

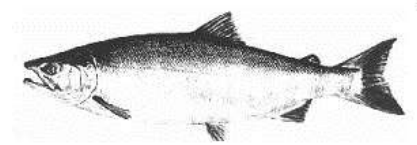
ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

NEWS RELEASE



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2016 NORTON SOUND SALMON SEASON SUMMARY

COMMERCIAL SALMON FISHERY

Near record runs of pink salmon and the seventh highest coho salmon harvest highlighted the 2016 Norton Sound commercial salmon fishery. The chum salmon harvest was less than half the forecast with a smaller than expected run. Also, likely contributing to the lower than expected chum salmon harvest was the large incidental catch of pink salmon and the below average number of permit holders fishing during the chum salmon season. The sockeye salmon harvest although a small portion of the overall harvest was the second highest in history at nearly 3,000 fish. Once again the king salmon run was poor and no commercial fishing targeting king salmon was allowed.

The commercial fishery started in late June in Subdistricts 2–4 (Golovin, Elim and Koyuk) with one 24-hour fishing period targeting chum salmon. Following the initial fishing period the buyer opted to go with 6 days a week fishing with 16-hour daily fishing periods. This was change from previous years when there were two 48-hour fishing periods per week. The daily 16-hour fishing periods continued until July 22 when the buyer requested a 58-hour fishing period followed by two 48-hour fishing periods a week for the rest of season during the coho salmon run. In Subdistricts 5 and 6 (Shaktolik and Unalakleet) fishing was delayed until July 1 to protect king salmon. The first period in Subdistricts 5 and 6 was a 24-hour fishing period beginning July 1 followed by fishing periods beginning on July 5 that ranged from 6 to 16 hours periods depending on buyer capacity. Also, on July 22 the buyer requested a 58-hour fishing period in Subdistricts 5 and 6 followed by two 48-hour fishing periods a week for the rest of the season. In Subdistrict 1 (Nome) the first commercial fishing period was on July 9 for 24 hours and then there was one 48-hour fishing period every weekend for six weeks. Permit holders only participated in three of the six 48-hour fishing periods.

Table 1 lists the Norton Sound salmon current year and historical commercial harvests relative to the recent 5-year (2011–2015) and 10-year (2006–2015) averages. The combined commercial harvest of all salmon species (365,452) ranked third highest in the last ten seasons in Norton Sound. There were 141 commercial permits fished in 2016 and this was the highest total since 1993. The 2016 fishery exvessel value of \$1,237,229 ranked fourth highest in the last 10 years and was the sixth year in the last seven years that the value exceeded 1 million dollars. Previous to

2010 the last time the value of the fishery exceeded 1 million dollars was in the 1980s. This summary should be considered preliminary and will be updated with additions and corrections in subsequent reports.

The pink salmon catch was the majority of the harvest in 2016 (Table 2) although the catch was an incidental harvest during the larger mesh openings targeting chum and coho salmon. The coho salmon catch was 23% above the 5-year average and was the seventh time the harvest exceeded 100,000 fish in the 56-year history of the fishery. However, the chum salmon catch was less than half the recent 5-year average (Table 3).

Only one salmon buyer operated in Norton Sound during the 2016 season. The Unalakleet fish plant operated by Norton Sound Seafood Products (NSSP) was the base of commercial fisheries operations. Salmon were both delivered to the Unalakleet dock and tendered from all other subdistricts, except from the Nome Subdistrict. The Nome Subdistrict catch was processed at the NSSP plant in Nome.

The average price paid for king salmon was \$2.45/lb, \$0.90/lb for sockeye salmon, \$1.39/lb for coho salmon, \$0.10/lb for pink salmon, and \$0.48/lb for chum salmon.

SUBSISTENCE SALMON FISHERY

Subsistence salmon fishers in the Port Clarence District and Subdistricts 1–3 (Nome, Golovin, and Moses Point) were required to possess a subsistence permit for each household that fished in these locations. The permits identify the type of gear used and the bag limit which is specific to each body of water. In addition, the permit contains a catch calendar where the permit holder records catches in numbers of each species of fish for each day fished. If the subsistence fishers have filled their harvest limit in one river they can fish in another river.

The only places there are limits on subsistence salmon harvest are in the Nome Subdistrict, and Pilgrim River in the Port Clarence District. Salmon limits have been in place in Nome Subdistrict since 1985, but have been removed in a number of rivers with the improving chum salmon runs in recent years. Subsistence permits are important to management because they identify users and harvests, but the actual catch information cannot be compiled in most circumstances until well after the season when the permits are returned. In southern Norton Sound, villages are surveyed to estimate the subsistence harvest and likewise this information is not available until well after the season.

SEASON SUMMARY BY SUBDISTRICT

Nome - Subdistrict 1

This was the fourth consecutive season that commercial fishing was allowed since the mid-90s. There were 5 permit holders that fished this year and which is the most since fishing resumed in 2013, but the effort is half of any other district. Permit holders only fished during four of seven fishing periods and expressed discouragement with the low price of pink salmon as one of the reasons for lack of effort.

In recent years subsistence fishing time has been liberalized in Nome Subdistrict by increasing marine gillnet fishing time from three days a week to five days a week west of Cape Nome and seven days a week east of Cape Nome. Also, fresh water gillnet fishing time has been increased from two 48-hour fishing periods a week to five days a week fishing.

For over 40 years subsistence salmon permits have been required for the Nome Subdistrict and during the 2016 season a record 591 subsistence salmon permits were issued. One of the best pink salmon runs on record likely contributed to the increased effort this year.

Observations during the season indicate that the Nome River was once again the river that had the most fishing effort and had the greatest pink salmon escapement of any river in the subdistrict with over 1 million counted through the Nome River weir.

Golovin - Subdistrict 2

This season there was a change in the usual fishing schedule with the buyer requesting daily 16-hour fishing periods six days a week during the majority of the chum salmon season instead of the usual two 48-hour fishing periods a week. The buyer requested this change to improve fish quality. After the third week of July, when coho salmon started to appear in the catch, the buyer requested a return to two 48-hour fishing periods a week.

The chum salmon harvest of 5,331 fish was only one-quarter of last year's harvest, but was still the third highest chum salmon harvest since commercial fishing resumed in 2008 in Golovin. The pink salmon harvest of 15,341 fish was the second highest since 2008. Coho salmon catches were well below average and commercial fishing was suspended ten days before the usual end of August fishing closure. The coho salmon harvest of 880 fish was only one-quarter of last year's harvest and was the fourth lowest harvest since 2008.

Subsistence fishing was allowed to continue seven days a week with no catch limits throughout the season.

The Fish River tower was in its third year of operation and 69,984 chum salmon and nearly 1.3 million pink salmon were counted. The tower crew suspended operations in late July because of high water and coho salmon passage was not determined. However, an aerial survey estimate of 976 coho salmon for Niukluk River and Ophir Creek was within the aerial survey escapement goal range of 750-1,600 coho salmon (Table 4).

Elim - Subdistrict 3

The Elim Subdistrict commercial fishing schedule was the same as the Golovin Subdistrict with daily 16-hour fishing periods six days a week until the third week of July when the two 48-hour fishing periods a week resumed. The only difference in the 16-hour daily fishing schedule was the buyer would have Golovin closed to fishing on Tuesdays and Elim on Thursdays.

The pink salmon run was estimated to be one of the greatest on record, but there were no directed pink salmon fishing periods. Nearly 39,000 pink salmon were harvested incidentally and this was the second highest since commercial fishing resumed in 2007 in Elim. The chum salmon run was below average and the catch of 6,733 fish was only one-sixth of last year's harvest. The coho salmon run was above average and the harvest of 14,069 was the second highest in history.

In 2016 the escapement past the Kwiniuk tower was 135 king salmon, 8,526 chum salmon, 1.9 million pink salmon, and 9,210 coho salmon. King salmon passage was below the escapement goal of 250 fish for the first time in three years and the chum salmon passage was also below the escapement goal range of 11,500–23,000 fish for the first time in three years. Pink salmon escapement was third highest in the 52-year project history. Counting at the Kwiniuk River tower has only extended into coho salmon season for the last 16 years and this year was the sixth

highest escapement on record, however in three of the five years with higher escapements there was no commercial fishing because of a lack of a buyer.

Norton Bay - Subdistrict 4

To protect king salmon the department restricted subsistence fishing in Norton Bay Subdistrict to two 48-hour fishing periods a week during the month of June. The first fishing period each week had a restriction of 6 inch or smaller mesh size and the second period had no mesh size restrictions.

Like Golovin and Elim Subdistricts, the commercial fishing schedule was 16-hour daily fishing periods, but with fishing closed on Wednesdays. After the third week of July fishing periods were two 48-hour fishing periods a week.

The commercial catch of 14,049 chum salmon, 38,335 pink salmon and 6,652 coho salmon ranked eighth highest, second highest and third highest, respectively, in history.

The Inglutalik River counting tower has been operational since 2011, but in most years high water prevents operating the project during coho salmon season. This year was no exception with the project unable to operate after mid-July. Escapements counts through July 16 were 3,285 king salmon, 43,226 chum salmon, 78,916 pink salmon and 693 coho salmon. Counts for all species through mid-July were the second highest on record.

Shaktoolik and Unalakleet - Subdistricts 5 and 6

Both the Shaktoolik and Unalakleet Subdistricts share a common commercial fishing boundary and management actions typically encompass both subdistricts because salmon tend to intermingle and the harvest in one subdistrict affects the movement of fish in the adjacent subdistrict. Commercial fishing is typically only allowed after king salmon have been observed in increasing numbers in subsistence fishing nets and the department is confident the midpoint of the king salmon escapement goal range of 1,200–2,600 fish will be reached at the North River counting tower. If the department does not project that the midpoint of the king salmon escapement goal range will be reached then no commercial gillnet fishing periods are allowed for any species until after June 30.

The department forecast for 2016 was for a below average run of king salmon and that subsistence fishing restrictions would be required to reach sufficient escapement. After department staff met with residents of Shaktoolik and Unalakleet, the residents of Shaktoolik preferred restricting fishing time to two 24-hour fishing periods per week with no mesh size restrictions than the latter option of two 48-hour fishing periods per week with 6 inch or smaller mesh size restriction. Unalakleet residents preferred the latter option. The department then restricted subsistence fishing time in June for each subdistrict based on the preference of each community.

Commercial fishing targeting chum salmon began on July 1 with a 24-hour fishing period and all fishing periods throughout the season occurred concurrent for both subdistricts. The buyer had capacity issues with the number of pink salmon caught in the 24-hour fishing period and limited fishing periods to 12 hours or less through July 20. The usual two 48-hour fishing periods a week did not begin until later July when pink salmon catches began to slow and coho salmon catches were increasing.

Commercial catches for chum salmon were nearly equal in both subdistricts with 12,145 fish caught in Shaktoolik and 12,228 fish caught in Unalakleet (Table 2). Pink salmon catches in Unalakleet were over three times the catch in Shaktoolik with 86,402 fish caught in Unalakleet and

28,307 fish caught in Shaktoolik. And coho salmon catches were over twice as high in Unalakleet with 25,849 fish caught in Shaktoolik and 55,083 fish caught in Unalakleet (Table 2).

The chum salmon catch for Shaktoolik was the lowest since 2009 and for Unalakleet was the lowest since 2007. The pink salmon catch was the third highest in the 2000s in Shaktoolik and was the highest since 1998 in Unalakleet. The coho salmon catch was similar to last year in Shaktoolik, but was only half of last year's record catch in Unalakleet.

Both the North River tower and Unalakleet River weir crews were unable to count after the third week of July and king salmon cumulative escapement counts through that time were 510 fish at North River and 505 fish at Unalakleet River. The king salmon passage was probably near the third-quarter point at both projects when high water prevented counting and the North River escapement goal range for king salmon was likely not reached.

Port Clarence District

Port Clarence is the salmon district immediately to the northwest of Norton Sound and has a larger run of sockeye salmon than Norton Sound. Sockeye salmon return to Salmon Lake via Pilgrim River which is easily accessible by a road from Nome.

The sockeye salmon run was very strong for the second year in a row and the department waived subsistence catch limits early in the season. A record 506 Pilgrim River subsistence permits were issued this year and greatly exceeded last year's record of 377 permits issued. The majority of the Pilgrim River harvest is by seines.

Port Clarence also has large summer and fall chum salmon runs that are harvested by residents of Teller and Brevig Mission using gillnets in marine waters.

ESCAPEMENT

Table 4 summarizes escapement assessments for the major index river systems of the Norton Sound and Port Clarence Districts in 2016. These assessments are often qualitative and relative to historical escapement sizes.

Department escapement projects in Norton Sound include a counting tower on the Kwiniuk River and weirs on the Nome River and Solomon River. Norton Sound Economic Development Corporation (NSEDG) assists with staffing at the Kwiniuk River and Nome River projects.

Eight additional counting projects were also operated in the management area this season. The Eldorado River and Pilgrim River had weir projects and the Fish, Inglutalik, North and Shaktoolik Rivers had counting towers which were setup and operated by NSEDG. A cooperative weir project was operated on Snake River by the department and NSEDG. Also, a cooperative weir project was operated on the Unalakleet River by the department with assistance from NSEDG and Native Village of Unalakleet. Funding for the Unalakleet River weir project was provided by United States Fish & Wildlife Service Office of Subsistence Management.

Aerial survey assessment conditions were fair to good in northern Norton Sound, but poor in southern Norton Sound because of high water during the 2016 season. However, throughout Norton Sound the large pink salmon escapement prevented chum salmon from being adequately observed in many rivers. As usual, the Nome Subdistrict streams received the most intensive assessment efforts because salmon stocks local to the Nome area are easily accessed by road system, and are exposed to intensive subsistence and sport fishing pressure.

King Salmon

The 2016 king salmon run was weak and subsistence fishing restrictions were in effect in southern Norton Sound. Flooding prevented an accurate assessment of the king salmon run at the North River counting tower, but the escapement goal range of 1,200–2,600 fish was likely not reached. Counting operations were suspended for one month beginning on July 19 when the cumulative king salmon escapement count was 510 fish. The 5-year average passage of king salmon by tower on July 19 is 61% and the 10-year average is 73%. In only one year in the 2000s was the passage lower than 50% by July 19. Previous to this year the last time the lower end of the king salmon goal was not reached was in 2013. Likewise, the king salmon escapement goal Kwiniuk River counting tower was not reached for the first time since 2013.

Chum Salmon

Chum salmon escapement goal ranges were exceeded in all rivers in the Nome Subdistrict, but was not reached at Kwiniuk River counting tower in the Elim Subdistrict. The chum salmon escapement count of 8,526 fish was the third lowest in over 30 years and well below the Kwiniuk River escapement goal range of 11,500–23,000 fish. The department did not fly the Tubutulik River in Elim Subdistrict to determine if the chum salmon escapement goal range was reached there. An overwhelming number of pink salmon in the adjacent Kwiniuk River was likely an indication of huge numbers of pink salmon at Tubutulik River and effectively counting chum salmon by aerial survey would have been difficult.

Pink Salmon

For over 30 years pink salmon returns to Norton Sound have followed an odd and even year cycle with the even-numbered year returns typically much higher in number than the odd-numbered years. In 2016, there were near record to record escapements for a number of rivers. The Unalakleet River weir had a record count of nearly 5 million pink salmon. Nome River pink salmon counts were over 1.75 million fish and were second only to the 1.87 million fish counted in 2008. The Kwiniuk River pink salmon count was over 1.9 million fish and was third highest in the 52-year project history and the North River pink salmon count was over 1 million fish and was the fourth highest in the 21-year project history. There are three pink salmon escapement goals in Norton Sound and those goals at Kwiniuk (8,400), Nome (13,000), and North (25,000) rivers were easily exceeded.

Coho Salmon

Coho salmon are found in nearly all of the chum salmon producing streams throughout Norton Sound with the primary commercial contributors being the Unalakleet and Shaktoolik Rivers. Because inclement weather is normally experienced in this area during August and September, escapement data can be somewhat incomplete. Streams in the northern subdistricts of Norton Sound are typically surveyed. Although no coho salmon escapement goals have yet been established in Nome Subdistrict numerous rivers were flown in the subdistrict and high numbers of coho salmon were counted compared to historical surveys. The Niukluk River and Ophir Creek aerial survey escapement goal range of 750–1,600 coho salmon was met with 976 fish counted. The Kwiniuk River aerial survey escapement goal range of 650–1,300 coho salmon was easily exceeded with a count of 1,987 fish. The other aerial survey escapement goal range of 550–1,100 at North River was likely met, but a lack of available aircraft prevented a survey. However, the

North River tower crew was able to count the majority of the second half of the coho salmon run when water levels lowered and counted 2,241 fish.

Sockeye Salmon

Sockeye salmon are typically found in small numbers throughout the Norton Sound District with the largest spawning stock at Glacial Lake where 1,000 to 2,000 sockeyes usually return to spawn each year, but large run years can have runs from 5,000 to over 10,000 sockeyes. The aerial survey escapement goal range of 800–1,600 at Glacial Lake was reached with a count of 1,582 sockeye salmon.

In Port Clarence, sockeye salmon spawning populations were near 10,000 fish at Salmon Lake in years previous to 2003. However, record runs of sockeye salmon to Salmon Lake began in 2004 and continued until 2009 when the run crashed for several years. Closures to subsistence fishing at Pilgrim River and Salmon Lake beginning in 2009 continued through 2014, with the exception of a good run in 2013. Good runs in 2015 and 2016 resulted in no closures and all sockeye salmon catch limits being waived. The combined escapement goal range of Salmon Lake and Grand Central River is 4,000–8,000 sockeye salmon by aerial survey and this year's survey count of 8,558 fish exceed the upper end of the range by 7%.

Table 1.—Norton Sound salmon catch and dollar value, 1961–2016.

Year	Total Catch	Number of Permits	Gross Value of Catch to Permit Holders
1961	101,711	a	a
1962	232,431	a	\$105,800
1963	224,378	a	\$104,000
1964	164,671	a	\$51,000
1965	39,203	a	\$21,483
1966	100,345	a	\$68,000
1967	74,818	a	\$44,038
1968	124,409	a	\$63,700
1969	178,972	a	\$95,297
1970	178,218	a	\$99,019
1971	141,977	a	\$101,000
1972	149,494	a	\$102,225
1973	176,797	a	\$308,740
1974	315,829	a	\$437,127
1975	251,861	a	\$413,255
1976	193,063	a	\$285,283
1977	257,325	164	\$546,010
1978	531,948	176	\$907,330
1979	350,401	175	\$878,792
1980	444,337	159	\$572,125
1981	441,734	167	\$761,658
1982	511,208	164	\$1,069,723
1983	456,420	170	\$946,232
1984	342,159	141	\$738,064
1985	180,200	155	\$818,477
1986	230,400	163	\$546,452
1987	136,283	164	\$517,894
1988	225,132	152	\$760,641
1989	92,811	110	\$319,489
1990	131,665	128	\$474,064
1991	156,789	126	\$413,479
1992	199,933	110	\$448,395
1993	263,670	153	\$368,723
1994	1,108,184	119	\$863,060
1995	181,393	105	\$356,164
1996	571,241	86	\$340,347
1997	79,141	102	\$363,908
1998	641,396	82	\$358,982
1999	23,051	60	\$76,860
2000	217,873	79	\$149,907
2001	30,849	51	\$56,921
2002	2,365	12	\$2,941
2003	20,653	30	\$64,473
2004	48,381	36	\$122,506
2005	89,669	40	\$296,154

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Table 1.–Page 2 of 2.

Year	Total Catch	Number of Permits	Gross Value of Catch to Permit Holders
2006	140,873	61	\$389,707
2007	152,357	71	\$572,195
2008	221,101	91	\$759,451
2009	138,737	88	\$722,167
2010	211,622	115	\$1,220,487
2011	177,167	123	\$1,269,730
2012	305,657	123	\$758,908
2013	181,247	124	\$1,183,236
2014	403,715	128	\$1,915,749
2015	369,720	128	\$1,940,408
2016	365,452	141	\$1,237,229
5-year avg. ^b	287,501	125	\$1,413,606
10-year avg. ^c	230,220	105	\$1,073,204

^a Information not available.^b 2011-2015.^c 2006-2015.

Table 2.–Norton Sound commercial salmon harvest summary by subdistrict, 2016.

		Subdistricts						Total
		1	2	3	4	5	6	
Number of Permit Holders ^a		5	10	25	18	28	68	141
King	Number	0	18	58	107	0	0	183
	Weight (lbs)	0	158	703	1,262	0	0	2,123
Sockeye	Number	5	138	641	171	466	1,214	2,635
	Weight (lbs)	38	906	4,023	1,135	2,847	7,108	16,057
Coho	Number	117	880	14,141	6,652	25,849	55,083	102,722
	Weight (lbs)	827	5,996	96,906	44,345	177,252	376,272	701,598
Pink	Number	1,448	15,346	38,907	38,335	28,307	86,402	208,745
	Weight (lbs)	4,961	57,196	136,686	135,634	104,287	308,919	747,683
Chum	Number	661	5,331	6,733	14,069	12,145	12,228	51,167
	Weight (lbs)	3,997	37,554	45,071	95,265	81,537	81,773	345,197
Total	Number	2,231	21,713	60,480	59,334	66,767	154,927	365,452
	Weight (lbs)	9,823	101,810	283,389	277,641	365,923	774,072	1,812,658

^a Number of permit holders is the unique number of permit holders that fished in each subdistrict. Some permit holders fished in more than one subdistrict.

Table 3.—Norton Sound salmon catch, 1961–2016.

Year	King	Sockeye	Coho	Pink	Chum	Total
1961	5,300	35	13,807	34,237	48,332	101,711
1962	7,286	18	9,156	33,187	182,784	232,431
1963	6,613	71	16,765	46,180	154,749	224,378
1964	2,018	126	98	13,567	148,862	164,671
1965	128	30	2,030	220	36,795	39,203
1966	1,553	14	5,755	12,778	80,245	100,345
1967	1,804	0	2,379	28,879	41,756	74,818
1968	1,045	0	6,885	71,179	45,300	124,409
1969	2,392	0	6,836	86,949	82,795	178,972
1970	1,853	0	4,423	64,908	107,034	178,218
1971	2,593	0	3,127	4,895	131,362	141,977
1972	2,938	0	454	45,182	100,920	149,494
1973	1,918	0	9,282	46,499	119,098	176,797
1974	2,951	0	2,092	148,519	162,267	315,829
1975	2,393	2	4,593	32,388	212,485	251,861
1976	2,243	11	6,934	87,919	95,956	193,063
1977	4,500	5	3,690	48,675	200,455	257,325
1978	9,819	12	7,335	325,503	189,279	531,948
1979	10,706	57	31,438	167,411	140,789	350,401
1980	6,311	40	29,842	227,352	180,792	444,337
1981	7,929	56	31,562	232,479	169,708	441,734
1982	5,892	10	91,690	230,281	183,335	511,208
1983	10,308	27	49,735	76,913	319,437	456,420
1984	8,455	6	67,875	119,381	146,442	342,159
1985	19,491	166	21,968	3,647	134,928	180,200
1986	6,395	233	35,600	41,260	146,912	230,400
1987	7,080	207	24,279	2,260	102,457	136,283
1988	4,096	1,252	37,214	74,604	107,966	225,132
1989	5,707	265	44,091	123	42,625	92,811
1990	8,895	434	56,712	501	65,123	131,665
1991	6,068	203	63,647	0	86,871	156,789
1992	4,541	296	105,418	6,284	83,394	199,933
1993	8,972	279	43,283	157,574	53,562	263,670
1994	5,285	80	102,140	982,389	18,290	1,108,184
1995	8,860	128	47,863	81,664	42,898	181,393
1996	4,984	1	68,206	487,441	10,609	571,241
1997	12,573	161	32,284	20	34,103	79,141
1998	7,429	7	29,623	588,013	16,324	641,396
1999	2,508	0	12,662	0	7,881	23,051
2000	752	14	44,409	166,548	6,150	217,873
2001	213	44	19,492	0	11,100	30,849
2002	5	1	1,759	0	600	2,365
2003	12	21	17,060	0	3,560	20,653
2004	22	47	42,016	0	6,296	48,381
2005	151	12	85,523	0	3,983	89,669

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Table 3.–Page 2 of 2.

Year	King	Sockeye	Coho	Pink	Chum	Total
2006	20	3	130,808	0	10,042	140,873
2007	19	2	126,136	3,769	22,431	152,357
2008	83	60	120,309	75,525	25,124	221,101
2009	84	126	87,041	17,364	34,122	138,737
2010	140	103	62,079	31,557	117,743	211,622
2011	185	369	58,917	7,141	110,555	177,167
2012	197	134	37,056	205,498	62,772	305,657
2013	151	247	53,802	8,338	118,709	181,247
2014	289	519	112,756	182,406	107,745	403,715
2015	1,288	4,119	153,928	62,888	147,497	369,720
2016	183	2,635	102,722	208,745	51,167	365,452
5-year avg. ^a	422	1,078	83,292	93,254	109,456	287,501
10-year avg. ^b	246	568	94,283	59,449	75,674	230,220

^a 2011-2015^b 2006-2015

Table 4.—Salmon counts of rivers and associated salmon escapement goal ranges (SEG, BEG, or OEG), Norton Sound and Port Clarence, 2016.

Stream	King Salmon			Chum Salmon			
	Weir/ Tower Count	Escapement Goal Range	Aerial Survey Count ^a	Weir/ Tower Count	Escapement Goal Range	Aerial Survey Count ^a	Aerial Survey Expansion
Salmon L.							
Grand Central R.							
Pilgrim R.	34			21,379			
Glacial L.							
Sinuk R.							9,408
Cripple R.						390	
Penny R.						29	
Anvil Creek							
Snake R.	15			3,666	1,600 - 2,500 ^b		
Nome R.	25			7,093	2,900 - 4,300 ^b		
Flambeau R.						5,175	13,254
Eldorado R.	0			18,938	6,000 - 9,200 ^b		
Bonanza R.			3			1,350	6,374
Solomon R.	6			2,016		240	
Nome Subdistrict					23,000 - 35,000 ^c		60,749
Fish R.	828			69,984			
Boston Cr.			75				
Niukluk R.							
Ophir Cr.							
Kwiniuk R.	135	250		8,526	11,500 - 23,000 ^d		
Tubutulik R.					9,200 - 18,400 ^e		
Ungalik R.							
Inglutalik R.	3,285			43,226			
Shaktoolik R.	351			14,808			
Unalakleet R.	505			31,576			
Old Woman R.							
North R.	513	1,200-2,600		16,014			

-Continued-

Table 4.–Page 2 of 2.

Stream	Coho Salmon			Sockeye Salmon			Pink Salmon		
	Weir/ Tower Count	Aerial Survey Count ^a	Escapement Goal Range	Weir/ Tower Count	Aerial Survey Count ^a	Escapement Goal Range	Weir/ Tower Count	Escapement Goal Range	Aerial Survey Count ^a
Salmon L.					6,155	Combined			
Grand Central R.					2,403	4,000 - 8,000			
Pilgrim R.	554			15,066			2,986		
Glacial L.					1,582	800 - 1,600			
Sinuk R.		1,610			85				405,200
Cripple R.		280							45,000
Penny R.		354							34,400
Anvil Creek									
Snake R.	1,115	962		120			204,641		
Nome R.	2,331	1,104		254			1,175,723	13,000	
Flambeau R.		652							1,450
Eldorado R. ^b	41	907		16			42,699		
Bonanza R.		561							139,200
Solomon R.	215	945		11			128,016		
Fish R.	3,300			24			1,282,892		
Boston Cr.									
Niukluk R.		773	Combined						
Ophir Cr.		203	750-1,600						
Kwiniuk R.	9,210	1,987	650-1,300	15			1,909,949	8,400	
Tubutulik R.									
Ungalik R.									
Inglutalik R.	693			0			78,916		
Shaktoolik R.	480			0			1,180,551		
Unalakleet R.	132			580			4,752,639		
Old Woman R.									
North R.	2,241		550-1,100	9			1,045,410	25,000	

Note: Data not available for all streams. Sustainable escapement goal (SEG), biological escapement goal (BEG), and optimal escapement goal (OEG) are listed.

^a All aerial surveys are rated fair to good, unless otherwise noted.

^b The Alaska Board of Fisheries (BOF) also established an OEG with the same range as the BEG.

^c BOF-established OEG is the same range as the BEG and is based on a combination of weir counts and expanded aerial survey counts. The OEG and BEG do not include Cripple and Penny rivers.

^d This represents the OEG in regulation. The BEG is 10,000-20,000 for the Kwiniuk River and 8,000-16,000 for the Tubutulik River.

^e The goal listed is actual fish and not aerial counts. However, at this time there is no counting project on the river.