

**This is a Petition not a Record Copy**

(Susitna King)

**Petition to the Alaska Board of Fisheries**

I am petitioning the Alaska Board of Fisheries under 5 AAC 96.625 and AS 44.62.220 to reject the Department's escapement goal recommendations for the Deshka River, eastside Susitna River, Talkeetna River and Yentna River. All of these escapement goal analyses fail to set the current escapement goals in a balanced, scientifically defensible manner around MSY. Instead all four of these goals are set to eliminate any other user other than the in-river sport fishery and lead to **purposeful mismanagement** eliminating participation of other fisheries and causing mismanagement of other stocks. Shifting these goals to the right of MSY or elevating the upper bound of the goal has usurped the Board's allocation authority to the point that the Department told the Mat-Su Fish and Wildlife Committee that they would object to raising these goals because they would be **"unsustainable"**. It would be unconstitutional if the Board had established these goals as OEG's because they restrict or eliminate other users like the Tyonek Subsistence and Northern District commercial fishery, creating an exclusive fishery in violation of the State constitution. The fact that it is being done by ADF&G speaks to the bias and unchecked unethical and illegal acts being allowed to try to create an exclusive sport fishery in Cook Inlet. The Department keeps including the scaled  $S_{msy}$  ratios for other Alaskan Chinook salmon stocks as justification for their method of shifting goals to the right of MSY. What the Department is really admitting is that all of these Chinook salmon stocks statewide have a goal range that has been shifted to the right of MSY to maximum recruitment (MAXR), raising goals, allocating illegally to the sport fishery or wasting yield without any one objecting except now in Cook Inlet. What would really be enlightening would be to see this same plot with BEG goal ranges from stocks other than Chinook or coho goals done by sport fish staff. They are getting away with this by handing out reports so late, days before the BoF meeting at best so that there is no chance for a thorough review. I would certainly question what type of peer review any of these reports has undergone.

The Deshka River Chinook goal is listed as a BEG which should have a range around MSY of 90 percent (Federal and State standard). Instead ADF&G set the goal ranges by arbitrary methods. This goal is really an OEG that the Department without any rational or authority set the goal range of 91.5% probability of achieving 80+ percent of MSY at the lower end of the range and 78% probability of achieving 80+ percent of MSY at the upper end of the range. The range is also set at a 70 percent probability of achieving 90 percent of MSY at the lower end of the range and a 50 percent probability of achieving 90 percent of MSY at the upper end of the range. (See method from Figure 6 from the Alek River stock attached) Optimum Yield is defined in Federal Law as MSY plus or minus 10 percent or 90 percent of MSY, it is also the state standard in every escapement goal report, now we find that ADF&G is violating this policy regularly. The Board's own policy states you will follow Federal Law. While it is difficult to determine the actual range of 90 percent of MSY from the Optimum Yield profile on page 49 of the report, it looks like it would be somewhere around 10,000 at the lower end, to 15,000 at the upper end. By shifting this goal range to the right of MSY, they have raised the upper

end of the goal to the maximum recruitment point at the upper end of the goal range (bottom panel page 46) which prevents E.O. liberalization of the bag limit until projecting to go beyond that point. Don't be fooled by their label of maximum sustained recruitment (MSR) for this point, no other entity or text labels it as such in fact their own reports from just the last BoF cycle label it as Maximum Recruitment because it is unknown if it is sustainable. Given that the Deshka stock has a near Zero percent probability of over fishing given the escapement goal, page 49 middle graph, has over-escaped repeatedly due to a goal that was set too high and 14 of 36 broods failed to replace themselves and that Dr. Bernard has pointed out that the use of a Ricker curve may result in overly conservative (**too high**) escapement goals, I would think it prudent to be less allocative when setting this goal and set it appropriately to achieve 90% of MSY to allow for more fishing not less at least for a BoF cycle or two.

There seems to be this idea that raising escapement goals will produce more fish. From the draft report in 2013 from Fleishman and McKinley from the taskforce meetings in Soldotna "*Given that Kenai River Chinook salmon support a large sport fishery, and catch rate in this fishery depend on abundance, the performance of different levels of escapement in producing maximal returns is a consideration in development of an escapement goal. Returns and therefore run size are maximized at a higher level of escapement ( $S_{MAXR}=31,080$ ; Figure 10) than is maximum yield ( $S_{MSY}=19,930$ ; Figure 8)*" which they then set the goal range shifted to the right from 15,000 to 30,000 or .8 to 1.6 times  $S_{MSY}$  (19,930). They used an untested method .8 to 1.6 times  $S_{MSY}$  mentioned by Eggers as a possibility of managing a mixed stock fishery but even Eggers said it needed further testing. Raising the goal only works if you are below MSY, when you artificially raise goals above MSY to MAXR as was done in the Deshka River and Kenai River, instead of having good fishing or even moderate fishing you get closed because you don't have enough fish to meet the goal because of reduced productivity or you get restricted to catch and release and other fisheries get closed. I presume that this is the true motive, close or restrict other fisheries otherwise after the experience with the Deshka River goal which was addressed in a proposal last cycle, that the Board ignored should have enlightened them. In either case this is not sustained yield management and certainly not for maximum sustained yield, it is purposeful mismanagement for allocation, not in ADF&G's authority or the state's best interest.

The remaining three goals from this report are much worse, shifted so far to the right to be absurd. The Eastside Susitna goal goes from 96 % probability of achieving 80 % of MSY at the lower end of the range to a 19% probability of achieving 80% of MSY at the upper end of the range. To put this range in perspective it goes from MSY to beyond MAXR allowing for almost no yield at the upper end of the range which again makes it an OEG not SEG. Also 18 of 39 years of modeled escapements exceeded this upper range of 25,000 (MAXR) suggesting more fishing is needed in most years not less. They base the need for this "conservative" escapement goal without any reasonable rationale other than the shift to younger smaller fish. Of course this shift is from jacks which are male and mostly not counted especially from aerial surveys. Their stated purpose is "Because of the lag between the fishery and final run assessment" they chose a "conservative" escapement goal range. The lag between the fishery and the assessment is a perfect reason to choose a different method to set the goal not to artificially raise it. Use of the percentile method would be much more resilient to fisheries management and achieving of the goal. Because of the need for a Statewide Harvest estimate and the need to rerun the Bayesian model it will be three years until the next evaluation of whether this

goal was met in year one. With that kind of lag there is no need to be “conservative” because whatever the escapement is it can be evaluated by any standard including 90% of MSY when the model is rerun. The only reason to be “conservative” is that what you mean by being “conservative” is “allocative” for which the Department has no authority. This goal and method should be rejected since it is set to illegal levels with no standards what so ever and can not be evaluated until 3 years later. It would be much better to set the existing goals to the three tier percentile approach which can be evaluated each year with no lag time waiting for the SWHS results.

The remaining two escapement goals suffer from the same allocatively driven ranges shifted so far to the right to be absurd. Both escapement goal ranges go from  $S_{msy}$  to MAXR or a little beyond MAXR. In the Talkeetna River the modeled escapements exceeded the upper end of the escapement goal range in 19 of 39 years yet the Department argues for “conservative” escapement goal range from MSY to MAXR. There is absolutely no reasonable justification for this shifting to higher goal ranges other than reallocation for which, the Department has no authority. This is keeping other users from harvesting these stocks surplus to escapement needs even though they share disproportionately in the conservation of these stocks. These goals and methods should be rejected since they are set to arbitrary, illegal levels with no standards what so ever and can not be evaluated until 3 years after the end of a season. It would be much better to set the existing goals to the three tier percentile approach which can be evaluated each year with no lag time and can even be managed for in-season, not preseason as is the current plan. Also to evaluate the escapement goal using their new Bayesian Statistics (BS) they still need to fly the escapement surveys. In order to give the Board a choice in escapement goals, legal or non-legal I have redone the percentile approach goals and included them in Table 2, (attached) using the Percentile Method, 3 tier approach suggested by Clark et. al. and adjusted to L90 and U90 or 90 percent of MSY, the legal standard in State and Federal law.

Jeff Fox

Soldotna

Table 2. Summary of current escapement goals and recommended escapement goals for stocks in Upper Cook Inlet, 2019.  
 (Replacement for escapement goal Table 2, done by McKinley et.al. 2019)

System	Current escapement goal			Recommended escapement goal				
	Goal	Type	Year Adopted	Range	Type	Data	Action	Tier
<b>Chinook Salmon</b>								
Talachulitna River	2,200-5,000	SEG	2002	2,100-3,000	BEG	SAS	NEW	T1
Lake Cr.	2,500-7,100	SEG	2002	1,600-3,800	BEG	SAS	NEW	T3
Peters Cr.	1,000-2,600	SEG	2002	1,000-1,500	BEG	SAS	NEW	T1
Deshka River	13,000-28,000	SEG	2011	~10,000-15,000	BEG	Weir	NEW	
Clear Cr.	950-3,400	SEG	2002	950-1,550	BEG	SAS	NEW	T1
Prarie Cr.	3,100-9,200	SEG	2002	2,900-3,900	BEG	SAS	NEW	T1
Goose Cr.	250-650	SEG	2002	100-300	BEG	SAS	NEW	T1
Little Willow Cr.	450-1,800	SEG	2002	700-900	BEG	SAS	NEW	T1
Montana Cr.	1,100-3,100	SEG	2002	900-1,450	BEG	SAS	NEW	T1
Sheep Cr.	600-1,200	SEG	2002	350-750	BEG	SAS	NEW	T1
Willow Cr.	1,600-2,800	SEG	2002	1,150-2,000	BEG	SAS	NEW	T1
Chulitna R.	1,800-5,100	SEG	2002	1,150-2,550	BEG	SAS	NEW	T3
Alexander Cr.	2,100-6,000	SEG	2002	200-2,300	BEG	SAS	NEW	T1
Lewis R.	250-800	SEG	2002	Discontinue				T1
Chuitna R.	1,200-2,900	SEG	2002	950-1,400	BEG	SAS	NEW	T1
Theodore R.	500-1,700	SEG	2002	350-650	BEG	SAS	NEW	T1
Little Su weir	2,300-3,900	SEG	2017	2,450-3,650	BEG	SAS	NEW	T3
Little Su. aerial	900-1,800	SEG	2002	600-1,300	BEG	SAS	NEW	T3
Canbpell Cr.	300	SEG	2011					
Crooked Cr.	650-1,700	SEG	2002	650-1,100	BEG	Weir	NEW	T3
Kenai R. early		SEG	2017					
Kenai R. late		SEG	2017					
<b>Chum Salmon</b>								
Clearwater Cr.	3,500-8,000	SEG	2017	3,500-6,250	BEG	PAS	NEW	T1
<b>Coho Salmon</b>								
Deshka R.	10,200-24,100	SEG	2017	7,150-12,750	BEG	Weir	NEW	T2
Fish Cr.	1,200-4,400	SEG	2011	1,250-5,100	BEG	Weir	NEW	T2
Jim Cr.	450-1,400	SEG	2014	250-650	BEG	SFS	NEW	T2
Little Susitna R.	10,100-17,700	SEG	2002	9,150-15,850	BEG	Weir	NEW	T2
<b>Sockeye Salmon</b>								
Chelatna Lake	20,000-45,000	SEG	2017	19,450-28,500	BEG	Weir	NEW	T2
Judd Lake	15,000-40,000	SEG	2017	16,600-38,300	BEG	Weir	NEW	T2
Larson Lake	15,000-35,000	SEG	2017	17,600-37,900	BEG	Weir	NEW	T2
Fish Cr.	15,000-45,000	SEG	2017	8,500-20,500	BEG	Weir	NEW	T2
Packers Cr.	15,000-30,000	SEG	2008	17,750-22,300	BEG	Weir/Video	NEW	T1
Kasilof River	160,000-340,000	BEG	2011	~160,000-260,000	BEG	Sonar	NEW	S/R
Kenai River	700,000-1,200,000	BEG	2011	600,000-800,000	BEG	Sonar	NEW	S/R

T1 ADF&G 20th to 60 percentile  
 T2 ADF&G 15th to 65 percentile  
 T3 ADF&G 5th to 65 percentile

T1 Adjusted for L90-U90 (MSY) Clark-2014 20th to 60 percentile  
 T2 Adjusted for L90-U90 (MSY) Clark-2014 20th to 50 percentile  
 T1 Adjusted for L90-U90 (MSY) Clark-2014 5th to 55 percentile

Alexander Cr. Chinook goal reset using all data that replaced themselves, not just high escapement counts  
 Deshka River Coho goal redone using Clark 3 tiers adjusted to L90-U90 (MSY)  
 Deshka River Chinook goal redone using method from companion Petition (MSY)