

Submitted by the Alaska Department of Fish and Game
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Harvest and Harvest Rate Estimates for Bear River Early- and Late-Run Sockeye Salmon

The following tables provide estimates for harvest and harvest rate of Bear River sockeye salmon separated into early and late run for 2006 to 2008.

Bear River subregional reporting group data from the WASSIP sockeye salmon harvest and harvest rate report were separated into Bear River early- and late-runs by date, not using genetic differences. Early- and late-run escapements were separated using August 1 as the start of the late run. For harvest in North Peninsula fisheries, fish harvested prior to August 1 were considered early-run fish, whereas fish harvested on or after that date were considered late-run fish. In South Peninsula fisheries (June fishery, post-June fishery, SEDM, Chignik Area fisheries), the date used to demark early- and late-run fish was July 1 based on average number of days between release in South Alaska Peninsula and recapture of tagged fish in North Alaska Peninsula fisheries from previous ADF&G studies. Bristol Bay and Kuskokwim Area harvests were essentially zero, but any harvests were assigned to Bear River late run.

Table 1.—Bear River early- and late-run sockeye commercial salmon harvest and harvest rate estimates, 2006. Medians, 90% credibility intervals (90% CI), the probability that harvest estimate is equal to zero ($P = 0$), mean, and SD are reported.

Area	Fishery	Harvest					Harvest Rate (%)					
		90% CI				P = 0	Mean	SD	Median	90% CI		
		Median	5%	95%	5%					95%	Mean	SD
South Alaska Peninsula		7,183	3,328	12,167	0.00	7,385	2,711	1.0	0.5	1.7	1.1	0.4
North Alaska Peninsula		428,831	402,217	457,088	0.00	429,132	16,691	61.4	58.3	64.3	61.3	1.8
Bristol Bay/Kuskokwim areas		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
North Alaska Peninsula												
Bear River		224,820	208,457	242,284	0.00	225,017	10,258	32.2	29.9	34.5	32.2	1.4
Three Hills		26,089	22,615	29,897	0.00	26,151	2,222	3.7	3.2	4.3	3.7	0.3
Ilnik southern		126,288	109,235	144,992	0.00	126,576	10,882	18.1	15.8	20.4	18.1	1.4
Ilnik northern		51,049	40,375	63,389	0.00	51,388	7,035	7.3	5.8	9.0	7.3	1.0
Outer Port Heiden ^a		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
WASSIP Total		436,226	409,211	464,823	0.00	436,517	16,916	62.4	59.4	65.4	62.4	1.8
Late Run												
South Alaska Peninsula		15,086	12,141	18,508	0.00	15,172	1,940	2.7	2.2	3.3	2.7	0.3
North Alaska Peninsula		360,614	341,715	380,713	0.00	360,821	11,858	64.6	61.8	67.2	64.5	1.6
Bristol Bay/Kuskokwim areas		163	0	4,657	0.08	954	2,225	0.0	0.0	0.8	0.2	0.4
North Alaska Peninsula												
Bear River		213,950	197,085	232,267	0.00	214,244	10,710	38.3	35.9	40.8	38.3	1.5
Three Hills		57,844	53,279	62,835	0.00	57,912	2,901	10.4	9.5	11.3	10.4	0.6
Ilnik southern		82,567	76,038	89,648	0.00	82,665	4,138	14.8	13.5	16.1	14.8	0.8
Ilnik northern		5,994	5,521	6,506	0.00	6,001	300	1.1	1.0	1.2	1.1	0.1
Outer Port Heiden ^a		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
WASSIP Total		376,690	357,283	397,500	0.00	376,947	12,239	67.4	64.7	70.1	67.4	1.6

Note: Harvest is the number of sockeye salmon reported to have been harvested in the fishery.

Note: Harvest rate is the fishery harvest divided by the total run within the WASSIP area for a given reporting group, expressed as a percent. Mean total run for Bear River early-run sockeye salmon was estimated to be 669,772 (CV = 0.03) and 559,182 (CV = 0.03) for Bear River late-run sockeye.

Note: Medians for harvest estimates are unadjusted; early and late runs sum to 99.2% of the adjusted medians for the Bear subregional reporting group calculated in WASSIP.

^a Outer Port Heiden Section closed entire 2006 fishing season.

Table 2.—Bear River early- and late-run commercial sockeye salmon harvest and harvest rate estimates, 2007. Medians, 90% credibility intervals, the probability that harvest estimate is equal to zero ($P = 0$), mean, and SD are reported.

Area	Harvest						Harvest Rate (%)												
	90% CI			P = 0	Mean	SD	Median	90% CI											
	5%	95%	5%					5%	95%	5%	95%	SD							
Early Run																			
South Alaska Peninsula	5,806	3,216	10,091	0.00	6,117	2,167	0.9	0.5	1.5	0.9	0.3								
North Alaska Peninsula	465,431	436,326	496,283	0.00	465,760	18,235	68.7	66.1	71.2	68.7	1.5								
Bristol Bay/Kuskokwim areas	0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0								
North Alaska Peninsula																			
Bear River	123,108	113,413	133,406	0.00	123,219	6,089	18.2	16.7	19.7	18.2	0.9								
Three Hills	15,579	12,962	18,541	0.00	15,640	1,701	2.3	1.9	2.7	2.3	0.3								
Ilnik southern	162,542	142,677	184,230	0.00	162,874	12,624	24.0	21.5	26.6	24.0	1.6								
Ilnik northern	130,272	113,581	148,901	0.00	130,622	10,774	19.2	17.0	21.6	19.3	1.4								
Outer Port Heiden	33,240	27,117	40,222	0.00	33,404	3,992	4.9	4.0	5.9	4.9	0.6								
WASSIP Total	471,546	442,234	502,701	0.00	471,877	18,356	69.6	67.0	72.0	69.6	1.5								
Late Run																			
South Alaska Peninsula	20,356	15,776	25,646	0.00	20,487	3,008	2.1	1.6	2.6	2.1	0.3								
North Alaska Peninsula	718,285	681,026	758,149	0.00	718,782	23,461	74.2	71.7	76.3	74.1	1.4								
Bristol Bay/Kuskokwim areas	1,963	2	24,240	0.04	5,956	8,703	0.2	0.0	2.5	0.6	0.9								
North Alaska Peninsula																			
Bear River	419,468	386,468	455,753	0.00	420,057	21,048	43.3	40.8	45.8	43.3	1.5								
Three Hills	183,804	169,268	199,407	0.00	184,001	9,182	19.0	17.5	20.5	19.0	0.9								
Ilnik southern	103,263	95,119	112,108	0.00	103,394	5,172	10.7	9.8	11.6	10.7	0.6								
Ilnik northern	11,317	10,421	12,283	0.00	11,331	565	1.2	1.1	1.3	1.2	0.1								
Outer Port Heiden	0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0								
WASSIP Total	744,482	705,128	788,067	0.00	745,225	25,240	76.8	74.7	78.8	76.8	1.2								

Note: Harvest is the number of sockeye salmon reported to have been harvested in the fishery.

Note: Harvest rate is the fishery harvest divided by the total run within the WASSIP area for a given reporting group, expressed as a percent. Mean total run for Bear River early-run sockeye salmon was estimated to be 678,337 (CV = 0.03) and 970,217 (CV = 0.03) for Bear River late-run sockeye.

Note: Medians for harvest estimates are unadjusted; early and late runs sum to 99.8% of the adjusted medians for the Bear subregional reporting group calculated in WASSIP.

Table 3.—Bear River early- and late-run commercial sockeye salmon harvest and harvest rate estimates, 2008. Medians, 90% credibility intervals, the probability that harvest estimate is equal to zero ($P = 0$), mean, and SD are reported.

Area	Fishery	Harvest						Harvest Rate (%)				
		Median	90% CI			Mean	SD	Median	90% CI			
			5%	95%	$P = 0$				5%	95%	Mean	SD
South Alaska Peninsula		25,147	14,508	37,938	0.00	25,546	7,152	13.1	7.9	18.8	13.2	3.3
North Alaska Peninsula		41,580	33,375	51,129	0.00	41,826	5,413	21.6	17.5	26.1	21.7	2.6
Bristol Bay/Kuskokwim areas		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
North Alaska Peninsula												
Bear River		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
Three Hills		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
Ilnik southern		13,921	10,091	18,509	0.00	14,057	2,568	7.2	5.2	9.6	7.3	1.3
Ilnik northern		20,266	13,871	28,182	0.00	20,546	4,369	10.5	7.3	14.4	10.6	2.1
Outer Port Heiden		7,061	4,544	10,465	0.00	7,223	1,815	3.7	2.4	5.4	3.8	0.9
WASSIP Total		66,984	53,236	82,707	0.00	67,372	8,967	34.8	29.1	40.7	34.8	3.5
Late Run												
South Alaska Peninsula		28,130	24,346	32,333	0.00	28,202	2,435	3.1	2.7	3.6	3.1	0.3
North Alaska Peninsula		674,324	638,985	712,389	0.00	674,788	22,355	75.0	72.4	77.4	75.0	1.5
Bristol Bay/Kuskokwim areas		181	0	5,817	0.09	1,177	2,600	0.0	0.0	0.6	0.1	0.3
North Alaska Peninsula												
Bear River		416,628	383,829	452,415	0.00	417,196	20,877	46.4	43.8	48.9	46.4	1.6
Three Hills		123,189	113,443	133,758	0.00	123,339	6,192	13.7	12.5	14.9	13.7	0.7
Ilnik southern		97,183	89,544	105,484	0.00	97,307	4,857	10.8	9.9	11.8	10.8	0.6
Ilnik northern		36,901	34,008	40,035	0.00	36,946	1,840	4.1	3.7	4.5	4.1	0.2
Outer Port Heiden		0	0	0	1.00	0	0	0.0	0.0	0.0	0.0	0.0
WASSIP Total		703,662	667,918	742,137	0.00	704,167	22,643	78.3	75.7	80.7	78.3	1.5

Note: Harvest is the number of sockeye salmon reported to have been harvested in the fishery.

Note: Harvest rate is the fishery harvest divided by the total run within the WASSIP area for a given reporting group, expressed as a percent. Mean total run for Bear River early-run sockeye salmon was estimated to be 193,149 (CV = 0.07) and 899,883 (CV = 0.03) for Bear River late-run sockeye.

Note: Medians for harvest estimates are unadjusted; early and late runs sum to 99.9% of the adjusted medians for the Bear subregional reporting group calculated in WASSIP.