

Kuskokwim River In-season Harvest and Effort Estimates

6/8/2022 Subsistence Harvest Opportunity (Set Nets Only)

Opportunity Time Period: 6:00 AM – 10:00 PM (16 Hours)

Area Covered by Estimates: Tuntutuliak ↔ Akiak

Announcement #: 3-KS-01–22



Data Sources

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

Data Source	Interviews	Percent
Other Villages (BSFA/KRITFC)	22	58%
Bethel Boat Harbor (ONC)	8	21%
Bethel Area Fish Camps (ONC)	8	21%
Total	38	100%

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

Time Information			Nets Counted	
Start Time	End Time	Hours	Drift	Set
2:00 PM	3:34 PM	1.57	0	78

Effort Estimates

- An estimated **78** total set net trips occurred.

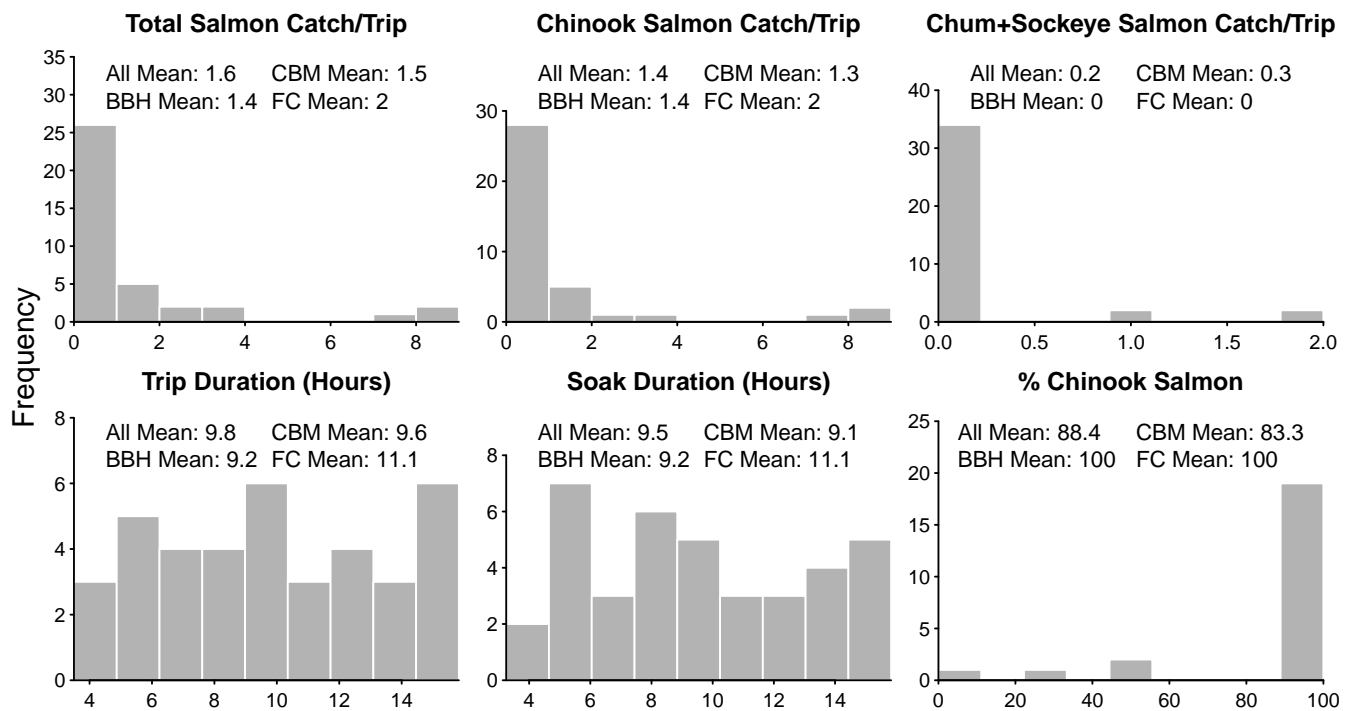
Harvest Estimates

- An estimated total of **140 (80 – 200)** salmon were harvested.
 - An estimated total of **120 (70 – 180)** Chinook salmon were harvested.
 - An estimated total of **0 (0 – 0)** chum salmon were harvested.
 - An estimated total of **20 (0 – 50)** sockeye salmon were harvested.

TABLE 3. Summary of relevant quantities by river stratum (area) for set nets. Numbers in parentheses are 95% confidence intervals.

Stratum	Interviews	Effort Est.	Estimated Harvest			
			Chinook	Chum	Sockeye	Total
Tuntutuliak ↔ Johnson R.	0	1	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Johnson R. ↔ Napaskiak	12	7	10 (10 – 20)	0 (0 – 0)	0 (0 – 0)	10 (10 – 20)
Napaskiak ↔ Akiachak	26	51	80 (40 – 120)	0 (0 – 0)	10 (0 – 30)	90 (50 – 130)
Akiachak ↔ Akiak	0	19	30 (20 – 40)	0 (0 – 0)	0 (0 – 10)	30 (20 – 50)
All	38	78	120 (70 – 180)	0 (0 – 0)	20 (0 – 50)	140 (80 – 200)

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

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	1	1	9
Napaskiak ↔ Akiachak	26	0	0	1	2	9
All	38	0	0	1	2	9

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	0.4	0.5	2.5
Napaskiak ↔ Akiachak	26	0	0	0.4	0.6	2.1
All	38	0	0	0.4	0.6	2.5

TABLE A3. Summary of set net catch per trip of chum+sockeye salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	0	0	1
Napaskiak ↔ Akiachak	26	0	0	0	0	2
All	38	0	0	0	0	2

TABLE A4. Summary of set net catch rate of chum+sockeye salmon by fishing area (salmon per 150 feet of net per hour).

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	0	0	0.4
Napaskiak ↔ Akiachak	26	0	0	0.1	0	1.3
All	38	0	0	0.1	0	1.3

TABLE A5. Summary of set net percent composition of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0%	100%	88%	100%	100%
Napaskiak ↔ Akiachak	26	33%	100%	89%	100%	100%
All	38	0%	100%	88%	100%	100%

TABLE A6. Summary of set net active fishing hours by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	3.2	6	7.9	10.1	12
Napaskiak ↔ Akiachak	26	4.8	7.3	10.3	14.1	15.8
All	38	3.2	6.4	9.5	12.4	15.8

TABLE A7. Summary of set net total trip duration by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	3.5	6.4	8.2	10.2	13
Napaskiak ↔ Akiachak	26	4.8	7.5	10.6	14.1	15.8
All	38	3.5	7	9.8	12.9	15.8

Appendix B: Non-salmon Harvest Information

- An estimated total of **80 (40 – 130)** non-salmon (sheefish and whitefishes) were harvested.
 - An estimated total of **20 (0 – 30)** sheefish were harvested.
 - An estimated total of **60 (30 – 110)** whitefishes were harvested.

TABLE B1. Summary of relevant quantities by river stratum (area) for set nets. Numbers in parentheses are 95% confidence intervals.

Stratum	Interviews	Effort Est.	Estimated Harvest		
			Sheefish	Whitefishes	Total
Tuntutuliak ↔ Johnson R.	0	1	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Johnson R. ↔ Napaskiak	12	7	0 (0 – 0)	10 (0 – 10)	10 (0 – 10)
Napaskiak ↔ Akiachak	26	51	10 (0 – 20)	40 (20 – 70)	50 (30 – 80)
Akiachak ↔ Akiak	0	19	0 (0 – 10)	20 (10 – 30)	20 (10 – 30)
All	38	78	20 (0 – 30)	60 (30 – 110)	80 (40 – 130)

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	0	0	2
Napaskiak ↔ Akiachak	26	0	0	0	0	2
All	38	0	0	0	0	2

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	12	0	0	1	1	4
Napaskiak ↔ Akiachak	26	0	0	1	1	6
All	38	0	0	1	1	6