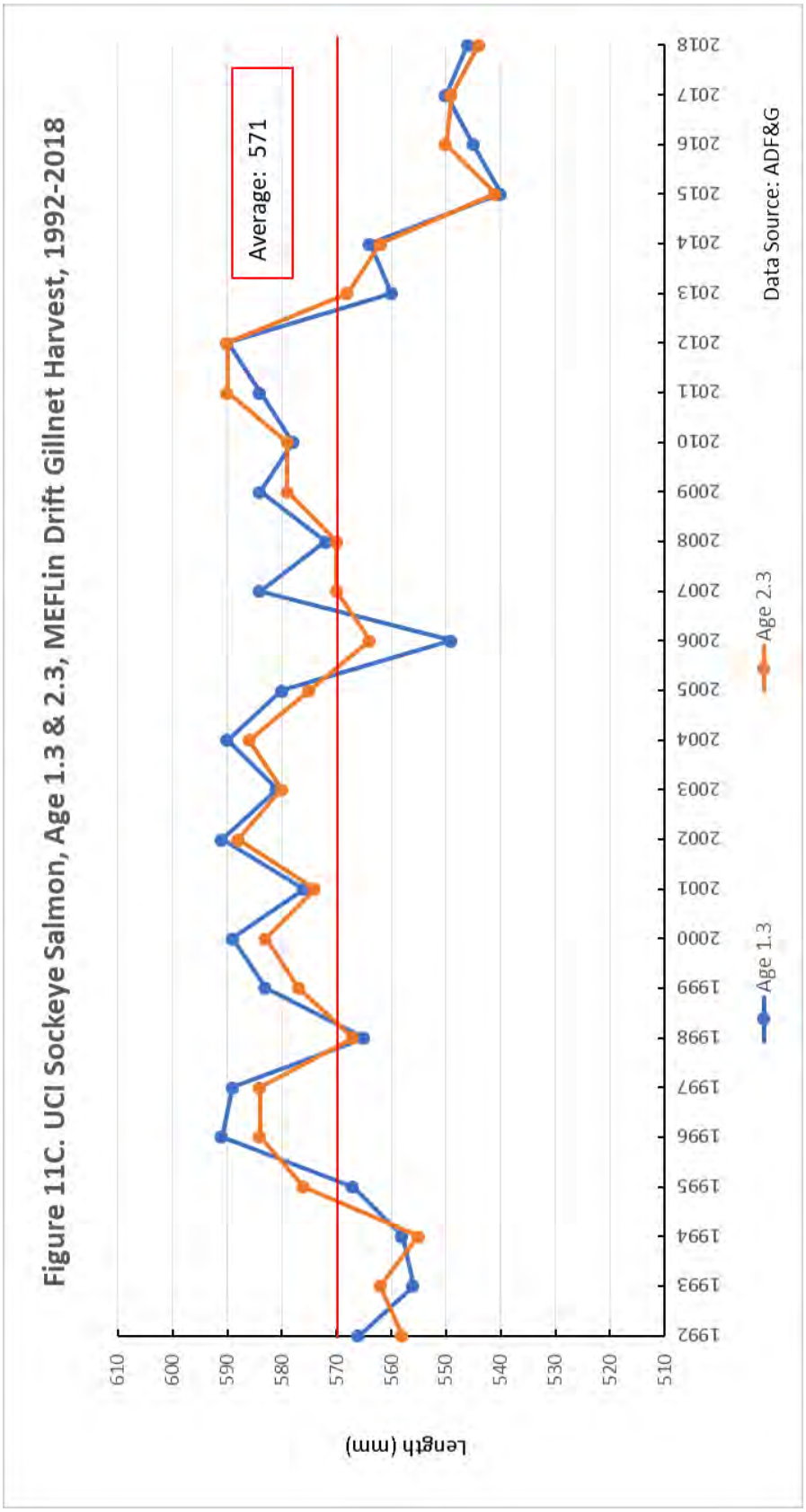


Figure 11C. UCI Sockeye Salmon, Age 1.3 & 2.3, MEFLin Drift Gillnet Harvest, 1992-2018
Average: 571
Length (mm)
610
600
590
580
570
560
550
540
530
520
510
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Age 1.3
Age 2.3
Data Source: ADF&G

IX. MEFL, KR and KasR Sockeye Salmon, RM 19.5 Sonar

Figures 12A – 12F

It is noted that the MEFLs at RM 19.5 are a reflection of the sockeye after the commercial, personal use and recreational harvest below the RM 19.5 sonar site.

Figure 12A displays the weighted average MEFL of all sockeyes migrating past the KR sonar site at RM 19.5. As one can see, there can be large MEFL variations from year to year between 1980 and 2018. The weighted mean length is 556 mm. Since 2009/2010, all salmon MEFLs have decreased, on average, by 15%. That is to say that during the past 9 years, all sockeye salmon going past the sonar counter at RM 19.5 have decreased by 15% in MEFL.

Figure 12B displays the KR age 1.3 sockeye salmon MEFL is displayed over the same 1980-2018 timeframe.

Figure 12C displays the Kenai River age 2.3 sockeye salmon lengths at RM 19.5. Both the 1.3 and 2.3 age classes reveal a decrease in length of 15% over the last 9 years.

These age classes are one year apart in brood years and did smolt and presumably rear together in the ocean environments.

Figure 12D displays the KasR sockeye, all ages, passage MEFL. These lengths are for all sockeye stocks and all age classes. Again, there are annual variations of up to 20-30 mm. Please note that there has been an approximate 20% decline in the MEFL during the past 8 years. This 20% decline in the KasR sockeye stocks is larger than the 15% decline in the KR sockeye stocks. The rate of MEFL decline in these KasR stocks is economically problematic.

Figure 12E displays the KasR, age 1.3 sockeye salmon average MEFL, no weights are displayed.

Figure 12F displays the lengths of the age 2.3 sockeye salmon in the KasR, 1979-2018. The average, non-weighted length is 534 mm. These age 2.3 sockeyes are, on average, 6 mm less in length than the age 1.3. These two age classes came from different brood years, however, the age 1.3 and 2.3 smolted together and have reared together for 3 years in the ocean environments.

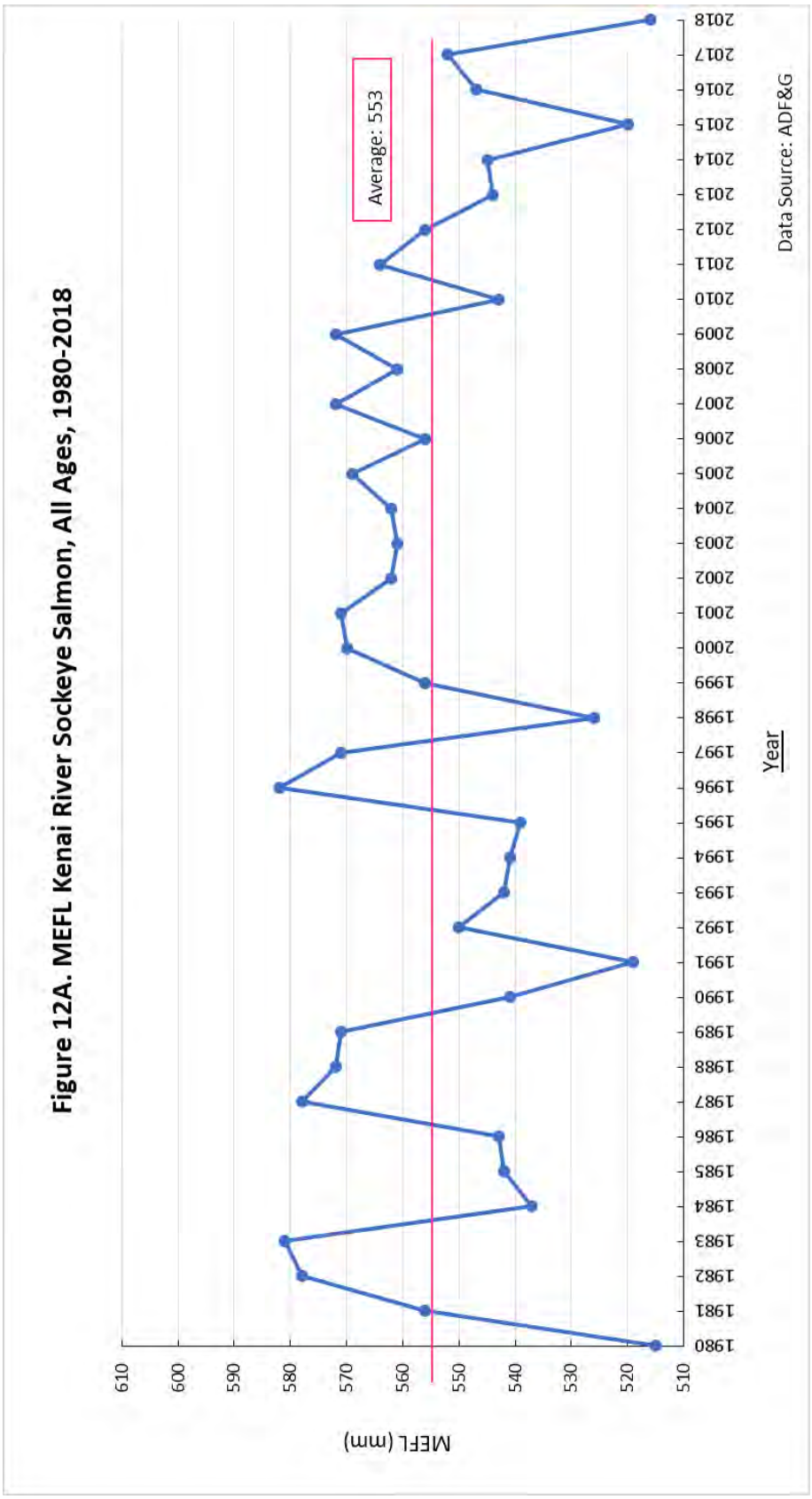


Figure 12A. MEFL Kenai River Sockeye Salmon, All Ages, 1980-2018
Average: 553
MEFL (mm)
610
600
590
580
570
560
550
540
530
520
510
Year
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
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2011
2012
2013
2014
2015
2016
2017
2018
Data Source: ADF&G

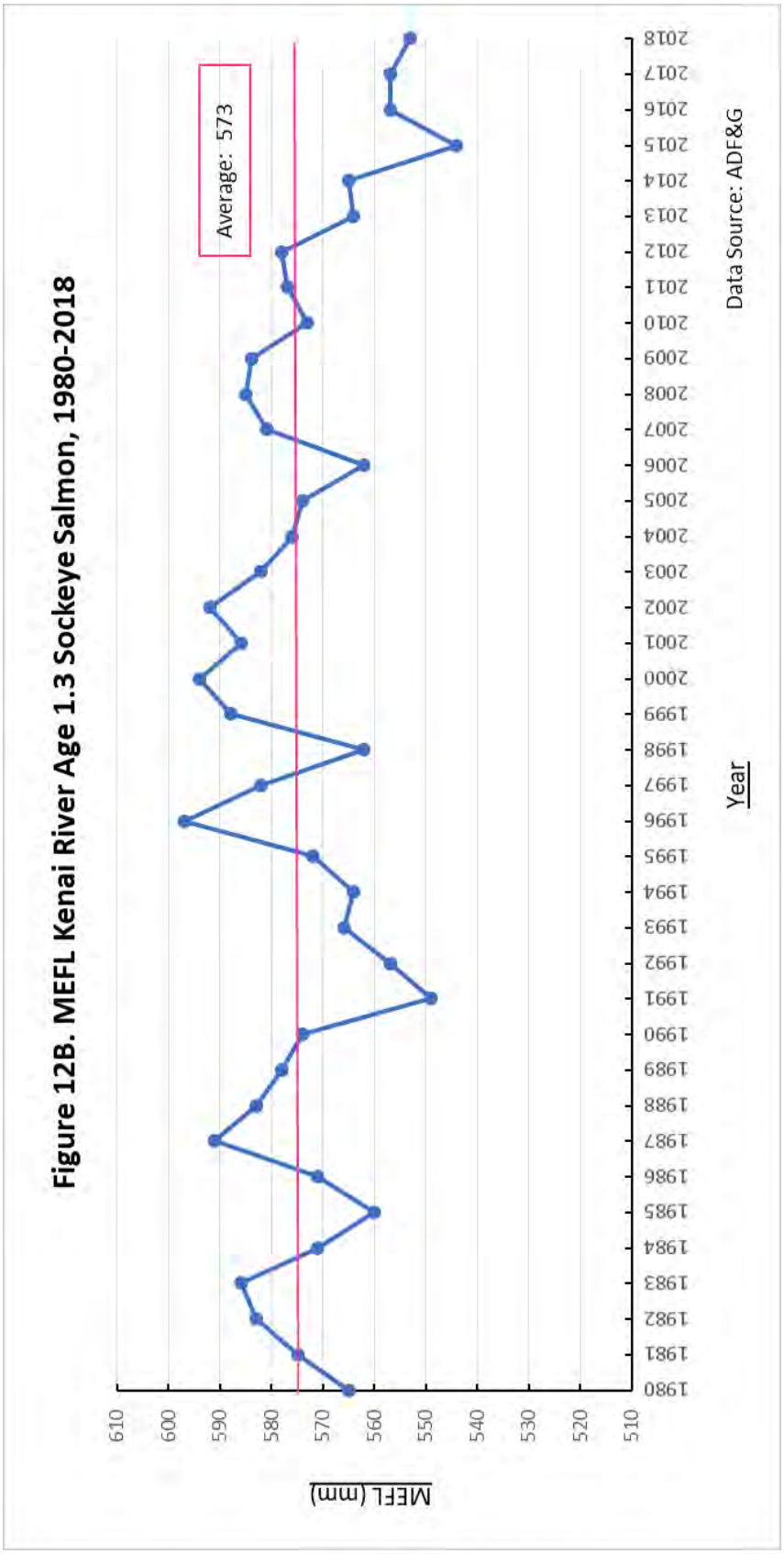
Figure 12B. MEFL Kenai River Age 1.3 Sockeye Salmon, 1980-2018
Average: 573
Data Source: ADF&G
Year
MEFL (mm)
610
600
590
580
570
560
550
540
530
520
510
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
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2018

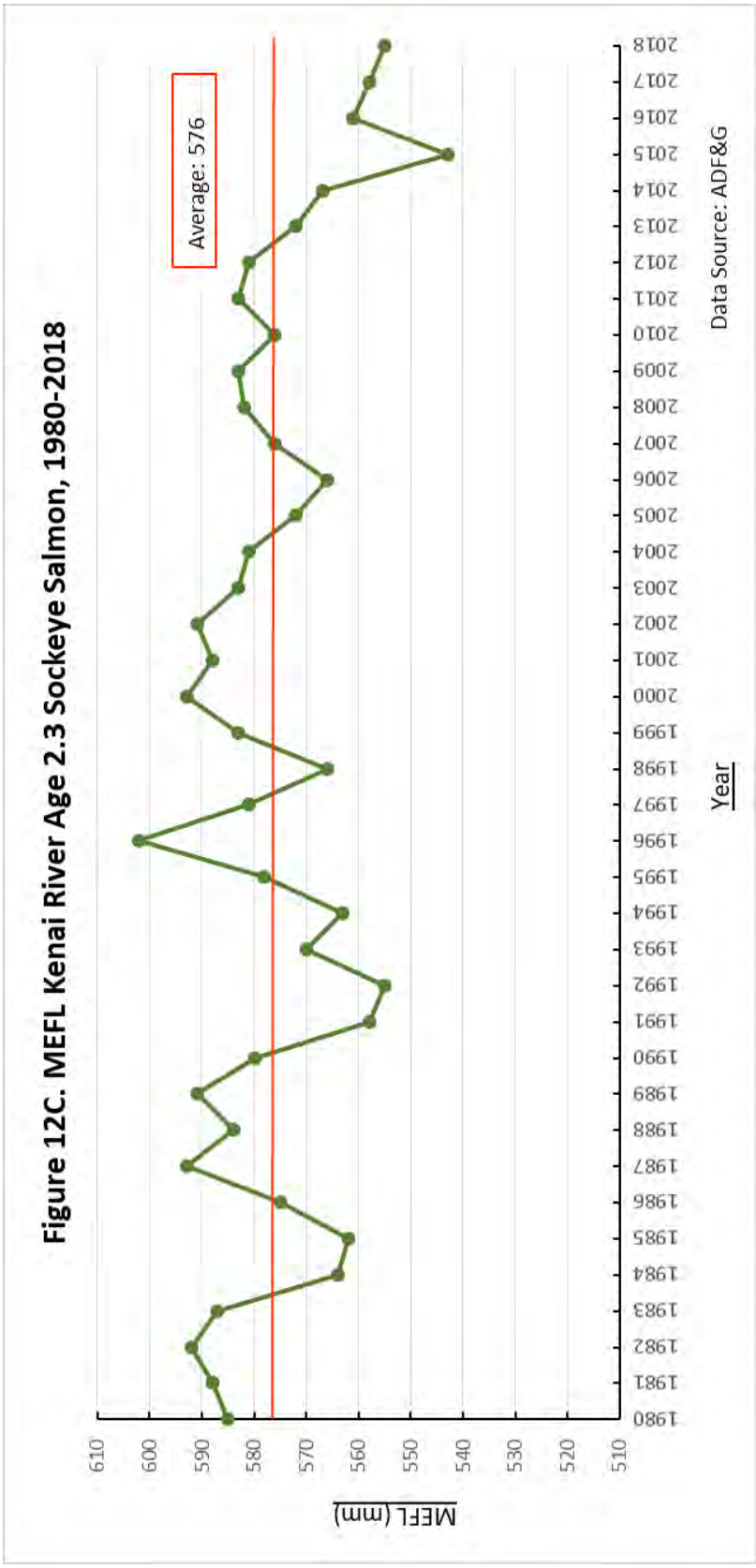
Figure 12C. MEFL Kenai River Age 2.3 Sockeye Salmon, 1980-2018
Average: 576
MEFL (mm)
610
600
590
580
570
560
550
540
530
520
510
Year
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Data Source: ADF&G

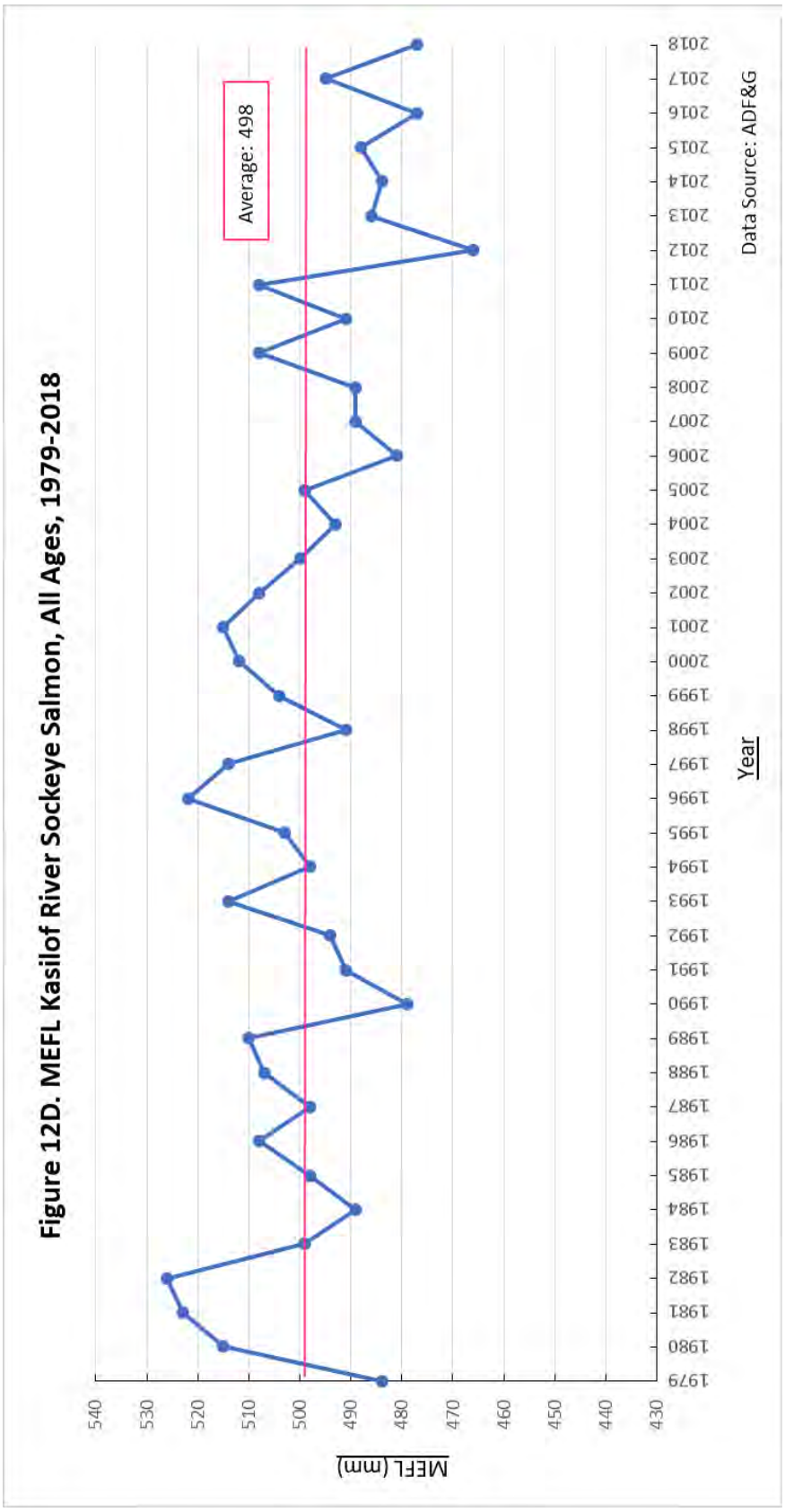
Figure 12D. MEFL Kasilof River Sockeye Salmon, All Ages, 1979-2018
Average: 498
Data Source: ADF&G
MEFL (mm)
Year
540
530
520
510
500
490
480
470
460
450
440
430
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
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2013
2014
2015
2016
2017
2018

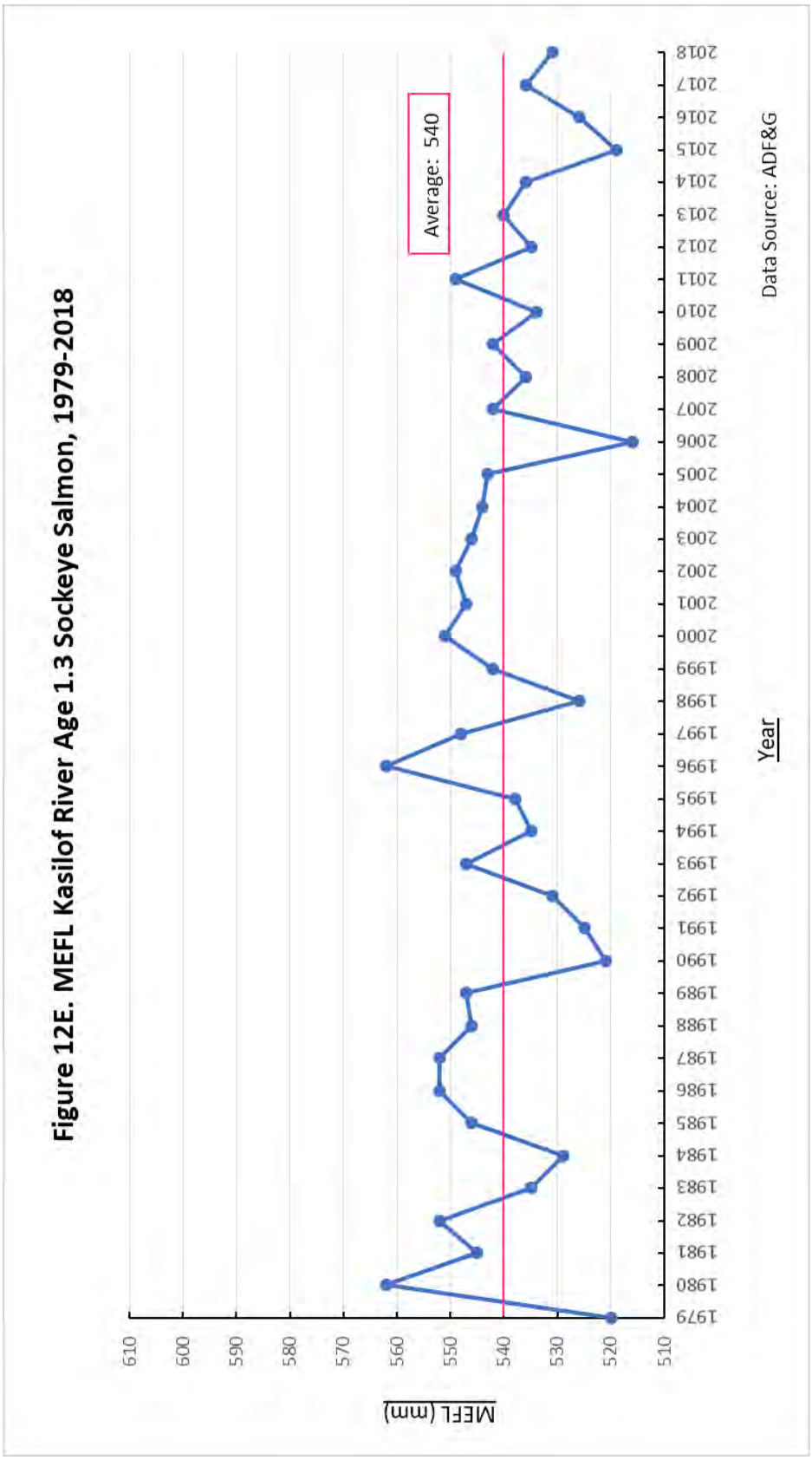
Figure 12E. MEFL Kasilof River Age 1.3 Sockeye Salmon, 1979-2018
Average: 540
MEFL (mm)
610
600
590
580
570
560
550
540
530
520
510
Year
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
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2011
2012
2013
2014
2015
2016
2017
2018
Data Source: ADF&G

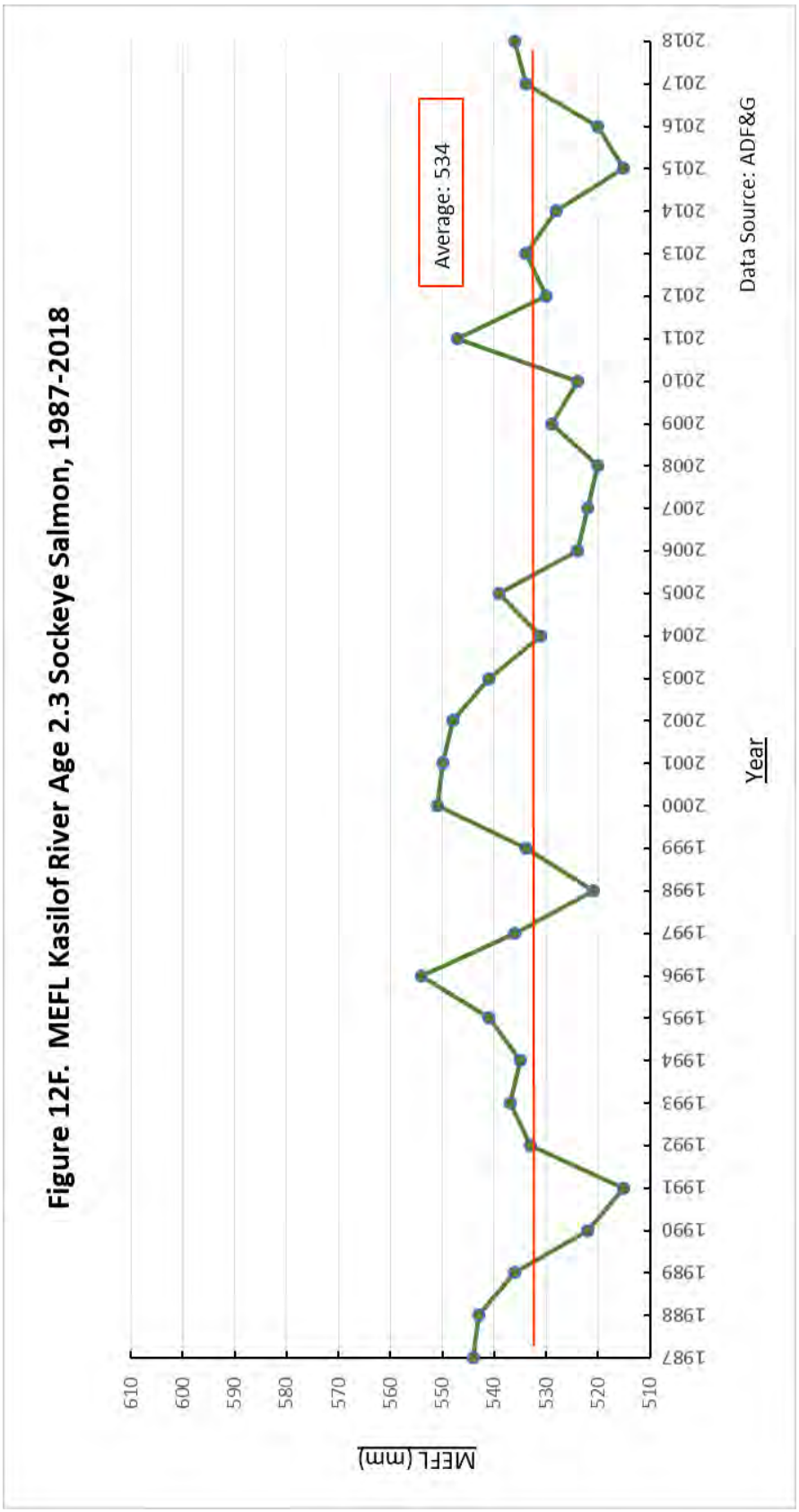
Figure 12F. MEFL Kasilof River Age 2.3 Sockeye Salmon, 1987-2018
Average: 534
Data Source: ADF&G
MEFL (mm)
Year
610
600
590
580
570
560
550
540
530
520
510
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

X. UCI Gillnet Harvest Average Sockeye Salmon Weight in lbs. 1999-2018

Figure 13

Figure 13 provides the historical weights in lbs. of all age classes in the sockeye harvest by the UCI Drift Gillnet Fleet from 1999-2018. The average harvested weight for this time period was 6.2 lbs., including the 2006 and 2015-2018 harvests. In 2006, the average weight was 5.2 lbs.; the lowest in 40 years.

Note: In 2015-2018, all averages are below the 20 year average weight of 6.2 lbs. Also, it is anticipated that the 2019 harvest average weights will be in the 5.4 lb range.

In a September, 2019 Bristol Bay salmon season summary, an average weight of 5.2 lbs is reported for the 56.5 million harvest.

When examining the average sockeye harvested in UCI, not only are the salmon getting shorter in length, but they also weigh less. It is a straight forward loss of one lb per salmon, which equates to a loss of 2 million pounds on a 2 million harvest.

Two million lbs @ $2 per lb equals a 4 million ex-vessel value, with 4 million dollars less at the first wholesale value. These 2 and 4 million dollar ex-vessel value reductions directly relate to permits, fees and local taxes. Additionally, the ad valorem taxes are reduced.

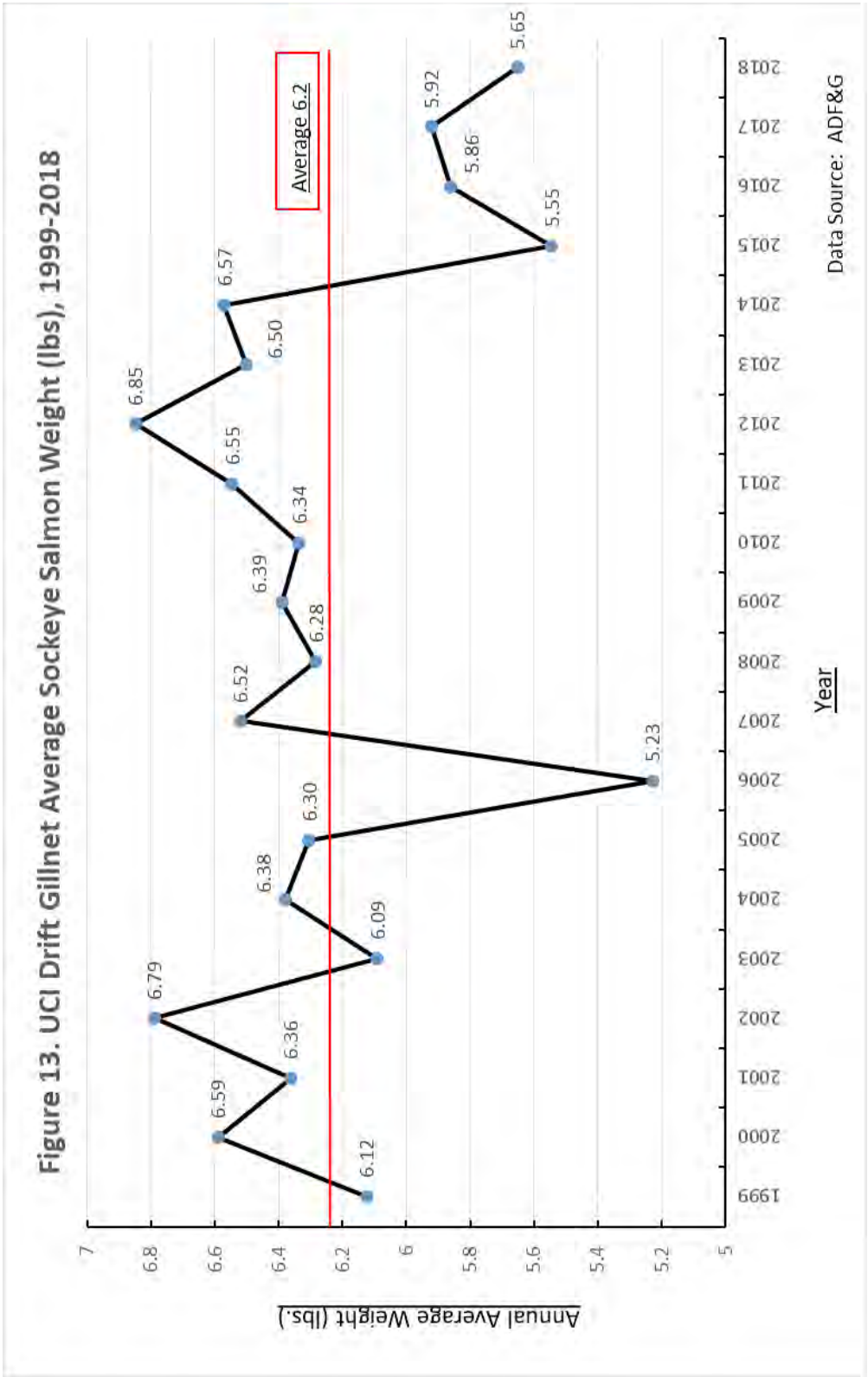
Figure 13. UCI Drift Gillnet Average Sockeye Salmon Weight (lbs), 1999-2018
Annual Average Weight (lbs.)
Year
Data Source: ADF&G
Average 6.2
6.12
6.59
6.36
6.79
6.09
6.38
6.30
5.23
6.52
6.28
6.39
6.34
6.55
6.85
6.50
6.57
5.55
5.86
5.92
5.65
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
7
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
5.2
5

XI. Markov Table, KRLRS

Tables 14A & Figures 14B – 14C

Table 14A is a condensed KRLRS brood table for years 1969-2019. IT is notes that is takes 6 to 7 years from a particular brood spawning event for all the adults to return. For this reason, many of the brood table values remain open.

Table 14B is a Markov Table for years 1969-2019. This Markov Table uses data from Table 14A with 200,000 increments, with 100,000 overlaps. As readily apparent, the 600-800,000 spawning interval had the highest mean return. At an average, an escapement of 734,000 spawners brought back a 4,636,000 return and a 3,902,000 mean yield. This is highlighted in yellow for the reader's reference. In the 500-700,000 spawning interval, mean yields drop to 2,483,000. In the 700-900,000 spawning interval, mean yields are 3,729,000, a decrease of about 200,000. In the 800-1,000,000 spawning interval, mean yields are 1,200,000 less than the 600-800,000 spawning interval.

The Markov Table 14B indicates the MSY spawner range should be 600-900,000.

Table *14A*. Kenai late-run sockeye salmon brood table, brood years 1969-*2019*.
Hidden enhanced escapement was not substracted to estimate spawners.

Brood Year	Spawners	Returns	Yield	Return per Spawner	Harvest Rate
1968	115.545	960.169			
1969	72.901	430.947	358.046	5.91	0.83
1970	101.794	550.923	449.129	5.41	0.82
1971	406.714	986.397	579.683	2.43	0.59
1972	431.058	2,547.851	2,116.793	5.91	0.83
1973	507.072	2,125.986	1,618.914	4.19	0.76
1974	209.836	788.067	578.231	3.76	0.73
1975	184.262	1,055.373	871.111	5.73	0.83
1976	507.440	1,506.012	998.572	2.97	0.66
1977	951.038	3,112.620	2,161.582	3.27	0.69
1978	511.781	3,785.040	3,273.259	7.40	0.86
1979	373.810	1,321.039	947.229	3.53	0.72
1980	615.382	2,673.295	2,057.913	4.34	0.77
1981	535.523	2,464.323	1,928.800	4.60	0.78
1982	755.672	9,587.700	8,832.028	12.69	0.92
1983	792.765	9,486.794	8,694.029	11.97	0.92
1984	446.397	3,859.109	3,412.712	8.65	0.88
1985	573.836	2,587.921	2,014.085	4.51	0.78
1986	555.207	2,165.138	1,609.931	3.90	0.74
1987	2,011.772	10,356.627	8,344.855	5.15	0.81
1988	1,213.047	2,546.639	1,333.592	2.10	0.52
1989	2,026.637	4,458.679	2,432.042	2.20	0.55
1990	794.754	1,507.693	712.939	1.90	0.47
1991	727.159	4,436.074	3,708.915	6.10	0.84
1992	1,207.382	4,271.576	3,064.194	3.54	0.72
1993	997.730	1,689.779	692.049	1.69	0.41
1994	1,309.695	3,052.634	1,742.939	2.33	0.57
1995	776.880	1,899.870	1,122.990	2.45	0.59
1996	963.125	2,261.757	1,298.632	2.35	0.57
1997	1,365.746	3,626.402	2,260.656	2.66	0.62
1998	929.091	4,465.328	3,536.237	4.81	0.79
1999	949.276	5,755.063	4,805.787	6.06	0.84
2000	696.899	7,058.348	6,361.449	10.13	0.90
2001	738.229	1,698.142	959.913	2.30	0.57
2002	1,126.642	3,630.740	2,504.098	3.22	0.69
2003	1,402.340	1,922.165	519.825	1.37	0.27
2004	1,690.547	3,240.428	1,549.881	1.92	0.48
2005	1,654.003	4,802.362	3,148.359	2.90	0.66
2006	1,892.090	5,003.585	3,111.495	2.64	0.62
2007	964.261	4,376.406	3,412.145	4.54	0.78
2008	708.833	3,377.884	2,669.051	4.77	0.79
2009	848.117	3,983.872	3,135.755	4.70	0.79
2010	1,037.666	3,625.388	2,587.722	3.49	0.71
2011	1,284.486	4,513.815	3,229.329	3.51	0.72
2012	1,212.837	1,490.134	277.297	1.23	0.19
2013	980.403				
2014	1,219.124				
2015	1,325.673		2,541.668	4.45	0.70
2016	*1,383.692*				
2017	*1,308.492*				
2018	*1,035.761*				
2019	*1,548.157*				

Data Source: ADF&G

Italicized Values: UCIDA

Table 14B. Markov yield table for Kenai late-run sockete salmon constructed using data from brood years 1969-2009

Escapement Interval	Number of Years	Mean Spawners	Mean Returns	Return per Spawner	Mean	Yield Range
0 - 200	4	119	749	6.3	631	358 - 871
100 - 300	4	153	839	5.8	686	449 - 871
200 - 400	2	292	1,055	4.4	763	478 - 947
300 - 500	4	414	2,179	5.1	1,764	580 - 3,413
400 - 600	9	497	2,448	4.9	1,950	580 - 3,413
500 - 700	8	563	3,046	5.3	2,483	999 - 6,361
600 - 800	9	734	4,636	6.3	3,902	713 - 8,694
700 - 900	8	768	4,497	5.9	3,729	713 -8,694
800 - 1,000	7	943	3,664	3.9	2,720	692 - 4,806
900 - 1,100	6	959	3,610	3.8	2,641	692 - 4,806
1,000 - 1,200	1	1,127	3,631	3.2	2,604	2,504 - 2,504
1,100 - 1,300	3	1,182	3,483	3.0	2,301	1,334 - 3,064
1,200 - 1 400	4	1,274	3,374	2.7	2,100	1,334 - 3,064
> 1,300	8	1,669	4,558	2.6	2,889	520 - 8,345

Note: Numbers in thousands of fish.

Data Source: Erickson, Willette and McKinley, 2016 Review of Salmon Escapement Goals in Upper Cook Inlet, Alaska

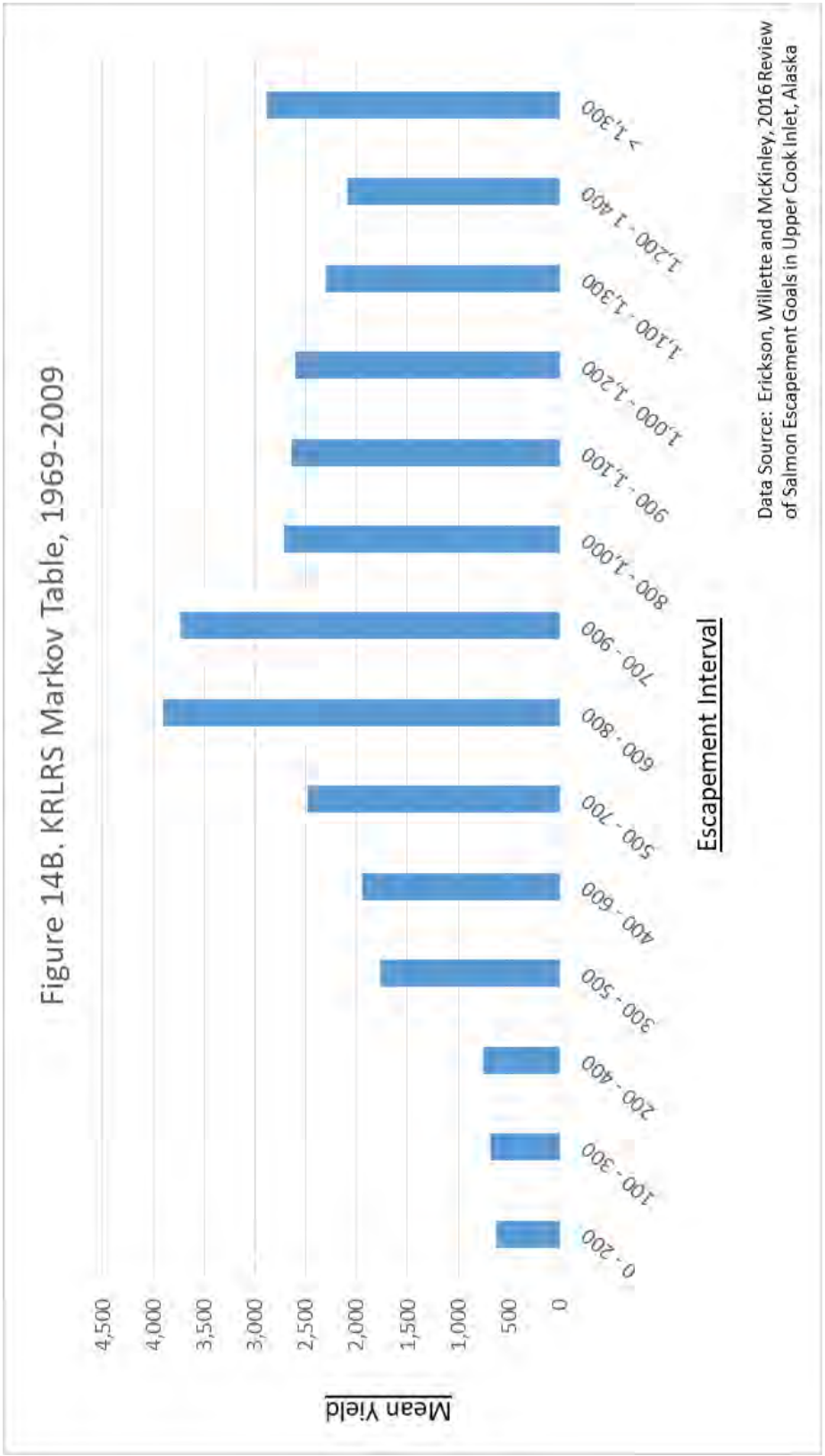
Figure 14B. KRLRS Markov Table, 1969-2009
Mean Yield
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0 - 200
100 - 300
200 - 400
300 - 500
400 - 600
500 - 700
600 - 800
700 - 900
800 - 1,000
900 - 1,100
1,000 - 1,200
1,100 - 1,300
1,200 - 1,400
> 1,300
Escapement Interval
Data Source: Erickson, Willette and McKinley, 2016 Review of Salmon Escapement Goals in Upper Cook Inlet, Alaska

Table 14C results from the Kenai River Brood Interaction Simulation Model. Bold cells indicate a spawner range with less than a 6% probability of a commercial harvest of less than 1,000,000. Shaded cells indicate a spawner range of capable of producing a harvest that is 90% of MSY. The brood interaction model indicates a spawner escapement range of 700,000-1,100,000 (DIDSON counts). Data Source: Erickson, Willette and McKinley, 2016 Review of Salmon Escapement Goals in Upper Cook Inlet, Alaska.

Table 14C. - Simulation results from a brood-interaction model for Kenai River late-run sockeye salmon.

	Brood Years 1969-2009			
Number Spawners	Mean Run	Mean Yield	Yield CV	$P < 1{,}000$
100	606	506	0.65	0.953
150	896	746	0.56	0.820
200	1,182	982	0.53	0.596
250	1,463	1,213	0.52	0.431
300	1,736	1,436	0.51	0.304
350	2,002	1,652	0.51	0.219
400	2,258	1,858	0.51	0.157
450	2,504	2,054	0.51	0.121
500	2,739	2,239	0.51	0.086
550	2,961	2,411	0.51	0.070
600	3,171	2,571	0.52	0.065
650	**3,366**	**2,716**	**0.52**	**0.057**
700	**3,547**	**2,847**	**0.52**	**0.052**
750	**3,712**	**2,962**	**0.52**	**0.051**
800	**3,862**	**3,062**	**0.53**	**0.048**
850	**3,996**	**3,146**	**0.53**	**0.046**
900	**4,114**	**3,214**	**0.54**	**0.043**
950	**4,216**	**3,266**	**0.54**	**0.044**
1,000	**4,302**	**3,302**	**0.55**	**0.047**
1,050	**4,371**	**3,321**	**0.55**	**0.050**
1,100	**4,425**	**3,325**	**0.56**	**0.052**
1,150	**4,463**	**3,313**	**0.56**	**0.052**
1,200	**4,485**	**3,285**	**0.57**	**0.057**
1,250	4,493	3,243	0.58	0.062
1,300	4,487	3,187	0.59	0.067
1,350	4,467	3,118	0.60	0.071
1,400	4,434	3,035	0.61	0.081
1,450	4,390	2,941	0.62	0.099
1,500	4,334	2,836	0.64	0.118

Note: Numbers are in thousands of fish. Model parameters were obtained from regression analyses conducted using brood year 1669-2009. Tanges corresponding to the original criteria (6% risk of a yield, 1 million salmon; Carlson et.al 1999) used to establish the sustainable escapement goal range are indicated in bold. Ranges corresponding to escapement needed to produce 90-100% of maximum yield (asuming a constant escapement goal policy) are shaded.

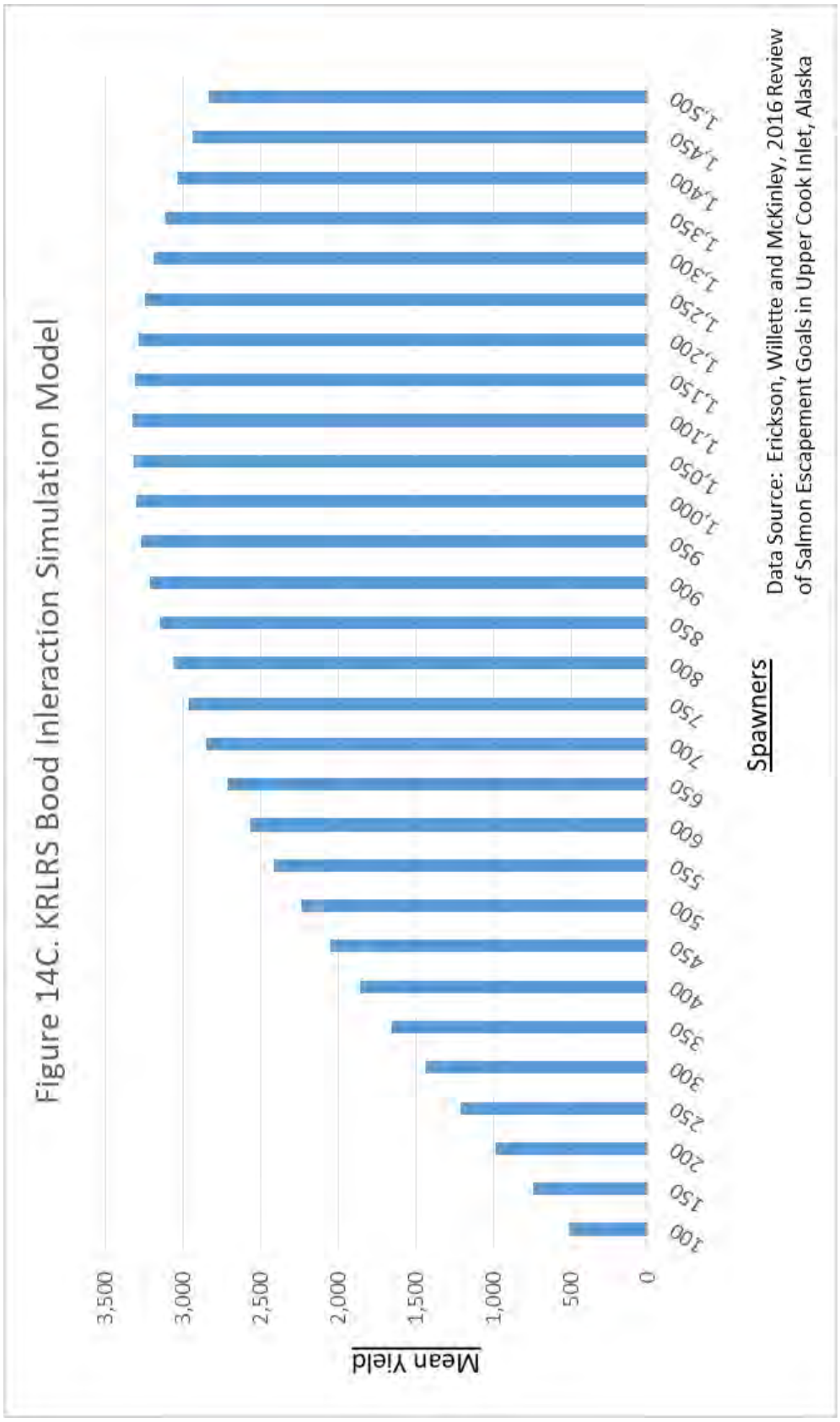
Figure 14C. KRLRS Bood Inleraction Simulation Model
Mean Yield
3,500
3,000
2,500
2,000
1,500
1,000
500
0
Spawners
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1,000
1,050
1,100
1,150
1,200
1,250
1,300
1,350
1,400
1,450
1,500
Data Source: Erickson, Willette and McKinley, 2016 Review of Salmon Escapement Goals in Upper Cook Inlet, Alaska

XII. KRLRS Salmon: Mortality – Eggs to Age 0 Fry and Adults

1. Assumptions:
   A. 50:50 male to female ratio
   B. Each female fecundity is 3,500 eggs, on average
   C. Ocean Survival is 20%

The mortality from adult, eggs, fry, smolt to returning adult ranges from 99.77% (4 million return, 20 million fry) up to 99.83% (3 million return, 20 million fry). The ability to accurately model and predict the adult to adult cycle over a 4, 5 or 6 year life cycle is mathematically very difficult. The probability of accurately forecasting or predicting a future event of adult spawners forces one into a negative probability art form. This is especially true due to not knowing the mortality, variables and or their effects.

The difference between a 4 million and a 3 million adult return is a 99.77% and a 99.83% mortality (See Scenario A and Scenario B, 20 million age 0 fall fry is 00.06%, or six one-hundredths of one percent).

2. Scenarios

Scenario A:

100% spawn – 1.0 million spawners, 500,000 females, 4.0 million return
500,000 x 3,500 = 1.75 Billion eggs spawned

Eggs		Age 0 Fall Fry		Egg to Fry Mortality		4 Million Return
1.75B	=	20 million	=	98.86%	=	99.77% mortality
1.75B	=	15 million	=	99.14%	=	99.77% mortality

Scenario B:

100% spawn – 1.0 million spawners, 500,000 females, 3.0 million return
500,000 x 3,500 = 1.75 billion eggs spawned

Eggs		Age 0 Fall Fry		Egg to Fry Mortality		3 Million Return
1.75B	=	20 million	=	98.86% mortality	=	99.83% mortality
1.75B	=	15 million	=	98.93% mortality	=	99.83% mortality

XIII. In-River Goals, KRLRS, 2000-2019

The State of Alaska BOF and regulatorily adopted management plans for the KRLRS and included in-river passage goals. A passage goal is the desired number of KRLRS that are to pass upriver of the Bendix, or now DIDSON sonar site at RM 19.5 of the Kenai River. The BOF has, in regulation, established three goals depending on the number of KRLRS. The three tiers are as follows:

(1) at run strengths of less than 2,300,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 900,000 – 1,100,000 sockeye salmon past the sonar counter at river mile 19; and

(B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, unless the department determines that the minimum inriver goal will not be met, at which time the fishery shall be closed or restricted as necessary; the commissioner may, by emergency order, allow extra fishing periods of no more than 24 hours per week, except as provided in 5 AAC 21.365;

(2) at run strengths of 2,300,000 – 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,000,000 – 1,300,000 sockeye salmon past the sonar counter at river mile 19;

(B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, or until the department makes a determination of run strength, whichever occurs first; if the department determines that the minimum inriver goal will not be met, the fishery shall be closed or restricted as necessary; the commissioner may, by emergency order, allow extra fishing periods of no more than 51 hours per week, except as provided in 5 AAC 21.365; and

(C) the Upper Subdistrict set gillnet fishery will be closed for one continuous 36-hour period per week beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday and for one continuous 24-hour period per week beginning between 7:00 p.m. Monday and 7:00 a.m. Wednesday;

(3) at run strengths greater than 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,100,000 – 1,500,000 sockeye salmon past the sonar counter at river mile 19;

B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, or until the department makes a determination of run strength, whichever occurs first; if the department determines that the minimum inriver goal will not be met, the fishery shall be closed or restricted as necessary; the commissioner may, by emergency

order, allow extra fishing periods of no more than 84 hours per week, except as provided in 5 AAC 21.365; and

(C) the Upper Subdistrict set gillnet fishery will be closed for one continuous 36-hour period per week, beginning between 7:00 p.m. Thursday and 7:00 a.m. Friday.

Each year ADFG begin the UCI fishery using the preseason forecast and outlook public notices. IF the forecast papers indicate the KRLRS to be in Tier 2, as described above, all fishing harvests are as directed above by the BOF regulations. If, however, the in-river harvests and the OTF program indicate either a smaller or larger run, than forecasted, then an in-season run adjustment will be made. These in-season run-adjustments are often made in late July. If the in-season run is smaller than forecasted, then there is very little opportunity to reduce harvest. This results in overharvest occurring up to that assessment date and underharvest on the remaining portion of the run. Conversely, if the run is above forecast, this results in underharvest occurring up to that assessment date and overharvest on the remaining portion of the run.

Table 15 reflects how in-river goals change by year depending on the use of the Bendix or the DIDSON sonar counter. The Bendix was used from 2000 to 2010. The DIDSON has been used from 2011 to present. The 'Made' or 'Exceeded' result is the comparison of the passage estimates to the in-river goal. In 9 of the last 10 years, 90%, and 14 of the last 20 years, 70%, of these times the in-river goals were exceeded.

If more/larger escapements were considered to be a solution to decreasing MEFL, weight at age and optimum yields, then the events described earlier in this paper would not have happened. Exceeding the in-river goals are most of the problem, not the solution.

It is not understood how an in-river goal complies with a BEG, GHL or ACL and MSY or OY management.

Table 15. Kenai River Sockeye Salmon - Past 20 Years			
	Inriver	Passage	
Year	Goal	Estimate	Result
2000	600,000-850,000	624,578	Made
2001	600,000-850,000	650,036	Made
2002	750,000-950,000	957,924	Exceeded
2003	750,000-950,000	1,181,309	Exceeded
2004	850,000-1,100,000	1,385,981	Exceeded
2005	850,000-1,100,000	1,376,452	Exceeded
2006	750,000-950,000	1,499,692	Exceeded
2007	750,000-950,000	867,572	Made
2008	650,000-850,000	614,946	Made
2009	650,000-850,000	745,170	Made
2010	750,000-950,000	970,662	Exceeded
2011	1,100,000-1,350,000	1,599,217	Exceeded
2012	1,100,000-1,350,000	1,581,555	Exceeded
2013	1,000,000-1,200,000	1,359,893	Exceeded
2014	1,000,000-1,200,000	1,520,340	Exceeded
2015	1,000,000-1,200,000	1,709,051	Exceeded
2016	1,100,000-1,350,000	1,383,692	Exceeded
2017	1,000,000-1,300,000	1,308,498	Exceeded
2018	900,000-1,100,000	1,035,761	Made
2019	1,000,000-1,300,000	1,848,157	Exceeded
		Made 6	30%
		Exceeded 14	70%

Note: prior to 2011, goals were Bendix based and assessed; in 2011 goals are DIDSON-based and assessed

Note: spawning escapement for 2018 is an estimate; 2019 spawning esc unknown, but will exceed SEG

Data Source: ADF&G (Unpublished)

XIV. Yields from the KRLRS Brood Table for 2012 and 2013

For the 2012 brood year, the following is noted:

Spawners	Return	R/S
1,212,921	1,484,043	1.22 : 1

The R/S of 1.22 : 1 is the lowest since 1968, 45 years. In this 2012 brood year, there was a yield of 136,000 KRLRS. This is pathetic in that these 136,000 KRLRS are to support a commercial, sport and subsistence fisheries through all of UCI.

Again, if larger escapements are to produce larger harvests, then larger escapements are the problem, not the solution.

For the 2013 brood year Return to Date, the following is noted:

Spawners	Return	R/S
980,208	1,078,658	1.10 : 1

The R/S of 1.10 : 1, again, is the lowest now in 46 years. Even lower than the 2012 brood year. The yield to date for the 2013 brood is 98,450 KRLRS. This is pathetic in that this yield of 98,450 supported the commercial, sport and subsistence through all of UCI. A portion of this brood year returned in 2019. However, ADFG does not have that data at this time.

Again, if larger escapements are to produce larger harvests, then larger escapements are the problem, not the solution.

The 2012 and 2013 brood years also demonstrate the negative interaction between brood years. In 2010, 2011 and 2012, in-river goals were exceeded. The effect on yields from back-to-back exceeding of the in-river goals has potentially devastated the 2012 and 2013 yields.

In 2019, the KRLRS sonar passage was nearly 1.9 million sockeyes. This is equal to the entire UCI harvest of 1.95 million sockeyes, all 23 major stocks. This year, as many KRLRS passed the RM 19.5 sonar counter as the entire commercial fishery harvests in UCI.

XV. BENDIX to DIDSON/ARIES Hydroacoustics Counters

In the Kenai, Kasilof and Yentna Rivers there have been a few different echo-location or sonar systems used to enumerate adult salmon runs. The Bendix system relied on echo-location, electronic signal processing to record the presence of objects passing through a transducer produced electronic beam. The state of propogation, echo reception and processing of these electrical signals were reflections of the electrical engineering sofistication of 1960's and early 1970's. These Bendix units were often made of military-grade components. These Bendix units, early on, relied on ocilloscopes, audible alarms and hand-held counters (finger-clickers). These units were required constant calibration, sometimes several times per hour. This historical description is not intended to be derogatory, rather a depiction of the state of echo-location systems systems in the 1960-1970's. In the late 1980's, other echo-location developments occurred both in the research and commercial markets. The commercial and recreational sectors saw numerous manufacturers and markets develop. Gone were the old flashers – paper-carbon recorders were replaced with new higher power, multi-frequency video display units.

Research markets also had new technologies in echo-location developments. One of these was the DIDSON. The DIDSON systems were selected by the ADF&G for testing and possible replacement for the Bendix systems. In the rearly 2000's, units were tested and deployed. A full-scale side-by-side comparative field test was undertaken by ADF&G from 2004-2008. Abstract of this side-by-side study is provided below:

> "Fishery managers have long relied on the use of active hydroacoustic systems to assess salmon (Oncorhynchus spp.) populations. Long-term datasets extending more than 20 years obtained from Bendix echo-counting sonars have provided the primary data used to assess migrating adult salmon escapement in several Alaska rivers. When it became necessary to replace the echo counters with a newer technology, a DIDSON was selected as the replacement. Changing and using data from the new system required an understanding of the relationship between salmon escapement estimates obtained from the 2 sonars. Although salmon estimates from the 2 sonars were shown to be equivalent in a clear river ground-truth study, in the larger, more turbid rivers where the echo counters were used, the relationship between estimates from the 2 sonar systems was site-specific. At most sites, DIDSON estimates were either higher than the echo counter or very similar. Because of the DIDSON's larger beam, better target resolution, and ability to subtract bottom echoes, salmon estimates from this system should be closer to the true migrating salmon populations. **Environmental differences between sites helped explain the variation and bias observed between the 2 technologies and show why the groundtruth study was not transferrable to the new sites.**"

Results of this side-by-side study in the Kenai River were:

> "Ratios of DIDSON and echo-counter estimates were not similar to a ratio of 1.0, nor were they the same between the north and south banks, with overall ratios of 1.59 from north bank and 1.25 from south bank and annual ratios varying from 1.41–1.78 for north bank and 1.20–1.30 for south bank (Table 3). More fish were estimated by the DIDSON than the echo counter during each year along both sides of the river. The north-bank echo counter estimated a total of 1,632,227 fish during the comparison study, the DIDSON 2,600,687 fish for an overall difference of 968,460 fish; with a south-bank estimate of 2,562,056 fish (echo counter) and 3,209,661 fish (DIDSON) for an overall difference of 647,605 fish."

Discussion includes:

> "The 1:1 ratio between echo-counter and DIDSON counts of migrating salmon observed at the Wood River (Maxwell and Gove 2007) was not observed at the Kenai River, nor was the relationship between the 2 sonars the same for both banks. The divergence between counts was greater along the north bank. Because of the advantages of the DIDSON over the echo counter, our conclusion is that the echo counter has been underestimating salmon on both sides of the Kenai River, but the relative consistency between regression slopes (Figures 35 and 37) and annual ratios (Table 3) suggests that the echo counter provided a reasonable index of abundance at this site.
>
> We observed more variation in the north-bank estimates. Confidence intervals for the slope and intercept were wider (Table 5), regression lines were more variable between years (Figures 35 and 37), as were the annual ratios (Table 3).
>
> There are many environmental differences between the north and south banks of the Kenai River including river bottom topography, current speed, and water depth. The assumptions used when designing the echo counter have been addressed by other studies.
>
> The 2 sonar systems differ markedly in their design and capabilities. There are several differences between the 2 systems that could account for the variation between salmon estimates. The most plausible explanation for the variation in the south-bank estimates is the larger water column, with fish swimming over the beam. Knowing the vertical distribution at this site would confirm whether or not this is true. The most plausible explanation for the differences in the north-bank estimates is the image resolution of the 2 sonars, which is compromised for the echocounter because of the longer range ensonified. The longer range coupled with high density schools passing at close range add to the complexity of assessing fish at this site. The higher bias at this site is likely due to the difficulty operators have in distinguishing and counting

voltage spikes during the calibrations, and higher variation may in part be due to differences between operators.

The historical echo-counter estimates were converted to DIDSON equivalents using the regression coefficients (Table 5) applied to the square root of the historical data, and then squaring the predicted estimates. The predicted estimates were then apportioned using the fish wheel data (Westerman and Willette (2006, 2007a, 2007b, 2010a), and error bounds were determined for the estimates. Over the 28 years of annual estimates, the 2 estimates differed by an overall average of 347,534 fish per year, an average ratio of 1.42, with DIDSON estimates higher than echo-counter estimates (Table 10). The largest deviation between the 2 estimates occurred in 1989 when predicted DIDSON estimates were 695,573 fish higher than echo-counter estimates; the smallest deviation was in 1979 with a difference of 129,122 fish (Table 10). The average CV across all historical years was 0.016. The annual historical estimates were substantially smaller than the predicted DIDSON estimates, and the error bounds were barely visible on the scale of the data (Figure 40). During the historical years, the bank preference of migrating salmon shifted between banks, but the average favored the north bank (north/south ratio of 1.24)." (Maxwell, Faulkner, Fair and Zhang, 2011).

There are eight issues that need pointing out:

(1) The historical Bendix counts had up to a ± 20% error etimate. This error estimate was determined by internal calibartion comparisons and independent control studies above RM 19.5. The Bendix-derived fish counts were always considered an index of salmon passage. The ± 20% Bendix error estimate, in part, explains the wide range in the escapement goals. The ± 20% error was acceptable for management pruposes.

(2) Lack of calibration of Bendix systems across the historic Bendix derived salmon enumerations. The calibration accuracy and frequencies during the side-by-side comparisons was not the same as during the prior 30 years.

(3) In the Kvichak, Kasilof and Copper Rivers, the Bendix-DIDSON comparisons were close to 1:1. Why in the Kenai River is the side-by-side comparison so different?

(4) During the side-by-side comparative experiment, there was NO independent assessments made as to the real-actual numbers of fish. It was **assumed** that the DIDSON equipment was 100% acccurate at counting targets, or fish.

(5) The historic Bendix counts were published, right down to the individual spawner. These historic Bendix-derived spawner counts were meant to be an index, not the actual count of fish.

(6) The Bendix to DIDSON correction factors were applied to the daily passage rates for the prior 30 years. Based on a three-year bendix-DIDSON comparison, brood tables were retrospectively adjusted for the prior 30 years. These retrospective adjustments amount to hundreds of thousands of salmon. The biological-economic-social aspects of this retrospective adjustment is a big deal. Hundreds of thousands fo salmon were added into the management scenarios.

(7) The x1.4 retrospective expansion factor was directly applied to the escapement goals.

(8) In the last decade, there have been NO follow-up studies done to assess the accuracy or consistency of the DIDSON-derived enumerations.

XVI. General Discussion

UCIDA chooses to combine several topics into one presentaion. These discussion topics are organized around the issues presented earlier.

1. Review of Assumptions
   The Introduction on page one lists 7 assumptions:

   A. Independent spawning events, year-to-year. Spawning events and subsequent progeny do interact with each other and prior years' fry. In the KR and the KAsR, clearly the annual spawning events are not independent. Both prior and successive progenies are interacting. The exact energetics, biological, predatory or competitive nature of these interacting broods are evident but remain largely unknown. The mechanisms for these brood interactions have been examined by some ADFG staff, past and present. There remains much to be done in order to have a better understanding of these issues for all salmon stocks natal to UCI. In the present Alaskan budgetary environment, future research is unlikely.

      All the spawning and predictive models that fail to incorporate brood interactions are doomed to providing misleading estimates. Both spawning and return estimates will have unreliable and high return predictions.

   B. Mathematical relationship between spawners, eggs, fry, smolt and returning adults. There is a huge mortality of 98.77% up to 99.83%, from eggs to either 4 million or 3 million returning adults. The mortalities across the KR and KasR salmon life-cycle are poorly understood.

   C. Food – quantity, quality, temporal and spacial distribution and size is understandable and somewhat constant.
      There are no life-cycle longitudinal food studies for any of these salmon stocks that occur in UCI. There are some isolated, unconnected salmon dietary studies for salmon natal to UCI.

   D. Parasites, disease, virus and bacterial effects are known and constant (no thresholds).
      The mortality, growth limiting vectors, are poorly understood in the salmon stocks natal to UCI. By in large because these vectors have had little assessments and monitoring. This is especially true of the wild, natal stocks. A substantial portion of the research, assessments and monitoring is conducted by CIAA.

E. Thresholds – In the last decade, CIAA has discovered and verified new diseases never before identified in UCI stocks. Additionally, there are significant elodea and northern pike population expansions in UCI. Many of these newly discovered plants and diseases are now occurring and expanding distributions with the fore mentioned forcing, perturbation and stochastic events.

F. Predator-Prey complexes are understood and or constant.
There are at least 5 historical salmon producing lakes that have no salmon populations. Salmon populations occur in over a thousand lakes, rivers and aquatic areas in UCI. The state has expended limited management response and limited resources to address this issue in Northern UCI water bodies. The State of Alaska has severe budgetary restrictions. These budgetary issues will continue for an unspecified number of years.

G. Forcing Functions and Perturbations: ecosystem stability has had no forcing functions or random perturbations.

UCIDA is of the opinion that global warming is a forcing function on such a grand scale that the human experience is powerless to change them, even if we wished.

UCIDA is of the opinion that perturbation events such as the 'Blob' and now the 'Blob 2' are a part of our human and environmental conditions. We might, in the short term, define management responses. This does not include human management of avoidances, but how to accommodate this perturbation. As resource managers, how do we move into the future? It is an open question as to whether the Blobs will be the new normal and change into a forcing function.

H. Stochastic: ecosystem stability may have stochastic changes that have no, or a minor, effect.
The UCI watershed has had hundreds of square miles experiencing spruce bark beetle infestation and forest fires. This is especially true in the last 2 decades. Entire watersheds have been changed from climatic to an earlier ecological state. The changes to earlier ecological serial stages have and will change aquatic populations, production, food chains and food webs. The stochastic events have and will affect UCI salmon productions. How do we move forward? What are the correct management responses?

2. Escapement Goals and Data

In this paper, UCIDA put into the public record the following:

A. The Bendix derived enumeration numbers have a ± 20% error estimates.

B. There is no reliable mathmatical or statistical transformation to correct this ± variance in the Bendix estimates or 'fish counts'.

C. The Bendix derived fish counts are reported to the single fish, giving a representation of accuracy that simply does not exist.

D. There is no reliable understanding of the distribution of the ± 20% variance across hours, days, years or passage rates.

E. The DIDSON derived passage estimates have not had an independent assessment as to the accuracy of passage over time or accuracy of passage density.

F. The DIDSON produced hourly estimates of fish passage rates, however, the hourly rates were combined to arrive at the daily passage rate. No internal verificaiton occurred concerning these hourly to daily passsage rates.

G. The Markov Table, by using 100,000 fish increments, does provide up to a 100,000 fish variance estimate.

H. None of the escapement goal methodoligies consider the actual imperical date:

- Declining sockeye MEFL of 15-20%
- Declining sockeye weight of 15-20%
- August entry pattern of 60% for KRLRS
- Degraded fish quality, including the presence of surface infected areas associated with scale loss and mushy, gray colored flesh.

3. Biological Issues

Some of these issues are directly linked to anthrogentic management decisions, practices and policies. The specific issues put forward included:

A. Over the past decade, the sockeye in UCI are shorter in length by 15-20%.

B. UCI sockeye salmon weights have decreased by 1 lb per sockeye. See economic discussion for significance.

C. An August portion of the KRLRS have gray-colored, mushy flesh. The eggs in these fish remain undeveloped and are noticably smaller than usual. See economic discussion for significance.

D. The UCI sockeye runs start in late June and continue through late August, 60 days, which reduces the overall densities of fish which has caused the annual and daily CPUE to be reduced to a marginal economic performance.

E. In 9 of the last 10 years, escapement goals were grossly exceeded. This has caused marginally fit and marginally developed smolt. They, in turn, cause marginally fit adults, both in quality and quantity. There are 3 effects of exceeding escapement goals:

- Reduced harvestable and saleable biomass
- Some age classes are retuning in very low numbers, such as the 2012-2013 brood years
- Spawner recruit ratios of 1.1-1.2 returning adults per spawner

F. Mortality rate of 99% in 'Adult to Fry to Smolt to Adult'

G. The following models may be utilized:

- Ricker-spawner recruit analysis – This model was first introduced in Ricker (1954) where it was used to model stock dynamics and recruitment in fisheries. The model is similar to (in terms of formulization and dynamical behavior) and inspired by the logistic growth equation. Consequently, it is somewhat more realistic and "safer" to use.
- Markov table(s)
- Beverton-Holt model – The Beverton-Holt model is a classic discrete-time population model which gives the expected number or density of individuals in a generation as a function of the number of individuals in the previous generation.
- KRLRS Brood interaction models developed by the Soldotna ADFG Office
- Percentile techniques and analysis developed by ADFG
- In order to use the Percentile Technique, a fishery or stock complex must have a minimum of a 40% exploitation rate.
- A fishery stock or complex must have the following minimum of spawning salmon:
  - Chinook: 1,000
  - Sockeye: 20,000
  - Coho: 10,000
  - Chum: 20,000
  - Pink: 50,000

4. Optimum Yield (OY)

A. Optimum Yield – NOAA Fisheries Glossary, page 34. The harvest level for a species that achieves the greatest overall benefits, including economic, social, and biological considerations. Optimum yield is different from MSY in that MSY considers primarily the

biology of the species. The term includes both commercial and sport yields; 2. The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems. MSY constitutes a "ceiling" for OY. OY may be lower than MSY, depending on relevant economic, social, or ecological factors. In the case of an overfished fishery, OY should provide for the rebuilding of the stock to B_{MSY};

B. Optimum Yield. Magnuson-Stevens Act section (3)(33) defines "optimum," with respect to the yield from a fishery, as the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; that is prescribed on the basis of the MSY from the fishery, as reduced by any relevant economic, social, or ecological factor; and, in the case of an overfished fishery, that provides for rebuilding to a level consistent with producing the MSY in such fishery.

C. The number of spawning salmon that will result, on average, the maximum returns in a fishery or stock complex;

D. spawning ranges will be at 85% to 100% of MSY spawning goal (UCIDA Proposal);

E. spawning goals will be assessed in season on a weekly, monthly and seasonal basis (UCIDA Proposal);

F. spawning goals will be utilized when there are competing MSY spawning goals;

G. spawning goals may be developed when the quantity or quality of the data in a fishery or stock complex is based on the recommendation of the EGC or SAC;

H. spawning goals, when recommended, may be utilized for a period of time not to exceed 5 years (UCIDA Proposal);

I. spawning goals will be developed using as guides:

- Applying Eco-Based Fishery Management Policy 0-120
- Incorporate Advisory Committee and Escapement Goal Committee local knowledge
- Ricker-spawner recruit analysis
- Markov table(s)
- Beverton-Holt model
- KRLRS Brood interaction models

J. Percentile techniques and analysis

- In order to use the Percentile Technique, a fishery or stock complex must have a minimum of a 40% exploitation rate.

- A fishery stock or complex must have the following minimum of spawning salmon:
  - Chinook: 2,000
  - Sockeye: 20,000
  - Coho: 20,000
  - Chum: 20,000
  - Pink: 50,000

5. Annual Catch Limit (ACL)

A. Definitions - The following definitions were taken from the NOAA Fisheries Glossary, 2006 Revised Edition

- Catch- page 5
  To undertake any activity that results in taking fish out of its environment dead or alive. To bring fish on board a vessel [or on shore] dead or alive; 2. The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed; 3. The component of fish encountering fishing gear, which is retained by the gear [drop-outs, break-offs].
- Acceptable Biological Catch – page 1
  A scientific calculation of the sustainable harvest level for a species or species group, and is used to set the upper limit on the range of potential annual total allowable catch (TAC).
- Annual Total Mortality (Rate) – page 2
  The rate of death, usually in terms of a percentage of fish dying from a population in one year, due to both fishing and natural causes; 2. The ratio of the number of fish which die during a year divided by the number alive at the beginning of that year.
- Carrying Capacity – page 5
  The maximum population of a species that an area or specific ecosystem can support indefinitely without deterioration of the character and quality of the resource; 2. The level of use, at a given level of management, at which a natural or man-made resource can sustain itself over a long period of time. For example, the maximum level of recreational use, in terms of numbers of people and types of activity that can be accommodated before the ecological value of the area declines.
- Limit Reference Points – page 25
  Benchmarks used to indicate when harvests should be constrained substantially so that the stock remains within safe biological limits. The probability of exceeding limits should be low. In the National Standard Guidelines, limits are referred to as thresholds. In much of the international literature (e.g. United Nations Food and Agricultural Organization, FAO) thresholds are used as buffer points that signal when a limit is being approached. (See National Standard Guidelines)
- Spawning numbers needed to maintain and not negatively affec2t the carrying capacity of a particular fishery or stock complex;
- spawning goals will may be utilized when there are competing MSY spawning goals;

- yields (harvests) will be in the 50% to 70% range of estimated MSY/OY;
- yields will occur so that underutilization or overfishing do not occur;
- the necessary scientific data need to establish MSY or OY spawning goals is weak, sporadic non-existent;
- may utilize catch per unit effort(s) or proxy modeling between fisheries, stock complex(es) or species.

6. Guideline Harvest Level (GHL)

A. Definitions taken from NOAA Fisheries Glossary

- Harvest Guideline – page 21
  A numerical harvest level that is a general objective, but not a quota. Attainment of a harvest guideline does not require a management response, but does prompt review of a fishery.
- Quota – page 39
  A specified numerical harvest objective, the attainment (or expected attainment) of which causes closure of the fishery for that species or species group.
- Catch Per Unit (of) Effort (CPUE) – page 6
  The quantity of fish caught (in number or in weight) with one standard unit of fishing effort; e.g. [number or salmon caught per 12 hour fishing period per one standard length of gillnet,] number of fish taken per 1,000 hooks per day or weight of fish, in tons, taken per hour of trawling. CPUE is often considered an index of fish biomass (or abundance). Sometimes referred to as catch rate. CPUE may be used as a measure of economic efficiency of fishing as well as an index of fish abundance. Also called: catch per effort, fishing success, availability.
- Results in the number of spawning salmon that well result in yields and protect against underutilization and over fishing in a fishery or stock complex.
- Are developed due to lack of enumeration(s), data on run timing, run strength, spatial or temporal information.
- Spawning numbers and yields will be achieved through the use of CPUE's [and indexes].
- Spawning numbers and yields will be achieved by maintaining a 30% to 70% exploitation rate(s).

7. Economic and Social Consideration

A. The economic impact of salmon that have a smaller MEFL and less weight at age is, in our opinion, economically devistating. Three million sockeye averaging 1 lb less per fish equates to a loss of $12,000,000 annually for the commercial fishing industry. The

absence of the sockeye salmon over 6 lbs has taken Cook Inlet out of the premium market. Now, UCI sockeye are competing with the marketplace where 3-5 and 4-6 lb sockeye are plentiful. Cook Inlet has lost the premium market position.

B. The August component of the sockeye harvest no longer are graded #1; now it's mostly #2 and dog food grades. Annually, the August sockeye component costs the industry in excess of $2 million.

C. The smaller sockeye and lower grade sockeye cost the industry $14 million annually. Historically, UCI salmon were of premium size and quality worth 50-75¢ more per pound than Bristol Bay. This diminished sockeye size and quality has had negative effects on Chinook, Chums, Pinks, and Silvers, even though the size and quality issue was less pronounced. This $14 million in diminished economic activity spill over into the retail, transportation, local, state and national taxes paid. Crew members, process workers and labor markets become less attractive making the hiring of entry-level labor much more difficult. Capital investments are restructured and redirected. These costs are real and diffucult to quantify.

D. Tables 16A and 16B provide the total ex-vessel value, adjusted for inflation value and the first wholesale value of all salmon harvested by the UCI commercial salmon industry, 1960-2018. The ex-vessel total values were normalized by using th US Inflation Calculator found at ww.usinflationcalculator.com, published by the US Dept. fo Commerce. The ex-vessel total values are the result of lbs of salmon sold at a given price per pound. In the 2000-2009 decade, salmon prices were severely depressed.

Table 16A. Approximate exvessel value of UCI commercial salmon harvest, 1960-2018

58 Years - Totals & Averages - Exvessel Values 1960-2017 - Drift & Set

Year	Total	2018 Value	First Wholesale	*Historic Events*
1960	2,787,000	23,727,727	47,455,454	*ADFG Management Begins*
1961	2,125,000	17,910,125	35,820,250	
1962	3,981,000	32,219,731	64,439,462	
1963	1,919,000	15,803,906	31,607,812	
1964	3,678,000	29,899,293	59,798,586	
1965	2,558,000	20,464,489	40,928,978	
1966	4,233,000	32,924,117	65,848,234	
1967	2,586,000	19,511,602	39,023,204	
1968	4,355,000	31,536,958	63,073,916	
1969	1,755,394	12,053,674	24,107,348	
1970	2,984,840	19,386,536	38,773,072	
1971	2,050,974	12,761,920	25,523,840	
1972	3,543,192	21,361,379	42,722,758	
1973	6,163,635	34,983,636	69,967,272	
1974	6,562,535	33,545,602	67,091,204	
1975	6,702,612	31,395,881	62,791,762	
1976	13,677,413	60,576,413	121,152,826	*MSA Passed & Implemented*
1977	21,537,920	89,565,760	179,131,520	
1978	32,581,114	125,930,003	251,860,006	
1979	14,632,021	50,790,042	101,580,084	*Initial Alaska State FMP*
1980	12,871,810	39,366,181	78,732,362	
1981	18,448,596	51,145,840	102,291,680	
1982	31,437,716	82,098,374	164,196,748	
1983	29,360,152	74,286,490	148,572,980	
1984	17,335,160	42,045,855	84,091,710	
1985	34,359,478	177,260,685	354,521,370	
1986	46,430,522	106,758,851	213,517,702	
1987	101,099,156	224,274,594	448,549,188	
1988	122,177,017	260,264,931	520,529,862	
1989	59,174,188	120,260,084	240,520,168	
1990	40,671,938	78,420,600	156,841,200	*West Area FMP*
1991	15,242,649	28,202,929	56,405,858	
1992	100,068,258	179,741,991	359,483,982	
1993	30,026,815	52,366,349	104,732,698	
1994	34,453,264	58,585,892	117,171,784	
1995	22,014,944	36,403,530	72,807,060	
1996	29,712,117	47,722,318	95,444,636	
1997	32,394,427	50,863,448	101,726,896	
1998	8,685,145	13,427,660	26,855,320	
1999	20,975,713	31,728,724	63,457,448	
2000	8,147,307	11,932,172	23,864,344	
2001	7,732,881	11,009,787	22,019,574	
2002	11,643,925	16,635,071	33,270,142	
2003	12,875,310	17,633,996	35,267,992	
2004	20,701,093	27,616,726	55,233,452	
2005	31,677,341	40,874,961	81,749,922	
2006	13,904,377	17,380,855	34,761,710	
2007	23,423,367	28,423,064	56,846,128	
2008	16,696,717	19,543,029	39,086,058	
2009	14,573,854	17,119,185	34,238,370	
2010	33,168,113	38,332,188	76,664,376	
2011	53,121,708	59,513,864	119,027,728	
2012	34,955,955	38,368,208	76,736,416	
2013	40,241,970	43,532,574	87,065,148	
2014	35,079,504	37,342,210	74,684,420	
2015	24,164,211	25,692,360	51,384,720	
2016	22,384,437	23,503,437	47,006,874	
2017	23,838,446	24,508,124	49,016,248	
2018	9,124,911	9,124,911	18,249,822	*Lowest value since 1960 (59 yrs)*
Total $$	***1,384,808,142***	***2,979,660,842***	***5,959,321,684***	
Average $$	***23,471,324***	***50,502,726***	***101,005,452***	

Data Source: ADF&G Annual Manaagement Reports

Table 16B. Economic Performance of UCI Salmon Fishery			
10-year Averages			
Years	**Ex-Vessel**	**2018 Value**	**2018 First Wholesale**
1960-1969	2,997,739	23,605,162	47,210,324
1970-1979	11,043,626	48,029,717	96,059,434
1980-1989	47,269,379	117,776,189	235,552,377
1990-1999	33,424,527	57,746,344	115,492,688
2000-2009	16,137,617	20,816,885	41,633,769
2010-2018	29,065,311	33,324,208	66,648,417
			Source: ADFG

8. Maximum Sustainable Yield (MSY)

A. Definitions - The following definitions were taken from the NOAA Fisheries Glossary, 2006 Revised Edition, NFMS's Guidelines and National Standards Guidelines 50 CFR 600.305 et. seq.

- Maximum Sustained Yield (MSY) – page 28
  The largest average catch or yield that can continuously be taken from a stock under existing environmental conditions. For species with fluctuating recruitment, the maximum might be obtained by taking fewer fish in some years than in others. Also called: maximum equilibrium catch; maximum sustained yield; sustainable catch.
- Sustainability – page 52
  Ability to persist in the long-term. Often used as "short hand" for sustainable development; 2. Characteristic of resources that are managed so that the natural capital stock is non-declining through time, while production opportunities are maintained for the future.
- Sustainable Catch (Yield) – page 52
  The number (weight) of fish in a stock that can be taken by fishing without reducing the stock biomass from year to year, assuming that environmental conditions remain the same.
- Sustainable Fishing – page 52
  Fishing activities that do not cause or lead to undesirable changes in the biological and economic productivity, biological diversity, or ecosystem structure and functioning from one human generation to the next.
- Sustainable Yield – page 53
  Equilibrium yield; 2. The amount of biomass or the number of units that can be harvested currently in a fishery without compromising the ability of the population/ecosystem to regenerate itself.

XVII. Spawning Goals

1. UCIDA Recommendations

A. The number of spawning salmon that will result in the maximum yield, catch or harvest in a salmon fishery or stock complex.

B. Spawning goal(s) ranges will be 90% to 100% of the MSY number of spawners needed, unless otherwise justified.

C. Spawning goal ranges may be developed for index stock(s) or stock complex(es).

D. Spawning goals will be assessed in season on a daily, weekly or seasonal schedule?

E. Spawning goals may be developed by utilizing one or more of the following:

- Applying Eco-Based Fishery Management Policy 0-120
- Incorporate Advisory Committee and Escapement Goal Committee local knowledge
- Ricker-spawner recruit analysis
- Markov table(s)
- Beverton-Holt model
- KRLRS Brood interaction models

F. Apply the Ecosystem-Based Fisheries Management Policy, 0-120, to the Salmon FMP.

G. Strongly consider applying the Precautionalry Principal to the setting of UCI Escapement Goals.

H. Develop accountability and security measures in the event the managers violate or ignore the Salmon Fishery Management Plan instructions or provisions. Example: If the State is the on-site manager, posting of a $100 million performance bond.

I. Strongly encourage the creation of a standing salmon advisory committee to include multi-federal and state agencies, federal subsistence groups, commercial, recreational and local government officials.

J. Strongly encourage an escapement goal committee including Federal and State agencies and UCI stakeholders. Preferrable an 8 person committee.

K. Establish interim escapement goals for UCI.

L. Adopt fishing sector ACL, GHL and Allocations. See Table 17.

M. Adopt fishing sector priorities, ACLs, GHLs and Allocations.

Table 17. Fishing Sector Priorities, Spawners, ACL's and GHL's

Stock Complex	Commercial %		Recreational %		Subsistence %		ABC, ACL Yield %*	
Stock Complex #1	Chinook	50	Chinook	48	Chinook	2	Chinook	100
May 1 thru June 20	Sockeye	50	Sockeye	48	Sockeye	2	Sockeye	100
	Coho	0	Coho	0	Coho	0	Coho	0
	Pink	0	Pink	0	Pink	0	Pink	0
	Chum	0	Chum	0	Chum	0	Chum	0
Stock Complex #2	Chinook	48	Chinook	48	Chinook	4	Chinook	100
June 20 thru	Sockeye	85	Sockeye	14	Sockeye	1	Sockeye	100
15-Aug	Coho	50	Coho	48	Coho	2	Coho	100
	Pink	95	Pink	3	Pink	2	Pink	100
	Chum	80	Chum	18	Chum	2	Chum	100
Stock Complex #3	Chinook	0	Chinook	0	Chinook	0	Chinook	0
August 16 thru	Sockeye	95	Sockeye	3	Sockeye	2	Sockeye	100
October 30	Coho	50	Coho	49	Coho	1	Coho	100
	Pink	95	Pink	3	Pink	2	Pink	100
	Chum	95	Chum	5	Chum	0	Chum	100

ABC - Annual Biological Catch
ACL - Annual Catch Limit
GHL - Guideline Harvest Level

- The primary objective is to achieve MSY/OY spawning goals where established.
- All percentages determined at Anchor Point line.
- All percentages to be applied as Spawning Goals, ACL's or GHL's are met.
- All percentages unique to inriver situations.
- No intra-river transfers for recreational sector

***** After MSY/OY spawning goals, ACL and GHL achieves spawning needs.

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3. Maxwell, et al, A Comparison of Estimates from 2 Hydroacoustic Systems Used to Assess Sockeye Salmon Escapement in 5 Alaska Rivers, 2011, Fishery Manuscript Series No. 11-02.

4. Shields & Dupuis, Upper Cook Inlet Commercial Fisheries Annual Management Report, 2017. Fishery Manuscript Series 17-05.
   Special Note: The Annual Management Reports from the last 20 years were also reviewed.

UNITED FISHERMEN OF ALASKA

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January 23, 2020

Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526
Submitted VIA: Alaska Board of Fisheries e-mail (dfg.bof.comments@alaska.gov)

RE: Opposition Proposals 78, 79, and 95

Dear Chairman Morisky and Board of Fisheries Members,

United Fishermen of Alaska (UFA) is the statewide commercial fishing trade association, representing 34 commercial fishing organizations participating in fisheries throughout the state, and the federal fisheries off Alaska's coast.

Proposal 78

We oppose Proposal 78 which seeks to amend the Upper Cook Inlet Salmon Management Plan by changing the order of allocation criteria, and seems to inherently favor specific user groups.

Adoption of this proposal would be either redundant to what the board already does for every allocative proposal because the board already considers all criteria in relation to all proposals, or it will give more weight to criteria at the top of the list and constrain the board decision-making process.

Proposal 79

We oppose Proposal 79 which seeks to establish a personal use priority for Cook Inlet salmon fisheries and the four other nonsubsistence areas found in regulation [5 AAC 99.015]. Commercial, Sport and Personal Use are all given equal weight under current regulations. Subsistence Use has a priority over every other use to recognize the traditional and vital importance of Customary and Traditional (C&T) uses of fish and wildlife resources in predominately rural subsistence use areas. It is clear this proposal seeks to do an end-run around the subsistence priority. Multiple Boards of Fisheries have reviewed Cook Inlet over the years and none reached a positive C&T finding for the area.

We also note that the 2018 season was very unusual in this region. The Kenai late-run sockeye were weak and they were also very late. Changing longstanding regulations so dramatically based on results from one season does not seem prudent.

The author of this proposal states that the commercial fishery was allowed to fish through August, which is an inaccurate statement. The drift and ESSN fisheries were closed entirely during the week of July 29-August 4 to protect Kenai late-run sockeye. The regular fishing

periods for ESSN and drift fisheries were also closed on August 6. Drift and ESSN fisheries after this time were opened in limited area to target very abundant Kasilof sockeye salmon.

Lastly, as this proposal seeks to establish personal use priority in all five nonsubsistence areas, this proposal should not be deliberated on at the Upper Cook Inlet meeting and instead be noticed and deliberated on at a Statewide BOF meeting so that all regions have the opportunity to weigh in.

Proposal 95

We oppose Proposal 95 which seeks to amend the Kenai River Late-Run Sockeye Salmon Management Plan to remove and replace the provision to manage this stock primarily for commercial uses with a provision to acknowledge the value of the stock to three user groups, commercial, sport, and personal use. Kenai River late-run sockeye salmon are an important, if not the most important, stock of salmon for ESSN and drift gillnet fisheries. Viable sport and personal use fisheries are already provided for under current regulations.

In closing, in current regulation there is an expectation that the board will hear the public and current science to make informed decisions that will be guided by statute. We kindly request that this be the guiding principle when making decisions.

Thank you,

Matt Alward
President

Frances H. Leach
Executive Director

Vikki McCoy

01/08/2020 06:56 AM AKST

RE: PROPOSAL 78 Amend the Upper Cook Inlet Salmon Management Plan to include weighted criteria for the allocation of fishery resources

I oppose this proposal. I am 71 years old and have participated in the personal use fishery for over 20 years. However, i had to give up dip-netting from the shore when I turned 63 due to severe spinal stenosis and arthritis. I found a guide service in 2018 that provided handicap accessible dip-netting from a boat. For the past 2 years, I have been able to dip-net with their able assistance again. Being able to fish for my own annual food harvest again has provided me with pride in my accomplishment, dignity, food, and a sense of enjoyment that I have not had in several years. Please do not prevent ADA accessibility by disallowing guided dip-net charters.

Submitted By
Wade Beard
Submitted On
1/15/2020 7:48:21 AM
Affiliation

Phone
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Address
po box 3044
soldotna, Alaska 99669

Comments on Proposal 169.

Proposal 169 intends to close the Kasilof River to motorized boats bellow the Silver Salmon Rapids.

I have a home on the Kasilof River just below the Silver Salmon Rapids and Propasal 169 would stop my "reasonable right of access" to my home on the navigatable Kasilof River . My home on the Kasilof is only accessable in the summer by Motor Boat. There are no roads to my home.

In the well known Supreme court case between John Sturgeon and the National Park Service. The Supreme court sided with Sturgeon because they said Alaska is different, the navigatable rivers in alaska are like highways to the rest of America. The Navigatable rivers are, in most cases, the only mode of reasonable transpertation. In my case the ONLY mode of reasonble transprotation is by motorized boat.

The Kasilof River guides are fishing for profit and finacial gain. This is not sport fishing. Fishing for money is not a sport it is for business and should be classified as commercial fishing and regulated as such. The guides are destroying the fishery on the Kasilof for finacial gain.

The commercial guided fishing on the Kasilof needs to be regulated more tightly and seperately from normal Sport fisherman. A blanket shutdown of motorized boats does not solve the problem and only blocks my reasonable right to access my home.

If propasal 169 passes then I will see the State in Supreme court.

Wade Beard

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Comment due date: January 23, 2020
Location: Anchorage – Egan Center

Proposal Comments and Feedback, Wilderness Place Lodge, Lake Creek River Guides: Proposal text in black, general comments from us in red

Proposal 215 – Creation of Susitna and Yentna Rivers King Salmon Management Plan

We support the creation of such a plan, but have varying ideas of how that should be established. Please see our separate document outlining our ideas and comments.

Proposed by Mat-Su Borough Fish & Wildlife Commission

(a) Stated purpose of creating this proposed plan: "To ensure an adequate escapement of king salmon into the rivers and streams of the Susitna and Yentna river drainages, to provide management guidelines and tools to the department and to provide predictability in management…" **We ultimately agree that there should be a simple plan that clearly outlines the goals and guidelines for managing a health king salmon fishery for both the Susitna and Yentna drainages.**

(b) The department shall initiate management of the sport fisheries for king salmon in the Eastside Susitna management area (Unit 2 of the Susitna River) based on the pre-season forecast for the Deshka River and other available abundance indices. **Clearly define "other available abundance indices." Also, clearly define how the current "sustainable escapement goal" for the Deshka is established. We would then propose a next step establishing an "optimal escapement range" and manage for optimal numbers exclusively. I.e. the current posted "sustainable escapement goal" for chinook salmon on the Deshka River is 13,000 – 28,000 fish. Hypothetically, the "optimal escapement goal" for management purposes may be 16,000 – 20,000 fish. (See our *King salmon management* plan document attached; our ideas on how the plan can be simplified and organized)**

(2) – (15): Within Proposal 215 Outline #s (2) through (15) regarding how to regulate king salmon fishing based on (b) above for the Susitna and Yentna Rivers, please see our king salmon management plan. The existing text in this proposal is wordy and complicated. We have simplified a plan to manage king salmon with clear guidance for all and optimal benefit to the fishery. It is attached as an exhibit to our commentary.

Other General Comments to this proposal: In general, we do not support 24 hour sport fishing for kings, even in years of king abundance. This makes it difficult for Conservation Officers to enforce regulations and law and also inevitably results in some users to abuse them. Also, we do not support fishing with bait for King salmon on any river system other than the Deshka and Little Susitna under any conditions.

Proposal 216 – Creation of Susitna and Yentna Rivers King Salmon Management Plan

Proposed by Matanuska Valley Fish and Game Advisory Committee

"Please adopt a large fish Deshka River king salmon spawning escapement goal" -- **Clearly define "large fish" Perhaps 5 year age class fish? Or 4 and 5 year?** -- Since 2013 Deshka River, Susitna River drainage, and Northern District king salmon fisheries have been managed based partially on the preseason Deshka River king salmon return estimate. The Department's most accurate portion of this estimate is for older age-class fish (large fish). In addition, the female component of a king salmon run consists almost entirely of older age-class "large" fish. Since it is important for quality king salmon spawning escapements to have adequate numbers of female fish, rather than only high numbers of younger male fish, since the Deshka River return is used for management purposes throughout the entire Susitna River drainage

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and for management of the Northern District commercial set net fishery, and since Deshka River has the best king salmon data set in Northern Cook Inlet, it therefore makes sense, consistent to large fish king salmon goals used elsewhere in Alaska, that a large fish king salmon goal be developed and adopted for Deshka River. Such a goal would increase projection accuracy and allow for more precise fishery management coinciding with the goal. The Committee knows the Department develops a BEG or SEG, but the Board may adopt an OEG. The Board previously designated several Northern Cook Inlet king salmon stocks as Stocks of Concern. We respectfully request the most recent and best available science be used to manage Northern Cook Inlet king salmon stocks. NOTE: With ADF&G suggesting a reduced Deshka River goal of 9,000 - 18,000 (kings of any size) **We disagree with lowering the existing SEG. It makes no sense. This is not the best interest when managing an already volatile population**- a better precautionary measure would be to ensure an escapement target containing adequate numbers of large king salmon. The department's ability to gauge king salmon size in-season should be considered.

We agree that one of the most obvious observation during the king salmon downturn in the Susitna Drainage has been the low abundance of large fish, primarily 5 year fish. We agree that when early indices, ADF&G fish wheel samples and commercial fish harvest observations indicate a low abundance of 4 and/or 5 year king salmon that that age group can be protected from over-harvest and/or harvest in general by emergency order. ADF&G: Please clearly define the length of these fish for each age group so that they can be clearly identified by sport, personal use and subsistence fishermen throughout the Susitna drainage. We support the decision making process of our regional fisheries biologists to determined when and if each age group is in low abundance. A slot limit (if regulations are allowing retention) below a certain length of fish may be established to protect a specific age demographic. Any fish under that length would be required to be released and not retained. This can be used as a 'fine-tune' management tool to allow for optimal escapement numbers of chinook and also assuring a healthy, age-diversified spawning population in each tributary. Establishing and managing for an "Optimal Escapement Goal" for in-river total king numbers and for age demographics within that population would be our vote.

Proposal 217 – Creation of a Deshka River King Salmon Management Plan

Proposed by Mat-Su Borough Fish and Wildlife Commission

Our comments to this are in line with our comments to Proposal 215. Our guidelines for establishing what we feel to be the best king salmon management plan we have proposed in a second attached document.

Proposal 220 – Special provisions for the seasons, bag, possession and size limit

We support this proposal, commentary below

Proposed by Jim Wagner

5 AAC 61.118. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 4 of the Susitna River Drainage Area.

Prohibit retention of rainbow trout and the use of bait in the Lake Creek drainage, as follows: Yentna unit 4 lake creek drainage Designate the entire Lake Creek drainage as catch and release for Rainbow trout, no retention allowed. Restrict

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the use of bait to 1/2 mile above the confluence of Lake Creek and the Yentna River. All areas above the marker 1/2 mile above the confluence would incorporate the same regulations for trout that currently exist 1/4 mile above the outlet of Bulchitna Lake. Allowing the use of bait to the area below the marker during the time frame allowed for the use of bait, would minimize any negative impacts to the commercial lodges and guide services which rely heavily on the use of bait to catch Silver salmon. On the other hand, the chance to land a trophy Rainbow Trout would be an incentive for many sport anglers. With most Taxidermists utilizing molds and photographs and measurements of trophy fish to reproduce an exact replica of the fish without having to kill the fish to do so. I believe instituting these changes would enhance the number and size of Rainbow trout and protect the resource for future generations. It would also be a positive step for the commercial lodges and guide services, and air taxi operators, if trophy trout were readily available, without incurring the huge expense of a trip to Bristol Bay or western Alaska. **We support this proposal.**

What is the issue you would like the board to address and why? To make Lake Creek a designated trophy fishery for Rainbow trout similar to what's been done on the Taluchulitna river. I've been a property owner on Bulchitna Lake since 1987, and the last several years have noticed a severe decline in the number and size of Rainbow trout. Although the waters 1/4 mile above Bulchitna lake are designated catch and release for rainbow trout, the lower Two miles of the river below Bulchitna lake allow for retention of trout. This area receives a lot of pressure due to ease of access, and with the restrictions imposed on the King Salmon fishery, and inconsistent runs of Sockeye and Silver salmon, there is more of a tendency to retain rainbow trout. With the expense involved of getting there via air, or hiring a guide, people want to take something home to justify the expense. During the period July 13 thru August 15 bait is allowed and this contributes to high mortality rates for Rainbow trout even when released, as trout have a tendency to swallow the bait. **We agree with this proposal completely. We as a lodge do not fish with bait on Lake Creek, and exclusively fish single hook, artificial barbless hooks for trout. We have a lodge policy of catch and release only for rainbow trout and feel there is no reason to retain trout on lake creek. We agree that bait fishing in general results in significant mortality in the native rainbow trout population. Also, fishing with bait from July 13 – August 15 also results in unintended hook-ups with king salmon, which can result in disturbing spawning kings on their redds and inevitably leading to mortality in some. Bait fishing for other species in rivers where king salmon populations are of concern should be taken into account.**

Proposal 223 – Allowing more than one unbaited hook on artificial lures for rainbow trout

Proposed by Gene Sandone

We do not support this proposal

5 AAC 61.114. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 2 of the Susitna River Drainage Area; 61.116. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 3 of the Susitna River Drainage Area; 61.118. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 4 of the Susitna River Drainage Area; 61.120. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 5 of the Susitna River Drainage Area; 61.122. Special provisions for the seasons, bag, possession, and size limits, and methods and means for Unit 6 of the Susitna River Drainage Area; and 61.185. Special management areas for rainbow trout in the Susitna River Drainage Area.

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Allow more than one unbaited, single-hook, artificial lure in the Susitna River, as follows: There are several locations in regulations where terminal tackle is restricted to one unbaited, single-hook artificial lure. Because there are no negative biological impacts to the rainbow trout populations, I believe that the restriction to terminal tackle, in the regulations cited below should be changed to allow unbaited single-hook, artificial lures instead of limiting it to only one unbaited artificial lure. These regulations are listed below along with substitute language. However, this may not be an exhaustive list of regulations that I recommend to be changed. There may be other regulations that pertain to the Susitna River Drainage areas that should be changed from one unbaited single-hook artificial lure to unbaited, single-hook artificial lures. I suggest changing these regulations also.

What is the issue you would like the board to address and why? Currently, terminal tackle when sport fishing in various areas during certain times and within the rainbow trout catch-andrelease special management areas in the Susitna River Drainage Area is limited to only one unbaited, single-hook, artificial lure. Accordingly, the use of a dropper fly is prohibited in these select areas. However, there is no biological reason to prohibit dropper flies in these waters. I would like the Board to address the issue of allowing dropper flies or allowing more than 1 unbaited singe hook lure as terminal tackle when fishing in these Susitna Areas and the special management areas in the Susitna River Drainage. This change in regulation would allow a sport fisherman to use two different flies when fishing for rainbow trout in these waters. I believe that there are no negative biological implications to the rainbow trout population or the individual rainbow trout, except that it might provide more hookups for the fisherman. Allowing the use of an additional dropper fly when sport fishing in these waters would benefit the fisherman who would like to use a dropper fly and have no impacts to fishermen who prefer to use only one fly or lure. The current regulations are overbearing and confusing. For example, from currently, from June 1 through July 13, above the Parks Highway in Willow Creek, terminal tackle is restricted to unbaited, single hook lures, while below the Parks Highway, during the same time period, only one, unbaited single-hook lure can be used. The change in this regulation would provide the same regulation for Willow Creek above and below the Parks Highway. Additionally, the proposed changes in regulations would simplify and coordinate regulations for other streams and lakes within the Susitna River drainage during the period September 1 through July 13, as specified in 5 AAC 61.112; 5 AAC 61.120; and 5 AAC 61.122.

We do not support this proposal. We do not have issues with successful catch of rainbow trout with the current regulations limiting us to single hook, artificial. Any double-hook rig can lead to potential gilling and or double hook penetration of rainbows that might impact their survival. We see some people abusing a double-hook rig to use for snagging salmon. Also, when using double hook rigs for trout, the inadvertent snagging of salmon may occur, which is undesirable and impactful, especially if those salmon are spawning on their redds.

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Proposed "Susitna, Yentna King Salmon Management Plan) Proposals 215, 216, 217, 219
Comments and Management Considerations
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Our Input below on the proposed Susitna and Yentna Drainage King Salmon Management Plan if adopted.

Proposals 215, 216, 217 and 219 encourage the implementation of a king salmon management plan for the drainages and inlying tributaries of the Susitna and Yentna River Drainages. The proposals are broadly written, we feel in order to be open to comments and input on how this management plan may function best to support the re-establishment and health of this king fishery while also considering consistent opportunity for all user groups from year to year into the future. Our thoughts are outlined below. Thank you for your considerations of our ideas. Our ideas are solely to open new thoughts and discussions to aid in helping all groups decide upon the most beneficial management plan.

In an effort to promote the long term use of salmon by the people who are identified as fisherman who are part of the commercial, personal, subsistence and sport fish uses, we are supportive of a proactive management plan that focuses on the health of the Susitna drainage king salmon first and foremost. Secondly, a plan that manages to provide equal and optimal opportunities for all fishing user groups. All fishing user groups will be allowed harvest opportunities in line with management for optimal sustained king salmon returns.

We would like to site the principles and policy rational of work done nearly 20-years ago by Charlie Swanton, ADF&G Deputy Commissioner to address Western Salmon Stocks of concern. This framework still has the same fundamental merit and provides an analytical structure for BOF to utilize. We support Mr. Swanton's prior framework, and have suggested the following process that could be utilized for the Yentna and Susitna drainages to have a permanent management plan in place where the BOF establishes and maintains an optimal escapement goal of king salmon.

This approach should follow these guiding principles:

- *Protect wild salmon and habitat to ensure balanced, optimal yields.*
- *Manage for ideal escapement ranges that sustain maximum healthful population numbers and ecosystem function.*
- *Apply effective management systems which regulate human activities.*
- *Encourage public support and involvement.*
- *Manage conservatively commensurate with uncertainty*

Sustainable Salmon Fisheries Policy (SSFP) should:

- *Provide an analytical structure for the BOF process*
- *Articulate ADF&G and BOF approach to salmon management*
- *Encompass a large geographic, multi-stock, multi-species scope*
- *Is implemented in a public forum - the Board of Fisheries process*

Reasons to support:

- *Alaska Constitution mandates fish resources be developed and maintained for sustained yields.*
- *SSFP built on a harvest strategy based on fixed escapements.*
- *Fixed escapements offer the opportunity for greater yields than with other harvest strategies*
- *Regular evaluations of goals and management strategies under the SSFP ALMOST assure sustainability.*

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Italicized text: source: Chalie Swanton
ADF&G: http://archive.ecotrust.org/copperriver/workshop/pdf/Alaska_Salmon_Mgmt_Policies-Swanton.pdf We have attached this document for BOF review.

Key Points to consider:

1. The king salmon management plan should focus on optimizing king salmon populations with the Susitna and Yentna drainages. This should be the first priority before consideration of the priorities of the in-river fishery's user groups. Both prior year escapements and projected estimates of kings for each river system will be taken into account when planning future regulatory guidelines. Goals for planning as follows:
    a. Permanently establish the ideal **Sustainable Escapement Goal (SEG)** for king salmon on the Deshka River and/or keep the SEG range at the existing 13,000min – 28,000max
    b. Establish, agree upon and implement an **Optimal Escapement Goal (OEG)** for Deshka River King Salmon. Ie: here a completely hypothetical OEG of say 16,000 – 20,000 kings, which may also though be close to a credible range. OEG will be determined by historical numbers within the fishery that provided the best opportunity for user groups, but also the best reproductivity for the salmon. This assures that any unexpected deviation from projected numbers does not result in king numbers following below the existing minimum SEG of 13,000 fish for the Deshka. In prior seasons, when kings were managed with hopes to achieve a minimum of 13,000 fish, the SEG goal fell short of its low-end goal. This has resulted in a long hard road for the population to recover to healthy, optimal numbers. OEG guarantees the best chance of consistent and positive experiences for all fishery user-groups year to year with minimal impact of overharvest or un-planned environmental events such as floods, drought, etc. OEG considers any standard error or deviation from pre-season population estimates.
    c. Consider Sonar Counter Project at a river within the Yentna Drainage to establish concrete database and management metric similar to how the Deshka count is currently implemented. This would serve as an objective measurement to serve as a check of the sum total against the sum of the parts. It would help to ensure the management plan is calibrated right in the early years of a newly established OEG.
    d. Agree upon what primary indices will be used to proactively manage the Susitna Drainage king fishery for OEG:
        i. Use Deshka River pre-season population estimates and prior season(s) escapement numbers
        ii. Use Little Susitna pre-season population estimates and prior season(s) escapement numbers. Establish an easy scale for all fishermen to determine age class. (ie. "4+ year age class 37" and above")
        iii. Use projected age class demographics of pre-season king population estimates.
        iv. Consider fishing/harvest pressure for each river as a metric.
            1. Establish fisher survey for each individual purchasing a king salmon stamp to include questionnaire including what body of water did you fish? Amount of days fished? # king salmon landed? # king salmon released?
            2. Establish ADF&G and DNR relations to require, track and enforce Commercial Recreation Permits for sport fishing guides and business on each inland waterway. This is currently

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law, but not currently enforced. Commercial Recreation permits are the metric that show business-related pressure on each individual river and hence a good indicator of fishing pressure.

e. Agree upon what primary indices will be used to proactively manage the Yentna Drainage king fishery for OEG:
   i. Establish, agree upon and implement an Optimal Escapement Goal for the Yentna River Drainage. Validate where this data is derived from.
   ii. Use relative Deshka River pre-season population estimates and prior season(s) escapement numbers
   iii. Use Lake Creek and Talachulitna prior season(s) relative escapement numbers from aerial counts
   iv. Use projected age class demographics of pre-season king population estimates
   v. Consider fishing/harvest pressure for each river as a metric.
f. Create a decision-making chart to establish regulations based on pre-season population projections (see our proposed example in #6 below)

2. Establish an annual calendar for when king salmon management data reports and regulatory decisions will be available to the public.
   a. IE. October 1 or sooner: Release escapement numbers for each river in the drainage that were observed by sonar counter or aerial observation.
   b. IE. January 1 or sooner: ADF&G to release pre-season king salmon estimates for the following spring/summer. King salmon regulations for each user group will be established at this time. ADF&G is encouraged to publish conservative regulations based on the lower-end of their projected escapement range.
   c. IE. June 20 or later: ADF&G can restrict or liberalize by "Management Order" in-river fishing regulations for king salmon based on existing escapement numbers and fish age demographics.
3. Change the term "Emergency Order" to "Management Order" and only implement these orders in-season .
4. The plan should consider balanced and equitable opportunities for all fisheries user-groups.
   a. On any give year, based on run forecasts, allocate ***harvest*** privileges with priority to subsistence first, personal use second and sport fish 3rd.
   b. Consider catch & release as a regular option for sport fishing if escapement numbers are not forecasted to be within the Optimal Escapement goal. Harvest for sport fish will be implemented when OEG is projected to be attained.
   c. Liberalize or restrict existing regulations for one or more user-groups by in-season "Management Orders" enacted by ADF&G regional fisheries biologists when escapement numbers fall short of or exceed projected number.
5. General Thoughts and Comments:
   a. Never implement 24-hour sport fishing for kings. This is impossible for enforcement to monitor and can result in some users breaking laws and regulations with respect to harvest.

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b. Bait should only be implemented for kings on the Deshka or Little Susitna Rivers to the discretion of Regional ADF&G Fisheries Biologists.

6. Decision-Making Chart: Establishing Regulations based on Metrics outlined in #1 above using Optimal Escapement (OEG) of king salmon as the ideal goal.
   a. Opportunity for subsistence and personal use king fisheries will be managed by regional fish and game biologists as per their expertise and discretion. Any projected king estimate below 13,000 fish should result in the closure of these fisheries unless special permits are issued.
   b. Sport fishing regulations should be based on a simple chart and be approached conservatively or liberally based upon pre-season estimates. See the Planning Chart below
   c. Considerations: Pre-season king population projection estimates should be trimmed conservatively to consider:
      i. Standard error or deviation if actual numbers deviate from projected numbers
      ii. Environmental strain including drought or flood
      iii. Potential user pressure for each river system
      iv. Potential impact of Cook Inlet Commercial fisheries

HYPOTHETICAL Susitna/Yentna King Salmon Sport-Fishery Regulatory Planning Guideline

Currently based upon Pre-season population estimates for the Deshka River
Current Sustainable Escapement Goal for the Deshka: 13,000 - 28,000 Kings
Hypothetical Optimal Escapement Goal for the Deshka: 16,000 - 20,000 Kings

Deshka River		
Pre-Season Projected Population	**Potential Regulatory Decision for Sport-Fishing, Release: Jan. 1**	**Management Order Implement, ~ June 20**
<13,000 Kings (below SEG objectives)	King Salmon Closed in-river fishing	TBD based on in-season escapment #s
13,000 - 16,000 Kings (low end of SEG)	King Salmon Opens to retention for personal and subsistence, C&R only for sport fishing	TBD based on in-season escapment #s
16,000 - 20,000 Kings (Optimal) - OEG	King Salmon Opens to Retention of 1-3 kings, TBD by ADF&G	TBD based on in-season escapment #s
20,000+ Kings (Surplus)	King Salmon Opens to Retention of 3+ kings, TBD by ADF&G	TBD based on in-season escapment #s

Similar Tables may be constructed for the Yentna River Drainage king escapement goals, whereas the Yentna may be managed as a separate ecosystem.

Policies Governing Alaska's Salmon Management

Charles O. Swanton

Alaska Dept. of Fish and Game,

Division of Sport Fish

Presentation Overview

ESCAPEMENT GOAL POLICY
- Development
- Terms and Examples
- Elements and principles
- Goal Development

SUSTAINABLE SALMON FISHERIES POLICY
- Policy Development
- Inputs, Terms and Definitions
- Initial implementation

- SUMMARY

Policy for Statewide Salmon Escapement Goals

- Policy development Initiated in 1989-memo

- Central theme-"to achieve a constant level of escapement regardless of run strength".

- As information improves escapement goals will be improved and developed for increasing sustained harvest level.

- A professional and scientific approach is required for establishing and changing goals.

The 1992 working draft included:

Data quality, scientific methods, informing the pubic and users, allocation implications directed to BOF.

Codified Escapement Goal Policy: Key Elements

1) Establish BEGs and SEGs for stocks that are actively managed for.

2) Document all analyses used to establish goals.

3) Establish SETs if needed.

4) Review goals within a region every BOF cycle.

BEG: Biological Escapement Goal

- A goal that provides the greatest potential for MSY;
- Primary management Objective;
- Based on best available biological information;
- Expressed as a range;
- Seek to maintain escapements evenly within the range.

Building a Brood Table

- Escapement Estimates
- Harvest Estimates
- Age Composition of Escapement and Harvest
- Stock Identification and Run Reconstruction
- 20-30 years of DATA

Spawner-Recruit Data (Anvik River chum salmon)

Year	Escapement	Return
1972	457,800	362,587
1973	249,015	856,936
1974	411,133	1,338,657
1975	900,967	843,132
1976	511,475	2,926,444
1977	358,771	1,321,297
1978	307,270	1,187,305
1979	280,537	979,514
1980	492,676	1,744,558
1981	1,486,182	2,779,191
1982	444,581	988,061
1983	362,912	1,220,480
1984	891,028	2,928,193
1985	1,080,243	1,141,620
1986	1,189,602	1,203,367
1987	455,876	1,480,599
1988	1,125,449	628,815
1989	636,906	1,318,363
1990	403,627	1,300,412
1991	847,772	1,588,212
1992	775,626	1,233,719
1993	517,409	467,159

SEG: Sustainable Escapement Goal

- Level of escapement indicated by an index or escapement estimate that is known to provide for sustained yields over a 5-10 year period

- Used when stock-specific catch data is lacking.

- Stated as a range taking into account data uncertainty

OEG: Optimal Escapement Goal

- A specific management objective for salmon escapement that considers biological and allocative factors.
- Expressed as a range with lower bound above that of an SET
- Set by the Board of Fish (not ADFG)
- Example: lower a goal to allow for subsistence harvest; or raise a goal because of data uncertainty.

- **Counting Towers**

Submitted by Wilderness Place Lodge

Mark-Recapture

Picket Weir

Submitted by Wilderness Place Lodge

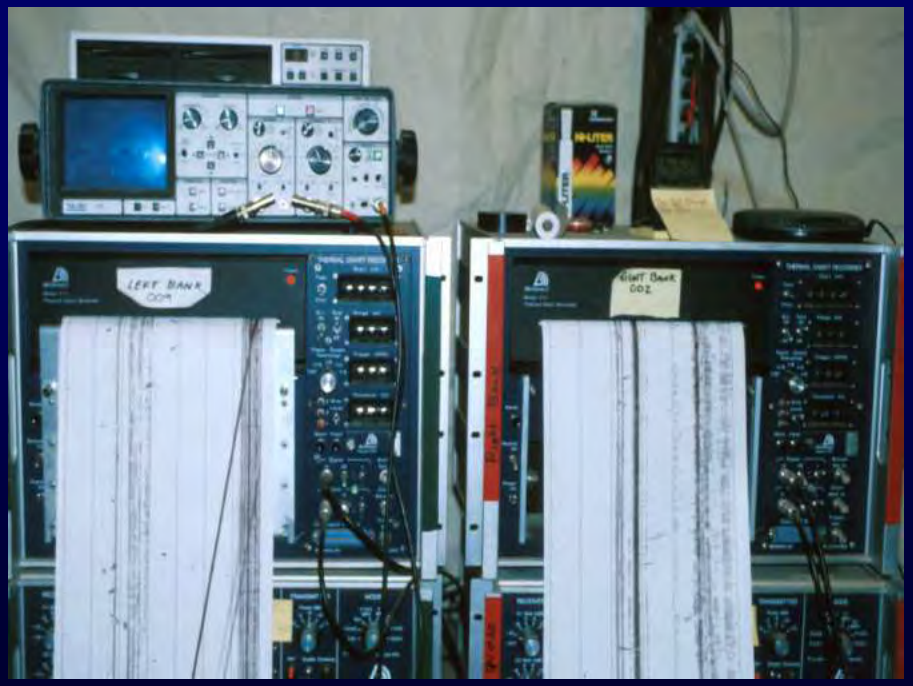
Floating Weir (Takotna R.)

Submitted by Wilderness Place Lodge

Floating Weir (SF Koyokuk)

Submitted by Wilderness Place Lodge

- Sonar



- Aerial Counts

Sustainable Salmon Fisheries Policy Development: 1997-1999

- ADF&G/BOF Sustainable Fisheries Committee
- Synthesis of published scientific information
- Department panel for technical review
- Public advisory panel
- Over 30 public meetings
- External scientific peer review conducted

PARTS OF THE POLICY

I. Principles and criteria for sustainable salmon fisheries management

II. Implementation Steps

III. Definitions of terms

IV. Courtship & subsequent marriage to BEG policy (Feb 2001)

Principles

- Protect wild salmon and habitat to ensure sustained yields.
- Manage for escapement ranges that sustain production & maintain normal ecosystem functioning.
- Apply effective management systems which regulate human activities.
- Encourage public support and involvement.
- Manage conservatively commensurate with uncertainty.

General policy Implementation

- At BOF meetings/work sessions (normal cycle) ADF&G provides stock by stock review for consistency with principles and criteria.
- Each stock status report will discuss escapement goals, habitat issues, and Identify concerns.
- If concern is identified, ADF&G/BOF crafts an action plan.

Terms and Definitions

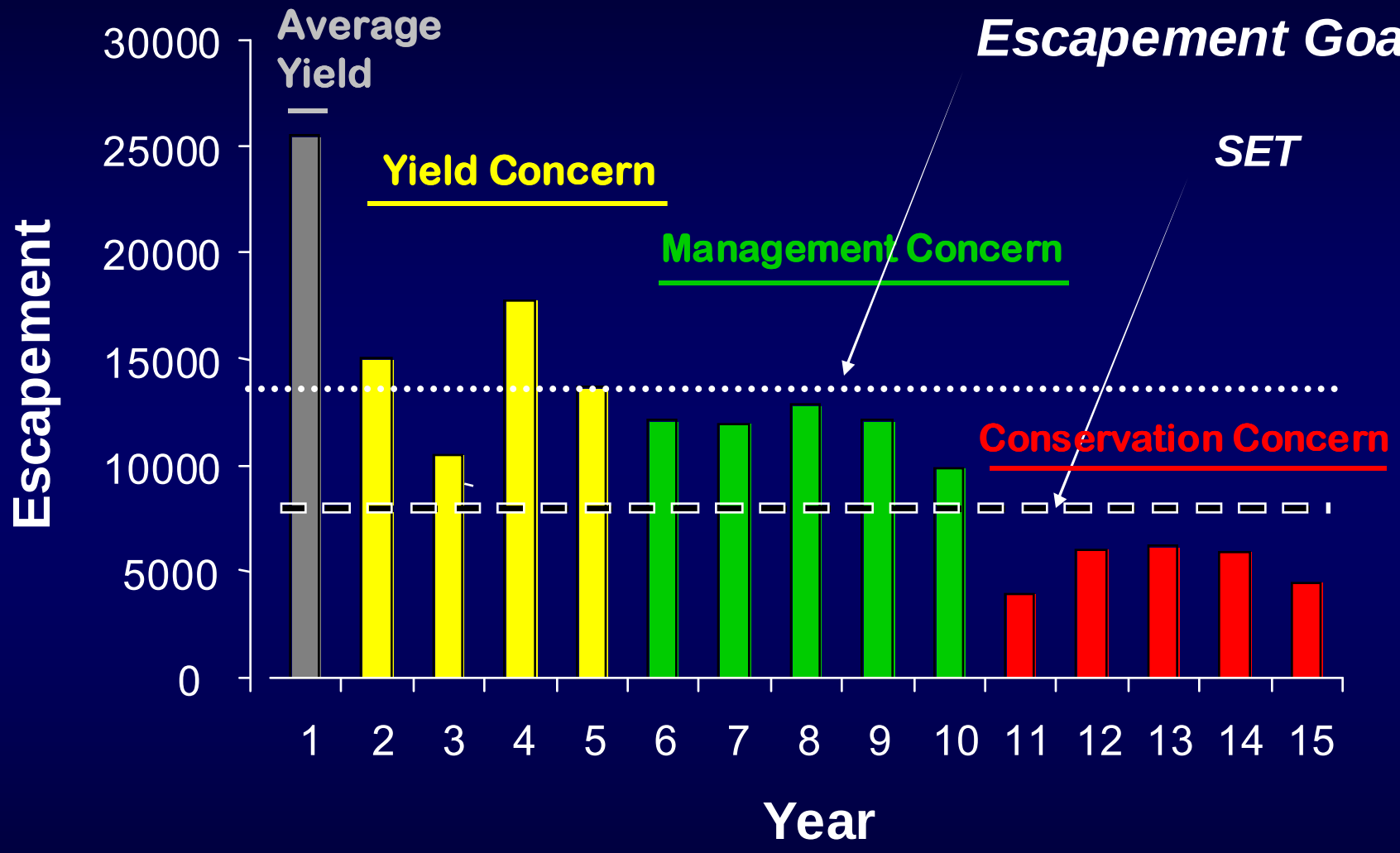
44 terms are defined

- MSY
- Burden of conservation
- Stock
- Yield
- 3 types of Escapement goals (BEG, SEG, OEG)
- 3 levels concern (yield, management, conservation)

Levels of Concern

- **Yield Concern**: results from a chronic inability to maintain yields or harvestable surplus above escapement needs
- **Management Concern**: results from a chronic inability to maintain escapements within the bounds of a BEG,SEG, or OEG.
- **Conservation Concern**: results from a chronic inability to maintain escapements above a sustainable escapement threshold (SET).

Chronic inability - continuing or anticipated inability to meet escapement threshold (goals) over 4-5 year period (generation time of most spp.) despite use of specific management measures.



Submitted by Wilderness Place Lodge

Action Plan Elements

- Habitat restoration, protection measures
- Stock rebuilding goals, objectives
- Management actions
- Performance measures
- Research plan
- Communication with other agencies

First time Implementation: Western Alaska Fisheries 2000-2001

- The Board requested specific focus on Western AK stocks after the 2000 season.
- The Department provided stock-status reports (Sept. 2000 meeting);
- The Board defined levels of concern (Sept 2000);
- The Board and Department developed action plan options (November 2000)
- Board held a special BEG meeting(Dec. 2000)

Western Alaska Salmon Stocks of Concern:

- **Yield Concern**
  1. Kuskokwim chinook salmon
  2. Kuskokwim chum salmon
  3. Yukon fall chum salmon (except Toklat and Fishing Branch stocks)
  4. Yukon chinook salmon
  5. Golovin Bay & Moses Pt. chum salmon
  6. Kvichak sockeye salmon

Kuskokwim Chinook Yield Concern Designation (Escapement)

- 1996-1997 escapement goals achieved; parent year escapements judged good-fair
- 1998-2000 escapement goals not achieved; parent year escapements judged good
- 2001 outlook is for a poor chinook run

Kuskokwim Chinook Yield Concern Designation (Harvest)

- Non-directed commercial chinook catch 1988-92 Avg=47,000, whereas 93-00 Avg=12,000.
- 1996-97 Subsistence Harvest Avg=79,500; Commercial Avg=8,900
- 1998-99 Subsistence Harvest Avg=77,000; Commercial Avg=11,000
- 2000 Subsistence Harvest ~70,000?; Commercial Harvest=444
- 2001 Outlook is for a poor run.

Kuskokwim Chinook (Salmon Rebuilding Plan)

- Intent and Objectives articulated-stocks managed during June and July to meet escapement goals and subsistence needs
  - Subsistence fishery open 4 consecutive days/week applied temporally within drainage; adjustments via E.O.
  - Commercial fishery (chum Salmon), when indicators suggest subsistence needs met, in co-op with Working Group, and after notifying BOF, may open chum salmon fishing-GHR for chinook 0-50,000
  - Sport fishery restrictions made commensurate with abundance; Aniak R. reduction of bag limit and establishment of annual limit.
  - Gear and gear specifications-ADF&G given E.O. authority.

Sustainable Salmon Fisheries Policy

- Provides an analytical structure for the BOF process
- Articulates ADF&G and BOF approach to salmon management
- Encompasses a large geographic, multi-stock, multi-species scope
- Is implemented in a public forum - the Board of Fisheries process

Summary

- Constitution mandates fish resources be developed and maintained for sustained yields.
- SSF and EG Policies built on a harvest strategy based on fixed escapements.
- Fixed escapements offer the opportunity for greater yields than with other harvest strategies
- Regular evaluations of goals and management strategies under the SSFP ALMOST assure sustainability.