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# Kuskokwim River In-season Harvest and Effort Estimates

7/19/2023 Subsistence Harvest Opportunity (Set Nets Only)

Opportunity Time Period: 10:00 AM – 10:00 PM (12 Hours)

Area Covered by Estimates: Tuntutuliak ↔ Bogus Cr.



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## Data Sources

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

Data Source	Interviews	Percent
Bethel Boat Harbor (ONC)	10	59%
Other Villages (KRITFC)	7	41%
<b>Total</b>	<b>17</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
1:55 PM	3:10 PM	1.25	0	7

## Effort Estimates

- An estimated **17** set net trips occurred.

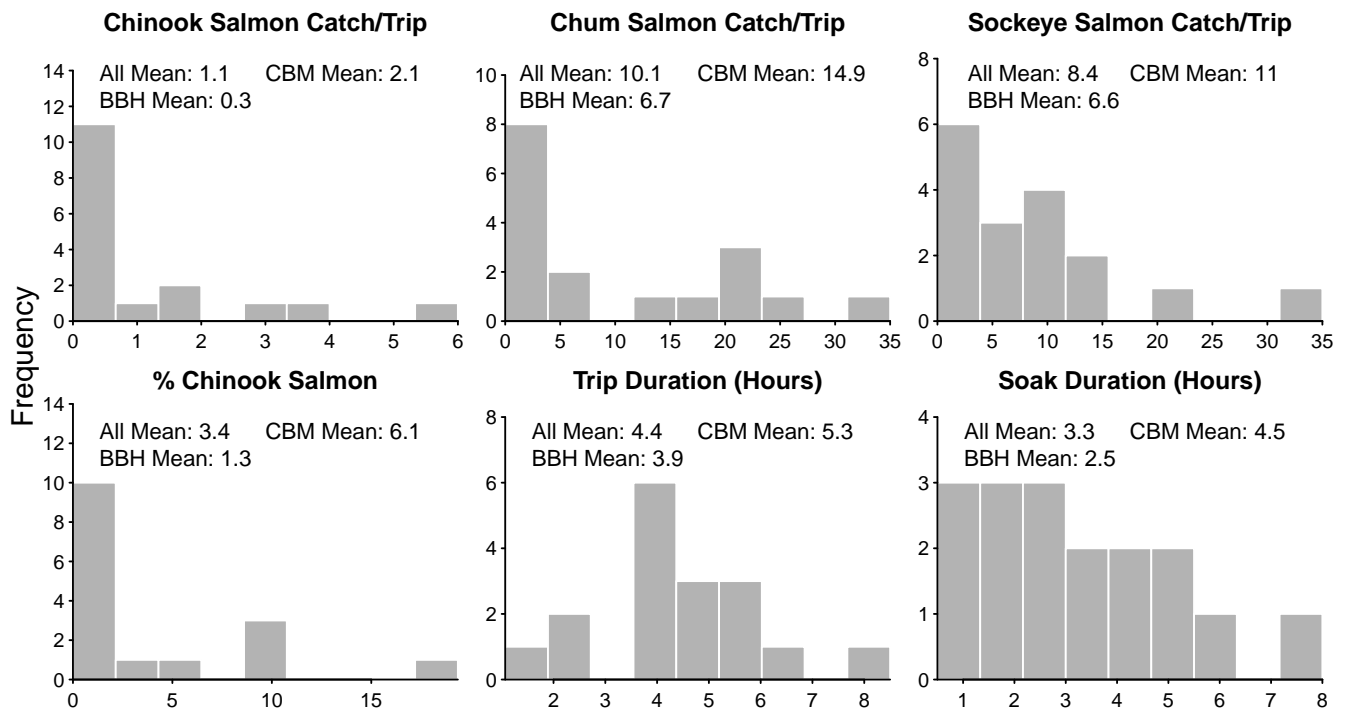
## Harvest Estimates

- An estimated total of **308 (176 – 463)** salmon were harvested.
  - An estimated total of **13 (1 – 28)** Chinook salmon were harvested.
  - An estimated total of **159 (76 – 261)** chum salmon were harvested.
  - An estimated total of **136 (76 – 205)** 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			
			Chinook	Chum	Sockeye	Total
Tuntutuliak ↔ Johnson R.	0	2	2 (0 – 3)	19 (9 – 31)	16 (9 – 24)	36 (21 – 54)
Johnson R. ↔ Napaskiak	10	0	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)	0 (0 – 0)
Napaskiak ↔ Akiachak	6	10	8 (1 – 17)	93 (45 – 153)	80 (45 – 121)	181 (104 – 273)
Akiachak ↔ Akiak	1	2	2 (0 – 3)	19 (9 – 31)	16 (9 – 24)	36 (21 – 54)
Akiak ↔ Bogus Cr.	0	3	2 (0 – 5)	28 (13 – 46)	24 (13 – 36)	54 (31 – 81)
<b>Total</b>	<b>17</b>	<b>17</b>	<b>13</b> (1 – 28)	<b>159</b> (76 – 261)	<b>136</b> (76 – 205)	<b>308</b> (176 – 463)

**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	10	0	0	2	3	6
Napaskiak ↔ Akiachak	6	0	0	0	0	1
Akiachak ↔ Akiak	1	0	0	0	0	0
<b>All</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>6</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	9	0	0	0.9	1	3.8
Napaskiak ↔ Akiachak	6	0	0	0.1	0	0.8
Akiachak ↔ Akiak	1	0	0	0	0	0
<b>All</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0.6</b>	<b>0.8</b>	<b>3.8</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	10	0	8	16	21	35
Napaskiak ↔ Akiachak	6	0	0	1	1	3
Akiachak ↔ Akiak	1	6	6	6	6	6
<b>All</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>20</b>	<b>35</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	9	0	9.4	10.5	12.9	24
Napaskiak ↔ Akiachak	6	0	0	0.5	1	1.9
Akiachak ↔ Akiak	1	15	15	15	15	15
<b>All</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>7.1</b>	<b>12.9</b>	<b>24</b>

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

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	10	0	3	11	14	35
Napaskiak ↔ Akiachak	6	0	1	5	8	10
Akiachak ↔ Akiak	1	4	4	4	4	4
<b>All</b>	<b>17</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>10</b>	<b>35</b>

**TABLE A6.** Summary of set 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	9	0	2.8	6.6	8.1	15
Napaskiak ↔ Akiachak	6	0	0.4	4.6	6.8	15
Akiachak ↔ Akiak	1	10	10	10	10	10
<b>All</b>	<b>16</b>	<b>0</b>	<b>2.3</b>	<b>6</b>	<b>8.7</b>	<b>15</b>

**TABLE A7.** Summary of set net percent composition of Chinook salmon by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	10	0%	0%	5%	8%	19%
Napaskiak ↔ Akiachak	6	0%	0%	2%	0%	9%
Akiachak ↔ Akiak	1	0%	0%	0%	0%	0%
<b>All</b>	<b>17</b>	<b>0%</b>	<b>0%</b>	<b>3%</b>	<b>6%</b>	<b>19%</b>

**TABLE A8.** Summary of set net trip duration by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	9	1.1	4	4.2	4.8	5.5
Napaskiak ↔ Akiachak	6	2.2	3	4.2	5.5	6.5
Akiachak ↔ Akiak	1	4	4	4	4	4
<b>All</b>	<b>16</b>	<b>1.1</b>	<b>4</b>	<b>4.2</b>	<b>4.9</b>	<b>6.5</b>

**TABLE A9.** Summary of set net active fishing hours by fishing area.

Area	N	Min	25%	Mean	75%	Max
Johnson R. ↔ Napaskiak	9	0.5	3	3.4	4	5.4
Napaskiak ↔ Akiachak	6	1	2	2.7	2.9	5.8
Akiachak ↔ Akiak	1	1	1	1	1	1
<b>All</b>	<b>16</b>	<b>0.5</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5.8</b>