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To: Board of Fisheries / Board Support Section

RE: Kenai River late-run king salmon / New Information regarding RC 151 (Proposal 209 as amended).

- The insertion for management to an inriver return of 22,500 fish is severely unwarranted on several counts. First, the department (ADFG) is unable to project 22,500 king salmon escapements with any confidence level and not until August 7th. The result of which severely impedes the late-run king salmon management inseason on ESSN stakeholders and directly affects the sockeye salmon fisheries throughout the ESSN fishery. Both the Kasilof River sockeye salmon management plan and Kenai River late-run sockeye management plan are jeopardized. Ref: Projected inriver run and range of projections by date during 2012 on average run timing, ADFG. In fact, ADFG cannot project an inriver run of 16,500 until on or after July 23rd. The mid-point of inriver king run is July 21 – 23rd. Note: this specific information resulted in no changes at the statewide meeting in 2013. However RC 151 appears to have negated this information and inserted similar language found within the Board generated proposal at the statewide meeting on hours, time, and gear reduction elements that failed 0-7.
- Second, the Sustained Yield difference on spawning escapements of 14,000 are nearly identical to spawning escapements of 15,000 – both produce sustained yields of over 34,000 (harvest). Spawning escapements of 16,000 are nearly identical with at near 35,000 Sustained Yields (harvest). In fact Sustained Yields are very similar on spawning escapements between 14,000 and 25,000 with no significant yield difference. See “Posterior medians of return and sustained yield for escapements by ADFG Steve Fleischman and Tim McKinley.”
- There was no discussion on the repercussions to the Kasilof River sockeye management plan or the impact on management for the Kenai River sockeye salmon plan. Reducing weekly opened periods per week in regulation from 75 hours available to 36 hours will essentially ensure tens of millions of dollars of surplus to escapement sockeye will be foregone on two different sockeye systems and jeopardize sockeye salmon yields into the future by grossly exceeding escapements. This action created a discrete salmon fishery from July 1 that never existed in the late-run king salmon plan or any sockeye plan. This is unprecedented. The question becomes how can the department (ADFG) risk the loss of 2 million sockeye (future yields) over the comparable lost yield of only several king salmon?

- The department already acknowledged it was willing to manage this stock to within a 13,500 spawning escapement at the time of the Task Force and yet no discussion occurred.
- The insertion of gear reduction has no merit on the use of 29 mesh depth nets. In fact, this was rejected unanimously over the past 4 BOF regular cycle meeting. The department stated it had no merit under a previous design study and was not to be used. The Area manager stated in communications that the department's position is that there would be no king savings BUT the result would be significant loss of sockeye (Pat Shields, ADFG communications at past four BOF meetings and recently in 2014). The cost to the ESSN fishery would be near 10 million dollars to replace gear. RC 151 in fact attempts to further expand an "experiment" with no science. In fact, only a few setnetters promoted the use of 29 mesh depth nets and wanted this change. Testimony of "I believe" it would....when those individuals already use 29 mesh nets in their operations due to rocks, shallow slope beach, or to reduce gear operational times in a tide. Speculation isn't measured but a 10 million cost and impact to the entire ESSN fishery and fishermen.
- There will be significant redistribution of sockeye salmon all along 60 miles of beach and allocation consequences. And, significant reallocation on the burden to conserve late-run king salmon from one stat area or Section to another when each stat area's Kenai River late-run king salmon exploitation is significantly different. (See Appendix A3 ESSN Kenai River late-run king salmon harvest 2013) And Ref: Fishery Data Series No. 13-63 by ADFG, Tony Eskelin, et al found in RC 4.
- The CPUE on smaller and larger late-run kings are significantly different by stat area. One stat area can benefit over others when measuring king "savings" per hour or per opening. The department and Board have not weighed in the allocation consequences regarding any of the above. The Board and Department is charged to reduce fishery conflicts not create them.
- The overall exploitation rate on Kenai king salmon is extremely low in a mixed stock fishery; the king harvest is .002 of the entire ESSN harvest while .998 is comprised of sockeye salmon. The same percentage applies to all nets operating – only a small fraction of nets encounter or harvest Kenai River king salmon.

Projected inriver run and range of projections by date during 2012 based on average run timing.

2012							
Date	Daily Estimates	Cumulative Estimates	Projected Inriver Run	Low Projection	High Projection	Error in Projection	Precision
1-Jul	236	236	11,186	7,408	14,963	6,718	68%
2-Jul	138	374	9,018	6,504	11,531	5,545	56%
3-Jul	154	528	8,640	6,224	11,056	5,562	56%
4-Jul	95	623	7,906	5,953	9,860	4,914	49%
5-Jul	73	695	6,641	5,316	7,967	3,970	40%
6-Jul	124	819	6,459	5,208	7,710	3,852	39%
7-Jul	151	970	6,448	5,227	7,669	3,767	38%
8-Jul	164	1,134	6,530	5,404	7,657	3,432	35%
9-Jul	313	1,446	7,375	6,167	8,582	3,257	33%
10-Jul	630	2,076	9,461	7,934	10,989	3,211	32%
11-Jul	531	2,608	10,539	8,953	12,125	2,994	30%
12-Jul	493	3,100	11,197	9,410	12,984	3,174	32%
13-Jul	834	3,934	12,844	10,819	14,869	3,136	32%
14-Jul	793	4,726	13,938	11,805	16,072	3,045	31%
15-Jul	316	5,043	13,487	11,511	15,462	2,914	29%
16-Jul	500	5,543	13,551	11,603	15,499	2,860	29%
17-Jul	1,254	6,796	15,183	13,218	17,147	2,574	26%
18-Jul	704	7,500	15,591	13,735	17,446	2,367	24%
19-Jul	436	7,936	15,599	13,786	17,412	2,312	23%
20-Jul	811	8,748	16,223	14,404	18,041	2,230	22%
21-Jul	506	9,254	16,207	14,456	17,959	2,150	22%
22-Jul	621	9,875	16,525	14,899	18,152	1,958	20%
23-Jul	275	10,150	16,161	14,596	17,726	1,927	19%
24-Jul	594	10,744	16,497	14,949	18,044	1,866	19%
25-Jul	611	11,355	16,769	15,304	18,234	1,738	17%
26-Jul	910	12,265	17,457	15,990	18,925	1,672	17%
27-Jul	1,075	13,340	18,264	16,860	19,668	1,530	15%
28-Jul	1,098	14,438	19,188	17,810	20,566	1,429	14%
29-Jul	823	15,260	19,565	18,312	20,818	1,274	13%
30-Jul	709	15,969	19,833	18,633	21,033	1,204	12%
31-Jul	1,076	17,045	20,581	19,423	21,739	1,119	11%
1-Aug	841	17,886	21,021	19,955	22,086	1,008	10%
2-Aug	745	18,631	21,502	20,483	22,521	943	9%
3-Aug	728	19,359	21,947	21,003	22,891	855	9%
4-Aug	649	20,008	22,156	21,364	22,948	711	7%
5-Aug	361	20,369	22,062	21,448	22,676	554	6%
6-Aug	718	21,086	22,373	21,853	22,894	463	5%
7-Aug	1,084	22,170	23,101	22,730	23,473	320	3%
8-Aug	755	22,925	23,465	23,270	23,660	165	2%
9-Aug	858	23,783	24,061	23,957	24,166	87	1%
10-Aug	1,083	24,865	24,865	24,865	24,865	0	0%

Yellow cells denote average first and third quartiles of Kenai River late-run Chinook salmon run.

Green cells denote average mid-point of Kenai River late-run Chinook salmon run.

Source: Alaska Department of Fish and Game.

Posterior medians of return and sustained yield for escapements from 1,000 to 50,000 spawning fish, obtained from fitting a state-space model to Kenai River late-run Chinook Salmon data, 1986-2012.

Escapement S	Return	
	R	Sustained Yield SY
1000	5,216	4,216
2000	10,110	8,106
3000	14,680	11,680
4000	18,970	14,970
5000	22,970	17,970
6000	26,700	20,700
7000	30,160	23,160
8000	33,390	25,390
9000	36,390	27,390
10000	39,170	29,170
11000	41,730	30,730
12000	44,090	32,090
13000	46,270	33,270
14000	48,260	34,260
15000	50,060	35,060
16000	51,680	35,680
17000	53,150	36,150
18000	54,490	36,490
19000	55,670	36,670
20000	56,700	36,700
21000	57,630	36,630
22000	58,430	36,430
23000	59,140	36,140
24000	59,760	35,760
25000	60,250	35,250
26000	60,670	34,670
27000	60,970	33,970
28000	61,210	33,210
29000	61,370	32,370
30000	61,470	31,470
31000	61,490	30,490
32000	61,460	29,460
33000	61,390	28,390
34000	61,260	27,260
35000	61,130	26,130
36000	60,920	24,920
37000	60,660	23,660
38000	60,380	22,380
39000	60,070	21,070
40000	59,750	19,750
41000	59,410	18,410
42000	59,040	17,040
43000	58,620	15,620
44000	58,170	14,170
45000	57,700	12,700
46000	57,210	11,210
47000	56,730	9,726
48000	56,180	8,179
49000	55,650	6,646
50000	55,080	5,084