# Kuskokwim River Salmon Management Working Group 1 (800) 315-6338 (MEET) Code: 58756# (KUSKO)

### Meeting Agenda

Date: 8/14/2024	Time: 10:00 AM	Place: Bethel	
Time Called to Order:	Chair:		
ROLL CALL TO ESTA Upriver Elder: Downriver Elder: Commercial Fisher: Lower River Subsistence: Middle River Subsistence: Upper River Subsistence: Headwaters Subsistence:	BLISH QUORUM:	QUORUM MET? Yes / N Member at Large: Member at Large 2: Sport Fisher: Western Interior RAC: Y-K Delta RAC: KRITFC: ADF&G:	<u>(o</u>
USFWS MANAGEMENT ADF&G MANAGEMENT POLLOCK FLEET & SA PEOPLE TO BE HEARD CONTINUING BUSINES	ES: Optional. ADF&G of UPDATE: CACTIONS UNDER CLIMON BYCATCH PR Non-Working Group M S:	does not prepare official meeting CONSIDERATION: EESENTATION: Kate Haapala	, PhD, NPFMC
<ul> <li>River, Middle River, Upp</li> <li>Overview of Kuskokwim <ul> <li>a. Test Fisheries (Bethe</li> <li>b. Sonar/Weirs/Aerial S</li> <li>c. Subsistence Division</li> </ul> </li> </ul>	River salmon run assessa el and Aniak): Surveys/Other:	ment:	
<ul> <li>Commercial Catch Report</li> <li>Processor Report: N/A</li> <li>Sport Fish Report:</li> <li>Intercept Fishery Report:</li> <li>Weather Forecast:</li> </ul>	optional		
<ul><li>Discussion of ADF&amp;G N the Working Group):</li><li>Motion for Discussion ar</li></ul>		s and discussion of possible alterr	natives (recommendations from
		oug Vincent-Lang, from Amendagement Working Group letter	
NEW BUSINESS:			
COMMENTS FROM WO	RKING GROUP MEN	MBERS:	
NEXT MEETING DATE:	Tin	ne: Place:	

# Kuskokwim River Salmon Management Working Group ADF&G Bethel toll free: 1 (855) 933-2433

### **Informational Packet**

### Information Packets ARE:

- Intended to help inform Working Group discussions.
- To be viewed and used in context with Working Group meetings only.

### Packets ARE NOT:

- To be viewed as standalone documents.
- A final say on fisheries management decisions.

### Please use this information responsibly:

Packet information is an incomplete snapshot of an ongoing discussion and changing conditions. Packet information should not be reproduced for any purpose other than to describe Working Group meeting discussions.

Misuse of Packet information can contribute to misunderstandings that can cause harm to salmon users and potentially damage salmon resources.

Ask Questions: ADF&G staff will be happy to answer biology and management questions. Please call 1-855-933-2433 to reach ADF&G Kuskokwim Area staff.

Attend Meetings: Each Working Group meeting is announced at least 48 hours prior to time and date of meeting. In addition, each meeting is recorded. Recordings can be found here: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.kswg

Viewing the information packet while listening to meetings/recordings will provide a better understanding of the information presented in this packet.

Thank you, Savannah Hollingworth Working Group Coordinator



### Orutsararmiut Native Council (ONC) Inseason Harvest Monitoring Weekly Report August 12, 2024

### Comments from August 10, 2024 Opener:

**The Boat Harbor:** 2 people had stated that the river should be left open and 2 others said that there should be more openings. 1 mentioned that it was a beautiful day to be out and 1 asked where are the fish? 2 fishers stated that it is wet out and that it was actually a really good day despite the rain.

### There were no comments from the Fish Camp surveys.

Our staff has asked people if they have met their target harvest goal that we asked at the very beginning of the season for this year, 2024, and here is what we collected:

King salmon: 4 Goals met, 2 over half, 2 half way, 7 under half, and 4 not at all.

Chum Salmon: 10 Goals met, 1 half way, 2 under half, and 6 not at all.

Red Salmon: 9 Goals met, 3 over half, 2 half way, 1 under half, 1 halfway, and 4 not at all.

**Table 1.** Average fish harvest, net length, and mesh size range reported by surveyed Bethel area fish camps and Bethel boat harbor from the August 10, 2024 fishing opportunity.

Data Source	Number of Surveys Conducted	Average Coho Salmon Harvest	Average Chum Salmon Harvest	Average Sockeye Salmon Harvest	Average other harvest	Net Length Range (ft.)	Mesh Size Range (in.)
Bethel Boat Harbor	36	20	0	0	0	60-300	4-6
Bethel Fish Camps	2	6	0	17	0	150	5.5-5.875

### **Fish Distribution**

From June 4, 2024 through July 16, 2024, ONC delivered 196 Chinook salmon, 57 Sockeye Salmon, and 1 Whitefish to Bethel area elders and people in need. We have unfortunately lost count of the Chum Salmon numbers that have been distributed but the majority have been brought to the Bethel Winter House for the elders within the Senior Services department at ONC. These fish were caught by the Alaska Department of Fish & Game Bethel Test Fishery.

# Kuskokwim River Salmon Assessment Update 8/12/2024



The data summaries presented in this document are provided by ADF&G. All data and analyses contained are preliminary and are subject to change, so please make interpretations carefully.

If you have any questions about the content, please contact Sean Larson (ADF&G; sean.larson@alaska.gov). Original development of code used to create this document is credited to Benjamin Staton.

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### **Bethel Test Fishery Summaries**

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- Page 4: Chinook, Chum, and Sockeye Salmon Summaries

### **Abbreviations:**

- BTF: Bethel Test Fishery
- ATF: Aniak Test Fishery
- CPUE: Catch-per-unit-effort
- EOS: End-of-Season
- ADF&G: Alaska Department of Fish and Game
- KRITFC: Kuskokwim River Inter-tribal Fisheries Commission
- OTNC: Orutsaramiut Traditional Native Council
- USFWS: United States Fish and Wildlife Service
- YDNWR: Yukon Delta National Wildlife Refuge

### To view escapement information, please visit the ADF&G Kuskokwim River Fish Counts page:

 $\bullet \ \ http://www.adfg.alaska.gov/index.cfm?adfg=commercial by a reakuskokwim.salmon\#fish counts$ 

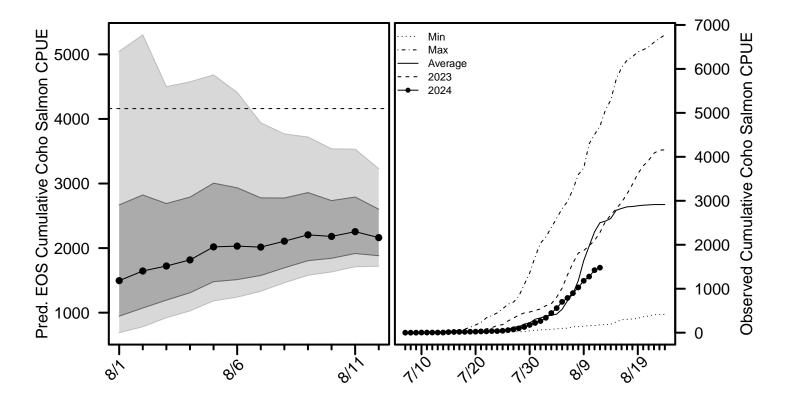
### For the most up-to-date information regarding fishing opportunities please visit:

- USFWS: https://www.fws.gov/refuge/yukon\_delta/wildlife\_and\_habitat/dailyupdate.html
- ADF&G: http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main

### Coho Salmon BTF Summary (8/12)

- The BTF daily CPUE was **56**.
- The BTF cumulative CPUE is now 1,478.
- 33% years since 2008 fell below this cumulative CPUE on this date.
- 57% 79% of the run is likely complete based on historical run timing scenarios.

Coho Salmon Figure 1. Left: predicted cumulative EOS BTF CPUE according to various run timing scenarios: central 80% (light grey band), central 50% (dark grey band), and the historical median (circles). The dashed horizontal line shows the EOS value from 2023. Right: The cumulative BTF CPUE from 2024 plotted along with the prior year, a year with an average (1984-2023) cumulative CPUE, and years with the minimum and maximum cumulative CPUEs.

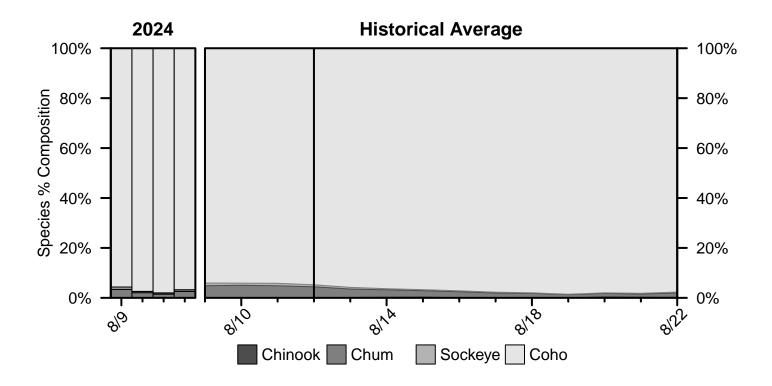


For more detailed information, see the coho salmon summary.

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### Percent Composition by Salmon Species

**Percent Composition Figure 1.** Species percent composition in the BTF from 2024 and based on the historical average. The composition presented on each day represents the average composition over the past 2 days.



### Coho Salmon Summary

Coho Salmon Table A1. Cumulative CPUE from the BTF.

Date	2024	2023	2022	2021	2020	5-Yr Avg.	2008 - 2023 Avg.
8/9	1,180	1,867	545	722	706	910	1,492
8/10	$1,\!275$	1,977	585	778	826	984	1,618
8/11	1,422	2,097	636	914	862	1,061	1,727
8/12	$1,\!478$	$2,\!278$	680	<b>980</b>	$\bf 921$	$1,\!137$	$1,\!838$
8/13		2,524	711	1,022	992	1,233	1,956
8/14		2,677	746	1,081	1,067	1,329	2,062
8/15		2,817	820	1,122	1,140	1,413	2,154
EOS		4,160	1,281	1,696	1,822	2,152	2,897

<sup>\*\*\*</sup> The Kuskokwim River sonar ended operations on 7/25 with a total passage estimate of **20,560 coho salmon**, which was above the 2018-2023 average of **13,053 coho salmon** for this date.

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### Chinook, Chum, and Sockeye Salmon Summaries

### Chinook Salmon Summary

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2024	2023	2022	2021	2020	5-Yr Avg.	2008 - 2023 Avg.
8/9	327	382	502	532	487	550	550
8/10	327	382	502	532	487	550	550
8/11	327	382	502	532	487	550	550
8/12	327	<b>382</b>	<b>504</b>	$\bf 532$	487	551	<b>550</b>
8/13		382	504	532	487	551	550
$\mathbf{EOS}$		382	504	532	487	551	550

<sup>\*\*\*</sup> The Kuskokwim River sonar ended operations on 7/25 with a total passage estimate of **143,323 Chinook salmon**, which was above the 2018-2023 average of **119,863 Chinook salmon** for this date.

### Chum Salmon Summary

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2024	2023	2022	2021	2020	5-Yr Avg.	2008 - 2023 Avg.
8/9	6,016	4,273	2,119	325	1,421	2,864	5,458
8/10	6,019	4,273	2,128	325	1,428	2,875	5,467
8/11	6,022	4,282	2,144	327	1,428	2,887	5,473
8/12	6,024	$4,\!283$	2,162	327	$1,\!428$	$2,\!894$	$5,\!478$
8/13		4,287	2,168	327	1,430	2,901	5,484
EOS		4,303	$2,\!193$	327	1,442	2,938	5,509

<sup>\*\*\*</sup> The Kuskokwim River sonar ended operations on 7/25 with a total passage estimate of **254,537 chum salmon**, which was above the 2018-2023 average of **220,041 chum salmon** for this date.

### Sockeye Salmon Summary

Sockeye Salmon Table A1. Cumulative CPUE from the BTF.

Date	2024	2023	2022	2021	2020	5-Yr Avg.	2008 - 2023 Avg.
8/9	596	1,778	1,369	1,677	1,051	1,708	1,737
8/10	596	1,778	1,370	1,677	1,056	1,710	1,739
8/11	596	1,781	1,370	1,685	1,056	1,712	1,741
8/12	<b>598</b>	1,781	$1,\!370$	1,686	1,056	1,713	1,743
8/13		1,783	1,370	1,686	1,060	1,714	1,744
EOS		1,788	1,372	1,694	1,060	1,720	1,749

<sup>\*\*\*</sup> The Kuskokwim River sonar ended operations on 7/25 with a total passage estimate of **695,228 sockeye salmon**, which was below the 2018-2023 average of **735,502 sockeye salmon** for this date.

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<sup>\*\*\*</sup> The ATF ended operations on 7/15 with an EOS cumulative CPUE value of **2,673 for Chinook salmon**, which was above the 2019-2023 average EOS cumulative CPUE of **1,683**.

<sup>\*\*\*</sup> The ATF ended operations on 7/15 with an EOS cumulative CPUE value of **5,906 for chum salmon**, which was above the 2019-2023 average EOS cumulative CPUE of **1,220**.

<sup>\*\*\*</sup> The ATF ended operations on 7/15 with an EOS cumulative CPUE value of **651 for sockeye salmon**, which was above the 2019-2023 average EOS cumulative CPUE of **153**.

### **Kuskokwim River In-season Harvest and Effort Estimates**

8/5/2024 Subsistence Harvest Opportunity (Drift & Set Nets)

Opportunity Time Period: 9:00 AM - 9:00 PM (12 Hours) Area Covered by Estimates: Tuntutuliak  $\longleftrightarrow$  Bogus Cr.







### **Data Sources**

**TABLE 1.** The number and percent of fisher interviews conducted by location and organization.

Data Source	Interviews	Percent
Bethel Boat Harbor (ONC) Other Villages (KRITFC)	37 9	80% 20%
Total	46	100%

Of these interviews, 37 were from drift nets and 9 were from set nets.

TABLE 2. The time each flight was conducted and fishers counted each flight.

Time	Nets C	Counted		
Start Time	End Time	Hours	Drift	Set
12:15 PM	2:13 PM	1.97	27	5
6:35 PM	8:22 PM	1.78	22	8

### **Effort Estimates**

- An estimated 48 drift boat trips occurred.
  - An estimated 41% of the trips counted on flight 2 were also counted on flight 1.
  - An estimated 8 trips started and ended when no flights occurred.
- An estimated 9 set net trips occurred.

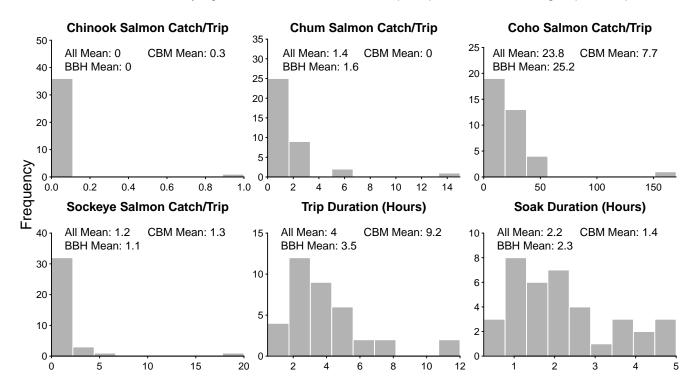
### **Harvest Estimates**

- An estimated total of 1,401 (1,182 1,634) salmon were harvested.
  - An estimated total of 1 (0 2) Chinook salmon were harvested.
  - An estimated total of **62** (**38 89**) chum salmon were harvested.
  - An estimated total of 1,240 (1,021 1,458) coho salmon were harvested.
  - An estimated total of **98 (62 139)** sockeye salmon were harvested.
- Harvest by set nets accounted for an estimated 116 (51 190) total salmon (0% Chinook salmon, 0% chum salmon, 67% coho salmon, and 33% sockeye salmon).

TABLE 3. Summaries by river stratum (area) for drift nets. Numbers in parentheses are 95% confidence intervals.

			Estimated Harvest					
Stratum	Interviews	Effort Est.	Chinook	Chum	Coho	Sockeye	Total	
Tuntutuliak $\longleftrightarrow$ Johnson R.	0	3	0 (0 – 0)	0 (0 – 0)	6 (6 – 6)	6 (6 – 6)	<b>12</b> (12 – 12)	
Johnson R. ←→ Napaskiak	2	8	0 (0 – 1)	10 (5 – 18)	205 (158 – 257)	20 (3 – 49)	<b>236</b> (179 – 295)	
Napaskiak ←→ Akiachak	33	27	1 (0 – 2)	37 (17 – 63)	702 (521 – 893)	24 (7 – 49)	<b>764</b> (577 – 969)	
Akiachak ←→ Akiak	0	7	0 (0 – 1)	10 (5 – 16)	179 (136 – 234)	6 (2 – 12)	195 (149 – 251)	
Akiak ←→ Bogus Cr.	2	3	0 (0 – 0)	4 (2 – 7)	74 (56 – 94)	3 (1 – 6)	81 (61 – 102)	
Total	37	48	1 (0 – 2)	62 (38 – 89)	<b>1,163</b> (975 – 1,369)	60 (31 – 100)	<b>1,285</b> (1,085 – 1,508)	

**FIGURE 1.** Distributions of relevant quantities from all completed trips using drift nets. The mean quantity by primary data source is shown in the top right; BBH = Bethel Boat Harbor (ONC), CBM = Other Villages (KRITFC).



### **Appendix A: Detailed Interview Summaries**

### **Column Meanings**

- Area: the area of the river the trip occurred in
- N: the number of interviews with usable information in each area
- Min: the minimum value among trips in each area
- 25%: the value that 25% of trips fell below in each area
- Mean: the average value across trips in each area
- 75%: the value that 75% of trips fell below in each area
- Max: the maximum value among trips in each area

Information is for drift net trips only.

TABLE A1. Summary of drift net catch per trip of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	0	0	0	0	0
Napaskiak $\longleftrightarrow$ Akiachak	33	0	0	0	0	1
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	37	0	0	0	0	1

TABLE A2. Summary of drift net catch rate of Chinook salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	0	0	0	0	0
Napaskiak $\longleftrightarrow$ Akiachak	33	0	0	0	0	0.4
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	36	0	0	0	0	0.4

**TABLE A3.** Summary of drift net catch per trip of chum salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	0	4	8	11	15
Napaskiak ←→ Akiachak	33	0	0	1	2	6
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	37	0	0	1	2	15

**TABLE A4.** Summary of drift net catch rate of chum salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	0	0	0	0	0
Napaskiak ←→ Akiachak	33	0	0	0.7	8.0	6
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	36	0	0	0.6	8.0	6

**TABLE A5.** Summary of drift net catch per trip of coho salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	2	44	86	128	170
Napaskiak ←→ Akiachak	33	0	10	21	30	50
Akiak $\longleftrightarrow$ Bogus Cr.	2	1	1	2	2	2
All	37	0	9	24	30	170

**TABLE A6.** Summary of drift net catch rate of coho salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	30	30	30	30	30
Napaskiak $\longleftrightarrow$ Akiachak	33	0	6	12.4	16.6	48
Akiak $\longleftrightarrow$ Bogus Cr.	2	0.7	1	1.3	1.6	1.9
All	36	0	5.2	12.3	16.8	48

**TABLE A7.** Summary of drift net catch per trip of sockeye salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	2	3	4	4	5
Napaskiak $\longleftrightarrow$ Akiachak	33	0	0	1	0	20
Akiak $\longleftrightarrow$ Bogus Cr.	2	1	2	2	2	3
All	37	0	0	1	1	20

TABLE A8. Summary of drift net catch rate of sockeye salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	30	30	30	30	30
Napaskiak $\longleftrightarrow$ Akiachak	33	0	0	0.4	0	5.3
Akiak $\longleftrightarrow$ Bogus Cr.	2		1.3	1.8	2.3	2.9
All	36	0	0	1.3	0.7	30

TABLE A9. Summary of drift net percent composition of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	0%	0%	0%	0%	0%
Napaskiak $\longleftrightarrow$ Akiachak	33	0%	0%	<1%	0%	5%
Akiak $\longleftrightarrow$ Bogus Cr.	2	0%	0%	0%	0%	0%
All	37	0%	0%	<1%	0%	5%

**TABLE A10.** Summary of drift net trip duration by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	0.5	0.5	0.5	0.5	0.5
Napaskiak ←→ Akiachak	33	1	2.4	3.5	4.5	7.7
Akiak $\longleftrightarrow$ Bogus Cr.	2	12	12	12	12	12
All	36	0.5	2.3	3.9	4.6	12

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**TABLE A11.** Summary of drift net active fishing hours by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	1	0.2	0.2	0.2	0.2	0.2
Napaskiak $\longleftrightarrow$ Akiachak	33	1	1.3	2.2	2.8	5
Akiak $\longleftrightarrow$ Bogus Cr.	2	8.0	8.0	8.0	8.0	8.0
All	36	0.2	1.2	2.1	2.6	5

### **Appendix B: Non-salmon Harvest Information**

- An estimated total of 10 (4 17) nonsalmon were harvested.
  - An estimated total of 3 (0 6) sheefish were harvested.
  - An estimated total of **7** (**3 12**) all whitefishes were harvested.
- Harvest by set nets accounted for an estimated 0 (0 0) total nonsalmon (0% sheefish and 0% all whitefishes).

**TABLE B1.** Summaries by river stratum (area) for drift nets. Numbers in parentheses are 95% confidence intervals.

			Estir	nated Harve	st
Stratum	Interviews	Effort Est.	Sheefish	Whitefish	Total
Tuntutuliak ←→ Johnson R.	0	3	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Johnson R. ←→ Napaskiak	2	8	0 (0 – 1)	1 (0 – 2)	2 (0 – 4)
Napaskiak ←→ Akiachak	33	27	2 (0 – 5)	4 (1 – 8)	6 (1 – 13)
Akiachak ←→ Akiak	0	7	0 (0 – 1)	1 (0 – 2)	2 (0 – 3)
Akiak ←→ Bogus Cr.	2	3	0 (0 – 1)	1 (0 – 2)	1 (0 – 2)
Total	37	48	3 (0 – 6)	7 (3 – 12)	10 (4 – 17)

**TABLE B2.** Summary of drift net catch per trip of sheefish by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	0	0	0	0	0
Napaskiak ←→ Akiachak	33	0	0	0	0	2
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	37	0	0	0	0	2

**TABLE B3.** Summary of drift net catch per trip of all whitefishes by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	2	0	0	0	0	0
Napaskiak ←→ Akiachak	33	0	0	0	0	2
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	1	2	2
All	37	0	0	0	0	2

### **Kuskokwim River In-season Harvest and Effort Estimates**

8/10/2024 Subsistence Harvest Opportunity (Drift & Set Nets)

Opportunity Time Period: 9:00 AM - 9:00 PM (12 Hours) Area Covered by Estimates: Tuntutuliak  $\longleftrightarrow$  Bogus Cr.







### **Data Sources**

**TABLE 1.** The number and percent of fisher interviews conducted by location and organization.

Data Source	Interviews	Percent
Bethel Boat Harbor (ONC)	36	78%
Other Villages (KRITFC)	8	18%
Bethel Area Fish Camps (ONC)	2	4%
Total	46	100%

Of these interviews, 43 were from drift nets and 3 were from set nets.

**TABLE 2.** The time each flight was conducted and fishers counted each flight.

Time	Nets C	ounted		
Start Time	End Time	Hours	Drift	Set
2:05 PM	3:47 PM	1.7	37	4

### **Effort Estimates**

- An estimated **51** drift boat trips occurred.
  - An estimated **14** trips started and ended when no flights occurred.
- An estimated 4 set net trips occurred.

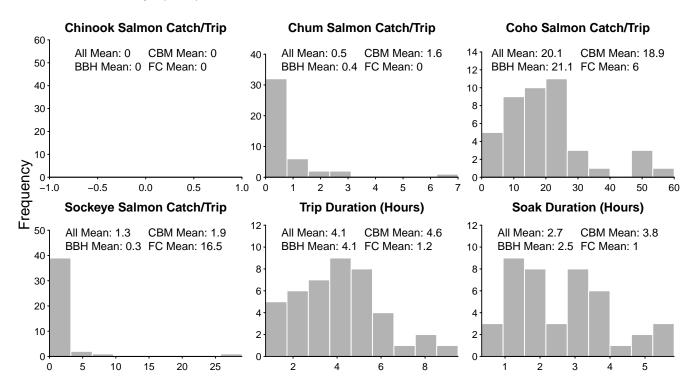
### Harvest Estimates

- An estimated total of 1,570 (1,304 1,881) salmon were harvested.
  - An estimated total of **0** (**0 0**) Chinook salmon were harvested.
  - An estimated total of 28 (13 49) chum salmon were harvested.
  - An estimated total of 1,415 (1,144 1,748) coho salmon were harvested.
  - An estimated total of 127 (27 292) sockeye salmon were harvested.
- Harvest by set nets accounted for an estimated 7 (4 12) total salmon (0% Chinook salmon, 0% chum salmon, 71% coho salmon, and 29% sockeye salmon).

TABLE 3. Summaries by river stratum (area) for drift nets. Numbers in parentheses are 95% confidence intervals.

			Estimated Harvest					
Stratum	Interviews	Effort Est.	Chinook	Chum	Coho	Sockeye	Total	
	0	1	0 (0 – 0)	1 (0 – 2)	21 (15 – 28)	1 (0 – 2)	23 (15 – 31)	
Johnson R. ←→ Napaskiak	8	1	0 (0 – 0)	1 (0 – 1)	27 (21 – 34)	2 (0 – 5)	<b>30</b> (24 – 37)	
Napaskiak ←→ Akiachak	32	41	0 (0 – 0)	22 (7 – 44)	1,138 (862 – 1,457)	102 (9 – 268)	1,263 (1,004 – 1,562)	
Akiachak ←→ Akiak	0	6	0 (0 – 0)	3 (1 – 6)	168 (132 – 213)	14 (1 – 38)	<b>185</b> (150 – 230)	
Akiak ←→ Bogus Cr.	3	2	0 (0 – 0)	1 (0-2)	56 (43 – 71)	5 (0 – 13)	<b>62</b> (50 – 76)	
Total	43	51	0 (0 – 0)	28 (13 – 49)	1,410 (1,139 – 1,742)	<b>124</b> (25 – 291)	<b>1,563</b> (1,296 – 1,870)	

FIGURE 1. Distributions of relevant quantities from all completed trips using drift nets. The mean quantity by primary data source is shown in the top right; BBH = Bethel Boat Harbor (ONC), CBM = Other Villages (KRITFC), FC = Bethel Area Fish Camps (ONC).



### **Appendix A: Detailed Interview Summaries**

### **Column Meanings**

- Area: the area of the river the trip occurred in
- N: the number of interviews with usable information in each area
- Min: the minimum value among trips in each area
- 25%: the value that 25% of trips fell below in each area
- Mean: the average value across trips in each area
- 75%: the value that 75% of trips fell below in each area
- Max: the maximum value among trips in each area

Information is for drift net trips only.

TABLE A1. Summary of drift net catch per trip of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	0	0	0	0
Napaskiak $\longleftrightarrow$ Akiachak	32	0	0	0	0	0
Akiak $\longleftrightarrow$ Bogus Cr.	3	0	0	0	0	0
All	43	0	0	0	0	0

TABLE A2. Summary of drift net catch rate of Chinook salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	0	0	0	0	0
Napaskiak ←→ Akiachak	32	0	0	0	0	0
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	41	0	0	0	0	0

TABLE A3. Summary of drift net catch per trip of chum salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	0	0	0	3
Napaskiak $\longleftrightarrow$ Akiachak	32	0	0	0	0	3
Akiak $\longleftrightarrow$ Bogus Cr.	3	0	0	2	4	7
All	43	0	0	1	0	7

**TABLE A4.** Summary of drift net catch rate of chum salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	0	0	0.4	0.4	1.7
Napaskiak ←→ Akiachak	32	0	0	0.2	0.1	3
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	41	0	0	0.2	0	3

**TABLE A5.** Summary of drift net catch per trip of coho salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	9	14	20	28
Napaskiak ←→ Akiachak	32	0	11	21	25	60
Akiak $\longleftrightarrow$ Bogus Cr.	3	8	12	21	28	39
All	43	0	11	20	25	60

**TABLE A6.** Summary of drift net catch rate of coho salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	4	5.5	11.1	15.3	22.4
Napaskiak $\longleftrightarrow$ Akiachak	32	0	5.7	11.8	14.8	50
Akiak $\longleftrightarrow$ Bogus Cr.	2	7.5	9.3	11	12.8	14.6
All	41	0	5.8	11.7	14.7	50

**TABLE A7.** Summary of drift net catch per trip of sockeye salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	0	1	1	3
Napaskiak $\longleftrightarrow$ Akiachak	32	0	0	1	0	29
Akiak $\longleftrightarrow$ Bogus Cr.	3	0	0	3	4	9
All	43	0	0	1	1	29

TABLE A8. Summary of drift net catch rate of sockeye salmon by fishing area (fish per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	0	0	0.5	0.5	2.4
Napaskiak $\longleftrightarrow$ Akiachak	32	0	0	1.1	0.1	24.9
Akiak $\longleftrightarrow$ Bogus Cr.	2	0	0	0	0	0
All	41	0	0	0.9	0.2	24.9

TABLE A9. Summary of drift net percent composition of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0%	0%	0%	0%	0%
Napaskiak $\longleftrightarrow$ Akiachak	32	0%	0%	0%	0%	0%
Akiak $\longleftrightarrow$ Bogus Cr.	3	0%	0%	0%	0%	0%
All	43	0%	0%	0%	0%	0%

**TABLE A10.** Summary of drift net trip duration by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	1.5	3.2	4.9	6.5	9.5
Napaskiak ←→ Akiachak	32	8.0	2.8	4	5	8.3
Akiak $\longleftrightarrow$ Bogus Cr.	2	5	5.2	5.5	5.8	6
All	41	8.0	3	4.2	5	9.5

**TABLE A11.** Summary of drift net active fishing hours by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	7	1.2	2.8	3.1	3.4	5.2
Napaskiak ←→ Akiachak	32	0.5	1.5	2.5	3.2	5.8
Akiak $\longleftrightarrow$ Bogus Cr.	2	5	5.1	5.2	5.4	5.5
All	41	0.5	1.5	2.7	3.8	5.8

### **Appendix B: Non-salmon Harvest Information**

- An estimated total of 5 (0 11) nonsalmon were harvested.
  - An estimated total of **0** (**0 0**) sheefish were harvested.
  - An estimated total of 5 (0 11) all whitefishes were harvested.
- Harvest by set nets accounted for an estimated 0 (0 0) total nonsalmon (0% sheefish and 0% all whitefishes).

TABLE B1. Summaries by river stratum (area) for drift nets. Numbers in parentheses are 95% confidence intervals.

			Estir	nated Harve	est
Stratum	Interviews	Effort Est.	Sheefish	Whitefish	Total
Tuntutuliak ←→ Johnson R.	0	1	0 (0 – 0)	0 (0 – 1)	0 (0 – 1)
Johnson R. ←→ Napaskiak	8	1	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Napaskiak ←→ Akiachak	32	41	0 (0 – 0)	4 (0 – 10)	4 (0 – 10)
Akiachak ←→ Akiak	0	6	0 (0 – 0)	1 (0 – 1)	1 (0 – 1)
Akiak ←→ Bogus Cr.	3	2	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Total	43	51	0 (0 – 0)	5 (0 – 11)	5 (0 – 11)

**TABLE B2.** Summary of drift net catch per trip of sheefish by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	0	0	0	0
Napaskiak ←→ Akiachak	32	0	0	0	0	0
Akiak $\longleftrightarrow$ Bogus Cr.	3	0	0	1	1	2
All	43	0	0	0	0	2

TABLE B3. Summary of drift net catch per trip of all whitefishes by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ←→ Napaskiak	8	0	0	0	0	1
Napaskiak $\longleftrightarrow$ Akiachak	32	0	0	0	0	2
Akiak $\longleftrightarrow$ Bogus Cr.	3	0	0	0	0	0
All	43	0	0	0	0	2



### KUSKOKWIM IN-SEASON HARVEST ESTIMATES - RECENT YEARS COMPARISON - MINIMUM IN-SEASON ESTIMATES

2021 Lower River Harvest Estimates (T	[untutuliak to Akiak	- KRITFC + ONC + USFWS Data
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2021 FISHING DATE	PERIOD	GEAR TYPE	TRIPS	CHINOOK SALMON HARVEST	CHUM SALMON HARVEST	SOCKEYE SALMON HARVEST	TOTAL SALMON HARVEST
6/2/2021	16 h	S	29S	30	0	0	30
6/5/2021	16 h	S	918	300	10	40	350
6/9/2021	16 h	S	107S	390	0	20	410
6/12/2021	12 h	D/S	381D/23S	3,260	70	350	3,640
6/15/2021	12 h	D/S	467D/31S	8,580	360	1,400	10,340
6/19/2021	12 h	D/S	511D/31S	6,190	990	2,400	9,580
6/28/2021	12 h	D/S	220D/8S	3,010	970	6,960	10,940
7/2/2021	9 h	D/S	211D/4S	1,330	1,150	8,990	11,460
7/9/2021	12 h	D/S	1	-	1	1	-
7/10/2021	24 h	S	1	-	1	1	-
7/11/2021	24 h (c.)	S	-	-	-	-	-
7/16/2021	12 h	D/S	189D/4S	250	660	3,400	4,320
7/17/2021	24 h	S	-	-	-	-	-
7/18/2021	24 h (c.)	S	-	-	-	-	-
2021 CUMULATIVES		23,340	4,210	23,560	51,110		

### 2022 Lower River Harvest Estimates (Tuntutuliak to Akiak) - KRITFC + ONC + USFWS Data

2022 FISHING DATE	PERIOD	GEAR TYPE	TRIPS	CHINOOK SALMON HARVEST	CHUM SALMON HARVEST	SOCKEYE SALMON HARVEST	TOTAL SALMON HARVEST
6/1/2022	16 h	S	30S	30	0	0	30
6/4/2022	16 h	S	75S	80	0	0	80
6/8/2022	16 h	S	78S	120	0	20	140
6/12/2022	12 h	D/S	457D/22S	4,700	60	360	5,120
6/16/2022	12 h	D/S	473D/32S	7,680	160	1,920	9,770
6/22/2022	12 h	D/S	572D/17S	14,000	950	13,720	28,670
6/29/2022	36 h	S	74S	580	270	2,620	3,470
6/30/2022	36 h (c.)	S	72S	970	180	1,270	2,420
7/3/2022	36 h	S	69S	660	300	1,160	2,120
7/4/2022	36 h (c.)	S	-	-	-	-	-
7/9/2022	12 h	D/S	147D	480	1,730	3,730	5,940
7/10/2022	16 h	S	-	-	-	-	-
7/16/2022	16 h	S	-	-	-	-	-
2022 CUMULATIVES				29,300	3,650	24,800	57,750

### 2023 Lower River Harvest Estimates (Tuntutuliak to Tuluksak) – KRITFC + ONC + USFWS Data

	2020 2011cl little Hartest Estimates (Failtatanak to Failtatak) Killing Colores Sala								
2023 FISHING DATE	PERIOD	GEAR TYPE	TRIPS	CHINOOK SALMON HARVEST	CHUM SALMON HARVEST	SOCKEYE SALMON HARVEST	COHO SALMON HARVEST	TOTAL SALMON HARVEST	
6/3/2023	16 h	S	60S	376	4	0	0	381	
6/6/2023	16 h	S	82S	220	1	0	0	221	
6/9/2023	16 h	S	1295	1,064	15	122	0	1,201	
6/12/2023	12 h	D/S	202D/31S	1,003	107	414	0	1,524	
6/17/2023	12 h	D/S	484D/36S	10,437	2,957	6,160	0	19,554	
6/23/2023	12 h	D/S	449D/33S	6,949	4,647	9,541	38?	21,175	
6/30/2023	24 h	S	101S	593	1,298	6,454	0	8,345	
7/1/2023	24h (c.)	S	1	1	-	1	-	-	
7/4/2023	48h	S	39S	117	280	1,232	0	1,629	



### KUSKOKWIM IN-SEASON HARVEST ESTIMATES - RECENT YEARS COMPARISON - MINIMUM IN-SEASON ESTIMATES

7/5/2023	48h (c.)	S	-	-	-	-	-	-
7/6/2023	48h (c.)	S	-	-	-	-	-	-
7/7/2023	24h	S	-	-	-	-	-	-
7/8/2023	24h (c.)	S	ı	-	-	-	-	-
7/11/2023	6h	D/S	120D/16S	260	1,914	4,475	0	6,649
7/17/2023	12h	S	145	17	108	180	0	305
7/19/2023	12h	S	17S	13	159	136	0	308
7/21/2023	12h	S	ı	-	-	-	-	-
7/24/2023	6h	S	<b>7</b> S	13	65	56	30	164
7/26/2023	6h	S	ı	-	-	-	-	-
8/3/2023	12h	D/S	129D/6S	35	521	188	4,027	4,771
8/9/2023	12h	D/S	41D/1S	0	27	36	1,225	1,288
8/12/23	12h	D/S	62D/9S	0	75	37	2,161	2,273
_	2023 CUMULATIVES			21,119	12,178	29,031	7,481	69,809

2024 LOWEI RIVEL Halvest Littlia	tes (Turrtuturiak	to ruiuksakj – k	MITE + DIVE + USF	WS Dutu

2024 FISHING	PERIOD	GEAR TYPE	TRIPS	CHINOOK SALMON	CHUM SALMON	SOCKEYE SALMON	COHO SALMON	TOTAL SALMON HARVEST
DATE		ITPE		HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
6/3/2024	16 h	S	78S	50	4	0	0	54
6/6/2024	16 h	S	156S	422	8	22	0	452
6/10/2024	16 h	S	214S	622	85	51	0	758
6/12/2024	12 h	D/S	452D/24S	3,396	611	188	0	4,195
6/16/2024	12 h	D/S	505D/85S	6,561	1,454	923	0	8,938
6/22/2024	12 h	D/S	475D/39S	8,709	7,657	7,953	0	24,319
7/1/2024	24 h	S	1485	921	1,700	2,078	0	4,699
7/2/2024	24 h (c.)	S	ı	-	-	1	-	-
7/6/2024	48 h	S	<b>114</b> S	806	1,225	2,001	0	4,032
7/7/2024	48 h (c.)	S	45S	262	539	1,057	0	1,858
7/8/2024	48 h (c.)	S	ı	-	-	1	-	-
7/12/2024	24 h	D/S	ı	-	-	1	-	-
7/13/2024	24 h (c.)	D/S	-	-	-	-	-	-
7/16/2024	24 h	S	185	50	145	249	39	483
7/17/2024	24 h (c.)	S	•	-	-	-	-	-
7/19/2024	24 h	D/S	-	-	-	-	-	-
7/20/2024	24 h (c.)	D/S	8D/7S	12	190	127	13	342
7/23/2024	210 h	D/S	-	-	-	-	-	-
7/24/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/25/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/26/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/27/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/28/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/29/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/30/2024	210 h (c.)	D/S	-	-	-	-	-	-
7/31/2024	210 h (c.)	D/S	-	-	-	-	-	-
8/5/2024	12 h	D/S	48D/11S	1	87	115	1,291	1,494
8/10/2024	12 h	D/S	51D/4S	0	28	127	1,415	1,570
2024	CUMULATIV	ES (up to 8/	12/24)	21.812	13.733	14.891	2.758	53.194

**Note:** Highlighted sections are either added dates to the original document, or updated information (such as total counts of a given species). The (c.) seen behind some hours is for (continued), in cases where openers are extended between 2 calendar days.

# South Peninsula Commercial Harvest

Species	Cumulative Harvest
Chinook	7,136
Sockeye	1,293,305
Coho	70,976
Pink	1,029,743
Chum	528,958

- The total June chum salmon harvest was 417,316 fish.
- Stock composition of the harvest (2023 data):
  - <u>June Fishery</u>: 39.5% Asia, **28.4% CWAK**, 20.0% East of Kodiak, 12.1% Other.
  - Post-June Fishery: 50.3% South Peninsula, 26.9% Chignik/Kodiak, 11.5% Asia, **2.6% CWAK**, 8.7% Other.
  - Entire Season: 41.5% South Peninsula, 22.9% Chignik/Kodiak, 16.6% Asia, 7.3% CWAK, 11.7% Other.
- The Coastal Western Alaska (CWAK) group includes Bristol Bay, Kuskokwim, Yukon, and Norton Sound stocks.

# Bering Sea Aleutian Island Bycatch

- Bycatch occurs in the Bering Sea and Aleutian Island (BSAI) groundfish fishery, which is managed by the National Marine Fisheries Service and is one of the most extensively monitored fisheries in the U.S.
- King salmon bycatch to date: **8,570** (all stocks)
- Non-king salmon bycatch to date: 17,286 (all stocks)

### Helpful Links

AK Pen harvest numbers and information on the stock composition study are available at: <u>Alaska Peninsula Management Area Salmon, Alaska Department of Fish and Game</u>.

Bycatch numbers are reported by the National Marine Fisheries Service, available at: <a href="https://alaskafisheries.noaa.gov/fisheries-catch-landings?tid=286.">https://alaskafisheries.noaa.gov/fisheries-catch-landings?tid=286.</a>

Letter written to ADF&G Commissioner Doug Vincent-Lang, from Amendment 80 Supporters in response to Kuskokwim River Salmon Management Working Group letter to North Pacific Marine Fisheries Council. Amendment 80 Supporters met with the Commissioner on July 29th.

The Kuskokwim River Salmon Management Working Group has drafted a letter to the Alaska Department of Fish and Game (copying the Alaska Congressional delegation) expressing concerns over springtime yellowfin sole fishing near Kuskokwim Bay. Stated concerns include Amendment 80 (A80) bycatch, fishing in closed areas, and habitat impacts of bottom trawling.

### Fishery Information and Bycatch Information:

- **Fishing near Kuskokwim Bay has very low levels of bycatch.** There was 0 chinook and 0 chum bycatch from 2022-24. Halibut bycatch rates are 1.75 to 3 times lower than the surrounding Bering Sea area. We have 2 NOAA certified observers at all times, and only fish in the area in May and June.
- There have been <u>no</u> incursions into the <u>Nunivak Island, Etolin Strait, Kuskokwim Bay Habitat</u>
   <u>Conservation Area</u> (NIESKC HCA). We are monitored by a Vessel Monitoring System (VMS), and the Marine Exchange of Alaska (MXAK). (Figure 1)
- We do not fish near Kuskokwim Bay in winter. VMS and MXAK data verifies that our vessels operate over 100 NM away from the NIESKB HCA during winter months (Oct 2023 Mar 2024) (Figure 2).
- The 2023 review of the Fishing Effects Model found that the relative degree of disturbance of substrates and common seafloor invertebrates is relatively low compared to other federal waters in the Bering Sea. Other relevant studies have shown bottom impacts are mostly not detectable or very small after trawling and no impacts were detectable one year later.<sup>1</sup>
- Given these low impacts, maintaining access to the Kuskokwim Bay area is extremely important because the areas have clean fishing regularly produce the highest catch per unit effort of flatfish.

### **Regulatory Management:**

- Each individual vessel operates with near real time catch accountability. In addition to 2 observers, and VMS, each A80 vessel fishes with modified Bering Sea trawl sweeps to minimize bottom contact, and has a full complement of deck and in-factory video monitoring. Observers sample every haul for species composition and volume, submitting that data to NOAA and Sea State.
- Kuskokwim Bay is protected by an expansive 8.3 million acre offshore habitat conservation area (NIESKB HCA) which stretches from Cape Newenham, across Kuskokwim Bay, and around the northside of Nunivak Island. These closures limit fishing and were designed to protect subsistence marine resources.

### Collaborative and Cooperative Management in Kuskokwim Bay:

- A80 vessels honor an agreement established in 2013 with the Association of Village Council Presidents
  (AVCP), the Bering Sea Elders Group (BSEG), and the Alaska Seafood Cooperative (AKSC). Our fleet
  worked collaboratively with Tribal representatives without Council action to identify areas the A80 fleet
  does not fish in around Kuskokwim Bay that are in addition to the regulatory closure area. (Figure 3).
- AKSC is conducting ongoing collaborative research with NOAA fisheries by deploying bottom
  temperature sensors in the Kuskokwim Bay region so that A80 fishermen can better forecast those coldwater conditions which are optimal to catch yellowfin sole and minimize halibut bycatch.

<sup>&</sup>lt;sup>1</sup> ICES Journal of Marine Science (2014), 71(9), 2469–2483. doi:10.1093/icesjms/fsu054

# A80 Yellowfin Sole Track Lines (Spring 2024)



- Boundary of Nunivak Island, Etolin Strait, Kuskokwim Bay Habitat Conservation Area
- Established by 2008 NPFMC action to "freeze the footprint" for bottom trawling & included several other areas.
- Spring 2024 A80 track lines provided by Marine Exchange of Alaska. Track lines include fishing & transiting
- All vessels are equipped with VMS & AIS.
   No incursions into the HCA noted.

# A80 Vessel Track Lines Oct 1, 2023 thru Mar 31, 2024

- Nearest A80 vessel to Kuskokwim Bay HCA closure area is over 100 NM away.
- A80 vessels very unlikely to be the source of "winter lights" as reported in the draft letter to ADF&G.

