



Advisory Announcement

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2023 BRISTOL BAY SALMON SEASON SUMMARY

The following is an overview of the 2023 Bristol Bay commercial salmon season. All data are preliminary. The 2023 inshore Bristol Bay sockeye salmon run of 54.5 million fish (Table 1) was the 8th largest inshore run since 2003 and was 17% above the 46.7 million average run for the latest 20-year period (2003–2022).

The 2023 Bristol Bay sockeye salmon run was 10% above the preseason inshore forecast of 49.7 million fish (Table 2). Runs to every district were larger than their preseason forecasts. All sockeye salmon escapement goals were met or exceeded, with a total bay-wide escapement of 13.9 million fish (Table 3). The commercial harvest of 40.6 million sockeye salmon was 11% above the 36.6 million preseason forecast (Table 1). The preliminary harvest estimates for other species are 9,512 Chinook, 342,905 chum, 15,561 coho, and 3,142 pink salmon (Table 1).

EXVESSEL VALUE

Exvessel value of salmon caught in Bristol Bay in 2023 was estimated using the fish ticket weight, and price paid for each species. The 2023 Bristol Bay preliminary exvessel value of \$117.4 million (Table 4) for all salmon species was 37% below the 20-year average of \$187.6 million. Prices are based on the major buyers' base price and do not include future price adjustments for icing, bleeding, floating, or production bonuses.

SPECIES PERFORMANCE

Sockeye Salmon

The 2023 harvest of 40.6 million sockeye salmon was 27% higher than the recent 20-year average of 31.9 million for all districts (Table 5). Nushagak and Wood River sockeye salmon escapements were above the sustainable escapement goal (SEG) ranges, but within the optimum escapement goal (OEG) ranges adopted this year by the Alaska Board of Fisheries for Chinook salmon conservation (Table 3). The sockeye salmon escapement goal was exceeded on the Igushik River, but all other systems were within their respective escapement goal ranges (Table 3). Overall, run timing was one day late compared to the 10-year average.

The 2023 Bristol Bay sockeye salmon run was dominated by 3-ocean fish, or fish with three years of ocean growth. The 1.3 age class composed roughly 61% of the total run to Bristol Bay and came in well over its preseason forecast of 46%. Age 2.3 fish made up the next largest component of the run at 19%, which was also above the forecasted 9%. Fish with two years of marine growth (1.2s and 2.2s) made up most of the remaining age classes seen in 2023. The 1.2 and 2.2 age classes made up 13% and 5% of the

total return, respectively, which is less than half of their preseason forecasts. Average weight for sockeye salmon in 2023 was 5.5 pounds (Table 4) which is slightly larger than recent years due to the high percentage of larger 3-ocean fish and in line with the most recent 20-year average.

Chinook Salmon

Chinook salmon harvested in Bristol Bay this season were incidentally caught during directed sockeye salmon fishing periods. The Nushagak District, which is the main contributor of Chinook salmon harvests in Bristol Bay, was again actively managed to reduce Chinook salmon harvest in an effort to meet the escapement goal. Overall, the 2023 Chinook salmon harvests were below average in all districts of Bristol Bay (Table 6). A preliminary total of 9,512 (Table 6) Chinook salmon were harvested, which is below the most recent 20-year average of 40,741 fish, and the third lowest in the last 20 years. The Nushagak District Chinook salmon harvest was 6,847 fish (Table 6), which is well below the 20-year average harvest of 32,491 fish.

The Nushagak River Chinook salmon in-river run index at Portage Creek Sonar was 31,499 fish, which is below the escapement goal range of 55,000–120,000 fish and the in-river goal of 95,000 fish.

Chum Salmon

The 2023 preliminary Bristol Bay chum salmon harvest was 342,905 fish (Table 1), well below the recent 20-year average of 1.1 million fish. The Nushagak District is the largest producer of chum salmon and had a harvest of 175,090 fish (Table 1). The Nushagak River chum salmon escapement of 110,379 fish was below the lower bound sustainable escapement goal of 200,000 fish.

Pink Salmon

There was no directed fishery for pink salmon in 2023 because they are predominantly an even year species in Bristol Bay and were thus not abundant. The harvest was incidental to the sockeye salmon fishery and totaled 3,142 fish (Table 1). Pink salmon escapement is not monitored in Bristol Bay.

Coho Salmon

The preliminary coho salmon harvest in 2023 was 15,561 fish (Table 1), which was below the recent 20-year average of 97,620 fish. The Nushagak District is typically the largest producer of coho salmon and accounted for 7,098 of the fish harvest in 2023. Egegik District produced 6,732 coho salmon harvest in 2023 (Table 1). Harvests of coho salmon can be variable from year to year depending on processor availability, market conditions, and overall fishing effort. In 2023, fishing ended early due in part to bad weather and low market interest in purchasing coho salmon. Coho salmon escapement is not monitored in Bristol Bay.

ALLOCATION

Bristol Bay fisheries are managed for allocation (secondary to escapement) between drift and set gillnet gear groups in four of five districts. The Togiak District is excluded from the allocation plan. Strategies used to achieve allocation between gear groups included varying the amount of fishing time and providing separate gear group openings. Table 7 lists the allocation goals and the actual harvest percentages for 2023. During years with large sockeye salmon returns, gear group allocations can be difficult to achieve when the primary objective is managing to meet escapement goals.

Acknowledgements

The department would like to thank the Bristol Bay Fisheries Collaborative (BBFC) for their funding assistance over the last several years. Created in 2016, BBFC provided financial support to assist management of the salmon fishery. BBFC was an agreement between the department and the Bristol Bay Science and Research Institute (BBSRI) to work together and with stakeholders to restore a world class fisheries management system and raise funds for its support and maintenance. Programs previously funded by BBFC are now fully funded by the State of Alaska. Additionally, the department would like to thank BBSRI and Bristol Bay Regional Seafood Development Association for their funding and efforts to operate the Port Moller Test Fishery. Included with these efforts was the deployment of a second vessel which provided a better index of the arrival timing, abundance, and stock composition of this year's return than was possible with a single vessel. Additionally, BBSRI continued an on-board genetics laboratory that provided real-time genetic stock composition of fish passing Port Moller Test Fishery.

Table 1.–Preliminary 2023 Bristol Bay salmon harvest and escapement by district and species. ND = no data collected.

District	Sockeye	Chinook	Chum	Pink	Coho	TOTAL
Naknek-Kvichak catch	13,154,400	1,206	54,941	280	1,126	13,211,953
Escapement-Kvichak tower	3,751,686	ND	ND	ND	ND	3,751,686
Naknek tower	1,156,206	ND	ND	ND	ND	1,156,206
Alagnak tower	1,099,050	ND	ND	ND	ND	1,099,050
Naknek-Kvichak subtotal	19,161,342	1,206	54,941	280	1,126	19,218,895
Egegik catch	12,681,679	440	43,015	116	6,732	12,731,982
Escapement-Egegik tower	1,562,700	ND	ND	ND	ND	1,562,700
Egegik subtotal	14,244,379	440	43,015	116	6,732	14,294,682
Ugashik catch	2,265,313	317	17,114	42	197	2,282,983
Escapement-Ugashik tower	1,128,896	ND	ND	ND	ND	1,128,896
Ugashik subtotal	3,394,209	317	17,114	42	97	3,411,879
Nushagak catch	12,010,310	6,847	175,090	514	7,098	12,199,859
Escapement- Wood tower	2,648,616	ND	ND	ND	ND	2,648,616
Igushik tower	542,496	ND	ND	ND	ND	542,496
Nushagak sonar ^a	1,772,676	31,499	110,380	ND	ND	1,914,555
Nushagak subtotal	16,974,098	38,346	285,470	514	7,098	17,305,526
Togiak catch	442,861	702	52,745	2,190	408	498,906
Escapement - Togiak tower	268,218	ND	ND	ND	ND	268,218
Togiak subtotal	711,079	702	52,745	2,190	408	767,124
Bristol Bay catch	40,554,563	9,512	342,905	3,142	15,561	40,925,683
Bristol Bay escapement	13,930,544	ND ^b	ND ^b	ND ^b	ND ^b	14,072,423
Bristol Bay total run	54,485,107	ND ^b	ND ^b	ND ^b	ND ^b	54,998,106

^a Nushagak sonar indexed Chinook, sockeye, and chum salmon in 2023.

^b Incomplete data for Bristol Bay.

Table 2.–Difference between Bristol Bay sockeye salmon actual inshore run and preseason forecast, 2023.

District	Inshore forecast	Inshore run	% Above/below forecast
Naknek-Kvichak	18,340,000	19,161,342	4% Above
Egegik	11,100,000	14,244,379	28% Above
Ugashik	3,260,000	3,394,209	4% Above
Nushagak	16,270,000	16,974,098	4% Above
Togiak	680,000	711,079	5% Above
Totals	49,650,000	54,485,107	10% Above

Table 3.—Bristol Bay sockeye salmon escapement goals and actual escapements, 2023.

River system	Escapement goal range	Escapement
Kvichak River	2,000,000–10,000,000	3,751,686
Naknek River	800,000–2,000,000	1,156,206
Alagnak River	320,000 minimum	1,099,050
Egegik River	800,000–2,000,000	1,562,700
Ugashik River	500,000–1,400,000	1,128,896
Nushagak River OEG	370,000–2,000,000	1,772,676
Nushagak River SEG	370,000-900,000	
Wood River OEG	700,000–3,000,000	2,648,616
Wood River SEG	700,000-1,800,000	
Igushik River	150,000–400,000	542,496
Togiak River	120,000–270,000	268,218
Total		13,930,544

Table 4.—Average price, weight, harvest, and value of salmon harvest in Bristol Bay, 2023.

Species	Price/lb.	Avg. weight (lb.)	Number of fish	Total weight	Value
Sockeye	\$0.52	5.54	40,554,563	224,672,279	\$116,829,585
Chinook	\$0.10	10.03	9,512	95,405	\$9,254
Chum	\$0.29	5.78	342,905	1,981,991	\$574,777
Pink	\$0.06	3.24	3,142	10,180	\$611
Coho	\$0.29	5.88	15,561	91,499	\$26,535
Totals			40,925,683	226,851,354	\$117,440,762

Table 5.—2023 Preliminary commercial sockeye salmon harvests and 20-year averages by district.

District	2003–2022 average sockeye harvest	2023 sockeye salmon harvest
Naknek-Kvichak	9,758,065	13,154,400
Egegik	8,388,415	12,681,679
Ugashik	3,398,372	2,265,313
Nushagak	9,711,992	12,010,310
Togiak	616,763	442,861
Totals	31,873,607	40,554,563

Table 6.– 2023 Preliminary Chinook salmon harvest and 20-year averages by district.

District	2003–2022 average Chinook salmon harvest	2023 Chinook salmon harvest
Naknek-Kvichak	1,721	1,206
Egegik	757	440
Ugashik	955	317
Nushagak	32,491	6,847
Togiak	4,817	702
Totals	40,741	9,512

Table 7.–Allocation of Bristol Bay drift and set gillnet harvest, 2023.

District	Drift gillnet percent of harvest allocated / caught	District set gillnet percent of harvest allocated / caught	Section set gillnet percent of harvest allocated / caught
Naknek-Kvichak	84% / 81%	16% / 19%	Naknek: 8% / 10% Kvichak: 8% / 9%
Egegik	86% / 81%	14% / 19%	–
Ugashik	90% / 81%	10% / 19%	–
Nushagak ^a	74% / 77 %	26% / 23%	Nushagak: 20% / 17% Igushik: 6% / 3% Wood River NA/3%

^a Wood River Special Harvest Area harvest is included in Nushagak District calculations.