

RC 124



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Kenai Fish & Wildlife Field Office  
43655 Kalifornsky Beach Road  
Soldotna, AK 99669-8296



IN REPLY REFER TO  
FWS/AFES

February 3, 2014

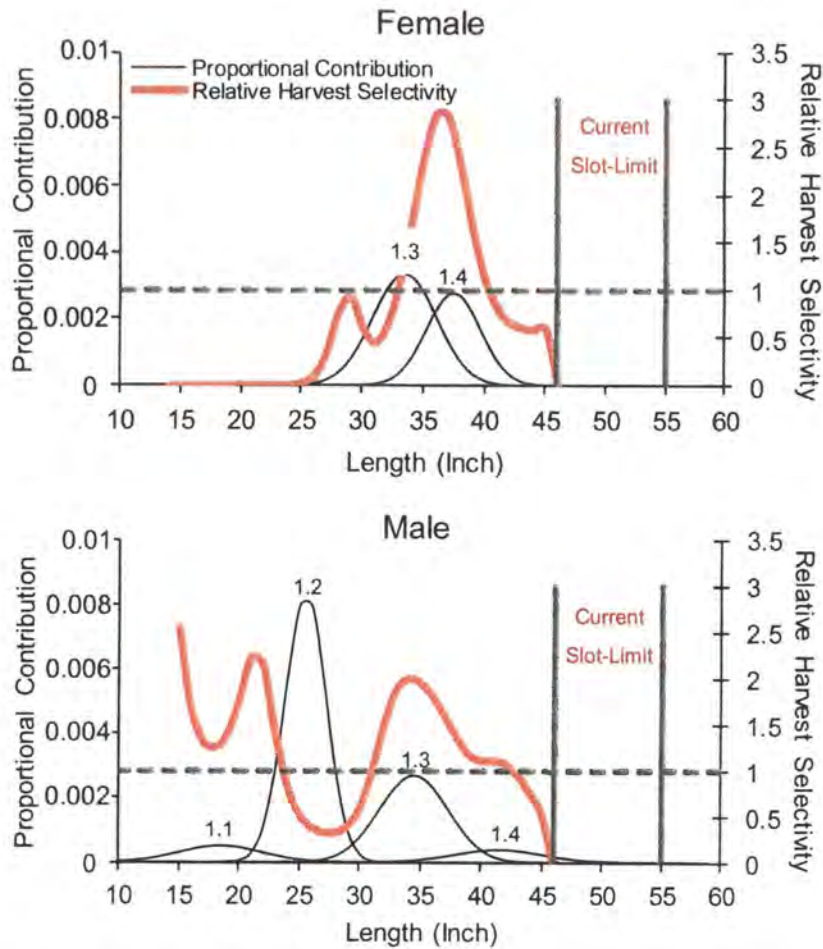
Mr. Karl Johnstone, Chair  
Alaska Board of Fisheries  
Alaska Department of Fish and Game  
P.O. Box 115526  
Juneau, Alaska 99211-5526

Dear Mr. Johnstone:

Please consider the following technical information developed from data collected by the U. S. Fish and Wildlife Service at two of our Chinook salmon escapement monitoring weirs on tributaries to the Kenai River. This information is pertinent to proposals addressed in Public Comment Number 301 submitted by the Service. The weir on the Funny River has been operated since 2006 to monitor escapement of Chinook salmon. The weir on the Killey River weir has been operated for the past two years (2012 and 2013) to monitor Chinook salmon escapement. Published reports providing more information on both projects can be found online at: <http://www.fws.gov/alaska/fisheries/fish/reports.htm>.

Sincerely,

Jeffrey Anderson  
Field Supervisor  
Kenai Fish and Wildlife Field Office



**Figure 1. Distributions of lengths (dark thin lines) for Funny River Chinook salmon overlaid by early-run relative harvest selectivity (light wide line). Proportional contributions of Funny River Chinook salmon lengths are separated by sex and age. Lengths are based on estimated means and standard deviations of Chinook salmon sampled from the population passing through the Funny River weir between 2006 and 2012. Relative harvest selectivity for male and female early-run Chinook salmon is illustrated using length rather than age and was determined from means and standard errors estimated by the Alaska Department of Fish and Game for the in-river return and sport harvest for 2008 – 2012 when the slot limit was 46-55 inches. Selectivity estimates less than 1 equate to no selectivity for that length of fish, 1 equates to no selectivity or neutral for that length of fish, and values greater than 1 equate to selectivity for that length of fish. Vertical bars illustrate the current slot limit of 46 – 55 inches.**

Source:

Boersma, J. K., K. S. Gates. 2013. Abundance and run timing of adult Chinook salmon and steelhead in the Funny River, Kenai Peninsula, Alaska, 2012. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2013-4, Soldotna, Alaska.

Boersma, J. K., K. S. Gates. 2012. Abundance and run timing of adult Chinook salmon and steelhead in the Funny River, Kenai Peninsula, Alaska, 2011. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2012-11, Soldotna, Alaska.

- Gates, K. S., and J. K. Boersma. 2011. Abundance and run timing of adult Chinook salmon and steelhead in the Funny River, Kenai Peninsula, Alaska, 2010. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2011-1, Soldotna, Alaska.
- Gates, K. S., and J. K. Boersma. 2009b. Abundance and run timing of adult Chinook salmon and steelhead in the Funny River, Kenai Peninsula, Alaska, 2009. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2009-16, Soldotna, Alaska.
- Gates, K. S., and J. K. Boersma. 2009a. Abundance and run timing of adult Chinook salmon and steelhead in the Funny River, Kenai Peninsula, Alaska, 2008. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2009-1, Soldotna, Alaska.
- Gates, K. S., and D. E. Palmer. 2008. Abundance and run timing of adult Chinook salmon in the Funny River, Kenai Peninsula, Alaska, 2007. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2008-3, Kenai, Alaska.
- Gates, K. S., and D. E. Palmer. 2007. Abundance and run timing of adult Chinook salmon in the Funny River, Kenai Peninsula, Alaska, 2006. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series Number 2007-2, Kenai, Alaska.
- Perschbacher, J. 2012. Chinook salmon creel survey and inriver gillnetting study, lower Kenai River, Alaska, 2011. Alaska Department of Fish and Game, Fishery Data Series No. 12-84.
- Perschbacher, J. 2012. Chinook salmon creel survey and inriver gillnetting study, lower Kenai River, Alaska, 2010. Alaska Department of Fish and Game, Fishery Data Series No. 12-75, Anchorage.
- Perschbacher, J. 2012. Chinook salmon creel survey and inriver gillnetting study, lower Kenai River, Alaska, 2009. Alaska Department of Fish and Game, Fishery Data Series No. 12-61, Anchorage.
- Perschbacher, J. 2012. Chinook salmon creel survey and inriver gillnetting study, lower Kenai River, Alaska, 2008. Alaska Department of Fish and Game, Fishery Data Series No. 12-70, Anchorage.
- 2012 Chinook salmon creel survey and inriver gillnetting age, sex , and length information, Alaska Department of Fish and Game, personal communication.

**Table 1.—Total escapement of Chinook salmon passing the Killey (N=1,881) and Funny (N=1,027) river weirs during 2013 was 2,908. Females comprised 14% (Killey River) and 24% (Funny River) of the returns and were comprised of age 1.3 and 1.4 fish. Age 1.2 male Chinook salmon were dominant in both escapements comprising 69% (Killey River) and 47% (Funny River) of all fish. Length measurements are reported as total lengths in inches. Mean total lengths for Chinook salmon in the Killey and Funny rivers was 29 and 30 inches, respectively.**

Killey River			Estimated Escapement		Total Length (in) <sup>b</sup>		
Sex	Age	Sample size (n) <sup>a</sup>	N	SE	$\hat{\mu}$	SE	Range
Female	1.3	42	127	16	39	1.1	34 - 44
	1.4	46	142	16	41	0.9	36 - 45
Female Total		88	269	22	40	1.2	34 - 45
Male	1.1	21	66	11	18	1.0	12 - 22
	1.2	426	1299	29	25	1.0	19 - 33
	1.3	60	184	18	35	1.4	29 - 44
	1.4	20	59	11	45	1.1	39 - 50
	1.5	1	3	3	47	N/A	N/A
Male Total		528	1612	22	27	2.5	12 - 50
Cumulative Total		616	1,881		29	3.2	12 - 50

<sup>a</sup> Fish with incomplete ASL data were omitted from this analysis (n=45).

<sup>b</sup> Estimated from a multi-linear regression provided by Alaska Department of Fish and Game.

Funny River			Estimated Escapement		Total Length (in) <sup>b</sup>		
Sex	Age	Sample size (n) <sup>a</sup>	N	SE	$\hat{\mu}$	SE	Range
Female	1.3	33	168	24	34	0.3	31 - 38
	1.4	15	76	17	37	0.5	35 - 42
Female Total		48	244	28	35	0.6	31 - 42
Male	1.1	8	41	13	19	1.0	14 - 24
	1.2	94	478	32	26	0.2	22 - 29
	1.3	45	229	27	32	0.2	27 - 36
	2.3	1	6	5	34	N/A	N/A
	1.4	6	31	11	37	1.0	33 - 42
Male Total		154	785	28	28	0.6	14 - 42
Cumulative Total		202	1,027		30	0.3	14 - 42

<sup>a</sup> Fish with incomplete ASL data were omitted from this analysis (n=17).

<sup>b</sup> Estimated from a multi-linear regression provided by Alaska Department of Fish and Game.

Source:

Gates, K. S., and J. K. Boersma. In Preparation. Abundance and run timing of adult Chinook salmon in the Killey River and Quartz Creek, Kenai Peninsula, Alaska, 2013. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series, Soldotna, Alaska.

Boersma, J. K., and K. S. Gates. In Preparation. Abundance and run timing of adult Chinook salmon in the Funny River, Kenai Peninsula, Alaska, 2013. U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Alaska Fisheries Data Series, Soldotna, Alaska.