



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
*National Marine Fisheries Service*  
P.O. Box 21668  
Juneau, AK 99802-1668

January 18, 2024

MEMORANDUM FOR: Jennifer Quan  
Regional Administrator, West Coast Region

FROM: Jonathan M. Kurland  
Regional Administrator

SUBJECT: 2023 Annual Report for the Alaska Groundfish Fisheries Chinook  
Salmon Incidental Catch and Endangered Species Act Consultation

We are providing to you the annual report on salmon incidental catch in the Alaska groundfish fisheries, including current information on salmon bycatch reduction measures and sources for the genetic composition of salmon caught in these fisheries. This report updates previous annual reports on salmon incidental catch and includes—

- 2023 data on salmon incidental catch in groundfish fisheries,
- a link to information on NMFS's efforts to reduce the incidental catch of salmon in groundfish fisheries, and
- a note that there is a genetics program page on the Alaska Regional NOAA website, which is a reference point for the genetics tech memos on salmon bycatch.

This report fulfills one of the terms and conditions of the December 2, 2009, and the January 11, 2007 (NMFS 2009 and NMFS 2007), supplements to the November 30, 2000, biological opinion (BiOp) regarding authorization of the Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA) groundfish fisheries (NMFS 2000).

The most recent BiOp that addresses incidental catch of Chinook salmon in the GOA groundfish fisheries is the supplemental BiOp issued on January 9, 2012. This BiOp concluded that the GOA groundfish fisheries are not likely to jeopardize the continued existence of listed salmon evolutionarily significant units (ESUs) (NMFS 2012).

The North Pacific Observer Program bycatch sampling data from 2023 will be forthcoming in the fall of 2024. The coded wire tag (CWT) data from 2023 will also be forthcoming in the fall of 2024 after NMFS Alaska Fisheries Science Center staff can access the CWT database and after CWT numbers are merged with data on stock of origin, hatchery, and location of origin.



## Data Reports: Accounting for Chinook Salmon Incidental Catch in the GOA and BSAI Groundfish Fisheries

The amount of Chinook salmon incidental catch in the Alaska groundfish fisheries in 2023 was below the incidental take statement amounts for both the BSAI and GOA groundfish fisheries.

Groundfish Fishery	BSAI Pollock Trawl	BSAI Non-Pollock trawl and non-trawl	GOA Pollock and Non-Pollock Fisheries trawl and non-trawl
Chinook Incidental Take Statement	47,591 to 60,000 Chinook salmon <sup>1</sup>	8,745 Chinook salmon <sup>2</sup>	40,000 Chinook salmon <sup>2</sup>
2023 Incidental Catch of Chinook Salmon	11,855	2,743	21,118

Tables 1 through 5 below provide current and historical data on the incidental catch of Chinook salmon by fishery type or target fishery, quarter, and from Western Alaska Community Development Quota (CDQ) Program and non-CDQ Program sources. The annual Chinook salmon incidental catch data in these tables are periodically updated. For example, NMFS updated Tables 1 and 2 on January 9, 2024, while Tables 3, 4, and 5 are automatically updated on a monthly basis. These slightly different revision dates account for small differences in some of the incidental catch estimates in Tables 1 and 2 versus 3, 4, and 5.

Tables 1 and 2 provide annual estimates of Chinook salmon incidental catch by fishery target for the groundfish trawl and non-trawl fisheries for the BSAI and GOA from 2009 through 2023. In 2023, the majority of the incidental catch of Chinook salmon in the BSAI and GOA occurred in the pollock pelagic trawl fishery. Tables 3 through 5 provide seasonal or quarterly Chinook salmon incidental catch estimates by pollock and non-pollock fishery categories.

The amount of Chinook salmon incidental catch in the BSAI groundfish fisheries in 2023 was 14,597 salmon (Table 1). Of this amount, 11,855 Chinook salmon were caught in the Bering Sea pollock trawl fishery. The amount of Chinook salmon incidental catch in the 2023 BSAI non-pollock groundfish fisheries was 2,743 salmon, which is below the incidental take statement amount for the non-pollock trawl fishery of 8,745 established in the 2009 BiOp.

The amount of Chinook salmon incidental catch in the GOA groundfish fisheries in 2023 was 21,118 salmon (Table 2). Of this amount, 18,115 Chinook salmon were caught in the GOA pollock trawl fishery. The total Chinook salmon incidental catch in the GOA was below the annual incidental take limit of 40,000 Chinook salmon established in the 2012 BiOp for groundfish fisheries of the GOA (NMFS 2012).

<sup>1</sup> See the 2009 BiOp (NMFS 2009) for Amendment 91 to the BSAI fishery management plan. The incidental take statement includes the Chinook prohibited species catch limit for non-trawl groundfish of 8,745 salmon.

<sup>2</sup> See the 2012 section 7 consultation for GOA groundfish fisheries (NMFS 2012), which supersedes the 2000 Consultation for the GOA (NMFS 2000).

## **Current Genetic Analysis of Salmon Incidental Catch in the BSAI and GOA**

An updated genetics program website is now a reference point for the genetics tech memos on salmon bycatch at:

<https://www.fisheries.noaa.gov/alaska/science-data/genetics-research-alaska-fisheries-science-center>

The memos can be found listed by year toward the bottom of the page. Updated memos should post by this fall of 2024.

## **Groundfish Management Measures for Salmon Incidental Catch in Groundfish Fisheries**

This information can be found at: <https://www.fisheries.noaa.gov/alaska/bycatch/chinook-salmon-bycatch-management-alaska>

## Literature Cited

- NMFS (National Marine Fisheries Service). 2012. Supplemental Biological Opinion on the Re-initiation of Endangered Species Act Section 7 Consultation on Incidental Catches of Chinook Salmon in the Gulf of Alaska Groundfish Fisheries. January 9, 2012. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, WA.
- NMFS 2009. Supplemental Biological Opinion Reinitiating Consultation on the January 11, 2007 Biological Opinion regarding Authorization of Bering Sea/Aleutian Islands (BSAI) Groundfish Fisheries. December 2, 2009. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, WA.
- NMFS. 2007. Supplemental Biological Opinion Reinitiating Consultation on the November 30, 2000 Biological Opinion regarding Authorization of Bering Sea/Aleutian Islands Groundfish Fisheries. January 11, 2007. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, WA.
- NMFS. 2000. ESA Section 7 Consultation Biological Opinion and Incidental Take Statement. Activities Considered: Authorization of Bering Sea/Aleutian Islands groundfish fisheries based on the Fishery Management Plan for the Bering Sea/Aleutian Islands Groundfish and Authorization of the Gulf of Alaska groundfish fisheries based on the Fishery Management Plan for Groundfish of the Gulf of Alaska. November 30, 2000. NMFS Alaska Region, P. O. Box 21668, Juneau, Alaska 99802.

**Table 1. BSAI groundfish fisheries total Chinook salmon incidental catch compared against total groundfish catch: 2009 through 2023**

BSAI Chinook Count			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	12,406	9,693	25,499	11,343	13,016	15,037	18,329	21,926	30,076	13,740	24,984	32,294	13,784	6,337	11,855
		Pacific Cod Target	1,054	1,256	404	927	882	1,306	1,419	3,360	2,114	1,359	1,443	214	131	262	1,257
	Non-Pelagic	Flatfish	166	636	19	175	557	1,173	4,542	6,492	2,339	1,203	3,394	1,589	1,147	258	671
		Other Targets	354	883	644	434	1,537	556	894	746	1,715	1,019	1,568	836	749	1,400	806
Non-Trawl Gear	All Targets		11	12	44	50	15	34	73	44	33	72	22	21	16	7	9
<b>TOTAL</b>			<b>13,990</b>	<b>12,479</b>	<b>26,609</b>	<b>12,929</b>	<b>16,007</b>	<b>18,106</b>	<b>25,257</b>	<b>32,568</b>	<b>36,277</b>	<b>17,394</b>	<b>31,412</b>	<b>34,955</b>	<b>15,828</b>	<b>8,264</b>	<b>14,597</b>
BSAI Groundfish			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	810,475	803,513	1,198,529	1,202,056	1,247,022	1,257,200	1,294,735	1,318,493	1,332,718	1,346,353	1,383,891	1,342,964	1,353,099	1,067,533	1,267,464
		Pacific Cod Target	38,238	36,938	44,988	53,728	54,511	53,832	41,546	56,643	46,327	47,878	34,499	26,710	20,152	27,602	28,666
	Non-Pelagic	Flatfish	245,561	277,416	309,567	324,386	348,229	333,209	269,480	281,689	262,227	263,531	261,442	270,591	213,658	268,911	234,010
		Other Targets	99,496	100,458	81,807	79,235	63,297	70,799	96,213	93,310	107,018	117,011	111,596	109,772	108,343	110,435	125,278
Non-Trawl Gear	All Targets		143,798	136,863	178,931	196,149	194,414	207,679	210,114	216,969	218,674	189,054	165,401	140,739	115,153	149,763	138,923
<b>TOTAL</b>			<b>1,337,568</b>	<b>1,355,187</b>	<b>1,813,822</b>	<b>1,855,554</b>	<b>1,907,473</b>	<b>1,922,719</b>	<b>1,912,088</b>	<b>1,967,105</b>	<b>1,966,964</b>	<b>1,963,827</b>	<b>1,956,831</b>	<b>1,890,776</b>	<b>1,810,405</b>	<b>1,624,243</b>	<b>1,794,341</b>
BSAI Chinook Rate			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	0.015	0.012	0.021	0.009	0.010	0.012	0.014	0.017	0.023	0.010	0.018	0.024	0.010	0.006	0.009
		Pacific Cod Target	0.028	0.034	0.009	0.017	0.016	0.024	0.034	0.059	0.046	0.028	0.042	0.008	0.007	0.010	0.044
	Non-Pelagic	Flatfish	0.001	0.002	0.000	0.001	0.002	0.004	0.017	0.023	0.009	0.005	0.013	0.006	0.005	0.001	0.003
		Other Targets	0.004	0.009	0.008	0.005	0.024	0.008	0.009	0.008	0.016	0.009	0.014	0.008	0.007	0.013	0.006
Non-Trawl Gear	All Targets		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>TOTAL</b>			<b>0.010</b>	<b>0.009</b>	<b>0.015</b>	<b>0.007</b>	<b>0.008</b>	<b>0.009</b>	<b>0.013</b>	<b>0.017</b>	<b>0.018</b>	<b>0.009</b>	<b>0.016</b>	<b>0.018</b>	<b>0.009</b>	<b>0.005</b>	<b>0.008</b>

Updated January 9, 2024

**Table 2. GOA groundfish fisheries total Chinook salmon incidental catch compared against total groundfish catch: 2009 through 2023**

Gulf of Alaska Chinook Count			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	2,916	42,885	12,218	16,091	12,149	10,878	13,475	19,249	21,530	14,575	20,972	10,937	10,356	13,044	18,115
		Other Targets	126	148	59	598	154	38	906	14	372	38	115	52	424	239	680
	Non-Pelagic	Pollock Target	111	435	437	292	750	32	175	1,591	45	271	21	41	141	86	302
		Pacific Cod Target	3,784	7,750	1,337	507	387	278	1,153	34	2,087	394	165	-	3,827	-	857
		Flatfish	1,181	1,448	4,486	1,582	7,725	3,059	2,252	598	735	1,405	2,312	231	1,005	206	650
Other Targets	278	1,893	1,039	998	2,183	1,209	1,025	384	163	321	319	603	1,328	898	515		
Non-Trawl Gear	All Targets	-	-	-	-	3	42	52	166	70	79	17	-	-	-	-	
<b>TOTAL</b>			<b>8,397</b>	<b>54,559</b>	<b>19,577</b>	<b>20,068</b>	<b>23,352</b>	<b>15,536</b>	<b>19,039</b>	<b>22,035</b>	<b>25,003</b>	<b>17,082</b>	<b>23,920</b>	<b>11,864</b>	<b>17,082</b>	<b>14,473</b>	<b>21,118</b>
Gulf of Alaska Groundfish			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	39,558	74,743	72,912	99,606	86,276	133,976	162,370	175,658	180,799	153,242	116,705	103,811	99,530	133,623	135,825
		Other Targets	3,381	4,743	3,905	4,451	2,173	4,308	4,041	2,441	4,703	7,055	8,059	11,118	13,852	12,789	15,053
	Non-Pelagic	Pollock Target	1,921	2,994	9,435	4,231	9,990	12,174	8,009	4,637	6,803	8,582	6,200	8,319	4,530	4,341	4,934
		Pacific Cod Target	8,736	17,230	13,858	19,482	20,056	21,103	21,055	16,174	13,824	1,466	1,896	98	2,254	3,770	1,540
		Flatfish	52,052	42,619	45,644	32,620	38,199	52,533	25,665	28,576	36,623	27,749	37,650	30,624	10,981	11,933	11,119
Other Targets	22,579	24,203	20,465	23,635	22,942	24,235	27,169	30,039	24,329	27,448	24,234	21,015	27,297	27,196	22,580		
Non-Trawl Gear	All Targets	55,019	71,117	86,169	75,306	71,004	78,496	76,590	66,912	54,434	30,192	29,429	19,438	34,348	43,850	39,144	
<b>TOTAL</b>			<b>183,246</b>	<b>237,649</b>	<b>252,389</b>	<b>259,330</b>	<b>250,640</b>	<b>326,826</b>	<b>324,898</b>	<b>324,437</b>	<b>321,514</b>	<b>255,734</b>	<b>224,173</b>	<b>194,423</b>	<b>192,792</b>	<b>237,503</b>	<b>230,195</b>
Gulf of Alaska Chinook Rate			2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trawl Gear	Pelagic	Pollock Target	0.074	0.574	0.168	0.162	0.141	0.081	0.083	0.110	0.119	0.095	0.180	0.105	0.104	0.098	0.133
		Other Targets	0.037	0.031	0.015	0.134	0.071	0.009	0.224	0.006	0.079	0.005	0.014	0.005	0.031	0.019	0.045
	Non-Pelagic	Pollock Target	0.058	0.145	0.046	0.069	0.075	0.003	0.022	0.343	0.007	0.032	0.003	0.005	0.031	0.020	0.061
		Pacific Cod Target	0.433	0.450	0.096	0.026	0.019	0.013	0.055	0.002	0.151	0.269	0.087	-	1.698	-	0.556
		Flatfish	0.023	0.034	0.098	0.048	0.202	0.058	0.088	0.021	0.020	0.051	0.061	0.008	0.092	0.017	0.058
Other Targets	0.012	0.078	0.051	0.042	0.095	0.050	0.038	0.013	0.007	0.012	0.013	0.029	0.049	0.033	0.023		
Non-Trawl Gear	All Targets	-	-	-	-	-	0.001	0.001	0.002	0.001	0.003	0.001	-	-	-	-	
<b>TOTAL</b>			<b>0.046</b>	<b>0.230</b>	<b>0.078</b>	<b>0.077</b>	<b>0.093</b>	<b>0.048</b>	<b>0.059</b>	<b>0.068</b>	<b>0.078</b>	<b>0.067</b>	<b>0.107</b>	<b>0.061</b>	<b>0.089</b>	<b>0.061</b>	<b>0.092</b>

Updated January 9, 2024

**Table 3. Chinook salmon mortality in BSAI groundfish fisheries (including pollock)**

Year	ANNUAL	ANNUAL	ANNUAL	SEASON A	SEASON B	SEASON A	SEASON B	SEASON A	SEASON B
	WITH CDQ	NO CDQ	CDQ	With CDQ		No CDQ		CDQ Only	
1991	48,880	48,880		46,392	2,488	46,392	2,488		
1992	41,955	41,955		31,419	10,536	31,419	10,536		
1993	46,014	46,014		24,688	21,326	24,688	21,326		
1994	43,821	40,614	3,207	38,921	4,900	36,699	3,915	2,223	985
1995	23,436	21,430	2,006	18,939	4,497	18,284	3,146	655	1,351
1996	63,205	60,744	2,460	43,316	19,888	42,028	18,716	1,289	1,172
1997	50,530	48,046	2,484	16,401	34,129	14,902	33,144	1,499	985
1998	60,549	55,431	5,118	19,870	40,679	18,930	36,501	939	4,179
1999	14,599	12,937	1,662	8,794	5,805	8,205	4,732	589	1,073
2000	8,223	7,474	749	6,568	1,655	6,138	1,336	430	319
2001	40,547	37,986	2,561	24,871	15,676	23,093	14,893	1,778	783
2002	39,684	37,581	2,103	26,277	13,407	24,859	12,722	1,418	685
2003	53,661	50,948	2,713	40,058	13,603	38,262	12,685	1,795	918
2004	60,040	57,030	3,010	30,767	29,274	29,626	27,404	1,140	1,870
2005	75,084	73,028	2,056	33,622	41,462	32,326	40,702	1,296	760
2006	87,114	85,324	1,790	62,547	24,568	60,943	24,381	1,603	187
2007	130,011	124,367	5,644	78,157	51,854	75,062	49,304	3,094	2,550
2008	23,838	23,198	640	18,829	5,009	18,224	4,973	604	36
2009	14,272	13,825	447	11,377	2,894	11,019	2,805	358	89
2010	12,515	12,180	335	9,502	3,012	9,167	3,012	335	0
2011	26,609	25,845	764	7,602	19,007	7,172	18,673	430	334
2012	12,937	12,559	378	8,989	3,948	8,644	3,914	344	34
2013	16,084	15,423	661	9,188	6,896	8,716	6,707	472	189
2014	18,204	17,311	893	13,839	4,365	13,147	4,164	692	201
2015	25,289	23,840	1,449	17,534	7,755	16,485	7,354	1,048	401
2016	32,925	29,861	3,064	26,086	6,839	23,761	6,099	2,324	740
2017	36,280	33,011	3,269	27,007	9,272	24,126	8,884	2,881	388
2018	17,399	15,647	1,752	11,264	6,135	10,182	5,464	1,081	671
2019	31,467	28,670	2,797	20,088	11,378	18,192	10,477	1,896	901
2020	34,976	32,505	2,470	20,442	14,534	18,625	13,880	1,816	654
2021	15,896	14,709	1,187	10,719	5,177	9,871	4,838	848	339
2022	8,342	7,566	776	6,308	2,034	5,733	1,833	575	201
2023	14,616	13,106	1,510	12,899	1,718	11,436	1,670	1,462	48

[https://www.fisheries.noaa.gov/sites/default/files/akro/chinook\\_salmon\\_mortality2023.html](https://www.fisheries.noaa.gov/sites/default/files/akro/chinook_salmon_mortality2023.html). Accessed January 10, 2024

**Table 4. Chinook salmon mortality in BSAI pollock directed fisheries.**

Year	ANNUAL WITH CDQ	ANNUAL NO CDQ	ANNUAL CDQ	SEASON A With CDQ	SEASON B No CDQ	SEASON A No CDQ	SEASON B CDQ Only	SEASON A CDQ Only	SEASON B CDQ Only
1991	40,906	40,906		38,791	2,114	38,791	2,114		
1992	35,950	35,950		25,691	10,259	25,691	10,259		
1993	38,516	38,516		17,264	21,252	17,264	21,252		
1994	33,136	30,572	2,564	28,451	4,686	26,871	3,701	1,580	985
1995	14,984	12,978	2,006	10,579	4,405	9,924	3,053	655	1,351
1996	55,623	53,162	2,460	36,068	19,554	34,780	18,383	1,289	1,172
1997	44,909	42,434	2,475	10,935	33,973	9,445	32,989	1,490	985
1998	56,440	51,322	5,118	16,132	40,308	15,193	36,130	939	4,179
1999	11,978	10,381	1,597	6,352	5,627	5,768	4,614	584	1,013
2000	4,961	4,242	719	3,422	1,539	2,992	1,250	430	289
2001	33,444	30,937	2,507	18,484	14,961	16,711	14,227	1,773	734
2002	34,495	32,402	2,093	21,794	12,701	20,378	12,024	1,416	677
2003	45,661	43,096	2,565	32,606	13,055	30,913	12,183	1,693	872
2004	51,762	48,796	2,966	23,099	28,663	21,959	26,837	1,140	1,826
2005	68,184	66,251	1,933	27,323	40,861	26,027	40,224	1,296	637
2006	82,752	81,015	1,737	58,390	24,362	56,810	24,205	1,580	157
2007	122,195	116,575	5,620	70,414	51,781	67,323	49,252	3,091	2,529
2008	21,307	20,667	640	16,495	4,811	15,891	4,775	604	36
2009	12,579	12,132	447	9,882	2,697	9,524	2,608	358	89
2010	9,737	9,402	335	7,668	2,069	7,333	2,069	335	0
2011	25,499	24,735	764	7,137	18,362	6,707	18,028	430	334
2012	11,343	10,994	349	7,765	3,578	7,421	3,573	344	5
2013	13,016	12,496	520	8,219	4,797	7,747	4,749	472	48
2014	15,037	14,309	728	11,539	3,498	10,847	3,462	692	36
2015	18,329	17,298	1,031	12,304	6,025	11,523	5,775	781	250
2016	21,926	20,329	1,597	16,828	5,098	15,583	4,746	1,245	352
2017	30,076	27,572	2,504	21,828	8,248	19,712	7,860	2,116	388
2018	13,740	12,449	1,291	8,645	5,095	7,712	4,737	933	358
2019	24,984	22,604	2,380	15,781	9,203	14,120	8,484	1,661	719
2020	32,294	30,045	2,249	18,369	13,925	16,677	13,368	1,692	557
2021	13,784	12,607	1,177	9,503	4,281	8,655	3,952	848	329
2022	6,337	5,908	429	5,185	1,152	4,793	1,115	392	37
2023	11,855	10,684	1,171	10,685	1,170	9,534	1,150	1,151	20

Notes:

Starting in 2011, the sampling method for salmon in BS pollock directed fisheries changed to census counts  
 Non-CDQ data for 1991-2002 from Blend Program data (akfish\_report.mv\_blend\_psc)  
 Non-CDQ data for 2003-2010 from Catch Accounting System database (akfish\_report.v\_cas\_psc)  
 Non-CDQ data for 2011-current from Catch Accounting System database (akfish\_report.v\_cas\_psc\_primary\_postings)  
 CDQ data for 1992-1997 from Blend Program data (akfish\_report.mv\_blend\_psc)  
 CDQ data for 1998 from Blend Program data (akfish\_report.mv\_blend\_bostrate\_98)  
 CDQ data for 1999-2007 from CDQ catch report database (akfish\_report.mv\_cdq\_catch\_report\_total\_catch)  
 CDQ data for 2008-2010 from Catch Accounting System database (akfish\_report.v\_cas\_psc)  
 CDQ data for 2011-current from Catch Accounting System database (akfish\_report.v\_cas\_psc\_primary\_postings)  
 A season - January 1 to June 10  
 B season - June 11 to December 31  
 For specific pollock season dates by year see:  
<https://www.fisheries.noaa.gov/alaska/resources-fishing/federal-fishery-seasons-alaska>

[https://www.fisheries.noaa.gov/sites/default/files/akro/chinook\\_salmon\\_mortality2023.html](https://www.fisheries.noaa.gov/sites/default/files/akro/chinook_salmon_mortality2023.html). Accessed January 10, 2024

**Table 5. Chinook salmon incidental catch (numbers of salmon) by quarter from 1991 through 2023 in the GOA pollock and other non-pollock groundfish fisheries**

Year	Chinook salmon mortality in GOA groundfish fisheries						Other Fisheries
	Annual Total	GOA Pollock Fisheries				Annual	
		First Quarter	Second Quarter	Third Quarter	Fourth Quarter		
1991	38,893	3,239	538	1,799	2,862	8,438	30,455
1992	16,788	2,289	2,663	1,457	1,801	8,210	8,578
1993	19,260	6,499	157	2,730	4,192	13,578	5,682
1994	13,616	3,685	88	1,973	1,474	7,220	6,396
1995	14,653	1,408	32	2,342	1,136	4,918	9,735
1996	15,761	4,802	57	6,421	100	11,380	4,381
1997	15,229	4,622	48	4,742	30	9,442	5,787
1998	16,983	1,672	1	8,550	4,005	14,228	2,755
1999	30,600	10,408	35	5,981	10,003	26,427	4,173
2000	26,730	4,298	2,313	9,744	2,058	18,413	8,317
2001	15,104	4,204	3,107	754	1,466	9,531	5,573
2002	12,919	1,505	640	553	2,463	5,161	7,758
2003	15,367	765	389	948	2,298	4,400	10,967
2004	17,777	3,632	2,176	2,207	5,137	13,152	4,625
2005	31,271	11,100	5,123	1,076	10,629	27,928	3,343
2006	18,763	2,918	4,292	4,637	3,859	15,706	3,057
2007	40,521	1,525	28,389	1,315	3,867	35,096	5,425
2008	16,264	578	7,691	389	2,087	10,745	5,519
2009	8,475	718	1,406	653	412	3,189	5,286
2010	54,674	4,975	1,632	4,892	33,270	44,769	9,905
2011	19,576	1,712	1,213	1,291	8,438	12,654	6,922
2012	20,069	2,906	862	4,398	8,217	16,383	3,686
2013	23,353	4,462	681	1,046	6,711	12,900	10,453
2014	15,537	1,717	1,634	3,413	4,147	10,911	4,626
2015	19,040	2,596	4,274	2,188	4,593	13,651	5,389
2016	22,035	2,575	998	6,231	11,036	20,840	1,195
2017	25,004	9,065	1,741	4,640	6,130	21,576	3,428
2018	17,082	5,146	498	2,577	6,625	14,846	2,236
2019	23,920	3,860	558	3,579	12,996	20,993	2,927
2020	11,865	6,976	1,089	1,584	1,330	10,979	886
2021	17,082	4,094	532	3,646	2,225	10,497	6,585
2022	14,474	4,537	1,264	5,287	2,043	13,131	1,343
2023	21,044	5,307	1,658	3,837	7,540	18,342	2,702

Note:

1991 - 2002: Blend data. Week end date was used to determine quarters. Week end dates do not always match quarter dates.

2003 - Current: Catch Accounting System.

Due to changes in regulatory pollock season dates from 1991 to 2001 and to match current pollock season dates, data were grouped by quarter.

Multiple fixes were applied to the Catch Accounting System in early 2014. This has resulted in minor changes in prior years.

First Quarter Jan 1 - Feb 28

Second Quarter Mar 1 - May 31

Third Quarter Jun 1 - Sep 30

Fourth Quarter Oct 1 - Dec 31

<https://www.fisheries.noaa.gov/sites/default/files/akro/goasalmonmort2023.html>. Accessed January 10, 2024