

---

# Kuskokwim River In-season Harvest and Effort Estimates

## 7/24/2023 Subsistence Harvest Opportunity (Set Nets Only)

Opportunity Time Period: 10:00 AM – 4:00 PM (6 Hours)

Area Covered by Estimates: Tuntutuliak ↔ Bogus Cr.

Contact Person(s): Bill Bechtol, [bechtolresearch@hughes.net](mailto:bechtolresearch@hughes.net)



---

## Data Sources

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

Data Source	Interviews	Percent
Other Villages (KRITFC)	4	57%
Bethel Boat Harbor (ONC)	3	43%
<b>Total</b>	<b>7</b>	<b>100%</b>

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

Time Information			Nets Counted	
Start Time	End Time	Hours	Drift	Set
1:00 PM	3:00 PM	2	0	6

## Effort Estimates

- An estimated 7 set net trips occurred.

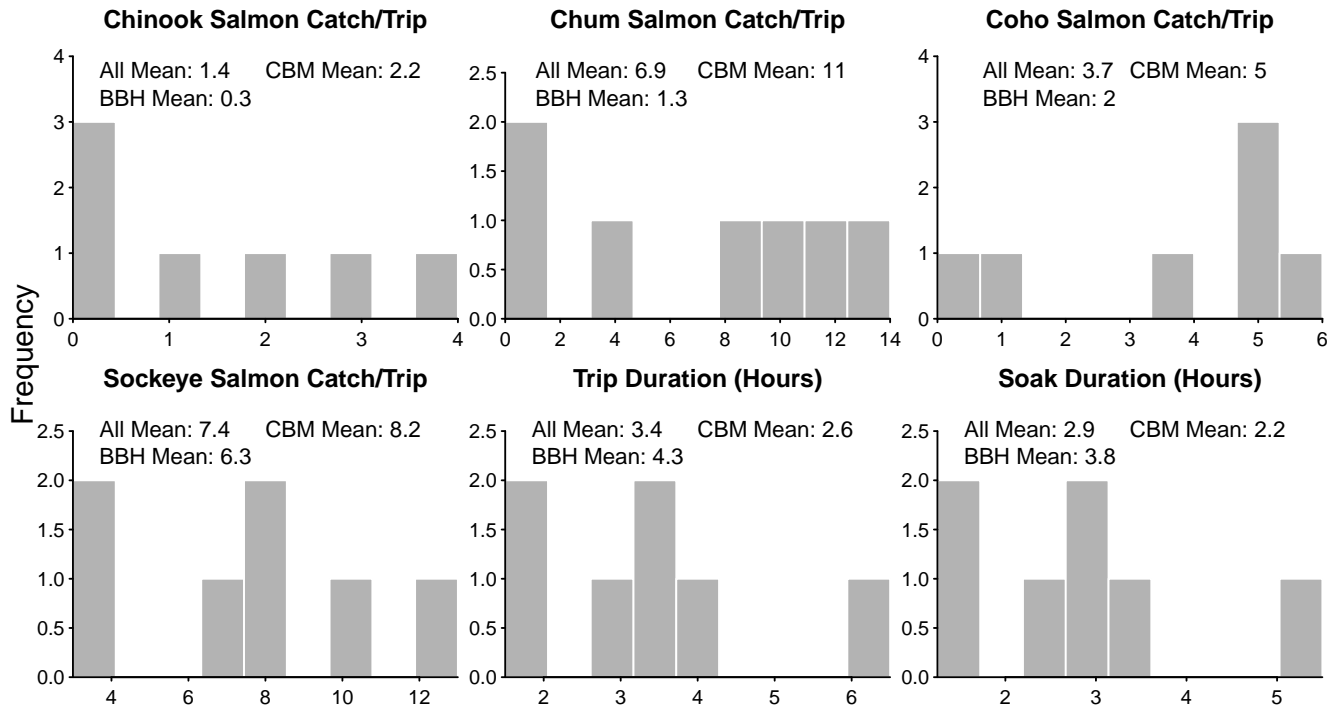
## Harvest Estimates

- An estimated total of **164 (97 – 214)** salmon were harvested.
  - An estimated total of **13 (1 – 27)** Chinook salmon were harvested.
  - An estimated total of **65 (35 – 85)** chum salmon were harvested.
  - An estimated total of **30 (15 – 42)** coho salmon were harvested.
  - An estimated total of **56 (34 – 70)** sockeye salmon were harvested.

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

Stratum	Interviews	Effort Est.	Estimated Harvest				Total
			Chinook	Chum	Coho	Sockeye	
Tuntutuliak ↔ Johnson R.	0	1	2 (0 – 4)	9 (5 – 12)	4 (2 – 6)	8 (5 – 10)	<b>23</b> (14 – 31)
Johnson R. ↔ Napaskiak	6	3	6 (1 – 11)	28 (15 – 37)	13 (7 – 18)	24 (14 – 30)	<b>70</b> (41 – 91)
Napaskiak ↔ Akiachak	1	1	2 (0 – 4)	9 (5 – 12)	4 (2 – 6)	8 (5 – 10)	<b>23</b> (14 – 31)
Akiachak ↔ Akiak	0	1	2 (0 – 4)	9 (5 – 12)	4 (2 – 6)	8 (5 – 10)	<b>23</b> (14 – 31)
Akiak ↔ Bogus Cr.	0	1	2 (0 – 4)	9 (5 – 12)	4 (2 – 6)	8 (5 – 10)	<b>23</b> (14 – 31)
<b>Total</b>	<b>7</b>	<b>7</b>	<b>13</b> (1 – 27)	<b>65</b> (35 – 85)	<b>30</b> (15 – 42)	<b>56</b> (34 – 70)	<b>164</b> (97 – 214)

**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 (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 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	6	0	0	2	3	4
Napaskiak ↔ Akiachak	1	0	0	0	0	0
<b>All</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>4</b>

**TABLE A2.** Summary of set 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	6	0	0.2	2	2.3	6.7
<b>All</b>	<b>6</b>	<b>0</b>	<b>0.2</b>	<b>2</b>	<b>2.3</b>	<b>6.7</b>

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	6	0	5	8	11	14
Napaskiak ↔ Akiachak	1	0	0	0	0	0
<b>All</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>10</b>	<b>14</b>

**TABLE A4.** Summary of set 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	6	0	4.4	9.7	15.4	18
<b>All</b>	<b>6</b>	<b>0</b>	<b>4.4</b>	<b>9.7</b>	<b>15.4</b>	<b>18</b>

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	6	0	2	4	5	6
Napaskiak ↔ Akiachak	1	5	5	5	5	5
<b>All</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	0	1.5	4.6	7.5	10
<b>All</b>	<b>6</b>	<b>0</b>	<b>1.5</b>	<b>4.6</b>	<b>7.5</b>	<b>10</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	3	4	6	8	10
<b>Napaskiak ↔ Akiachak</b>	1	13	13	13	13	13
<b>All</b>	<b>7</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>13</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	2.1	3.6	8.4	13.7	16.7
<b>All</b>	<b>6</b>	<b>2.1</b>	<b>3.6</b>	<b>8.4</b>	<b>13.7</b>	<b>16.7</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	0%	2%	9%	13%	20%
<b>Napaskiak ↔ Akiachak</b>	1	0%	0%	0%	0%	0%
<b>All</b>	<b>7</b>	<b>0%</b>	<b>0%</b>	<b>7%</b>	<b>13%</b>	<b>20%</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	1.5	2.2	2.8	3.5	3.8
<b>All</b>	<b>6</b>	<b>1.5</b>	<b>2.2</b>	<b>2.8</b>	<b>3.5</b>	<b>3.8</b>

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

<b>Area</b>	<b>N</b>	<b>Min</b>	<b>25%</b>	<b>Mean</b>	<b>75%</b>	<b>Max</b>
<b>Johnson R. ↔ Napaskiak</b>	6	1.2	1.7	2.4	3	3.5
<b>All</b>	<b>6</b>	<b>1.2</b>	<b>1.7</b>	<b>2.4</b>	<b>3</b>	<b>3.5</b>

## Appendix B: Non-salmon Harvest Information

- An estimated total of **2 (0 – 8)** nonsalmon were harvested.
  - An estimated total of **2 (0 – 8)** sheefish were harvested.
  - An estimated total of **0 (0 – 0)** all whitefishes were harvested.

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

Stratum	Interviews	Effort Est.	Estimated Harvest		
			Sheefish	Whitefish	Total
Tuntutuliak ↔ Johnson R.	0	1	0 (0 – 1)	0 (0 – 0)	0 (0 – 1)
Johnson R. ↔ Napaskiak	6	3	1 (0 – 4)	0 (0 – 0)	1 (0 – 4)
Napaskiak ↔ Akiachak	1	1	0 (0 – 1)	0 (0 – 0)	0 (0 – 1)
Akiachak ↔ Akiak	0	1	0 (0 – 1)	0 (0 – 0)	0 (0 – 1)
Akiak ↔ Bogus Cr.	0	1	0 (0 – 1)	0 (0 – 0)	0 (0 – 1)
<b>Total</b>	<b>7</b>	<b>7</b>	<b>2</b> (0 – 8)	<b>0</b> (0 – 0)	<b>2</b> (0 – 8)

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	6	0	0	0	0	3
Napaskiak ↔ Akiachak	1	0	0	0	0	0
<b>All</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	6	0	0	0	0	0
Napaskiak ↔ Akiachak	1	0	0	0	0	0
<b>All</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>