

K3.6 COMMERCIAL AND RECREATIONAL FISHERIES

The following tables (Table K3.6-1 through Table K3.6-7) and figures (Figure K3.6-1 through Figure K3.6-2) support Section 3.6, Commercial and Recreational Fisheries.

K3.6.1 Commercial Fisheries Data

Table K3.6-1: 2000-2019 20-Year Average Harvest Distribution by Species (Percent)

Species	Naknek/ Kvichak	Egegik	Ugashik	Nushagak	Togiak	Total
Sockeye	97.5	98.8	97.6	89.7	74.0	94.8
Chinook	0.0	0.0	0.0	0.4	0.6	0.1
Coho	0.0	0.2	0.1	0.7	1.7	0.3
Chum	2.3	1.0	2.3	6.8	19.3	3.9
Pink	0.1	0.0	0.0	2.4	4.3	0.9

Note: Percentages may not equal 100 due to rounding.
Source: ADF&G 2020

Table K3.6-2: 2000-2019 20-Year Annual Bristol Bay Sockeye Salmon Harvest by District

	Naknek/ Kvichak	Egegik	Ugashik	Nushagak	Togiak	Total
20-Year Min.	1,418,938	2,291,502	480,509	2,663,014	233,743	10,675,713
20-Year Max.	16,531,193	14,683,614	6,630,231	24,230,150	1,018,644	43,023,030
20-Year Median	8,716,327	6,979,009	2,424,145	6,784,561	636,120	28,083,789
20-Year Average	8,433,034	7,190,984	2,871,760	7,915,926	623,378	27,118,129
2000-2009 Average	6,128,962	6,786,535	2,304,287	6,772,146	610,095	22,767,725
2010-2019 Average	10,737,106	7,595,433	3,439,233	9,059,705	636,660	31,468,532

Source: ADF&G 2020

Table K3.6-3: 2000-2019 Annual Bristol Bay Sockeye Salmon Escapement by District

	Naknek/ Kvichak	Egegik	Ugashik	Nushagak	Togiak	Total
20-Year Min.	2,303,463	927,054	596,332	1,389,975	128,118	6,200,639
20-Year Max.	15,033,216	2,600,982	2,599,186	9,525,486	511,770	22,366,676
20-Year Median	6,795,420	1,290,144	905,584	2,765,440	203,148	12,744,610
20-Year Average	6,773,798	1,428,523	1,078,711	3,274,607	247,104	12,802,743
2000-2009 Average	6,373,567	1,240,460	1,037,830	2,705,570	260,191	11,617,619
2010-2019 Average	7,174,030	1,616,585	1,119,592	3,843,644	234,016	13,987,867

Source: ADF&G 2020

Table K3.6-4: Inshore¹ Sockeye Salmon Run by River System, 2000-2019, Naknek-Kvichak District (Thousands of Fish)

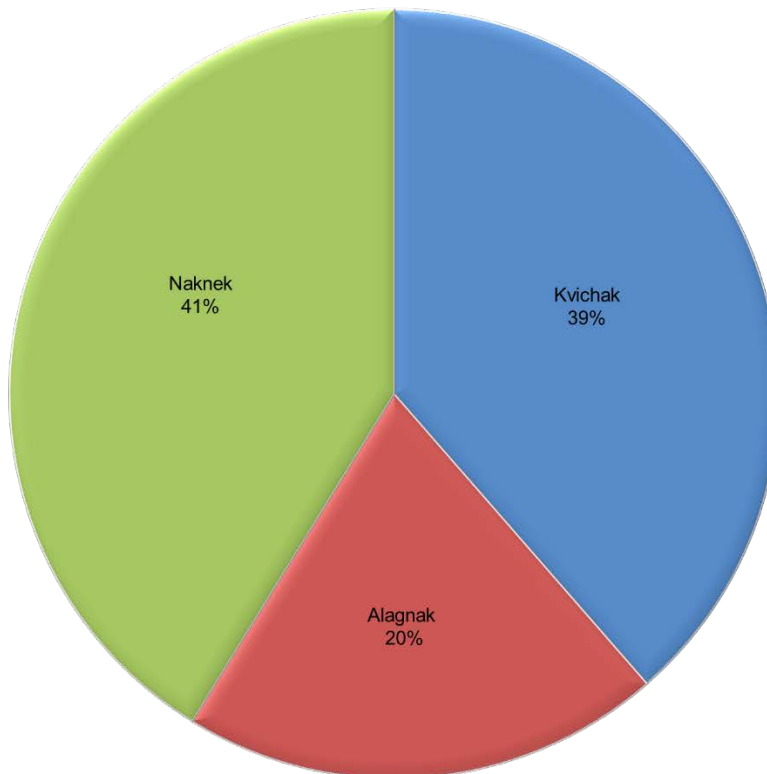
	Kvichak	Alagnak	Naknek	Total
20-Year Min. Run Size	707	335	2,249	3,722
20-Year Max. Run Size	15,470	11,682	13,350	31,572
20-Year Median Run Size	5,776	2,686	5,113	16,035
20-Year Average	6,209	3,352	5,732	16,995
2000-2009 Average	3,867	3,150	5,657	17,443
2010-2019 Average	8,550	3,553	5,806	15,876

Notes: Due to rounding, district total runs may not equal the sum of the rows.

¹ADF&G uses the term “inshore” to indicate fish from a specific fishery that have returned to that fishery. An inshore Bristol Bay sockeye is one that has returned to the Bristol Bay fishery. There are Bristol Bay sockeye that do not make it back to the fishery because they are intercepted by other fisheries either as part of incidental bycatch (accidental harvest) or because they are caught passing through another salmon fishery area (i.e., Area M). The term acknowledges that some potential returning adult spawners do not make it back to the back and that the inshore run total does not fully represent the productivity of the bay’s river systems. Interception of Bristol Bay sockeye by Area M harvesters has been a contentious issue over the years.

Source: ADF&G 2020

Figure K3.6-1: Inshore Average Sockeye Salmon Run by River System, 1998-2017, Naknek-Kvichak District



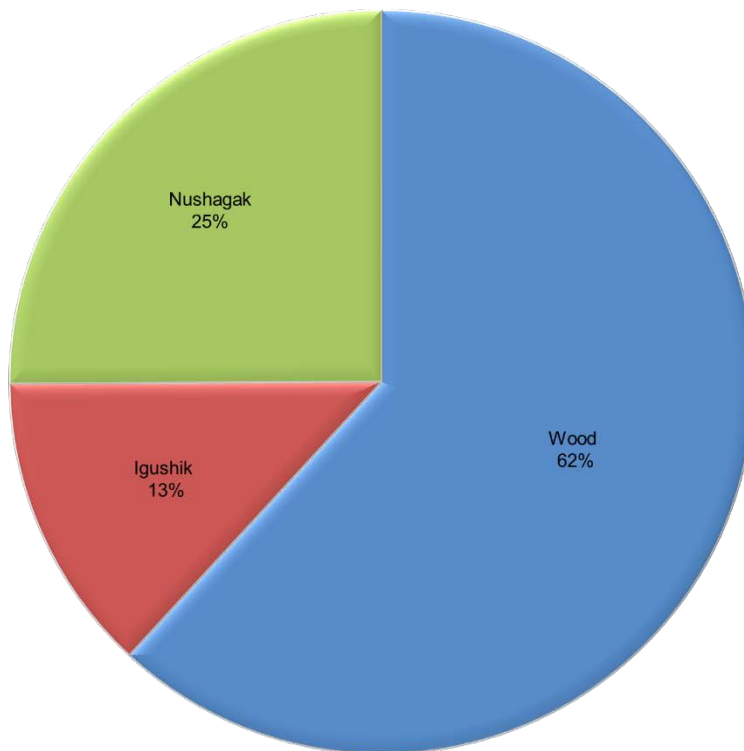
Source: EIS work product produced from ADF&G 2020

Table K3.6-5: Inshore Sockeye Salmon Run by River System, 2000-2019, Nushagak District (Thousands of Fish)

Year	Wood	Igushik	Nushagak	Total
20-Year Min. Run Size	2,449	207	674	4,055
20-Year Max. Run Size	22,426	2,394	9,425	33,756
20-Year Median Run Size	5,431	1,330	2,321	9,662
20-Year Average	7,008	1,314	2,912	11,236
2000-2009 Average	5,879	1,325	2,186	9,390
2010-2019 Average	8,136	1,303	3,639	13,082

Notes: Due to rounding, district total runs may not equal the sum of the rows.
 Source: ADF&G 2020

Figure K3.6-2: Inshore Average Sockeye Salmon Run by River System, 2000-2019, Nushagak District



Source: EIS work product produced from ADF&G 2020

Table K3.6-6: Comparison of Vessels Used in the Bristol Bay Drift Gillnet Fishery, by Residency of Permit Holder

	Group	1983	1988	1993	1998	2003	2008
Average age of vessels (years)	Bristol Bay Residents	9	11	14	18	22	26
	Other Alaska Residents	9	11	14	17	21	24
	Residents of Other States	11	12	13	16	20	24
	Average	10	11	14	17	21	25
Average horsepower of vessels	Bristol Bay Residents	239	279	282	294	287	337
	Other Alaska Residents	243	271	315	345	350	373
	Residents of Other States	252	286	335	368	372	382
	Average	245	278	311	366	366	364
Average displacement of vessels (gross tons)	Bristol Bay Residents	10	12	12	12	12	12
	Other Alaska Residents	12	13	13	13	14	15
	Residents of Other States	12	12	13	14	14	14
	Average	11	12	13	13	13	14
Average fuel capacity of vessels (gallons)	Bristol Bay Residents	239	288	292	294	287	299
	Other Alaska Residents	306	334	364	357	357	360
	Residents of Other States	283	311	348	352	350	364
	Average	276	311	331	335	331	341
Percent of vessels with refrigeration capacity	Bristol Bay Residents	0.5%	0.5%	2.3%	4.5%	5.5%	7.7%
	Other Alaska Residents	1.3%	2.3%	7.5%	13.7%	15.3%	20.8%
	Residents of Other States	0.5%	2.0%	8.1%	15.5%	17.8%	22.2%
	Average	0.8%	1.6%	6.0%	11.2%	12.9%	16.9%

Source: NEI 2009

K3.6.2 Area N, P, S, and T Freshwater Guide Logbook Data

Table K3.6-7 summarizes 2011-2014 data from the Alaska Department of Fish and Game’s (ADF&G) Freshwater Guide Logbook program, which requires fishing guides in the state of Alaska to record the location, number of clients, and catch/harvest for every guided trip. Included in Table K3.6-7 is the average number of businesses reporting for a waterbody, the average annual number of trips taken, and the average number of days fished. In addition, the table shows the number of times in the 4-year span that the ADF&G reported program data. For example, Lower Talarik Creek appears in the data for 3 out of 4 years between 2011 and 2014. On average, five businesses reported a total of 16 trips and 48 fishing days per year. Table K3.6-7 highlights (in blue) waterbodies that could be affected by an aspect of the project or by unanticipated releases.

Table K3.6-7: Comparative Estimates of Sport Fishing Effort, Days

Waterbody	Average of 2011-2014 Data			
	Appearances in Data (Max = 4)	Businesses Operating	Trips	Days
Area N				
Big River Lakes	4	26	757	2,932
Wolverine Creek mouth (by Big River Lakes)	4	17	500	1,959
Kustatan River	4	28	242	1,027
Crescent Lake	4	17	176	606
Kamishak River	4	8	133	356
Big River	4	8	89	328
Other sites (South of North Forelands)	1	12	61	231
Other lakes and streams	2	7	57	190
Crescent River (Grecian River)	3	9	38	155
Sites south of North Forelands	2	13	47	150
Chuitna River	4	8	26	111
Bachatna Creek	4	8	19	80
Coal Creek (into Beluga Lake)	3	4	18	58
Other sites between North Forelands and Susitna drainage	1	5	11	31
Area P				
Kenai River—Cook Inlet to Soldotna Bridge	4	146	4,449	15,389
Kenai River—Skilak Inlet to Kenai Lake	4	46	2,490	7,673
Kasilof River—below Sterling Highway	4	79	1,825	5,996
Kenai River—Moose River to Skilak outlet	4	94	1,724	5,562
Kenai River—Soldotna Bridge to Moose River	4	56	739	2,376
Kasilof River—above Sterling Highway	4	21	146	478
Russian River	4	11	151	342
Other streams	4	7	64	271
Deep Creek	4	5	44	164
Kenai River—guided, reach not specified	4	11	43	127
Other lakes	4	10	39	117
Anchor River	4	7	52	115
Ninilchik River	1	4	30	111
Quartz Creek	4	9	36	79
Kasilof River—guided, reach not specified	2	6	12	33
Bench Lake (Johnson Trail)	1	5	11	28
Hidden Lake	1	4	7	24

Table K3.6-7: Comparative Estimates of Sport Fishing Effort, Days

Waterbody	Average of 2011-2014 Data			
	Appearances in Data (Max = 4)	Businesses Operating	Trips	Days
Afonasi Lake	1	4	4	14
Area S				
Alagnak (Branch) River	4	18	1,292	2,776
Copper River (Iliamna Lake area)	4	11	613	1,466
Kvichak River	4	19	548	1,288
Moraine Creek	4	18	463	1,047
Kulik River	4	12	382	972
Iliamna River	4	7	185	430
Battle River	4	15	94	293
Gibraltar River	4	9	123	289
Kukaklek River (Big Ku) (into Alagnak)	4	9	105	220
Tazimina River	4	6	95	214
Iliamna Lake	4	8	76	223
Nanuktuk Creek	4	13	92	195
Newhalen River	3	9	58	174
Lake Clark	4	12	59	161
Lower Talarik Creek	4	8	55	148
Nonvianuk River (into Alagnak)	4	7	49	108
Funnel Creek	4	9	32	73
Kijik River	4	5	18	60
Little Kulik (into Nanuktuk Creek)	2	6	28	56
Other lakes and streams	3	6	19	52
Upper Talarik Creek	3	5	16	48
Chekok Creek	2	7	19	46
Nonvianuk Lake	1	9	18	38
Kontrashibuna Lake	2	4	12	38
Kijik Lake	3	5	8	27
Area T				
Nushagak River—sonar site to outlet of Mulchatna	4	28	1,153	3,577
Nushagak River—Black Point upstream to Sonar Site	4	21	847	2,513
Togiak River System	3	6	732	1,571
Togiak River and Lake drainage	1	7	707	1,509
Agulowak River	4	6	715	1,355

Table K3.6-7: Comparative Estimates of Sport Fishing Effort, Days

Waterbody	Average of 2011-2014 Data			
	Appearances in Data (Max = 4)	Businesses Operating	Trips	Days
Other lakes and streams	2	10	478	992
Other streams	2	7	339	675
Nushagak River—upstream from mouth of Mulchatna River	4	13	352	670
Wood River Lakes system	4	8	293	628
Agulukpak River	4	10	306	586
Mulchatna River	4	6	135	342
Nuyakuk River (Tikchik-Nuyakuk Lake system)	1	12	151	329
Aleknagik Lake	4	6	93	194
Other lakes	2	4	86	168
Nushagak River system (excluding Mulchatna drainage)	2	10	53	143
Wood River	1	7	56	129
Nushagak River System (including Harris Creek and King Salmon River)	1	6	38	119

Note: Blue highlights indicate waterbodies that could be affected by an aspect of the project or by unanticipated releases.

Source: Sigurdsson and Powers 2012, 2013, 2014; Powers and Sigurdsson 2016