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Petition to the Alaska Board of Fisheries

I am petitioning the Alaska Board of Fisheries to take immediate action via Board Generated Proposal at the 2014 Upper Cook Inlet Board meeting to establish provisions in the Kenai River Early Run King Salmon Management Plan: to direct the Department to close sport fishing for king salmon in the entire Kenai River with bait or from a boat with anything other than a single hook artificial fly from the current regulatory end of the Early Run on June 30, or earlier if closed by emergency order, until September 10 any time the lower end of the escapement goal (5,300) is not achieved. These emergency actions are necessary to protect the Early-Run King stocks because the Department has failed to provide scientifically defensible escapement goals which protect the early-run stocks which is evident now that the in-river genetics reports by (McKinley, 2013) and (Reimer, 2013) have finally come out. While there is not sufficient time to adequately review these reports they demonstrate that the July 1 demarcation between early and late runs is inappropriate and scientifically invalid and the escapement goals need to be redone immediately. These reports also show that the Early-run has been mismanaged in-river for years and that escapement is often well below the minimum escapement necessary to sustain this run, especially in the tributaries. They also show that the Late-run is several thousand fish stronger than what is being reported. While these two reports detail the percentages of tributary (Early-Run) and Mainstem (Late-run) they failed to apply these percentages by day to the sonar counts or daily harvest so the actual escapements by stock are unknown. The department continues to withhold essential data and delay reports to keep these issues from being fully vetted before the board. In their submissions to date there is no mention of the USFW work in the Killey and Funny rivers which document that the DIDSON counter is not accurate and that the early- run is over 80 percent males. It now appears that nearly all of the "facts" on Kenai kings that the department has given us over the years appear to be flawed at the least and generally totally wrong. Certainly as KRSA has stated the lower end of the Early-run escapement goal should take precedence over exceeding the Late-run escapement goal.

Since 1990 we were sold on the veracity of these counts because of Mark/Recapture experiments and indices which supported these sonar estimates. In 2013 we were given the Run Reconstruction report which was less than forthright when it implied that these target strength escapement estimates were "not readily convertible" when in fact they were thrown away and a new series of DIDSON estimates were created with a yet unverified Bayesian Statistical (BS) model which employed the same indices and M/R estimates. From the Run Reconstruction report we now see that ADF&G knew the counters didn't work as early as 1994 and 1998 but failed to inform anyone or make any substantive changes. We now see in the McKinley report that the age composition provided by the netting program is not unbiased as reported last year but in fact does not work at all. In the very near future the veracity of the DIDSON counter will also likely come to light also.

Utilizing the BS model the department has reduced the escapement estimate (Table 1) from the old Target Strength counter to the DIDSON counter by an average of 3,100 less chinook, ranging from 14,000 less to 8,400 more Chinook or 84 percent overall (Table 2) but there are huge swings in run strength from + 518 percent (DIDSON count is lower) to -40 percent (DIDSON is higher) (Table 2). When compared to the M/R numbers the Target Strength counter performed better (PMR.80) when compared to DIDSON (PMR .54) and the TS PMR is distributed around the M/R estimate whereas the DIDSON is always biased below the M/R estimate which makes the decision to dump the Target Strength counter seem fairly ill-advised. This is especially true since the Target Strength count is not adjusted by the M/R estimates with the additional 28 or 55 percent as the DIDSON counter. Using these DIDSON estimates the exploitation rate increases to a range of 6 to 82 percent without considering the number of fish harvested after July 1 which are incorrectly subtracted from the late-run escapement. When these fish are correctly allocated to the early-run the exploitation rate will exceed 90 percent. From the Genetics data released during the "task force" process we see that 50 percent of the middle river harvest from July 1-15 is actually early run fish of tributary origin in addition to the un-known number of early arriving main-stem fish which are also taken during July. In the McKinley report dated December 2013 on page 14 the following quote **"Both of these results point to the same conclusion: so-called *Early-run mainstem spawners* are simply the beginning of the late-run mainstem spawning stock."**, however this report stops short of actually applying the genetic stock compositions to the catch and escapements, When this is done by stock the escapement of early-run fish will be much lower and the escapement of late-run fish will be higher.

From the 1992 Bendock catch and release report the peak of entry into the tributaries of early run fish is July 25. That is to the peak, not the end which is when ADF&G normally reopens the fishery when they have failed to achieve the escapement goal allowing the tail of the early-run to be harvested, generally with bait which these fish have not been exposed to previously in many cases. The "*early-run mainstem fish*" which we now see are really late-run fish don't spawn until September. These fish which may comprise up to 40 percent of the early run escapement receive no protection from the fishery in-river. This Bendock report also documents that 15 percent of the early-run escapement in 1989-1991 originated from the Main-Stem spawning population. In the current Genetics data from 2003 to 2013 the percent of the escapement that is now of main-stem origin returning prior to July 1 is now ranging from 27 to 40 percent, nearly double in 20 years. This increase in the main-stem component is troubling leading to the conclusion that the tributary population is in serious decline. Likely due to too much exploitation and the near elimination of smaller tributary stocks like Slikok Cr., Beaver Cr., Quartz Cr., and Russian River all of which is hidden by the early arriving main-stem component, which are likely harvested during the late-run fishery at an exceptionally high rate. If ADF&G had completed their analysis in the Reimer and McKinley reports we would have true numbers but since these reports just came out in the last few days there is not enough time for us to do the analysis. However ADF&G has the data already in tables and could do it for the Board relatively quickly.

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In 2012 and 2013 the department counters failed to count nearly 3 out of 4 fish at a minimum. The exact figures are difficult to estimate due to the department's reluctance to release any of this data in a timely fashion. From the Fish and Wildlife Service weirs we see that they counted more fish at 2 weirs than the DIDSON counted. If you add in the fish not accounted for below the weirs, mainstem, or other tributary stocks the number of fish not counted is 300 or more percent off. The problem is that these fish are over 80 percent males and most of the fish are 1.1 (age 3) or 1.2 (age 4) fish. This shift from larger fish with equal numbers of males and females to 80% small males is certainly cause for alarm and something which needs to be addressed immediately. This is an emergency situation which the board needs to correct immediately. Had the department released these reports prior to the proposal deadline this crisis could have been handled with a proposal instead of as a petition. In either case this stock is in serious decline!

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Table 1. Kenai River Early-run king exploitation rate by counter type.

	Target Strength				DIDSON			
Year	Total Run	Total Harvest	Total Escapement	Exploit Rate	Total Run	Total Harvest	Total Escapement	Exploit Rate
1986	27,080	8,398	18,682	31%	20,068	8,398	11,670	42%
1987	25,643	13,863	11,780	54%	21,637	13,863	7,774	64%
1988	20,880	15,549	5,331	74%	19,844	15,549	4,295	78%
1989	17,992	8,543	9,449	47%	12,277	8,543	3,734	70%
1990	10,768	2,185	8,583	20%	9,822	2,185	7,637	22%
1991	10,939	2,097	8,842	19%	10,597	2,097	8,500	20%
1992	10,087	2,477	7,610	25%	11,921	2,477	9,444	21%
1993	19,669	9,628	10,041	49%	12,394	9,628	2,766	78%
1994	18,403	8,456	9,947	46%	13,147	8,456	4,691	64%
1995	21,857	10,547	11,310	48%	12,906	10,547	2,359	82%
1996	23,505	6,910	16,595	29%	9,597	6,910	2,687	72%
1997	14,963	6,778	8,185	45%	11,149	6,778	4,371	61%
1998	13,103	1,424	11,679	11%	11,904	1,424	10,480	12%
1999	25,666	8,390	17,276	33%	13,493	8,390	5,103	62%
2000	12,479	2,003	10,476	16%	10,767	2,003	8,764	19%
2001	16,676	2,603	14,073	16%	14,003	2,603	11,400	19%
2002	7,162	977	6,185	14%	10,843	977	9,866	9%
2003	13,325	3,228	10,097	24%	20,188	3,228	16,960	16%
2004	15,497	3,643	11,854	24%	23,493	3,643	19,850	16%
2005	20,450	4,063	16,387	20%	20,713	4,063	16,650	20%
2006	23,326	4,898	18,428	21%	18,168	4,898	13,270	27%
2007	16,217	3,713	12,504	23%	13,569	3,713	9,856	27%
2008	15,355	3,623	11,732	24%	10,193	3,623	6,570	36%
2009	11,334	1,563	9,771	14%	7,726	1,563	6,163	20%
2010	13,251	1,427	11,824	11%	7,820	1,427	6,393	18%
2011		1,429			9,877	1,429	8,448	14%
2012		326			5,370	326	5,044	6%
2013							2,048	

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Table 2. Kenai River Early Run King Escapement Estimates from Run Reconstruction

Year	Total Escapement Target Str.	Total Escapement DIDSON	Change in Escapement	Percent Change Escapement	ADF&G M/R Estimate	DIDSON PMR	TS PMR
1986	18,682	11,670	7,012	60%	27,080	0.43	0.69
1987	11,780	7,774	4,006	52%	25,643	0.30	0.46
1988	5,331	4,295	1,036	24%	25,074	0.17	0.21
1989	9,449	3,734	5,715	153%	23,253	0.16	0.41
1990	8,583	7,637	946	12%			
1991	8,842	8,500	342	4%			
1992	7,610	9,444	-1,834	-19%			
1993	10,041	2,766	7,275	263%			
1994	9,947	4,691	5,256	112%			
1995	11,310	2,359	8,951	379%			
1996	16,595	2,687	13,908	518%			
1997	8,185	4,371	3,814	87%			
1998	11,679	10,480	1,199	11%			
1999	17,276	5,103	12,173	239%			
2000	10,476	8,764	1,712	20%			
2001	14,073	11,400	2,673	23%			
2002	6,185	9,866	-3,681	-37%			
2003	10,097	16,960	-6,863	-40%			
2004	11,854	19,850	-7,996	-40%			
2005	16,387	16,650	-263	-2%			
2006	18,428	13,270	5,158	39%			
2007	12,504	9,856	2,648	27%	13,010	0.76	0.96
2008	11,732	6,570	5,162	79%	8,636	0.76	1.36
2009	9,771	6,163	3,608	59%	10,580	0.58	0.92
2010	11,824	6,393	5,431	85%	8,347	0.77	1.42
2011		8,448			9,267	0.91	
2012		5,044			6,513	0.77	
2013		2,048					
Average	11,546	8,450	3,096	84%	15,740	0.54	0.80