



# Federal Subsistence Board Public Meeting

April 15 - 18, 2019

William A. Egan Civic & Convention Center  
Anchorage, Alaska





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**FEDERAL SUBSISTENCE BOARD  
PUBLIC MEETING AGENDA  
April 15, 2019 – April 18, 2019**

April 15, 2019: 1:30 p.m. to 5:00 p.m.  
April 16 – 18, 2019: 8:30 a.m. to 5:00 p.m. daily  
Egan Center  
555 West 5<sup>th</sup> Avenue  
Anchorage, Alaska

**\*Asterisk denotes Action Item**

*On April 15th, prior to start of the Public Meeting, the Federal Subsistence Board will meet at 9:00 a.m. to conduct Tribal and ANCSA Corporation consultations regarding proposals to change the Federal Subsistence Regulations and other subsistence issues. The Public Meeting will begin at 1:30 p.m.*

**Public Meeting**

1. **Call to Order and Welcome**
2. **Review and Adopt Agenda\***
3. **Federal Subsistence Board Information Sharing**
4. **Regional Advisory Council Chairs discuss topics of concern with the Board**
5. **Public Comment Period on Non-Agenda Items** *(This opportunity is available at the beginning of each day)*
6. **Old Business**
  - a. Positioning animals with snowmachines while subsistence hunting (Gayla Hoseth, BBNA)
7. **Cook Inlet Area Regulations Final Rule\*** (Scott Ayers & Theo Matuskowitz)
  - a. Kenai Community Gillnet Fishery Temporary Special Action Request FSA19-01\*  
[Supplemental]
8. **2019–2021 Subparts C&D Proposals** *(Fish and Shellfish Regulations)*
  - a. Tribal Government-to-Government and ANCSA Corporation Consultation Summary
  - b. Announcement of Consensus Agenda *(see detailed agenda that follows)*
  - c. Public Comment Period on Consensus Agenda Items *(This opportunity is available at the beginning of each subsequent day prior to the final action)*
  - d. Board deliberation and action on Non-Consensus Agenda items\* *(see detailed agenda that follows)*

- i. As necessary, Board deliberation about potential Temporary Special Action(s) to implement Board actions before publication of revised regulations\*
- e. Adoption of Consensus Agenda\*
  - i. As necessary, Board deliberation about potential Temporary Special Action(s) to implement Board actions before publication of revised regulations\*
- 9. Nonrural Proposal Threshold Determinations**
  - a. Nonrural Proposal RP19-01\* (Robbin La Vine)
- 10. Fisheries Temporary Special Action Request FSA19-02\*** (Submitted by Akiak Native Community) [Supplemental]
- 11. Schedule of Upcoming Board Meetings\***
  - a. 2019 Summer Work Session (*Topics to be determined*)
  - b. 2020 April Public Meeting (*Wildlife Regulations*)
- 12. Requests for Reconsideration (RFRs)**
  - a. RFR18-02 Berners Bay Moose (WP18-11) Threshold Analysis\* (Suzanne Worker) [Supplemental]
  - b. RFR15-01 Kenai River Community Gillnet (FP15-10) – Status Update (Scott Ayers)
  - c. RFR18-01 Unit 2 Deer (WP18-01) – Status Update (Terry Suminski)
- 13. Eastern Interior Hunters Education Pilot Program Update** (Katerina Wessels) [Supplemental]
- 14. Highlights in Partnership – The Partners Program for Fisheries Monitoring and Alaska Native Science and Engineering Program (ANSEP) Internships** (Jarred Stone)
- 15. 2020-23 Partners for Fisheries Monitoring Program** (Karen Hyer)
- 16. Adjourn**

*Note: The meeting will be held from 1:30 p.m. until 5:00 p.m. on Monday, April 15th and then daily from 8:30 a.m. to 5:00 p.m. or until the Board calls a recess for the day, or completes its work. To participate in this meeting by teleconference, dial TOLL FREE (888)455-5897, the passcode is 3344290. Updates on the Board's progress through the agenda can be obtained by calling 1-800-478-1456, or in Anchorage at 907-786-3888.*

**FEDERAL SUBSISTENCE BOARD  
CONSENSUS AGENDA PROPOSALS**

The following proposals have been included on the consensus agenda. These are proposals for which there is agreement among Federal Subsistence Regional Advisory Councils, the Federal Interagency Staff Committee, and the Alaska Department of Fish and Game concerning Board action. Anyone may request that the Board remove a proposal from the consensus agenda and place it on the regular agenda. The Board retains final authority for removal of proposals from the consensus agenda. The Board will take final action on the consensus agenda after deliberation and decisions on all other proposals.

<b>Proposal</b>	<b>Region/Unit/Species</b>	<b>Recommendation</b>	<b>Page</b>
FP19-02 Modify closures prior to Yukon River commercial season opener	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/Districts 1-4A/Salmon	Oppose	1
FP19-03/04 Modify closures prior to, during, and after Yukon River commercial openings	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/Districts 1-3/ Salmon	Oppose	29
FP19-05 Remove fin clipping restrictions on Yukon River subsistence caught fish	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/ Districts 1-3/Chinook Salmon	Support as modified by OSM	61
FP19-06 Add protections to first pulse of Yukon River fish	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/Districts 1-5/Chinook Salmon	Oppose	83
FP19-07 Make dip nets legal gear for harvest of Salmon in Yukon River	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/Districts 1-6/Salmon	Support as modified by OSM	105
FP17-05 Requests Kuskokwim River management plans, strategies, fishing schedules, openings, closings, and fishing methods be issued independently by the USFWS	Yukon-Kuskokwim Delta, Western Interior/Kuskokwim River drainage/All fish	Oppose	131
FP19-08 Specify restrictions to subsistence gillnet use in Kuskokwim River June 1 to July 25	Yukon-Kuskokwim Delta, Western Interior/Kuskokwim River drainage/Chinook Salmon	Oppose	165

<b>Proposal</b>	<b>Region/Unit/Species</b>	<b>Recommendation</b>	<b>Page</b>
FP19-12 Revise Kasilof River experimental community gillnet fishery	Southcentral/Kasilof River/Salmon	Support as modified by OSM	245
FP19-15 Move requirements to check fish wheel from owner to operator	Southcentral & Eastern Interior/ Glennallen Subdistrict / Salmon	Support	271
FP19-17 Revise C&T determinations for the Yakutat and Southeastern Alaska areas	Southeast/Yakutat/ Southeastern Area/All fish	Support	291
FP19-18 Revise gillnet restrictions in the Stikine River subsistence fishery	Southeast/Stikine River/Chinook, Coho, and Sockeye Salmon	Support as modified by OSM	331



**FEDERAL SUBSISTENCE BOARD  
NON-CONSENSUS AGENDA**

**Procedure for considering proposals:**

- Analysis (*Lead Author*)
- Summary of public comments (*Regional Council Coordinator*)
- Open floor to public testimony
- Regional Advisory Council recommendation(s) (*Chair or designee*)
- Tribal/Alaska Native Corporation comments (*Native Liaison*)
- Alaska Department of Fish and Game comments (*State Liaison*)
- Interagency Staff Committee comments (*ISC Chair*)
- Board discussion
- Federal Subsistence Board action on regulatory proposal
- Federal Subsistence Board deliberation and action on possible Temporary Special Action

<b>Proposal</b>	<b>Region/Unit/Species</b>	<b>Page</b>
FP19-01 Allow use of gillnets and rescind net depth restrictions for Yukon River subsistence	Yukon-Kuskokwim Delta, Western Interior, Seward Peninsula, Eastern Interior/Subdistricts 4B and 4C/Salmon	351
FP19-09 Allow use of 6 inch or less mesh size gillnets prior to June 1 in the Kuskokwim River	Yukon-Kuskokwim Delta, Western Interior/Kuskokwim River drainage/All fish	377
FP19-10 Specify that non-salmon spawning tributaries of Kuskokwim River remain open to the use of gillnets 100 yards upstream of confluence during times of closure to salmon fishing	Yukon-Kuskokwim Delta, Western Interior/Kuskokwim River drainage/All fish	451
FP19-11 Revise subsistence regulations to allow hook and line fishing and extend regulations to Sixmile Lake	Bristol Bay/Newhalen River drainage/Salmon	477
FP19-13 Add current permit conditions to regulations	Southcentral/Prince William Sound Area/All fish	497
FP19-16 Clarify gear usage for Upper Copper River District subsistence salmon fishing permits	Southcentral & Eastern Interior/Upper Copper River District/Salmon	523
FP19-19 Close Federal waters of Neva Creek, Neva Lake, and South Creek to harvest of Sockeye Salmon by non-Federally qualified users	Southeast/Neva Lake, Neva Creek, South Creek/Sockeye Salmon	545

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**FP19–02 Executive Summary**

<p><b>General Description</b></p>	<p>Proposal FP19-02 requests the Federal Subsistence Board decrease the time the subsistence fishery is closed prior to the start of the State commercial fishing season in Yukon Districts 1, 2, 3, and 4A (excluding Koyukuk and Innoko rivers) from 24 hours to 6 hours. <i>Submitted by: Alissa Rogers.</i></p>
<p><b>Proposed Regulation</b></p>	<p><b>§ __.14 Relationship to State procedures and regulations</b></p> <p><i>(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.</i></p> <p><b>§ __.27 Subsistence taking of fish</b></p> <p><i>(e)(3) Yukon-Northern Area.</i></p> <p style="text-align: center;">* * * *</p> <p><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), except in Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the 6 hours immediately before the opening of a State commercial salmon fishing season, unless superseded by a Federal Special Action.</i></p> <p style="text-align: center;">* * * *</p> <p><i>(vi) In Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the 246 hours immediately before the opening of the State commercial salmon fishing season.</i></p>

**FP19-02 Executive Summary**

<p><b>OSM Preliminary Conclusion</b></p>	<p><b>Support</b> FP19-02 <b>with modification</b> to provide the updated language only one time in the regulations to avoid redundancy.</p> <p>The modified regulation should read:</p> <p style="text-align: center;"><b>§ __.27 Subsistence taking of fish</b></p> <p style="text-align: center;"><i>(e)(3) Yukon-Northern Area.</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><i>(vi) In Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the <del>246</del> hours immediately before the opening of the State commercial salmon fishing season.</i></p>
<p><b>OSM Conclusion</b></p>	<p><b>Oppose</b></p>
<p><b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b></p>	<p><b>Oppose</b></p>
<p><b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b></p>	<p><b>Oppose</b></p>
<p><b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b></p>	<p><b>Oppose</b></p>

<b>FP19–02 Executive Summary</b>	
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Oppose</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS  
FP19-02**

**ISSUES**

Proposal FP19-02, submitted by Alissa Rogers of Bethel, requests the Federal Subsistence Board (Board) decrease the time the subsistence fishery is closed prior to the start of the State commercial fishing season in Yukon Districts 1, 2, 3, and 4A (excluding Koyukuk and Innoko rivers) from 24 hours to 6 hours.

**DISCUSSION**

The proponent states these closures do not prevent people from selling into the commercial fishery Chinook Salmon taken in the subsistence fishery because only a few Yukon subsistence fishermen do this. The proponent states there are always going to be a few bad actors that they are known and have been fined before but that the existing regulation has not stopped them. The proponent states that this regulation is burdensome on subsistence fishermen without any benefit.

**Existing Federal Regulation**

*§ \_\_.14 Relationship to State procedures and regulations*

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

*§ \_\_.27 Subsistence taking of fish*

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

*(vi) In Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River*

*drainages, you may not take salmon for subsistence purposes during the 24 hours immediately before the opening of the State commercial salmon fishing season.*

## **Proposed Federal Regulation**

### **§ \_\_.14 Relationship to State procedures and regulations**

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

### **§ \_\_.27 Subsistence taking of fish**

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), **except in Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the 6 hours immediately before the opening of a State commercial salmon fishing season, unless superseded by a Federal Special Action.***

\* \* \* \*

*(vi) In Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the ~~24~~ hours immediately before the opening of the State commercial salmon fishing season.*

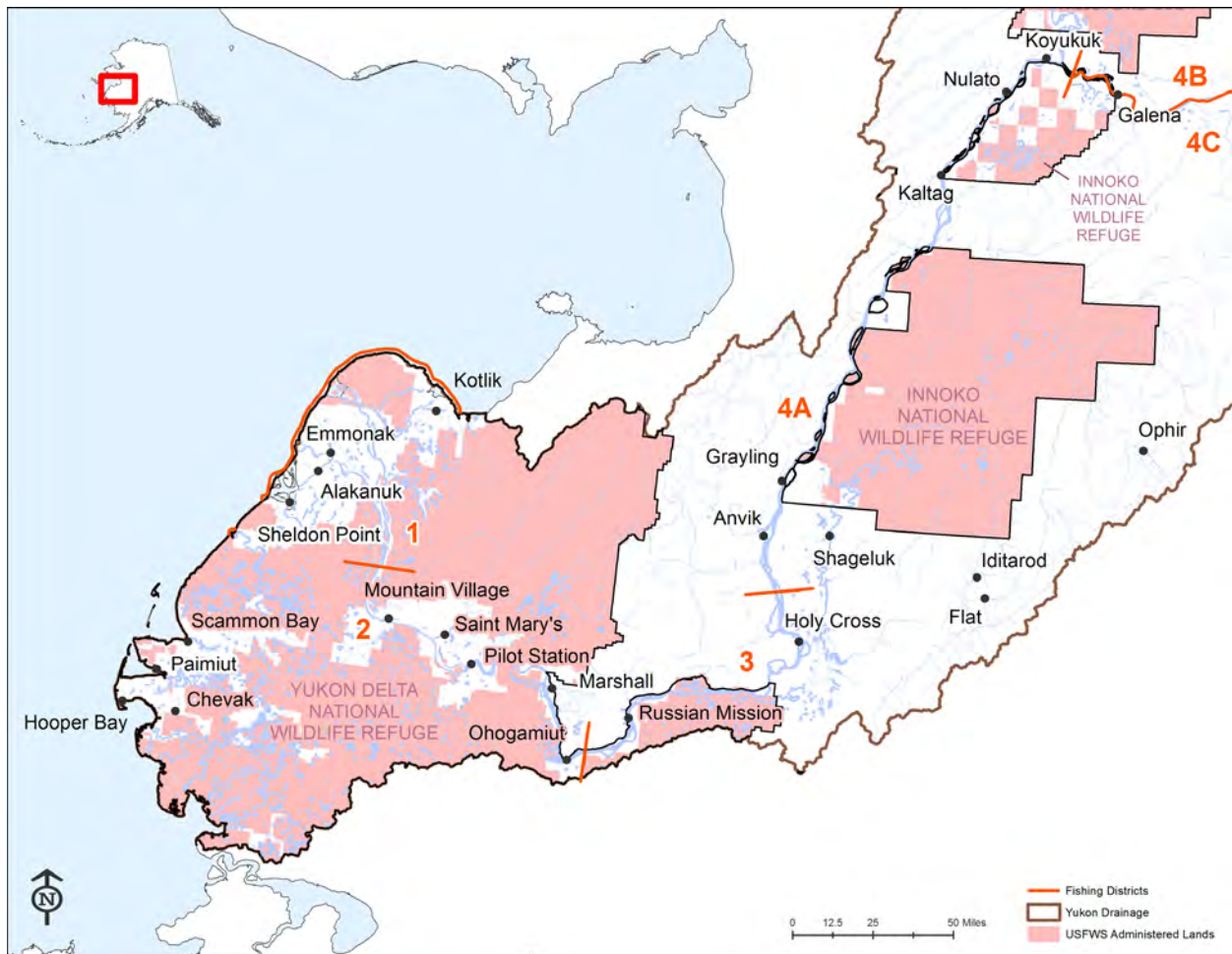
## **Existing State Regulation**

### **5 AAC 01.240. Marking and use of subsistence-taken salmon**

*(e) In Districts 1, 2, and 3, excluding the Innoko River drainage, salmon may not be taken for subsistence during the 24 hours immediately before the opening of the commercial salmon fishing season, and*

**Extent of Federal Public Lands**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The Federal public waters addressed by this proposal are those portions of the Yukon River located within, or adjacent to, the external boundaries of the Yukon Delta National Wildlife Refuge (NWR) within fishing Subdistricts 1-3 of the Yukon/Northern Federal Subsistence Fishery Management Area (**Figure 1**).



**Figure 1.** Lower Yukon River Districts 1, 2, 3, and 4A.

**Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have customary and traditional use determination for Salmon, other than Fall Chum salmon in the Yukon River drainage.

Residents of the Yukon River drainage and the community of Chevok, Hooper Bay, Scammon Bay, and Stebbins have a customary and traditional use determination for Fall Chum salmon in the Yukon River drainage.



## Regulatory History

### State Regulatory History

The current six commercial fishing districts were established in 1974. The subsistence fishing schedules were also linked to the commercial fishing schedules in districts 1-6 in the same year, and concurrent subsistence and commercial fishing for 5 days per week was implemented in the Upper Yukon Area (Districts 4-6). Beginning in 1977 the lower Yukon area was reduced to commercial and subsistence fishing for 3 days per week during the commercial Chinook Salmon season, and 3.5 days per week during the Fall Chum Salmon season. The Fall Chum Salmon fishing season was again reduced in 1979, to 3 days per week. Beginning in 1981, ADF&G began announcing in-season Lower Yukon area commercial fishing periods by emergency order, with Lower Yukon area subsistence periods announced in this manner beginning in 1984 (Jallen et al. 2015).

In December 1976, the Alaska Board of Fisheries (BOF) prohibited the use of drift gillnets for subsistence Chinook Salmon fishing in the middle and upper Yukon Areas (Districts 4-6). The BOF discussions at that time indicated that the possible increase in the use of drift gillnets could seriously impact both the conservation and allocation of middle and upper Yukon River salmon stocks, which were being harvested at maximum levels (ADF&G 2001). However, subsistence users in the upper Yukon areas were allowed to continue using drift gillnets throughout the Yukon River drainage until the 1977 season.

In 1981, the Alaska BOF adopted a proposal to allow drift gillnets for subsistence Chinook Salmon harvest in Subdistrict 4A (ADF&G 1982).

Beginning in 1993, regulations separated commercial and subsistence fishing times in Districts 1, 2, 3 and Subdistrict 4A. The regulations stated that subsistence fishing in Districts 1-3 was open 7 days per week, 24 hours/day until the commercial fishing season began. Once commercial fishing had started, subsistence fishing was closed 18 hours prior, during, and 12 hours after each commercial fishing period. Also, marking of subsistence caught fish was required by removal of the dorsal fin. These regulations were made based on an enforcement action where subsistence-caught fish were being sold in the commercial fishery in 1992 (Bergstrom et al. 1995).

In 1994, the Alaska BOF questioned the need for drift gillnets to provide for adequate subsistence opportunity in the middle and upper Yukon Areas. State staff comments suggested that at that time it did not appear necessary (ADF&G 2001). The BOF stated that the Alaska Department of Fish and Game could allow increased time for subsistence fishing with other gear types by emergency order, as an alternative, if subsistence needs were not being met. No BOF action was taken.

The Alaska BOF added a fishing schedule for the subsistence salmon fisheries in 2001. The schedule will be implemented chronologically, consistent with migratory timing as the run progresses upstream. This schedule may be altered by emergency order if preseason or in-season indicators indicate it is necessary for conservation. Districts 1-3 windows allowed subsistence salmon fishing for two 36 hour periods per week. Districts 4, and Subdistricts 5-B and 5-C were open to subsistence fishing for two 48-hour periods per week. Subsistence fishing in Subdistrict 4A was further defined during the

commercial fishing season in 2004 with Chinook Salmon fishing only allowed during two 48 hour drift netting periods per week by emergency order.

In February 2007, the BOF adopted a proposal changing the marking requirement for subsistence-caught salmon in Districts 1–3 from removal of the dorsal fin to removal of both tips of the tail fin. The rationale cited in the subcommittee report was to foster better compliance because marking would be easier, to make the regulation consistent with other areas of the state, to clarify when subsistence marking requirements would be in place, to use a more sanitary mark, and to discourage subsistence caught fish from entering the State’s commercial fisheries (ADF&G 2007).

Commercial fishing for Chum Salmon during times of Chinook Salmon conservation was permitted with fish wheels by emergency order in Subdistrict 4-A, beginning in 2012. Fishermen are required to be present at the fish wheel, and immediately release all Chinook Salmon alive.

In March 2015, the Alaska BOF adopted a new regulation that allowed the use of drift gillnets to harvest summer Chum Salmon for subsistence purposes during times of Chinook conservation from June 10 through August 2, by emergency order, in the upper portion of Subdistrict 4A (5 AAC 01.220(e)(1)).

In January 2016, the Alaska BOF adopted the same regulations in the lower portion of the Subdistrict 4A (5 AAC 01.220 (e) (2)).

The Alaska BOF adopted a proposal to allow the use of drift gill nets in sub-districts 4B and 4C at the March 2018 meeting.

### Federal Regulatory History

Starting in October 1999, Federal subsistence management regulations for the Yukon-Northern Area stipulated that, unless otherwise restricted, rural residents may take salmon in the Yukon-Northern Area at any time by gillnet, beach seine, fish wheel, or rod and reel unless exceptions are noted.

In 2002, the Board delegated some of its authority to manage Yukon River drainage subsistence salmon fisheries to the Branch Chief for Subsistence Fisheries, U.S. Fish and Wildlife Service, in Fairbanks. The Federal Subsistence Board’s delegation allows the Federal manager to open or close Federal subsistence fishing periods or areas provided under codified regulations, and to specify methods and means.

In 2017, through fisheries proposal FP17-03, the Board modified regulations in Subdistrict 4A to allow the Federal In-season Manager to open fishing periods during which Chum Salmon may be taken by drift gillnets from June 10 through August 2 (FSB 2017). This regulation change was made to match existing ADF&G regulations that were modified in 2015 and 2016.

### **Current Events**

The proponent for this regulatory proposal has also submitted this proposal (Alaska BOF Proposal 90) to the BOF for its review during their Arctic/Yukon/Kuskokwim Finfish meeting that is scheduled for

January 15-19, 2019. The proponent has also submitted FP19-03 and FP19-04, which are similar proposals that aim to reduce or eliminate the required closure before a commercial fishing period. Fisheries Proposal 19-03 requests to reduce the closure time down to 6 hours prior to and 6 hours after a commercial fishing period, while FP19-04 requests that there would be no closure to subsistence fishing prior to, during, and after a commercial fishing period.

## **Biological Background**

### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks showed periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station was approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish and below the average of 195,800 fish for years with early run timing. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2015).

The 2015 projected run size was 118,000-140,000 fish, which was once again below average but higher than the previous year's projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately 116,000±30,000 fish (90% CI) (**Figure 2**). As with the previous year, this number was still below the historical average. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately 176,898±18,466 fish (90% CI) (Liller, 2018, pers. comm.). This number was near the recent historical average of 178,300 fish (ADFG 2018), but is considered preliminary at this time. Conservative actions were relaxed slightly from previous years and all escapement goals were again met (JTC 2016). The 2017 run outlook was slightly larger, but still for a below average run of 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately 263,000±29,000 fish (90% CI) (ADF&G 2018), the largest since 2003 (JTC 2017), is also considered preliminary. Subsistence management restrictions were further relaxed that resulted in harvests approximately two thirds of average and most escapement goals were met despite the poor water conditions that existed throughout the drainage. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

The 2018 run outlook is larger than in recent years, with a run size of 173,000-251,000 fish (ADF&G 2018a). The upper end of the range could support an average subsistence harvest, while the low end of the range would likely result in restrictions to subsistence fishing.

### Summer Chum Salmon

Summer Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 15 years, 2003-2017. In 2017, the projected outlooks were for a run size of approximately 2 million fish, while the 2018 projection is expected to be similar or slightly lower than the 2017 run of approximately 3.6 million fish.

In 2016, approximately 1.92 million  $\pm 80,517$  (90% CI) fish passed the Yukon River sonar project at Pilot Station, which was near the historical median for the project of 1.90 million fish. In 2017, the passage estimate at Pilot Station increased to 3.09 million  $\pm 138,259$  (90% CI) (**Figure 3**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018). The Henshaw Creek weir counted a record number of Chum Salmon (360,687), which was only 13% smaller than the number counted at the Anvik River Sonar (415,139).

Although all 2017 numbers are preliminary at this time, the 2018 run is anticipated to provide for escapement, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

### Fall Chum Salmon

Fall Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 8 years, 2010-2017. The 2018 projection of 1.6-1.8 million fish is lower than the 2017 run of approximately 2.3 million fish (JTC 2018).

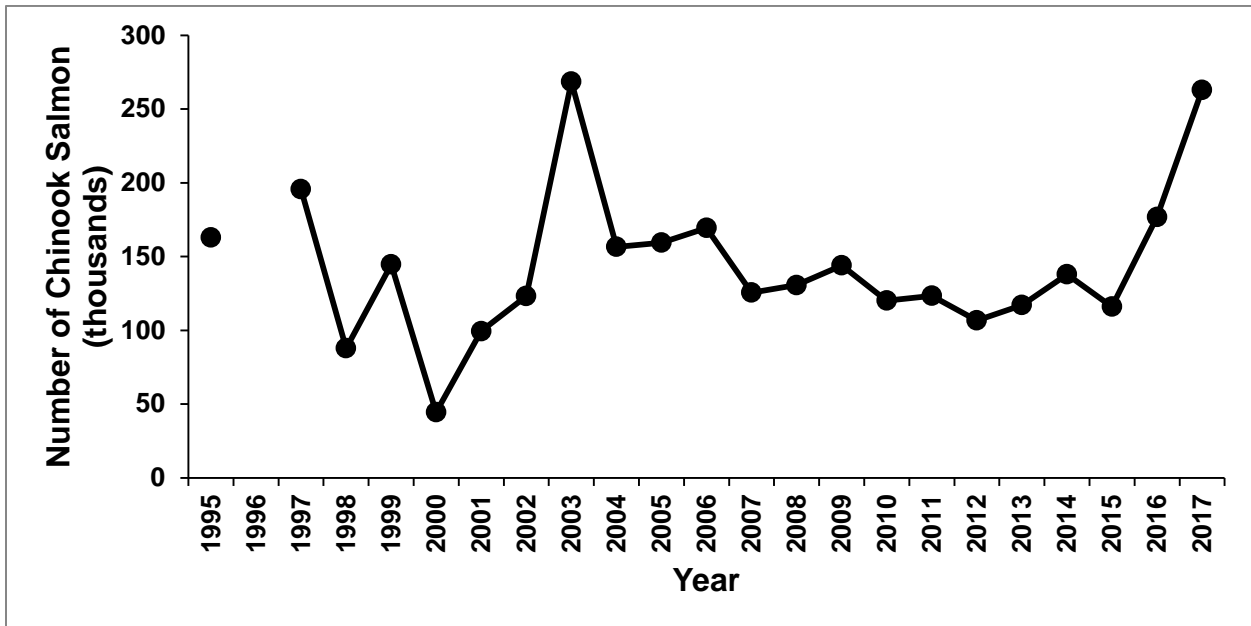
In 2016, approximately 994,760 million  $\pm 64,434$  (90% CI) Fall Chum Salmon passed the Yukon River sonar project at Pilot Station, which was above the 1995-2016 median for the project of 688,057 fish. In 2017, the passage estimate at Pilot Station increased to 1.83 million  $\pm 54,179$  (90% CI) and was the second largest run in 43 years (**Figure 4**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018) although all 2017 numbers are still preliminary at this time.

The 2018 run is anticipated to provide for escapement, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

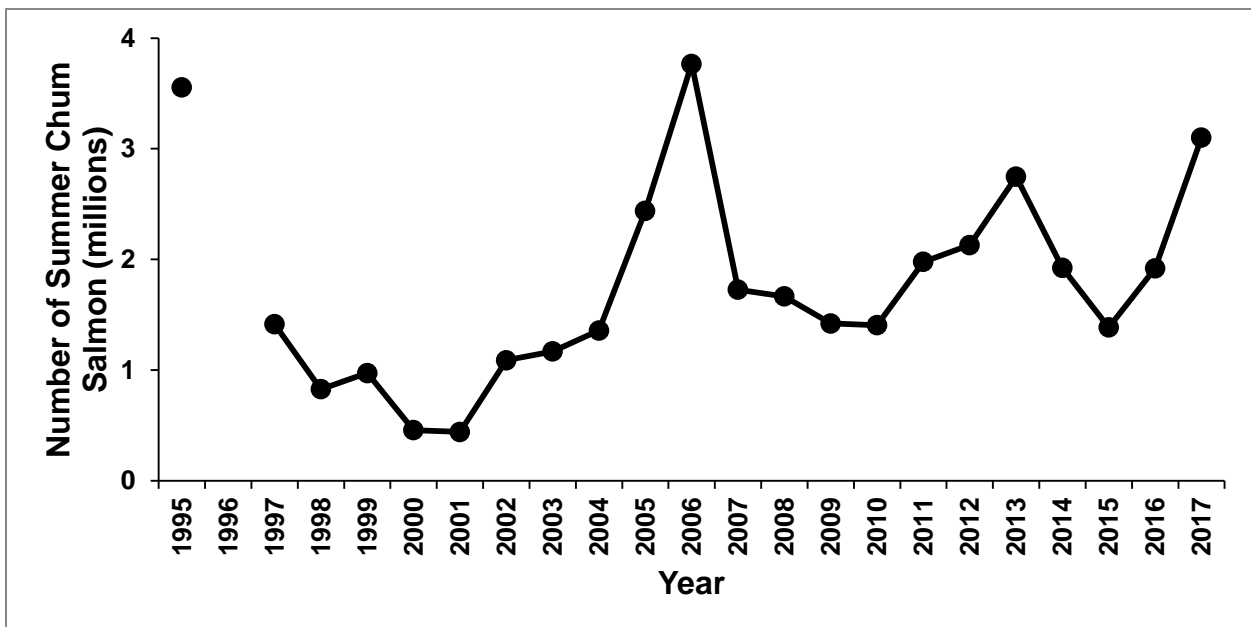
### Coho Salmon

In 2016, approximately 168,297  $\pm 11,180$  (90% CI) Coho Salmon passed the Yukon River sonar project at Pilot Station, which was slightly above the historical median of 160,272 fish. In 2017, the passage estimate at Pilot Station decreased to 166,330  $\pm 20,300$  (90% CI) and was slightly above the historical median (**Figure 5**). All 2017 numbers are preliminary at this time. The Coho Salmon outlook is based upon parent year escapements assuming average survival. Since Coho Salmon predominately return as

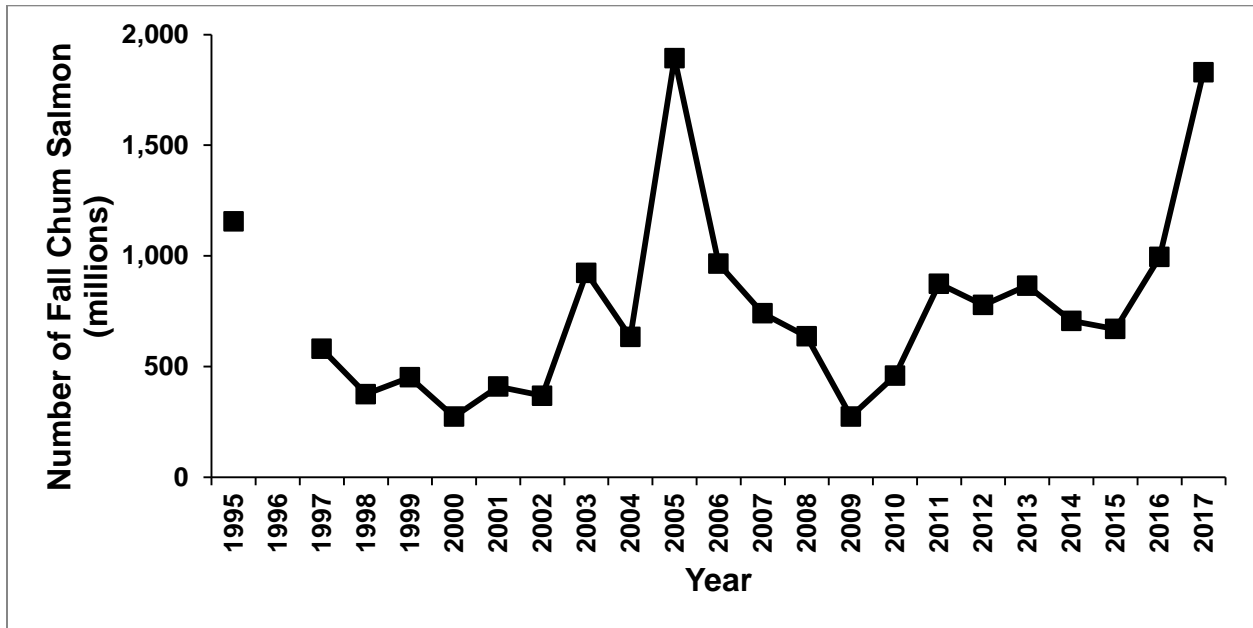
age 2.1 fish (4 year old fish), the major contributor to the 2018 returns are from the 2014 parent year. Therefore, the 2018 outlook is for average to above average returns in 2018



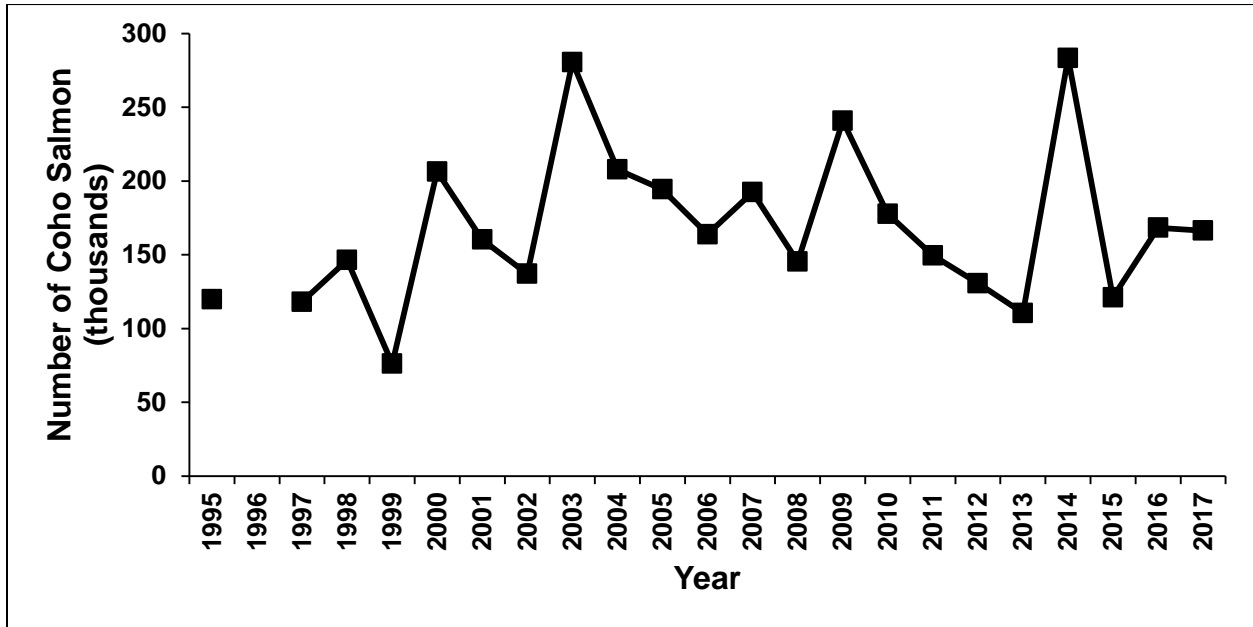
**Figure 2.** Chinook Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 3.** Summer Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 4.** Fall Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 5.** Coho Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.

## Harvest History

### Chinook Salmon

#### *Subsistence*

Subsistence harvest of Chinook Salmon in the Alaska portion of the Yukon River averaged 34,791 fish from 1961-2015, with a high of 62,486 in 1993 and a low of 2,724 in 2014 (JTC 2017) (**Figure 6**). The 2014 Chinook Salmon subsistence harvest of 2,724 fish was the lowest on record for the Alaska portion of the Yukon River drainage. Harvest increased in 2015, 2016, and 2017, with 7,577, 21,627, and 36,992 fish harvested respectively. The 2017 harvest estimate, though preliminary, is larger than the 2007-2016 average (29,514) and over two times the number of the recent 5 year average of 15,088 (JTC 2018). The 2017 harvest is the largest since 2011.

The subsistence harvest in Yukon River Districts 1-3 averaged 16,755 from 2004- 2013, with a 2009-2013 average of 13,442 Chinook Salmon (Jallen et al. 2017). The estimated 2014 subsistence harvest in these districts was 2,020 Chinook Salmon.

#### *Commercial*

Chinook Salmon have not been targeted in the commercial fishery for 10 years and the sale of incidentally caught Chinook Salmon was prohibited for the seventh consecutive year during the 2017 summer season. However, there was a small opportunity during the fall fishing seasons were fish were sold in Districts 1 and 2 in 2011 (82) and 2017 (168). The 1961-2016 average commercial harvest is 88,092 with a recent 10 year average of 9,714 (JTC 2018).

#### *Sport fish*

Sport fishing harvest of Chinook Salmon are generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 105 Chinook Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort. During 2017, sport fishing was allowed after June 20, and allowed for a bag limit of 1 Chinook Salmon 20-inches or greater (JTC 2018).

### Summer Chum Salmon

#### *Subsistence*

Subsistence harvest of summer Chum Salmon in the Alaska portion of the Yukon River averaged 129,766 fish from 1970-2016, with a high of 227,829 in 1988 and a low of 72,155 in 2001 (JTC 2018) (Figure 7). The 2012-2016 average harvest is estimated to be 100,113 summer Chum Salmon, and the harvest estimate from 2014-2017 has remained relatively constant. The preliminary 2017 harvest is 87,252 summer Chum Salmon. Summer Chum Salmon are predominately harvested in Yukon area

Districts 1-4, and 6. Few summer Chum Salmon migrate upstream of the Tanana River in the Yukon River mainstream.

#### *Commercial*

Commercial harvest of Chum Salmon in the Alaska portion of the Yukon River averaged 382,635 fish from 1970-2016, with a high of 1,148,650 in 1988 and a low of 0 in 2001 (JTC 2018). Since 2001, commercial catches of summer Chum Salmon has increased dramatically, with a 2012-2016 average of 444,094 fish. The preliminary 2017 harvest is 555,296 summer Chum salmon.

#### *Sport fish*

Sport fishing harvest of summer Chum Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 264 summer Chum Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.

### Fall Chum Salmon

#### *Subsistence*

Subsistence harvest of fall Chum Salmon in the Alaska portion of the Yukon River averaged 105,167 fish from 1961-2016, with a high of 342,819 in 1987 and a low of 19,395 in 2000 (JTC 2018) (**Figure 8**). The 2012-2016 average harvest is estimated to be 95,294 fall Chum Salmon, and the harvest estimate from 2014-2017 has remained relatively constant. The preliminary 2017 harvest is 86,189 fall Chum Salmon.

#### *Commercial*

Commercial harvest of fall Chum Salmon in the Alaska portion of the Yukon River averaged 157,467 fish from 1961-2016, with a high of 466,451 in 1981 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of fall Chum Salmon has varied dramatically, and the 2012-2016 average is 260,042 fish. The preliminary 2017 harvest is 489,702 fall Chum salmon.

#### *Sport fish*

Sport fishing harvest of fall Chum Salmon is generally low in the Yukon River drainage, with no data presented (JTC 2018).



## Coho Salmon

### *Subsistence*

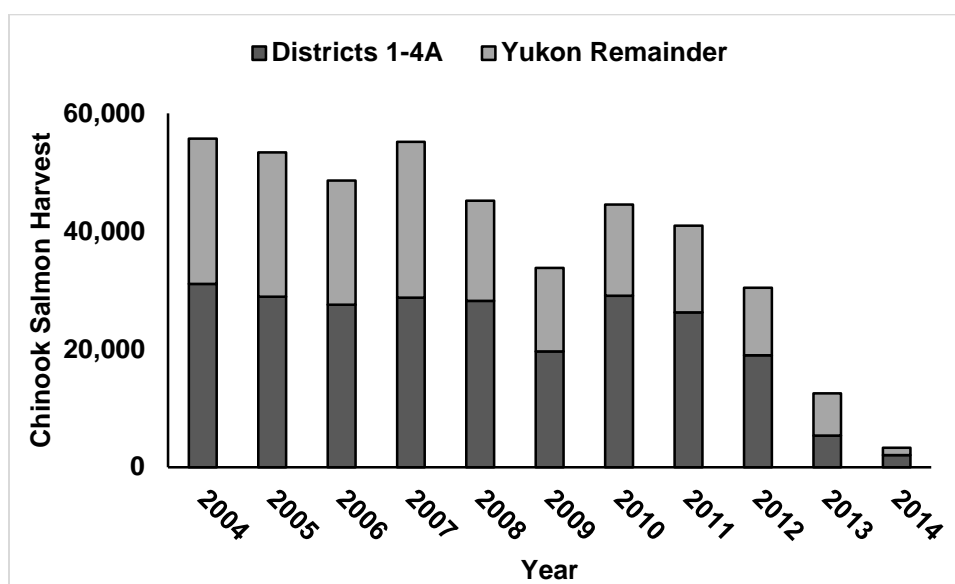
Subsistence harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 22,400 fish from 1961-2016, with a high of 82,371 in 1987 and a low of 3,966 in 1970 (JTC 2018) (**Figure 9**). The 2012-2016 average harvest is estimated to be 16,003 Coho Salmon, while the harvest estimate from 2016 and 2017 has decreased. The preliminary 2017 harvest is 7,645 Coho Salmon.

### *Commercial*

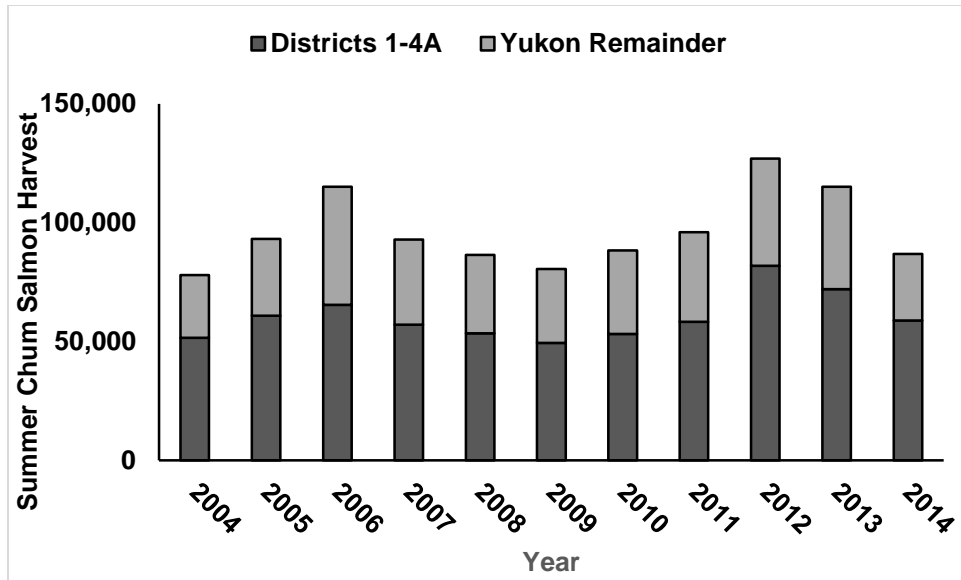
Commercial harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 38,031 fish from 1961-2016, with a high of 201,482 in 2016 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of Coho Salmon has varied dramatically, and the 2012-2016 average is 115,372 fish. The 2017 harvest is 138,915 Coho salmon. All harvest data from 2016 and 2017 is preliminary.

### *Sport fish*

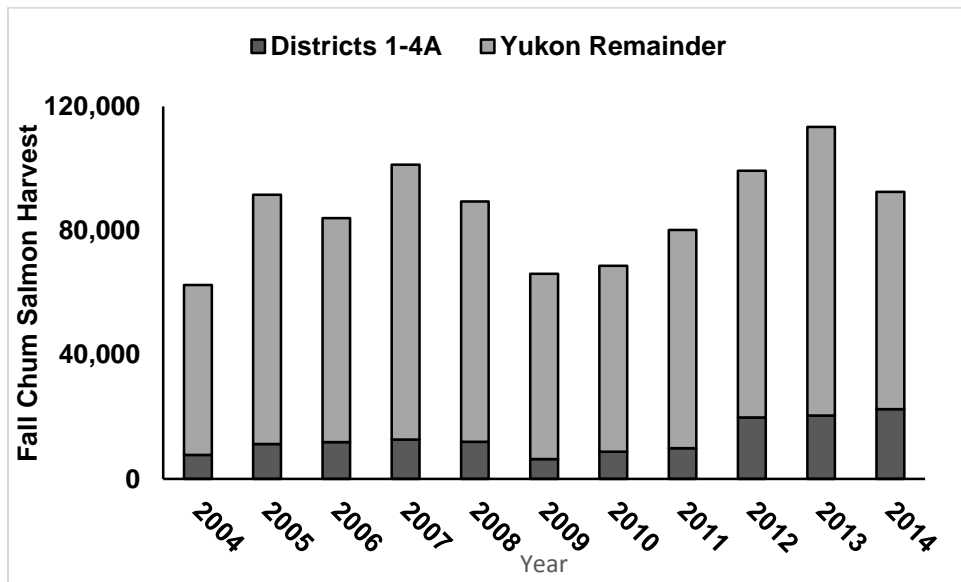
Sport fishing harvest of Coho Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 703 Coho Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.



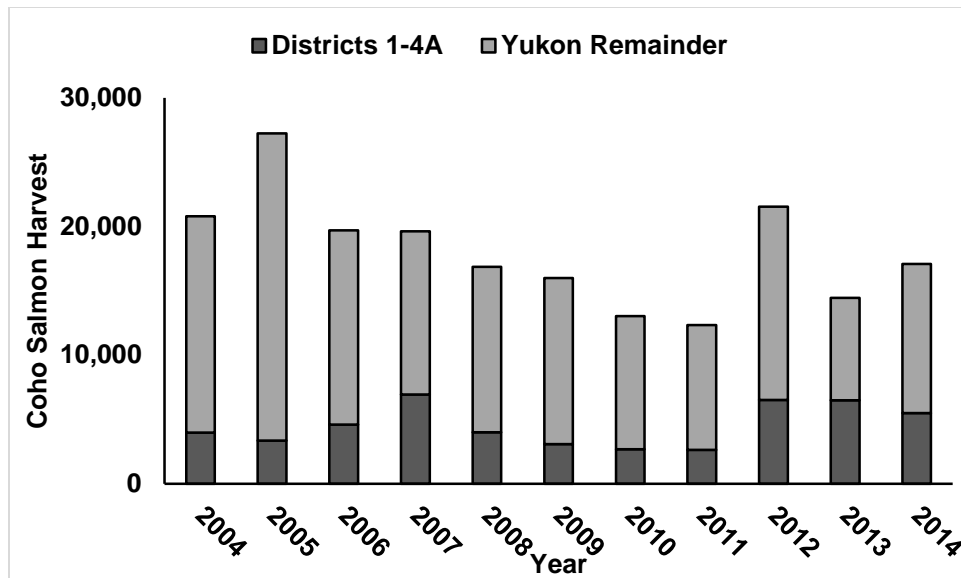
**Figure 6.** Comparison of Chinook Salmon subsistence harvest of communities from Districts 1- 4A and the remaining U.S. districts of the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 7.** Comparison of Summer Chum Salmon subsistence harvest from communities in Districts 1-4A and the remaining U.S. districts of the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 8.** Comparison of Fall Chum Salmon subsistence harvest from communities in Districts 1-4A and the remaining U.S. districts of the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 9.** Comparison of Coho Salmon subsistence harvest from communities in Districts 1- 4A and the remaining U.S. districts of the Yukon River from 2004 to 2014 (Jallen et al. 2017).

### Cultural Knowledge and Traditional Practices

The use and importance of salmon and other non-salmon species for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence lifestyle, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have likely lived in the Yukon area for over 10,000 years (Rainey 1940) and fishing was a family and community activity, deeply ingrained in to the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and more recently employed commercially made set nets along with handmade fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recalled whole families spending long hours at their fish camps, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010; Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and Fall Chum Salmon along with other subsistence resources (Brown et al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and

commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is passed down from generation to generation.

Customary trade of fish is an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use nets under the ice to fish for pike, whitefish, or sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed by people in the United States and overseas. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

The use, harvest, and dependence of salmon resources can vary by community based on cultural practices, resource availability, economics and many other factors. Yukon River drainage residents exhibit these variations generally within the lower, middle, and upper stretches of the drainage. Communities present along the river and their populations over time, by fishing district, are represented in **Appendix 1**.

### **Effects of the Proposal**

If this proposal were adopted, Federally qualified subsistence users would be allowed to continue subsistence fishing for salmon up to 6 hours, instead of up to 24 hours, before the start of the State commercial fishing season in Yukon Districts 1, 2, 3, and Subdistrict 4A (excluding Koyukuk and Innoko rivers).

Although this proposal may increase opportunities for subsistence harvest for Federally qualified users, there are some potential drawbacks that may occur. State and Federal regulations would no longer be the same, complicating enforcement of these regulations and creating confusions about where and when it is legal to fish. Districts 1 and 2 contain primarily Federal public waters, as well as most of District 3. However, once out of the Yukon Delta National Wildlife Refuge, land status becomes more varied and would require users to know the location of Federal public waters.

Fishery managers currently have the authority to set time and area. Therefore, it is not unusual for them to modify the amount of closure time leading into and out of a commercial fishing period. For example, subsistence fishing was closed for only 3 hours prior to and reopened 3 hours after a commercial opening on July 22, 2017 (ADF&G 2017).

If the proposal was not adopted, the subsistence fishery would remain closed for 24 hours prior to the start of the State commercial fishing season and subsistence management regulations would remain the same.

## OSM PRELIMINARY CONCLUSION

**Support** Proposal FP19-02 **with modification** to provide the updated language only one time in the regulations to avoid redundancy.

The modified regulation should read:

### *§ \_\_.14 Relationship to State procedures and regulations*

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

### *§ \_\_.27 Subsistence taking of fish*

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

*(vi) In Districts 1, 2, 3, and Subdistrict 4A, excluding the Koyukuk and Innoko River drainages, you may not take salmon for subsistence purposes during the ~~246~~ hours immediately before the opening of the State commercial salmon fishing season.*

## **Justification**

Adoption of this proposal would result in additional opportunity for Federally qualified subsistence users in Districts 1-4A on the Yukon River. If adopted with FP19-03 as modified, Federally qualified subsistence users would have a uniform period of closure surrounding the commercial fishery throughout the fishing season reducing confusion in Federal regulations surrounding the closure time before and after a commercial fishing opportunity. The 6 hours between subsistence fishing and commercial fishing would still allow enough time for users to adjust for each as needed. Modification of the proposed language avoids redundancy in Federal regulations.

## ANALYSIS ADDENDUM

### OSM CONCLUSION

**Oppose** Proposal FP19-02

#### **Justification**

Adoption of this proposal may increase opportunities for some Federally qualified users in the Yukon River Districts 1, 2, 3, and 4A; however, the potential benefits do not outweigh the anticipated negative effects. State and Federal regulations would no longer be congruent, complicating enforcement of these regulations and creating confusions among Federally qualified users regarding where and when it is legal to fish. In addition, shortening the closure period before the start of the commercial fishing period may make it easier for subsistence caught fish to be sold into the commercial fisheries. Additionally, some subsistence fishers prefer a pause between subsistence fishing and commercial fishing to prepare gear, rest, and to travel to fishing locations. For these reasons this proposal is likely to add to the complexity of the fishery for both managers and Federally qualified users.

In addition, public testimony has also indicated little support for this proposal. Following the Yukon Delta, Western Interior, Eastern Interior, and Seward Peninsula Council meetings, OSM staff reviewed comments made during the meetings, and revised the OSM conclusion accordingly.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Oppose** FP19-02. The Council discussed that would like to see an opportunity for subsistence fishers to be out earlier or longer on the river around commercial fisheries openings for more time to harvest for subsistence. However, Yukon Council members expressed their experience has been that ADF&G had been managing this pretty well. The Council concurred that based on overall feedback that this in-season management was working pretty well and that a little bit of buffer between fisheries could actually be helpful for those that engage in both subsistence and commercial fishing which is common in many lower Yukon communities. The Council did stress that they saw this as good management to have a brief buffer between commercial and subsistence fishing but emphasized it should not be viewed as a criminal enforcement issue, noting that few to none would try to travel all the way to a buyer in short time to try to sell subsistence fish. The Council expressed again all the efforts that subsistence communities all along the Yukon River have made in support of Chinook conservation.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-02. Several Council members remarked on the potential for subsistence caught fish to be sold into the commercial markets if the time buffer between the two fisheries was reduced. The Council agreed that although they would like to see an opportunity for subsistence users to get out on the river earlier, they recognized that the State and Federal managers had provided a working buffer. One member mentioned that reducing the buffer may give certain fisherman prior knowledge of where the fish are, and therefore provide an advantage. The Council also agreed that the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council provided expertise on this issue, and concurred with their position to oppose FP19-02.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Oppose** FP19-02. The Council considers the opposition by three Yukon River area Councils to be paramount to this decision and that it was important to support the regions that would be directly impacted by this proposal. The Council supports current management tools and the ability of managers to prevent the sale of subsistence caught fish in the commercial market. The Council also felt having a different closure period under state and Federal regulations would create confusion.



### **Eastern Interior Alaska Subsistence Regional Advisory Council**

**Oppose FP19-02.** The Council opposed the proposal, because it would impair effectiveness of management, and noted that the purpose of the closure is to conduct orderly commercial and subsistence fisheries and help to prevent the illegal sales of subsistence-caught salmon into the commercial fishery. Approving this proposal might make conserving salmon more difficult as the law enforcement would lose an ability to bring charges against someone engaging in illegal sales. Rejecting the proposal would not be detrimental to subsistence fishing, as subsistence would still be able to occur, and it would not restrict subsistence – just separate by time from commercial fishing. The Council noted that it is aware of a prosecution of a case when in 1992 subsistence fishermen from District 1 would be catching subsistence fish and selling to commercial processors in District 1. The Council felt that it was important to oppose the Fisheries Proposal FP19-02 in order to continue the separation of the subsistence and commercial fisheries that would prevent cases similar to 1992 case from happening.

### **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### **ALASKA DEPARTMENT OF FISH AND GAME COMMENTS**

**Fisheries Proposal FP19-02:** This proposal was submitted by Alissa Nadine Rogers of Bethel. The proposal would reduce the time subsistence fishing is closed prior to the start of the State commercial fishing season for Yukon districts 1, 2, and 3 and Subdistrict 4-A (excluding Koyukuk and Innoko rivers) from 24 hours to 6 hours.

**Introduction:** The purpose of the closure times is to help ensure subsistence-caught fish are not sold in the commercial fishery. Furthermore, Federal regulations are currently aligned with state regulations.

**Impact on Subsistence Users:** Adoption of this proposal could potentially create confusion among subsistence users by having different time requirements in state and Federal regulations.

**Impact on Other Users:** None.

#### **Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for

customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

For salmon in the Yukon Area, the BOF has made the following ANS findings

45,500–66,704 king salmon

83,500–142,192 summer chum salmon

89,500–167,900 fall chum salmon

20,500–51,980 coho salmon

2,100–9,700 pink salmon

The State directs (5 AAC 01.210) subsistence fishing closures before the opening of commercial seasons. The state already reduces the closures before, during and after commercial openings to provide increased subsistence opportunity when it is warranted. In some cases, for instance in subdistrict 4-A, commercial and subsistence fishing is concurrent with no closure to subsistence fishing.

#### **5 AAC 01.210. Fishing seasons and periods**

(e) In Districts 1, 2, and 3, excluding the Innoko River drainage, salmon may not be taken for subsistence during the 24 hours immediately before the opening of the commercial salmon fishing season, and...

**Conservation Issues:** Requiring managers to reduce closure times around commercial openings, could reduce management flexibility in times when market demand or lack of enforcement presence could encourage fishermen to sell subsistence-caught king salmon or chum salmon illegally into the commercial fishery. While the occurrence of this has been rare since the cessation of the king salmon commercial fishery due to depressed run sizes, it can be a factor in the chum commercial fishery, and management flexibility to react is imperative. Furthermore, closures around commercial openings, can also be used as a conservation tool to allow fish to pass thru areas without fishing pressure from either the commercial or subsistence fishery.

**Enforcement Issues:** This proposal could increase the amount of subsistence taken salmon illegally sold in the commercial fishery. In addition, because of misaligned regulations, adoption of the proposal would create confusion for enforcement officers as to which regulations were in effect.

**Recommendation:** ADF&G **OPPOSES** this proposal. State and federal regulations are currently aligned, and this proposal would take them out of alignment. Closures around commercial openings are an important tool used to allow groups of fish to pass through areas without fishing pressure from either the commercial or subsistence fishery. Time periods between subsistence and commercial fisheries are used throughout the state to help prevent subsistence fish making its way into commercial sales. ADF&G already has the authority to alter closure times to reflect the frequency of commercial openings. State managers work very closely with federal managers to determine closures around commercial fishing periods.

ADF&G encourages the federal subsistence management program to clarify how this regulation would be implemented.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 90 and 91 are especially relevant to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

**Appendix 1.** Population data for communities within the Yukon River drainage fishing districts, 1960-2010.

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Stebbins city	158	231	331	400	547	556	134
<b>Outside drainage subtotal</b>	<b>158</b>	<b>231</b>	<b>331</b>	<b>400</b>	<b>547</b>	<b>556</b>	<b>134</b>
Alakanuk city	278	265	522	544	652	677	160
Nunam Iqua city	125	125	103	109	164	187	43
Emmonak city	358	439	567	642	767	762	185
Kotlik city	57	228	293	461	591	577	128
<b>District 1 subtotal</b>	<b>818</b>	<b>1,057</b>	<b>1,485</b>	<b>1,756</b>	<b>2,174</b>	<b>2,203</b>	<b>516</b>
Mountain Village city	300	419	583	674	755	813	184
Pitkas Point CDP	28	70	88	135	125	109	31
Saint Marys city	260	384	382	441	500	507	151
Pilot Station city	219	290	325	463	550	568	121
Marshall city	166	175	262	273	349	414	100
<b>District 2 subtotal</b>	<b>973</b>	<b>1,338</b>	<b>1,640</b>	<b>1,986</b>	<b>2,279</b>	<b>2,411</b>	<b>587</b>
Russian Mission city	102	146	169	246	296	312	73
Holy Cross city	256	199	241	277	227	178	64
Shageluk city	155	167	131	139	129	83	36
<b>District 3 subtotal</b>	<b>513</b>	<b>512</b>	<b>541</b>	<b>662</b>	<b>652</b>	<b>573</b>	<b>173</b>
Anvik city	120	83	114	82	104	85	33
Grayling city	0	139	209	208	194	194	55
Kaltag city	165	206	247	240	230	190	70
Nulato CDP	183	308	350	359	336	264	92
Koyukuk city	128	124	98	126	101	96	42
Huslia city	168	159	188	207	293	275	91
Hughes city	69	85	73	54	78	77	31
Allakaket city	115	174	163	170	97	105	44
Alatna CDP				31	35	37	12
Bettles city	77	57	49	36	43	12	9
Evansville CDP	77	57	45	33	28	15	12
Wiseman CDP	0	0	8	33	21	14	5
Coldfoot CDP					13	10	6
Galena city	261	302	765	833	675	470	190
Ruby city	179	145	197	170	188	166	62
<b>District 4 subtotal</b>	<b>1,542</b>	<b>1,839</b>	<b>2,506</b>	<b>2,582</b>	<b>2,436</b>	<b>2,010</b>	<b>754</b>
Tanana city	349	120	388	345	308	246	100
Rampart CDP	49	36	50	68	45	24	10
Stevens Village CDP	102	74	96	102	87	78	26
Beaver CDP	101	101	66	103	84	84	36
Fort Yukon city	701	448	619	580	595	583	246
Chalkyitsik CDP	57	130	100	90	83	69	24

*Continued on next page*

## Appendix 1. Continued from previous page

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Arctic Village CDP	110	85	111	96	152	152	65
Venetie CDP	107	112	132	182	202	166	61
Birch Creek CDP	32	45	32	42	28	33	17
Circle CDP	41	54	81	73	100	104	40
Chicken CDP	0	0	0	0	17	7	5
Central CDP	28	26	36	52	134	96	53
Eagle Village CDP	0	0	54	35	68	67	31
Eagle city	92	36	110	168	129	86	41
<b>District 5 subtotal</b>	<b>1,769</b>	<b>1,267</b>	<b>1,875</b>	<b>1,936</b>	<b>2,032</b>	<b>1,795</b>	<b>755</b>
Livengood CDP					29	13	7
Manley CDP	72	34	61	96	72	89	41
Minto CDP	161	168	153	218	258	210	65
Whitestone CDP						97	22
Nenana city	286	362	470	393	402	378	171
Four Mile Road CDP					38	49	14
Healy CDP	67	79	334	487	1,000	1,021	434
McKinley Park CDP	0	0	60	171	142	185	109
Anderson city	341	362	517	628	367	246	90
Ferry CDP				56	29	33	17
Lake Minchumina CDP	0	0	22	32	32	13	6
Cantwell CDP	85	62	89	147	222	219	104
Delta Junction city	0	703	945	652	840	958	377
Fort Greely CDP	0	1,820	1,635	1,299	461	539	236
Deltana CDP					1,570	2,251	784
Healy Lake CDP	0	0	33	47	37	13	7
Big Delta CDP	0	0	285	400	749	591	206
Dry Creek CDP	0	0	0	106	128	94	29
Dot Lake CDP	56	42	67	70	19	13	7
Dot Lake Village CDP					38	62	19
Tanacross CDP	102	84	117	106	140	136	53
Tetlin CDP	122	114	107	87	117	127	43
Tok CDP	129	214	589	935	1,393	1,258	532
Northway CDP	196	40	73	123	95	71	27
Northway Jct. CDP	0	0	0	88	72	54	20
Northway Village CDP						98	
Alcan border CDP	0	0	0	27	21	33	16
Nabesna CDP						5	3
<b>District 6 subtotal</b>	<b>1,617</b>	<b>4,084</b>	<b>5,557</b>	<b>6,168</b>	<b>8,271</b>	<b>8,856</b>	<b>3,439</b>
<b>TOTAL</b>	<b>7,390</b>	<b>10,328</b>	<b>13,935</b>	<b>15,490</b>	<b>18,391</b>	<b>18,404</b>	<b>6,358</b>

CDP=Census Designated Place. Black cell=information is not available. Source: ADCCED 2014.

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**FP19-03/19-04 Executive Summary**

<p><b>General Description</b></p>	<p>Proposal FP19-03 requests the Federal Subsistence Board (Board) decrease the time the subsistence fishery is closed immediately before the State commercial fishing period in Yukon Districts 1, 2, and 3 from 18 hours to 6 hours, and immediately after from 12 hours to 6 hours.</p> <p>Proposal FP-04 requests the Board eliminate the closures to subsistence fishing immediately before, during and after commercial fishing periods in Yukon Districts 1, 2, and 3.</p> <p><i>Both proposals submitted by: Alissa Rogers.</i></p>
<p><b>Proposed Regulation</b></p>	<p><i>See pages 33 to 35 of this book for proposed regulations.</i></p>
<p><b>OSM Preliminary Conclusion</b></p>	<p><b>Support FP19-03 with modification</b> to include district 4A and provide the updated language only one time in the regulations to avoid redundancy.</p> <p>The modified language should read:</p> <p style="padding-left: 40px;"><b>§ __.14 Relationship to State procedures and regulations</b></p> <p style="padding-left: 40px;"><i>(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.</i></p> <p style="padding-left: 40px;"><b>§ __.27 Subsistence taking of fish</b></p> <p style="padding-left: 40px;"><i>(e)(3) Yukon-Northern Area.</i></p> <p style="padding-left: 80px;">* * * *</p> <p style="padding-left: 40px;"><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.</i></p> <p style="padding-left: 80px;">* * * *</p> <p style="padding-left: 40px;"><i>(vii) In Districts 1, 2, and 3:</i></p>

<b>FP19–03/19-04 Executive Summary</b>	
	<p>(A) After the opening of the State commercial salmon fishing season through July 15, you may not take salmon for subsistence for <del>186</del> <b>126</b> hours immediately before, during, and for <del>126</del> <b>126</b> hours after each State commercial salmon fishing period;</p> <p>(B) After July 15, you may not take salmon for subsistence for <del>126</del> <b>126</b> hours immediately before, during, and for <del>126</del> <b>126</b> hours after each State commercial salmon fishing period.</p> <p>(viii) In Subdistrict 4A after the opening of the State commercial salmon fishing season, you may not take salmon for subsistence for <del>126</del> <b>126</b> hours immediately before, during, and for <del>126</del> <b>126</b> hours after each State commercial salmon fishing period; however, you may take Chinook salmon during the State commercial fishing season, with drift gillnet gear only, from 6:00 p.m. Sunday until 6:00 p.m. Tuesday and from 6:00 p.m. Wednesday until 6:00 p.m. Friday.</p> <p><b>Oppose</b> FP19-04.</p>
<b>OSM Conclusion</b>	<b>Oppose</b>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>



<b>FP19-03/19-04 Executive Summary</b>	
<b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Oppose</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS  
FP19-03 AND 19-04**

**ISSUES**

Proposal FP19-03, submitted by Alissa Rogers of Bethel, requests the Federal Subsistence Board (Board) decrease the time the subsistence fishery is closed immediately before the State commercial fishing period in Yukon Districts 1, 2, and 3 from 18 hours to 6 hours, and immediately after from 12 hours to 6 hours.

Proposal FP-04, submitted by Alyssa Rogers of Bethel requests the Board eliminate the closures to subsistence fishing immediately before, during and after commercial fishing periods in Yukon Districts 1, 2, and 3.

**DISCUSSION**

The proponent states these closures do not prevent people from selling their harvest from the Federal subsistence fishery as commercially caught fish. The proponent states there are always going to be a few bad actors, that they are known and have been fined before but that the existing regulation has not stopped them. The proponent states that the existing regulation is burdensome on Federal subsistence fishermen without any benefit.

**Existing Federal Regulation**

*§ \_\_.14 Relationship to State procedures and regulations*

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

*§ \_\_.27 Subsistence taking of fish*

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

(vii) *In Districts 1, 2, and 3:*

*(A) After the opening of the State commercial salmon fishing season through July 15, you may not take salmon for subsistence for 18 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period;*

*(B) After July 15, you may not take salmon for subsistence for 12 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period.*

### **Proposed Federal Regulation**

Proposal FP19-03

#### **§ \_\_.14 Relationship to State procedures and regulations**

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

#### **§ \_\_.27 Subsistence taking of fish**

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), **except in Districts 1, 2, and 3 after the opening of the State commercial salmon fishing season through July 15, you may not take salmon for subsistence for 6 hours immediately before, during, and for 6 hours after each State commercial salmon fishing period and after July 15, you may take salmon for subsistence for 6 hours immediately before, during, and for 6 hours after each State commercial salmon fishing period, unless superseded by a Federal Special Action.***

\* \* \* \*

(vii) *In Districts 1, 2, and 3:*

(A) *After the opening of the State commercial salmon fishing season through July 15, you may not take salmon for subsistence for ~~186~~ hours immediately before, during, and for ~~126~~ hours after each State commercial salmon fishing period;*

(B) *After July 15, you may not take salmon for subsistence for ~~126~~ hours immediately before, during, and for ~~126~~ hours after each State commercial salmon fishing period.*

Proposal FP19-04

**§ \_\_.27 Subsistence taking of fish**

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), **except in Districts 1, 2, and 3 after the opening of the State commercial salmon fishing there are no closures to subsistence salmon fishing before, during, or after each State commercial fishing period, unless superseded by a Federal Special Action.***

\* \* \* \*

(vii) *In Districts 1, 2, and 3:*

(A) *After the opening of the State commercial salmon fishing season through July 15, you may ~~not~~ take salmon for subsistence for 18 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period;*

(B) *After July 15, you may ~~not~~ take salmon for subsistence for 12 hours*

*immediately before, during, and for 12 hours after each State commercial salmon fishing period.*

## **Existing State Regulation**

### **5 AAC 01.210. Fishing seasons and periods**

*(e) In Districts 1, 2, and 3, excluding the Innoko River drainage, salmon may not be taken for subsistence during the 24 hours immediately before the opening of the commercial salmon fishing season, and*

*(1) in Districts 1, 2, and 3,*

*(A) after the opening of the commercial salmon fishing season through July 15, salmon may not be taken for subsistence for 18 hours immediately before, during, and for 12 hours after each commercial salmon fishing period;*

*(B) after July 15, salmon may not be taken for subsistence for 12 hours immediately before, during, and for 12 hours after each commercial salmon fishing period;*

*(C) notwithstanding the provisions of (A) and (B) of this paragraph, if the commissioner determines it necessary to ensure that reasonable opportunity for subsistence uses is being provided, the commissioner may, by emergency order, open a subsistence fishing period that may occur during times that are before, during, and after a commercial salmon fishing period;*

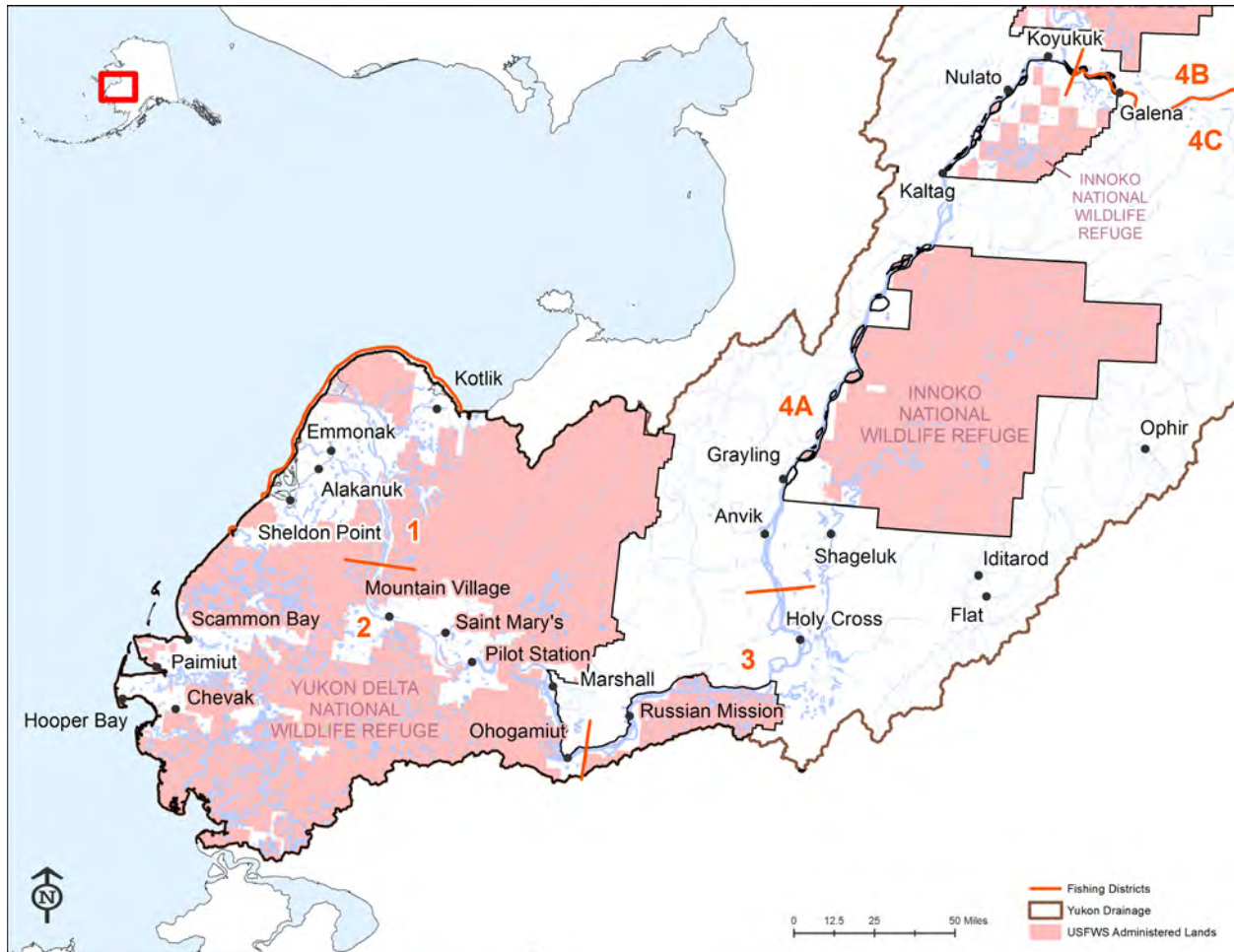
## **Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The Federal public waters addressed by this proposal are those portions of the Yukon River located within, or adjacent to, the external boundaries of the Yukon Delta National Wildlife Refuge (NWR) within fishing Subdistricts 1-3 of the Yukon/Northern Federal Subsistence Fishery Management Area (**Figure 1**).

## **Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have customary and traditional use determination for Salmon, other than Fall Chum Salmon in the Yukon River drainage.

Residents of the Yukon River drainage and the community of Chevak, Hooper Bay, Scammon Bay, and Stebbins have a customary and traditional use determination for Fall Chum Salmon in the Yukon River drainage.



**Figure 1.** Yukon River Drainage fishing Districts 1, 2, 3, and 4A.

## Regulatory History

### State Regulatory History

The current six commercial fishing districts were established in 1974. The subsistence fishing schedules were also linked to the commercial fishing schedules in Districts 1-6 in the same year, and concurrent subsistence and commercial fishing for 5 days per week was implemented in the Upper Yukon Area (Districts 4-6). Beginning in 1977 the lower Yukon area was reduced to commercial and subsistence fishing for 3 days per week during the commercial Chinook Salmon season, and 3.5 days per week during the Fall Chum Salmon season. The Fall Chum Salmon fishing season was again reduced in 1979, to 3 days per week. Beginning in 1981, ADF&G began announcing in-season lower Yukon area commercial fishing periods by emergency order, with Lower Yukon area subsistence periods announced in this manner beginning in 1984 (Jallen et al. 2015).

In December 1976, the Alaska Board of Fisheries (BOF) prohibited the use of drift gillnets for subsistence Chinook Salmon fishing in the middle and upper Yukon Areas (Districts 4-6). The Alaska BOF discussions at that time indicated that the possible increase in the use of drift gillnets could seriously impact both the conservation and allocation of middle and upper Yukon River salmon stocks,

which were being harvested at maximum levels (ADF&G 2001). However, subsistence users in the upper Yukon areas were allowed to continue using drift gillnets throughout the Yukon River drainage until the 1977 season.

In 1981, the Alaska BOF adopted a proposal to allow drift gillnets for subsistence Chinook Salmon harvest in Subdistrict 4-A (ADF&G 1982).

Beginning in 1993, regulations separated commercial and subsistence fishing times in Districts 1-3 and Subdistrict 4A. The regulations stated that subsistence fishing in District 1-3 was open 7 days per week, 24 hours/day until the commercial fishing season began. Once commercial fishing had started, subsistence fishing was closed 18 hours prior, during, and 12 hours after each commercial fishing period. Also, marking of subsistence caught fish was required by removal of the dorsal fin. These regulations were made based on an enforcement action where subsistence-caught fish were being sold in the commercial fishery in 1992 (Bergstrom et al. 1995).

In 1994, the Alaska BOF questioned the need for drift gillnets to provide for adequate subsistence opportunity in the middle and upper Yukon Areas. State staff comments suggested that at that time, it did not appear necessary (ADF&G 2001). The Alaska BOF stated that ADF&G could allow increased time for subsistence fishing with other gear types by emergency order, as an alternative, if subsistence needs were not being met. No BOF action was taken.

The Alaska BOF added a fishing schedule for the subsistence salmon fisheries. The schedule will be implemented chronologically, consistent with migratory timing as the run progresses upstream. This schedule may be altered by emergency order if preseason or in-season indicators suggest it is necessary for conservation. Districts 1-3 windows allowed subsistence salmon fishing for two 36 hour periods per week. Districts 4, and Subdistricts 5-B and 5-C were open to subsistence fishing for two 48-hour periods per week. Subsistence fishing in Subdistrict 4-A was further defined during the commercial fishing season in 2004 with Chinook Salmon fishing only allowed during two 48 hour drift netting periods per week by emergency order.

In February 2007, the Alaska BOF adopted a proposal changing the marking requirement for subsistence-caught salmon in Districts 1–3 from removal of the dorsal fin to removal of both tips of the tail fin. The rationale cited in the subcommittee report was to foster better compliance because marking would be easier, to make the regulation consistent with other areas of the State, to clarify when subsistence marking requirements would be in place, to use a more sanitary mark, and to discourage subsistence caught fish from entering the State’s commercial fisheries (ADF&G 2007).

Commercial fishing for Chum Salmon during times of Chinook Salmon conservation was permitted with fish wheels by emergency order in Subdistrict 4A, beginning in 2012. Fishermen are required to be present at the fish wheel, and immediately release all Chinook Salmon alive.

In March 2015, the Alaska BOF adopted a new regulation that allowed the use of drift gillnets to harvest Summer Chum Salmon for subsistence purposes during times of Chinook conservation from June 10 through August 2, by emergency order, in the upper portion of Subdistrict 4A (5 AAC 01.220(e)(1)).

In January 2016, the Alaska BOF adopted the same regulations for the lower portion of the Subdistrict 4A (5 AAC 01.220 (e) (2)).

### Federal Regulatory History

Starting in October 1999, Federal subsistence management regulations for the Yukon-Northern Area stipulated that, unless otherwise restricted, rural residents may take salmon in the Yukon-Northern Area at any time by gillnet, beach seine, fish wheel, or rod and reel unless exceptions are noted.

In 2002, the Board delegated some of its authority to manage Yukon River drainage subsistence salmon fisheries to the Branch Chief for Subsistence Fisheries, U.S. Fish and Wildlife Service, in Fairbanks. The Federal Subsistence Board's delegation allows the Federal manager to open or close Federal subsistence fishing periods or areas provided under codified regulations, and to specify methods and means.

In 2017, through fisheries proposal FP17-03, the Board modified regulations in Subdistrict 4-A to allow the Federal In-season Manager to open fishing periods during which Chum Salmon may be taken by drift gillnets from June 10 through August 2 (FSB 2017). This regulation change was made to match existing ADF&G regulations that were modified in 2015 and 2016.

### **Current Events**

The proponent for this regulatory proposal has also submitted this proposal (Alaska BOF Proposal 91) to the BOF for its review during their Arctic/Yukon/Kuskokwim Finfish meeting that is scheduled for January 15-19, 2019. The proponent has also submitted FP19-02, which is a similar proposal that aims to reduce the required closure before the beginning of the commercial fishing season from 24 hours to 6 hours.

### **Biological Background**

#### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks showed periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station were approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish and below the average of 195,800 fish for years with early run timing. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2015).



The 2015 projected run size was 118,000-140,000 fish, which was once again below average yet higher than the previous year's projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately  $116,000 \pm 30,000$  fish (90% CI) (**Figure 2**). As with the previous year, this number was still below the historical average. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately  $176,898 \pm 18,466$  fish (90% CI) (Liller, 2018 pers. comm.). This number was near the recent historical average of 178,300 fish (ADF&G 2018a), but is considered preliminary at this time. Conservative actions were relaxed slightly from previous years and all escapement goals were again met (JTC 2016).

The 2017 run outlook was slightly larger, but still below average: 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately  $263,000 \pm 29,000$  fish (90% CI) (ADF&G 2018a), which was the largest since 2003 (JTC 2017), is also considered preliminary. Subsistence management restrictions were further relaxed that resulted in harvests approximately two thirds of average and most escapement goals were met despite the poor water conditions that existed throughout the drainage. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

The 2018 run outlook is larger than in recent years, with a run size of 173,000-251,000 fish (ADF&G 2018a). The upper end of the range could support an average subsistence harvest, while the low end of the range would likely result in restrictions to subsistence fishing.

### Summer Chum Salmon

Summer Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 15 years, 2003-2017. In 2017, the projected outlooks were for a run size of approximately 2 million fish, while the 2018 projection is expected to be similar or slightly lower than the 2017 run of approximately 3.6 million fish.

In 2016, approximately  $1.92 \text{ million} \pm 80,517$  (90% CI) fish passed the Yukon River sonar project at Pilot Station, which was near the historical median for the project of 1.90 million fish. In 2017, the passage estimate at Pilot Station increased to  $3.09 \text{ million} \pm 138,259$  (90% CI) (**Figure 3**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018). The Henshaw Creek weir counted a record number of Chum Salmon (360,687), which was just under the number counted at the Anvik River Sonar (415,139). The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

Although all 2017 numbers are preliminary at this time, the 2018 run is anticipated to provide for escapement, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

Fall Chum Salmon

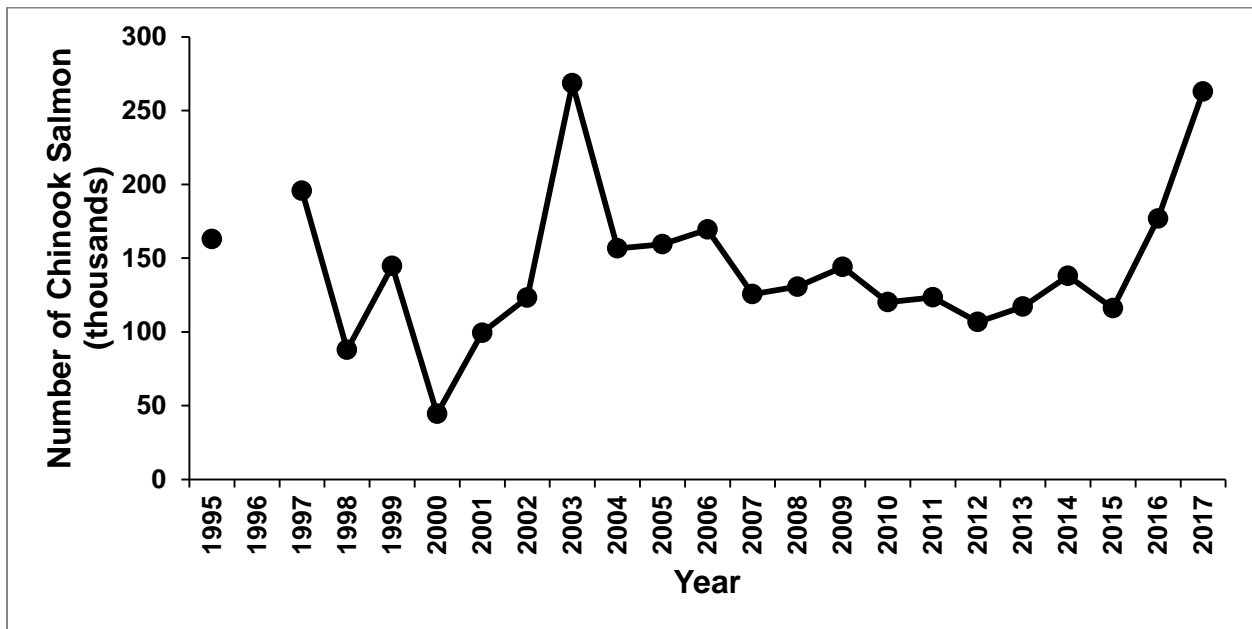
Fall Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 8 years, 2010-2017. The 2018 projection of 1.6-1.8 million fish is lower than the 2017 run of approximately 2.3 million fish (JTC 2018).

In 2016, approximately 994,760 million  $\pm 64,434$  (90% CI) Fall Chum Salmon passed the Yukon River sonar project at Pilot Station, which was above the 1995-2016 median for the project of 688,057 fish. In 2017, the passage estimate at Pilot Station increased to 1.83 million  $\pm 54,179$  (90% CI) and was the second largest run in 43 years (**Figure 4**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018) although all 2017 numbers are preliminary at this time.

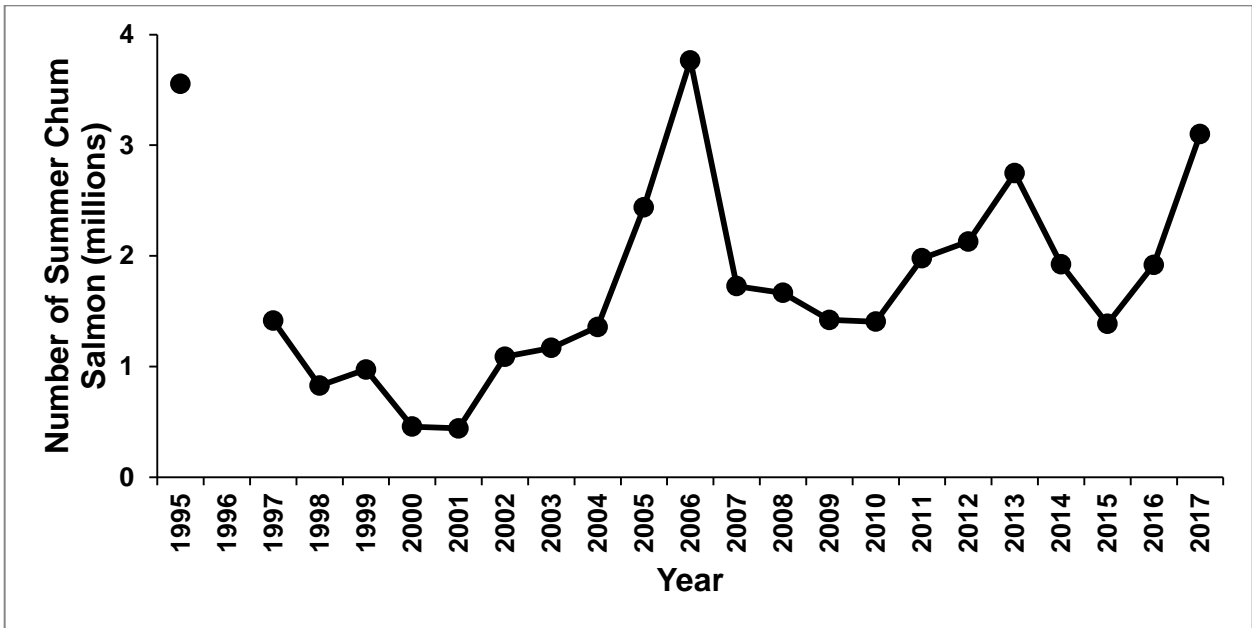
The 2018 run is anticipated to provide for escapement, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

Coho Salmon

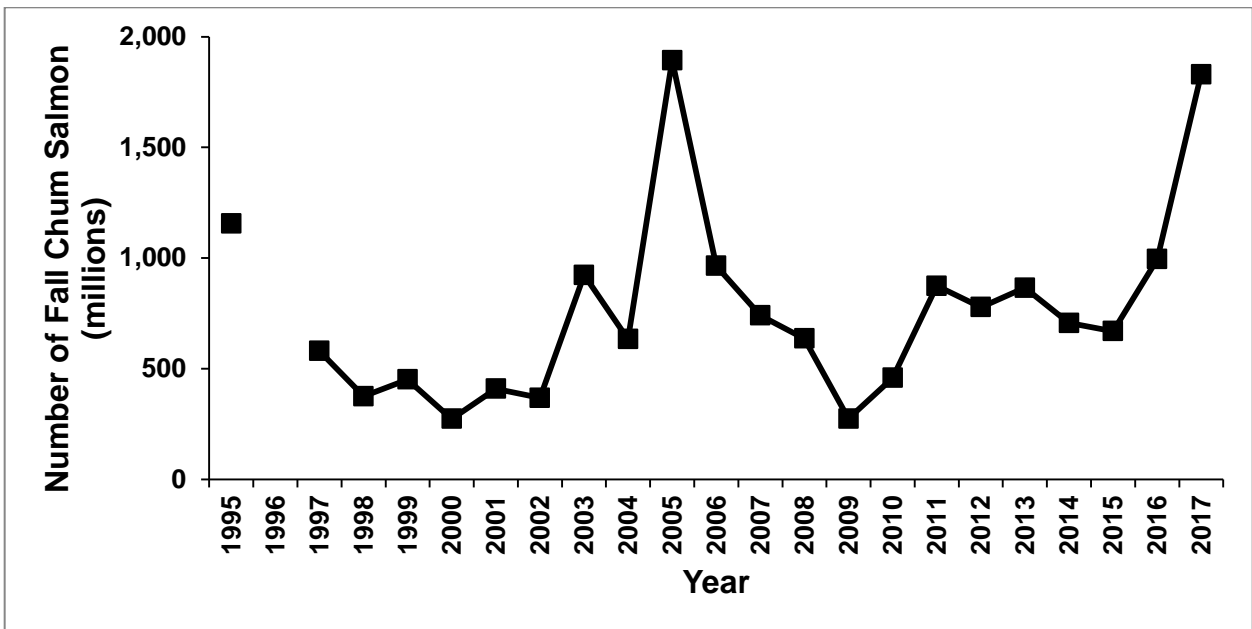
In 2016 approximately 168,297  $\pm 11,180$  (90% CI) Coho Salmon passed the Yukon River sonar project at Pilot Station, which was slightly above the historical median of 160,272 fish. In 2017, the passage estimate at Pilot Station decreased to 166,330  $\pm 20,300$  (90% CI), which was also slightly above the historical median (**Figure 5**). All 2017 numbers are preliminary at this time. The Coho Salmon outlook is based upon parent year escapements assuming average survival. Since Coho Salmon predominantly return as age 2.1 fish (4 year old fish), the major contributor to the 2018 returns are from the 2014 parent year. Therefore, the 2018 outlook is for average to above average returns in 2018.



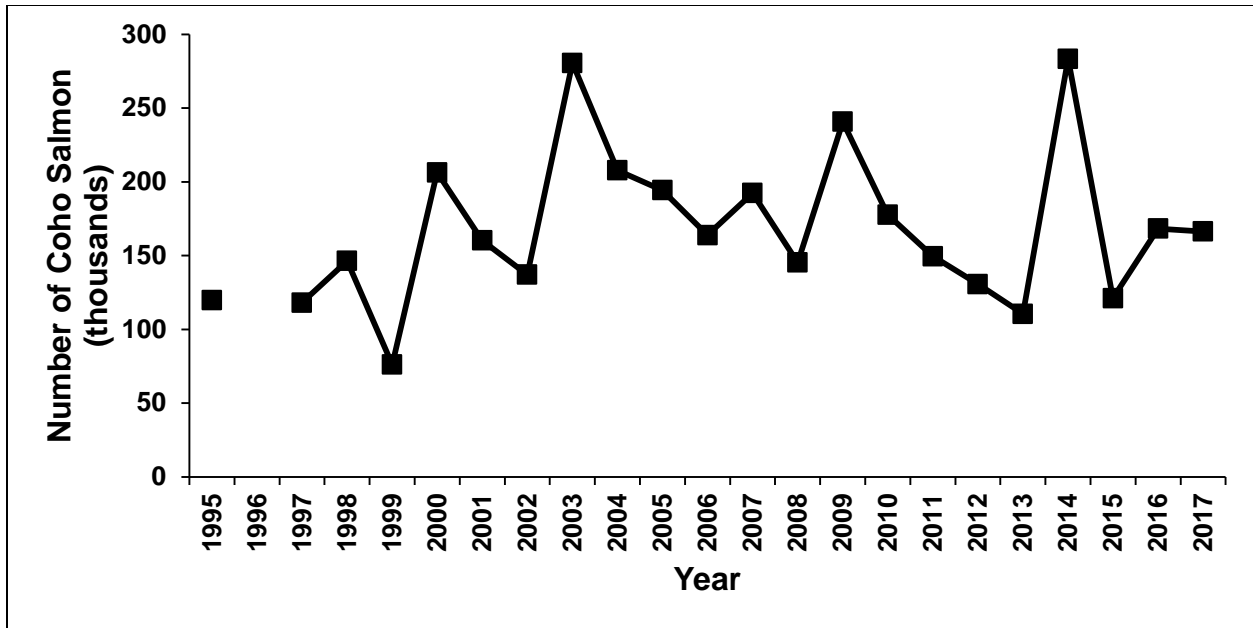
**Figure 2.** Chinook Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 3.** Summer Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 4.** Fall Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 5.** Coho Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.

## Harvest History

### Chinook Salmon

#### *Subsistence*

Subsistence harvest of Chinook Salmon in the Alaska portion of the Yukon River averaged 34,791 fish from 1961-2015, with a high of 62,486 in 1993 and a low of 2,724 in 2014 (JTC 2017) (**Figure 6**). The 2014 Chinook Salmon subsistence harvest of 2,724 fish was the lowest on record for the Alaska portion of the Yukon River drainage. Harvest increased in 2015, 2016 and 2017 with 7,577, 21,627, and 36,992 fish harvested respectively. The 2017 harvest estimate, though preliminary, is larger than the 2007-2016 average (29,514) and over 2 times the number of the recent 5 year average of 15,088 (JTC 2018). The 2017 harvest was the largest since 2011.

The subsistence harvest in Yukon River Districts 1-3 averaged 16,755 from 2004- 2013, with a 2009-2013 average of 13,442 Chinook Salmon (Jallen et al. 2017). The estimated 2014 subsistence harvest in these districts was 2,020 Chinook Salmon.

#### *Commercial*

Chinook Salmon have not been targeted in the commercial fishery for 10 years and the sale of incidentally caught Chinook Salmon was prohibited for the seventh consecutive year during the 2017 summer season. However, there was a small opportunity during the fall fishing seasons were fish were sold in Districts 1 and 2 in 2011 (82) and 2017 (168). The 1961-2016 average commercial harvest is 88,092 with a recent 10 year average of 9,714 (JTC 2018).

*Sport fish*

Sport fishing harvest of Chinook Salmon are generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 105 Chinook Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort. During 2017, sport fishing was allowed after June 20, and allowed for a bag limit of 1 Chinook Salmon 20-inches or greater (JTC 2018).

Summer Chum Salmon*Subsistence*

Subsistence harvest of Summer chum Salmon in the Alaska portion of the Yukon River averaged 129,766 fish from 1970-2016, with a high of 227,829 in 1988 and a low of 72,155 in 2001 (JTC 2018) (**Figure 7**). The estimated 2012-2016 average harvest was 100,113 Summer Chum Salmon, and the harvest estimate from 2014-2017 remained relatively constant. The preliminary 2017 harvest is 87,252 Summer Chum Salmon. Summer Chum Salmon are predominately harvested in Yukon area Districts 1-4, and 6. Few Summer Chum Salmon migrate upstream of the Tanana River in the Yukon River mainstream.

*Commercial*

Commercial harvest of Chum Salmon in the Alaska portion of the Yukon River averaged 382,635 fish from 1970-2016, with a high of 1,148,650 in 1988 and a low of 0 in 2001 (JTC 2018). Since 2001, commercial catches of Summer Chum Salmon has increased dramatically, with a 2012-2016 average of 444,094 fish. Preliminary data for the 2017 season shows a harvest of 555,296 Summer Chum Salmon.

*Sport fish*

Sport fishing harvest of Summer Chum Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 264 Summer Chum Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.

Fall Chum Salmon*Subsistence*

Subsistence harvest of Fall Chum Salmon in the Alaska portion of the Yukon River averaged 105,167 fish from 1961-2016, with a high of 342,819 in 1987 and a low of 19,395 in 2000 (JTC 2018) (**Figure 8**). The 2012-2016 average harvest is estimated to be 95,294 Fall Chum Salmon, and the harvest estimate from 2014-2017 has remained relatively constant. The preliminary 2017 harvest is 86,189 Fall Chum Salmon.

### *Commercial*

Commercial harvest of Fall Chum Salmon in the Alaska portion of the Yukon River averaged 157,467 fish from 1961-2016, with a high of 466,451 in 1981 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of Fall Chum Salmon has varied dramatically, and the 2012-2016 average is 260,042 fish. Preliminary data for the 2017 season shows a harvest of 489,702 Fall Chum Salmon.

### *Sport fish*

Sport fishing harvest of Fall Chum Salmon is generally low in the Yukon River drainage, with no data available (JTC 2018).

## Coho Salmon

### *Subsistence*

Subsistence harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 22,400 fish from 1961-2016, with a high of 82,371 in 1987 and a low of 3,966 in 1970 (JTC 2018) (**Figure 9**). The 2012-2016 average harvest was estimated to be 16,003 Coho Salmon, while the harvest estimate from 2016 and 2017 has decreased. Preliminary data for the 2017 season show a harvest of 7,645 Coho Salmon.

### *Commercial*

Commercial harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 38,031 fish from 1961-2016, with a high of 201,482 in 2016 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of Coho Salmon has varied dramatically, and the 2012-2016 average is 115,372 fish. The 2017 harvest was 138,915 Coho Salmon. All harvest data from 2016 and 2017 are preliminary.

### *Sport fish*

Sport fishing harvest of Coho Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 703 Coho Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.

## Comprehensive Household Harvest Surveys

ADF&G's Division of Subsistence occasionally undertakes comprehensive household surveys as time and resources allow. These document the use, harvest, and sharing of all wild foods harvested in a community in a given year and can thus provide insights on the importance of individual resources within the overall harvest and the cultural contexts of these harvests, including patterns of sharing. For

the region represented by the proposal, available salmon harvest and use data collected by these surveys is represented in **Table 1**.

The Chinook Salmon and Chum Salmon harvests and use represented in **Table 1** include all gear types including commercial retention. A large percentage of households in these communities used Chinook Salmon in the study years. Patterns of Chum Salmon use was similar to Chinook Salmon for all communities except for Alakanuk, which had a higher percentage of Chinook Salmon compared to Chum Salmon. Coho Salmon use was much less than for the other two species for all communities except Shageluk which used more Coho Salmon than Chinook or Chum Salmon in 2013.

Sharing of salmon resources as represented by giving and receipt in **Table 1** was common for communities with available data. Sharing includes distribution within and outside of the community. For all communities except Marshall, a larger percentage of households reported receiving salmon resources than did those giving them away. Russian Mission household also gave away more Chum Salmon in 2011 than they received. Emmonak represented the greatest percentage of households sharing both Chinook Salmon and Chum Salmon, with 56.5% and 55.7% of households respectively.

The estimated amount of harvest for these salmon species varied by community and year, based largely on availability of the resource and the population of each community. To correct for population, lbs. harvested per capita is a better indicator of harvest and use than is the total estimated harvest. Within the available data, all communities except Marshall and Russian Mission harvested more pounds. per capita of Chum Salmon than Chinook Salmon. Marshall’s per capita harvest of Chinook and Chum Salmon were similar while Russian Mission’s per capita harvest of Chinook Salmon was greater than that of Chum Salmon in both 1985 and 2011. For all years and communities except Shageluk, the per capita harvest of Coho was lower than that of Chinook and Chum Salmon. While Shageluk’s per capita harvest of Coho was lower in 1990, it exceeded that of Chinook Salmon in 2013.

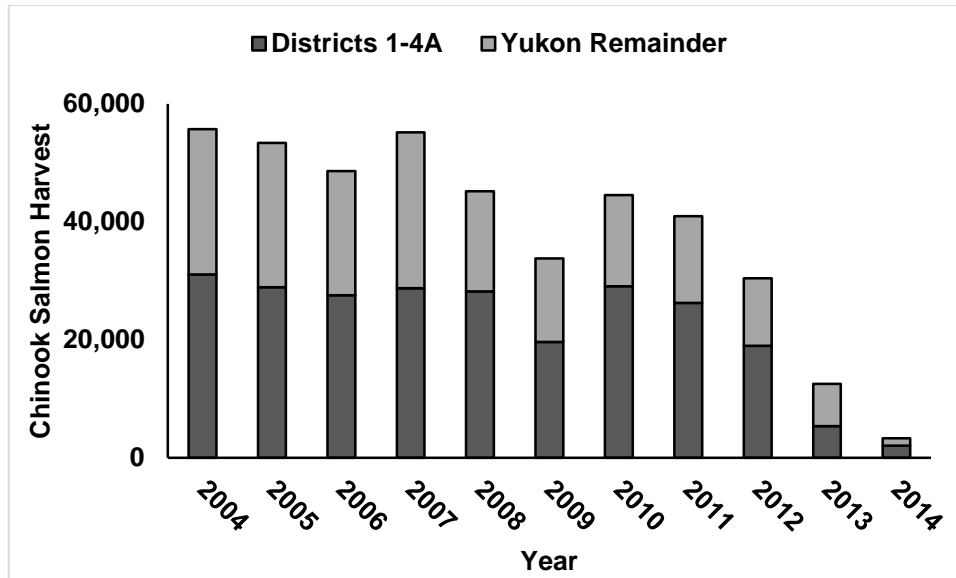
**Table 1.** Chinook Salmon, Chum Salmon, and Coho Salmon harvest in communities located within Yukon River districts 1-3 as determined through available ADF&G household subsistence harvest surveys (ADF&G 2018b).

Community, Year, Species	% Households Using	Est. Individuals Harvested	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Alakanuk</b>					
1980 Chinook	-	13,693	72.5	-	-
1980 Chum	-	1,521	112.2	-	-
1980 Coho	-	2,717	12.5	-	-

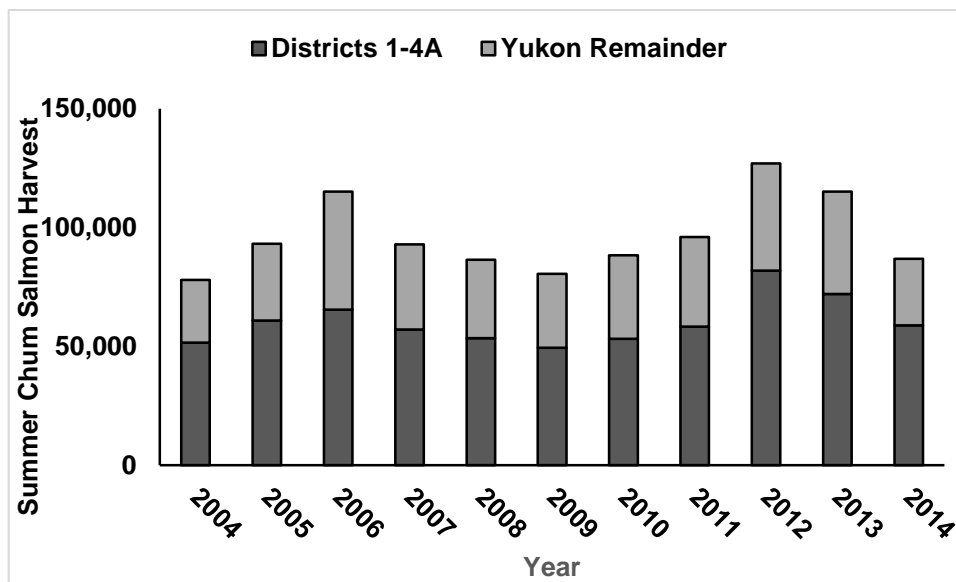
<b>Community, Year, Species</b>	<b>% Households Using</b>	<b>Est. Individuals Harvested</b>	<b>Lbs. Harvested per Capita</b>	<b>% Households Giving Away</b>	<b>% Households Receiving</b>
<b>Nunam Iqua</b>					
1980 Chinook	-	1912	220.3	-	-
1980 Chum	-	11,487	406.2	-	-
1980 Coho	-	1,275	45.1	-	-
<b>Emonnak</b>					
1980 Chinook	-	2,256	79.7	-	-
1980 Chum	-	12,144	131.7	-	-
1980 Coho	-	1,350	14.6	-	-
2008 Chinook	89.0	3,042.7	39.3	34.9	65.1
2008 Chum	90.1	19,132.0	125.0	41.3	57.8
2008 Coho	55.0	3,265.3	21.2	20.2	32.1
<b>Kotlik</b>					
1980 Chinook	-	1,060	44.8	-	-
1980 Chum	-	6,884	89.4	-	-
1980 Coho	-	764	9.9	-	-
<b>Mountain Village</b>					
1980 Chinook	-	2,322	71.6	-	-
1980 Chum	-	17,382	164.4	-	-
1980 Coho	-	1,932	18.3	-	-
2010 Chinook	85.2	2,198.9	26.4	38.3	56.5
2010 Chum	82.6	11,447.5	74.1	38.3	55.7
2010 Coho	39.1	1,134.9	7.6	16.5	22.6
<b>Marshall</b>					
2010 Chinook	89.1	3,303.9	91.2	50.0	39.1
2010 Chum	89.1	5,981.4	89.0	41.3	37.0
2010 Coho	34.8	844.5	13.1	23.9	17.4
<b>Russian Mission</b>					
1985 Chinook	-	1,938	134.7	-	-
1985 Chum	-	3,087	73.2	-	-
1985 Coho	-	740	17.6	-	-
2011 Chinook	84.8	3,176.5	73.5	28.3	37.0
2011 Chum	80.4	2,375.0	29.7	32.6	15.2
2011 Coho	47.8	479.2	6.1	13.0	21.7
<b>Holy Cross</b>					
1990 Chinook	-	1,649	82.9	-	-
1990 Chum	-	1,218	21.1	-	-
1990 Coho	-	944	17.2	-	-
<b>Shageluk</b>					



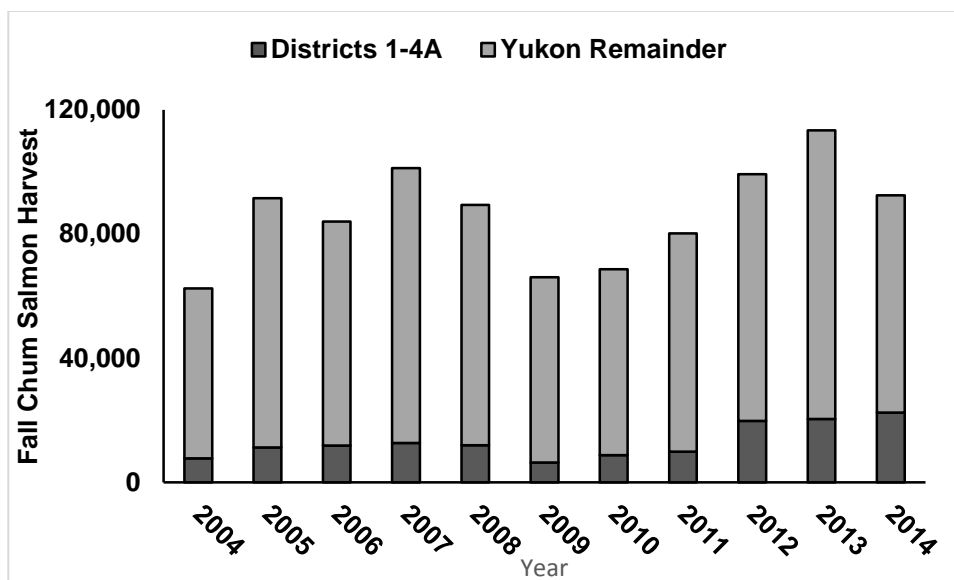
<b>Community, Year, Species</b>	<b>% Households Using</b>	<b>Est. Individuals Harvested</b>	<b>Lbs. Harvested per Capita</b>	<b>% Households Giving Away</b>	<b>% Households Receiving</b>
1990 Chinook	-	189	21.1	-	-
1990 Chum	-	3,680	136.8	-	-
1990 Coho	-	0	0	-	-
2013 Chinook	46.2	83.7	9.5	15.4	26.9
2013 Chum	46.2	2,881.6	34.0	19.2	23.1
2013 Coho	65.4	425	23.0	19.2	46.2



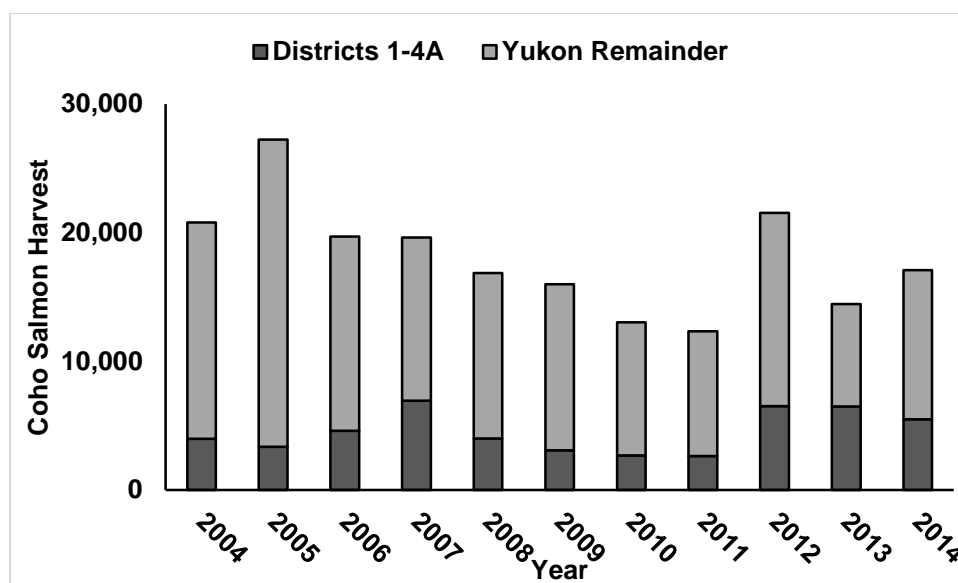
**Figure 6.** Comparison of Chinook Salmon subsistence harvest of communities from Districts 1- 4A and the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 7.** Comparison of Summer Chum Salmon subsistence harvest from communities in Districts 1-4A and the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 8.** Comparison of Fall Chum Salmon subsistence harvest from communities in Districts 1- 4A and the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 9.** Comparison of Coho Salmon subsistence harvest from communities in Districts 1- 4A and the Yukon River from 2004 to 2014 (Jallen et al. 2017).

### Cultural Knowledge and Traditional Practices

The use and importance of salmon and other non-salmon species for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence lifestyle, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have likely lived in the Yukon area for over 10,000 years (Rainey 1940) and fishing was a family and community activity, deeply ingrained in to the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and

more recently employed commercially made set nets along with hand made fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recalled whole families spending long hours at their fish camps, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010, Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders, dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and Fall Chum Salmon along with other subsistence resources (Brown and et al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation.

Customary trade of fish is an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use nets under the ice to fish for pike, whitefish, or sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed by people in the United States and overseas. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation.

The use, harvest, and dependence of salmon resources can vary by community based on cultural practices, resource availability, economics and many other factors. Yukon River drainage residents exhibit these variations generally within the lower, middle, and upper stretches of the drainage. **Table 2** shows the populations over time (1960-2010) for the communities within or in proximity to Yukon River Districts 1-3.

**Table 2.** U.S. Census Bureau population estimates for communities within or in proximity to Yukon River Districts 1-3, 1960-2010 (ADCCED 2018).

Community	1960	1970	1980	1990	2000	2010	2010 No. Households
<b>District 1</b>							
Alakanuk city	278	265	522	544	652	677	160
Nunam Iqua city	125	125	103	109	164	187	43
Emmonak city	358	439	567	642	767	762	185
Kotlik city	57	228	293	461	591	577	128
<b>District 2</b>							
Mountain Village city	300	419	583	674	755	813	184
Pitkas Point CDP	28	70	88	135	125	109	31
Saint Marys city	260	384	382	441	500	507	151
Pilot Station city	219	290	325	463	550	568	121
Marshall city	166	175	262	273	349	414	100
<b>District 3</b>							
Russian Mission city	102	146	169	246	296	312	73
Holy Cross city	256	199	241	277	227	178	64
Shageluk city	155	167	131	139	129	83	36

### Effects of the Proposal

If either proposal were adopted as submitted, there will be more subsistence fishing opportunity for Federally qualified subsistence users on Federal public lands in Districts 1-3. Effects on the salmon stocks are likely negligible as subsistence users typically do not harvest more than what is needed.

If proposal FP19-03 were adopted, there would be a decrease in duration of the closure to subsistence fishing before and after State commercial opening periods. However, the fishery would remain closed for six hours before, six hours after, and during the entire length of the State commercial fishing periods.

If proposal FP19-04 were adopted, it would eliminate the closures to subsistence fishing immediately before, during, and immediately following State commercial fishing periods.

Subdistrict 4A has similar restrictions prior to, during and after a commercial fishing period. While there has been relatively few commercial fishing periods recently due to the lack of buyers during some years, the number of commercial fishing periods could increase in the future. Subdistrict 4A would benefit having similar regulations as districts 1, 2, and 3 on the lower Yukon River.

Although these proposals may increase opportunities for subsistence harvest for Federally qualified users, there are some potential drawbacks that could occur. State and Federal regulations would no longer be the same, complicating enforcement of these regulations and creating confusions about where and when it is legal for Federally qualified users to subsistence fish during commercial openings. Districts 1 and 2 contain primarily waters under Federal subsistence fisheries jurisdiction, as well as

most of District 3. However, once out of the Yukon Delta National Wildlife Refuge land status becomes more varied and would require users to know the Federal public waters boundaries.

Commercial and subsistence fishers fishing at the same time increases enforcement complexity and may increase user conflict. Commercial fishers will be competing with subsistence fishers for prime fishing locations. Also, since Districts 1-3 are regulated to two 36-hour subsistence fishing periods per week, this proposed regulation may force some fishers to choose between catching fish for food purposes and catching fish to be sold. Additionally, this proposal may make it easier to illegally sell subsistence-caught fish in the commercial fishery, which could hinder upstream subsistence fishing opportunity and reduce escapement into spawning tributaries.

One potential effect that could come from adopting either of these proposals is an increase in commercial fishing time. If the Yukon Area managers are allowing two 18-hour subsistence fishing opportunities per week, then there is potential for commercial fishing to occur during, or up to 6 hours prior, and again 6 hours after the subsistence fishing opportunity. This may affect the quality of fishing during the subsistence fishing period.

Fishery managers currently have the authority to set time and area. Therefore, it is not unusual for them to modify the amount of closure time leading into and out of a commercial fishing period. For example, subsistence fishing was closed for only 3 hours prior to and reopened 3 hours after a commercial opening on July 22, 2017 (ADF&G 2017).

If both proposals were not adopted, then the subsistence fishery will remain closed for 12 hours prior to, during, and after a State commercial fishing openings and Federal and State subsistence management regulations will remain the same.

## **OSM PRELIMINARY CONCLUSION**

**Oppose** Proposal FP19-04.

**Support** Proposal FP19-03 **with modification** to include district 4A and provide the updated language only one time in the regulations to avoid redundancy.

The modified regulation should read:

### ***§ \_\_.14 Relationship to State procedures and regulations***

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

### ***§ \_\_.27 Subsistence taking of fish***

(e)(3) Yukon-Northern Area.

\* \* \* \*

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.

\* \* \* \*

(vii) In Districts 1, 2, and 3:

(A) After the opening of the State commercial salmon fishing season through July 15, you may not take salmon for subsistence for ~~186~~ hours immediately before, during, and for ~~126~~ hours after each State commercial salmon fishing period;

(B) After July 15, you may not take salmon for subsistence for ~~126~~ hours immediately before, during, and for ~~126~~ hours after each State commercial salmon fishing period.

(viii) In Subdistrict 4A after the opening of the State commercial salmon fishing season, you may not take salmon for subsistence for ~~126~~ hours immediately before, during, and for ~~126~~ hours after each State commercial salmon fishing period; however, you may take Chinook salmon during the State commercial fishing season, with drift gillnet gear only, from 6:00 p.m. Sunday until 6:00 p.m. Tuesday and from 6:00 p.m. Wednesday until 6:00 p.m. Friday.

## Justification

Adoption of this proposal as modified may result in additional opportunity for Federally qualified subsistence users in Districts 1, 2, 3 and 4-A on the Yukon River, while avoiding issues that may come with having concurrent subsistence and commercial fishing periods. This proposal as modified will also remove some of the confusion associated with restrictions prior to commercial fisheries by standardizing the amount of time subsistence fishing is closed prior to and after the commercial openings. Modification of the proposed language avoids redundancy in Federal regulations.

## ANALYSIS ADDENDUM

### OSM CONCLUSION

**Oppose** FP19-03 and FP19-04

#### **Justification**

Adoption of either one of these proposals would increase management complexity while having minimal effects on subsistence fishing opportunity for Federally qualified subsistence users. Managers already have the ability to shorten or lengthen the closure period before and after a commercial fishing period. These time and area modifications can allow for increased fishing time during high abundance, or decrease fishing pressure to allow more fish to pass between the subsistence fishing and commercial fishing opportunity when there is lower abundance. In addition, Federally qualified subsistence users who are also commercial fishers may lose subsistence fishing time while traveling before and after a commercial fishing period. Longer breaks between fishing allow subsistence fishers the time necessary for preparing gear, resting, and processing fish. Therefore, allowing the managers to be flexible with the closure period can allow Federally qualified subsistence users to relay information and effect management decisions during the season. Additionally, either one of these proposals may make it easier for subsistence caught salmon to be illegally sold in the commercial fishery. Adoption of either of these proposals may lead to less flexibility in management.

In addition, public testimony has also indicated little support for this proposal. Following the Yukon Delta, Western Interior, Eastern Interior, and Seward Peninsula Council meetings, OSM staff reviewed comments made during the meetings, and changed the OSM conclusion accordingly.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Oppose** FP19-03/04. Oppose for the same reasons listed for FP-19-02. The Council also felt that some buffer between Subsistence and Commercial fishing would help prevent overfishing on salmon stocks by managing for some break between harvest effort.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-03/04. The justification for opposing is similar to the concerns expressed for FP19-02, where a reduced time buffer may result in incentives to sell subsistence caught fish in the commercial market. The Council agreed with the Yukon-Kuskokwim Subsistence Regional Advisory Council and the Alaska Department of Fish and Game that timing was important and enabled fish to have a break between subsistence and commercial fishing. The Council remarked that it was important the State have the authority to maximize or shorten fishing windows before or after commercial fisheries in order to allow for ample fish passage.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Oppose** FP19-03/04. Both proposals are very similar in intent and scope to FP19-02, making it difficult to support them for the same reasons. The Council believes there is still a conservation concern and a need to allow for enough fish passage. Further, all three Yukon River area Council affected by these proposals are opposed to them.

### **Eastern Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-03/04. The Council concurred with the comments by the State and Federal in-season managers regarding the limitations of the proposed regulatory change and stated that current regulations provide managers with the best ability to use their existing management tools to provide for reasonable subsistence opportunity while keeping subsistence and commercial fisheries separate. The Council also incorporated by reference their comments and justification related to FP19-02, noting similarities and differences of two proposals.

## **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fisheries Proposals FP19-03 and FP19-04:** These proposals were submitted by Alissa Nadine Rogers of Bethel. The proposals would reduce the time subsistence fishing is closed prior to, during, and following each state commercial salmon fishing period in Yukon River districts 1–3. Proposal FP19-03 requests a decrease in the closures immediately before commercial periods from 18 hours before July 15 and from 12 hours after July 15, to 6 hours, and a decrease in the closures immediately after a commercial period from 12 hours to 6 hours. Proposal FP19-04 requests eliminating the closures to subsistence fishing immediately before, during and after commercial fishing periods.

**Background:** The purpose of the closure times is to help ensure subsistence-caught fish are not sold in the commercial fishery. Furthermore, current Federal regulations are currently aligned with state regulations.

**Impact on Subsistence Users:** Adoption of these proposals could potentially create confusion among subsistence users by having different time requirements in state and Federal regulations.

**Impact on Other Users:** None.

### **Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

For salmon in the Yukon Area, the BOF has made the following ANS findings

45,500–66,704 king salmon

83,500–142,192 summer chum salmon

89,500–167,900 fall chum salmon

20,500–51,980 coho salmon

2,100–9,700 pink salmon

The state directs (5 AAC 01.210) subsistence fishing closures before, during, and after commercial fishing periods.

**5 AAC 01.210. Fishing seasons and periods**

(e) In Districts 1, 2, and 3, excluding the Innoko River drainage, salmon may not be taken for subsistence during the 24 hours immediately before the opening of the commercial salmon fishing season, and

(1) in Districts 1, 2, and 3,

(A) after the opening of the commercial salmon fishing season through

July 15, salmon may not be taken for subsistence for 18 hours immediately before, during, and for 12 hours after each commercial salmon fishing period;

(B) after July 15, salmon may not be taken for subsistence for 12 hours immediately before, during, and for 12 hours after each commercial salmon fishing period;

(C) notwithstanding the provisions of (A) and (B) of this paragraph, if the commissioner determines it is necessary to ensure that reasonable opportunity for subsistence uses is being provided, the commissioner may, by emergency order, open a subsistence fishing period that may occur during times that are before, during, and after a commercial salmon fishing period;

**Conservation Issues:**

Requiring managers to reduce closure times around commercial openings could reduce management flexibility in times when market demand or lack of enforcement presence could encourage fishermen to sell subsistence-caught king salmon or chum salmon illegally into the commercial fishery. While the occurrence of this has been rare since the cessation of the king salmon commercial fishery due to depressed run sizes, it can be a factor in the chum commercial fishery, and management flexibility to react is imperative. Furthermore, closures around commercial openings, can also be used as a conservation tool to allow fish to pass thru areas without fishing pressure from either the commercial or subsistence fishery.

**Enforcement Issues:** These proposals could increase the amount of subsistence taken salmon illegally sold in the commercial fishery. In addition, because of misaligned regulations, adoption of the proposals would create confusion for enforcement officers as to which regulations were in effect.

**Recommendation:** ADF&G **OPPOSES** these proposals. State and federal regulations are currently aligned, and these proposals would take them out of alignment, Closures around commercial openings

are an important tool used to allow groups of fish to pass thru areas without fishing pressure from either the commercial or subsistence fishery. Time periods between subsistence and commercial fisheries are used throughout the state to help prevent subsistence fish making its way into commercial sales.

ADF&G already has the authority to alter closure times to provide more subsistence harvest opportunity before, during or after commercial openings. State managers work very closely with Federal managers to determine closures around commercial fishing periods.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 90 and 91 especially are similar to these proposals. ADF&G may modify these preliminary comments to reflect any BOF actions made.

ADF&G encourages the federal subsistence management program to clarify how this regulation would be implemented.

**FP19–05 Executive Summary**

<p><b>General Description</b></p>	<p>Proposal FP19–05 requests the Federal Subsistence Board remove the requirement of fin clipping subsistence-caught Chinook Salmon in the Lower Yukon River Districts 1, 2, and 3. <i>Submitted by: Alissa Rogers.</i></p>
<p><b>Proposed Regulation</b></p>	<p><b>§ __.14 Relationship to State procedures and regulations</b></p> <p><i>(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.</i></p> <p><b>§ __.27 Subsistence taking of fish</b></p> <p><i>(e)(3) Yukon-Northern Area.</i></p> <p style="text-align: center;">* * * *</p> <p><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060) <b>except in Districts 1, 2, and 3 from June 1 through July 15 you may possess Chinook salmon taken for subsistence purposes with out both tips (lobes) of the tail fin removed, unless superseded by a Federal Special Action.</b></i></p> <p style="text-align: center;">* * * *</p> <p><i>(xx) ) In Districts 1, 2, and 3, from June 1 through July 15, you may <del>not</del> possess Chinook salmon taken for subsistence purposes <del>unless</del> <b>without</b> both tips (lobes) of the tail fin <del>have been</del> removed <del>before the person conceals the salmon from plain view or transfers the salmon from the fishing site.</del></i></p>

**FP19–05 Executive Summary**

<p><b>OSM Conclusion</b></p>	<p><b>Support with modification</b> to allow Federally qualified subsistence users to harvest Chinook Salmon without clipping the tails during times that the commercial sale of Chinook Salmon is not allowed, and provide the updated language only one time in the regulations to avoid redundancy.</p> <p>The modified regulation should read:</p> <p style="padding-left: 40px;"><i>(e)(3) Yukon-Northern Area.</i></p> <p style="text-align: center;">* * * *</p> <p style="padding-left: 40px;"><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.</i></p> <p style="text-align: center;">* * * *</p> <p style="padding-left: 40px;"><i>(xx) In Districts 1, 2, and 3, from June 1 through July 15.</i></p> <p style="padding-left: 40px;"><i>(A) If the State of Alaska has announced that Chinook Salmon can be sold in the commercial fisheries, then you may not possess Chinook salmon taken for subsistence purposes unless both tips (lobes) of the tail fin have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site.</i></p>
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<b>FP19–05 Executive Summary</b>	
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Support as modified by OSM</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS**  
**FP19-05**

**ISSUES**

Proposal FP19-05, submitted by Alissa Rogers of Bethel, requests the Federal Subsistence Board (Board) remove the requirement of fin clipping subsistence-caught Chinook Salmon in the Lower Yukon River Districts 1, 2, and 3.

**DISCUSSION**

The proponent states that fin clipping does not prevent people from selling subsistence-caught Chinook Salmon into the commercial fishery because only a few Yukon subsistence fishermen do this. The proponent states there are always going to be a few bad actors, that they are known and have been fined before, but that the existing regulation has not stopped them. The proponent states that the existing regulation is burdensome on subsistence fishermen without any benefit.

**Existing Federal Regulation**

*§ \_\_.14 Relationship to State procedures and regulations*

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

*§ \_\_.27 Subsistence taking of fish*

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

*(xx) In Districts 1, 2, and 3, from June 1 through July 15, you may not possess Chinook salmon taken for subsistence purposes unless both tips (lobes) of the tail fin have been*

*removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site.*

## **Proposed Federal Regulation**

### **§ \_\_.14 Relationship to State procedures and regulations**

*(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

### **§ \_\_.27 Subsistence taking of fish**

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060) **except in Districts 1, 2, and 3 from June 1 through July 15 you may possess Chinook salmon taken for subsistence purposes with out both tips (lobes) of the tail fin removed**, unless superseded by a Federal Special Action.*

\* \* \* \*

*(xx) In Districts 1, 2, and 3, from June 1 through July 15, you may ~~not~~ possess Chinook salmon taken for subsistence purposes ~~unless~~ **without** both tips (lobes) of the tail fin ~~have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site.~~*

## **Existing State Regulation**

### **5 AAC 01.240. Marking and use of subsistence-taken salmon**

*(c) In Districts 1 - 3, from June 1 through July 15, a person may not possess king salmon taken for subsistence uses unless both tips (lobes) of the tail fin have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site. A person may not sell or purchase salmon from which both tips (lobes) of the tail fin have been removed.*

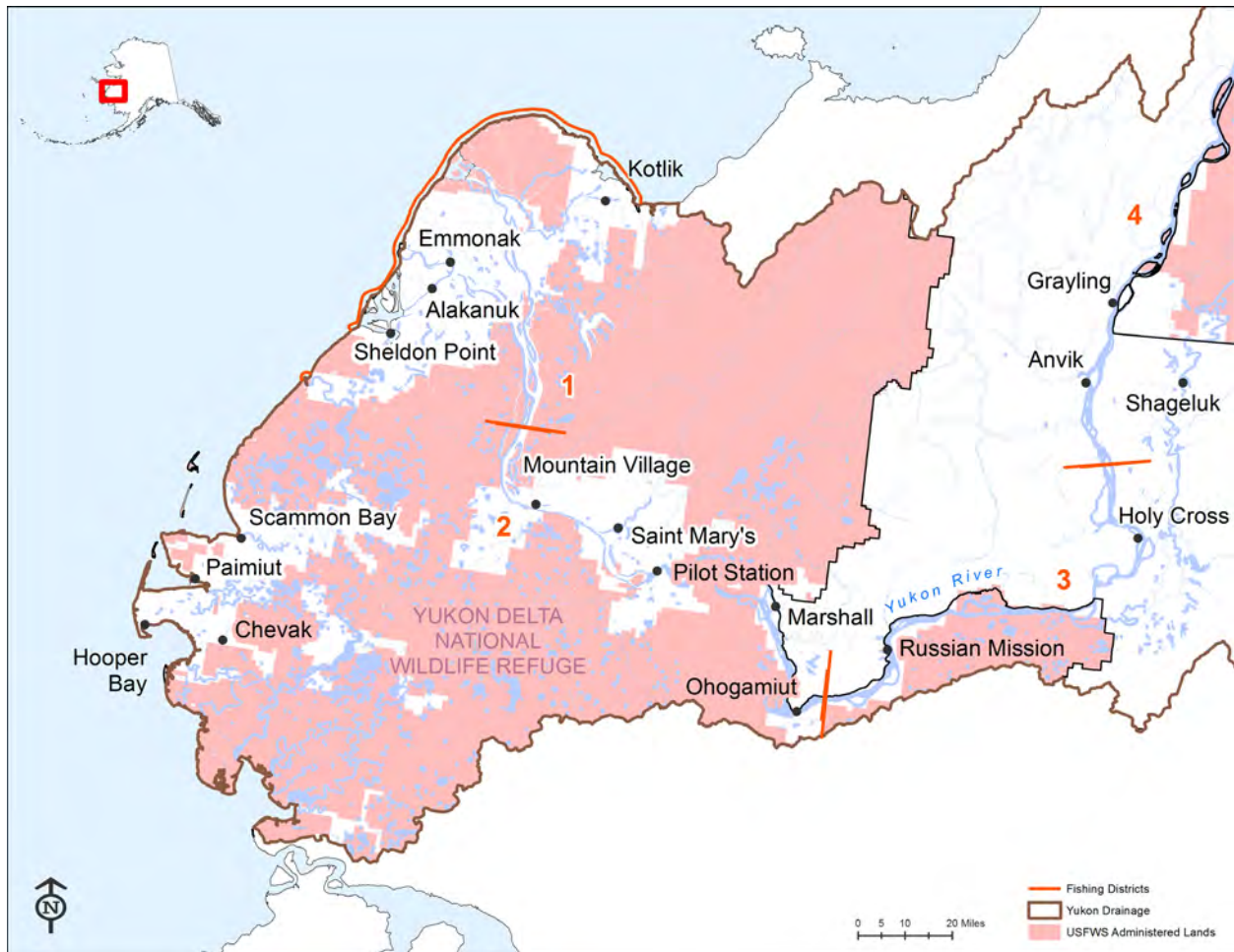
**Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The Federal public waters addressed by this proposal are those portions of the Yukon River located within, or adjacent to, the external boundaries of the Yukon Delta National Wildlife Refuge (NWR) and fishing Subdistricts 1-3 of the Yukon/Northern Federal Subsistence Fishery Management Area (**Figure 1**).

**Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have customary and traditional use determination for Salmon, other than fall chum salmon in the Yukon River drainage.

Residents of the Yukon River drainage and the community of Chevak, Hooper Bay, Scammon Bay, and Stebbins have a customary and traditional use determination for Fall Chum Salmon in the Yukon River drainage.



**Figure 1.** Lower Yukon River Districts 1, 2, and 3.

## **Regulatory History**

### State Regulatory History

The current six commercial fishing districts were established in 1974. The subsistence fishing schedules were also linked to the commercial fishing schedules in Districts 1-6 in the same year, and concurrent subsistence and commercial fishing for 5 days per week was implemented in the Upper Yukon Area (Districts 4-6). Beginning in 1977, the lower Yukon area was reduced to commercial and subsistence fishing for 3 days per week during the commercial Chinook Salmon season, and 3.5 days per week during the fall Chum Salmon season. The Fall Chum Salmon fishing season was again reduced in 1979, to 3 days per week. Beginning in 1981, ADF&G began announcing in-season Lower Yukon area commercial fishing periods by emergency order, with Lower Yukon area subsistence periods announced in this manner beginning in 1984 (Jallen et al. 2015).

Beginning in 1993, regulations were put into effect that separated commercial and subsistence fishing times in Districts 1-3 and Sub-district 4-A. The regulations stated that subsistence fishing in District 1-3 was open 7 days per week, 24 hours/day until the commercial fishing season began. Once commercial fishing had started, subsistence fishing was closed 18 hours prior, during, and 12 hours after each commercial fishing period. Also, marking of subsistence-caught fish was required by removal of the dorsal fin. These regulations were made based on an enforcement action where subsistence-caught fish were being sold in the commercial fishery in 1992 (Bergstrom et al 1995).

The Alaska Board of Fisheries (BOF) added a fishing schedule for the subsistence salmon fisheries. The schedule will be implemented chronologically, consistent with migratory timing as the run progresses upstream. This schedule may be altered by emergency order if preseason or in-season indicators suggest it is necessary for conservation. Districts 1-3 windows allowed subsistence salmon fishing for two 36 hour periods per week. Districts 4, and Sub-districts 5-B and 5-C were open to subsistence fishing for two 48-hour periods per week. Subsistence fishing in Sub-district 4-A was further defined during the commercial season in 2004 with Chinook Salmon fishing only allowed during two 48 hour drift netting periods per week by emergency order.

In February 2007, the Alaska BOF adopted a proposal changing the marking requirement for subsistence-caught salmon in Districts 1–3 from removal of the dorsal fin to removal of both tips of the tail fin. The rationale cited in the subcommittee report was to foster better compliance because marking would be easier, to make the regulation consistent with other areas of the state, to clarify when subsistence marking requirements would be in place, to use a more sanitary mark, and to discourage subsistence-caught fish from entering the State’s commercial fisheries (ADF&G 2007).

Commercial fishing for Chum Salmon during times of Chinook Salmon conservation was permitted with fish wheels by emergency order in Sub-district 4A, beginning in 2012. Fishermen are required to be present at the fish wheel, and immediately release all Chinook Salmon alive.

### Federal Regulatory History

Fin clipping regulations were adopted by the Board from State subsistence regulations in the fall of 1998.

Starting in October 1999, Federal subsistence management regulations for the Yukon-Northern Area stipulated that, unless otherwise restricted, rural residents may take salmon in the Yukon-Northern Area at any time by gillnet, beach seine, fish wheel, or rod and reel unless exceptions are noted.

In 2002, the Board delegated some of its authority to manage Yukon River drainage subsistence salmon fisheries to the Branch Chief for Subsistence Fisheries, U.S. Fish and Wildlife Service, in Fairbanks. The Board's delegation allows the Federal manager to open or close Federal subsistence fishing periods or areas provided under codified regulations, and to specify methods and means.

In 2013, the Board adopted FP13-02, which aligned State and Federal marking requirements providing a modest reduction in regulatory complexity. This change in marking requirements made it mandatory to remove both tips of the tail fin on all Chinook Salmon before the person conceals the salmon from plain view or transfers the salmon from the fishing site.

### **Current Events**

During the 2019-2021 Regulatory cycle, three proposals (FP19-02, FP19-03, and FP19-04) were submitted to alter or remove restrictions on subsistence fishing by Federally qualified subsistence users in Federal waters.

The proponent submitted a similar proposal (Proposal 93) to the Alaska BOF to take up at its Arctic/Yukon/Kuskokwim Finfish meeting on January 15-19, 2019.

### **Biological Background**

#### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks showed periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station was approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish and below the average of 195,800 fish for years with early run timing. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2015).

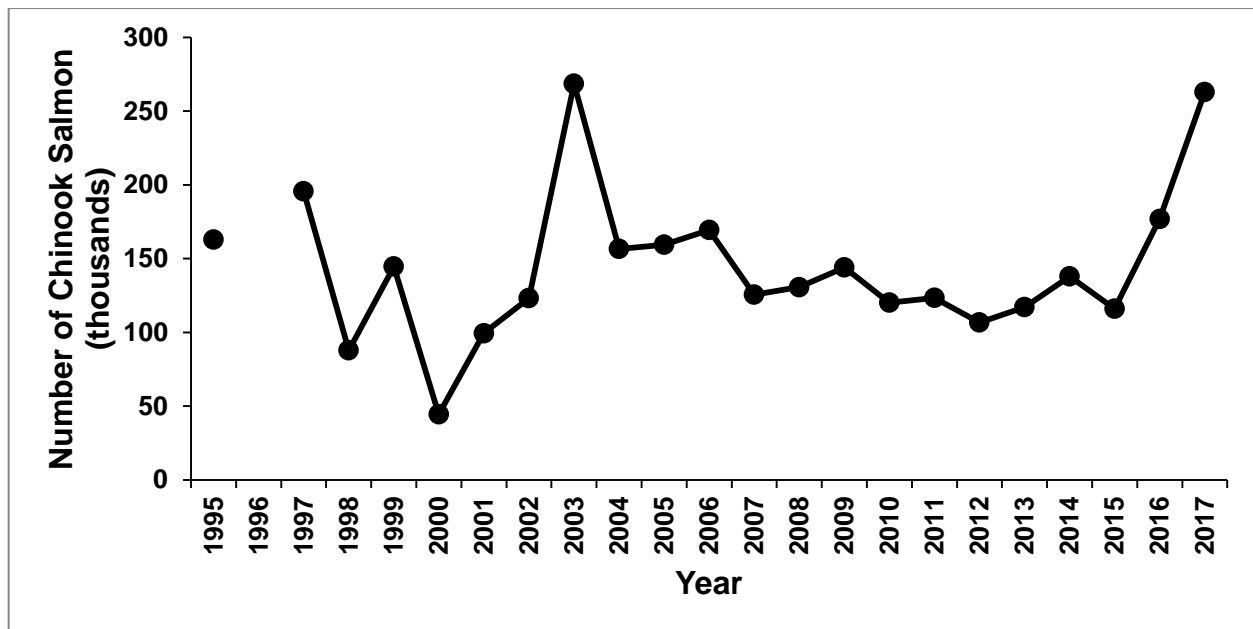
The 2015 projected run size was 118,000-140,000 fish, which was once again below average yet higher than the previous year's projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately 116,000±30,000 fish (90% CI) (**Figure 2**). As with the previous year, this number

was still below the historical average. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately 176,898±18,466 fish (90% CI) (Liller, 2018 pers. comm.). This number was near the recent historical average of 178,300 fish (ADFG 2018a), but is considered preliminary at this time. Conservative actions were relaxed slightly from previous years and all escapement goals were again met (JTC 2016).

The 2017 run outlook was slightly larger, but still below average: 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately 263,000±29,000 fish (90% CI) (ADF&G 2018a), which was the largest since 2003 (JTC 2017), is also considered preliminary. Subsistence management restrictions were further relaxed which resulted in harvests approximately two thirds of average and most escapement goals were met despite the poor water conditions that existed throughout the drainage. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

The 2018 run outlook is larger than in recent years, with a run size of 173,000-251,000 fish (ADF&G 2018a). The upper end of the range could support an average subsistence harvest, while the low end of the range would likely result in restrictions to subsistence fisheries.



**Figure 2.** Chinook Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.

## **Harvest History**

### Chinook Salmon

#### *Subsistence*

Subsistence harvest of Chinook Salmon in the Alaska portion of the Yukon River averaged 34,791 fish from 1961-2015, with a high of 62,486 in 1993 and a low of 2,724 in 2014 (JTC 2017) (**Figure 3**). The 2014 Chinook Salmon subsistence harvest of 2,724 fish was the lowest on record for the Alaska portion of the Yukon River drainage. Harvest increased in 2015, 2016 and 2017 with 7,577, 21,627, and 36,992 fish harvested respectively. The 2017 harvest estimate, though preliminary, is larger than the 2007-2016 average (29,514) and over two times the number of the recent 5 year average of 15,088 (JTC 2018). The 2017 harvest was the largest since 2011.

The subsistence harvest in Yukon River Districts 1-3 averaged 16,755 from 2004- 2013, with a 2009-2013 average of 13,442 Chinook Salmon (Jallen et al. 2017). The estimated 2014 subsistence harvest in these districts was 2,020 Chinook Salmon.

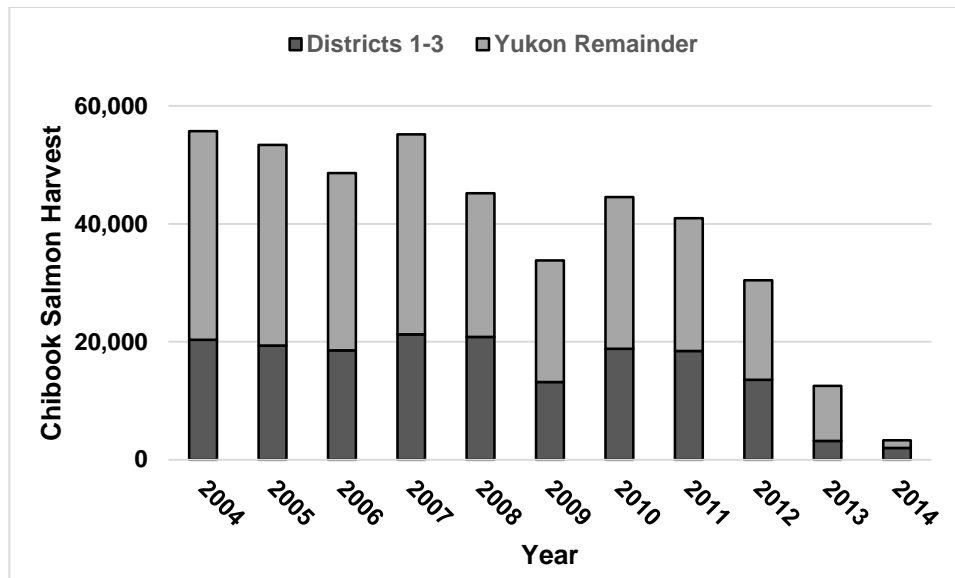
#### *Commercial*

Chinook Salmon have not been targeted in the commercial fishery for 10 years and the sale of incidentally caught Chinook Salmon was prohibited for the seventh consecutive year during the 2017 summer season. However, there was a small opportunity during the fall fishing seasons where fish were sold in Districts 1 and 2 in 2011 (82) and 2017 (168). The 1961-2016 average commercial harvest was 88,092 with a recent 10 year (2007-2016) average of 9,714 (JTC 2018).

#### *Sport fish*

Sport fishing harvest of Chinook Salmon are generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 105 Chinook Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort. During 2017, sport fishing was allowed after June 20, and allowed for a bag limit of 1 Chinook Salmon 20-inches or greater (JTC 2018).





**Figure 3.** Comparison of Chinook Salmon subsistence harvest of communities from Districts 1-3 and the Yukon River from 2004 to 2014 (Jallen et al. 2017).

#### Comprehensive Household Harvest Surveys

ADF&G's Division of Subsistence occasionally undertakes comprehensive household surveys as time and resources allow. These document the use, harvest, and sharing of all wild foods harvested in a community in a given year and can thus provide insights on the importance of individual resources within the overall harvest and the cultural contexts of these harvests, including patterns of sharing. For the region represented by this proposal, household surveys that include Chinook, Chum and Coho Salmon harvest were conducted in several years for several communities (**Table 1**).

The Chinook Salmon and Chum Salmon harvests and use represented in **Table 1** include all gear types including commercial retention. A large percentage of households in these communities used Chinook Salmon in the study years. Chum Salmon use was similar to Chinook Salmon for all communities with available data. Coho Salmon use was much less than for the other two species for all communities except Shageluk, which used more Coho Salmon than Chinook or Chum Salmon in 2013.

Sharing of salmon resources as represented by giving and receipt in **Table 1** was common for communities with available data. Sharing includes distribution within and outside of the community. For all communities except Marshall, a larger percentage of households reported receiving salmon resources than did those giving them away. Russian Mission household also gave away more Chum Salmon in 2011 than they received. Emmonak represented the greatest percentage of households sharing both Chinook Salmon and Chum Salmon, with 56.5% and 55.7% of households respectively.

The estimated amount of harvest for these salmon species varied by community and year, based largely on availability of the resource and the population of each community. To correct for population, lbs. harvested per capita is a better indicator of harvest and use than is the total estimated harvest. Within the available data, all communities except Marshall and Russian Mission harvested more pounds per capita

of Chum Salmon than Chinook Salmon. Marshall's per capita harvest of Chinook and Chum Salmon were similar while Russian Mission's per capita harvest of Chinook Salmon was greater than that of Chum Salmon in both 1985 and 2011. For all years and communities except Shageluk, the per capita harvest of Coho was lower than that of Chinook and Chum Salmon. While Shageluk's per capita harvest of Coho Salmon was lower in 1990, it exceeded that of Chinook Salmon in 2013.

**Table 1.** Chinook Salmon, Chum Salmon, and Coho Salmon harvest in communities located within Yukon River districts 1-3 as determined through available ADF&G household subsistence harvest surveys (ADF&G 2018b).

Community, Year, Species	% Households Using	Est. Individuals Harvested	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Alakanuk</b>					
1980 Chinook	-	13,693	72.5	-	-
1980 Chum	-	1,521	112.2	-	-
1980 Coho	-	2,717	12.5	-	-
<b>Nunam Iqua</b>					
1980 Chinook	-	1,912	220.3	-	-
1980 Chum	-	11,487	406.2	-	-
1980 Coho	-	1,275	45.1	-	-
<b>Emonnak</b>					
1980 Chinook	-	2,256	79.7	-	-
1980 Chum	-	12,144	131.7	-	-
1980 Coho	-	1,350	14.6	-	-
2008 Chinook	89.0	3042.7	39.3	34.9	65.1
2008 Chum	90.1	19,132.0	125.0	41.3	57.8
2008 Coho	55.0	3,265.3	21.2	20.2	32.1
<b>Kotlik</b>					
1980 Chinook	-	1,060	44.8	-	-
1980 Chum	-	6,884	89.4	-	-
1980 Coho	-	764	9.9	-	-
<b>Mountain Village</b>					
1980 Chinook	-	2,322	71.6	-	-
1980 Chum	-	17,382	164.4	-	-
1980 Coho	-	1,932	18.3	-	-
2010 Chinook	85.2	2,198.9	26.4	38.3	56.5
2010 Chum	82.6	11,447.5	74.1	38.3	55.7
2010 Coho	39.1	1,134.9	7.6	16.5	22.6
<b>Marshall</b>					
2010 Chinook	89.1	3,303.9	91.2	50.0	39.1

<b>Community, Year, Species</b>	<b>% Households Using</b>	<b>Est. Individuals Harvested</b>	<b>Lbs. Harvested per Capita</b>	<b>% Households Giving Away</b>	<b>% Households Receiving</b>
2010 Chum	89.1	5,981.4	89.0	41.3	37.0
2010 Coho	34.8	844.5	13.1	23.9	17.4
<b>Russian Mission</b>					
1985 Chinook	-	1,938	134.7	-	-
1985 Chum	-	3,087	73.2	-	-
1985 Coho	-	740	17.6	-	-
2011 Chinook	84.8	3,176.5	73.5	28.3	37.0
2011 Chum	80.4	2,375.0	29.7	32.6	15.2
2011 Coho	47.8	479.2	6.1	13.0	21.7
<b>Holy Cross</b>					
1990 Chinook	-	1,649	82.9	-	-
1990 Chum	-	1,218	21.1	-	-
1990 Coho	-	944	17.2	-	-
<b>Shageluk</b>					
1990 Chinook	-	189	21.1	-	-
1990 Chum	-	3,680	136.8	-	-
1990 Coho	-	0	0	-	-
2013 Chinook	46.2	83.7	9.5	15.4	26.9
2013 Chum	46.2	2,881.6	34.0	19.2	23.1
2013 Coho	65.4	425	23.0	19.2	46.2

### **Cultural Knowledge and Traditional Practices**

The use and importance of salmon and other non-salmon species for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence lifestyle, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have likely lived in the Yukon area for over 10,000 years (Rainey 1940) and fishing was a family and community activity, deeply ingrained in to the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and more recently employed set nets along with fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recalled whole families spending long hours at their fish

camps, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010; Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and fall Chum Salmon along with other subsistence resources (Brown et al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation.

Customary trade of fish is an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use nets under the ice to fish for pike, whitefish, or sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum Salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed by people in the United States and overseas. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

The use, harvest, and dependence of salmon resources can vary by community based on cultural practices, resource availability, economics and many other factors. Yukon River drainage residents exhibit these variations generally within the lower, middle, and upper stretches of the drainage. **Table 2** shows the populations over time (1960-2010) for the communities within or in proximity to Yukon River Districts 1-3.

Fin marking requirements for Yukon River Chinook Salmon harvested in the Federal subsistence fishery were adopted from the State regulations by the Board in 1998. While transcripts of Board meetings lack mention of public or Council comment on the matter, a proposal to eliminate marking requirements in Southeast Alaska (13-16) was submitted to the Board in 2013. The analysis indicated that fin clipping was not a traditional practice and that some residents feel that it is disrespectful to cultural ways of life (FSB 2013a, FSB 2013b). Also in 2013 the Board adopted a proposal, FP13-02, to change the marking requirements from clipping the dorsal fin to clipping the tips of the tail of subsistence Chinook salmon harvested in Districts 1, 2, and 3 of the Yukon River. All four effected Councils supported the change (FSB 2013b).

**Table 2.** U.S. Census Bureau population estimates for communities within or in proximity to Yukon River Districts 1-3, 1960-2010 (ADCCED 2018).

Community	1960	1970	1980	1990	2000	2010	2010 No. Households
<b>District 1</b>							
Alakanuk city	278	265	522	544	652	677	160
Nunam Iqua city	125	125	103	109	164	187	43
Emmonak city	358	439	567	642	767	762	185
Kotlik city	57	228	293	461	591	577	128
<b>District 2</b>							
Mountain Village city	300	419	583	674	755	813	184
Pitkas Point CDP	28	70	88	135	125	109	31
Saint Marys city	260	384	382	441	500	507	151
Pilot Station city	219	290	325	463	550	568	121
Marshall city	166	175	262	273	349	414	100
<b>District 3</b>							
Russian Mission city	102	146	169	246	296	312	73
Holy Cross city	256	199	241	277	227	178	64
Shageluk city	155	167	131	139	129	83	36

### Effects of the Proposal

If the proposal were adopted, there would be a reduction of requirements on Federally qualified subsistence users on Federal public lands in Districts 1-3, saving them time, the possibility of being cited, and potentially ameliorating ethical and cultural concerns regarding unnecessary mutilation of the carcass. Effects on the salmon stocks are likely negligible as subsistence users are not likely to harvest more Chinook Salmon due to the removal of fin clipping.

Although this proposal would reduce the requirements for subsistence harvest for Federally qualified users, there are some potential drawbacks that may occur. State and Federal regulations would no longer be the same, complicating enforcement of these regulations and creating confusions about where and when it is legal for Federally qualified users to harvest Chinook Salmon without clipping fins. Districts 1 and 2 contain primarily Federal waters, as well as most of District 3. However, once out of the Yukon Delta National Wildlife Refuge land status becomes more varied and would require users to know the Federal public waters boundaries. Additionally, this proposal may make it easier for subsistence-caught fish to end up being illegally sold in the commercial fishery.

If the proposal was not adopted, the subsistence fishery in Districts 1-3 will continue to clip fins on subsistence-caught Chinook Salmon under State regulations. Federal and State subsistence management regulations would remain the same.

## OSM CONCLUSION

**Support** Proposal FP19-05 **with modification** to allow Federally qualified subsistence users to harvest Chinook Salmon without clipping the tails during times that the commercial sale of Chinook Salmon is not allowed, and provide the updated language only one time in the regulations to avoid redundancy.

The modified regulation should read:

*(e)(3) Yukon-Northern Area.*

\* \* \* \*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

*(xx) In Districts 1, 2, and 3, from June 1 through July 15.*

*(A) If the State of Alaska has announced that Chinook Salmon can be sold in the commercial fisheries, then you may not possess Chinook salmon taken for subsistence purposes unless both tips (lobes) of the tail fin have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site.*

## Justification

Fin clipping is not a traditional practice and in some regions of Alaska, marking requirements have been described as burdensome and disrespectful to cultural ways of life (FSB 2013a). There have not been targeted Chinook Salmon commercial fisheries in the Yukon River for many years and there may not be any in the near future. The incidental harvest and sale of Chinook Salmon has been permitted by the State only occasionally in the recent past. Given the limited opportunity for commercial sale of subsistence-caught Chinook salmon, there is no need to burden subsistence users with marking requirements meant to prevent illegal sale of Chinook salmon. The modification to require fin clipping once the commercial sale of Yukon River Chinook salmon is announced, removes an unnecessary burden on subsistence users, but, leaves in place a requirement to clip fins as a deterrent to illegal sales of subsistence-caught fish.

Requiring fin clipping once the commercial sale of Yukon River Chinook Salmon is announced is necessary for law enforcement to affectively track and differentiate salmon harvested under Federal subsistence fisheries and State commercial fisheries. Given the proximity of these two fisheries in both space and time, the opportunity for illegal sale of Chinook Salmon may be elevated in times that sale of the species is allowed. Curbing such illegal sales is essential to prevent overharvest as a means for some rural residents to earn cash from an illegal activity. While fish marking requirements are warranted during these specific and recently limited times, they are not warranted at all times. Thus, providing balance between the two concerns ensures continued subsistence opportunity while reducing burden on Federally qualified subsistence users and being sensitive to their cultural concerns when possible. Modification of the proposed language avoids redundancy in Federal regulations.

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## RECOMMENDATIONS SUBSISTENCE REGIONAL ADVISORY COUNCIL

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Support FP19-05 as Modified by OSM.** The Council feels that fin clipping is an unnecessary regulation that is burdensome on subsistence fishers and is contrary to traditional beliefs that if you catch a fish you should use the whole thing. The Council stressed that there are traditions considered “unwritten regulations” and felt people should defer to the ancestors who said you should not waste or throw anything away – and clipping and throwing away the fins contradicts these traditional laws. The Council also discussed at length the origins of this fin clipping regulation in the late 1990’s when the Chinook commercial fishery was quite large and an issue at that time with enforcement around keeping subsistence and commercial fish separate. The Council and stressed that this regulation assumes and enforcement issue when that was a single incident or few “bad actors” and does not represent communities on the Yukon that strive to be law abiding. The Council also highlighted that commercial Chinook harvest had not occurred in many years due to low Chinook returns, and yet this regulation continued to be burdensome for subsistence harvesters even though there was no need to differentiate subsistence caught fish. The Council stressed again that subsistence fishers all along the Yukon River were making every effort to support Chinook conservation. The Council did discuss the OSM modification with the State and Federal in-season managers and realizing this regulatory change might have a better chance of passing under both State and Federal regulations if modified to fin clipping would be required during times that the State of Alaska has announced Chinook Salmon can be sold in the commercial fishery. Thus, the Council supported the proposal with the OSM Modification to allow Federally qualified subsistence users to harvest Chinook Salmon without clipping the tails during times that the commercial sale of Chinook Salmon is not allowed and provide the updated language only one time in the regulation to avoid redundancy.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Support FP19-05 as modified by OSM.** The Council concurred with the Alaska Department of Fish and Game that fin clipping should only be required when there are commercial sales of Chinook salmon. The Council agreed with the Yukon Kuskokwim Delta Subsistence Regional Advisory Council that fin clipping was unnecessary and burdensome to subsistence users, particularly when there has been no Chinook salmon commercial fishery for many years. Council Chair Reakoff recommended clarifying the regulatory language to read that if there were no commercial fishery, subsistence users could leave the fin intact. The Council agreed that if the State of Alaska announces a Chinook salmon commercial fishery, then subsistence users may not possess Chinook salmon without the fins clipped.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Support FP19-05 as modified by OSM.** The Council recognized that it was important to keep a clipping requirement in place when a commercial fishery is active to prevent subsistence caught fish from being sold into the commercial market. The Council would also like to alleviate the burden of clipping fins to subsistence users whenever possible.

### **Eastern Interior Alaska Subsistence Regional Advisory Council**

**Support FP19-05 as modified by OSM.** The Council noted being torn about the proposal, because although not clipping the fins when there are no commercial fisheries, it is important to keep methodologies the same on the river to avoid confusion. The Council would not want to see someone get cited for not fin clipping if a commercial opener occurs. There is not a conservation concern, but there is the potential for people to cheat and get subsistence-caught fish into the commercial fishery. Clipping fins is an enforcement tool to prevent illegal fish sales, but the Council is willing to support the regulation that makes subsistence fishing easier for people. The Council supported the proposal only in modified form and was against completely eliminating fin clipping because people on the lower Yukon would want the fin clipping during king salmon commercial fishery. In summary, the Council agreed that if FP19-05 is adopted as modified by OSM, the new regulations would not be really complicated – you won't have to clip fins of subsistence-caught fish if there is no commercial fishery but will be required to clip subsistence-caught fish during a commercial fishery.

### **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### **ALASKA DEPARTMENT OF FISH AND GAME COMMENTS**

**Fishery Proposal FP19-05:** This proposal, submitted by Alissa Nadine Rogers of Bethel, would remove the requirement of fin clipping to mark subsistence-caught Chinook salmon in Lower Yukon River districts 1, 2, and 3.

**Introduction:** Under current Federal regulation, subsistence fishermen may not possess Chinook Salmon taken for subsistence purposes unless both tips of the tail fin have been removed before the fisherman conceals the salmon from plain view or transfers it from the fishing site. The purpose of this provision is to help ensure subsistence caught fish are not sold in the commercial fishery. State and federal regulations are currently aligned.

**Impact on Subsistence Users:** Subsistence fishermen would no longer be required to clip the tail fin of harvested Chinook salmon, which may save an unknown amount of time at the fishing site.

**Impact on Other Users:** None.

#### **Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The BOF has found that 45,500–66,704 king salmon are reasonably necessary for subsistence uses in the Yukon Area.

In regard to fin clipping, state regulations have the following provisions:

**5 AAC 01.240. Marking and use of subsistence-taken salmon.**

(c) In Districts 1 - 3, from June 1 through July 15, a person may not possess king salmon taken for subsistence uses unless both tips (lobes) of the tail fin have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site. A person may not sell or purchase salmon from which both tips (lobes) of the tail fin have been removed.

**Conservation Issues:** Removing the fin clip requirement would likely have a negligible impact to immediate Chinook salmon abundance because subsistence users are not likely to harvest more Chinook Salmon if they do not have to clip tail fins because commercial sale of Chinook salmon has not been allowed in most years since 2007. There could be an increase in harvest of subsistence caught fish if they ended up being sold commercially

**Enforcement Issues:** Any current enforcement issues are likely negligible. The intent of fin clipping is to reduce or eliminate the numbers of subsistence-caught Chinook salmon being sold in the commercial fishery. However, there has not been a Chinook salmon directed fishery in the Yukon Area since 2007. In most years since 2010, the sale of incidentally-caught Chinook salmon in the chum salmon-directed commercial fisheries has not been allowed.

**Recommendation:** ADF&G **OPPOSES** this proposal as written. Although commercial sale of Chinook salmon is not currently allowed, the runs have been improving, and sale could be allowed in the future. The current regulation that requires fin clips of subsistence caught Chinook salmon is to more easily identify illegal sales of subsistence-caught Chinook salmon in Yukon commercial fisheries. **The ADF&G supports the OSM modification.**

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF Proposal 93 especially is similar to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

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<b>FP19–06 Executive Summary</b>	
<b>General Description</b>	Proposal FP19–06 requests that a new regulation be added for conservation protections to the first pulse of Yukon River Chinook Salmon in Federal public waters in Districts 1 through 5. <i>Submitted by: Don Woodruff of Eagle.</i>
<b>Proposed Regulation</b>	<p><b>§ __.27(e)(3) Yukon-Northern Area – Salmon</b></p> <p><i>(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time. In those locations where subsistence fishing permits are required, only one subsistence fishing permit will be issued to each household per year. You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in paragraph (e)(3) of this section.</i></p> <p><i>(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.</i></p> <p style="text-align: center;"><b><i>(A) The first pulse of Chinook Salmon in Districts 1 through 5 will be protected in Federal public waters through systematic closures coordinated with the first pulse movement upstream as announced by the Federal in-season manager.</i></b></p>
<b>OSM Conclusion</b>	<b>Oppose</b>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>

<b>FP19-06 Executive Summary</b>	
<b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Oppose</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

## STAFF ANALYSIS

### FP19-06

#### ISSUES

Proposal FP19-06, submitted by Don Woodruff of Eagle, requests the Federal Subsistence Board (Board) revise Federal subsistence management regulations section § \_\_.27(e)(3)(ii) by establishing a new regulation to add conservation protections to the first pulse of Yukon River Chinook Salmon in Federal public waters Districts 1 through 5.

#### DISCUSSION

The proponent notes that these fish are primarily Canadian bound stocks, and that it is the Boards responsibility to ensure food security throughout the Yukon River. The proponent states that one or two years of fair runs of fish does not mean that the fishery has recovered. In addition to this, the proponent raises concerns over recent actions by the Alaska Board of Fisheries (BOF) to open first pulse access (Proposal 231 – RC46) in Districts 1 and 2, which he believes to be counterproductive to recovery efforts.

The proponent suggests that the first pulse of Yukon River Chinook Salmon entering the river, be protected with systematic fishing closures as they travel up river starting with District 1 first pulse and continuing along the entire Yukon River to District 5 to ensure conservation and food security for future generations.

#### Existing Federal Regulation

##### **§ \_\_.27(e)(3) Yukon-Northern Area**

*(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time. In those locations where subsistence fishing permits are required, only one subsistence fishing permit will be issued to each household per year. You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in paragraph (e)(3) of this section.*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

## Proposed Federal Regulation

### § \_\_.27(e)(3) *Yukon-Northern Area*

(i) *Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time. In those locations where subsistence fishing permits are required, only one subsistence fishing permit will be issued to each household per year. You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in paragraph (e)(3) of this section.*

(ii) *For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

***(A) The first pulse of Chinook Salmon in Districts 1 through 5 will be protected in Federal public waters through systematic closures coordinated with the first pulse movement upstream as announced by the Federal in-season manager.***

## Existing State Regulation

### ***5 AAC 01.210. Fishing seasons and periods – Yukon Area***

(a) *Unless restricted in this section, or in 5 AAC 01.220 – 5 ACC 01.249, salmon may be taken in the Yukon Area at any time.*

(b) *When there are no commercial salmon fishing periods, the subsistence fishery in the Yukon River drainage will be based on a schedule implemented chronologically, consistent with migratory timing as the salmon run progresses upstream. The commissioner may alter fishing periods by emergency order, if the commissioner determines that preseason or in-season run indicators indicate it is necessary for conservation purposes. The fishing periods for subsistence salmon fishing in the Yukon River drainage will be established by emergency order as follow:*

*(1) Coastal District, Koyukuk River, Kantishna River, and Subdistrict 5D: seven days per week.*

(c) *Notwithstanding the provisions of (A) and (B) of this paragraph, if the commissioner determines it is necessary to ensure that reasonable opportunity for subsistence uses is being provided, the commissioner may, by emergency order, open a subsistence fishing period that may occur during times that are before, during, and after a commercial salmon fishing period.*

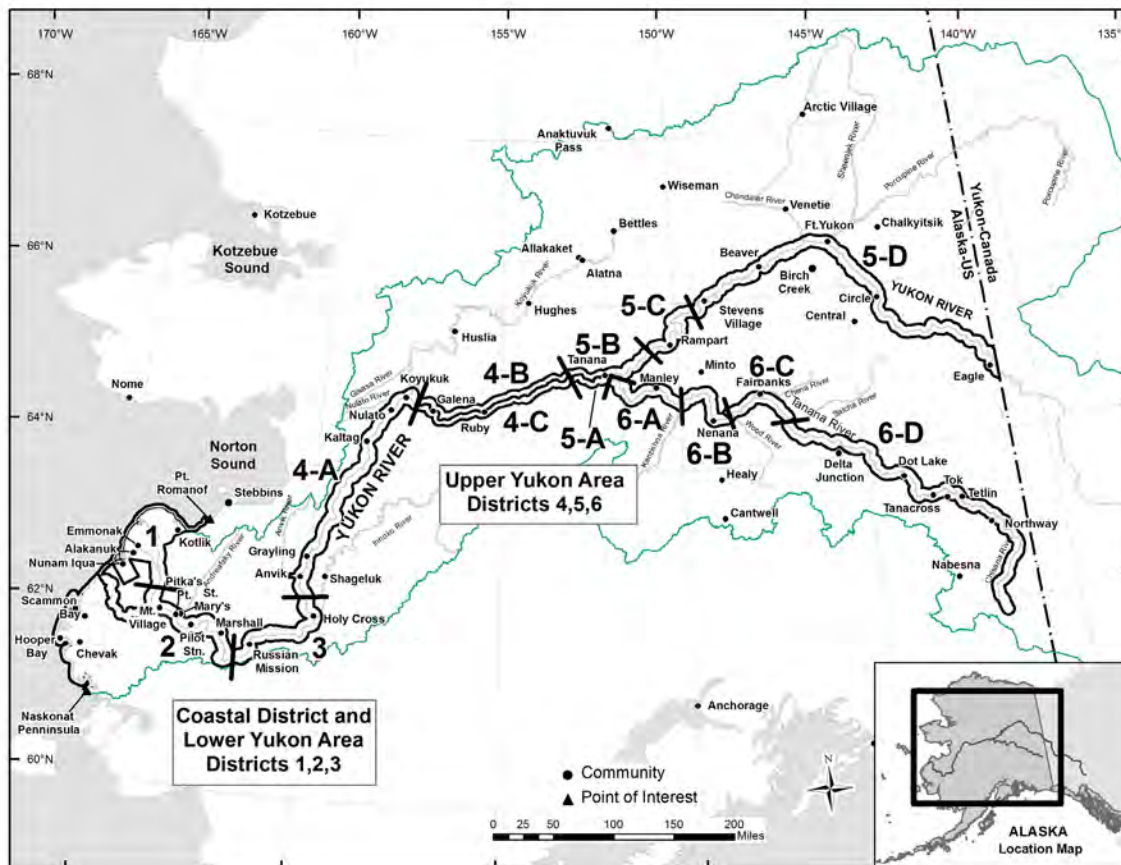


**5 AAC 05.360. Yukon River King Salmon Management Plan – Yukon Area**

*(1) In Districts 1 and 2, to account for the uncertainty in the preseason king salmon run projection, if the preseason king salmon forecast indicates insufficient abundance to meet escapement goal objectives and subsistence harvest needs, the department shall manage the king salmon subsistence fishery conservatively and not open any salmon subsistence fishing periods during the first pulse of king salmon entering the Districts.*

**Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The Federal public waters under Federal subsistence fisheries jurisdiction addressed by this proposal are those portions of the Yukon River located within, or adjacent to, Arctic National Wildlife Refuge, National Wildlife Refuge, Koyukuk National Wildlife Refuge, Kanuti National Wildlife Refuge, Nowitna National Wildlife Refuge, Denali National Park and Preserve, White Mountains National Recreation Area, Steese National Conservation Area, Yukon-Charley Rivers National Preserve, Beaver Creek National Wild Rivers, Birch Creek National Wild and Scenic River, Delta National Wild & Scenic River, Fortymile National Wild & Scenic River, Tetlin National Wildlife Refuge, Yukon Flats National Wildlife Refuge, and Wrangell-St. Elias National Park and Preserve (**Figure 1**).



**Figure 1.** Yukon River Districts located within the U.S. portion of the drainage (ADF&G 2018).

## **Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have a customary and traditional user determination for Chinook Salmon in the Yukon Northern Area.

## **Regulatory History**

### State Regulatory History

Since 2001, the Yukon River Chinook Salmon stock has been categorized as a “stock of yield concern” by the BOF in accordance with the State’s *Policy for the management of sustainable salmon fisheries* (5 AAC 39.222). This designation identifies a chronic inability to maintain expected yields or harvestable surpluses above a stock’s escapement needs despite restrictive management actions. Directed commercial fishing for Yukon River Chinook Salmon has been discontinued since 2007 and subsistence fishing opportunities have become increasingly more restrictive in an effort to conserve Chinook Salmon.

During 2001, subsistence fishing windows were established during times of conservation and were implemented throughout the entire Yukon River area when commercial fishing is closed. Districts 1-3 windows allowed subsistence salmon fishing for two 36 hour periods per week. Districts 4 and Subdistricts 5-B and 5-C were open to subsistence fishing for two 48-hour periods per week. Commercial fishing in Subdistrict 4-A was further regulated in 2004, with Chinook Salmon fishing only allowed during two 48 hour drift netting periods per week by emergency order.

Beginning in 2012, commercial fishing for Chum Salmon during times of Chinook Salmon conservation has been permitted with fish wheels by emergency order in Subdistrict 4-A. Fishermen are required to be present at the fish wheel and immediately release all Chinook Salmon alive.

In March 2015, the BOF adopted a new regulation that allowed the use of drift gillnets to harvest summer Chum Salmon for subsistence purposes during times of Chinook Salmon conservation from June 10 through August 2, by emergency order, in the upper portion of Subdistrict 4A.

In January 2016, the BOF adopted the same regulations for the lower portion of Subdistrict 4A.

In March of 2018, the BOF adopted a new regulation. If inseason run assessment information indicates insufficient abundance of Chinook Salmon to meet escapement objectives on specific components of the run and subsistence harvest needs, the Alaska Department of Fish and Game will not open any subsistence fishing periods during the first pulse implemented chronologically in the applicable district, consistent with migratory timing as the Chinook Salmon run progresses upstream; if inseason run assessment information indicates sufficient abundance of king salmon to meet escapement objectives on specific components of the run and subsistence harvests needs, subsistence fishing will revert to back to standard fishing periods.

### Federal Regulatory History

Since October 1999, Federal subsistence management regulations for the Yukon-Northern Area stipulated that, unless otherwise restricted, rural residents may take salmon in the Yukon-Northern Area at any time by gillnet, beach seine, fish wheel, or rod and reel, unless exceptions are noted.

In 2002, the Board delegated some of its authority to manage Yukon River drainage subsistence salmon fisheries to the Branch Chief for Subsistence Fisheries, U.S. Fish and Wildlife Service, in Fairbanks, Alaska. The Federal Subsistence Board's delegation allows the Federal manager to open or close Federal subsistence fishing periods or areas provided under codified regulations, and to specify methods and means.

In 2017, the Board modified regulations in Subdistrict 4-A to allow the Federal in-season manager to open fishing periods during which Chum Salmon may be taken by drift gillnets from June 10 through August 2. This regulation change was made to match existing ADF&G regulations that were modified in 2015 and 2016. The Board also added an additional regulation in Subdistrict 5-D to allow salmon to be harvested for subsistence use once the mid-range of the Canadian Interim Management Escapement Goal (IMEG) and the total allowable catch goal are projected to be achieved.

### Management Perspectives

For management purposes, the summer season refers to the fishing associated with Chinook and summer Chum Salmon migrations and the fall season refers to the fishing associated with the fall Chum and Coho Salmon migrations. During the fishing season, management is based on preseason projections and the in-season run assessments. Since 1995, the main river sonar project at Pilot Station has provided in-season estimates of salmon passage for fisheries management. The level of commercial, subsistence, and personal use harvests can be adjusted through the use of State emergency orders and Federal special actions to manage time, gear, and area of openings and closures. Since 2001, an Arctic Yukon Kuskokwim Sustainable Salmon Research action plan has been developed through a public process that includes goals, objectives, and provisions necessary to research and help rebuild Chinook Salmon runs (Munro and Tide 2014).

The Yukon River Salmon Agreement is collaboration between the U.S. and Canada where the Yukon River Panel and its Joint Technical Committee together make recommendations to managers of both countries. Currently the Canadian Interim Management Escapement Goal (IMEG) is set at 42,500-55,000 Chinook Salmon. Each year the Yukon River Joint Technical Committee reevaluates the need to modify the Chinook Salmon IMEG (JTC 2018); however, this range has been accepted since 2010. Federally qualified subsistence users are allowed to fish on the Yukon River in Districts 1 through 5 seven days a week, 24 hours/day using rod and reel with no harvest limit for salmon, unless closed by the in-season managers for conservation purposes. Additionally, Districts 1, 2, and 3 have special provisions for harvest before July 15, and after the opening of the State commercial salmon fishing season, subsistence salmon fishing is closed for 18 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period. After July 15, subsistence salmon fishing is closed for 12 hours immediately before, during, and for the 12 hours after each State commercial salmon

fishing period. In Subdistrict 4A, after the State commercial salmon fishing season opens, you may not subsistence fish for salmon for 12 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period. However, you may subsistence fish (using drift gillnets only) for Chinook Salmon during the State commercial fishing season from 6:00 p.m. Sunday until 6:00 p.m. Tuesday; and from 6:00 p.m. Wednesday until 6:00 p.m. Friday.

## **Current Events**

In 2015 the Yukon River was reevaluated to determine if the Yukon River Chinook Stock should be removed from the Stock of yield concern designation; however it was determined that the stock has yet to return to historical levels and will remain a stock of yield concern as it has been for the last 18 years. During the March 2018 Alaska Board of Fisheries meeting, Proposal 231 was adopted with additional language (RC46) to repeal the current closures on first pulse fishing in Districts 1 and 2. However, managers still retain the authority to close or restrict the fishery if the preseason forecast is insufficient to meet escapement goals and/or harvest levels.

Preliminary management objectives for 2018 as stated in the 2018 Yukon River Salmon Fisheries Outlook include allowing 7.5-inch or smaller mesh gillnets 24 hours per day, 7 days per week prior to the first pulse arriving. As the Chinook Salmon enter each District, subsistence salmon fishing will be provided on a reduced regulatory schedule with 7.5-inch or smaller mesh gillnets during the early part of the run. If the confidence is high that the Chinook Salmon run is adequate and escapement goals are likely to be met, the use of 7.5-inch gillnets on a full regulatory schedule will be considered. If in-season assessment indicates a poorer than anticipated run, subsistence fishing time may be reduced or gear may be limited to selective gear types with no retention of Chinook Salmon allowed.

During the commercial fall Chum Salmon fishery in 2017, subsistence fisherman had the opportunity to sell incidentally caught Chinook Salmon during a single period (168 fish). There were no incidentally caught subsistence Chinook Salmon sold during the 2018 season.

## **Biological Background**

### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks show periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

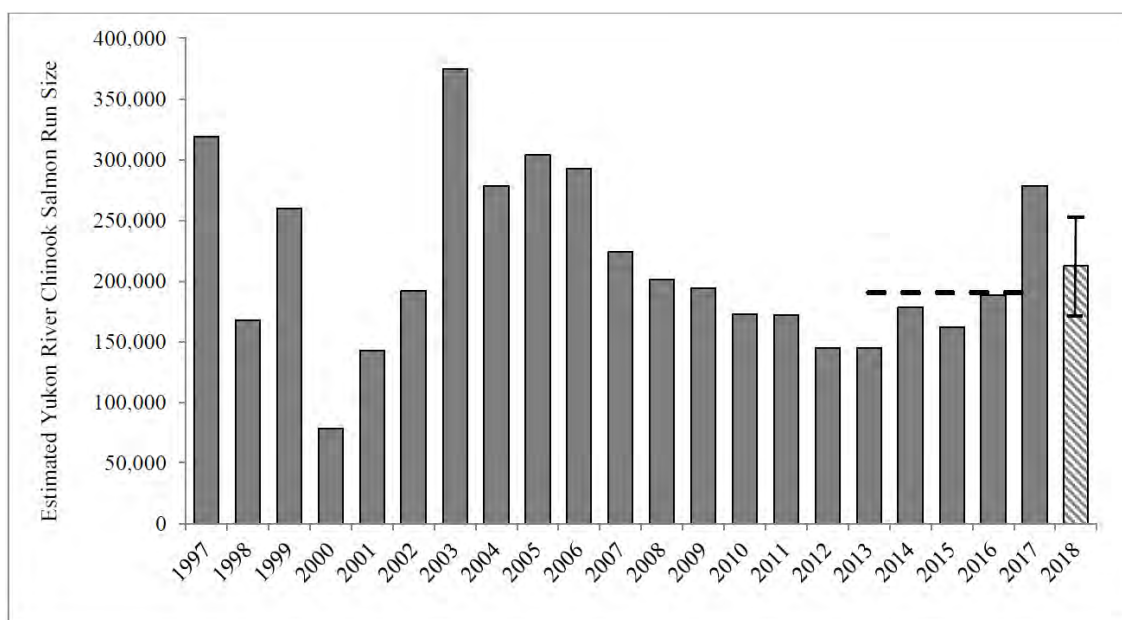
The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station was approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish and below the average of 195,800 fish for years with

early run timing. Even with below average run sizes, all escapement goals that could be assessed were achieved (JTC 2015).

The 2015 projected run size was 118,000-140,000 fish, which was once again below average but higher than the previous year’s projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately 116,000±30,000 fish (90% CI) (**Figure 2**). As with the previous year, this number was still below the historical average. All escapement goals were again met (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately 176,898±18,466 fish (90% CI) (JTC 2018). This number was near the recent historical average of 178,300 fish (ADF&G 2018), but is considered preliminary at this time. All escapement goals were again met (JTC 2016).

The 2017 run outlook was slightly larger, but still for a below average run of 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately 263,000±29,000 fish (90% CI) (ADF&G 2018), the largest since 2003 (JTC 2017). Most escapement goals were met except for 2007, 2008, 2010, 2012 and 2013 (JTC 2017).



**Figure 2.** Historical (1997-2017) and forecasted 2018 estimated Yukon River Chinook Salmon total run size with respective 95% confidence interval. Dashed line indicates last five-year average near 200,000 Chinook Salmon (ADF&G 2018).

The 2018 Yukon River Chinook Salmon fisheries outlook was for a run size of 173,000 to 251,000 fish (**Figure 2**, ADF&G 2018). The upper end of this range is less than the total estimated run observed in 2017, which was 263,000±29,000 fish. The 2018 Yukon River Salmon Fisheries Outlook stated that the 2018 run may be large enough to provide for normal subsistence harvests; however, a cautionary approach will be taken early in the season, and in-season management strategies will be based on run assessment information once fish begin entering the river. If assessment indicates the Chinook Salmon

run size is near the upper end of the range, and goals are projected to be met, subsistence fishing restrictions would likely be relaxed. If that occurs, commercial Chum Salmon fishermen may be given the opportunity to sell Chinook Salmon incidentally-caught in the Chum Salmon fishery, but this would likely be at the tail end of the run, when the majority of the Chinook Salmon have passed upriver for escapement and subsistence harvest purposes.

## **Harvest History**

### Subsistence

The entire Yukon River drainage has more than 50 communities, most of which participate in subsistence fisheries. Subsistence salmon fishing activities in the Yukon River drainage typically begin in late May and continue through early October. Currently the primary method for estimating the subsistence harvest is through an annual subsistence salmon harvest survey program that the Alaska Department of Fish & Game, Division of Commercial Fisheries administers, which conducts a survey of 33 communities (including the coastal communities of Scammon Bay and Hooper Bay) during the fall and after the fishing season (Jallen et al. 2017). In recent years, subsistence fishing has increasingly targeted other species of salmon and non-salmon fish. In order to allow continued subsistence opportunity throughout the season, subsistence fishing activity has been managed to avoid the take of Chinook Salmon while allowing for the harvest of other fish species.

Between 2006 and 2016, the ten year average Chinook Salmon subsistence harvest was approximately 41,200 fish annually in the Alaskan portion of the Yukon River. The five year average from 2011-2016 was 18,000 fish (**Figure 3**). Subsistence harvest levels of Chinook Salmon have declined since 1997 due to declining run abundance and resultant harvest restrictions (Schindler et al. 2013). Both survey and permit data for the 2017 subsistence salmon harvests in the Alaska portion of the Yukon River drainage was estimated to be 36,992 Chinook Salmon. The harvest levels during 2017 for Chinook Salmon were below levels defined by the BOF as Amounts Reasonably Necessary for Subsistence (ANS 45,500-66,704 Chinook; Jallen et al. 2012). Additionally, 2017 was the fourth highest subsistence harvest level for the last ten years with 2008 being number one at 43,700 fish harvested.

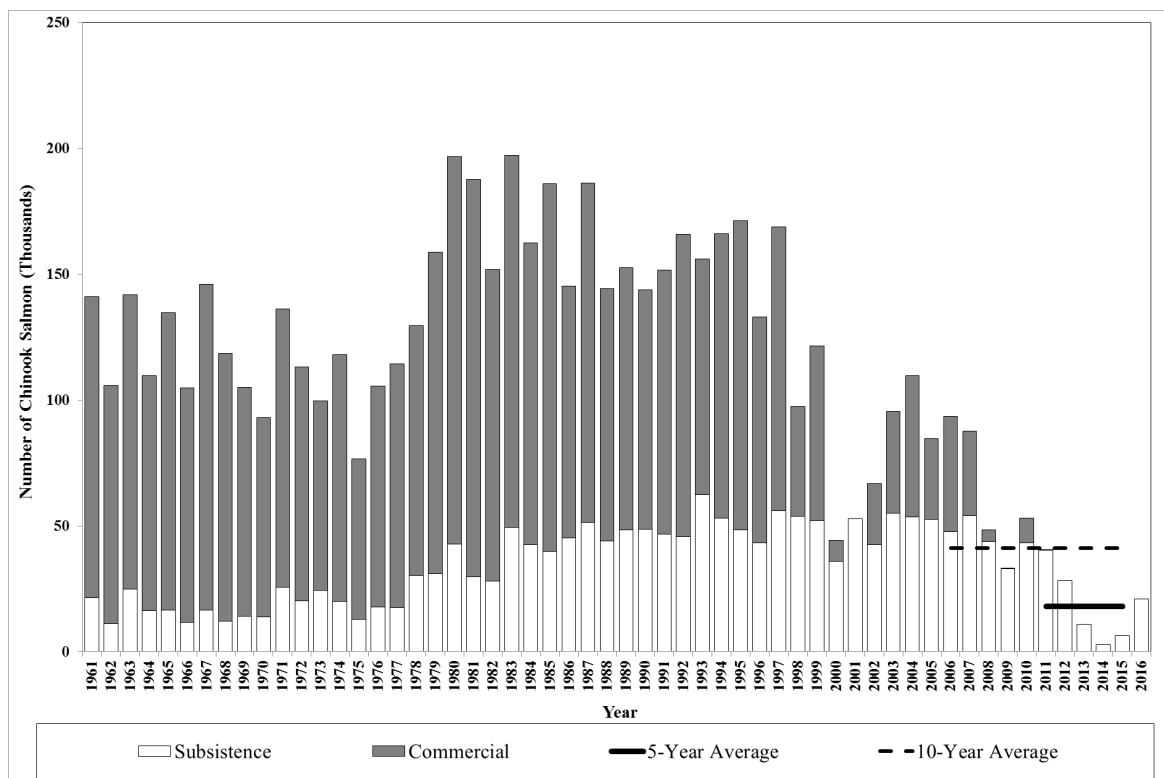
### Commercial

A commercial fishery directed towards Chinook Salmon has taken place since 2008. Retention and sale of incidental caught Chinook Salmon was allowed during two opportunities since 2008. Directed commercial harvest for Chinook Salmon was prohibited for the seventh consecutive year during the 2017 summer season. During the fall fishing seasons of 2011 and 2017, 82 and 168 fish were sold commercially in Districts 1 and 2, respectively. The 1961-2005 average commercial harvest is 98,000 and the 2006-2016 average harvest of 15,700 (JTC 2018).

### Sport

Sport fishing harvest of Chinook Salmon are generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to

be 105 Chinook Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort. During 2017, sport fishing was allowed after June 20, and allowed for a bag limit of 1 Chinook Salmon 20-inches or greater (JTC 2018).



**Figure 3.** Historical subsistence (hollow bars) and commercial (grey bars) harvest of Chinook Salmon in the Yukon River from 1961 – 2016. Solid black line indicates last 5 year average and dashed black line indicates last 10 year average subsistence harvest (JTC 2017).

### Cultural Knowledge and Traditional Practices

The use and importance of salmon and other non-salmon species for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence lifestyle, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have lived in the Yukon area for over 10,000 years (Rainey 1940, Cinq-Mars 1979) and fishing was a family and community activity, deeply ingrained in to the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and more recently employed set nets along with fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recalled whole families spending long hours at their fish

camp, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010; Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and fall Chum Salmon along with other subsistence resources (Brown et al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation.

Customary trade of fish is also an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use nets under the ice to fish for Northern Pike, whitefish, or Sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum Salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed by people in the United States and overseas. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

The use, harvest, and dependence of salmon resources can vary by community based on cultural practices, resource availability, economics and many other factors. Yukon River drainage residents exhibit these variations generally within the lower, middle, and upper stretches of the drainage. Communities present along the river and their populations over time, by fishing district, are represented in **Appendix A**.

### **Other Alternative(s) Considered**

The proponent of this proposal raises both conservation and future subsistence use concerns due to the opening of Districts 1 and 2 to harvest first pulse Chinook Salmon. The proposal could employ an alternative approach during the first pulse by reducing the level of harvest through gear or fishing time restrictions. This practice is already standard for the in-season managers when run size forecasts look to be insufficient to meet escapement goals and subsistence needs. This option still allows for an opportunity to fish first pulse fish, when the in-season manager feels the preseason Chinook Salmon forecast indicates sufficient abundance to meet escapement goal objectives and subsistence harvest needs. The amended language (RC46) added in the BOF proposal 231 allows this flexibility for the



in-season managers to still restrict the access of Districts 1 and 2 if the forecasts indicates insufficient abundance to meet escapement goal objectives and subsistence harvest needs. This alternative approach to managing the first pulse of Chinook Salmon is, however, more restrictive on Federally qualified subsistence users than State regulations. However the State regulations do allow for flexibility in the in-season management decision to close or restrict harvest if the run seems to be insufficient to meet escapement and harvest goals.

### **Effects of the Proposal**

If FP19-06 were adopted, Federally qualified subsistence users fishing under Federal subsistence regulations in Federal public waters in all Yukon River Districts would have a complete closure to the harvest of first pulse Chinook Salmon. This proposal would directly contradict recent BOF proposal 231, allowing subsistence fishing opportunity for Districts 1 and 2 to fish first pulse Chinook Salmon, if the preseason Chinook Salmon forecast indicates sufficient abundance to meet escapement goal objectives and subsistence harvest needs. FP19-06 has the potential to limit subsistence harvest opportunities during times of higher abundance levels. If adopted, this proposal would also make Federal subsistence management regulations more restrictive than State fishing regulations.

Federally qualified subsistence users prefer to put up fish earlier in the summer when the weather is better for drying fish and decreases chances of spoilage. This proposal has the potential to increase the focus of fishing effort later in the summer during times of poorer weather which could in return increase spoilage. Some or most of the fisherman are mobile enough that the benefit of a closure in Federal public waters could be offset by harvest in non-Federal public waters, rendering this proposal ineffective at achieving its stated intent.

If FP19-06 is not to be adopted, Districts 1 and 2 may be allowed conditional subsistence harvest opportunity to fish first pulse Chinook Salmon. However, if the preseason Chinook Salmon forecast indicates insufficient abundance to meet escapement goal objectives and subsistence harvest needs, the Federal and State in-season managers shall manage the Chinook Salmon subsistence fishery conservatively and not open any salmon subsistence fishing periods during the first pulse of Chinook Salmon entering the Districts.

### **OSM CONCLUSION**

**Oppose** Proposal FP19-06.

### **Justification**

Adoption of this proposal will reduce opportunities for Federally qualified subsistence users during years when escapement goals and objectives are projected to be met or exceeded. In-season managers currently attempt to manage this fishery conservatively. During years where abundance of Chinook Salmon will not be able to meet escapement needs, harvest objectives or the Canadian Interim Management Escapement Goal objectives, the in-season managers still retains authority to limit harvest

through gear or time restrictions, or completely close the fishery in a conservation effort. Therefore, this proposal will only add complexity to this fishery and remove some of the in-season management flexibility the fisheries managers currently have to allow subsistence harvest opportunities. The BOF proposal 231 with amended language from RC46, allows in-season managers to close Districts 1 and 2 subsistence harvest on first pulse Chinook Salmon if the forecast is too weak. Additionally, adoption of this proposal would also make Federal subsistence management regulations more restrictive than State subsistence fishing regulations, and thus fail to provide a meaningful rural subsistence priority.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Oppose** FP19-06. The Council voted to oppose this proposal after hearing detail from the State and Federal managers about the management of Chinook Salmon pulse protection. The Council concurred with the manager's assessment that it is important to provide some protection for all pulses of Chinook throughout the run in order to spread harvest out over all the stocks on the Yukon River. A complete closure of any harvest on the first pulse of Chinook Salmon would be an unnecessary restriction to subsistence since the best conservation strategy is to spread limited harvest throughout the entire Yukon Chinook run. Thus, the Council supports managing for some harvest opportunity throughout the season, especially some limited opportunity for subsistence salmon early in the season for fresh fish and when the season is good for drying fish. The Council is supportive of limited harvest throughout the run so as to not overharvest any one stock of Chinook Salmon.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-06. Council members agreed that existing regulations are more than enough to protect the Chinook Salmon pulse at this time. The Council acknowledged that State and Federal managers have the flexibility to address first pulse concerns, and the performance this past season shows that managers were actively conserving the resource. The Council agreed with the Alaska Department of Fish and Game's challenge of not having the management precision to shut down the fishery for five days, and that half a time period or one period a week if works better than full closures on certain areas of the Yukon River.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Oppose** FP19-06. The Council recognizes that when the first salmon come in, subsistence users are out fishing. When the Chinook Salmon show up in the river, users are immediately setting nets for them. The proposal could contribute to illegal fishing by subsistence users, and puts restrictions on existing management tools. The Council noted that we do not need to make criminals out of our own people.

### **Easter Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-06. The Council recognized the merit of the proposal's intent, especially for protection of the first pulse of Yukon River Chinook Salmon, but expressed concern about complicating management and imposing hardship on subsistence users. The Council concurred with the OSM staff analyses and found ADF&G report very compelling. However, the Council stressed that the conservation of Chinook Salmon and the first pulse protection are critical in order to protect this resource for future generations and that management needs to continue to keep this in mind.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fishery Proposal FP19-06:** This proposal, submitted by Don Woodruff of Eagle, would establish a new regulation to add conservation protections to the first pulse of Yukon River Chinook salmon in Federal public waters of districts 1 through 5.

**Introduction:** The proponent states the current Federal regulations do not have provisions that provide conservation protections to the first pulse of Yukon River Chinook salmon in Federal public waters of districts 1 through 5.

Beginning in 1998, Chinook salmon productivity began declining, and run sizes were considerably weaker, with the most dramatic drop in run sizes beginning in 2007. Yukon River Chinook salmon were classified as a yield concern in 2000. Since 2008, restrictions to subsistence fishing for Chinook salmon have been necessary in most years to meet escapement goals. Beginning in 2012 intensive subsistence fishery management has included full fishing closures around pulses of fish, fishing time reductions, gear restrictions, and even full subsistence fishing closures for Chinook salmon through most of the summer season, with the lowest harvests in 2014 (3,286) and 2015 (7,577). As the Chinook run size has begun to rebound in 2016 -2018, restrictions have been relaxed later in the season with some Chinook-directed subsistence harvest opportunities provided. Harvests of Chinook salmon in 2016 were approximately 22,000 and in 2017 were approximately 37,000. These harvests are above the (2013-2017) average of 16,000 fish.

The Canadian-origin component of Chinook salmon entering the Yukon River is highly variable. Based on genetic stock analyses done since 2005, the weighted season total estimate of Canadian origin Chinook salmon sampled at Pilot Station has ranged from 34% in 2011 to 52% in 2013, with an average of approximately 40% of the total run consisting of Canadian-origin Chinook salmon. How the Canadian origin stock enters the river is also quite variable. In many years, particularly odd-numbered years, the Canadian-origin stock proportion was higher in the first pulse, but in terms of the overall Canadian-origin run, the first pulse does not make up the bulk of the run. The first pulse only makes up about 25% of the total drainage-wide run in most years. However, Canadian-origin Chinook salmon continue to enter the river during the middle of the run when passage abundance estimates increase significantly, as well as throughout the remainder of the return. State regulations allow subsistence fishing opportunity for districts 1 and 2 on the first pulse of Chinook Salmon, if the pre-season Chinook Salmon forecast indicates enough abundance to meet escapement goal objectives and subsistence harvest needs. State regulations also allow management flexibility to restrict or close harvest on the first pulse if run

strength warrants it, and in 2014-2018 the first pulse has been protected in most districts either by complete closure, or through reduced fishing time, and restricted gear.

**Impact on Subsistence Users:** Federally qualified subsistence users in all Yukon River districts would have a complete closure to the harvest of first pulse Chinook Salmon regardless of preseason outlook. This proposal has the potential to limit subsistence harvest opportunities during times of higher abundance levels, when protection of a particular pulse is not warranted. If adopted, there could be excessive harvest on later pulses, which could affect harvest on particular stocks that arrive later in the run. Weather is typically better early in the season for drying fish, so there is usually less spoilage. This proposal would also make federal subsistence management regulations more restrictive than state fishing regulations and would directly oppose the recently-adopted Board of Fisheries (BOF) proposal 231, which allows subsistence fishing opportunity for districts 1 and 2 to fish first pulse Chinook Salmon, if the preseason Chinook Salmon forecast and inseason run abundance indicates enough abundance to meet escapement goal objectives and subsistence harvest needs.

**Impact on Other Users:** None.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The BOF has 45,500–66,704 king salmon are reasonably necessary for subsistence uses.

**5 AAC 05.360. Yukon River King Salmon Management Plan – Yukon Area**

(1) In Districts 1 and 2, to account for the uncertainty in the preseason king salmon run projection, if the preseason king salmon forecast indicates insufficient abundance to meet escapement goal objectives and subsistence harvest needs, the department shall manage the king salmon subsistence fishery conservatively and not open any salmon subsistence fishing periods during the first pulse of king salmon entering the districts.

**Conservation Issues:** This proposal has the potential to increase the focus of fishing effort on later arriving fish during times of poorer weather and to potentially increase spoilage. Pushing all of the harvest onto later portions of the run also has unknown harmful effects of potentially over-harvesting U.S. specific stocks that are known to have later run timing, such as the Tanana River stock. Recent years' management strategies have attempted to spread the harvest across the entire run so as to avoid any stock-specific over harvest. When Chinook run sizes allow for nearly full subsistence harvest (i.e. no restrictions), limiting fishing on the early or first fish, also reduces opportunity for fishermen in the lower river to target Chinook salmon, as later in the run, they are inundated by the super abundant summer chum, which can affect their ability to meet their Chinook salmon needs.

**Enforcement Issues:** Adoption of this proposal would result in the need for increased enforcement activity and patrols throughout the entire drainage to ensure compliance with added closures.

**Recommendation:** ADF&G **OPPOSES** reducing subsistence opportunity. Current state and federal regulations are aligned, and this proposal would put them out of alignment. ADF&G already has E.O. authority to restrict time, area, and gear to achieve escapement goals. At the recent March 6-9, 2018 Statewide BOF meeting mandatory first pulse protection was repealed for run sizes large enough to provide for subsistence and escapement needs. ADF&G has the ability to effectively manage the Chinook salmon subsistence fishery conservatively to account for uncertainty in preseason projections and inseason run assessment during the first pulse. The U.S. and Canada bilaterally negotiated Interim Management Escapement Goal (IMEG) has been exceeded since 2014.

**Appendix A.** Population data for communities within the Yukon River drainage fishing Districts, 1960-2010.

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Stebbins city	158	231	331	400	547	556	134
<b>Outside drainage subtotal</b>	<b>158</b>	<b>231</b>	<b>331</b>	<b>400</b>	<b>547</b>	<b>556</b>	<b>134</b>
Alakanuk city	278	265	522	544	652	677	160
Nunam Iqua city	125	125	103	109	164	187	43
Emmonak city	358	439	567	642	767	762	185
Kotlik city	57	228	293	461	591	577	128
<b>District 1 subtotal</b>	<b>818</b>	<b>1,057</b>	<b>1,485</b>	<b>1,756</b>	<b>2,174</b>	<b>2,203</b>	<b>516</b>
Mountain Village city	300	419	583	674	755	813	184
Pitkas Point CDP	28	70	88	135	125	109	31
Saint Marys city	260	384	382	441	500	507	151
Pilot Station city	219	290	325	463	550	568	121
Marshall city	166	175	262	273	349	414	100
<b>District 2 subtotal</b>	<b>973</b>	<b>1,338</b>	<b>1,640</b>	<b>1,986</b>	<b>2,279</b>	<b>2,411</b>	<b>587</b>
Russian Mission city	102	146	169	246	296	312	73
Holy Cross city	256	199	241	277	227	178	64
Shageluk city	155	167	131	139	129	83	36
<b>District 3 subtotal</b>	<b>513</b>	<b>512</b>	<b>541</b>	<b>662</b>	<b>652</b>	<b>573</b>	<b>173</b>
Anvik city	120	83	114	82	104	85	33
Grayling city	0	139	209	208	194	194	55
Kaltag city	165	206	247	240	230	190	70
Nulato CDP	183	308	350	359	336	264	92
Koyukuk city	128	124	98	126	101	96	42
Huslia city	168	159	188	207	293	275	91
Hughes city	69	85	73	54	78	77	31
Allakaket city	115	174	163	170	97	105	44
Alatna CDP				31	35	37	12
Bettles city	77	57	49	36	43	12	9
Evansville CDP	77	57	45	33	28	15	12
Wiseman CDP	0	0	8	33	21	14	5
Coldfoot CDP					13	10	6
Galena city	261	302	765	833	675	470	190
Ruby city	179	145	197	170	188	166	62
<b>District 4 subtotal</b>	<b>1,542</b>	<b>1,839</b>	<b>2,506</b>	<b>2,582</b>	<b>2,436</b>	<b>2,010</b>	<b>754</b>
Tanana city	349	120	388	345	308	246	100
Rampart CDP	49	36	50	68	45	24	10
Stevens Village CDP	102	74	96	102	87	78	26
Beaver CDP	101	101	66	103	84	84	36
Fort Yukon city	701	448	619	580	595	583	246
Chalkyitsik CDP	57	130	100	90	83	69	24

*Continued on next page*



## Appendix A. Continued from previous page

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Arctic Village CDP	110	85	111	96	152	152	65
Venetie CDP	107	112	132	182	202	166	61
Birch Creek CDP	32	45	32	42	28	33	17
Circle CDP	41	54	81	73	100	104	40
Chicken CDP	0	0	0	0	17	7	5
Central CDP	28	26	36	52	134	96	53
Eagle Village CDP	0	0	54	35	68	67	31
Eagle city	92	36	110	168	129	86	41
<b>District 5 subtotal</b>	<b>1,769</b>	<b>1,267</b>	<b>1,875</b>	<b>1,936</b>	<b>2,032</b>	<b>1,795</b>	<b>755</b>
Livengood CDP					29	13	7
Manley CDP	72	34	61	96	72	89	41
Minto CDP	161	168	153	218	258	210	65
Whitestone CDP						97	22
Nenana city	286	362	470	393	402	378	171
Four Mile Road CDP					38	49	14
Healy CDP	67	79	334	487	1,000	1,021	434
McKinley Park CDP	0	0	60	171	142	185	109
Anderson city	341	362	517	628	367	246	90
Ferry CDP				56	29	33	17
Lake MinChumina CDP	0	0	22	32	32	13	6
Cantwell CDP	85	62	89	147	222	219	104
Delta Junction city	0	703	945	652	840	958	377
Fort Greely CDP	0	1,820	1,635	1,299	461	539	236
Deltana CDP					1,570	2,251	784
Healy Lake CDP	0	0	33	47	37	13	7
Big Delta CDP	0	0	285	400	749	591	206
Dry Creek CDP	0	0	0	106	128	94	29
Dot Lake CDP	56	42	67	70	19	13	7
Dot Lake Village CDP					38	62	19
Tanacross CDP	102	84	117	106	140	136	53
Tetlin CDP	122	114	107	87	117	127	43
Tok CDP	129	214	589	935	1,393	1,258	532
Northway CDP	196	40	73	123	95	71	27
Northway Jct. CDP	0	0	0	88	72	54	20
Northway Village CDP						98	
Alcan border CDP	0	0	0	27	21	33	16
Nabesna CDP						5	3
<b>District 6 subtotal</b>	<b>1,617</b>	<b>4,084</b>	<b>5,557</b>	<b>6,168</b>	<b>8,271</b>	<b>8,856</b>	<b>3,439</b>
<b>TOTAL</b>	<b>7,390</b>	<b>10,328</b>	<b>13,935</b>	<b>15,490</b>	<b>18,391</b>	<b>18,404</b>	<b>6,358</b>

CDP=Census Designated Place. Black cell=information is not available. Source: ADCCED 2014.

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FP19-07 Executive Summary	
<b>General Description</b>	<p>Proposal FP19-07, requests the Federal Subsistence Board revise Federal subsistence management regulations section §____.27(e)(3)(xii) by adding dip nets to the gear types allowed for the subsistence harvest of salmon on the Yukon River.</p> <p><i>Submitted by: Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.</i></p>
<b>Proposed Regulation</b>	<p><b>§____.27 Subsistence taking of fish</b></p> <p style="text-align: center;">* * * *</p> <p><i>(xiii) You may take salmon only by gillnet, beach seine, fish wheel, or rod and reel, subject to the restrictions in this section. <b>Salmon may be harvested by dip net at any time, except in times of conservation, Chinook Salmon are required to be released alive.</b></i></p>
<b>OSM Conclusion</b>	<p><b>Support with modification</b> to allow the Federal in-season manager to additionally require the live release of Chinook, Chum, or Coho Salmon during times of low salmon abundance rather than only Chinook Salmon.</p> <p>The modified regulation should read:</p> <p style="text-align: center;"><b>§____.27 Subsistence taking of fish</b></p> <p style="text-align: center;">* * * *</p> <p><i>(xiii) You may take salmon only by gillnet, beach seine, fish wheel, <b>dip net</b>, or rod and reel, subject to the restrictions in this section.</i></p> <p style="text-align: center;">*****</p> <p><i><b>(C) Salmon may be harvested by dip net at any time, except during times of conservation, the Federal in-season manager may announce restrictions on time, area, and species.</b></i></p>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Support as Modified by OSM</b>

<b>FP19–07 Executive Summary</b>	
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as Modified by OSM</b>
<b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b>	<b>Support as Modified by OSM</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as Modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as Modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS**  
**FP19-07**

**ISSUES**

Proposal FP19-07, submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council), requests the Federal Subsistence Board (Board) revise Federal subsistence management regulations section § \_\_.27(e)(3)(xii) by adding dip nets to the gear types allowed for the subsistence harvest of salmon on the Yukon River.

**DISCUSSION**

According to the proponent, dip netting has been a traditional method of fish harvest for many communities on the Yukon River but is not currently a legal gear type for the harvest of salmon under Federal subsistence regulations. The Yukon Kuskokwim Delta Council has noted that it is allowed for commercial salmon harvest on the Yukon River by Alaska Department of Fish and Game (ADF&G) Emergency Order. Dip nets have proven to be an effective method of catching Chum Salmon with safe live release of Chinook Salmon.

**Existing Federal Regulation**

*§ \_\_.27 Subsistence taking of fish*

*(e)(3) Yukon-Northern Area.*

*(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time. In those locations where subsistence fishing permits are required, only one subsistence permit will be issued to each household per year. You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in paragraph (e)(3) of this section.*

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

*\* \* \* \**

*(xiii) You may take salmon only by gillnet, beach seine, fish wheel, or rod and reel,*

*subject to the restrictions in this section.*

\* \* \* \*

*(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:.*

\* \* \* \*

### **Proposed Federal Regulation**

#### **§ \_\_.27 Subsistence taking of fish**

\* \* \* \*

*(xiii) You may take salmon only by gillnet, beach seine, fish wheel, or rod and reel, subject to the restrictions in this section. **Salmon may be harvested by dip net at any time, except in times of conservation, Chinook Salmon are required to be released alive.***

\* \* \* \*

### **Existing State Regulation**

#### **5 AAC 01.220. Lawful gear and gear specifications**

*(a) Salmon may be taken only by gillnet, beach seine, a hook and line attached to a pole, handline, or fish wheel, subject to the restrictions set out in this section, 5 AAC 01.210, and 5 AAC 01.225-5 AAC 01.249.*

\* \* \* \*

*(m) Notwithstanding the provisions of (d), (e)(2), and (f)(2) of this section, during times when the commissioner determines that it is necessary for the conservation of chum salmon, the commissioner may, by emergency order, close the fishing season in the Yukon Area and immediately reopen the season in that area during which one or more of the following gear limitations may be implemented*

\* \* \* \*

*(3) dip nets may be used; however, all chum salmon caught with a dip net must be released into the water alive;*

*(n) Notwithstanding the provisions of (d), (e)(2), and (f)(2) of this section, during times when the commissioner determines that it is necessary for the conservation of king salmon, the commissioner may, by emergency order, close the fishing season in the Yukon Area and immediately reopen the season in that area during which one or more of the following gear limitations may be implemented*

\* \* \* \*

*(3) dip nets may be used; however, all king salmon caught with a dip net must be released into the water alive;*

### **Extent of Federal Public Waters**

For the purpose of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR 242.3 and 50 CFR 100.3. The Federal public waters addressed by this proposal are within the Yukon River Drainage within or adjacent to the Arctic National Wildlife Refuge, Gates of the Arctic National Park and Preserve, Innoko National Wildlife Refuge, Yukon Delta National Wildlife Refuge, Koyukuk National Wildlife Refuge, Kanuti National Wildlife Refuge, Nowitna National Wildlife Refuge, Denali National Park and Preserve, White Mountains National Recreation Area, Steese National Conservation Area, Yukon Charley Rivers National Preserve, Beaver Creek National Wild and Scenic River, Birch Creek National Wild and Scenic River, Delta Wild and Scenic River, Fortymile Wild and Scenic River, Tetlin National Wildlife Refuge, Yukon Flats National Wildlife Refuge, and Wrangell-St. Elias National Park and Preserve (**Figure 1**).

### **Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have customary and traditional use determination for Salmon, other than fall chum salmon in the Yukon River drainage.

Residents of the Yukon River drainage and the community of Chevak, Hooper Bay, Scammon Bay, and Stebbins have a customary and traditional use determination for Fall chum salmon in the Yukon River drainage.

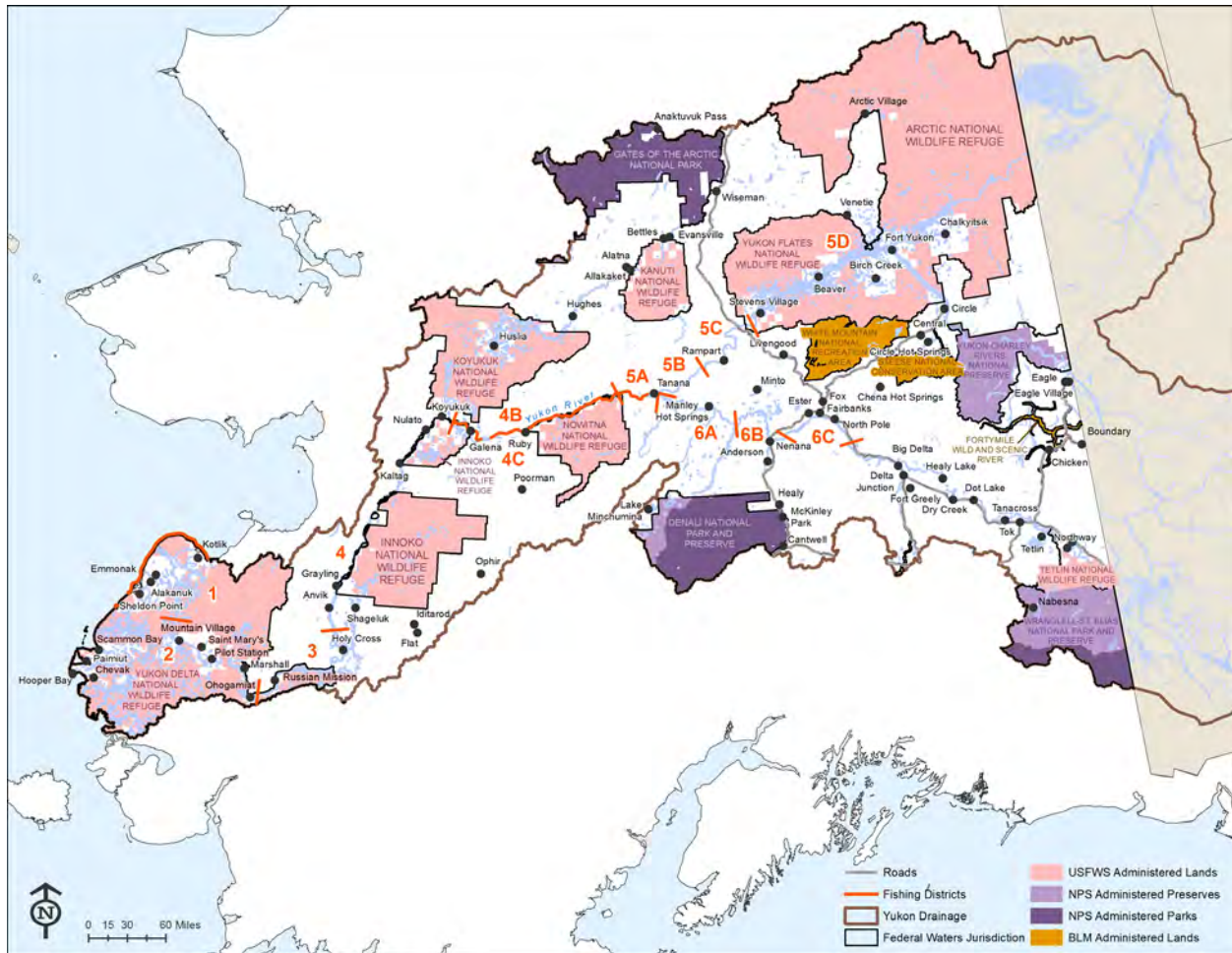


Figure 1. Yukon River with fishing Districts.

## Regulatory History

### State Regulatory History

In 2013, the Alaska Board of Fisheries adopted new commercial fishing regulations that allows the use of dip nets and beach seines to harvest salmon (Estensen et al. 2017). The rationale for adding these gear types was to allow fishing opportunity during times of low Chinook Salmon abundance.

### Federal Regulatory History

Starting in October 1999, Federal subsistence management regulations for the Yukon-Northern Area stipulated that, unless otherwise restricted, rural residents may take salmon in the Yukon-Northern Area at any time by gillnet, beach seine, fish wheel, or rod and reel unless exceptions are noted. These methods were adopted from ADF&G methods for the Yukon Region at that time.



## Biological Background

### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks showed periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station was approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish and below the average of 195,800 fish for years with early run timing. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2015).

The 2015 projected run size was 118,000-140,000 fish, which was once again below average yet higher than the previous year's projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately 116,000±30,000 fish (90% CI) (**Figure 2**). As with the previous year, this number was still below the historical average. As a result of severe management restrictions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately 176,898±18,466 fish (90% CI) (Liller, 2018 pers. comm.). This number was near the recent historical average of 178,300 fish (ADF&G 2018), but is considered preliminary at this time. Conservative actions were relaxed slightly from previous years and all escapement goals were again met (JTC 2016).

The 2017 run outlook was slightly larger, but still below average: 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately 263,000±29,000 fish (90% CI) (JTC 2018), which was the largest since 2003 (JTC 2017), is also considered preliminary. Subsistence management restrictions were further relaxed which resulted in harvests approximately two thirds of average and most escapement goals were met despite the poor water conditions that existed throughout the drainage. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

The 2018 run outlook is larger than in recent years, with a run size of 173,000-251,000 fish (ADF&G 2018). The upper end of the range could support an average subsistence harvest and while the low end of the range would likely result in restrictions to subsistence fisheries.

### Summer Chum Salmon

Summer Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 15 years, 2003-2017. In 2017, the projected outlooks were for a run size of approximately 2 million fish, while the 2018 projection is expected to be similar or slightly lower than the 2017 run of approximately 3.6 million fish.

In 2016, approximately 1.92 million  $\pm 80,517$  (90% CI) fish passed the Yukon River sonar project at Pilot Station, which was near the historical median for the project of 1.90 million fish. In 2017, the passage estimate at Pilot Station increased to 3.09 million  $\pm 138,259$  (90% CI) (**Figure 3**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018). The Henshaw Creek weir counted a record number of Chum Salmon (360,687), which was only 13% smaller than the number counted at the Anvik River Sonar (415,139). The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

Although all 2017 numbers are preliminary at this time, the 2018 run is anticipated to provide for escapements, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

### Fall Chum Salmon

Fall Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 8 years, 2010-2017. In 2017, the projected outlooks were for a run size of approximately 1.4-1.7 million fish, while the 2018 projection of 1.6-1.8 million fish is lower than the 2017 run of approximately 2.3 million fish (JTC 2018).

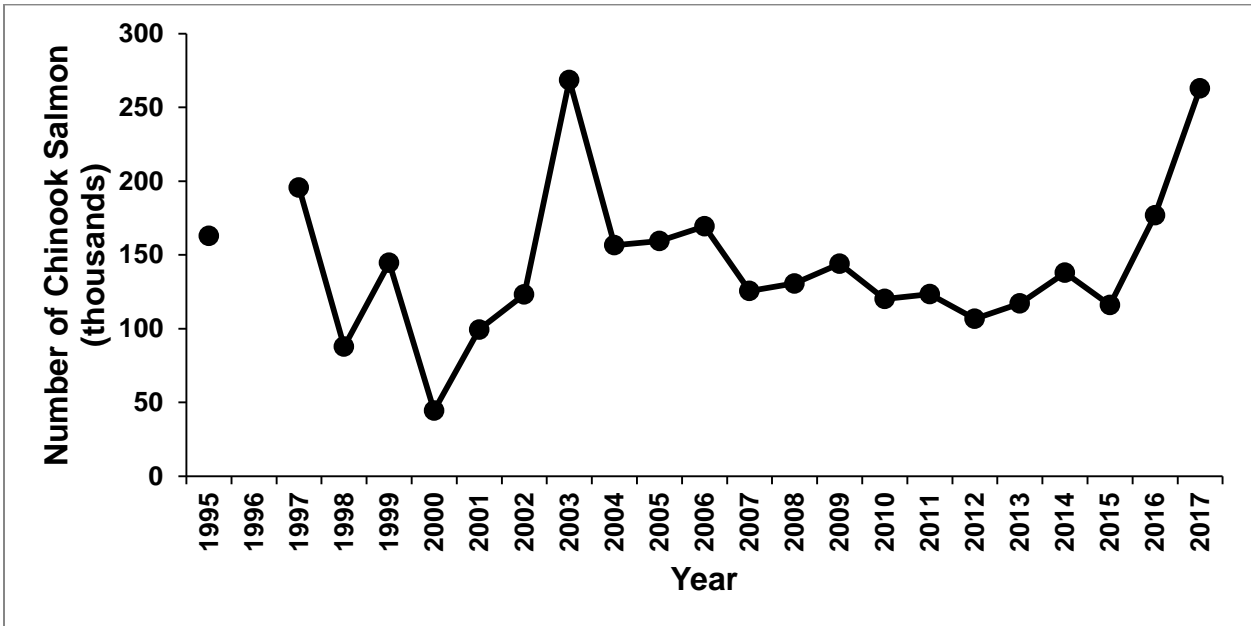
In 2016, approximately 994,760 million  $\pm 64,434$  (90% CI) Fall Chum Salmon passed the Yukon River sonar project at Pilot Station, which was above the 1995-2016 median for the project of 688,057 fish. In 2017, the passage estimate at Pilot Station increased to 1.83 million  $\pm 54,179$  (90% CI) and was the second largest run in 43 years (**Figure 4**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018) although all 2017 numbers are preliminary at this time. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.

The 2018 run is anticipated to provide for escapements, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

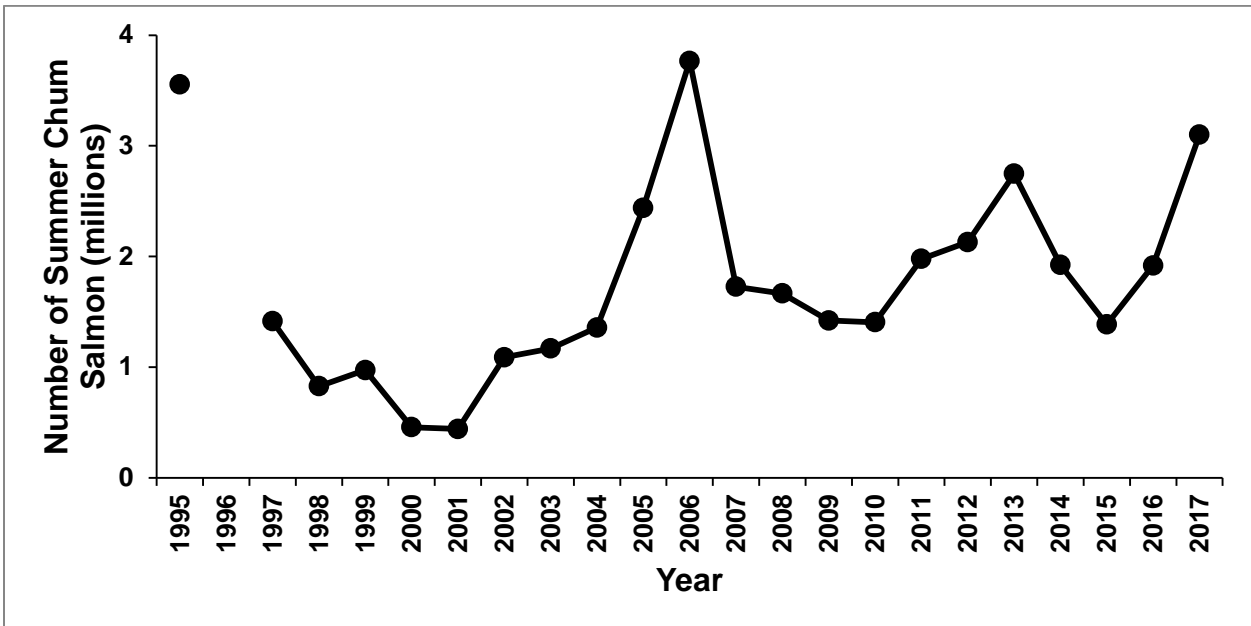
### Coho Salmon

In 2016 approximately 168,297  $\pm 11,180$  (90% CI) Coho Salmon passed the Yukon River sonar project at Pilot Station, which was slightly above the historical median of 160,272 fish. In 2017, the passage estimate at Pilot Station decreased to 166,330  $\pm 20,300$  (90% CI), which was also slightly above the historical median (**Figure 5**). All 2017 numbers are preliminary at this time. The Coho Salmon outlook is based upon parent year escapements assuming average survival. Since Coho Salmon predominately return as age 2.1 fish (4 year old fish), the major contributor to the 2018 returns are from

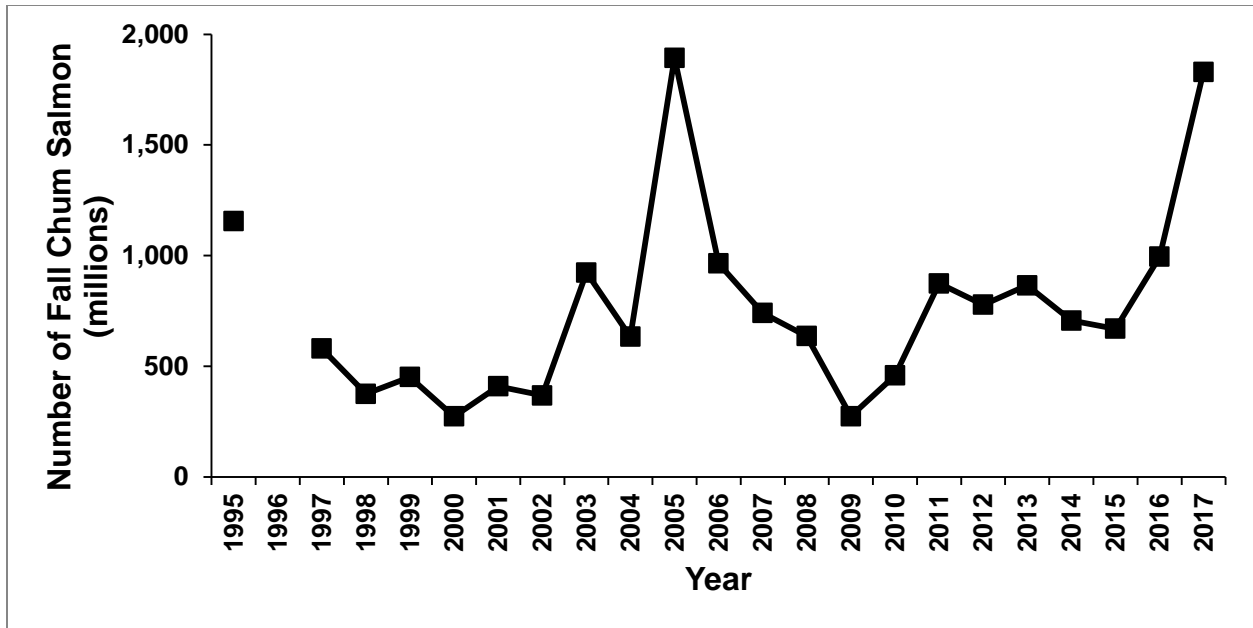
the 2014 parent year. Therefore, the 2018 outlook is for average to above average returns in 2018. The numbers reported at the Pilot Station sonar do not factor in any harvest that occurs downstream, which can be significant during some years.



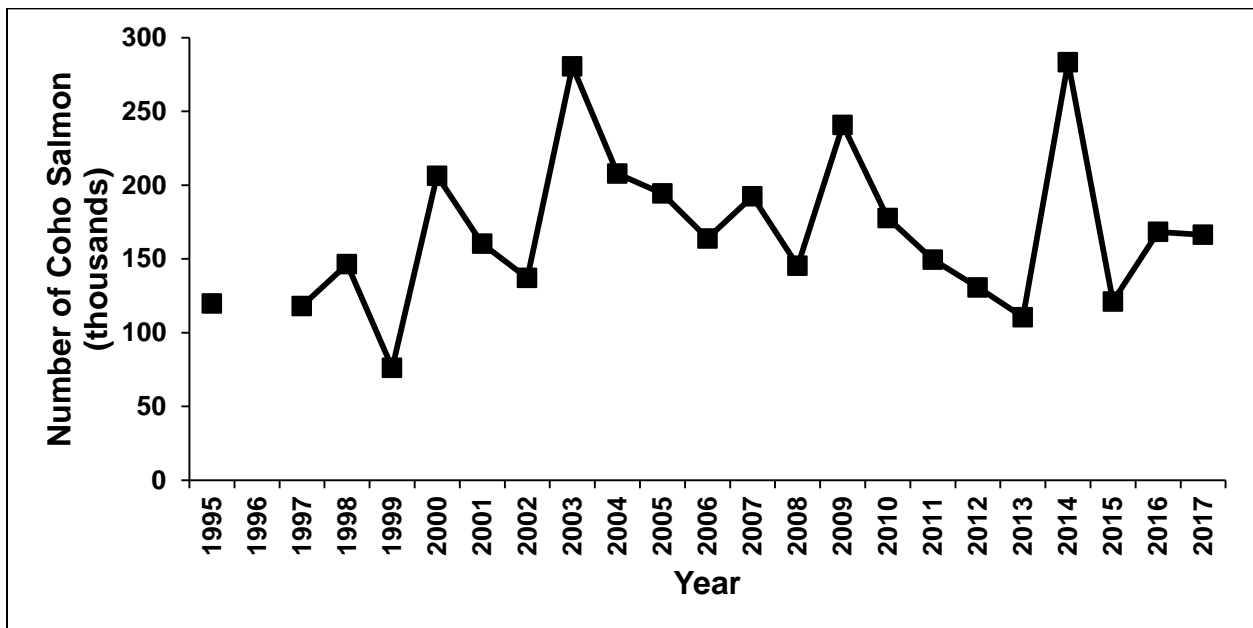
**Figure 2.** Chinook Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 3.** Summer Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 4.** Fall Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 5.** Coho Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.

**Harvest History**

Distribution and availability of salmon varies throughout the Yukon River drainage. Summer Chum Salmon are uncommon in the Yukon River drainage above the Tanana River, while the fall Chum Salmon spawning grounds are mainly from the Tanana River upstream (Estensen et al. 2017). The lack of Summer Chum Salmon in the upper portions of the drainage places a bigger reliance on Chinook

Salmon in the early season for these communities. This information is reflected in the 2014 ADF&G subsistence salmon harvest estimates (Jallen et al. 2017). It is important to make the distinction on locations and timing when discussing possible changes to Federal subsistence fishing regulations, as not every village has the same fishing opportunities.

### Chinook Salmon

#### *Subsistence*

Subsistence harvest of Chinook Salmon in the Alaska portion of the Yukon River averaged 34,791 fish from 1961-2015, with a high of 62,486 in 1993 and a low of 2,724 in 2014 (JTC 2017) (**Figure 6**). The 2014 Chinook Salmon subsistence harvest of 2,724 fish was the lowest on record for the Alaska portion of the Yukon River drainage. Harvest increased in 2015, 2016 and 2017 with 7,577, 21,627, and 36,992 fish harvested respectively. The 2017 harvest estimate, though preliminary, is larger than the 2007-2016 average (29,514) and over 2 times the number of the recent 5 year average of 15,088 (JTC 2018). The 2017 harvest is the largest since 2011.

#### *Commercial*

Chinook Salmon have not been targeted in the commercial fishery for 10 years and the sale of incidentally caught Chinook Salmon was prohibited for the seventh consecutive year during the 2017 summer season. However, there was a small opportunity during the fall fishing seasons where fish were sold in Districts 1 and 2 in 2011 (82) and 2017 (168). The 1961-2016 average commercial harvest is 88,092 with a recent 10 year average of 9,714 (JTC 2018).

#### *Sport fish*

Sport fishing harvest of Chinook Salmon are generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 105 Chinook Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort. During 2017, sport fishing was allowed after June 20, and allowed for a bag limit of 1 Chinook Salmon 20-inches or greater (JTC 2018).

### Summer Chum Salmon

#### *Subsistence*

Subsistence harvest of Summer Chum Salmon in the Alaska portion of the Yukon River averaged 129,766 fish from 1970-2016, with a high of 227,829 in 1988 and a low of 72,155 in 2001 (JTC 2018) (**Figure 7**). The 2012-2016 average harvest is estimated to be 100,113 Summer Chum Salmon, and the harvest estimate from 2014-2017 has remained relatively constant. The preliminary 2017 harvest is 87,252 Summer Chum Salmon. Summer Chum Salmon are predominately harvested in Yukon area

Districts 1-4, and 6. Few Summer Chum Salmon migrate upstream of the Tanana River in the Yukon River mainstream.

#### *Commercial*

Commercial harvest of Summer Chum Salmon in the Alaska portion of the Yukon River averaged 382,635 fish from 1970-2016, with a high of 1,148,650 in 1988 and a low of 0 in 2001 (JTC 2018). Since 2001, commercial catches of Summer Chum Salmon has increased dramatically, with a 2012-2016 average of 444,094 fish. The preliminary 2017 harvest is 555,296 Summer Chum salmon.

#### *Sport fish*

Sport fishing harvest of Summer Chum Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 264 Summer Chum Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.

### Fall Chum Salmon

#### *Subsistence*

Subsistence harvest of Fall Chum Salmon in the Alaska portion of the Yukon River averaged 105,167 fish from 1961-2016, with a high of 342,819 in 1987 and a low of 19,395 in 2000 (JTC 2018) (**Figure 8**). The 2012-2016 average harvest is estimated to be 95,294 Fall Chum Salmon, and the harvest estimate from 2014-2017 has remained relatively constant. The preliminary 2017 harvest is 86,189 Fall Chum Salmon.

#### *Commercial*

Commercial harvest of Fall Chum Salmon in the Alaska portion of the Yukon River averaged 157,467 fish from 1961-2016, with a high of 466,451 in 1981 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of Fall Chum Salmon has varied dramatically, and the 2012-2016 average is 260,042 fish. The preliminary 2017 harvest is 489,702 Fall Chum salmon.

#### *Sport fish*

Sport fishing harvest of Fall Chum Salmon is generally low in the Yukon River drainage, with no data presented (JTC 2018).

Coho Salmon

*Subsistence*

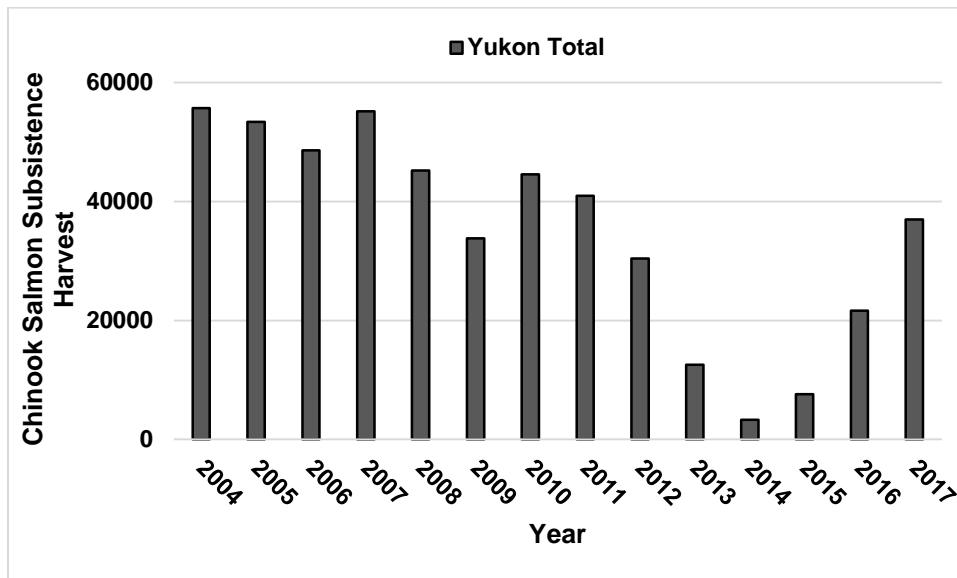
Subsistence harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 22,400 fish from 1961-2016, with a high of 82,371 in 1987 and a low of 3,966 in 1970 (JTC 2018) (**Figure 9**). The 2012-2016 average harvest is estimated to be 16,003 Coho Salmon, while the harvest estimate from 2016 and 2017 has decreased. The preliminary 2017 harvest is 7,645 Coho Salmon.

*Commercial*

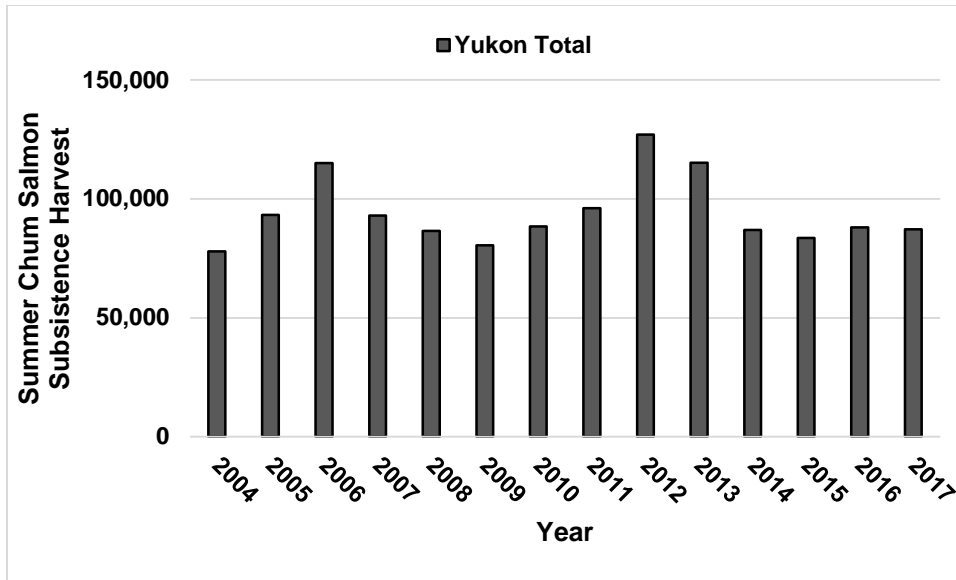
Commercial harvest of Coho Salmon in the Alaska portion of the Yukon River averaged 38,031 fish from 1961-2016, with a high of 201,482 in 2016 and a low of 0 in 1987, 1993, 2000, 2001, and 2002 when no commercial fishery was conducted (JTC 2018). Since 2002, commercial catches of Coho Salmon has varied dramatically, and the 2012-2016 average is 115,372 fish. The 2017 harvest is 138,915 Coho salmon. All harvest data from 2016 and 2017 is preliminary.

*Sport fish*

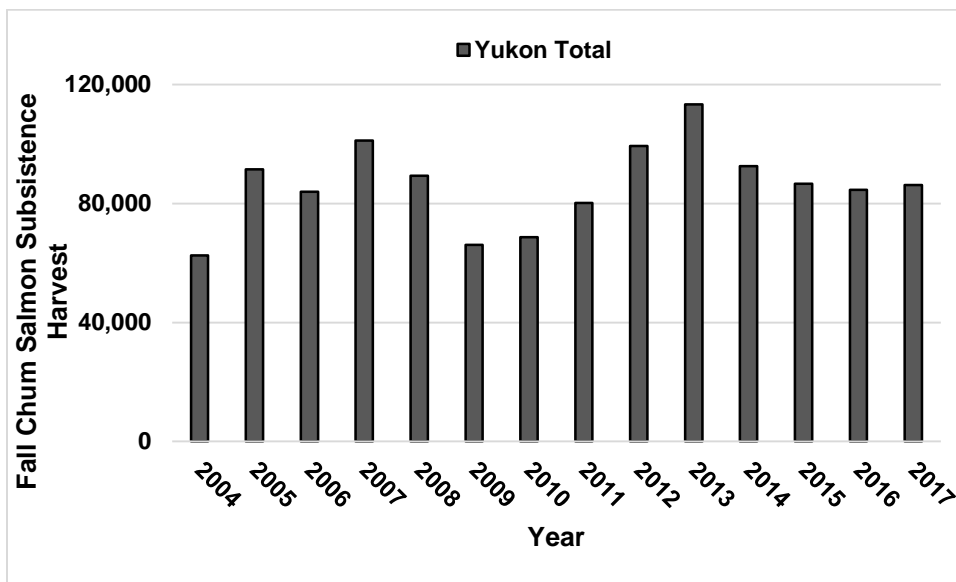
Sport fishing harvest of Coho Salmon is generally low in the Yukon River drainage. The 2012-2016 average sport fishing harvest within the Alaska portion of the Yukon River was estimated to be 703 Coho Salmon (JTC 2018). The majority of sport fishing effort in the drainage occurs in the Tanana River drainage (District 6). Outside of the Tanana River, the Andreafsky (in District 2) and Anvik (in District 4) rivers receive the bulk of the remaining effort.



**Figure 6.** Chinook Salmon subsistence harvest in the Alaska portion of the Yukon River from 2004 to 2014 (Jallen et al. 2017).

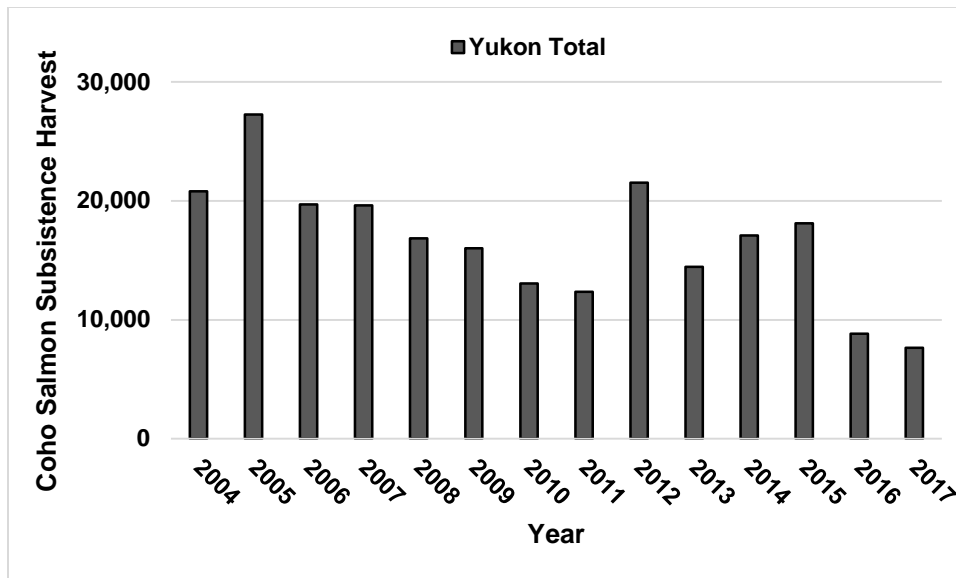


**Figure 7.** Summer Chum Salmon subsistence harvest in the Alaska portion of the Yukon River from 2004 to 2014 (Jallen et al. 2017).



**Figure 8.** Fall Chum Salmon subsistence harvest in the Alaska portion of the Yukon River from 2004 to 2014 (Jallen et al. 2017).





**Figure 9.** Coho Salmon subsistence harvest in the Alaska portion of the Yukon River from 2004 to 2014 (Jallen et al. 2017).

### Cultural Knowledge and Traditional Practices

The use and importance of salmon and other non-salmon species for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence lifestyle, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have lived in the Yukon area for over 10,000 years (Rainey 1940, Cinq-Mars 1979) and fishing was a family and community activity, deeply ingrained in to the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and more recently employed commercially made set nets along with hand-made fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recalled whole families spending long hours at their fish camps, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010; Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and fall Chum Salmon along with other subsistence resources (Brown et

al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation.

Customary trade of fish is also an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use nets under the ice to fish for Northern Pike, whitefish, or Sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum Salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed in large quantities by people in the US and overseas that attain the resource through the commercial fishing industry. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

Gear types and their use have changed over time in response to conservation and management actions to protect Chinook salmon (see Regulatory History). Management goals have been to provide adequate subsistence salmon fishing opportunity while conserving Chinook Salmon stocks. According to a Federal in-season manager in 2017, local people have been actively engaged in finding solutions and have been “willing to try dip nets and beach seines and gear” that are selective and that allow the live release of Chinook Salmon (FSB 2017; p. 63). During their winter 2018 meeting, members of the Yukon-Kuskokwim Delta Council reiterated that dip nets could be useful in times of conservation need, but also that they provide additional opportunity that could be important to some people (YKDRAC 2018). One member additionally indicated that this method is traditionally used (YKDRAC 2018; p 227):

Because historically my grandmother and I would go sit, when we used to have a fish camp on Flat Island, and we’d sit there for a week straight catching fall chum with a dip net on the banks of where our fish camp was and so, I guess I don’t know where else to go from there.

There is some local concern however that allowing the use of dip nets in the Federal subsistence salmon fishery could lead to future restrictions on the use of gillnets. In some areas of the Yukon the ability to use gillnets may not result in additional harvest opportunity because of topography and hydrological conditions that prevent adequate access. Residents of the Kuskokwim River have reported that while use of dip nets is an option for harvest in times of Chinook conservation since it allows live release of Chinook Salmon, in most areas of the Kuskokwim River it is an inefficient method of harvesting Chum and Sockeye Salmon in large enough numbers to fill smokehouses as they would using gill nets. The concern expressed was that while dip nets could be viewed as a management tool for providing subsistence fishing opportunity during times of Chinook conservation, the reality is that for many

locations and communities it is not a viable method for adequate subsistence salmon harvest in lieu of use of gill nets.

The use, harvest, and dependence of salmon resources can vary by community based on cultural practices, resource availability, economics and many other factors. Yukon River drainage residents exhibit these variations generally within the lower, middle, and upper stretches of the drainage. Communities present along the river and their populations over time, by fishing district, are represented in **Appendix 1**.

### **Effects of the Proposal**

Adoption of this proposal as submitted will allow for more subsistence fishing opportunity for Federally qualified subsistence users on Federal public lands in the Yukon River Drainage. Effects on the salmon stocks would likely be negligible. Adoption of dip net usage may be slow in some communities, as some have expressed interest in its use while others have not.

Although this proposal would increase opportunities for subsistence harvest for Federally qualified users, there are some potential drawbacks. State and Federal regulations would no longer be aligned, complicating enforcement of these regulations and creating confusions about where and when the gear is legal.

Dip nets can be fairly effective at harvesting fish in the Yukon River. During times of lower abundance, managers would need to be aware of fishing effort with this gear type and manage appropriately. However, the selectivity of this gear type can make it an excellent tool when there is a conservation concern on one or more species while executing a mixed stock fishery.

If no change is made, the Federal subsistence fishery will not allow dip nets to be used to harvest salmon. However, Federally qualified subsistence users will still be allowed to harvest salmon with dip nets by emergency order from ADF&G during times of Chinook or Chum Salmon conservation.

### **OSM CONCLUSION**

**Support** Proposal FP19-07 **with modification** to allow the Federal in-season manager to additionally require the live release of Chinook, Chum, or Coho Salmon during times of low salmon abundance rather than only Chinook Salmon.

The modified regulation should read:

#### **§ \_\_.27 Subsistence taking of fish**

\* \* \* \*

(xiii) *You may take salmon only by gillnet, beach seine, fish wheel, **dip net**, or rod and*

*reel, subject to the restrictions in this section.*

\*\*\*\*

***(C) Salmon may be harvested by dip net at any time, except during times of conservation, the Federal in-season manager may announce restrictions on time, area, and species.***

\* \* \* \*

## **Justification**

Adoption of this proposal would result in additional opportunity for Federally qualified subsistence users in the Yukon River drainage. The selective nature of this gear would allow for the release of species that need protection during times of low abundance while still allowing the harvest of species that are returning in large enough numbers to provide a harvestable surplus. The impact to the salmon stocks would likely be minimal.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Support FP19-07 as Modified by OSM.** The Council supports adding dip nets for legal gear for subsistence to offer more opportunity for subsistence harvest especially in time of conservation when gillnets are restricted since Chinook or other salmon can be released alive. Moreover dip nets have been traditional subsistence gear for salmon and other fish for many along the River and will make legal again this traditional method and make it a legal option to use if people choose to do so – it may be easier than gill nets for some or more affordable or functional than gillnets in some instances. The Council did support the OSM modification – to live release Chum or Coho as well as Chinook salmon if needed in times of conservation.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Support FP19-07 as Modified by OSM.** The Council engaged in lengthy discussion with OSM and ADFG over the efficiency of dip nets and potential mortality for non-target species like Chinook salmon. The Council heard from experts that live release methods from dip nets minimize mortality, particularly if the net is kept in the water. The Council believes that if commercial fisherman were allowed to use dip nets, then so should subsistence users. The Council concurred with experts that dip nets are less efficient than gillnetting, with a much lower harvest. Unlike gillnet use, dip netters can release non target fish alive and move to an alternate location to reduce non-target fish interception. Finally, if there is a restriction on gillnets due to low returns of Chinook Salmon, managers can allow dip netting to reduce mortality.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Support FP19-07 as Modified by OSM.** The Council believes this proposal will allow more subsistence opportunity while retaining measures to conserve select salmon species during periods of low abundance.

### **Eastern Interior Alaska Subsistence Regional Advisory Council**

**Support FP19-07 as Modified by OSM.** The Council stated that this is a tremendous tool for subsistence or commercial opportunity and at the same time a very important conservation tool that allows requiring the release of salmon species where conservation concerns exist. It will be 100% beneficial to subsistence uses and needs without causing conservation concerns. It will not restrict other users. The Council suggested that it may be prudent in the future during times of conservation concern for Chinook Salmon to add an amendment that would require any fish over 750mm to be returned to the Yukon River. According to the Council's experience, a 750mm fish is usually weights between 17 and 18 pounds, so returning larger fish into the water would preserve large fecund females.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

The ISC recommends that the OSM regulatory specialist modify the wording of the proposed regulation to remove superfluous language and simplify the regulation. The proposed language in section (C) is unnecessary as these provisions are already provided for in the in-season manager's delegation of authority from the Federal Subsistence Board. The ISC's proposed modified regulatory language would not change the original proposal's intent, "to add dip nets to the gear types allowed for the subsistence harvest of salmon on the Yukon River."

The modified regulation should read:

### *§ \_\_.27 Subsistence taking of fish*

\* \* \* \*

*(xiii) You may take salmon only by gillnet, beach seine, fish wheel, **dip net**, or rod and reel, subject to the restrictions in this section.*

\*\*\*\*

~~*(C) Salmon may be harvested by dip net at any time, except during times of conservation, the Federal in-season manager may announce restrictions on time, area, and species.*~~

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fishery Proposal FP19-07:** This proposal, submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (YKD Council), would add dip nets to the gear types allowed for the subsistence harvest of salmon on the Yukon River.

**Introduction:** Under current federal regulations, subsistence fishermen may not use dip net gear for subsistence harvest of salmon on the Yukon River. Dip nets are allowed for fish other than salmon, with certain species of salmon required to be released if there are conservation concerns.

**Impact on Subsistence Users:** Subsistence fishermen would be allowed to use dip net gear to harvest salmon for subsistence uses in waters under federal management. Subsistence fishermen could be more selective in the types of salmon they wanted to harvest, and they could target more abundant species

while releasing species of conservation concern; therefore conservation of Chinook salmon may be less burdensome to subsistence users.

**Impact on Other Users:** None.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

For salmon in the Yukon Area, the BOF has made the following ANS findings

45,500–66,704 king salmon

83,500–142,192 summer chum salmon

89,500–167,900 fall chum salmon

20,500–51,980 coho salmon

2,100–9,700 pink salmon.

Current state regulations do not authorize the use of dip nets in Yukon River subsistence salmon fisheries. Subsistence salmon may be taken only by gillnet, beach seine, a hook and line attached to a rod or pole, a handline, or a fish wheel.

**Conservation Issues:** While we do not anticipate that this gear type would increase Chinook harvests over other more efficient gear types such as gillnets or fishwheels, it could allow fishermen to select for the largest (and oldest) fish, which would have unknown effects on depressed run sizes where the oldest largest fish, important for escapement quality, tend to be smaller in numbers.

**Enforcement Issues:** If this proposal were adopted, there may be confusion for users and enforcement officers since dip nets would be allowed to be used only in waters under federal management, and not in waters under state management. Users and enforcement officers would need to be aware of Chinook



salmon retention regulations when commercial and subsistence periods are scheduled concurrently or close together.

**Recommendation:** ADF&G is **NEUTRAL** on this proposal to add dip nets as legal gear for subsistence harvest of salmon on the Yukon River. However, state and federal regulations are currently aligned, and this proposal may create confusion for residents.

**Appendix 1.** Population data for communities within the Yukon River drainage fishing districts, 1960-2010.

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Stebbins city	158	231	331	400	547	556	134
<b>Outside drainage subtotal</b>	<b>158</b>	<b>231</b>	<b>331</b>	<b>400</b>	<b>547</b>	<b>556</b>	<b>134</b>
Alakanuk city	278	265	522	544	652	677	160
Nunam Iqua city	125	125	103	109	164	187	43
Emmonak city	358	439	567	642	767	762	185
Kotlik city	57	228	293	461	591	577	128
<b>District 1 subtotal</b>	<b>818</b>	<b>1,057</b>	<b>1,485</b>	<b>1,756</b>	<b>2,174</b>	<b>2,203</b>	<b>516</b>
Mountain Village city	300	419	583	674	755	813	184
Pitkas Point CDP	28	70	88	135	125	109	31
Saint Marys city	260	384	382	441	500	507	151
Pilot Station city	219	290	325	463	550	568	121
Marshall city	166	175	262	273	349	414	100
<b>District 2 subtotal</b>	<b>973</b>	<b>1,338</b>	<b>1,640</b>	<b>1,986</b>	<b>2,279</b>	<b>2,411</b>	<b>587</b>
Russian Mission city	102	146	169	246	296	312	73
Holy Cross city	256	199	241	277	227	178	64
Shageluk city	155	167	131	139	129	83	36
<b>District 3 subtotal</b>	<b>513</b>	<b>512</b>	<b>541</b>	<b>662</b>	<b>652</b>	<b>573</b>	<b>173</b>
Anvik city	120	83	114	82	104	85	33
Grayling city	0	139	209	208	194	194	55
Kaltag city	165	206	247	240	230	190	70
Nulato CDP	183	308	350	359	336	264	92
Koyukuk city	128	124	98	126	101	96	42
Huslia city	168	159	188	207	293	275	91
Hughes city	69	85	73	54	78	77	31
Allakaket city	115	174	163	170	97	105	44
Alatna CDP				31	35	37	12
Bettles city	77	57	49	36	43	12	9
Evansville CDP	77	57	45	33	28	15	12
Wiseman CDP	0	0	8	33	21	14	5
Coldfoot CDP					13	10	6
Galena city	261	302	765	833	675	470	190
Ruby city	179	145	197	170	188	166	62
<b>District 4 subtotal</b>	<b>1,542</b>	<b>1,839</b>	<b>2,506</b>	<b>2,582</b>	<b>2,436</b>	<b>2,010</b>	<b>754</b>
Tanana city	349	120	388	345	308	246	100
Rampart CDP	49	36	50	68	45	24	10
Stevens Village CDP	102	74	96	102	87	78	26
Beaver CDP	101	101	66	103	84	84	36
Fort Yukon city	701	448	619	580	595	583	246
Chalkyitsik CDP	57	130	100	90	83	69	24

*Continued on next page*

## Appendix 1. Continued from previous page

U.S. CENSUS POPULATION							
Community	1960	1970	1980	1990	2000	2010	2010 number of households
Arctic Village CDP	110	85	111	96	152	152	65
Venetie CDP	107	112	132	182	202	166	61
Birch Creek CDP	32	45	32	42	28	33	17
Circle CDP	41	54	81	73	100	104	40
Chicken CDP	0	0	0	0	17	7	5
Central CDP	28	26	36	52	134	96	53
Eagle Village CDP	0	0	54	35	68	67	31
Eagle city	92	36	110	168	129	86	41
<b>District 5 subtotal</b>	<b>1,769</b>	<b>1,267</b>	<b>1,875</b>	<b>1,936</b>	<b>2,032</b>	<b>1,795</b>	<b>755</b>
Livengood CDP					29	13	7
Manley CDP	72	34	61	96	72	89	41
Minto CDP	161	168	153	218	258	210	65
Whitstone CDP						97	22
Nenana city	286	362	470	393	402	378	171
Four Mile Road CDP					38	49	14
Healy CDP	67	79	334	487	1,000	1,021	434
McKinley Park CDP	0	0	60	171	142	185	109
Anderson city	341	362	517	628	367	246	90
Ferry CDP				56	29	33	17
Lake MinChumina CDP	0	0	22	32	32	13	6
Cantwell CDP	85	62	89	147	222	219	104
Delta Junction city	0	703	945	652	840	958	377
Fort Greely CDP	0	1,820	1,635	1,299	461	539	236
Deltana CDP					1,570	2,251	784
Healy Lake CDP	0	0	33	47	37	13	7
Big Delta CDP	0	0	285	400	749	591	206
Dry Creek CDP	0	0	0	106	128	94	29
Dot Lake CDP	56	42	67	70	19	13	7
Dot Lake Village CDP					38	62	19
Tanacross CDP	102	84	117	106	140	136	53
Tetlin CDP	122	114	107	87	117	127	43
Tok CDP	129	214	589	935	1,393	1,258	532
Northway CDP	196	40	73	123	95	71	27
Northway Jct. CDP	0	0	0	88	72	54	20
Northway Village CDP						98	
Alcan border CDP	0	0	0	27	21	33	16
Nabesna CDP						5	3
<b>District 6 subtotal</b>	<b>1,617</b>	<b>4,084</b>	<b>5,557</b>	<b>6,168</b>	<b>8,271</b>	<b>8,856</b>	<b>3,439</b>
<b>TOTAL</b>	<b>7,390</b>	<b>10,328</b>	<b>13,935</b>	<b>15,490</b>	<b>18,391</b>	<b>18,404</b>	<b>6,358</b>

CDP=Census Designated Place.

Black cell=information is not available.

Source: ADCCED 2014.

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<b>FP17-05 Executive Summary</b>	
<b>General Description</b>	Proposal FP17-05 requests that Federal subsistence management plans, strategies, fishing schedules, openings, closings, and fishing methods for the Kuskokwim Area be issued independently by the Federal Subsistence Management Program in consultation with appropriate agencies and entities. <i>Submitted by: LaMont E. Albertson.</i>
<b>Proposed Regulation</b>	<p><b>§____.27(e)(4) Kuskokwim Area</b></p> <p><i>(ii) For the Kuskokwim area, Federal subsistence <b>management plans, strategies, fishing schedules, openings, closings, and fishing methods</b> are <del>the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060)</del>, unless superseded by a Federal Special Action. <b>issued independently by the Federal Subsistence Program, including the Federal In-season Manager in consultation with appropriate agencies and entities</b></i></p>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Oppose</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

## STAFF ANALYSIS

### FP17-05

#### ISSUES

Proposal FP17-05, submitted by LaMont E. Albertson of Aniak, Alaska, requests that Federal subsistence management plans, strategies, fishing schedules, openings, closings and fishing methods for the Kuskokwim Area be issued independently by the Federal Subsistence Management Program in consultation with appropriate agencies and entities. In 2017, the Federal Subsistence Board (Board) deferred action on this proposal until this regulatory cycle.

#### DISCUSSION

The proponent notes that provisions of Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) and applicable Federal land management missions and mandates differ in certain critically important ways from State regulations. The proponent states that changing this regulation is necessary for ensuring that Federal subsistence management practices align with Federal mandates in the Kuskokwim Area. The proponent notes that there are many cases where it is appropriate for Federal fisheries management plans and actions to mirror those of the State, and that the proposed regulation change is not intended to discourage or impede unified regulations when appropriate. The proponent believes that existing regulations severely limit the ability of the Federal Subsistence Management Program to exercise independent judgment, and he would like to see additional latitude for Federal managers to issue independent management plans, strategies, and fishing schedules when necessary to achieve the mandates and mission of ANILCA Title VIII. The proponent noted that existing regulatory language may have been a necessary stop gap measure when the U.S. Fish and Wildlife Service (FWS) did not possess its own fisheries management expertise, but this is no longer the case and it is now necessary to provide the FWS the latitude necessary to meet program mandates.

The proponent clarified the proposal (Albertson 2016, pers. comm.), and said he seeks to remove language stating that Federal subsistence fishing regulations for the Kuskokwim Area “*are the same as issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by Federal Special Action.*” The proponent wants the Federal Subsistence Management Program, including the Yukon Delta National Wildlife Refuge (Refuge) Manager, to work with the Alaska Department of Fish and Game (ADF&G) (including direct participation of the Kuskokwim River Salmon Management Working Group), and the Kuskokwim River Inter-tribal Fisheries Commission to determine a management strategy for Kuskokwim River drainage fisheries. The proponent clarified that he is supportive of Regional Advisory Council and Board processes.

During the 2017 regulatory cycle, the Yukon-Kuskokwim Delta and Western Interior Alaska Councils recommended the Board adopt Proposal FP17-05. In January 2017, the Board deferred action on Proposal FP17-05. The Board requested that the Office of Subsistence Management (OSM) update the Delegation of Authority Letter from the Board to the Kuskokwim Area Federal in-season manager (the Refuge manager) so that the updated letter could inform the Board during its deliberations on this

proposal (the updated Delegation of Authority Letter is in **Appendix 1**, the initial analysis of this proposal is in **Appendix 2**). The Board said it will also consider any developments in collaborative management efforts since 2017, such as the development of the Kuskokwim River Partnership Project.

### Existing Federal Regulations

#### § \_\_.27(e)(4) Kuskokwim Area

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

### Proposed Federal Regulation

#### § \_\_.27(e)(4) Kuskokwim Area

*(ii) For the Kuskokwim area, Federal subsistence **management plans, strategies**, fishing schedules, openings, closings, and fishing methods are ~~the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.~~ **issued independently by the Federal Subsistence Program, including the Federal In-season Manager in consultation with appropriate agencies and entities***

### Existing State Regulation

#### Sec. 16.05.060. Emergency orders

*(a) This chapter does not limit the power of the commissioner or an authorized designee, when circumstances require, to summarily open or close seasons or areas or to change weekly closed periods on fish or game by means of emergency orders.*

*(b) The commissioner or an authorized designee may, under criteria adopted by the Board of Fisheries, summarily increase or decrease sport fish bag limits or modify methods of harvest for sport fish by means of emergency orders.*

*(c) An emergency order has the force and effect of law after field announcement by the commissioner or an authorized designee. An emergency order adopted under this section is not subject to AS 44.62 (Administrative Procedure Act).*

### Extent of Federal Public Lands

For the purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. The Kuskokwim Area includes all waters of Alaska between the latitude of the westernmost point of the Naskonat Peninsula and the latitude of the southernmost tip of Cape Newenham including the waters of Alaska surrounding Nunivak and Saint Matthew Islands and

those waters draining into the Bering Sea. The Kuskokwim Area includes waters that are within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, Togiak National Wildlife Refuge, Lake Clark National Park and Preserve and the Denali National Park and Preserve. This includes portions of Districts 1 and 2 of the Kuskokwim Fishery Management Area; these waters are generally described as the lower Kuskokwim River drainage from the mouth upriver to and including about 30 miles of the Aniak River, hereafter referred to as Refuge waters.

### **Customary and Traditional Use Determinations**

For fish other than Rainbow Trout, rural residents of Kuskokwim Area except those persons residing on United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB have a customary and traditional use determination in the Kuskokwim Area.

For Rainbow Trout, rural residents of the communities of Akiachak, Akiak, Aniak, Atmautluak, Bethel, Chuathbaluk, Crooked Creek, Eek, Goodnews Bay, Kasigluk, Kwethluk, Lower Kalskag, Napakiak, Napaskiak, Nunapitchuk, Oscarville, Platinum, Quinhagak, Tuluksak, Tuntutuliak, and Upper Kalskag have a customary and traditional use determination in the Kuskokwim Area.

### **Regulatory History**

In 1999, Federal salmon subsistence fishery management was authorized by the Board. In 2000, an Interim Memorandum of Agreement between the agencies on the Board and ADF&G provided a foundation for coordinated Federal-State fisheries management and subsistence use on Federal public lands in Alaska.

On July 8, 2000, because of low runs of Chinook and Chum Salmon, ADF&G restricted by emergency order the salmon subsistence fishery to the use of 6-inch or less mesh gillnets, and hook and line fishers were limited to one Chinook Salmon per day. The Federal in-season manager issued an emergency special action with similar effect (Burkey et al. 2001).

In 2001, ADF&G implemented a new salmon management strategy in the Kuskokwim River drainage and restricted by emergency order the salmon subsistence fishery by “windowed” closures. Throughout the Chinook and Chum Salmon runs, the drainage was closed to the harvest of salmon, except by hook and line, from three days per week (upper river) to five days per week (lower and middle river), during which gillnets were restricted to 4-inch or less mesh size. The intent was to provide a distribution of salmon (primarily Chinook Salmon) throughout the Kuskokwim River drainage (Whitmore et al. 2004).

In 2002, OSM submitted Fisheries Special Action Request FSA02-01 to the Board requesting “Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Emergency Orders (ACC 16.05.060), unless superseded by a Federal Special Action” in the Yukon and Kuskokwim river drainages during the 2002 fishing season (OSM 2002). The Board approved Special Action Request FSA02-01.



In 2003, Proposal FP03-28 was submitted by OSM and requested that statewide for all fish “Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action” (OSM 2002:Tab B Page 171). The Yukon-Kuskokwim Delta Council recommended the Board adopt the proposal; Bristol Bay, Seward Peninsula, Western Interior Alaska, and Eastern Interior Alaska Councils recommended the Board adopt the proposal with modifications; Southcentral Alaska, Kodiak Aleutians, Northwest Arctic, and North Slope Alaska Councils had no recommendations for the Board. The Board adopted the Interagency Staff Committee’s recommendation and modified the proposal to apply the regulations only to the Yukon River drainage and Kuskokwim Area. This modification was consistent with the recommendations of the Yukon Kuskokwim Delta, Western Interior Alaska, and Eastern Interior Alaska Councils (OSM 2003; 68 FR 29 7277, 7286 February 12, 2003). The Interagency Staff Committee further added in its justification that this would “allow the current Federal/State in-season protocol effort to develop operating guidelines and recommendations for the statewide implementation” (OSM 2002:Tab B Page 173).

In 2008, the Board, the Alaska Boards of Fisheries and Game, and ADF&G signed a Memorandum of Understanding to provide the basis for coordinated Federal-State fisheries management and subsistence use on Federal public lands in Alaska. It expired in November 2014, and no subsequent Memorandum of Understanding has been signed by the parties.

In 2010, from June 10 through July 31, due to conservation concerns, the Federal in-season manager closed the Tuluksak and Kwethluk rivers to the harvest of Chinook Salmon with gillnets, during which gillnets were restricted to 4-inch or less mesh size, in the Tuluksak and Kwethluk rivers (Brazil et al. 2011).

In 2011, from June 1 through July 25, ADF&G by emergency order closed the harvest of Chinook Salmon using hook and line gear, and gillnets were restricted to 4-inch or less mesh size, in salmon spawning tributaries of the Kuskokwim River drainage. Additionally, District 1 of the Kuskokwim River mainstem closed to the harvest of salmon from June 16 through June 19 and from June 23 through June 29. The Federal in-season manager closed Refuge waters to the harvest of salmon for three days from June 30 through July 2 because of continuing concerns for the conservation of Chinook Salmon (Brazil et al. 2013).

In 2012, from June 1 through July 25, ADF&G by emergency order closed the drainage to the harvest of Chinook Salmon using hook and line gear, and gillnets were restricted to 4-inch or less mesh size, in salmon spawning tributaries of the Kuskokwim River drainage. In the mainstem, during the Chinook Salmon run, the harvest of salmon was restricted for 12 consecutive days by the use of rolling closures from the Kuskokwim River mouth to the headwaters followed by six days of rolling open fishing periods when 6-inch or less mesh size gillnets were allowed. After six-day periods when there were no closures, harvest of salmon was again prohibited in rolling closures until a date between June 30 (in the lower river) and July 14 (at the headwaters); however, the harvest of salmon with hook and line gear remained closed until later in the summer (Ellison et al. 2015).

In 2013, ADF&G closed the harvest of Chinook Salmon using hook and line gear, and gillnets were restricted to 4-inch or less mesh size in salmon spawning tributaries of the Kuskokwim River drainage. Gillnets were limited to 6-inch or less mesh size in the lower river beginning June 28 and in the middle river beginning July 3 in order to conserve Chinook Salmon. All restrictions were lifted by July 15 (Tiernan and Poetter 2015).

Since 2014, each year the Board has closed Refuge waters to the harvest of Chinook Salmon (and Chum Salmon in 2016) except by a subset of Federally qualified subsistence users identified in an ANILCA Section 804 Subsistence User Prioritization analysis. These actions have been necessary because of concerns for conservation and continuation of subsistence uses of Kuskokwim Chinook Salmon, given run sizes for the species have been below historical averages since 2011. After an initial closure, the Refuge Manager has managed harvest opportunities using openings, closings, and restrictions on legal gear through his Delegated Authority Letter issued to him by the Board. Since 2016, these closures have begun on June 12. These Federal actions are described further, below, in Kuskokwim Area Management Plans.

A similar regulation as in this request was adopted for the Chignik Area. In 2005, Proposal FP06-07 was submitted by OSM and requested that the 48-hour closure to subsistence fishing before the first salmon commercial opening in the Chignik Area be reduced to 24 hours for those who hold a commercial fishing license within the Chignik Area or that they be limited to the provisions specified on a subsistence fishing permit. The Bristol Bay Council recommended the Board support the proposal with modification to align Federal regulations with current State regulations and minimize the need for future changes to Federal subsistence fishing regulations. The Council said the modifications would also make Federal regulations more efficient by eliminating the need for a Federal special action every time ADF&G issued an emergency order for subsistence fisheries in the Chignik Area (OSM 2006). The Board adopted the Council's recommendation but for salmon only, which is the following: "For salmon, Federal subsistence fishing openings, closings and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action" (71 FR 60 15583, March 29, 2006).

This language occurs in regulation for these three areas only: the Kuskokwim Area, the Yukon River drainage, and the Chignik Area (for salmon). Fishery management regulations in all other areas of Alaska do not contain the reference to Federal regulations being the same as those implemented by ADF&G emergency orders unless superseded by Federal special action.

### **Kuskokwim Area Management Plans**

The proponent requests that management plans, strategies, fishing schedules, openings, closings and fishing methods for the Kuskokwim Area be issued by the Federal Subsistence Management Program, including the Refuge Manager, in consultation with other agencies and entities. Several Kuskokwim River fisheries management plans have been adopted by the Alaska Board of Fisheries. Since 2014, Federal in-season management strategies have been developed and implemented by the Refuge Manager in collaboration with other agencies and entities. This section briefly covers the development

of the State's Kuskokwim River Salmon Management Plan and summarizes management strategies that have been recently implemented or discussed.

In 2001, the Alaska Board of Fisheries adopted the Kuskokwim River Rebuilding Plan (5 AAC 07.365). The Management Plan allowed ADF&G to implement a management strategy of issuing emergency orders to restrict the salmon subsistence fishery by "windowed" closures. The intent was to provide a distribution of fish (primarily Chinook Salmon) throughout the Kuskokwim River drainage. These windowed closures were implemented from 2001 through 2006 (Tiernan and Poetter 2015).

In 2013, the Alaska Board of Fisheries adopted the Kuskokwim River Salmon Management Plan (5 AAC 07.365) that replaced the Rebuilding Plan, described above. The Management Plan has been amended several times since 2013. Significantly, in 2016, the Alaska Board of Fisheries added language mandating that ADF&G close the drainage at some point to the harvest of Chinook Salmon by emergency order through June 11 every year. The intent of this closure is to provide an equitable distribution of (primarily) Chinook Salmon throughout the Kuskokwim River drainage. In 2016, 2017, 2018, ADF&G implemented the closure by closing the mainstem and salmon spawning tributaries to the use of gillnets, while allowing the use of other legal gear to target fish other than Chinook Salmon. During these times of closures to gillnets, any incidental harvests of Chinook Salmon were required to be released immediately back into the water alive. These closures to the harvest of Chinook Salmon through complete gillnets restrictions have been implemented sequentially up the mainstem of the Kuskokwim River. The lower part of Refuge waters (Tuluksak and below) has been closed to gillnets by May 20 (2016, 2017) and by May 25 (2018), while the upper part of Refuge waters (Tuluksak to Aniak) has been closed to gillnets by May 25 (2016, 2017) and by May 30 (2018). Essentially, since 2016, Refuge waters have been closed to the use of gillnets in the mainstem Kuskokwim River by the last week of May (May 25 in 2016 & 2017, May 30 in 2018) (ADF&G 2018).

In 2017, the Alaska Board of Fisheries amended the Management Plan to allow for at least one fishing opportunity period per week with 4-inch or smaller mesh set gillnets before June 12. The intent was to provide some opportunity for subsistence users to harvest fish other than Chinook Salmon; however, any Chinook Salmon harvested during these opportunities can be retained. In 2017, ADF&G provided three 12 hour 4-inch or smaller mesh set gillnet opportunities on May 27, June 3, and June 10. In 2018, ADF&G provided two 12-hour, 4-inch or smaller mesh set gillnet opportunities on May 30 and June 6 (ADF&G 2018).

The Refuge Manager has been issuing a suite of special actions to manage the subsistence harvest of Chinook Salmon in Refuge waters each year since 2016. In 2016, 2017, and 2018, the Board closed Refuge waters on June 12 to the harvest of Chinook Salmon except by a subset of Federally qualified subsistence users identified in a ANILCA Section 804 Subsistence User Prioritization analysis. Following these closures, the Refuge Manager has been closing Refuge waters to the harvest of Chinook Salmon by Federally qualified users. These closures to subsistence users has been implemented by closing the mainstem and salmon spawning tributaries to the use of gillnets, while allowing the use of other legal gear to target fish other than Chinook Salmon. During these times of closures to gillnets, any incidental harvests of Chinook Salmon are required to be released immediately

back into the water alive. The Refuge Manager has included the lower 100 yards of tributaries in which salmon do not spawn in the gillnet closure in order to protect from harvest Chinook Salmon who wander into these streams (OSM 2018).

These actions can be the basis of a management strategy for the harvest of Chinook Salmon in Refuge waters. Any management strategy is likely to duplicate some ADF&G efforts to manage the harvest of Chinook Salmon that are based on best available science, such as, escapement goals and run-size projections.

The proponent also specifically asks for a Kuskokwim Area fisheries management plan. Any Federal subsistence fisheries management plan adopted in the future would have to meet the intent of Title VIII of ANILCA and be developed within the Federal subsistence regulatory process.

### **Collaborative Management**

In Alaska, fisheries management is often a collaborative process and the Kuskokwim River drainage salmon fisheries are no exception. Many different groups are involved in management and management planning includes the following: the Yukon Delta National Wildlife Refuge, the Kuskokwim River Inter-tribal Fisheries Commission, ADF&G, the Kuskokwim River Salmon Management Working Group, Yukon-Kuskokwim Delta and Western Interior Alaska Federal Subsistence Regional Advisory Councils, the Lower Kuskokwim River and Central Kuskokwim River Fish and Game Advisory Committees, Kuskokwim River drainage tribes, and OSM. The Kuskokwim River Inter-Tribal Fish Commission works collaboratively with the Yukon Delta National Wildlife Refuge as specified in the Memorandum of Understanding between the Commission and FWS (FWS 2016). The Board has delegated authority to the Federal in-season manager to work collaboratively with the Kuskokwim River Inter-Tribal Fish Commission, the Yukon-Delta and Western Interior Alaska Subsistence Regional Advisory Councils, ADF&G, and the Kuskokwim River Salmon Management Working Group. The management process is guided by these regulatory agreements and collaborations between these groups. Management planning picks up a couple of months before the Chinook Salmon subsistence fishery begins and continues throughout the Chinook Salmon fishery (May–August). Preseason and in-season management processes are informed by an abundance of projects that are operated by FWS, ADF&G, tribes, and rural Alaskan organizations.

At the January 2017 Board meeting, the Board deferred action on Proposal FP17-05 until the 2019 fisheries regulatory cycle to consider new developments in collaborative management efforts, such as the development of the Kuskokwim River Partnership Project. The Partnership Project is a two-phased process. Phase I was the implementation of the Memorandum of Understanding between the U.S. Fish and Wildlife Service and the Kuskokwim River Inter-Tribal Fish Commission. Phase II of the Partnership Project was identified in the Memorandum—a subcommittee of the Yukon-Kuskokwim Delta and the Western Interior Councils; however, after the January 2017 Board meeting, Partnership Project members decided to try a different route through the construction of a Federal Advisory Committee Act group that would consolidate a number of partners on the river and be able to help provide input to the Federal in-season and State fisheries managers for the management of the

subsistence fishery. To date, the second phase of the Partnership has not progressed and the members of the Kuskokwim River Partnership Project are looking for other opportunities aside from the Federal Advisory Committee Act-approved type of group to be able to provide that broader structure for input into fisheries management.

### **Delegation of Authority Letter**

Staff presented to the Board in July 2017 a draft revised Delegation of Authority Letter from the Board to the Refuge Manager. The revised letter was then reviewed by the Yukon-Kuskokwim Delta and Western Interior Councils, the Chair of the Kuskokwim River Inter-Tribal Fisheries Commission, Co-chairs of the Kuskokwim River Salmon Management Working Group, and the Refuge Manager. Their comments were presented to the Board at its meeting in February 2018, and the Board approved the revised Delegation of Authority Letter (**Appendix 1**). The revision added specific guidance about annual expectations for collaboration among identified stakeholders, carrying out fishery management decision making processes and requirements for issuing special actions (e.g., a general schedule for annually developing management strategies, goals and objectives of in-season management, making determinations about assimilating Alaska Statutes for the subsistence taking of fish, etc.). In its letter to the Refuge Manager, the Board directed the Refuge Manager to coordinate management with the representatives from Regional Advisory Councils and the Kuskokwim River Inter-Tribal Fisheries.

### **Current Events**

Proposals FP19-08, FP19-09, and FP19-10 request the Board to adopt into regulation actions that have been previously accomplished by special actions issued to manage the harvest of Chinook Salmon in Refuge waters since 2016. Proposals FP19-08 and FP19-09 deal with the timing of gillnet restrictions and how harvest opportunity will be managed during gillnet restrictions, while FP19-10 deals with what parts of Refuge waters remain open during gillnet restrictions. All of these requests deal with specifics about timing and manner of the fishery closures and harvest opportunities, and the location of harvest opportunities during closures. These are management topics that could benefit from a more coordinated and collaborative effort to develop permanent Federal regulations related to Chinook Salmon on the Kuskokwim River. Regardless of whether or not Proposal FP17-05 is approved, the adoption of any of these proposals would require the Federal in-season manager to continue to issue emergency special actions in order to adjust for in-season management in the absence of a comprehensive plan for Federal subsistence fisheries management.

### **Other Alternatives Considered**

If adopted, Proposal FP17-05 in combination with any of the other Kuskokwim area proposals submitted during this cycle (FP19-08, FP19-09, and FP19-10) would affect Federal subsistence management for the Kuskokwim Area. A potential alternative for consideration would be to defer all of the Kuskokwim area proposals (FP17-05, FP19-08, FP19-09, and FP19-10) and direct OSM staff to facilitate the development of a collaborative Federal subsistence management plan that would outline strategies for management of Federal subsistence fisheries in the Kuskokwim Area. The approaches suggested in the current fisheries regulatory proposals for the Kuskokwim Area are valid approaches to

fisheries management. However, it may be more effective to develop a full suite of permanent regulations through coordinated efforts with the parties identified in the Kuskokwim Area delegation of authority letter. This potential alternative would provide a mechanism to allow a larger group involving all entities the time to submit a comprehensive proposal or recommended plan that would become a Federal subsistence fisheries management plan for the Kuskokwim area.

### **Effects of the Proposal**

If the proposal was adopted, Federally qualified subsistence users could harvest salmon in Refuge waters at any time using any legal method. As a consequence, the Refuge Manager would have to issue special actions in collaboration with the Kuskokwim River Inter-Tribal Fisheries Commission and other entities as identified in the MOU and Kuskokwim Area Delegation of Authority Letter, if necessary, based on run-size indicators, to manage the harvest of salmon, until new management plans/strategies could be added to Federal regulations to guide subsistence fisheries management for the Kuskokwim area. For example, since 2016, Chinook Salmon harvests have been managed by ADF&G issuing emergency orders effective up June 12, and by the Refuge Manager issuing special actions effective after June 11. If the proposal was adopted the Refuge Manager would also have to manage the harvest of Chinook Salmon before June 12 during years when restrictions on the harvest of Chinook Salmon were necessary. This process would continue to occur every season in which conservation concerns for Chinook Salmon exist, until Federal subsistence regulations related Chinook Salmon are created.

If the proposal was adopted, during years when salmon run-sizes are adequate to provide for subsistence uses and escapement, no restrictions on the harvest of salmon would be implemented except existing codified short closures around commercial fishing openings. Given the State's Kuskokwim River Salmon Management Plan is entirely issued through emergency orders, removing the language in Proposal FP17-05 would result in the subsistence fisheries defaulting to Federal subsistence regulations for the Kuskokwim area, which state that fishing is allowed any time without a subsistence permit unless otherwise restricted through Federal regulations or through Federal special actions.

The harvest of fish other than salmon are rarely managed by ADF&G through the issuance of emergency orders except when protecting Kuskokwim salmon from harvest in gillnets, when necessary, based on run-size indicators, before June 12. As a consequence, if this proposal was adopted, the Refuge Manager would have to issue special actions to manage the use of gillnets for Federally qualified subsistence users in order to protect salmon from harvest, during years when restrictions on the harvest of salmon are necessary.

If this proposal was not adopted, there would be no immediate effect on Federally qualified subsistence users, nonsubsistence users, or fish. However, the layering of regulations and authorities that exist in the Kuskokwim Area make it difficult for many people to understand these regulations. This situation would continue.

Creation of management plans and implementation of management strategies would be controlled by the Federal Subsistence Management Program including the Refuge Manager through a public process.

## **OSM CONCLUSION**

**Support** FP17-05.

### **Justification**

When the Board adopted the regulation that is the focus of Proposal FP17-05 in 2003, ADF&G was managing its salmon subsistence fisheries annually with a schedule of windowed closures and gear type restrictions implemented by emergency orders. The Alaska Department of Fish and Game no longer uses this management strategy. Instead, ADF&G is now mandated to close the salmon subsistence fishery until June 11 annually and after June 11 offer some harvest opportunity, depending on run-size indicators, by emergency orders. In 2003, the Federal Subsistence Management Program was not actively managing Kuskokwim subsistence fisheries, and ADF&G relied primarily on the Working Group to inform and review its management decisions. However, since 2014, the Refuge Manager has actively managed salmon subsistence fisheries in Refuge waters. The Refuge Manager must coordinate management decisions with the Kuskokwim River Inter-Tribal Fisheries Commission as well as other agencies and entities. Therefore, it is no longer reasonable to assume that ADF&G emergency orders (such as the mandated closure to the harvest of Chinook Salmon through June 11 each year), and in-season management decisions implemented through emergency orders, aid Federal management. Instead, it has become difficult for the public and agency staff to know which ADF&G emergency orders are in effect in Refuge waters. Some ADF&G emergency orders are superseded by Federal fishery regulations, a fact that is not clear. While the effects of rescinding this regulation on subsistence users, other users and uses, and fishes are likely to be minimal, it would require the Refuge Manager to manage salmon subsistence fisheries for Federal qualified subsistence users. Concerning the proponent's request for fisheries management planning, the Board addresses regulatory proposals as it receives them during its fisheries regulatory cycle, and a Federal management plan for fisheries in Refuge waters would be considered through this process.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Oppose** FP19-08. The Council discussed the current in-season management at length and felt that the current process was working relatively well with the Federal in-season manager working with the Kuskokwim River Inter-Tribal Fish Commission, the Kuskokwim Salmon Management Working Group, and State managers and felt this process should be allowed to continue to grow rather than trying to manage strictly through an encompassing regulation. The Council felt the regulation would be too cumbersome for management and the current MOU with the KRITFC would work better. It was noted by the Council Chair that the proponent had expressed that he no longer felt this proposal was relevant – that the process of management had moved on. The Council did discuss the interest in and support for the development of a Kuskokwim Management Plan with the Federal in-season manager so that some guidance was in place in the event of turnover of the federal management staff at the refuge in the future. The Council felt this management plan would be critical to continuing to build on the collaborative salmon management efforts and open communication that had developed over the past couple seasons.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-08. The Council believes this proposal would bring about massive unnecessary change to a system that is currently working. The Council also agreed that concerns of the proponent had been addressed in the Delegation of Authority letter issued after FP17-05 was deferred by the Federal Subsistence Board. Although Council believes regulations would become very cumbersome under this proposal, they did recognize the need for a long term collaborative management plan that would provide a foundation regardless of working group or staff turnover. The Council concluded that the current system is working and FP17-05 would unnecessarily restrict managers' ability to respond to the public's needs.

## **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Background:** This proposal seeks to remove language from federal regulation that states for the Kuskokwim area Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action. There have been various clarifications on the intent expressed by the proponent since the proposal was published.

Recent sharp declines in Chinook salmon abundance have caused severe hardship for fishery-dependent communities in the Kuskokwim Area.

**Impact on Subsistence Users:** If adopted as written, management would be split, rather than aligned, resulting in confusion for subsistence users.

**Impact on Other Users:** With two management plans in place, and the resultant confusion, it is not certain that other uses and users could be provided for.

**Opportunities Provided by State:** Regulatory authority for Kuskokwim River salmon management is shared by the Federal Subsistence Board and the State of Alaska Board of Fisheries. The State is responsible for implementing regulations in accordance with the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) unless the Federal subsistence program determines that all non-Federally-qualified subsistence uses must be eliminated in order to meet the Federal subsistence priority. Subsistence salmon harvest in the Kuskokwim River is allowed without a permit and with no closed season or bag limits (with an exception for the Aniak River). Legal gear includes gillnets, hook and line, seines, and fish wheels.

**Recommendation:** ADF&G **OPPOSES** this proposal as written, but **SUPPORTS** the clarified intent of the proposal to increase collaboration among State and Federal fisheries management authorities so that subsistence uses continue to be the priority use for Kuskokwim River fish stocks. The State **SUPPORTS** clarifying the delegation of authority to the Federal inseason manager and stands ready to provide biological and management expertise to that effort.

## APPENDIX 1: REVISED LETTER OF DELEGATED AUTHORITY



FISH and WILDLIFE SERVICE  
BUREAU of LAND MANAGEMENT  
NATIONAL PARK SERVICE  
BUREAU of INDIAN AFFAIRS

## Federal Subsistence Board

1011 East Tudor Road, MS 121  
Anchorage, Alaska 99503 - 6199



FOREST SERVICE

MAR 13 2018

OSM 17058.JH

Refuge Manager  
U.S. Fish and Wildlife Service  
Yukon Delta National Wildlife Refuge  
P.O. Box 346  
Bethel, Alaska 99559

Dear Yukon Delta National Wildlife Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Manager of the Yukon Delta National Wildlife Refuge (Refuge Manager) to issue emergency special actions when necessary to ensure the conservation of a healthy fish population, to continue subsistence uses of fish, for the continued viability of a fish population, or for public safety reasons. This delegation only applies to Federal public waters subject to the Alaska National Interest Lands Conservation Act (ANILCA) Title VIII in the Kuskokwim Area, including the Goodnews and Kanektok Rivers.

It is the intent of the Board that Federal subsistence fisheries management by Federal officials be coordinated, prior to implementation, with the representatives from Regional Advisory Councils (Councils), the Kuskokwim River Inter-tribal Fish Commission (KRITFC), the Office of Subsistence Management (OSM), and the Alaska Department of Fish and Game (ADF&G), to the extent possible. The OSM will be used by managers to facilitate communication of actions and ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to cooperate with managers from the State and other Federal agencies, the Council Chair(s), and applicable Council members to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for emergency special action. In addition, the Kuskokwim River Salmon Management Working Group (KRSMWG) will be notified of actions and decisions whenever possible.

### DELEGATION OF AUTHORITY

- 1. Delegation:** The Refuge Manager is hereby delegated authority to issue emergency special actions affecting fisheries in Federal public waters as outlined under the **Scope of Delegation** below. Although a public hearing is not required for emergency special actions, if deemed necessary by you, then a public hearing on the emergency special action is recommended. Special actions are governed by regulation at 36 CFR 242.19 and 50 CFR 100.19.
- 2. Authority:** This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."
- 3. Scope of Delegation:** The regulatory authority hereby delegated is limited to the issuance of emergency special actions as defined by 36 CFR 242.19(a) and 50 CFR 100.19(a). Such an emergency action may not exceed 60 days, and may not be extended.

This delegation permits you to open or close Federal subsistence fishing periods or areas provided under codified regulations. It also permits you to specify methods and means; to specify permit requirements; and to set harvest and possession limits for Federal subsistence fisheries.

This delegation also permits you to close and re-open Federal public waters to nonsubsistence fishing, but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed fisheries. This delegation may be exercised only when it is necessary to conserve healthy populations of fish or to ensure continuation of subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations or requests for special actions greater than 60 days, shall be directed to the Board.

The Federal public waters subject to this delegated authority are those within the Kuskokwim Area (as described in the Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska). You will coordinate all local fishery decisions with all affected Federal land managers.

- 4. Effective Period:** This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

**5. Guidelines for Review of Proposed Special Actions:** You will use the following guidelines to determine the appropriate course of action when reviewing proposed special actions.

- a) Does the proposed special action fall within the geographic and regulatory scope of delegation?
- b) Have you communicated with the OSM to ensure the emergency special action is aligned with Federal subsistence regulations and policy?
- c) Does the proposed action need to be implemented immediately as an emergency special action, or can the desired conservation or subsistence use goal be addressed by deferring the issue to the next regulatory cycle?
- d) Does the supporting information in the proposed special action substantiate the need for the action?
- e) Are the assertions in the proposed special action confirmed by available current biological information and/or by affected subsistence users?
- f) Is the proposed special action supported in the context of available historical information on stock status and harvests by affected users?
- g) Is the proposed special action likely to achieve the expected results?
- h) Have the perspectives of the Chair or alternate of the affected Council(s), the KRITFC, OSM, and affected State and Federal managers been fully considered in the review of the proposed special action?
- i) Have the potential impacts of the proposed special action on all affected subsistence users and non-Federally qualified users within the drainage been considered?
- j) Can public announcement of the proposed special action be made in a timely manner to accomplish the management objective?
- k) After evaluating all information and weighing the merits of the special action against other actions, including no action, is the proposed emergency special action reasonable, rational, and responsible?

Yukon Delta National Wildlife Refuge Manager

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**6. Guidelines for Delegation:** You will become familiar with the management history of the fisheries in the region, with the current State and Federal regulations and management plans, and be up-to-date on stock and harvest status information.

You will provide subsistence users in the region a local point of contact about Federal subsistence fishery issues and regulations and facilitate a local liaison with State managers and other user groups. For in-season management decisions and special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government to Government Tribal Consultation Policy (Federal Subsistence Board Government to Government Tribal Consultation Policy 2012).

By March 15 of each year, you will convene a meeting of representatives from the Yukon Delta NWR, the KRITFC, and other Federally sanctioned entities to determine, in consultation with the OSM and ADF&G, if conditions warrant Federal management of subsistence fisheries on the Kuskokwim River.

In addition to any guidelines collaboratively established for issuing emergency special actions via this delegated authority, you will review emergency special action requests or situations that may require an emergency special action and all supporting information to determine (1) consistency with

36 CFR 242.19 and 50 CFR 100.19, (2) if the request/situation falls within the scope of your delegated authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action may be on potentially affected subsistence uses and nonsubsistence uses. Requests not within your delegated authority will be forwarded to the Board for consideration.

You will maintain a record of all special action requests and justification of your decisions. A copy of this record will be provided to the Administrative Records Specialist at OSM no later than sixty days after development of the document.

You will immediately notify the Board through the Assistant Regional Director for the OSM, and coordinate with the Chair or alternate of the affected Council(s), the KRITFC, local ADF&G managers, and other affected Federal conservation unit managers concerning emergency special actions being considered. In addition, the KRSMWG will be notified of actions and decisions whenever possible.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you may seek Council recommendations on the proposed emergency special action.

Yukon Delta National Wildlife Refuge Manager

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You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify Council representatives, the KRITFC, the KRSMWG, the public, OSM, affected State and Federal managers, and law enforcement personnel. If an action is to supersede a State action not yet in effect, the decision will be communicated to Council representatives, the KRITFC, the KRSMWG, the public, OSM, and State and Federal managers at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponents of the request immediately.

You may defer an emergency special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. These options should be exercised judiciously and only when sufficient time allows. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that an emergency special action request may best be handled by the Board, subsequently rescinding the delegated authority for the specific action only.

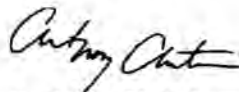
**7. Reporting:** If pre-season meetings result in the need for Federal management of the fishery, you will submit a written report to the Board by June 1 of each year documenting the outcome of this determination process, as well as outlining the in-season collaborative decision making process adopted by the group to include input from the KRITFC, the OSM, and ADF&G, proposed strategies for in-season management, and agreed upon guidelines for issuing emergency special actions via delegated authority.

You must provide to the Board, through the Assistant Regional Director for the OSM, a report describing the pre-season coordination efforts, local fisheries management decisions, and post-season evaluation activities for the previous fishing season by November 15. A summary of emergency special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of the calendar year for presentation during regularly scheduled Council meetings.

**8. Support Services:** Administrative support for your local Federal subsistence fisheries management activities will be provided by the Office of Subsistence Management.

Should you have any questions about this delegation of authority, please feel free to contact the Assistant Regional Director for the OSM at toll-free 1-800-478-1456 or (907) 786-3888.

Sincerely,



Anthony Christianson  
Chair

Yukon Delta National Wildlife Refuge Manager

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Enclosures

cc: Federal Subsistence Board

Assistant Regional Director, Office of Subsistence Management

Deputy Assistant Regional Director, Office of Subsistence Management

Subsistence Policy Coordinator, Office of Subsistence Management

Fisheries Division Supervisor, Office of Subsistence Management

Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory

Chair, Western Interior Subsistence Regional Advisory Council

Superintendent, Lake Clark/Katmai National Parks and Preserve

Superintendent, Denali National Park and Preserve

Manager, Togiak National Wildlife Refuge

Manager, Alaska Maritime National Wildlife Refuge

Assistant Regional Director, Law Enforcement, U.S. Fish and Wildlife Service (Region 7)

Commissioner, Alaska Department of Fish and Game

Interagency Staff Committee

Administrative Record



APPENDIX 2: ORIGINAL ANALYSIS

FP17-05

FP17-05 Executive Summary	
General Description	<p>Proposal FP17-05 requests that Federal subsistence management plans, strategies, fishing schedules, openings, closings, and fishing methods for the Kuskokwim Area be issued independently by the Federal Subsistence Management Program in consultation with appropriate agencies and entities.</p> <p><i>Submitted by: LaMont E. Albertson.</i></p>
Proposed Regulation	<p><i>§ __.27(e)(4)(ii) For the Kuskokwim area, Federal subsistence <b>management plans, strategies, fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action—issued independently by the Federal Subsistence Program, including Federal In-Season Manager in consultation with appropriate agencies and entities.</b></i></p>
OSM Conclusion	Defer
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	Support
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	Support
Interagency Staff Committee Comments	See page 134
ADF&G Comments	Oppose
Written Public Comments	None

**STAFF ANALYSIS  
FP17-05**

**ISSUES**

Proposal FP17-05, submitted by LaMont E. Albertson, requests that Federal subsistence management plans, strategies, fishing schedules, openings, closings and fishing methods for the Kuskokwim Area be issued independently by the Federal Subsistence Management Program in consultation with appropriate agencies and entities.

**DISCUSSION**

The proponent notes that provisions of ANILCA and the applicable Federal land management missions and mandates differ in certain critically important ways from Alaska Statute. The proponent states that changing this regulation is necessary for ensuring that Federal subsistence management practices align with Federal mandates in the Kuskokwim region. The proponent notes that there are many cases where it is appropriate for Federal fisheries management plans and actions to mirror those of the State of Alaska, and that the proposed regulation change is not intended to discourage or impede unified regulations when appropriate. The proponent believes that existing regulations severely limit the ability for the Federal subsistence program to exercise independent judgment, and would like to see additional latitude for Federal managers to issue independent management plans, strategies, and fishing schedules when necessary to achieve the mandates and mission of ANILCA. The proponent noted that existing regulatory language may have been a necessary stop gap measure when the Service did not possess their own fisheries management expertise, but this is no longer the case and it is now necessary to provide the Service the latitude necessary to meet program mandates.

The proponent clarified the proposal during telephone discussions on May 17 and June 27, 2016 and in an e-mail from the proponent on June 22, 2016. The proponent is seeking to remove language stating that Federal subsistence fishing regulations for the Kuskokwim Area, “*are the same as issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by Federal Special Action*”. The proponent wants the Federal Subsistence Management Program, including the Federal In-Season Manager, to work with the Alaska Department of Fish and Game (ADF&G) (including direct participation of the Kuskokwim River Salmon Management Working Group), and the Kuskokwim River Inter-Tribal Fish Commission to determine a management strategy for Kuskokwim Area fisheries. The proponent clarified that he is supportive of the Regional Advisory Council and Federal Subsistence Board (Board) process.

**Existing Federal Regulations****Fishery Management area restrictions for the Kuskokwim Area**

*50 CFR 100.27(e)(4)(ii)-For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking*

*of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

## Proposed Federal Regulation

### **Fishery Management area restrictions for the Kuskokwim Area**

*For the Kuskokwim area, Federal subsistence **management plans, strategies,** fishing schedules, openings, closings, and fishing methods are ~~the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.~~ **issued independently by the Federal Subsistence Program, including Federal In-Season Manager in consultation with appropriate agencies and entities.***

## Existing State Regulation

### **Sec. 16.05.060. Emergency orders**

*(a) This chapter does not limit the power of the commissioner or an authorized designee, when circumstances require, to summarily open or close seasons or areas or to change weekly closed periods on fish or game by means of emergency orders.*

*(b) The commissioner or an authorized designee may, under criteria adopted by the Board of Fisheries, summarily increase or decrease sport fish bag limits or modify methods of harvest for sport fish by means of emergency orders.*

*(c) An emergency order has the force and effect of law after field announcement by the commissioner or an authorized designee. An emergency order adopted under this section is not subject to AS 44.62 (Administrative Procedure Act).*

### **5 AAC 07.365. Kuskokwim River Salmon Management Plan**

*(a) The purpose of this management plan is to provide guidelines for management of the Kuskokwim River salmon fisheries that result in the sustained yield of salmon stocks large enough to meet escapement goals, amounts reasonably necessary for subsistence uses, and for nonsubsistence fisheries. The department shall use the best available data, including preseason and inseason run projections, test fishing indices, age and sex composition, harvest reports, passage escapement estimates, and recognized uncertainty, to assess run abundance for the purpose of implementing this plan.*

*(b) It is the intent of the Board of Fisheries that the Kuskokwim River salmon stocks shall be managed in a conservative manner consistent with the Policy for the Management of Sustainable Salmon Fisheries under 5 AAC 39.222 to meet escapement goals and the subsistence priority.*

*(c) In the king salmon fishery,*

*(1) when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall, by emergency order, close the commercial, sport, and subsistence king salmon fisheries;*

*(2) when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:*

*(A) to the extent practicable, at least one fishing period per week will be opened for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs, except that when surplus king salmon in excess of the drainagewide escapement goal is limited, the commissioner may, by emergency order, close the subsistence fishery and immediately reopen a subsistence fishery during which*

*(i) king salmon may be taken only by persons 60 years of age or older; and*

*(ii) a person authorized to take king salmon under (i) of this paragraph may not authorize a proxy to take or attempt to take king salmon under AS 16.05.405 or 5 AAC 01.011, but the participant may be assisted by family members within the second degree of kindred; in this sub-subparagraph, "within the second degree of kindred" has the meaning given in 5 AAC 92.990(a) ;*

*(B) fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;*

*(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range, the*

*(A) directed subsistence king salmon fishery will be open seven days per week; and*

*(B) commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs.*

*(d) In the subsistence fishery, in the Kuskokwim River drainage, in the waters of the mainstem of the river and other salmon spawning tributaries, unless otherwise specified by the department,*

(1) the subsistence salmon net and fish wheel fisheries will be open seven days per week, except that if the commissioner determines that it is necessary in order to achieve escapement goals, the commissioner may alter fishing periods, by emergency order, based on run abundance;

(2) the commissioner may implement one or more of the gear limitations as described in 5 AAC 01.270(n) during times the commissioner determines that it is necessary for the conservation of king salmon;

(A) the gillnet mesh size may not exceed four inches until sockeye and chum salmon abundance exceeds the king salmon abundance;

(B) a gillnet may not exceed 25 fathoms in length, except that a longer gillnet may be used if no more than 25 fathoms of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;

(C) a person may fish for salmon with a dip net, as defined in 5 AAC 39.105, and all king salmon caught by a dip net must be returned immediately to the water unharmed;

(3) actions to conserve king salmon may be applied to the entire Kuskokwim River, its sections, or tributaries, consistent with harvest trends and variability in abundance of king salmon available for harvest as the run progresses upstream;

(4) the commissioner may alter the subsistence hook and line bag and possession limits specified in 5 AAC 01.295, by emergency order, if the commissioner determines that inseason information indicates it is necessary for conservation purposes.

(e) In the commercial fishery,

(1) the guideline harvest level for king salmon and sockeye salmon is as follows:

(A) 0 - 50,000 king salmon;

(B) 0 - 50,000 sockeye salmon;

(2) only the waters of District 1 may be opened during the first commercial salmon fishing period;

(3) the commissioner shall open and close the Kuskokwim River commercial salmon fishery, by emergency order, if inseason information indicates a run strength that is large

*enough to provide for a harvestable surplus and a reasonable opportunity for subsistence uses and for nonsubsistence fisheries;*

*(4) the department shall provide, to the extent practicable, at least 24 hours advance notice of the opening of Districts 1 and 2 commercial fishing periods;*

*(5) Districts 1 and 2 commercial fishing periods are from 12:00 p.m. through 6:00 p.m.; when longer fishing periods are allowed, the extra time is to be divided before 12:00 p.m. and after 6:00 p.m.;*

*(6) the department shall manage the commercial fishery to ensure there is no significant impact on escapement or allocations of salmon species as a result of incidental harvest in commercial fisheries directed at other salmon species;*

*(7) in June and when king salmon are abundant, the department shall manage the commercial fishery conservatively to ensure king salmon escapement goals are achieved and reasonable opportunity for subsistence uses is provided in consideration of harvest trends and abundance of king salmon available for the subsistence fishery, as follows:*

*(A) when the projected escapement of king salmon is within the drainagewide escapement goal range,*

*(i) the first opening may not occur until after June 23;*

*(ii) only the waters of Subdistrict 1-B may be opened during the first commercial fishing period;*

*(iii) at least 72 hours must pass between the first Subdistrict 1-B opening and the first Subdistrict 1-A opening;*

*(B) when the projected escapement of king salmon exceeds the drainagewide escapement goal range, the commercial fishery will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;*

*(8) when chum salmon abundance exceeds king salmon relative abundance, the department shall manage, to the extent practicable, the commercial salmon fishery based on chum salmon run strength;*

*(9) when coho salmon abundance exceeds chum salmon abundance, the department shall manage, to the extent practicable, the commercial salmon fishery based on coho salmon run strength;*

(10) a person may not sell salmon roe taken in Districts 1 and 2.

(f) In the sport fishery,

(1) if the commissioner restricts the fishery, by emergency order, for conservation purposes, the restrictions must be based on the level of abundance;

(2) in the Aniak River drainage, the king salmon fishery is open from May 1 through July 25, with a bag and possession limit of two fish, 20 inches or greater in length, with an annual limit of two fish, 20 inches or greater in length; the sockeye, pink, chum, and coho salmon fisheries are open year round, with a combined daily bag and possession limit of three fish, of which no more than two fish may be king salmon;

(3) actions to conserve king salmon will only be implemented when king salmon are present, consistent with migratory timing as the run progresses upstream.

#### Extent of Federal Public Lands

For the purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. The Kuskokwim Area includes all waters of Alaska between the latitude of the westernmost point of the Naskonat Peninsula and the latitude of the southernmost tip of Cape Newenham including the waters of Alaska surrounding Nunivak and Saint Matthew Islands and those waters draining into the Bering Sea. The Kuskokwim Area includes waters that are within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, Togiak National Wildlife Refuge, Lake Clark National Park and Preserve and the Denali National Park and Preserve. This includes portions of Districts 1 and 2 of the Kuskokwim Fishery Management Area; these waters are generally described as the lower Kuskokwim River drainage from the mouth upriver to and including about 30 miles of the Aniak River.

#### Customary and Traditional Use Determinations

The Board has recognized the following customary and traditional uses (50 CFR 100.24) of fish in freshwater for the Kuskokwim Area:

*Salmon- Residents of the Kuskokwim Area, except those persons residing on United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB*

*Rainbow trout- Residents of the communities of Akiachak, Akiak, Aniak, Atmaultluak, Bethel, Chuathbaluk, Crooked Creek, Eek, Goodnews Bay, Kasigluk, Kwethluk, Lower Kalskag, Napakiak, Napaskiak, Nunapitchuk, Oscarville, Platinum, Quinhagak, Tuluksak, Tuntutuliak, and Upper Kalskag*

*All Other fish- Residents of the Kuskokwim Area, except those persons residing on United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB*

## Regulatory History

In April 2000, an Interim Memorandum of Agreement (MOA) between the agencies on the Board and ADF&G provided a foundation for coordinated Federal-State fisheries management and subsistence use on Federal public lands in Alaska. In 2008, the Board, the Alaska Boards of Fisheries and Game, and ADF&G signed a Memorandum of Understanding (MOU) to provide the basis for coordinated Federal-State fisheries management and subsistence use on Federal public lands in Alaska. The MOU between the Board, the State Boards of Fisheries and Game, and ADF&G expired in November 2014; however, this agreement may be reconsidered in 2016/2017 (FSB 2016).

In 2002, the Office of Subsistence Management (OSM) submitted a Fisheries Special Action request (FSA02-01) to the Board requesting streamlining of the special action process for the Yukon and Kuskokwim Rivers during the 2002 fishing season (Kron 2002, pers. comm.). Based on input from OSM staff, the Interagency Staff Committee and recommendations from the Yukon-Kuskokwim Delta, Seward Peninsula, and the Eastern Interior Alaska and Western Interior Alaska Regional Advisory Councils, the Board adopted the following wording based on Fisheries Proposal FP03-28: *“For the Yukon and Kuskokwim areas, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action”*. In 2007 similar wording was adopted by the Board for salmon in the Chignik Area. Only these three (Kuskokwim, Yukon and Chignik) of the thirteen Federal fishery management areas in Alaska currently include regulatory wording that specifies that Federal Subsistence fishing openings, closings and fishing methods are: *“the same as those issued for subsistence taking of fish under Alaska Statutes (AS16.05.060), unless superseded by Federal Special Action”*. Fishery management regulations for the Kotzebue, Norton Sound-Port Clarence, Bristol Bay, Aleutian Islands, Alaska Peninsula, Kodiak, Cook Inlet, Prince William Sound, Yakutat and Southeast Alaska Areas do not contain the referenced to regulations being: *“the same as those issued under Alaska Statutes (AS16.05.060), unless superseded by Federal Special Action”*.

Current general Federal Subsistence Management Program regulations concerning these issues statewide are as follows:

*50 CFR 100.14- Relationships to State procedures and regulations: (a) State fish and game regulations apply to public lands and such laws are hereby adopted and made part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.*

*50 CFR 100.27(b)(16)(ii)- Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.*



The Federal Subsistence Board has delegated in-season management responsibility for the Kuskokwim Area to the Yukon Delta National Wildlife Refuge Manager (**Appendix A**, May 3, 2002).

Since the Yukon and Kuskokwim Rivers subsistence regulations were first adopted by the Board in 2003, much has changed on the Kuskokwim River. Chinook Salmon returns and subsistence harvests have declined, and harvest regulations have become more restrictive. Chinook Salmon escapements dropped to record low levels in 2010, 2012 and 2013. There have been closures to fishing and ANILCA Section 804 analyses/determinations. The Federal Subsistence Management Program has been much more involved in the Kuskokwim River fisheries management in recent years.

### **Current Events Involving Management of the Species**

In 2011, the Department of Interior adopted a policy with Federally recognized Indian Tribes that reflects a commitment to enhance government to government consultation (DOI 2011). In 2012, the Federal Subsistence Board adopted their Government-to-Government, Tribal Consultation Policy (FSB 2012). This policy acknowledges that consultation is not always possible for in-season management decisions and special actions due to the quick turnaround times required but also notes that, to the extent practicable, two-way communication will take place before decisions are implemented.

In 2016, an MOU was signed between the U.S. Department of Interior, U.S. Fish and Wildlife Service and the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) (MOU 2016) as a part of a Kuskokwim River Partnership Project (Partnership Project). The Kuskokwim River Tribes established the KRITFC for the purpose of engagement in the management of Kuskokwim River fisheries. Based on the MOU, the USFWS and the KRITFC will consult for the purpose of collaboratively making fisheries management decisions, including in-season actions with the integration and application of KRITFC knowledge, information and management strategies.

A second portion of the Partnership Project is the collaborative development of a joint subcommittee comprised of members of the Western Interior Alaska and Yukon-Kuskokwim Delta Subsistence Regional Advisory Councils (Councils), which is still in development. The joint subcommittee would make recommendations to the Councils on proposals for regulations, policies, management plans, in-season management special actions and other matters relating to management, conservation and subsistence uses of fish in the Kuskokwim River Area. At the a fall 2016 Council meetings, the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council and the Western Interior Alaska Subsistence Regional Advisory Council each named a person to work on this on-going process. Board action required to implement the Kuskokwim River joint subcommittee portion of the Kuskokwim River Partnership Project has not yet occurred.

### **Effects of the Proposal**

The proposal requests that “management plans, strategies” be added to existing regulatory language. These are normal components of fishery management; aspects of both are already occurring and the Kuskokwim River Partnership Project will focus on these efforts when fully implemented. The proposal requests that prescriptive wording (“*are the same as those issued for the subsistence taking of fish under*

*Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action*”) be removed from Kuskokwim Area Federal subsistence regulations. Removing this language before all aspects of the Partnership Project have been fully implemented could result in ambiguity regarding how in-season management would proceed in years during which no concerns about resource conservation or the continuation of subsistence uses have been identified.

As written, the proposal does not specifically acknowledge the role of the Subsistence Regional Advisory Councils, the Federal Subsistence Board or the Secretaries’ delegation of authority directly to the Board. Clarifying discussions with the proponent revealed that he does support these aspects of the Federal Subsistence Management Program, including the collaborative process outlined in the Partnership Project for fishery management on the Kuskokwim River. However, based on a review of discussions with the proponent at the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council and Western Interior Alaska Subsistence Regional Advisory Council meetings, as well as comments received from the Interagency Staff Committee, the proposed regulatory change may not fully reflect the intended collaborative process. Furthermore, the proposed regulatory language does not provide sufficient detail about the structure, content or scope of proposed Federal subsistence management plans and strategies to fully assess the effects of mandating that these be issued independently by the Federal Subsistence Management Program. Finally, adopting this proposal before the collaborative decision making process outlined in the Kuskokwim River Partnership Project, Memorandum of Understanding (MOU) has not been implemented in its entirety, including Board action to authorize a Subsistence Regional Advisory Council subcommittee jointly chartered by the Western Interior Alaska and Yukon-Kuskokwim Delta Subsistence Regional Advisory Councils, may be premature.

## OSM CONCLUSION

Defer FP17-05 and revise Delegation of Authority letter for the Kuskokwim Area to address the proponent’s concerns regarding collaborative development of in-season management plans and strategies on an annual basis, in accordance with the goals and objectives of the Kuskokwim River Partnership Project.

## Justification

The Kuskokwim River Partnership Project is intended to provide a mechanism to meaningfully integrate Kuskokwim tribes and Federally qualified subsistence users into the decision making process for fisheries management on Federal public waters of the Kuskokwim River drainage. The Partnership Project aims to develop unified recommendations for fishery management for the Kuskokwim River drainage, including the development of a unified management strategy and associated in-season management decisions for the Kuskokwim River. While a signed MOU is in place to outline how tribal interests will be integrated into the in-season decision making process, the second part of the Partnership Project focusing on Federally qualified subsistence users, has not yet been implemented via Regional Advisory Councils and Board action. Deferring Fisheries Proposal FP17-05 will provide time for full implementation of all aspects of the Kuskokwim River Partnership Project before decisions are made about the necessity of regulatory changes to the Federal subsistence regulations.

However, the proponent has identified a number of important concerns regarding the ways in which current in-season management may occur within the context of delegated authority from the Board and in accordance with the goals and objectives of the Kuskokwim River Partnership Project. To address these concerns and help facilitate the Partnership Project, it is recommended that the Delegation of Authority letter from the Board be revised with specific guidance about annual expectations for collaboration among identified stakeholders, carrying out fishery management decision making processes and requirements for issuing special actions (e.g., a general schedule for annually developing management strategies, goals and objectives of in season management, making determinations about assimilating Alaska Statutes for the subsistence taking of fish, etc.). The updated letter of delegation would also require collaboration between the in-season manager, representatives from the Federal Subsistence Management Program, any local advisory committees authorized under ANILCA Section 805 and Federal and State sanctioned entities to accomplish an annual determination and written report to the Board regarding whether conditions warrant Federal management of subsistence fisheries on the Kuskokwim River. Such revisions to the delegation of authority letter for the Kuskokwim Area will provide clarity in terms of roles, responsibilities, participatory decision making and Board expectations regarding in-season management of subsistence fisheries on the Kuskokwim River. The letter of delegation for the Kuskokwim is more than 14 years old. OSM is in the process of revising letters of delegation for all areas of Alaska for the Board's consideration.

#### LITERATURE CITED

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- MOU 2016. Memorandum of Understanding between the United States Department of the Interior U.S. Fish and Wildlife Service Alaska Region and the Kuskokwim River Inter-Tribal Fish Commission. 8pp.

## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

**Support** FP 17-05. The Council emphasized the importance of everyone on the Kuskokwim having a seat at the table in the salmon management decision making process. They stressed that Tribal consultation and input from subsistence fishers that inhabit fish camps is essential in informing management decisions including when conditions are conducive to successfully drying fish. The Council noted the proposal would provide a stronger framework for much needed coordination between the Federal and State managers and Tribal communities along the Kuskokwim River. The Council was very pleased with the involvement of the Federal Inseason Managers with the Kuskokwim River Intertribal Fish Commission this past summer and felt scientific and local and traditional knowledge were brought to the table and considered in a collaborative decision making process. The Council feels that this proposal would further these efforts by formalizing the working relationship with the Federal managers and Kuskokwim Tribes and subsistence fishers and ensure the State participation through the establishment of this regulatory framework.

The Council stressed the need to engage all stakeholders in the decision making process and affirmed the proposal will be a tool to ensure all entities on the Kuskokwim River are working in collaboration on inseason fisheries management.

### Western Interior Alaska Subsistence Regional Advisory Council

**Support** FP 17-05. The Council emphasized the Kuskokwim Area is a major subsistence fishery. The Council noted the proposal would provide a forum for much needed coordination, though it unclear how implementation would be conducted. The Council stressed the need to engage all stakeholders in the decision making process. The Council affirmed the proposal will bring together all entities on the Kuskokwim River to establish coordinated fisheries management.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

While the Interagency Staff Committee supports the intent of the proposal to work toward a unified management strategy for Kuskokwim River fisheries, the Board may want to consider deferring action until the collaborative management aspects of the Kuskokwim River Partnership Project are more established. Further, there are aspects of the proposed regulatory language that may need additional vetting. The regulatory requirement for Federal subsistence management plans and strategies would be unique to the Kuskokwim River Area; however, there have not been any substantive discussion with public involvement about how the proposed management plans and strategies are developed.

The Board may want to consider which aspects of the proposal could be included in an updated Delegation of Authority Letter, which directs how the Federal in-season manager issues emergency special action. The letter includes guidelines on notification and consultation with affected agencies and entities. Delegation of authority letters can be updated at the discretion of the Board.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

### **Alaska Department of Fish and Game** *Comments to the Federal Subsistence Board*

**Fishery Proposal FP17-05:** This proposal was submitted by LaMont E. Albertson and requests that Federal subsistence management plans, strategies, fishing schedules, openings, closings, and fishing methods for the Kuskokwim Area be issued independently by the Federal Subsistence Management Program in consultation with appropriate agencies and entities.

**Background:** This proposal seeks to remove language from federal regulation that states for the Kuskokwim area Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action. There have been various clarifications on the intent expressed by the proponent since the proposal was published.

Recent sharp declines in Chinook salmon abundance have caused severe hardship for fishery-dependent communities in the Kuskokwim Area.

**Impact on Subsistence Users:** If adopted as written, management would be split, rather than aligned, resulting in confusion for subsistence users.

**Impact on Other Users:** With two management plans in place, and the resultant confusion, it is not certain that other uses and users could be provided for.

**Opportunities Provided by State:** Regulatory authority for Kuskokwim River salmon management is shared by the Federal Subsistence Board and the State of Alaska Board of Fisheries. The State is responsible for implementing regulations in accordance with the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) unless the Federal subsistence program determines that all non-Federally-qualified subsistence uses must be eliminated in order to meet the Federal subsistence priority. Subsistence salmon harvest in the Kuskokwim River is allowed without a permit and with no closed season or bag limits (with an exception for the Aniak River). Legal gear includes gillnets, hook and line, seines, and fish wheels.

**Recommendation:** The State OPPOSES this proposal as written, but SUPPORTS the clarified intent of the proposal to increase collaboration among State and Federal fisheries management authorities so that subsistence uses continue to be the priority use for Kuskokwim River fish stocks. The State SUPPORTS

clarifying the delegation of authority to the Federal inseason manager, and stands ready to provide biological and management expertise to that effort.

Original FP17-05 Analysis (2017)

FP19-08 Executive Summary	
<b>General Description</b>	Proposal FP19-08 requests that from June 1 through June 25, the use of six-inch or less mesh size gillnets will only be restricted, if necessary, during rolling closures implemented sequentially up the Kuskokwim River in a step-wise progression consistent with Chinook Salmon run-timing. <i>Submitted by: Alissa N. Rogers.</i>
<b>Proposed Regulation</b>	<p><b>§____.27(e)(4) Kuskokwim Area</b></p> <p><i>(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), <b>except from June 1 through June 25 the use of 6-inch or less mesh size gillnets will only be restricted, if necessary, during rolling closures implemented sequentially up the river in a step-wise progression consistent with Chinook Salmon run timing, unless superseded by a Federal Special Action.</b></i></p>
<b>OSM Preliminary Conclusion</b>	<p><b>Support with modification</b> to change the end date to July 15 and to remove language about implementing rolling closures consistent with Chinook Salmon run-timing.</p> <p>The modified language should read:</p> <p style="text-align: center;"><b>§____.27(e)(4) Kuskokwim Area</b></p> <p><i>(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), <b>or specified in the sections below, unless superseded by a Federal Special Action</b></i></p> <p style="text-align: center;">* * * *</p> <p><i>(xvii) <b>From June 1 through July 15, the use of six-inch or less mesh size gillnets will only be restricted when necessary.</b></i></p>
<b>OSM Conclusion</b>	<b>Oppose</b>

<b>FP19-08 Executive Summary</b>	
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Oppose</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>



**STAFF ANALYSIS  
FP19-08**

**ISSUES**

Proposal FP19-08, submitted by Alissa N. Rogers of Bethel, Alaska, requests that from June 1 through June 25, the use of six-inch or less mesh size gillnets will only be restricted, if necessary, during rolling closures implemented sequentially up the Kuskokwim River in a step-wise progression consistent with Chinook Salmon run-timing.

**DISCUSSION**

The proponent states that Alaska Department of Fish and Game's (ADF&G) Kuskokwim River Salmon Management Plan requires the State to close the Chinook Salmon fishery through June 11 every year, which is implemented through a closure to the use of gillnets. The proponent notes that there should be opportunity to harvest Chinook Salmon before June 11 every year, and that this opportunity be provided between rolling closures implemented sequentially up the river in a step-wise progression consistent with Chinook Salmon run timing. The proponent is seeking to establish "pulse" protection for Chinook Salmon similar to how Chinook Salmon in the Yukon River are managed.

**Existing Federal Regulation**

**§ \_\_.27(e)(4) Kuskokwim Area**

\* \* \* \*

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

\* \* \* \*

**Proposed Federal Regulation**

**§ \_\_.27(e)(4) Kuskokwim Area**

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), except from June 1 through June 25 the use of 6-inch or less mesh size gillnets will only be restricted, if necessary, during rolling closures implemented sequentially up the river in a step-wise progression consistent with Chinook Salmon run*

*timing, unless superseded by a Federal Special Action.*

## **Existing State Regulation**

### ***Kuskokwim Area—Subsistence Fishing***

#### **5 AAC 01.255. Description of districts, subdistricts, and sections**

*(a) Districts and subdistricts are as described in 5 AAC 07.200.*

*(b) During times of king salmon conservation, the Kuskokwim River may be divided into the following sections by emergency order:*

*(1) Section 1: from a line at the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim River at 59\_ 59.96' N. lat., 162\_ 30.46' W. long. to 59\_ 59.95' N. lat., 162\_ 11.15' W. long. to the confluence of the Johnson River and Kuskokwim River;*

*(2) Section 2: from the confluence of the Johnson River and Kuskokwim River to a line between ADF&G regulatory markers located approximately one-half mile upstream of the Tuluksak River mouth;*

*(3) Section 3: from a line between ADF&G regulatory markers located approximately one-half mile upstream of the Tuluksak River mouth to a line between ADF&G regulatory markers at the Yukon Delta National Wildlife Refuge boundary near Aniak;*

*(4) Section 4: from a line between ADF&G regulatory markers at the Yukon Delta National Wildlife Refuge boundary near Aniak to a line between ADF&G regulatory markers located downstream of the Holitna River mouth;*

*(5) Section 5: from a line between ADF&G regulatory markers located downstream of the Holitna River mouth to the headwaters of the Kuskokwim River.*

### ***Kuskokwim River Salmon Management Plan***

#### **5 AAC 07.365. Kuskokwim River Salmon Management Plan**

*(c) In the king salmon fishery,*

*(1) when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries;*

(2) when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, to the extent practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs,

(B) after June 11, fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(2)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark;

(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range,

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, the directed subsistence king salmon fishery will be open seven days per week; and

(B) after June 11, the commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs.

(C) notwithstanding (c)(3)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark;

(4) notwithstanding the provisions of (2) and (3) of this subsection, if the department determines there is a harvestable surplus of king salmon, the commissioner may open, by emergency order, a subsistence king salmon fishery during which

(A) king salmon may be taken only by a person 60 years of age or older; and

*(B) a person authorized to take king salmon under this paragraph may not authorize a proxy to take or attempt to take king salmon under AS 16.05.405 or 5 AAC 01.011, but the participant may be assisted by family members within the second degree of kindred; in this subparagraph, "within the second degree of kindred" has the meaning given in 5 AAC 92.990(a).*

*(d) In the subsistence fishery, in the Kuskokwim River drainage, in the waters of the mainstem of the river and other salmon spawning tributaries, unless otherwise specified by the department,*

*(1) the subsistence salmon net and fish wheel fisheries will be open seven days per week, except that if the commissioner determines that it is necessary in order to achieve escapement goals, the commissioner may alter fishing periods, by emergency order, based on run abundance;*

*(2) the commissioner may implement one or more of the gear limitations as described in 5 AAC 01.270(n) during times the commissioner determines that it is necessary for the conservation of king salmon;*

*(A) the gillnet mesh size may not exceed four inches until sockeye and chum salmon abundance exceeds the king salmon abundance;*

*(B) a gillnet may not exceed 25 fathoms in length, except that a longer gillnet may be used if no more than 25 fathoms of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;*

*(C) a person may fish for salmon with a dip net, as defined in 5 AAC 39.105, and all king salmon caught by a dip net must be returned immediately to the water unharmed;*

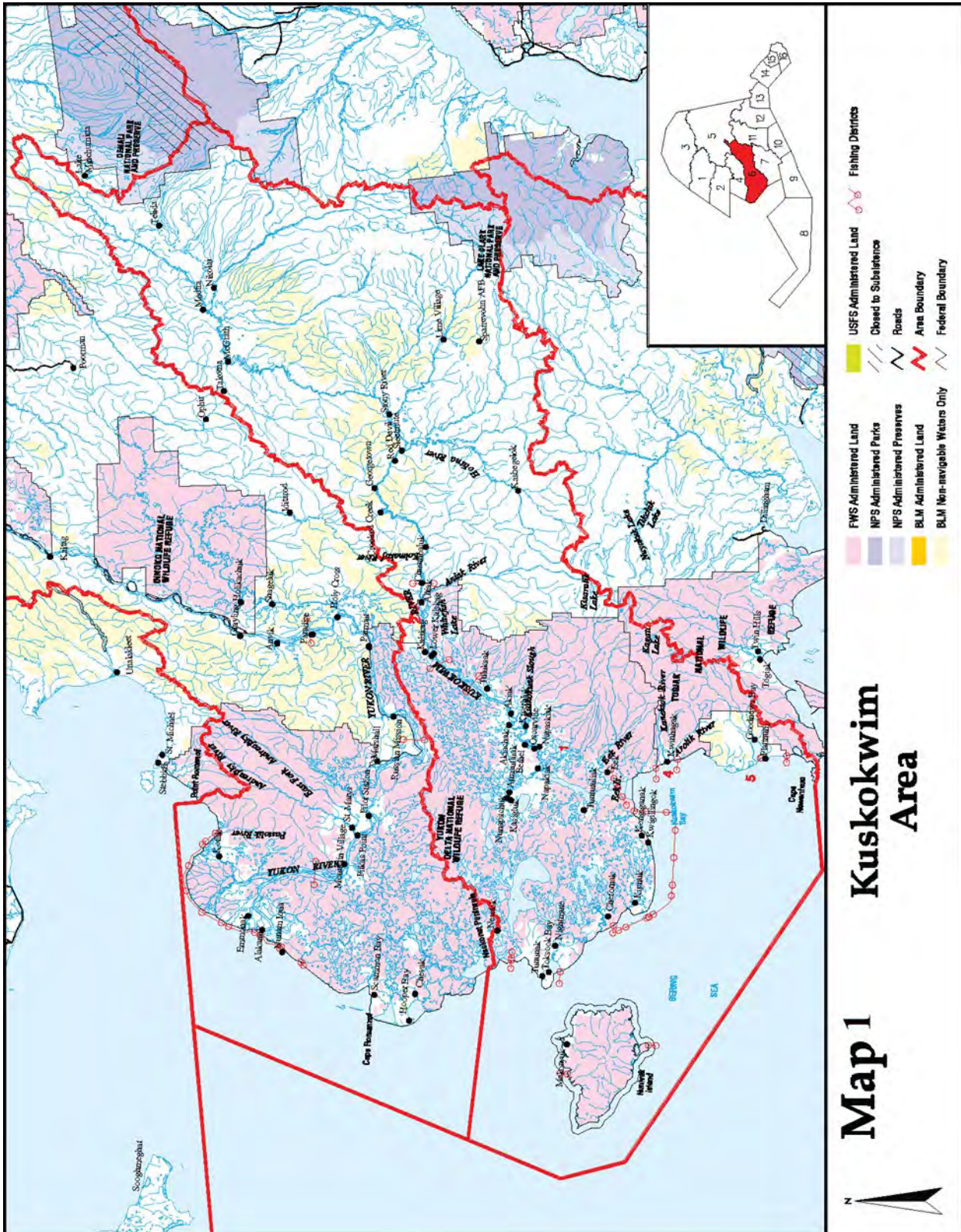
*(3) actions to conserve king salmon may be applied to the entire Kuskokwim River, its sections, or tributaries, consistent with harvest trends and variability in abundance of king salmon available for harvest as the run progresses upstream;*

*(4) the commissioner may alter the subsistence hook and line bag and possession limits specified in 5 AAC 01.295, by emergency order, if the commissioner determines that inseason information indicates it is necessary for conservation purposes.*

### **Extent of Federal Public Waters**

For purposes of this analysis, the phrase "Federal public waters" is defined as those waters described under 36 CFR 242.3 and 50 CFR 100.3. The affected area consists of those waters of the Kuskokwim River drainage that are within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge (Refuge), including District 1 and portions of District 2 of the Kuskokwim Fishery

Management Area. The waters are generally described as the lower Kuskokwim River drainage from the mouth upriver to and including about 30 miles of the Aniak River (Map 1).



## **Customary and Traditional Use Determinations**

Residents of the Kuskokwim Area, except those persons residing on United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB, have a customary and traditional use determination for salmon (50 CFR 100.24 and 36 CFR 242.24).

## **Regulatory History**

### History of Rolling Closures (2001-2009)

The practice of limiting the subsistence fishery through “windowed”, or rolling closures implemented sequentially up the river in a step-wise progression consistent with salmon run-timing, began in 2001 upon passage of the Kuskokwim River Rebuilding Plan (5 AAC 07.365) by the Alaska Board of Fisheries (BOF), continued until 2006, stopped between 2007 through 2011 as runs returned to normal, and then finally ended in 2012. The rebuilding plan was put into place after the BOF designated the Kuskokwim River Chinook and Chum Salmon stocks of yield concern. This action was based on the Sustainable Fisheries Policy and poor runs since 1997 (Whitmore et al. 2004, Poetter and Tiernan 2017). The plan provided direction for establishing a subsistence fishing schedule that allowed salmon gillnet and fish wheel fisheries to be open for four consecutive days per week in June and July as announced by emergency order. Once escapement goals were assured for Chinook and Chum Salmon, subsistence fishing would then be allowed seven days per week. The days of the week open to subsistence fishing were selected through meetings with the Kuskokwim River Salmon Management Working Group. The schedule was generally released before the fishing season and the removal of restrictions were dependent on in-season information gathered on the run.

Throughout the Chinook and Chum Salmon runs in 2001, the drainage was closed to the harvest of salmon (except by rod and reel), from three days per week (upper river) to five days per week (lower and middle river). During these closures gillnets were restricted to 4-inch or less mesh size (Whitmore et al. 2004). Lower river closures were implemented on June 3, middle river closures on June 10, and upper river closures on June 17 (Hamazaki 2008). All restrictions were lifted by July.

From 2002 through 2003, during the Chinook Salmon run, the Kuskokwim River drainage was closed to the harvest of Chinook Salmon (except by hook and line), three days a week in rolling closures. During these closures gillnets were restricted to 4-inch or less mesh size (Whitmore et al. 2004). In 2002, lower river closures were implemented on June 9 and middle river closures on June 28 (Hamazaki 2008). In 2003, lower river closures were implemented on June 1, middle river closures on June 8, and upper river closures on June 15 (Hamazaki 2008). Restrictions in 2002 were lifted by June 28, while restrictions in 2003 were lifted by July 3.

From 2004 through 2006, three day per week rolling closures to the harvest of Chinook Salmon were implemented. During these closures gillnets were restricted to 4-inch or less mesh size (Whitmore et al. 2004). In 2004, lower river closures were implemented between June 3 and June 20 (Hamazaki 2008). In 2005 and 2006, lower river closures were implemented between June 5 and June 19 (Hamazaki 2008).

There were no closures to the harvest of salmon in the upriver areas during these years (Martz and Whitmore 2005, Martz and Dull 2006, Dull and Shelden 2007).

In 2007, the Alaska Board of Fisheries discontinued the stock of concern designation for Kuskokwim River Chinook and Chum salmon based on at or above the historical average runs each year since 2002.

### Salmon Management 2010 – 2013

In 2010, from June 10 through July 31, the Federal in-season manager closed the Tuluksak and Kwethluk rivers to the harvest of Chinook Salmon with gillnets due to conservation concerns. During this time gillnets were restricted to 4-inch or less mesh size in the Tuluksak and Kwethluk rivers (Brazil et al. 2011).

In 2011, from June 1 through July 25, the harvest of Chinook Salmon using hook and line gear or gillnets (restricted at the time to 4-inch or less mesh size) was closed in the following important salmon rearing tributaries: Kuskokuak Slough, including all waters of the Kisaralik, Kasigluk, and Kwethluk river drainages; and the Tuluksak River drainage. District 1 of the Kuskokwim River main stem was closed to the harvest of salmon from June 16 through June 19 and June 23 through June 29. The Federal in-season manager closed Refuge waters to the harvest of salmon for three days from June 30 through July 2 because of continuing concerns for the conservation of Chinook Salmon (Brazil et al. 2013).

In 2012, from June 1 through July 25 the harvest of Chinook Salmon using hook and line gear was closed, while gillnets were restricted to 4-inch or less mesh size. Areas closed in Kuskokuak Slough, included all waters of the Kisaralik, Kasigluk, and Kwethluk river drainages, and the Tuluksak, Aniak, and George river drainages. In the mainstem, during the Chinook Salmon run, the harvest of Chinook Salmon was restricted for 12 consecutive days by the use of rolling closures from the Kuskokwim River mouth to the headwaters followed by six days of rolling open fishing periods when 6-inch or less mesh size gillnets were allowed. After six-day periods openings, harvest of salmon was again prohibited by rolling closures starting on June 30 in the lower river and ending July 14 at the headwaters. The harvest of salmon with hook and line gear remained closed until later in the summer (Elison et al. 2015). 2012 was the last year in which rolling closures were implemented in the Chinook Salmon subsistence fishery before the Kuskokwim River Salmon Management plan was adopted in 2013.

In 2013, the BOF adopted the Kuskokwim River Salmon Management Plan (5 AAC 07.365). The plan provided guidelines for managing the Kuskokwim River salmon fishery to meet escapement goals and subsistence use priority (Tiernan and Poetter 2015). On June 1, subsistence Chinook Salmon fishing with gillnets was restricted to four-inch or less mesh not to exceed 60 feet in the Kwethluk River drainage including its confluence with Kuskokuak Slough, as well as the Kasigluk, Kisaralik, Tuluksak, Aniak river drainages. This restriction was to conserve Chinook Salmon in the salmon-bearing tributaries of the Kuskokwim River while allowing the harvest of non-salmon species such as whitefish, Northern Pike, and Burbot. Gillnets were limited to six-inch or less mesh size in the lower river below Tuluksak beginning June 28 and between Tuluksak and Aniak beginning July 3 in order to conserve Chinook Salmon. All restrictions were lifted by July 15 (Tiernan and Poetter 2015).

## Salmon Management 2014 – Present

For a complete list of Federal special actions and State emergency orders from 2014 – 2017, see **Appendix 1**.

Salmon management from 2014 through present is substantially different than salmon management from 2001 to 2013 due to consistently low Chinook Salmon returns. Salmon management from 2014 to 2017 provided very limited harvest opportunities, and these were provided to Federally qualified subsistence users or a limited pool of Federally qualified subsistence users through the Federal special action process. Dates for harvest opportunities were decided during the in-season management process rather than through published fishing schedules provided at the beginning of the season as took place in 2001-2006. During this time period, fishing schedules, openings, closings, and gear restrictions for the Chinook Salmon subsistence fishery have been determined by the Federal in-season manager in collaboration with the Kuskokwim River Inter-Tribal Fish Commission, as well as other Federal and State entities.

Since 2016, there has been a complete restriction to gillnets in the main-stem Kuskokwim River and its salmon bearing tributaries during the front-end of the Chinook Salmon return (May 20 – June 12) in order to provide equitable distribution of Chinook Salmon harvest to middle and upper portions of the Kuskokwim River drainage. During these years, Federal public waters of the Kuskokwim River drainage have been closed to the use of all gillnets beginning between May 20 – May 30, and lasting until June 12. These past actions have been implemented by ADF&G, as mandated by State of Alaska regulations that state the Chinook Salmon subsistence fishery be closed through June 11. During these complete closures to gillnet use, ADF&G has provided limited weekly opportunities with four-inch or less mesh size set gillnets to harvest non-salmon species, as mandated by State of Alaska regulations that require at least one opportunity a week with four-inch or less mesh size set nets during the front-end closure (Poetter and Tiernan 2017).

Since 2016, the Chinook Salmon subsistence fishery has been restricted after June 11 through emergency special actions issued by either the Board or the Federal in-season manager for the Kuskokwim area. During this time, the Federal in-season manager limited Chinook Salmon harvest by providing short, time-limited opportunities for the harvest of Chinook Salmon by a limited pool of Federally qualified subsistence users with six-inch or less mesh size drift gillnets based on in-season information gathered as the Chinook Salmon return was monitored past the Bethel area.

## **Biological Background**

### Chinook Salmon

#### *Run-Size*

Estimates of drainage-wide run size are produced by the Chinook Salmon run-reconstruction model. This model uses multiple sources of data such as weir and aerial escapement indices, commercial catch and effort, mark-recapture estimates, and harvest to estimate annual returns (Liller and Smith 2018). As



of May 2018, the run-reconstruction model has been updated to include newly available mark-recapture information from 2014-2017, as well as additional model changes and data updates (Hamazaki et al. 2018).

Chinook Salmon abundance in the Kuskokwim River system has been highly variable with cyclical (~10 years) peaks around 379,000 and valleys around 120,000 fish. The last peak run-size occurred in 2004 with an estimated size of 366,725 Chinook Salmon. Run-sizes have dropped steadily from that peak until reaching an all-time low of 79,238 salmon in 2012. Since 2012, the population appeared to be on an increasing trend, with the 2017 run size estimated at 133,267 Chinook Salmon, which is a slight increase from the 2016 run-size of 128,855 Chinook Salmon. The Chinook Salmon run-size has remained effectively consistent from 2015 to 2017 (**Table 1, Figure 1**).

**Table 1.** Published comparison of estimates for Kuskokwim River Chinook Salmon run-size, escapement, and harvest from 1976 to 2017. Estimates produced by Liller and Smith (2018) are in parentheses, revised estimates from Hamazaki et al. (2018) are not.

Kuskokwim River Drainage							
Year	Total Run	Escapement	Harvest				
			Subsistence	Commercial	Sport	Test Fish	Total
1976	187,584 (233,967)	97,037 (143,420)	58,606	30,735		1,206	90,547
1977	348,824 (295,559)	255,117 (201,852)	56,580	35,830	33	1,264	93,707
1978	241,781 (264,325)	158,309 (180,853)	36,270	45,641	116	1,445	83,472
1979	233,787 (253,970)	137,485 (157,668)	56,283	38,966	74	979	96,302
1980	357,950 (300,573)	260,982 (203,605)	59,892	35,881	162	1,033	96,968
1981	308,660 (389,791)	198,261 (279,392)	61,329	47,663	189	1,218	110,399
1982	173,072 (187,354)	66,071 (80,353)	58,018	48,234	207	542	107,001
1983	148,278 (166,333)	66,133 (84,188)	47,412	33,174	420	1,139	82,145
1984	171,853 (188,238)	82,677 (99,062)	56,930	31,742	273	231	89,176
1985	143,568 (176,292)	61,641 (94,365)	43,874	37,889	85	79	81,927
1986	123,452 (129,168)	52,840 (58,556)	51,019	19,414	49	130	70,612
1987	186,184 (193,465)	81,941 (89,222)	67,325	36,179	355	384	104,243
1988	204,824 (207,818)	77,061 (80,055)	70,943	55,716	528	576	127,763
1989	214,081 (241,857)	87,928 (115,704)	81,175	43,217	1,218	543	126,153
1990	266,353 (264,802)	102,167 (100,614)	109,778	53,502	394	512	164,186
1991	210,525 (218,705)	97,377 (105,589)	74,820	37,778	401	149	113,148
1992	259,154 (284,846)	127,881 (153,573)	82,654	46,872	367	1,380	131,273
1993	274,830 (269,305)	175,319 (169,816)	87,674	8,735	587	2,515	99,511
1994	411,724 (365,246)	289,094 (242,616)	103,343	16,211	1,139	1,937	122,630
1995	371,079 (360,513)	236,161 (225,595)	102,110	30,846	541	1,421	134,918
1996	307,072 (302,603)	201,561 (197,092)	96,413	7,419	1,432	247	105,511
1997	295,259 (303,189)	203,878 (211,247)	79,381	10,441	1,227	332	91,381
1998	184,356 (213,873)	84,140 (113,627)	81,213	17,359	1,434	210	100,216
1999	158,770 (189,939)	80,940 (112,082)	72,775	4,705	252	98	77,830
2000	129,138 (136,618)	60,905 (65,180)	67,620	444	105	64	68,233

Table 1 (Continued).

Kuskokwim River Drainage							
Year	Total Run	Escapement	Harvest				
			Subsistence	Commercial	Sport	Test Fish	Total
2001	205,152 (223,707)	126,677 (145,232)	78,009	90	290	86	78,475
2002	226,106 (246,296)	144,445 (164,635)	80,982	72	319	288	81,661
2003	232,282 (248,789)	164,180 (180,687)	67,134	158	401	409	68,102
2004	366,725 (388,136)	266,084 (287,178)	96,788	2,305	857	691	100,641
2005	326,904 (366,601)	235,901 (275,598)	85,090	4,784	572	557	91,003
2006	326,067 (307,662)	232,409 (214,004)	90,085	2,777	444	352	93,658
2007	244,754 (273,060)	146,637 (174,943)	96,155	179	1,478	305	98,117
2008	219,709 (237,074)	111,613 (128,978)	98,103	8,865	708	420	108,096
2009	189,370 (204,747)	103,101 (118,478)	78,231	6,664	904	470	86,269
2010	112,975 (118,507)	43,541 (49,073)	66,056	2,732	354	292	69,434
2011	113,749 (133,059)	49,718 (72,097)	62,368	747	579	337	64,031
2012	79,238 (99,807)	55,746 (76,074)	22,544	627	0	321	23,492
2013	84,311 (94,166)	36,823 (47,315)	47,113	174	0	201	47,488
2014	84,326 (135,749)	72,560 (123,987)	11,234	35	0	497	11,766
2015	125,058 (172,055)	108,454 (155,464)	16,124	8	0	472	16,604
2016	128,855 (176,916)	97,640 (145,718)	30,693	0	0	522	31,215
2017	133,267 (166,863)	116,579 (150,193)	16,380	0	0	290	16,670

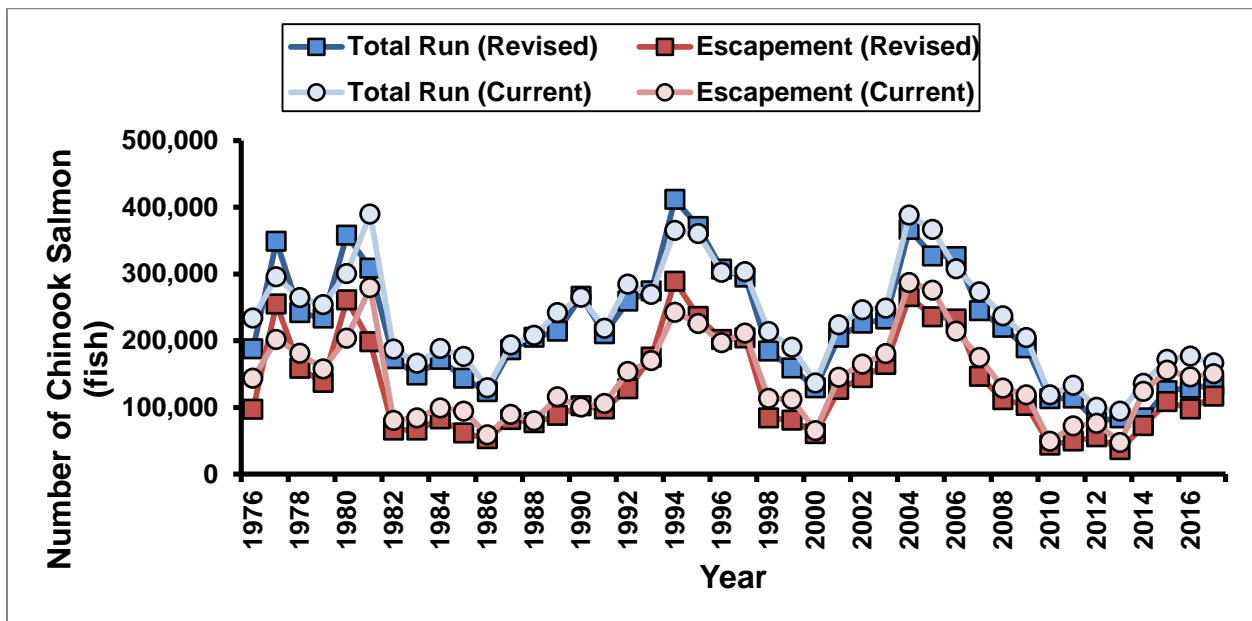


Figure 1. Comparison of Estimates for Kuskokwim River Chinook Salmon total run-sizes and escapements from 1976 to 2017. Estimates are produced from the Kuskokwim River Chinook Salmon Run-Reconstruction Model (Liller and Smith 2018) and the revised Kuskokwim River Chinook Salmon

Run-Reconstruction Model (Hamazaki et al. 2018). Blue lines indicate estimates produced by Liller and Smith 2018, while red lines indicate revised estimates produced by Hamazaki et al. (2018).

In relation to the previously published run-size estimates (Liller and Smith 2018), run-size estimates have decreased on average by 11% across the entirety of the time series, with 2014-2017 estimates being, on average, 28% lower due to the influence of the new scalar information from mark-recapture projects conducted from 2014-2017 (Hamazaki et al. 2018).

Direct estimates of total run-size for Kuskokwim River Chinook Salmon are available from 2003–2007 and 2014–2017 through extensive mark-recapture surveys performed by ADF&G. The mark-recapture projects from 2003 to 2007 and in 2014 were performed above Kalskag during above average run abundances (with the exception of 2014), while the 2015 to 2017 projects were performed in the lower Kuskokwim River just above Eek during below average run abundances. Methods for estimating escapement to unmonitored tributaries downriver of the tag site also were changed in 2015 to 2017 (Hamazaki et al. 2018). From 2003 to 2007, direct estimates ranged from 242,000 to 423,000 Chinook Salmon, while 2014–2017 estimates ranged from 78,600 to 133,200 Chinook Salmon (**Table 2**). The mark-recapture estimate for Chinook Salmon in 2017 is 133,200 (CI: 101,500 – 160,274 fish). Recent mark-recapture information (2014-2017) were included in the revised run-reconstruction model and methods for estimating escapement to unmonitored tributaries downriver of the tag site were standardized (Hamazaki et al. 2018).

**Table 2.** Mark-Recapture estimates of Chinook Salmon for years 2003-2007 and 2014-2017. Numbers inside parentheses represent lower and upper 95% confidence intervals.

<b>Year</b>	<b>Mark-Recapture Estimate</b>
<b>2003</b>	241,617 (169,871 - 313,363)
<b>2004</b>	422,657 (283,025 - 562,289)
<b>2005</b>	345,814 (254,337 - 437,291)
<b>2006</b>	396,248 (273,062 - 519,434)
<b>2007</b>	266,219 (201,637 - 330,801)
<b>2014</b>	78,600 (67,300 – 98,100)
<b>2015</b>	122,400 (112,000 - 132,600)
<b>2016</b>	127,500 (110,100 - 155,300)
<b>2017</b>	133,200 (101,500 – 160,274)

In addition to the mark-recapture abundance estimates, ADF&G in 2017 began operating a sonar and drift gillnet apportionment project near Church Slough above Bethel in order to estimate daily and total abundance of adult salmon species returning to the Kuskokwim River. Given that the sonar is located above Bethel, the total abundance reported is in terms of numbers of Chinook Salmon escaping past the Bethel fishery. In order to calculate a total abundance number, estimated Chinook Salmon harvest below Bethel would need to be added to the sonar abundance estimate. The preliminary abundance estimate for Chinook Salmon at the sonar site in 2017 was 61,500 (45,800 – 77,100 fish) (FWS 2017). As 2017 was the first year the sonar was in full operation, the initial results should be viewed cautiously until the project has accumulated enough years' worth of data. The data collected for this project is not

currently used in the run-reconstruction for Kuskokwim River Chinook Salmon; however, once enough data is accumulated and any kinks are identified and fixed, the sonar data will be pursued and analyzed as an additional data source to be used in the run-reconstruction.

### *Escapement*

The ADF&G and U.S. Fish and Wildlife Service monitor Chinook Salmon escapement throughout the Kuskokwim River drainage with a variety of weir and aerial surveys. Six weirs are utilized as data sources in the run-reconstruction model: two in the lower river (Kwethluk, Tuluksak) and four in the upper river (George, Kogruluk, Tatlawiksuk, and Takotna). The ADF&G discontinued the Takotna weir in 2014, but has since restarted the weir again in 2017. Two other weirs in the drainage are not used as data inputs in the run-reconstruction model (Salmon River of the Aniak drainage, Salmon River of the Pitka Fork drainage). In addition to the weir projects, 14 aerial index surveys are utilized as inputs into the run-reconstruction model: three in the lower river (Kwethluk, Tuluksak, and Kisaralik) and 11 in the upper river (Salmon-Aniak, Kipchuk, Aniak, Holokuk, Oskawalik, Holitna, Cheeneetnuk, Gagaryah, Pitka, Bear, and Salmon-Pitka). The drainage-wide sustainable escapement goal for Chinook Salmon is 65,000 – 120,000 fish and was established in 2013. The drainage-wide escapement goal is currently under review and will be determined during the Alaska BOF Arctic-Yukon-Kuskokwim Finfish meeting in January 2019.

Total escapement estimates of Chinook Salmon follow the same general trend as total run estimates with cyclical peaks and valleys. Average high escapement years were around 268,000 fish, while average low escapements were around 77,000 fish (**Table 1, Figure 1**). The last peak was in 2004, with an escapement of around 266,084 Chinook Salmon (**Table 1, Figure 1**). After the last peak, the escapement dropped to a record low of around 36,823 fish in 2013 (**Table 1, Figure 1**). Since the record low, escapement has steadily increased although it appears as though the rate of increased escapement is slower than escapement cycles in the past despite heavy restrictions to harvest. Since 2015, conservative fisheries management has led to escapement being held between 98,000 - 117,000 (**Table 1, Figure 1**). Before revised escapement estimates were published, conservative fisheries management targeted escapement for the upper quartile of the State's drainage-wide sustainable escapement goal range (100,000 – 120,000 Chinook Salmon), which resulted in maintaining escapement around 150,000 fish under the previously estimated run-reconstruction model (Liller and Smith 2018). Due to model revisions, the evaluation of management objectives with revised numbers is complicated without a revision to the drainage-wide sustainable escapement goal.

### Salmon Run-Timing, Composition

Given that Chinook Salmon, Chum Salmon, and Sockeye Salmon all return to the Kuskokwim River during the time period suggested by the proponent, it is important to discuss the run-timing and composition of the salmon runs as restrictions to limit the harvest of Chinook Salmon also effect the harvest of the other salmon species.

In-season run-timing heavily relies on information gathered from the Bethel Test Fishery. The Bethel Test Fishery has been operated upstream of Bethel since 1984, and provides a long term data set on

species composition, relative abundances, and run-timing. There are complications with using data from the test fishery to help in-season management both because in-river abundance during the season is confounded with run-timing, as well as the test fishery being located upstream of where much of the salmon harvest takes place. There is also a large amount of variation in historical run-timing, which complicates in-season predictions of run abundance. During in-season operations, run-timing becomes more informed as the season progresses with more data being collected from the Bethel Test Fishery.

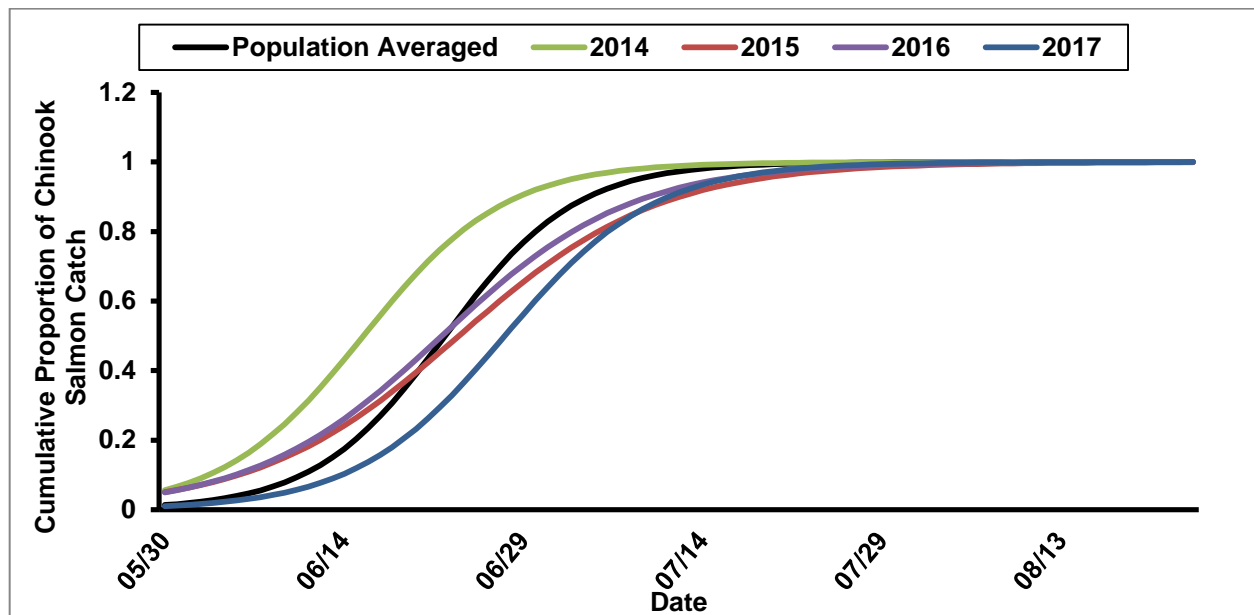
*Run-Timing*

The cumulative catch of salmon at the test fishery can best be described by a sigmoidal shaped curve (i.e., S-shaped), and can be utilized to generalize run-strength, run-timing, and species composition (**Figure 2, Figure 3**).

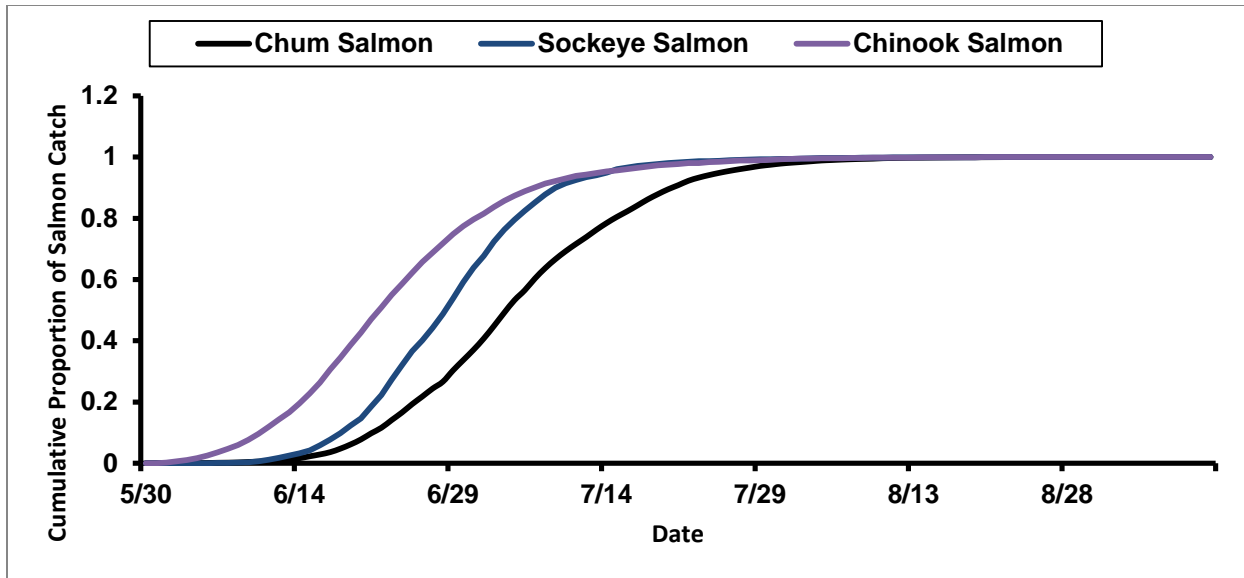
Chinook Salmon enter the Kuskokwim River beginning in late May and continue through early August. The estimated dates at which 50% of the Chinook Salmon run has passed the Bethel Test Fishery (D50) ranges from June 14 to July 2, with an average of June 22 ± 4 days (**Figure 2, Figure 3**).

Chum Salmon starting moving past the Bethel Test Fishery near the middle of June, with the earliest capture date being June 1. On average early July (July 3 – July 6) is the time at which 50% of the run has passed the Bethel Test Fishery (**Figure 3**).

Sockeye Salmon start moving past the Bethel Test Fishery in early June, with the earliest capture date at the test fishery being on June 1. On average, late June (June 27 – June 30) is the time at which 50% of the run has passed the Bethel Test Fishery (**Figure 3**).



**Figure 2.** Estimated average of the cumulative proportion of Chinook Salmon catch collected by date at the Bethel test fishery from 1984 to 2017. The most recent three years of the cumulative proportion of catch at the Bethel test fishery is also plotted for comparison purposes. Dates were estimated using non-linear version of the logistic equation.



**Figure 3.** Average of the cumulative proportion of all salmon species catch collected by date at the Bethel Test Fishery from 1984 to 2016.

Past research has shown that Chinook Salmon migrating to the upriver portions of the drainage tend to migrate earlier in this range than Chinook Salmon migrating to the middle or lower portions of the drainage (Stuby 2007, Smith and Liller 2017a, 2017b). Tagging studies performed by ADF&G in 2015 and 2016 performed near the confluence of the Johnson and Kuskokwim rivers, showed headwater Chinook Salmon comprised between 50 - 67% of the studies' catches during the end of May/beginning of June, while toward the middle/end of June the same sub-stock only comprised 5% or less of the catch. Additionally, these studies showed that the contribution of lower and middle river sub-stocks increased weekly throughout the run. In 2015, middle river tributaries made up 50 – 95% of the weekly catch between June 8 and July 24, while the lower river tributaries made up 17 – 33% of the weekly catch. In 2016, middle river stocks increased from 45% of the catch during the initial portion of the season to 70% of the catch by June 20 – June, while lower river stocks represented 5% of the total catch during the initial portion of the season to 33% by the end of the season.

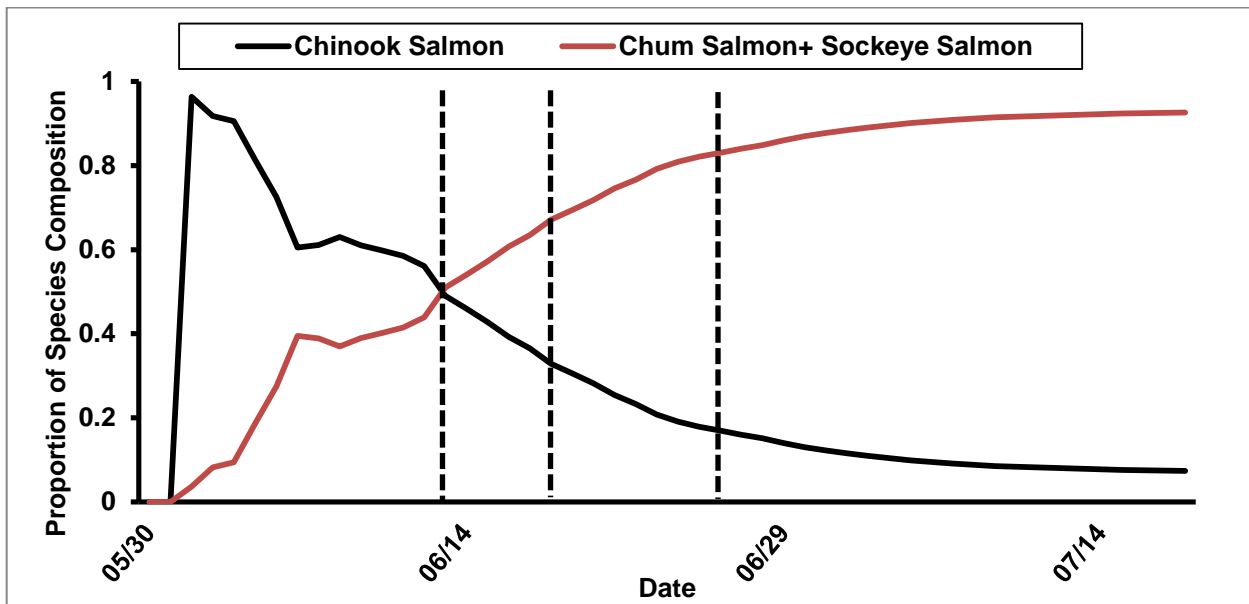
The tagging studies in 2015 and 2016 also showed that all sub-stocks display similar migration rates. Between the tagging site near the confluence of the Johnson and Kuskokwim rivers to the area near Bethel (river kilometer [rkm] 112), tagged Chinook Salmon migrated at a rate between 9 – 16 rkm/day. Chinook Salmon passing between these locations took 3 – 5 days to pass rkm 112 near Bethel. Chinook Salmon migrating pass this point proceed at a faster rate between 31 – 45 rkm/day (Smith and Liller 2017a, 2017b).

It is important to note that pulse protection has not occurred on the Kuskokwim River like what is currently seen on the Yukon River system. Pulses of Chinook Salmon have not been extensively documented in the Kuskokwim River, unlike Chinook Salmon pulses found within the Yukon River drainage. The Yukon River system is much larger than the Kuskokwim River and Chinook Salmon take much longer to traverse the length of the river. There is also a more considerable amount of

information on run-timing for Chinook Salmon across the entire Yukon River drainage than in the Kuskokwim River. Information on migration rates for the entire Kuskokwim River drainage only became recently available through telemetry studies performed in the lower Kuskokwim River from 2015 – 2017 (Smith and Liller 2017a, 2017b). Before these studies, telemetry data collected in 2002 – 2007 were collected from the middle of the Kuskokwim River drainage between Kalskag and Aniak; thus did not provide any information on run-timing information for lower river stocks. Currently, information on the progression of the Chinook Salmon run during the season are gathered through the Bethel Test Fishery and Kuskokwim River sonar projects, which are above Bethel, as well as the Aniak Test Fishery near the middle of the drainage. The sparsity of in-season data collections tools makes it difficult to establish run-timing schedules, particularly for the lower river below Bethel (given no projects collect information below Bethel). Currently, all that is known about stock specific run-timing in the Kuskokwim River is that headwater Chinook Salmon stocks are the first fish to begin migrating past Bethel in the early part of the season, while lower and middle river Chinook Salmon stocks come in later.

### Composition

Chinook Salmon are the main salmon species moving in the Kuskokwim River in the beginning of the season; however, the composition of the run transitions to Chum and Sockeye Salmon by mid-June (Figure 4). From 1984 to 2017, the average date at which the proportions of Chinook Salmon is equal to that of Chum Salmon plus Sockeye Salmon at the Bethel test fishery (1:1 ratio) is June 13 (Figure 3). The overall composition of catch by species at the Bethel test fishery is dominated by Chum and Sockeye Salmon, which on average account for 93% of the catch, while Chinook Salmon account for only 7% of the total catch (Figure 4).



**Figure 4.** Average proportion of species composition by date caught at the Bethel test fishery from 1984 to 2017. Three vertical dashed lines represent three increasing ratios of Chum and Sockeye to Chinook Salmon, which occur approximately on June 13 (1:1), June 18 (2:1), and June 26 (5:1).

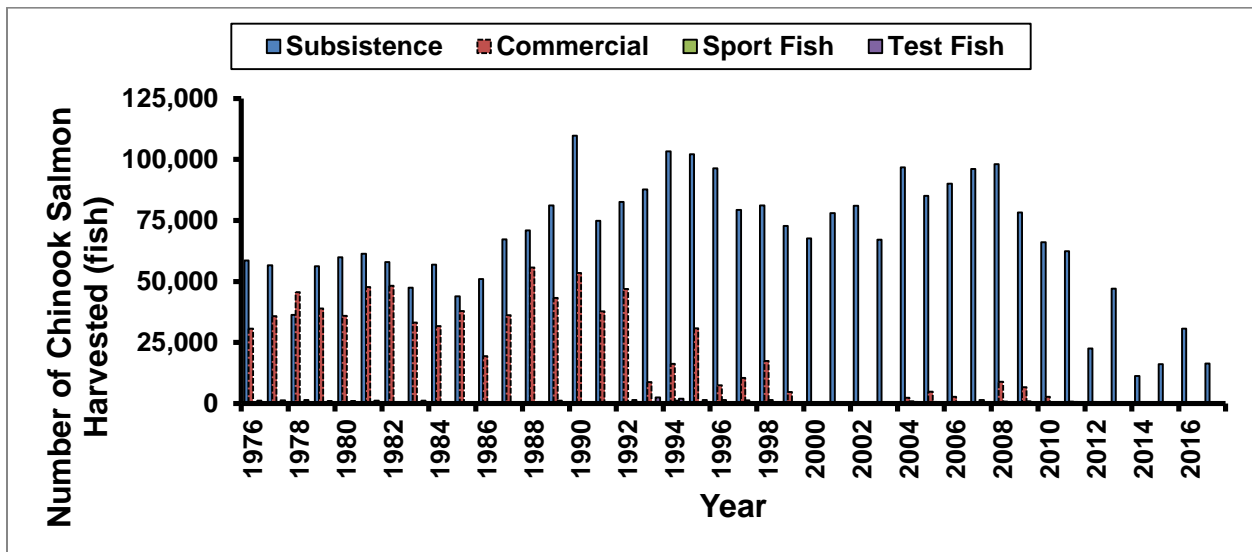
## Harvest History

### Chinook Salmon

#### Commercial

The beginnings of the commercial salmon fishery on the Kuskokwim River started in the 1800s (Oswalt 1990). The exportation of salmon commercially harvested from the Kuskokwim area has occurred since about 1935 (Pennoyer et al. 1965); however, the fishery did not mature until statehood. During the 1960s and 70s, commercial salmon fisheries in the Kuskokwim area were considered experimental and were managed using adaptive fisheries management. The directed Chinook Salmon commercial fishery was formally closed in 1987 to insure subsistence needs were met, but incidental catch in the Chum and Sockeye Salmon fisheries was still allowed (Schindler et al. 2013). Incidental harvest of Chinook Salmon in the Chum and Sockeye fisheries are limited to 50,000 fish (Hamazaki et al. 2012).

Commercial Chinook Salmon harvest in the Kuskokwim River averaged 23,000 per year during the 1960s and peaked in the 1980s with an average annual harvest of around 39,000 fish. From the 1990s to present commercial harvest of Chinook Salmon has dropped drastically from a peak of around 53,000 fish in 1990 to 0 fish in 2017. The average harvest during this period was around 9,800 Chinook Salmon (Table 1, Figure 5; Liller and Smith 2018)



**Figure 5.** Number of Chinook Salmon harvested in the Kuskokwim River from 1976 to 2017 for Subsistence, Commercial, Sport Fish, and the Bethel Test Fishery (Liller and Smith 2018).

#### Subsistence

The Kuskokwim River Chinook Salmon subsistence fishery is the largest in Alaska. Before 1990, annual harvest surveys employed various non-standard, ad hoc methods that were not always comparable between years. In 1990, a formal statistical survey protocol was established (Walker and Coffing 1993, Simon et al. 2007). Since 2009, the harvest of Chinook Salmon has been restricted



during most years. From 1990 to 2009, annual subsistence harvest averaged 73,303 fish, with a range of 67,596 fish in 2000 to 109,778 fish in 1990. Since 2009, the annual subsistence harvest has gone down, including the lowest annual harvest on record in 2014 of 11,234 fish (**Table 1, Figure 5**). The most recent five-year (2013–2017), ten-year (2008–2017), and 20-year (1998–2017) average annual subsistence harvest estimates for Chinook Salmon are: 24,305 fish, 44,883 fish, and 63,234 fish, respectively (**Table 3**, Liller and Smith 2018). The Chinook Salmon subsistence harvest for 2017 was 16,380 fish (Liller and Smith 2018). The majority of harvest occurs in the lower river, where the majority of the human population of the drainage resides (**Table 4**).

**Table 3.** Summary statistics (average, standard deviation, minimum, first quartile, median, third quartile, and maximum) of Chinook Salmon subsistence harvest on the Kuskokwim River by time periods (overall, five year, ten years, twenty years) in comparison to ANS range set by the Alaska Board of Fisheries in 2013.

<b>Chinook Salmon Harvest in Kuskokwim River Subsistence Fishery</b>							
<b>Time Period</b>	<b>Average</b>	<b>SD</b>	<b>Min</b>	<b>1st Quartile (25%)</b>	<b>Median (50%)</b>	<b>3rd Quartile (75%)</b>	<b>Max</b>
<b>Overall (1976-2017)</b>	68,052	23,319	11,234	56,432	67,620	83,872	109,778
<b>Five Year (2013-2017)</b>	24,305	14,675	11,234	13,679	16,380	38,895	47,113
<b>10 Year (2008-2017)</b>	44,883	30,141	11,234	16,316	38,895	69,100	98,103
<b>20 Year Average (1998-2017)</b>	63,234	28,959	11,234	34,785	70,198	84,121	98,103
<b>ANS (set in 2013)</b>	88,500	-	67,228	-	-	-	109,778

**Table 4.** The number of people living at the 40 communities in the customary and traditional use determination for salmon in the Kuskokwim River drainage, 1960-2010, based on U.S. Bureau of the Census estimates (ADCCED 2014).

Community	1960	1970	1980	1990	2000	2010	2010 number of households
<b>South Kuskokwim Bay and Coast</b>							
Platinum	43	55	55	64	41	61	19
Goodnews Bay	154		168	241	230	243	76
Quinhagak	228	340	412	501	555	669	165
Newtok	129	114	131	207	321	354	70
Tununak	183	274	298	316	325	327	84
Toksook Bay		257	333	420	532	590	125
Nightmute	237	127	119	153	208	280	59
Mekoryuk	242	249	160	177	210	191	70
Chefornak	133	146	230	320	394	418	92
Kipnuk	221	325	371	470	644	639	153
Kwigillingok	344	148	354	278	338	321	82
Kongiganek		190	239	294	359	439	94
<b>Subtotal</b>	<b>1,914</b>	<b>2,225</b>	<b>2,870</b>	<b>3,441</b>	<b>4,157</b>	<b>4,532</b>	<b>1,089</b>
<b>Lower Kuskokwim River Drainage</b>							
Tuntutuliak	144	158	216	300	370	408	96
Eek	200	186	228	254	280	296	91
Napakiak	190		262	318	353	354	96
Napaskiak	154	259	244	328	390	405	94
Oscarville	51	41	56	57	61	70	15
Kasigluk	244		342	425	543	569	113
Nunapitchuk	327	526	299	378	466	496	124
Atmauthluak			219	258	294	277	63
Bethel	1,258	2,416	3,576	4,674	5,471	6,080	1,896
Kwethluk	325	408	454	558	713	721	192
Akiachak	229	312	438	481	585	627	183
Akiak	187	171	198	285	309	346	90
Tuluksak	137	195	236	358	428	373	92
<b>Subtotal</b>	<b>3,446</b>	<b>4,672</b>	<b>6,768</b>	<b>8,674</b>	<b>10,263</b>	<b>11,022</b>	<b>3,145</b>
<b>Central Kuskokwim River Drainage</b>							
Lower Kalskag	122	183	246	291	267	282	75
Kalskag	147	122	129	172	230	210	60
Aniak	308	205	341	540	572	501	166
Chuathbaluk		94	105	97	119	118	36
<b>Subtotal</b>	<b>577</b>	<b>604</b>	<b>821</b>	<b>1,100</b>	<b>1,188</b>	<b>1111</b>	<b>337</b>
<b>Upper Kuskokwim River Drainage</b>							
Napaimute							
Crooked Creek	92	59	108	106	137	105	38
Georgetown							
Red Devil	152	81	39	53	48	23	12
Sleetmute	122	109	107	106	100	86	36
Stony River	75	74	62	51	61	54	20
Lime Village	32	25	48	42	46	29	11
<b>Subtotal</b>	<b>438</b>	<b>274</b>	<b>350</b>	<b>345</b>	<b>381</b>	<b>295</b>	<b>119</b>
<b>Headwaters</b>							
Takotna	40	0	48	38	50	52	41
McGrath	241	279	355	528	401	346	147
Telida							
Nikolai	85	112	91	109	100	94	37
<b>Subtotal</b>	<b>401</b>	<b>465</b>	<b>508</b>	<b>688</b>	<b>562</b>	<b>494</b>	<b>204</b>
<b>TOTAL</b>	<b>6,776</b>	<b>8,240</b>	<b>11,317</b>	<b>14,248</b>	<b>16,551</b>	<b>17,454</b>	<b>4,894</b>

Black cell=no information available.

## Chum Salmon

### *Commercial*

Kuskokwim Fishery Management Area Chum Salmon commercial harvests increased from the 1960s to the 1970s, and subsequently peaked in the 1980s when about 560,000 fish were caught annually. The decadal annual commercial harvests of Chum Salmon average about 330,000 fish in the 1990s, and since the early 2000s have averaged about 60,000 fish. The Chum Salmon commercial fishery dropped off during the early 2000s due to little processor interest coupled with very low prices (Clark et al. 2006). This was followed by a period of increased commercial harvest from 2009 to 2013, then a substantial decrease following the record low Chinook Salmon abundances in 2013. From 2005 to 2014, the average Chum Salmon harvest in the Kuskokwim area was 131,816 fish, with the most recent harvest in 2015 being 21,068 fish (ADF&G 2017). In 2015, there were no directed Chum Salmon commercial opportunities in the Kuskokwim River, with only 507 Chum Salmon estimated to be harvested in the commercial fishery incidental to fishing for Coho Salmon (ADF&G 2017). In 2016, salmon commercial fishing was allowed on July 29 and August 12; however, no commercial salmon processors were available in the area and the opportunity was for catcher/sellers only (ADF&G 2016a and 2016b).

### *Subsistence*

From 1990 to 2015, the subsistence harvest of Kuskokwim River Chum Salmon has averaged 68,736 fish, with a range of 37,770 in 1997 to 100,786 fish in 1996 (Shelden et al. 2016). The recent five-year average (2010–2014) subsistence harvest was 60,212 fish. In 2015, the estimated subsistence harvest was 40,872 fish. Kuskokwim River Chum Salmon subsistence harvest by village and sections of the Kuskokwim River can be found in **Table 5**.

## Sockeye Salmon

### *Commercial*

Inriver commercial harvest of Sockeye Salmon has likely been occurring since the early 1900s (Pennoyer et al. 1965). Commercial harvest of Sockeye Salmon was considered incidental to Chum Salmon commercial harvest in the Kuskokwim River from 1987 to 2003; however, in 2004, a guideline incidental harvest level of 0–50,000 Sockeye Salmon was established. District 4 and 5 commercial fisheries, in Kuskokwim Bay, target Sockeye Salmon (ADF&G 2017). Commercial harvest of Sockeye Salmon from the Kuskokwim area increased from the 1960s through the 1990s with decadal annual averages increased from 5,000 fish in the 1960s to 15,000 fish in the 1970s to 110,000 fish in the 1980s to 160,000 in the 1990s. Annual commercial harvest of Sockeye Salmon since 2000 has average about 70,000 fish (Clark et al. 2006). From 2005 to 2014, the average Sockeye Salmon harvest in the Kuskokwim area was 120,940 fish, with the most recent harvest in 2015 being 56,260 fish (ADF&G 2017). In 2015, limited commercial harvest opportunity was provided by ADF&G, due to overlapping run-timing with Chinook and Chum Salmon and the need to conserve those species. Only 130 Sockeye Salmon were harvested in the Kuskokwim River commercial fishery in 2015 (ADF&G 2017). In 2016, salmon commercial fishing was allowed on July 29 and August 12; however, no commercial salmon

processors were available in the area and the opportunity was for catcher/sellers only (ADF&G 2016a and 2016b).

**Table 5.** Chum Salmon harvest in the Kuskokwim River by village from 2005 – 2015 (Shelden et al. 2016).

CHUM SALMON													
KUSKOKWIM RIVER DRAINAGE													
Community	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2010-2014 average	2005-2014 average
Kongiganak <sup>a</sup>	1,960	2,420	<b>2,353</b>	1,755	1,420	2,522	2,809	<b>1,638</b>	<b>1,397</b>	<b>1,915</b>	-	2,056	2,019
Bay	1,960	2,420	2,353	1,755	1,420	2,522	2,809	1,638	1,397	1,915	0	2,056	2,019
Tuntutuliak	3,568	4,024	3,350	<b>3,375</b>	3,330	2,439	1,865	2,614	2,180	<b>2,967</b>	2,143	2,413	2,971
Eek	<b>877</b>	<b>1,075</b>	<b>783</b>	<b>788</b>	782	721	486	1,552	1,232	1,182	1,023	1,035	948
Kasigluk	<b>4,194</b>	<b>5,461</b>	<b>4,309</b>	<b>1,502</b>	1,857	2,338	2,029	3,261	2,197	3,612	2,080	2,687	3,076
Nunapitchuk	4,167	5,150	<b>6,619</b>	<b>4,705</b>	3,468	3,223	4,257	5,312	2,977	5,213	3,631	4,196	4,509
Atmautluak	1,940	<b>2,337</b>	2,193	<b>2,177</b>	1,665	1,386	1,864	2,701	2,409	3,327	2,165	2,337	2,200
Napakiak	3,238	8,143	3,628	1,313	1,638	1,759	1,546	1,711	1,185	2,392	1,508	1,719	2,655
Napaskiak	2,205	4,323	3,032	2,400	1,451	3,110	1,783	3,216	2,589	3,171	2,173	2,774	2,728
Oscarville	686	1,151	932	847	534	352	402	599	490	599	350	488	659
Bethelb	14,273	20,953	16,540	15,853	10,055	9,575	15,324	26,872	12,506	18,017	10,958	16,459	15,997
Kwethluk	4,328	6,328	6,291	5,729	4,111	3,112	3,484	3,849	3,825	4,318	2,230	3,718	4,538
Akiachak	2,428	4,333	4,782	6,856	2,872	2,856	3,205	4,150	3,417	4,744	2,085	3,674	3,964
Akiak	3,528	3,095	4,141	3,522	1,350	1,163	2,421	<b>2,925</b>	2,212	2,982	2,348	2,341	2,734
Tuluksak	2,183	3,094	<b>3,202</b>	2,920	1,570	3,180	2,697	2,585	3,062	2,274	1,747	2,760	2,677
Lower Kuskokwim	47,615	69,466	59,803	51,988	34,683	35,214	41,363	61,347	40,281	54,798	34,441	46,601	49,656
Lower Kalskag	997	4,703	1,997	1,004	930	691	1,643	3,284	1,214	1,458	1,233	1,658	1,792
Upper Kalskag	1,201	2,469	294	2,432	329	391	1,599	1,930	1,534	1,038	642	1,298	1,322
Aniak	2,952	3,722	4,108	2,830	2,602	2,515	2,391	5,667	2,880	4,695	1,395	3,630	3,436
Chuathbaluk	530	1,451	<b>1,541</b>	593	937	535	686	796	935	805	342	751	881
Kuskokwim	5,680	12,345	7,940	6,859	4,798	4,132	6,319	11,677	6,563	7,996	3,612	7,337	7,431
Crooked Creek	1,064	1,513	<b>813</b>	352	519	539	862	610	<b>1,803</b>	391	383	841	847
Red Devil	214	41	186	188	244	122	434	516	981	284	48	467	321
Sleetmute	422	1,475	818	373	367	524	689	1,004	542	633	337	678	685
Stony River	<b>324</b>	<b>790</b>	<b>540</b>	1,247	771	338	516	<b>491</b>	<b>27</b>	<b>89</b>	44	292	513
Lime Village <sup>a</sup>	<b>573</b>	<b>316</b>	<b>419</b>	<b>297</b>	<b>405</b>	<b>314</b>	<b>499</b>	419	909	295	-	487	445
McGrath	<b>470</b>	999	464	676	825	944	476	885	598	642	7	709	698
Takotna	4	0	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	0	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	2	2
Nikolai	230	308	223	54	292	440	349	1,044	513	1,356	2,000	740	481
Telida <sup>a</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Kuskokwim	3,301	5,442	3,464	3,187	3,423	3,221	3,825	4,970	5,386	3,690	2,819	4,218	3,991
<b>River<sup>b</sup></b>	<b>58,555</b>	<b>89,674</b>	<b>73,560</b>	<b>63,789</b>	<b>44,324</b>	<b>45,089</b>	<b>54,316</b>	<b>79,631</b>	<b>53,627</b>	<b>68,398</b>	<b>40,872</b>	<b>60,212</b>	<b>63,096</b>

Source: Shelden, Hamazaki, Horne-Brine, and Roczicka 2016.

Note: Dashes indicate harvest was not estimated; bold indicates Bayesian estimates.

<sup>a</sup> Villages not surveyed in 2015. Harvest was not estimated due to lack of recent data.

<sup>b</sup> Kuskokwim River Total includes the Lower, Middle, Upper Kuskokwim areas and North Kuskokwim Bay.

### Subsistence

From 1990 to 2015, the subsistence harvest of Kuskokwim River Sockeye Salmon has averaged 42,387 fish, with a range of 31,290 in 1995 to 52,213 fish in 2008 (Shelden et al. 2016). The recent five-year average (2010–2014) subsistence harvest was 43,426 fish. In 2015, the estimated subsistence harvest was 36,781 fish. Kuskokwim River Sockeye Salmon subsistence harvest by village and sections of the Kuskokwim River can be found in **Table 6**.

**Table 6.** Sockeye Salmon harvest in the Kuskokwim River by village from 2005 – 2015 (Shelden et al. 2016).

SOCKEYE SALMON													
KUSKOKWIM RIVER DRAINAGE													
Community	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2010-2014 average	2005-2014 average
Kongiganak <sup>a</sup>	1,103	1,464	<b>960</b>	1,502	1,018	1,869	1,266	<b>1,307</b>	<b>1,031</b>	<b>1,230</b>	-	1,341	1,294
Bay	1,103	1,464	960	1,502	1,018	1,869	1,266	1,307	1,031	1,230	0	1,341	1,294
Tuntutuliak	2,145	1,834	1,763	<b>2,120</b>	932	2,068	1,274	1,516	1,183	<b>1,774</b>	1,999	1,563	1,607
Eek	1,033	<b>684</b>	<b>558</b>	<b>834</b>	1,019	1,241	664	1,490	1,319	1,450	1,111	1,233	1,029
Kasigluk	<b>1,634</b>	<b>2,248</b>	<b>1,786</b>	<b>1,041</b>	1,215	1,441	1,269	1,451	1,470	1,990	1,442	1,524	1,546
Nunapitchuk	1,821	1,871	2,147	<b>2,549</b>	1,538	1,902	2,223	2,396	1,806	2,059	2,851	2,077	2,055
Atmautluak	1,444	<b>1,012</b>	1,041	<b>1,250</b>	624	731	827	1,623	1,316	1,531	1,173	1,206	1,106
Napakiak	2,122	1,845	1,962	1,244	917	1,183	1,351	1,141	1,105	1,573	1,179	1,271	1,369
Napaskiak	1,344	1,784	1,738	2,620	1,579	1,979	1,587	2,065	2,069	2,514	2,022	2,043	1,993
Oscarville	278	778	712	677	332	250	228	323	347	679	282	365	481
Bethelb	14,297	12,816	13,902	15,247	11,272	11,103	16,946	18,282	12,616	14,828	11,951	14,755	14,112
Kwethluk	2,457	2,770	3,536	4,920	2,432	2,534	2,357	2,884	2,705	5,921	1,955	3,280	3,340
Akiachak	2,372	2,661	3,269	4,354	2,407	2,433	2,647	3,443	2,594	3,047	2,551	2,833	2,984
Akiak	1,920	2,000	3,695	2,881	1,290	1,161	2,576	<b>1,818</b>	1,731	2,418	1,855	1,941	2,174
Tuluksak	987	2,247	<b>1,845</b>	2,133	1,691	2,483	1,699	1,380	1,541	622	1,037	1,545	1,738
Lower Kuskokwim	33,854	34,550	37,955	41,869	27,248	30,509	35,648	39,812	31,802	40,406	31,408	35,635	35,533
Lower Kalskag	439	1,434	780	1,583	1,044	507	802	891	977	1,040	487	843	1,006
Upper Kalskag	945	563	417	1,000	369	460	938	770	662	839	718	734	669
Aniak	1,015	692	1,261	1,585	923	1,165	1,168	1,375	1,466	1,578	2,407	1,350	1,246
Chuathbaluk	369	508	<b>484</b>	363	564	403	300	297	480	481	382	392	431
Kuskokwim	2,768	3,197	2,942	4,531	2,900	2,535	3,208	3,333	3,585	3,938	3,994	3,320	3,352
Crooked Creek	693	544	<b>523</b>	220	329	302	243	234	<b>514</b>	391	303	337	367
Red Devil	272	510	318	359	477	475	502	511	270	151	88	382	397
Sleetmute	673	1,181	1,303	1,164	684	1,024	693	715	362	541	497	667	852
Stony River	<b>688</b>	<b>746</b>	<b>1,019</b>	1,476	977	372	303	<b>469</b>	447	137	91	346	661
Lime Village <sup>a</sup>	<b>1,368</b>	<b>1,216</b>	<b>1,406</b>	<b>659</b>	<b>1,080</b>	<b>932</b>	<b>739</b>	780	<b>831</b>	<b>888</b>	-	834	948
McGrath	<b>454</b>	149	375	417	965	650	630	233	538	451	0	500	490
Takotna	<b>1</b>	0	<b>1</b>	<b>3</b>	<b>3</b>	<b>2</b>	0	<b>2</b>	<b>2</b>	<b>3</b>	0	2	2
Nikolai	10	20	14	13	66	65	13	0	0	236	400	63	47
Telida <sup>a</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Upper Kuskokwim	4,160	4,365	4,960	4,310	4,581	3,822	3,123	2,945	2,964	2,798	1,379	3,130	3,763
<b>River<sup>b</sup></b>	<b>41,885</b>	<b>43,577</b>	<b>46,817</b>	<b>52,213</b>	<b>35,747</b>	<b>38,735</b>	<b>43,245</b>	<b>47,396</b>	<b>39,382</b>	<b>48,372</b>	<b>36,781</b>	<b>43,426</b>	<b>43,943</b>

Source: Shelden, Hamazaki, Horne-Brine, and Roczicka 2016.

Note: Dashes indicate harvest was not estimated; bold indicates Bayesian estimates.

<sup>a</sup> Villages not surveyed in 2015. Harvest was not estimated due to lack of recent data.

<sup>b</sup> Kuskokwim River Total includes the Lower, Middle, Upper Kuskokwim areas and North Kuskokwim Bay.

### Effects of Windowed Closures on Subsistence Harvest

The proponent states that ADF&G’s Kuskokwim River Salmon Management Plan requires the State to close the Chinook Salmon fishery through June 11 every year, which is implemented through a closure to the use of gillnets. The proponent notes that there should be opportunity to harvest Chinook Salmon before June 11 every year, and that this opportunity be provided between rolling closures implemented sequentially up the river in a step-wise progression consistent with Chinook Salmon run timing. The proponent is seeking to establish “pulse” protection for Chinook Salmon similar to how Chinook Salmon in the Yukon River are managed.

During the years in which the closures were implemented, skepticism about the effectiveness of windows to alter the harvest timing pattern became apparent. Chinook Salmon returns began to increase to the same levels as the early 1990s. At the time, this suggested that the increase of escapement was not due to the windows, but to an increase in the Chinook Salmon run size. Additionally, reducing fishing days did not equate to a reduction in harvest because subsistence users could increase fishing efforts during the open periods and harvest the same number of fish per week as without the scheduling. In order to look into these claims, ADF&G produced a study that evaluated the effectiveness of the window scheduling on the subsistence harvest pattern in Bethel (Hamazaki 2008).

Results from Hamazaki 2008 showed that the “windowed”, or rolling closures had no effect on changing the front-loaded subsistence harvest pattern. The study stated the primary reason for the failure was that the windows were not restrictive enough to reduce subsistence fishing opportunities and harvest. Subsistence users in the study fished, on average, less than four days a week even before implementation of the scheduling, and they were able to increase harvests when they fished because of increased harvesting efforts or increased Chinook Salmon returns since 2001. The study also documented unexpected impacts of the closures on subsistence fishing. While the windows did not reduce the subsistence users fishing opportunities effectively, the closures did synchronize their fishing dates, which removed their ability to determine fishing dates based on their needs and availability of fish. This action had the unintended effects of intensifying competition for good fishing sites, as well as increasing uncertainties in harvesting sufficient numbers of fish. The study concluded, the windows failed to alter the front-load subsistence fishery harvest timing primarily because of the lack of understanding about tradition and culture of subsistence fisheries. After the closures were discontinued in 2007, the issues deriving from the front-loaded subsistence harvest timing remained: (1) the front-loaded harvest pattern causes higher exploitation of upper river stocks and (2) reduced harvest opportunities for the upper river communities. In somewhat of a prophetic statement considering current events, Hamazaki 2008 commented “Unless this harvest pattern is altered, these issues will resurface when the Chinook Salmon return declines.” This issue did return starting in 2010 with declines in the return of Chinook Salmon. The “windowed” closure system appeared once more in 2012 before the passage of the renewed Kuskokwim River Salmon Management Plan in 2013. In 2016, the Alaska Board of Fisheries passed a regulation stating the Chinook Salmon fisheries be closed through June 11 each year, which has been implemented through a complete gillnet closure with limited four inch set net opportunities. The goal of this regulation was to alter the front-loaded nature of this fishery in order to provide an equitable distribution of harvest to middle and upper river communities during times of Chinook Salmon conservation.

### **Cultural Knowledge and Traditional Practices**

Members of 40 Federally-recognized Tribes live in the Kuskokwim Fishery Management Area. The majority of people in the area are *Yup'ik* Eskimos. *Yup'ik* people self-recognize as belonging to a number of confederations of villages: *Qaluyaarmiut* on Nelson Island, *Nunivavaarmiut* on Nunivak Island, *Canineqmiut* along the coastal area from the mouth of the Kuskokwim River to Nelson Island, and *Kusquqvagmiut* in the lower and middle Kuskokwim River drainage. *Deg Hit'an* (or Ingalik), Upper Kuskokwim, and *Dena'ina* Athabascan peoples live in the villages along the middle and upper

Kuskokwim River drainage (Oswalt 1980, Fienup-Riordan 1984). The populations of Kuskokwim River region communities from 1960-2010, as provided by the U.S. Census Bureau, are included in **Table 4**.

Many forces of change have influenced people's subsistence uses of salmon. One is the increased use of motorized boats, snowmachines, and airplanes that replaced dog sleds as the primary mode of transportation. Many families no longer find it necessary to harvest wild resources in order to feed the dogs that were once owned by almost every family. In the Kuskokwim River drainage, Kuskokwim Bay, and adjacent coastal area, people fed their dogs with mainly Chum and Sockeye Salmon that were harvested later than Chinook Salmon. Dogs ate massive amounts of fish. These circumstances have changed and fewer families now own dogs, thereby greatly reducing subsistence harvests of Chum and Sockeye Salmon since the 1960s (Ikuta et al. 2013).

Most non-Natives living in the Kuskokwim Fishery Management Area reside in the regional hubs of Bethel, Aniak, and McGrath, which house Federal and State governments, transportation, trade, and services. Historically, non-Natives entered the area to mine, trade, missionize, homestead, and recreate. Some contemporary village sites were staging areas for these activities (Oswalt and VanStone 1967; Fienup-Riordan 1983, 1984; Kilbuck 1988; Oswalt 1990).

The population of the Kuskokwim Fishery Management Area almost tripled in the 50 years between 1960 and 2010 (ADCCED 2014). In 1960, the U.S. Census Bureau estimated that 6,776 people lived in the area. In 2010, an estimated 17,454 people living in 4,894 households were described as permanent residents of the villages in the Kuskokwim Fishery Management Area by the U.S. Census Bureau (**Table 4**).

Historically, in the lower and middle Kuskokwim River drainage, subsistence activities centered around fish, furbearers, and migratory birds. Moose and caribou were rarely present until recently. The fact that salmon are overwhelmingly the most important food item also influences the nature of the subsistence activities in this area (Oswalt 1959, 1990). When salmon traditionally began their ascent of the Kuskokwim River, there was no way to foretell whether the run would be strong or weak, and so from the time the run began, men fished from their boats with long gill nets for much of the afternoon and night. The yearly salmon run assured people of the availability of a predictable source of food. Usually about a week before Chinook Salmon arrived, Sheefish were caught in these nets. No fish was unutilized; in fact, the entire fish was used as food for humans or dogs. Once commercial goods became available, store-bought necessities frequently included sugar, salt, flour, milk, coffee, tea, tobacco, and cooking fats. Other foods purchased included various canned meats and fish, crackers, candy, carbonated beverages, canned fruits, potatoes, onions, and rice. The frequency with which these were consumed depended upon the cash or fur income of the family involved (Oswalt 1959).

In 2012, Ikuta et al. (2013) observed that elders in particular expressed concern about the consequences of not taking proper care of fish. Traditionally, it was said that if people keep fishing in the correct manner, there will be more fish every year. It was widely agreed upon among the people the authors talked to that if fish were wasted or disrespected, there would not be as many fish returning in the future. Fish remains were treated with great respect, so that the fish would not tell others to avoid these people.

“A traditional Yup’ik belief is that fish go away if they are not used, and taken care of” (Ikuta et al. 2013:15).

Traditionally and historically, in the Kuskokwim Area, people organized much of their lives in pursuit of wild resources in order to redistribute their surpluses during winter ceremonial seasons and during more informal sharing, such as funeral and birthday gatherings or hosting family and friends. “Status and authority accrued to the one who could afford to give” (Fienup-Riordan 1984:69). People continue to organize traditional winter ceremonies. Some are organized concurrently with American holiday celebrations or have merged with gatherings to celebrate Independence Day, Thanksgiving, Christmas, and Easter. High harvesters are also high givers, and giving to other households may be a primary motivation for high production by some households (Wolfe et al. 2007).

### The Impact of Overlapping Salmon-Run Management on Subsistence Users

Management of Chinook Salmon affects management of other species of salmon because run timing overlaps considerably (**Figure 3**). In recent years, people have been restricted from salmon fishing or using effective gear types such as large-mesh gillnets even when the majority of salmon in the river was Chum and Sockeye Salmon. For example in 2017, the drainage was closed to the harvest of Chinook Salmon from May 20 through June 11. From June 12 through July 3, only four opportunities to harvest salmon with gillnets with up to 6-inch mesh were provided: three 12-hour opportunities and one 6-hour opportunity. People could harvest Chum and Sockeye Salmon while live releasing Chinook Salmon with hook and line, dip net, fish wheels, and seines. However, these methods are not traditional and are not as efficient as the gillnets, which are traditional to the residents living in the Kuskokwim area. These methods do not allow people to harvest Chum and Sockeye Salmon in large enough numbers to fill smokehouses.

### Drying and Smoking Salmon

Hiroko Ikuta and others conducted research on subsistence salmon fisheries in 2012 (Ikuta et al. 2013). In their report, they describe how people dry and smoke salmon because it is necessary for understanding some of the impacts of early salmon fishing season closures on subsistence users that dry and smoke salmon. The closures occur early in the season, when weather is more likely to be warm and dry. The authors discuss why warm and dry weather are necessary to successfully dry and smoke salmon.

Salmon are cut into fillets and various parts of the fish (i.e., fillets, heads, bones, and roe) are processed into different final products. A portion of deboned King [Chinook] Salmon fillets are often processed into a popular product known locally as strips. These are made by slicing deboned King Salmon fillets in lengthwise strips. The strips are brined, hung to dry in covered, outdoor racks for a few days to a week, then hung in the smokehouse where wood smoke saturates the flesh with preserving compounds and they dry more completely. This method is also referred to as a cold-smoke process, so-called because drying occurs at temperatures sufficiently low to prevent cooking of the fish. Cold-smoking is a process wherein brining, drying, and smoking each contributes to the fish’s preservation. Proper drying of fish for preservation in a



cold-smoke process cannot occur at high relative humidity. Cold-smoking of strips is one of the preferred processing methods for King Salmon in many parts of the Kuskokwim River because individuals of the species tend to be very large. Large, thick fillets will often not dry thoroughly before spoiling, unless the ambient relative humidity of the fish rack is sufficiently low and the ratio of surface area to mass of the flesh is greatly increased as it is in these strips (Ikuta et al. 2013:124).

Smaller species of salmon such as Chum, Sockeye, and Coho Salmon, are often processed into a product known locally as dry fish. In this process, salmon are headed, gutted, and filleted. The fillets are cross-cut through the flesh down to the internal surface of the skin. These fillets are hung on a covered fish rack for several days until dry. The cross-cutting of the fillets increases the ratio of surface to mass of the flesh, allowing quicker and more complete air-drying. It is usually unnecessary for the processors to cut smaller fish into strips, because cross-cutting the thinner fillets sufficiently increases the surface area to mass ratio and allow for drying. Large King Salmon fillets are also processed in this fashion by some fishers when weather conditions permit it. Some fishers refer to these as slabs or blankets (Ikuta et al. 2013:124).

### Use and Sharing

Comprehensive household subsistence surveys can provide a glimpse of subsistence use within a given community, including the level of use of individual resources and local patterns of sharing for these resources. For the region represented by this proposal, comprehensive household subsistence surveys that include Chinook Salmon harvest were periodically conducted by ADF&G in several communities (**Table 7**). The Chinook Salmon harvest and use represented in **Table 7** include all gear types including commercial retention. A large percentage of households in these communities used Chinook Salmon in the study years except Takotna in which only 36% of households harvested Chinook Salmon in 2011.

Within the available data, Takotna had the lowest per capita harvest (11lb. in 2011) and Stony River had the greatest (147 lb. in 2009). As a percentage of total per capita harvest of wild resources, Chinook Salmon contributed the least in Takotna in 2011 (1%) and the most in Stony River in 2009 (nearly 28%). Sharing of salmon resources as represented by giving and receipt in **Table 10** was common for communities with available data. Sharing includes distribution within and outside of the community. No households in Takotna gave away Chinook Salmon in 2011. Takotna households reported that they chose to forgo fishing to take jobs during the local airport construction and, among those households that fished for Chinook Salmon, only half were successful (Ikuta et al. 2014).

**Table 7.** Chinook Salmon harvest, use, and sharing among communities in the Kuskokwim River drainage, based on the most recently collected ADF&G subsistence survey data (ADF&G 2018). Includes only those communities for which Chinook salmon harvest and use data is available. \*Estimated harvest is reported in number of individuals for Chinook Salmon and pounds for both All Fish and All Resources. These estimates fall within a range exhibiting varying confidence intervals and are included here for reference only.

Resource	% Households Using	Estimated Harvest*	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>South Kuskokwim Bay and Coast</b>					
<b>Quinhagak, 2013</b>					
Chinook Salmon	87	3,802	57	40	44
All Fish	97	108,422	148	61	88
All Resources	100	215,950	295	78	95
<b>Tununak, 1986</b>					
Chinook Salmon	100	411	23	46	55
All Fish	100	254,651	777	82	100
All Resources	100	358,100	1,093	97	100
<b>Lower Kuskokwim River Drainage</b>					
<b>Tuntutuliak, 2013</b>					
Chinook Salmon	82	2,511	67	45	42
All Fish	100	97,339	236	67	84
All Resources	100	149,047	361	81	99
<b>Eek, 2013</b>					
Chinook Salmon	73	784	25	38	34
All Fish	97	45,908	132	70	72
All Resources	100	84,775	244	81	95
<b>Napakiak, 2011</b>					
Chinook Salmon	77	2,552	76	30	30
All Fish	96	26,423	383	55	70
All Resources	96	36,033	489	73	86

Table 7 (Continued).

Resource	% Households Using	Estimated Harvest*	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Napaskiak, 2011</b>					
Chinook Salmon	91	4,227	83	39	45
All Fish	100	29,168	279	55	77
All Resources	100	41,197	410	80	98
<b>Oscarville, 2010</b>					
Chinook Salmon	100	1,097	164	42	25
All Fish	100	5,341	425	67	75
All Resources	100	6,712	521	75	100
<b>Nunapitchuk, 1983</b>					
Chinook Salmon	N/A	4,262	140	N/A	N/A
All Fish	N/A	298,635	653	N/A	N/A
All Resources	N/A	366,521	802	N/A	N/A
<b>Bethel, 2012</b>					
Chinook Salmon	37	7,846	13	20	33
All Fish	93	563,935	99	53	80
All Resources	97	940,426	166	70	92
<b>Kwethluk, 2010</b>					
Chinook Salmon	95	5,459	72	43	51
All Fish	98	38,715	255	58	73
All Resources	100	53,815	364	77	99
<b>Akiachak, 1998</b>					
Chinook Salmon	96	12,131	394	51	33
All Fish	99	469,321	897	78	74
All Resources	99	694,676	1328	91	91

Table 7 (Continued).

Resource	% Households Using	Estimated Harvest*	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Akiak, 2010</b>					
Chinook Salmon	57	5,229	128	44	37
All Fish	97	46,554	501	63	67
All Resources	100	58,821	616	78	95
<b>Tuluksak, 2010</b>					
Chinook Salmon	76	3,798	79	38	32
All Fish	85	25,585	260	59	68
All Resources	99	43,936	359	81	91
<b>Central Kuskokwim River Drainage</b>					
<b>Lower Kalskag, 2009</b>					
Chinook Salmon	86	2,034	64	25	49
All Fish	94	39,087	131	41	83
All Resources	97	55,793	187	57	94
<b>(Upper) Kalskag, 2009</b>					
Chinook Salmon	79	3,576	67	30	39
All Fish	92	120,187	240	48	65
All Resources	96	147,316	294	66	84
<b>Aniak, 2009</b>					
Chinook Salmon	79	3,576	67	30	39
All Fish	92	120,187	240	48	65
All Resources	96	147,316	294	66	84
<b>Chuathbaluk, 2009</b>					
Chinook Salmon	90	875	68	23	47
All Fish	97	21,909	179	40	67
All Resources	100	29,874	244	60	87

Table 7 (Continued).

Resource	% Households Using	Estimated Harvest*	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Upper Kuskokwim River Drainage</b>					
<b>Crooked Creek, 2009</b>					
Chinook Salmon	82	841	69	30	30
All Fish	94	23,058	200	49	64
All Resources	97	28,259	245	76	73
<b>Red Devil, 2009</b>					
Chinook Salmon	73	148	44	18	46
All Fish	100	8,346	262	27	82
All Resources	100	9,742	305	45	91
<b>Sleetmute, 2009</b>					
Chinook Salmon	88	1,041	109	41	38
All Fish	97	29,770	330	63	81
All Resources	100	36,547	405	81	91
<b>Stony River, 2009</b>					
Chinook Salmon	58	982	147	25	25
All Fish	100	29,033	458	83	83
All Resources	100	33,726	533	67	92
<b>Lime Village, 2007</b>					
Chinook Salmon	86	341	142	57	57
All Fish	100	4,125	606	86	71
All Resources	100	5,539	935	100	100

Table 7 (Continued).

Resource	% Households Using	Estimated Harvest*	Lbs. Harvested per Capita	% Households Giving Away	% Households Receiving
<b>Headwaters</b>					
<b>Takotna, 2011</b>					
Chinook Salmon	36	5	1	0	36
All Fish	57	276	10	36	50
All Resources	100	1,603	162	79	93
<b>McGrath, 2011</b>					
Chinook Salmon	71	1,157	31	20	54
All Fish	96	7,830	92	48	77
All Resources	99	13,859	236	77	93
<b>Nikolai, 2011</b>					
Chinook Salmon	79	1,143	92	35	58
All Fish	85	5,583	207	58	77
All Resources	100	8,218	499	85	92

## **Current Events**

Proposals FP19-08, FP19-09, and FP19-10 request the Board to adopt into regulation actions that have been previously accomplished by special actions issued to manage the harvest of Chinook Salmon in Refuge waters since 2016. Proposals FP19-08 and FP19-09 deal with the timing of gillnet restrictions and how harvest opportunity will be managed during gillnet restrictions, while FP19-10 deals with what parts of Refuge waters remain open during gillnet restrictions. All of these requests deal with specifics about timing and manner of the fishery closures and harvest opportunities, and the location of harvest opportunities during closures. These are management topics that could benefit from a more coordinated and collaborative effort to develop permanent Federal regulations related to Chinook Salmon on the Kuskokwim River. Regardless of whether or not Proposal FP17-05 is approved, the adoption of any of these proposals would require the Federal in-season manager to continue to issue emergency special actions in order to adjust for in-season management in the absence of a comprehensive plan for Federal subsistence fisheries management.

## **Other Alternatives Considered**

If adopted, Proposal FP17-05 in combination with any of the other Kuskokwim area proposals submitted during this cycle (FP19-08, FP19-09, and FP19-10) would affect Federal subsistence management for the Kuskokwim Area. A potential alternative for consideration would be to defer all of the Kuskokwim area proposals (FP17-05, FP19-08, FP19-09, and FP19-10) and direct OSM staff to facilitate the development of a collaborative Federal subsistence management plan that would outline strategies for management of Federal subsistence fisheries in the Kuskokwim Area. The approaches suggested in the current fisheries regulatory proposals for the Kuskokwim Area are valid approaches to fisheries management. However, it may be more effective to develop a full suite of permanent regulations through coordinated efforts with the parties identified in the Kuskokwim Area delegation of authority letter. This potential alternative would provide a mechanism to allow a larger group involving all entities the time to submit a comprehensive proposal or recommended plan that would become a Federal subsistence fisheries management plan for the Kuskokwim area.

## **Effects of the Proposal**

If this proposal was adopted, when restrictions to gillnets were necessary, the Federal in-season manager would be required to implement rolling closures sequentially up the Federal public waters of the Kuskokwim River drainage in a step-wise progression consistent with Chinook Salmon run-timing.

Current Federal regulations for the Kuskokwim area State that Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under ADF&G emergency orders issued, unless superseded by Federal Special Action. If adopted, this proposed regulation would supersede any State emergency orders that restrict six-inch or less gillnets in Federal public waters of the Kuskokwim River drainage between June 1 and June 25. The proposed regulation would compel the in-season manager to restrict the subsistence fisheries to only Federally qualified subsistence users if restrictions to gillnets were necessary. The Federal in-season manager would then proceed to manage subsistence fishery methods via gillnet restrictions and managing time

and area restrictions via rolling closures implemented sequentially up the Federal public waters of the Kuskokwim River drainage in a step-wise progression consistent with Chinook Salmon run-timing. Effectively, any gillnet fishing that occurred between June 1 and June 25 would have to be implemented by the Federal in-season manager via Federal special action, rather than through the State emergency order process.

Federal special actions issued by the Federal in-season manager for the Kuskokwim area or the Board could still restrict the use of gillnets before June 1 if in-season indicators suggests conservation of healthy populations concerns, continuation of subsistence uses concerns, or population viability issues. If adopted, the proposed changes would not prohibit the Federal in-season manager from using his or her emergency special action authority to restrict or liberalize the fishery as seen fit through delegated authority from the Board.

If adopted, the biological effects of the proposed changes would be highly dependent on the state of salmon populations in the Kuskokwim River, and how the Federal in-season manager opts to manage the fishery. Given pulses of Chinook Salmon have not been as clearly observed on the Kuskokwim River like they have been on the Yukon River and run-timing/migratory patterns are high uncertain, implementing pulse protection as intended by the proposed regulation may have consequences for tributary specific stocks if pulses were misidentified. The use of pulse protection or rolling closures would have effects on the harvest other salmon stocks (Sockeye and Chum Salmon) that co-migrate with Chinook Salmon during the majority of the time specified in the proposed regulation.

If adopted, the proposed regulation may have effects on traditional subsistence use patterns. As shown from study of past windowed closures (Hamazaki 2008), although the “windowed/rolling” closures did not reduce fishing harvests effectively, they did synchronize fishing dates. This had the effect of removing subsistence users’ ability to determine fishing dates based on their needs and availability of fish. If adopted, the proposed regulation may intensify competition for good fishing sites, as well as increase subsistence user uncertainties in harvesting sufficient numbers of fish. However, if adopted, the proposed changes would provide subsistence users a good idea of when restrictions to gillnets could occur (between June 1 and June 25). The proposed changes may provide additional opportunity by clarifying that the use of eight-inch or less mesh size gillnets would not be restricted, except if necessary.

If adopted, the proposed changes would provide some clarity to the in-season manager on when gillnet restrictions could take place in absence of any in-season information. Closures to non-Federally qualified subsistence users for Chinook Salmon would be situated around June 1 date because Federally qualified subsistence users would be unaffected by the State regulation that requires Chinook Salmon subsistence fishery to close before June 11 that has been implemented from 2016 via a ban to subsistence fishing with gillnets.

Lastly, if adopted, the proposed changes directing the Federal in-season manager to use rolling closures as a conservation measure if necessary to protect the Chinook Salmon returns would limit management options; however, the Federal in-season manager could always use their delegated authority to institute other actions through an emergency special action if deemed necessary and justifiable.



If the proposed changes are not adopted, Federal subsistence fishing schedules, openings, closings, and fishing methods would be the same as those issued for the subsistence taking of fish under ADF&G emergency orders issued, unless superseded by Federal Special Action. The Federal in-season manager for the Kuskokwim area would still retain emergency order authority through the delegation of authority letter authorized by the Board.

## OSM PRELIMINARY CONCLUSION

**Support** Proposal FP19-08 **with modification** to change the end date to July 15 and to remove language about implementing rolling closures consistent with Chinook Salmon run-timing.

The modified regulation should read:

**§ \_\_.27(e)(4) Kuskokwim Area**

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), or specified in the sections below, unless superseded by a Federal Special Action*

\* \* \* \*

*(xvii) From June 1 through July 15, the use of six-inch or less mesh size gillnets will only be restricted when necessary.*

## Justification

The OSM preliminary conclusion for this analysis is assuming Board action taken on FP17-05 reflects the OSM preliminary recommendation provided in that analysis, to support adoption. The OSM preliminary conclusion for this proposal is advocating support with modification as it would provide a framework for management in the event that FP17-05 were adopted.

By June 25, the proportion of the Chinook Salmon run passing Bethel ranges from 14 – 90%, with most values falling between 54 – 69%, and a median of 62%. By July 15, the proportion of the Chinook Salmon run passing Bethel ranges from 87 - 99%, with most values falling between 97 – 99%, and a median of 98%. The Chinook Salmon run around the Bethel area is essentially done by July 15, while around 40% of the run is still passing through Bethel by the June 25 date proposed in this regulation. In addition, from 2015 – 2017, the Federal in-season manager has typically rescinded any Federal special actions in the Kuskokwim area by the first week of July, and this is a time period in which local users commonly stop fishing for Chinook Salmon and move on to harvesting other more abundance salmon species such as Chum, Sockeye, and Coho salmon.

Rolling closures have been shown not to work in the Kuskokwim area. Pulse protection similar to the management scheme used in the Yukon River has not been implemented in the Kuskokwim River because information on run-timing and migration patterns is not known for the entire drainage, is highly uncertain, and pulses of Chinook Salmon are not as clearly identifiable as in the Yukon River. Combined with the relatively small area of Federal public waters in the Kuskokwim River, pulse protection would more than likely be ineffective. Placing language in regulation like what is proposed in this regulatory request would limit the Federal in-season manager from using other management tools to conserve the Chinook Salmon stocks, as well as make it difficult to determine fishing opportunities during the season given uncertainty in pulses of Chinook Salmon in the Kuskokwim River.

By removing the language about implementing rolling closures consistent with Chinook Salmon run-timing, the Federal in-season manager remains flexible to control fishing schedules, opening, closings, and methods, while still giving the Federal in-season manager a directive on time periods in which restrictions to six-inch or less mesh gillnets could be issued. Management strategies for the salmon seasons would be determined by the Federal in-season manager, in collaboration with the Kuskokwim River Inter-Tribal Fish Commission and other Federal and State management entities.

The regulations as modified would help clearly signal subsistence users what periods in which restrictions to gillnets would be likely to occur, as well as give clear indications as to who would be managing the salmon fisheries for a given year.

## ANALYSIS ADDENDUM

### OSM CONCLUSION

**Oppose** Proposal FP19-08

#### **Justification**

Rolling closures have been shown not to work in the Kuskokwim area. Pulse protection similar to the management scheme used in the Yukon River has not been implemented in the Kuskokwim River because information on run-timing and migration patterns is not known for the entire drainage, is highly uncertain, and pulses of Chinook Salmon are not as clearly identifiable as in the Yukon River. Combined with the relatively small area of Federal public waters in the Kuskokwim River, pulse protection would more than likely be ineffective. Placing language in regulation like what is proposed in this regulatory request would limit the Federal in-season manager from using other management tools to conserve the Chinook Salmon stocks, as well as make it difficult to determine fishing opportunities during the season given uncertainty in pulses of Chinook Salmon in the Kuskokwim River.

If FP19-09 is passed by the Board based on the ISC recommendation and the YKD RAC AND the pulse protection aspect of this proposal is removed, then the regulatory language in the proposal is redundant by comparison with FP19-09. Given FP19-09 states that six inch or less mesh size gillnets cannot be restricted before June 1, then logically it follows that after June 1, restrictions to six inch or less mesh size gillnets could be restricted if necessary for the conservation of Chinook Salmon or for the continuation of subsistence uses.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

**Oppose** FP19-08. The Council concurred with feedback from Kuskokwim Tribal representatives as well as the Federal and State in-season managers that the 6 inch mesh gillnets was an important tool for Chinook conservation management and the variability in the salmon run would require flexibility to manage during the June 1 – June 25 timeframe.

### Western Interior Subsistence Regional Advisory Council

**Oppose** FP19-08. The Council strongly supports management's current authority, and this proposal would eliminate the State's authority to manage the Chinook runs on the Kuskokwim River. The Council concurred with the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council that the 6" gillnet is an important tool for Chinook Salmon conservation and management flexibility. The Council also agreed with the position of Fish and Wildlife Service (FWS) that gillnets are only used when necessary and implemented through the Delegation of Authority. The FWS also noted that it was difficult to identify pulses on the Kuskokwim River. The Council concluded that this proposal was counterproductive to resource protection and the need to rebuild the Chinook Salmon stock on the river.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Introduction:** Since 2010, the Kuskokwim River has experienced poor Chinook salmon runs. Total run estimates for Kuskokwim River Chinook salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved. In 2014 and 2015, the subsistence fishery was closed at the beginning of the Chinook salmon run by Emergency Order in anticipation of low runs. Specific management actions were taken to close the subsistence and sport Chinook salmon fisheries with the intent of reducing Chinook salmon harvest to a level that would allow for achievement of escapement goals. Due to these management actions, the drainagewide escapement goal has been met since 2014 and the majority of tributary escapement goals were achieved in recent years. Additionally, USFWS enacted special actions to limit the harvest of Chinook salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the Alaska Board of Fisheries in 2013 found the following amount of Chinook salmon is reasonably necessary for subsistence uses, range 67,200–109,800 fish. The subsistence harvest

of Chinook salmon has fallen below the lower end of this range since 2011 in an effort to achieve escapement goals.

The Kuskokwim Subsistence Salmon Panel was established at the Alaska Board of Fisheries (BOF) work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel was composed of Board of Fisheries members as well as a broad cross-section of Kuskokwim River residents with longstanding traditional ecological knowledge. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the BOF. Subsequently, in January 2016, the BOF met in Fairbanks to consider proposals concerning the Arctic-Yukon-Kuskokwim areas. An early season Chinook salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group of Kuskokwim River residents who were in attendance. The BOF passed language that would annually suspend directed subsistence fishing for Chinook salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equability of harvest opportunity. This “front end closure” also conserves fish for escapement purposes. In 2017, the BOF provided the department additional guidance about fishing for nonsalmon fish during the closure and provided at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the closure. The board’s intent was to allow subsistence fishers the opportunity to harvest species other than salmon (e.g., sheefish, whitefish, burbot, and northern pike) during the regulatory front-end closure.

Since the introduction of the front-end closure in 2016, the Chinook salmon subsistence fishery has been closed beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species, at a time when there were little to no salmon present that early in the season. After the June 11 end date of the early season closure, the fishery is was managed by emergency order authority (waters upstream of Aniak) and Federal Special Actions (waters downstream of Aniak), with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) and based on inseason run indicators.

**Impact on Subsistence Users:** If this proposal were adopted, people fishing in the lower river would have some additional opportunity. There is potential for fish headed to the upper river to be harvested down river. In 2016 and 2017, for example, subsistence users would have had 12 days of additional opportunity. In 2018, subsistence users would have had 7 days of additional opportunity. Additional harvest of Chinook salmon in the lower river may impact abundance in the upper river. If restrictions are determined to be necessary, then all users would experience rolling closures or net restrictions from June 1–25.

**Impact on Other Users:** If adopted, this would not have a significant impact on other users.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for all finfish in the Kuskokwim Area.



Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has made the following salmon ANS findings for the Kuskokwim River drainage:

67,200–109,800 king salmon

41,200–116,400 chum salmon

32,200–58,700 sockeye salmon

27,400–57,600 coho salmon

500–2,000 pink salmon

**5 AAC 01.270. Lawful gear and gear specifications and operation.**

(n) Notwithstanding (b) and (j) of this section, during times when the commissioner determines that it is necessary for the conservation of king salmon, the commissioner, by emergency order, may close the fishing season in any portion of the Kuskokwim Area and immediately reopen the season in that portion during which one or more of the following gear limitations may be implemented:

(1) for gillnets;

(A) a gillnet mesh size may not exceed six inches;

(B) a gillnet mesh size may not exceed four inches and the gillnet may only be operated as a set gillnet; no part of a set gillnet may be more than 100 feet from the ordinary high water mark;

(C) a gillnet may not exceed the length specified by the commissioner in the emergency order, except that a longer gillnet may be used if no more than the specified length of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;

**5 AAC 07.365. Kuskokwim River Salmon Management Plan**

(a) The purpose of this management plan is to provide guidelines for management of the Kuskokwim River salmon fisheries that result in the sustained yield of salmon stocks large enough to meet escapement goals, amounts reasonably necessary for subsistence uses, and for nonsubsistence fisheries. The department shall use the best available data, including preseason and inseason run projections, test fishing indices, age and sex composition, harvest reports, passage escapement estimates, and recognized uncertainty, to assess run abundance for the purpose of implementing this plan.

(b) It is the intent of the Board of Fisheries that the Kuskokwim River salmon stocks shall be managed in a conservative manner consistent with the Policy for the Management of Sustainable Salmon Fisheries under 5 AAC 39.222 to meet escapement goals and the subsistence priority.

(c) In the king salmon fishery,

(1) when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries;

(2) when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, to the extent practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs;

(B) after June 11, fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(2)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark;

(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range,

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, the directed subsistence king salmon fishery will be open seven days per week; and

(B) after June 11, the commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(3)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high-water mark;

**Conservation Issues:** Since 2011 the Kuskokwim River has experienced poor Chinook salmon runs. This proposal may lead to additional harvest of Chinook salmon.

**Enforcement Issues:** ADF&G does not see any enforcement issues if this proposal were to be adopted.

**Recommendation:** ADF&G **OPPOSES** the effects of this proposal that contradict current state management plan regulations. Clear guidance would be needed about when the restrictions would be necessary to be in place, to avoid creating confusion among managers and resource users. The Alaska Board of Fisheries adopted regulations to institute the front-end closure in response to concerns from Kuskokwim River subsistence resource users about inequitable Chinook salmon harvest throughout the drainage. As a result, ADF&G currently does not have the authority to open a Chinook salmon subsistence fishery during the front-end closure. During times of conservation, early season fishing closures are necessary to distribute fish throughout the drainage and allow managers time to assess the Chinook salmon run prior to providing directed harvest opportunity. With the implementation of the front-end closure, that concludes June 12 each year, the department believes that it already has the necessary tools to manage the subsistence Chinook salmon fishery to achieve escapement goals and maximize subsistence fishing opportunity.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 110, 113, 114, 115, 116, and 117 are relevant to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

**APPENDIX 1**

**FEDERAL SPECIAL ACTIONS AND STATE EMERGENCY ORDERS 2014–2017**

**SALMON MANAGEMENT IN 2014****Appendix Table 1-1.** Federal special actions, Kuskokwim River drainage, 2014.

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-14	May 20–July 18, 2014	Federal public waters of the Kuskokwim drainage are closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-02-14	May 20–July 14, 2014	Mouth upriver to Tuluksak is closed to the harvest of Chinook salmon by all users.
SA 3-KS-03-14	May 27–July 18, 2014	Tuluksak upriver to Refuge boundary at Aniak is closed to the harvest of Chinook salmon by all users
SA 3-KS-04-14	June 11–June 30, 2014	Federal public waters of the Kuskokwim drainage are closed to the harvest of Chinook salmon except by residents of communities issued Social and Cultural Permits fishing with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep.
SA 3-KS-05-14 (see EO 3-S-WR-07-14)	June 20, 2014	Mouth upriver to Tuluksak is closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek fishing with gillnets 6-inches or less mesh size not exceeding 50-fathoms long and 45-meshes deep, for 4 hours.
SA 3-KS-06-14	June 20–July 14, 2014	Below the southern tip of Eek Island is closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek fishing with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep.
SA 3-KS-07-14	June 24–July 14, 2014	For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060). Two Special Actions remain in effect, 3-KS-01-14 and 3-KS-04-14, unless superseded by a Federal Special Action.

**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014.

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
Board of Fisheries (3/17/14)	Emergency regulation that was adopted into permanent regulations	Dip nets are legal gear for harvesting salmon other than Chinook salmon during times of Chinook salmon conservation. A dip net is a bag-shaped net supported on all sides by a rigid frame; the maximum distance between any two points on the net frame may not exceed 5 feet; the bag of the frame must be at least one-half the distance of the maximum frame opening; the webbing of the net may not exceed 4.5-inches stretch mesh.
Board of Fisheries (3/17/14)	Emergency regulation that was adopted into permanent regulations	Only gillnets less than 25 fathoms are legal gear during times of Chinook salmon conservation. Gillnets may be over 25-fathoms in total length, but must be tied and/or bagged in such a way that only 25-fathoms can be used to fish.
EO 3-KS-01-14 Sport fishing	May 1, 2014	All waters of the Kuskokwim–Goodnews Area are closed to sport fishing for Chinook salmon. Only one unbaited, single-hook, artificial lure may be used. All Chinook salmon caught unintentionally in the Kuskokwim-Goodnews Area while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-WR-01-14	June 1, 2014	Aniak River upriver to Holitna River, fishing for Chinook salmon is closed. Fishing for non-salmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep.
	June 4, 2014	Holitna River upriver to headwaters, fishing for Chinook salmon is closed. Fishing for non-salmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep.
EO 3-S-WR-02-14	June 1, 2014	Marine waters near the Kuskokwim River mouth (Ishkowiik River to the northern boundary of District W-4 at Weelung Creek) are closed to salmon fishing.
EO 3-S-WR-03-14	June 3, 2014	Naskonat Peninsula to Ishkowiik River (coastal waters including Nelson Island), fishing for salmon is restricted to gillnets with 6-inch or less mesh size.
	June 10, 2014	Aniak River upriver to Holitna River, fishing for Chinook salmon with a hook and line attached to a rod or pole is closed.

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**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING		
State Emergency Orders	Effective Date	Action
EO 3-S-WR-05-14	June 14–30, 2014	Mouth to Tuluksak, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any king salmon caught in a dip net must be returned immediately to the water unharmed.
	June 17–30, 2014	Tuluksak to Refuge boundary at Aniak, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any king salmon caught in a dip net must be returned immediately to the water unharmed. This section does not include the slough (locally known as Utak Slough) on the northwest side of the Kuskokwim River adjacent to the Tuluksak River mouth.
EO 3-S-WR-06-14	June 19, 2014 until further notice	Aniak River to headwaters, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any Chinook salmon caught in a dip net must be returned immediately to the water unharmed.
	June 19, 2014 until further notice	Aniak River to headwaters, fishing with fish wheels will be allowed. Fish wheels are required to have a live box with no less than 45 cubic feet of water, must be checked at least every 6 hours, and all Chinook salmon must be returned to the water alive.
EO 3-S-WR-07-14 (see SA 3KS-05-14 and 3-KS-06-14)	June 20, 2014	Johnson River downriver to southern tip of Eek Island, fishing for chum and sockeye salmon is allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, for 4 hours.
	June 20, 2014	Marine waters near the Kuskokwim River mouth (Ishkowik River to the northern boundary of District W-4 at Weelung Creek), fishing for chum and sockeye salmon is allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, until further notice.
EO 3-S-WR-08-14	June 24, 2014 until further notice	Johnson River downriver to southern tip of Eek Island, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, until further notice from 8:00 a.m. until 4:00 p.m.
	June 24, 2014	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 25-fathoms long and 45-meshes deep from 10:00 a.m. until 2:00 p.m. (4 hours). This section includes the slough (locally known as Utak Slough) on the northwest side of the Kuskokwim River adjacent to the Tuluksak River mouth.

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**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-09-14	June 24, 2014 until further notice	<i>Aniak River downriver to southern tip of Eek Island, fishing will remain open to gillnets with 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep. Fishing for Chinook salmon with a hook and line attached to a rod or pole will remain closed until further notice [already closed].</i>
EO 3-S-WR-10-14	June 27, 2014 until further notice	Johnson River to southern tip of Eek Island, fishing for chum and sockeye salmon will be allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long.
	June 27, 2014	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh not exceeding 50-fathom long from 10:00 a.m. until 6:00 p.m. (8 hours).
	June 27, 2014	Tuluksak upriver to Chuathbaluk, fishing for chum and sockeye salmon will be allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long from 10:00 a.m. until 6:00 p.m. (8 hours).
EO 3-S-WR-11-14	June 30, 2014 until further notice.	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	June 30, 2014 until further notice.	Tuluksak upriver to Chuathbaluk, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	June 30, 2014	Chuathbaluk upriver to Holitna River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long from 10:00 a.m. to 6:00 p.m.
EO 3-S-WR-12-14	June 30–July 12, 2014	Mouth upriver to Chuathbaluk, fishing with dip nets will be allowed, 24 hours per day, from 9:00 p.m. Monday, until 9:00 p.m. Saturday. Any king salmon caught in a dip net must be returned immediately to the water unharmed.
EO 3-S-WR-13-14	July 1, 2014 until further notice	Naskonat Peninsula to Ishkowik River (coastal waters including Nelson Island), fishing with gillnets with unrestricted mesh size will be allowed.

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**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-14-14	July 3, 2014 until further notice	Chuathbaluk upriver to Holitna River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	July 3, 2014 until further notice	Holitna River upriver to headwaters, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	July 3, 2014 until further notice	Chinook salmon fishing with hook and line gear with a daily bag limit of 3 and no possession, season, or size limits will be allowed.

**SALMON MANAGEMENT IN 2015**

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015.

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE–SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-15	May 21–July 20, 2015	All waters within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-02-15	May 21–28, 2015	The mouth of the Kuskokwim River upriver to Tuluksak and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> by all users.  Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, and Tuluksak rivers and their salmon tributaries.  Gillnets must be set and are restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, only 72 hours/week, 6:00 am Thur.–6:00 am Sunday.
SA 3-KS-03-15	May 28–July 20, 2015	The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> by all users ( <b>Appendix Figure C-1</b> ).
SA 3-KS-04-15	June 7–July 20, 2015	Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers and their salmon tributaries within and adjacent to the boundaries of the Refuge are closed to the use of <b>gillnets</b> by all users ( <b>Appendix Figure C-2</b> ).  Nonsalmon tributaries are Birch Creek, Akulikutak River, Columbia Creek, and Reindeer Slough 100-yards upstream from their confluences with salmon tributaries.
SA 3-KS-05-15 supersedes SA 3-KS-03-15	June 5–July 20, 2015	All waters within and adjacent to the Refuge boundary are closed to the harvest of <b>all fish</b> except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.  The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> by all users.  Gillnets must be set and are restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, only 72 hours per week, 6:00 am Thur.–6:00 am Sunday ( <b>Appendix Figure C-2</b> ).

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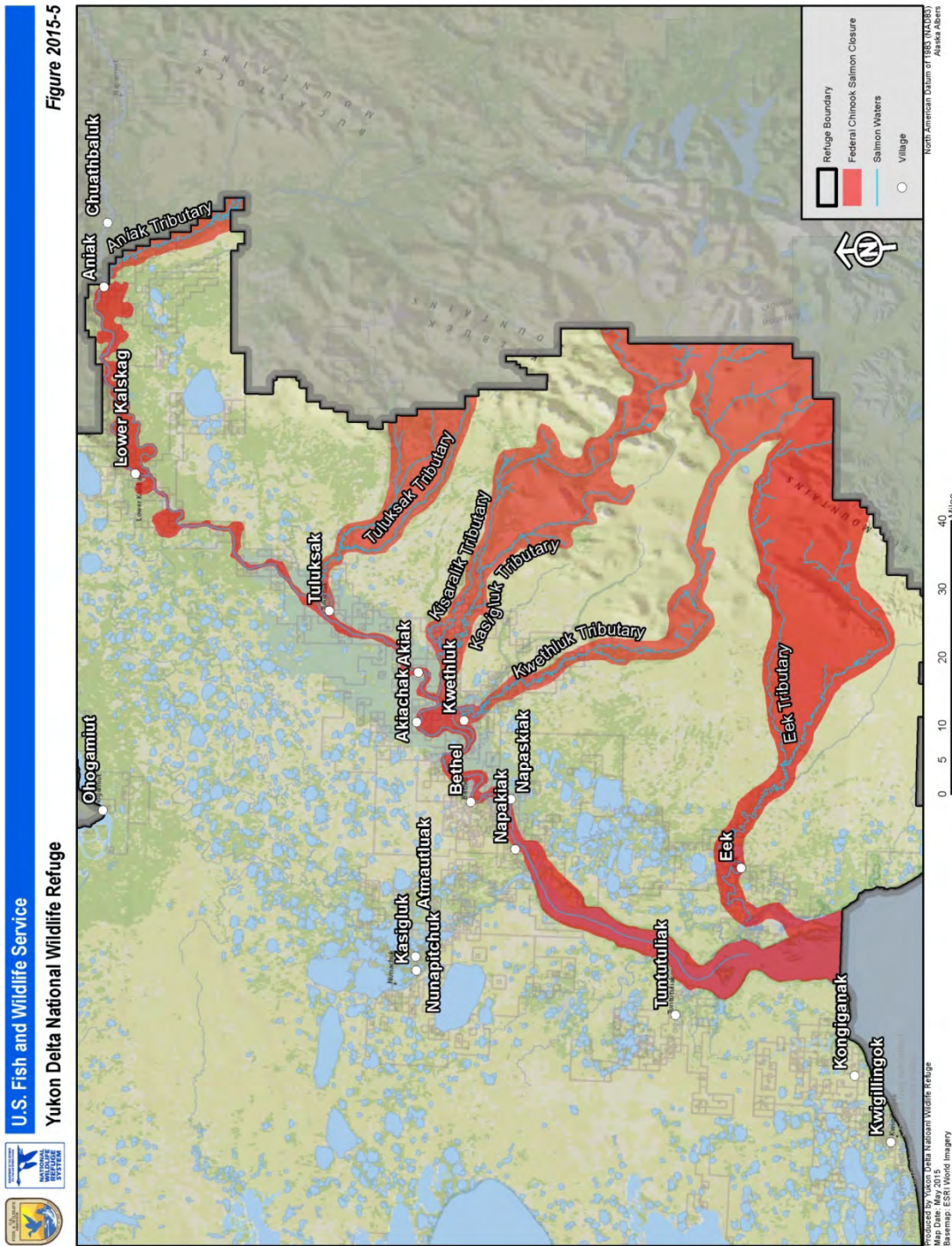
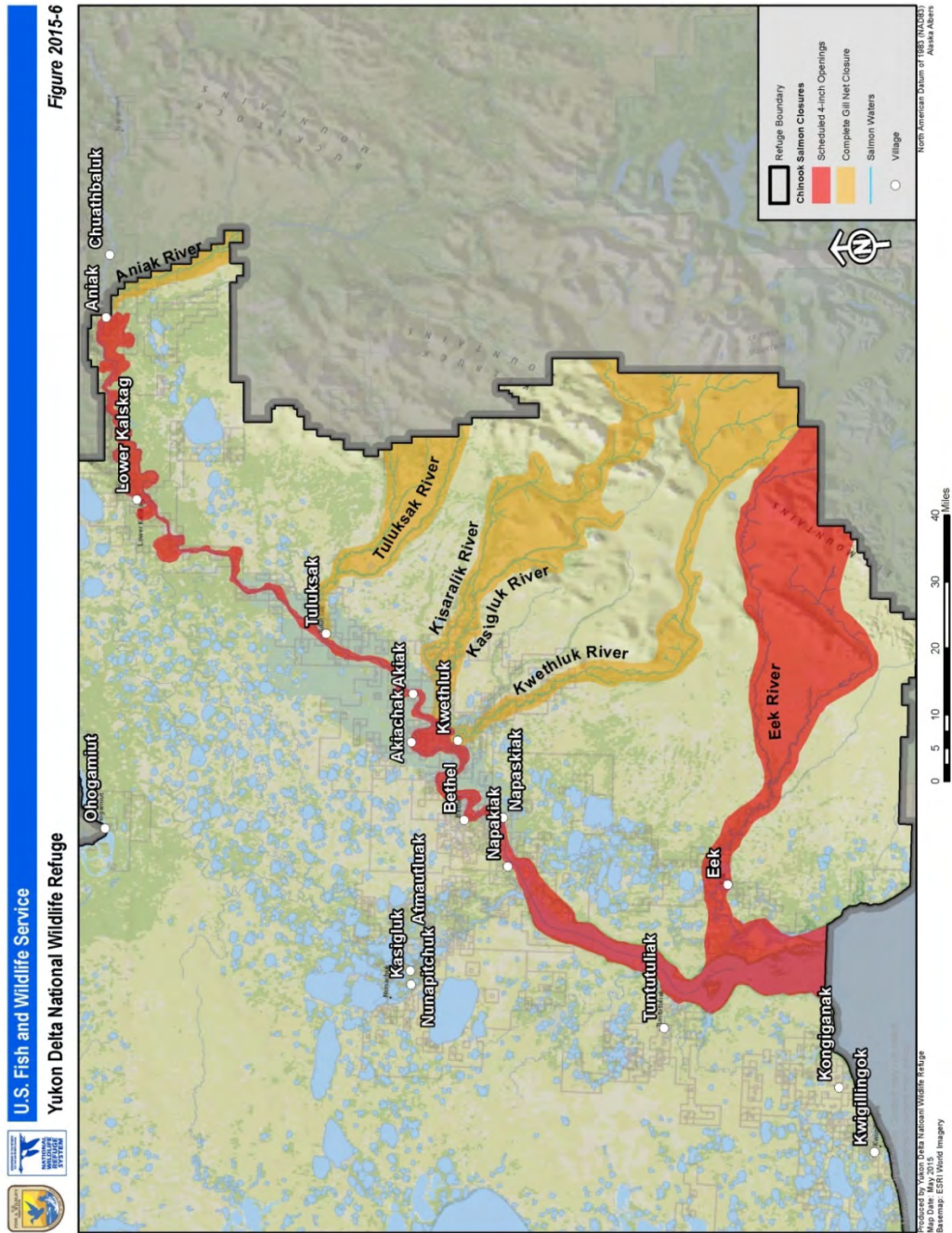


Figure 2015-5

U.S. Fish and Wildlife Service  
Yukon Delta National Wildlife Refuge

**Appendix Figure 1-1.** Federal Special Action SA 3-KS-03-15 closure to the harvest of Chinook Salmon by all users.

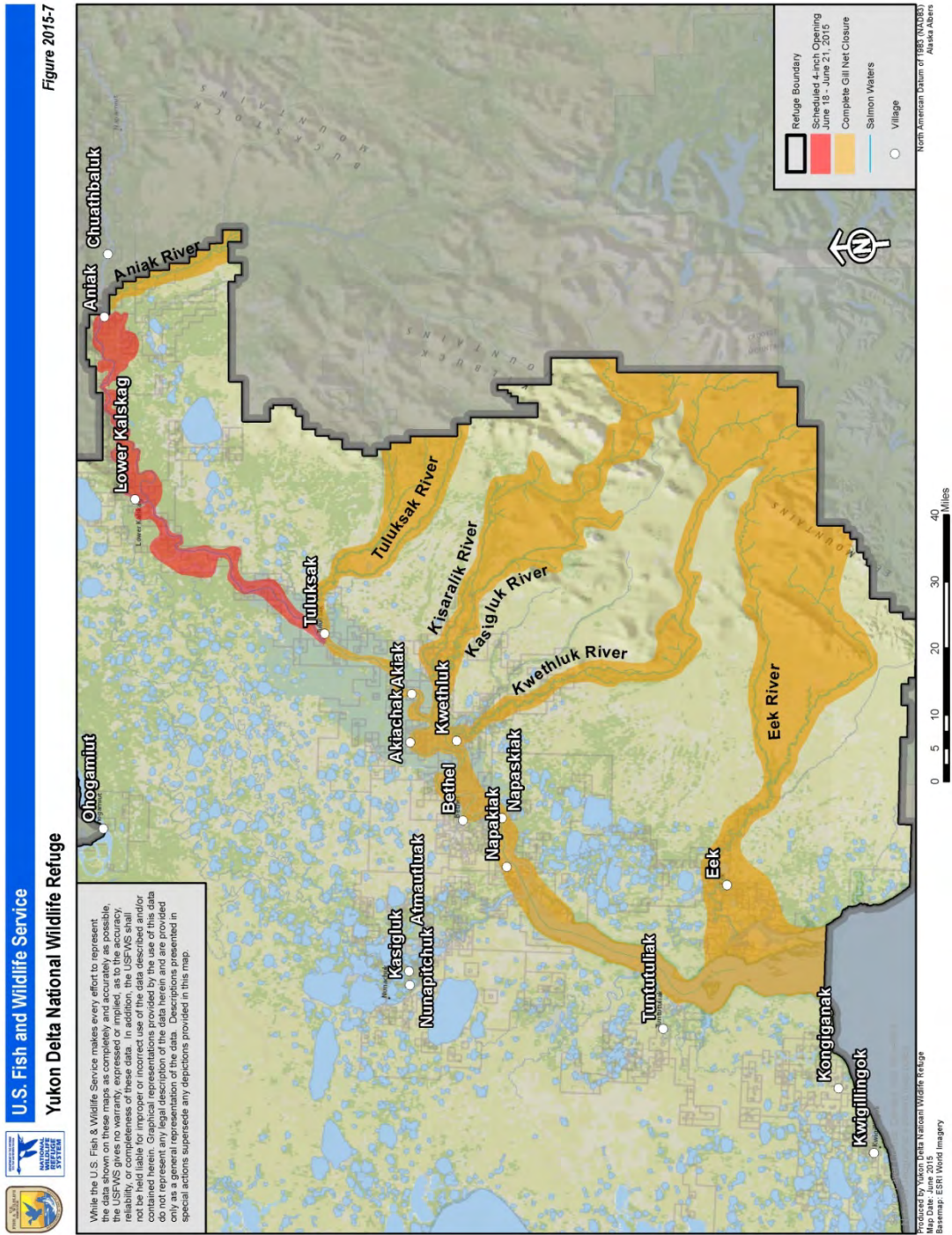


**Appendix Figure 1-2.** Federal Special Actions SA 3-KS-04-15 (closure to gillnets) and SA 3-KS-05-15 (scheduled openings to 4-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE–SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-06-15	June 10–30, 2015	<p>Unless superseded by subsequent Special Action, waters within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> except by Federally qualified subsistence users in possession of a Federal Community Harvest Permit. Dates and harvest limits will be described on each permit.</p> <p>Chinook Salmon may be targeted using dip-nets, beach seines, fish wheels, and gillnets. Gillnets are restricted to 6-inch or less mesh, not exceeding 300-feet long, and 45-meshes deep, and shall be drift net only. Chinook Salmon fishing is only permitted in the Kuskokwim River, the Eek River, and salmon tributaries of the Eek River. This permit is not valid on the Kwethluk, Kasigluk, Kisarialik, Tuluksak, and Aniak rivers and their salmon tributaries.</p>
SA 3-KS-07-15 Supersedes SA 3-KS-05-15	June 18–July 20, 2015	<p>Waters within and adjacent to the Refuge boundary are closed to the harvest of <b>all fish</b> except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> by all users.</p> <p>The Kuskokwim River and its salmon tributaries downstream of Tuluksak within and adjacent to the boundaries of the Refuge are closed to the use of <b>gillnets</b> by all users (<b>Appendix Figure 1-3</b>).</p> <p>The closure does not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15).</p>
SA 3-KS-08-15	June 18–21, 2015	<p>Federal public waters of the Kuskokwim River drainage upriver from the Tuluksak River are closed to the harvest of <b>nonsalmon fishes</b> except by Federally qualified subsistence users using 4-inch or less mesh set gillnets not exceeding 60-feet long and 45-meshes deep, only 72 hours per week, 6:00 am Thur.–6:00 am Sunday (<b>Appendix Figure 1-3</b>).</p>

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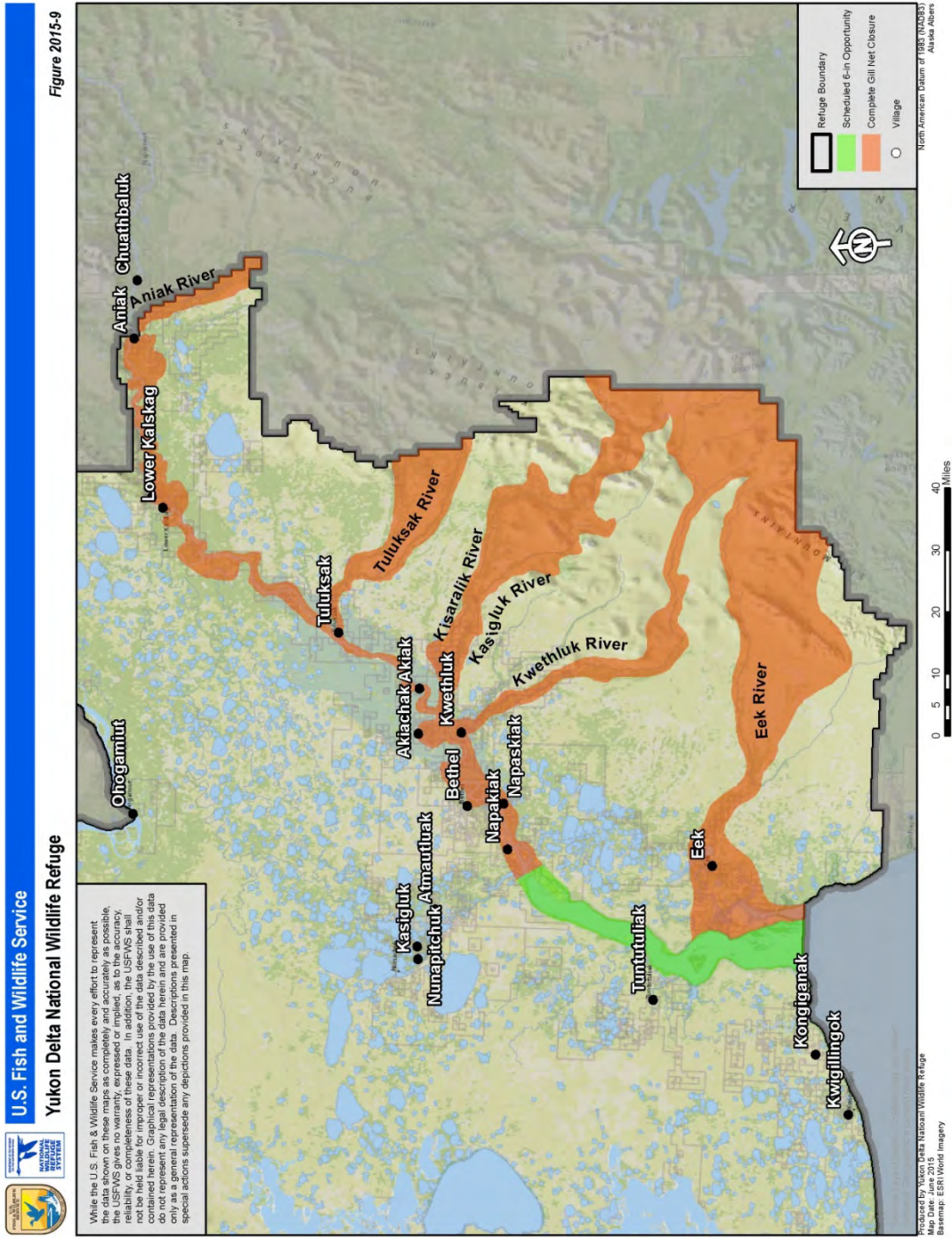


**Appendix Figure 1-3.** Federal Special Actions SA 3-KS-07-15 (closure to gillnets) and SA 3-KS-08-15 (scheduled opening to 4-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (continued from previous page).

2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE–SUBSISTENCE FISHING		
Federal Special Actions	Effective Date	Action
SA 3-KS-09-15  Supersedes SA 3-KS-08-15	June 22–July 20, 2015	<p>Waters within and adjacent to the Refuge boundary are closed to the harvest of <b>all fish</b> except by residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>The closure does not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15).</p> <p>Waters within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> except by Federally qualified subsistence users on Monday June 22, 4:00 pm–8:00 pm.</p> <p>Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used. Fishing is only permitted in the Kuskokwim River below the mouth of the Johnson River, excluding the Eek River and its salmon tributaries, within and adjacent to the Refuge boundary (<b>Appendix Figure 1-4</b>).</p> <p>Except for users with a Federal Community Harvest Permit or participating in a temporary opening, all <b>gillnets</b> are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>Subsistence fishing in the Kuskokwim River and its salmon tributaries by Federally qualified subsistence users is open with all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>

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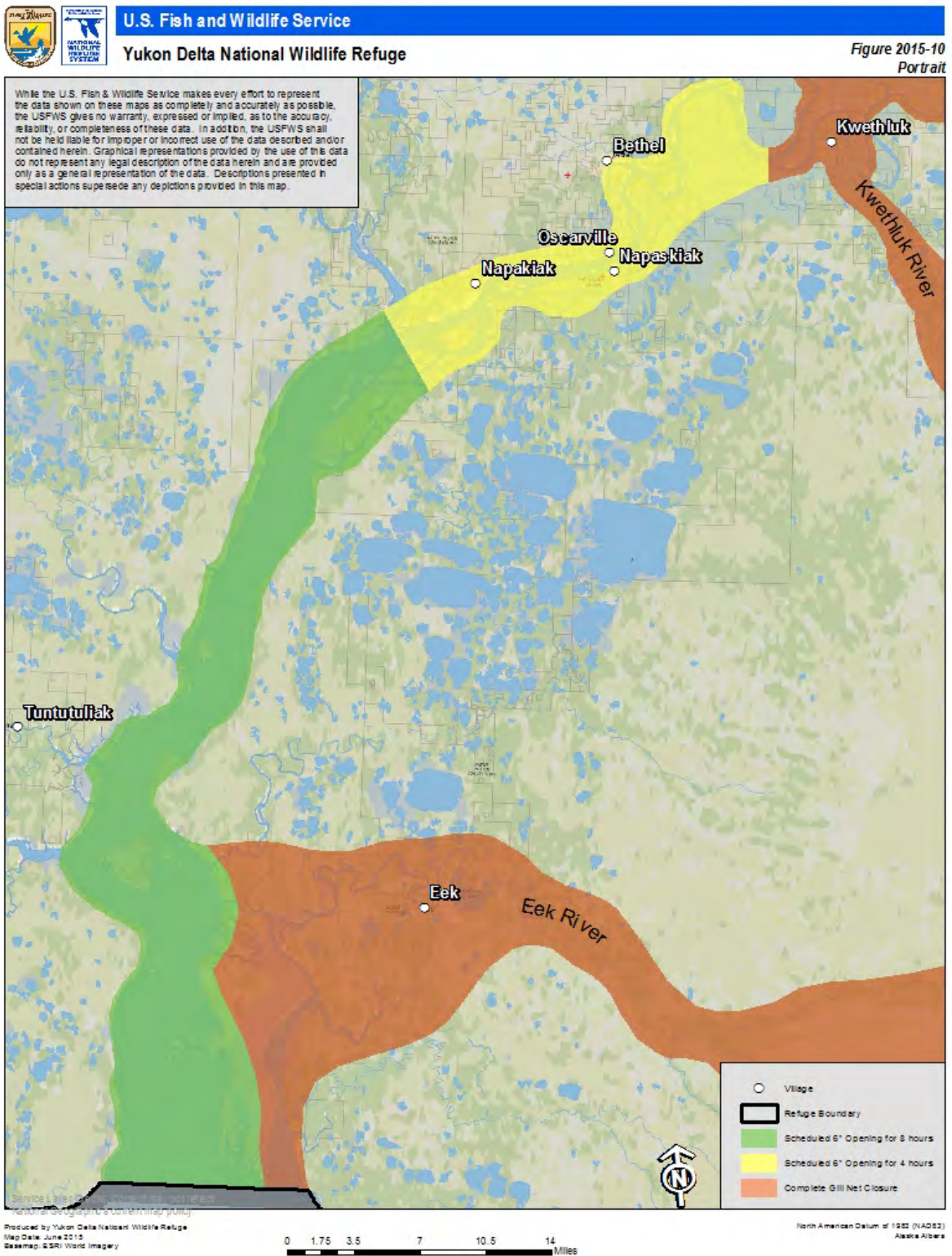
**Appendix Figure 1-4.** Federal Special Actions SA 3-KS-09-15 (scheduled opening to 6-inch mesh nets).



**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (*continued from previous page*).

2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE–SUBSISTENCE FISHING		
Federal Special Actions	Effective Date	Action
<p>SA 3-KS-10-15</p> <p>Supersedes</p> <p>SA 3-KS-09-15</p>	<p>June 26–July 20, 2015</p>	<p>Waters within and adjacent to the Refuge boundary are closed to the harvest of <b>all fish</b> except by residents of the Kuskokwim drainage and the villages of Cheformak, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> except:</p> <p style="padding-left: 40px;">The Kuskokwim River below the mouth of the Johnson River is open to the harvest of Chinook Salmon by Federally qualified subsistence users Friday June 26, 2:00 pm–10:00 pm.</p> <p style="padding-left: 40px;">The Kuskokwim River between Kuskokuak Slough and the Johnson River are open to the harvest of Chinook Salmon by Federally qualified subsistence users Friday June 26, 6:00 pm–10:00 pm.</p> <p style="padding-left: 40px;">Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used (<b>Appendix Figure 1-5</b>).</p> <p>The closures do not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15).</p> <p>Except for users with a Federal Community Harvest Permit or fishing in a temporary opening, all gillnets are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>The Kuskokwim River and its salmon tributaries are closed to the harvest of all fish except Federally qualified subsistence users using all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>

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**Appendix Figure 1-5.** Federal Special Actions SA 3-KS-10-15 (scheduled opening to 6-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE—SUBSISTENCE FISHING</b>		
Federal Special Actions	Effective Date	Action
SA 3-KS-11-15  Supersedes  SA 3-KS-10-15	June 30–July 20, 2015	<p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>all fish</b> except by Federally qualified subsistence users</p> <p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook Salmon</b> except:</p> <p style="padding-left: 40px;">The Kuskokwim River below the mouth of the Johnson River is open to the harvest of all fish by Federally qualified subsistence users Tuesday June 30, 2:00 pm–6:00 pm.</p> <p style="padding-left: 40px;">The Kuskokwim River between the Johnson River and the Aniak River are open to the harvest of all fish by Federally qualified subsistence users Tuesday June 30, 6:00 pm–6:00 pm.</p> <p style="padding-left: 40px;">Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used.</p> <p>Except for users with a Federal Community Harvest Permit or fishing in a temporary opening, all gillnets are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>The Kuskokwim River and its salmon tributaries are closed to the harvest of all fish except Federally qualified subsistence users using all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>
SA 3-KS-12-15	July 2, 2015	For the Kuskokwim Fishery Management Area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes.

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-KS-01-15	April 1–July 25, 2015	The Kuskokwim River drainage and Kuskokwim Bay tributaries are closed to sport fishing for <b>Chinook Salmon</b> Wednesday, April 1 through Saturday, July 25, 2015. All Chinook Salmon caught while fishing for other species may not be removed from the water and must be released immediately. In addition, anglers may use only one unbaited, single-hook, artificial lure in the entire Kuskokwim-Goodnews Area.
EO 3-S-WR-01-15	June 4, 2015, until further notice	From the Aniak River upriver to the Holitna River fishing for <b>salmon</b> is closed. Fishing for nonsalmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, setnets only  6:00 a.m. Thursday, June 4 until 6:00 a.m. Sunday, June 7;  6:00 a.m. Thursday, June 11 until 6:00 a.m. Sunday, June 14;  6:00 a.m. Thursday, June 18 until 6:00 a.m. Sunday, June 21;  6:00 a.m. Thursday, June 25 until 6:00 a.m. Sunday, June 28.  Subsistence fishing with hook and line for Chinook Salmon is closed; any Chinook Salmon caught must be returned alive to the water.  Subsistence fishing with dip nets is allowed; any Chinook Salmon caught in a dip net must be returned immediately to the water alive.  Subsistence fishing with fish wheels is allowed; fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours; fish wheels can be equipped with a chute and must be closely attended while in operation; any Chinook Salmon caught must be returned alive to the water.
EO 3-S-WR-02-15	June 7, 2015 until further notice	The Aniak River is closed to the use of all <b>gillnets</b> . All other legal subsistence fishing gear is allowed (beach seine, hook and line, handline, or fishwheel); any Chinook Salmon caught must be returned alive to the water.
EO 3-S-WR-03-15	May 28, 2015 until further	Marine waters near the Kuskokwim River mouth (Ishkowik River to the northern boundary of District W-4 at Weelung Creek), fishing for <b>salmon</b> is closed.

*Continued on next page.*

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-04-15	June 11–July 2, 2015	<p>From the Holitna River mouth to the headwaters of the Kuskokwim River subsistence salmon fishing is closed.</p> <p>Subsistence fishing for <b>nonsalmon fish</b> is restricted to the use of set gillnets with 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep:</p> <p>6:00 a.m. Thursday, June 11 until 6:00 a.m. Sunday, June 14;          6:00 a.m. Thursday, June 18 until 6:00 a.m. Sunday, June 21;          6:00 a.m. Thursday, June 25 until 6:00 a.m. Sunday, June 28;          6:00 a.m. Thursday, July 2 until 6:00 a.m. Sunday, July 5.</p> <p>Subsistence fishing with hook and line for <b>Chinook Salmon</b> is closed; any Chinook Salmon caught must be returned alive to the water.</p> <p>Subsistence fishing with dip nets is allowed; any Chinook Salmon caught in a dip net must be returned immediately to the water alive.</p> <p>Subsistence fishing with fish wheels is allowed; fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours; fish wheels can be equipped with a chute and must be closely attended while in operation; any Chinook Salmon caught must be returned alive to the water.</p>
EO 3-S-WR-05-15	June 20, 2015	<p>From the Aniak River to the headwaters of the Kuskokwim River is open to subsistence <b>salmon</b> fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, for Alaska residents 60 years of age or older, Saturday June 20, 2:00 p.m.–6:00 p.m.</p> <p>An Alaska resident 60 years of age or older must be present while fishing activities are being conducted but may be assisted by family members within the second degree of kindred. A gillnet longer than 10 fathoms may be used as long as only 10 fathoms is in a fishable condition and the remainder of the gillnet is either tied up or secured so that it is not in the water in a fishing condition.</p>
EO 3-S-WR-06-15	June 27, 2015	<p>From the Aniak River to the headwaters of the Kuskokwim River is open to subsistence <b>salmon</b> fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, Saturday June 27, 12:00 p.m.–6:00 p.m.</p>
EO 3-S-WR-07-15	June 27, 2015	<p>The Kuskokwim River and its tributaries from the Holitna River to the headwaters is open to subsistence fishing with a hook and line for <b>Chinook Salmon</b>, Saturday June 27 for 24 hours. The Chinook Salmon harvest limit for this hook and line opportunity is 5 fish.</p>

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-08-15	July 1, 2015	The Kuskokwim River from the Aniak River to the headwaters of the Kuskokwim River is open to subsistence <b>salmon</b> fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, Wednesday, July 1, 12:00 p.m.–8:00 p.m.
EO 3-S-WR-09-15	July 1, 2015	The Kuskokwim River and its tributaries, from the Holitna River to the headwaters of the Kuskokwim River, is open to subsistence fishing with a hook and line for <b>Chinook Salmon</b> , Wednesday, July 1, 12:01 a.m.–11:59 p.m. The Chinook Salmon bag limit for this hook and line opportunity is 5 fish.
EO 3-S-WR-10-15	July 1, 2015 until further notice	Subsistence fishing on the Stony River upstream of the confluence with the Stink River is unrestricted.
EO 3-S-WR-11-15	July 2, 2015 until further notice	The Kuskokwim River drainage from the mouth of the Kuskokwim River to the Aniak River subsistence fishing for <b>Chinook Salmon</b> with hook and line is closed. Any Chinook Salmon caught must be released alive to the water.  Subsistence fishing with fish wheels is allowed. Fish wheels are required to have a live box with no less than 45 cubic feet of water, must be checked at least every 6 hours. Fish wheels can be equipped with a chute and must be closely attended while in operation. All Chinook salmon must be returned alive to the water.  Subsistence fishing with dip nets is closed.  Subsistence fishing with <b>gillnets</b> is closed in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak river drainages and the Kuskokwim River.
EO 3-S-WR-12-15	July 4, 2015	The Kuskokwim River from the mouth of the Kuskokwim River to the mouth of the Johnson River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Saturday, July 4, 12:00 p.m.–8:00 p.m.  From the Johnson River to Tuluksak with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 25-fathoms long, Saturday, July 4, 4:00 p.m.–8:00 p.m.  From the Tuluksak to the Holitna River with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 25-fathoms long, Saturday, July 4, 12:00 p.m.–8:00 p.m.
EO 3-S-WR-13-15	July 4, 2015 until further notice	The Kuskokwim River and its tributaries from the Holitna River to the headwaters of the Kuskokwim River is open to subsistence fishing with a hook and line for Chinook Salmon. The Chinook Salmon limit for this hook and line opportunity will be 3 fish per day, 6 in possession.

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-CS-01-15	July 6–August 31, 2015	The Kuskokwim River drainage is closed to sport fishing for Chum Salmon. Only unbaited, single-hook, artificial lures may be used in the Kuskokwim-Goodnews Area. All Chum Salmon caught unintentionally while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-CS-02-15 supersedes EO 3-S-CS-01-15	July 10–Aug. 31, 2015	The Kuskokwim River drainage ( <b>excluding Kuskokwim Bay</b> ) is closed to sport fishing for Chum Salmon. Only unbaited, single-hook, artificial lures may be used in the Kuskokwim-Goodnews Area. All Chum Salmon caught unintentionally while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-WR-14-15	July 8, 2015	<p>The Kuskokwim River from the mouth of the Kuskokwim River to the mouth of the Johnson River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 9:00 a.m.–9:00 p.m.</p> <p>From the Johnson River to Tuluksak with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 5:00 p.m.–9:00 p.m.</p> <p>From Tuluksak to the headwaters of the Kuskokwim River with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 9:00 a.m.–9:00 p.m.</p> <p>The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W is closed to subsistence fishing with gillnets Wednesday, July 8, 9:00 a.m.–9:00 p.m. (<b>Appendix Figure 1-6</b>).</p>
EO 3-S-WR-15-15	July 8, 2015 until further notice	Subsistence fishing in the Stony River and its tributaries is unrestricted. The Chinook salmon limit for subsistence hook and line is 3 fish per day, 6 in possession.
EO 3-S-WR-16-15	July 8, 2015 until further notice	<p>From the Holitna River to the headwaters of the Kuskokwim River (excluding the Holitna and Swift rivers), subsistence fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long.</p> <p>The use of dip nets for subsistence salmon fishing is discontinued in the Kuskokwim River drainage from the Holitna River to the headwaters of the Kuskokwim River.</p> <p>The use of a live box or chute is not required while operating a fish wheel from the Holitna River to the headwaters of the Kuskokwim River.</p>

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**Appendix Figure 1-6.** State of Alaska Emergency Order EO 3-S-WR-14-15 (closed area in front of Aniak).



**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (continued from previous page).

2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING		
State Emergency Order	Effective Date	Action
EO 3-S-WR-17-15	July 11, 2015	<p>From the Johnson River to the mouth of the Kuskokwim River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long Saturday, July 11, 9:00 a.m.–9:00 p.m.</p> <p>From the Johnson River to Tuluksak subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45 meshes deep, and not to exceed 50-fathoms long Saturday, July 11, 10:00 a.m.–2:00 p.m.</p> <p>From Tuluksak to the Holitna River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50- fathoms long Saturday, July 11, 9:00 a.m.–9:00 p.m.</p>
EO 3-S-WR-18-15	July 11, 2015	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W ( <b>Appendix Figure 1-6</b> ) is closed to subsistence fishing with gillnets Saturday, July 11, 9:00 a.m.–9:00 p.m.
EO 3-S-WR-19-15	July 11, 2015 until further notice	The use of dip nets for subsistence salmon fishing is discontinued in the Kuskokwim River drainage from Aniak to the Holitna River.
EO 3-S-WR-20-15	July 13 and 15, 2015	<p>From the Johnson River to the mouth of the Kuskokwim River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 2015, 9:00 a.m.–9:00 p.m.</p> <p>From the Johnson River to Tuluksak subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Monday, July 13, 1:00 p.m.–7:00 p.m., and Wednesday, July 15, 3:00 p.m.–9:00 p.m.</p> <p>From Tuluksak to the Holitna River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 9:00 a.m.–9:00 p.m.</p>
EO 3-S-WR-21-15	July 13 and 15, 2015	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088'W ( <b>Appendix Figure 1-6</b> ) is closed to subsistence fishing with gillnets Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 9:00 a.m.–9:00 p.m.

Continued on next page.

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-22-15	July 13, 2015 until further notice	Marine waters near the Kuskokwim River mouth (Ishkowiik River to the northern boundary of District W-4 at Weelung Creek) are open to subsistence fishing.
EO 3-S-WR-23-15	July 15, 2015 until further notice	Subsistence salmon fishing with gillnets is allowed in the Kuskokwim River from the mouth of the Kuskokwim River to the Holitna River, with 6-inch or less mesh gillnets.
EO 3-S-WR-24-15	July 15, 2015 until further notice	The use of a live box or chute is not required while operating a fish wheel from the mouth of the Kuskokwim River to the Holitna River.
EO 3-S-WR-25-15	July 15, 2015 until further notice	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W ( <b>Appendix Figure 1-6</b> ) is closed to subsistence fishing with gillnets.
EO 3-S-WR-26-15	August 4, 2015	The following restrictions to the Kuskokwim River subsistence salmon fishery are rescinded: gillnet use in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers (EO 3-S-WR-11-15); 6-inch or less mesh requirements for subsistence gillnets (EO 3-S-WR-16-15; EO 3-S-WR-23-15; EO 3-S-WR-25-15); closed waters at the mouth of the Aniak (EO 3-S-WR-25-15); and restrictions to hook and line bag and possession limits for Chinook salmon (EO 3-S-WR-01-15, 3-S-WR-02-15, EO 3-S-WR-11-15).

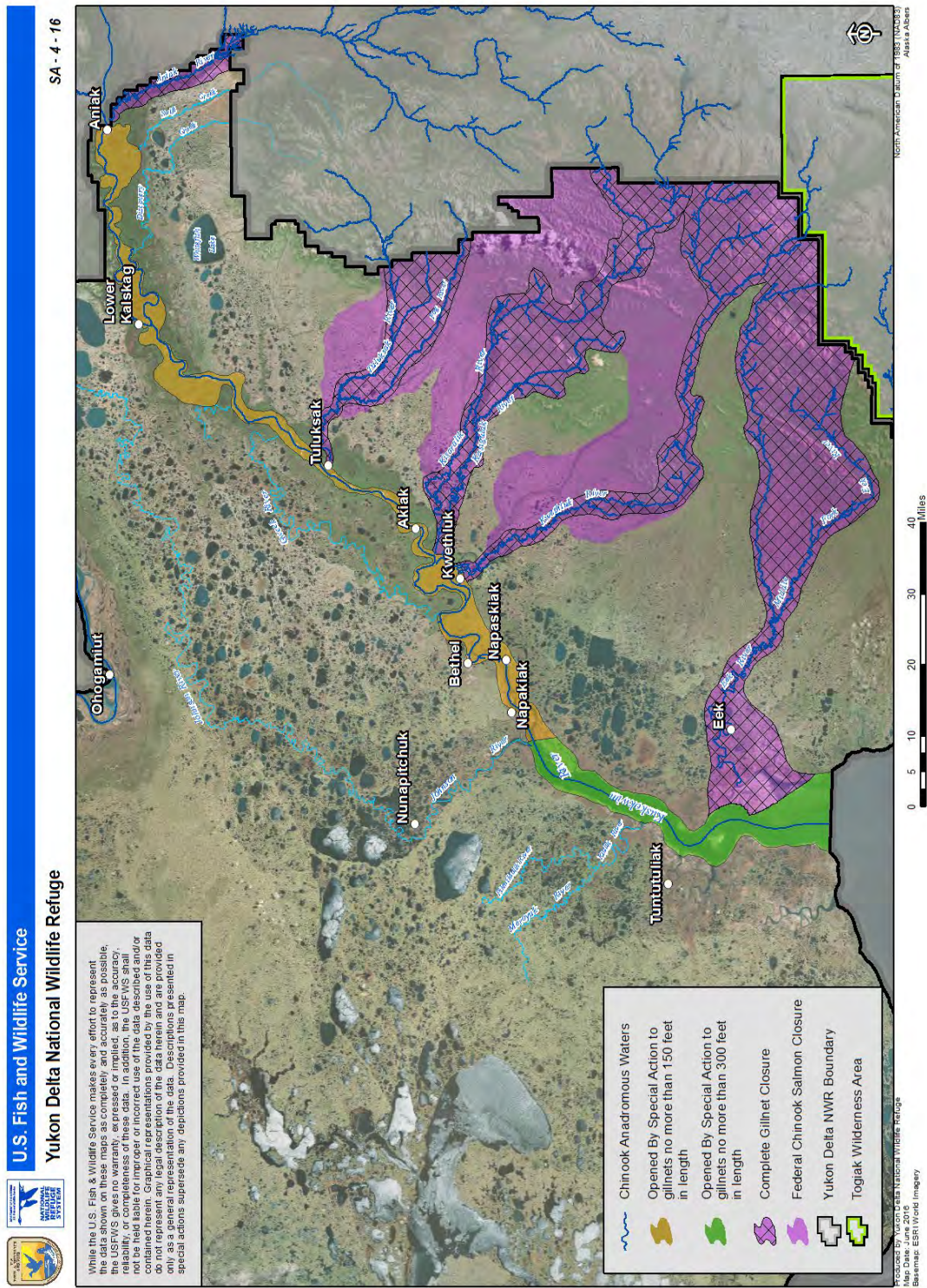
**SALMON MANAGEMENT IN 2016**

**Appendix Table 1-5.** Federal special actions, Kuskokwim River drainage, 2016.

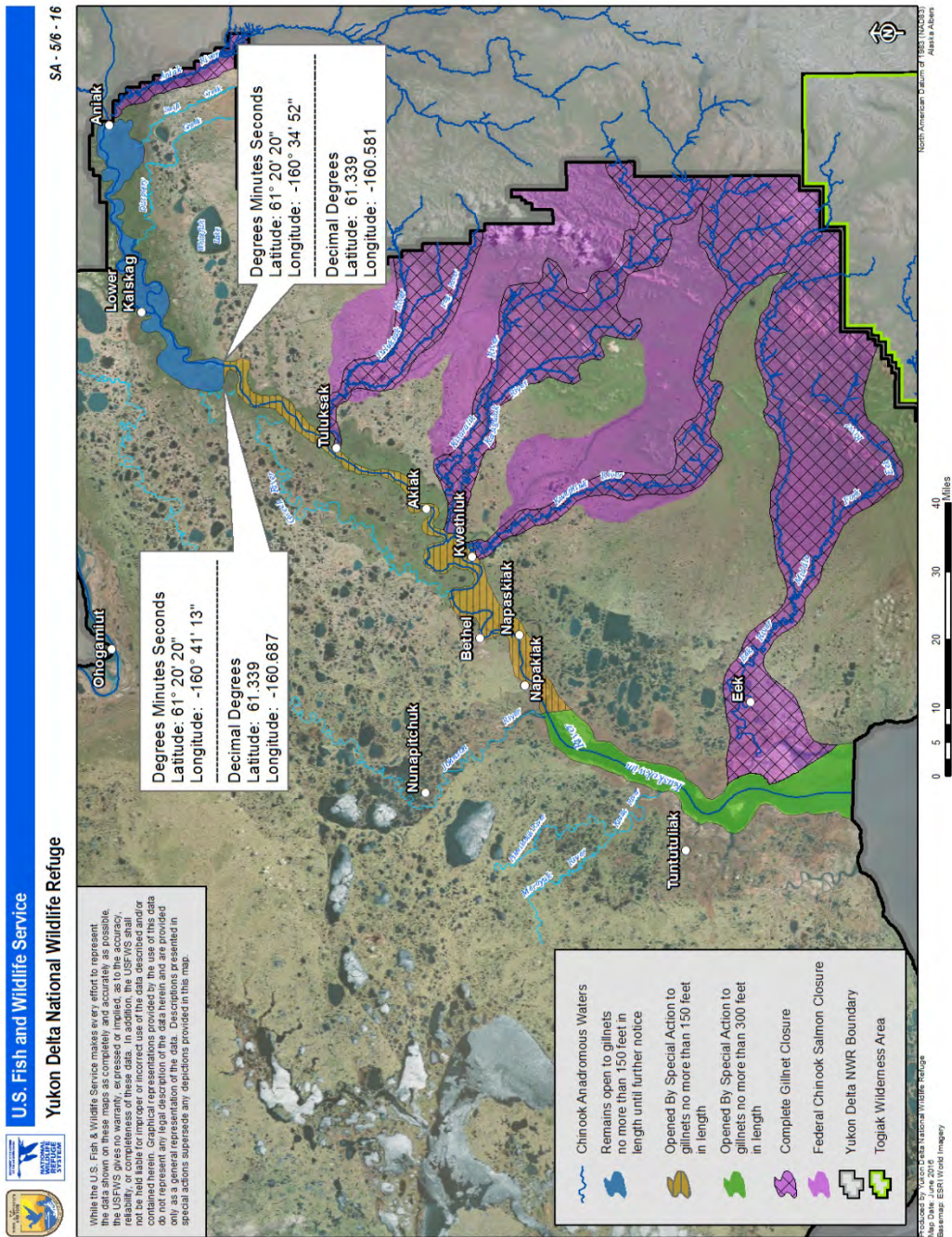
<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-16	June 1, 2016- June 12, 2016	All waters within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook and Chum Salmon</b> except by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-01a-16	June 3, 2016-July 7, 2016	Federal waters of the Kuskokwim River are closed to the harvest of <b>Chinook and Chum Salmon</b> by Federally qualified users. Fishing openings, closings, and fishing methods for Federally qualified subsistence users will be announced by subsequent Federal Special Actions.
SA 3-KS-02-16	June 12, 2016	Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and Chum Salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.  Legal gear includes drift and set gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak. Harvest allowed for 12 hours only from June 12, 2016 from 12:01 pm (noon) until 11:59 pm (midnight).
SA 3-KS-03-16	June 12, 2016-July 7, 2016	The use of gillnets for fishing on the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak Rivers as well as their salmon tributaries are closed within the boundaries of the Refuge ( <b>Appendix Figure 1-7</b> ).
SA 3-KS-04-16	June 16, 2016- June 17, 2016	Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.  Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak ( <b>Appendix 1-7</b> ). Harvest allowed for 24 hours only from June 16, 2016 from 12:01 pm (noon) until June 17, 2016 at 11:59 am (noon).

**Appendix Table 1-5.** Federal special actions, Kuskokwim River drainage, 2016 (continued from previous page.)

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-05-16	June 21, 2016-July 7, 2016	<p>Federal public waters of the Kuskokwim River from a line downstream of Kalskag at the south edge of Uknarik Slough and then due east to the edge of the bluff line to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>) are open to harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek until further notice.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, and 150-feet long</p>
SA 3-KS-06-16	June 21, 2016-June 24, 2016	<p>Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>). Harvest allowed for 72 hours only from June 21, 2016 from 12:01 pm (noon) until June 24, 2016 at 11:59 am (noon).</p>
SA 3-KS-07-16	June 29, 2016-July 2, 2016	<p>Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>). Harvest allowed for 72 hours only from June 29, 2016 from 12:01 pm (noon) until July 2, 2016 at 11:59 am (noon).</p>
SA 3-KS-08-16	July 7, 2016-present	For the Kuskokwim River drainage, all previously issued special actions were rescinded.



**Appendix Figure 1-7.** Federal Special Actions SA 3-KS-04-16, temporary harvest of Chinook and Chum salmon by Federally qualified subsistence users and SA-3-KS-03-16, temporary closure of rivers in Refuge boundary.



**Appendix Figure 1-8.** Federal Special Actions SA 3-KS-05-16, SA 3-KS-06-16, and SA 3-KS-07-16, temporary harvest of Chinook and Chum salmon by Federally qualified subsistence users.

**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016.

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
State Emergency Order	Effective Date	Actions
EO 3-KS-01-16	May 1, 2016- July 25, 2016	The Kuskokwim River drainage and tributaries are closed to sport fishing for <b>Chinook Salmon</b> Sunday May 1, 2016 through Monday July 25, 2016. All Chinook Salmon caught while fishing for other species may not be removed from the water and must be released immediately. In addition, anglers may use only one unbaited, single-hook, artificial lure in the entire Kuskokwim Area.
EO 3-S-WR-01-16	May 20, 2016-June 12, 2016;  June 1, 2016-June 12, 2016	<p>On May 20, subsistence fishing with gillnets is closed in the Kuskokwim River drainage from the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim River to the ADF&amp;G markers downstream of the Holitna River mouth until further notice. Subsistence fishing with hook and line for <b>Chinook salmon</b> is closed in this area to further notice. Subsistence fishing with fish wheels, dip nets, and beach seines are allowed in this area until further notice, but all <b>Chinook salmon</b> caught must be immediately be released alive.</p> <p>Subsistence fishing with gillnets is closed beginning on June 1 in the Kuskokwim River upstream from the ADF&amp;G markers near the Holitna River mouth to the headwaters of the Kuskokwim River, the Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough, the Kasigluk and Kisarialik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough, the Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately one mile to ADF&amp;G regulatory markers, and the Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River until further notice.</p> <p>Beginning on June 1, Subsistence fishing with hook and line for Chinook salmon is closed to further notice on the Kuskokwim River above the ADF&amp;G markers downstream of the Holitna River mouth until further notice. Subsistence fishing with fish wheels, dip nets, and beach seines are allowed in this area until further notice, but all Chinook salmon caught must be immediately be released alive.</p>

**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016 (*continued from previous page*).

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-02-16, EO 3-S-WR-03-16	June 12, 2016-June 14, 2016;  June 12, 2016 until further notice	<p>The area from the YDNWR border at Aniak to the mouth of the Holitna River (not including the Aniak River) is open to subsistence fishing with 6-inch or less mesh, 25-fathoms (150 ft.) long or less gillnets for 48 hours from June 12, 12:00 pm (noon)-June 14, 12:00 pm (noon).</p> <p>The area from the mouth of the Holitna River to the Kuskokwim River headwaters is open to subsistence fishing with 6-inch or less mesh gillnets from June 12, 2016 at 12:00 pm (noon) until further notice.</p> <p>Subsistence fishing is also allowed with beach seines, dip nets, and hook and line from the YDNWR boundary at Aniak to the Kuskokwim River headwaters from June 12, 2016 at 12:00 pm (noon) until further notice.</p>
EO 3-S-WR-04-16	June 16, 2016 until further notice	The area from the YDNWR border at Aniak to the headwaters of the Kuskokwim River (not including the Aniak River) is open to subsistence fishing with 6-inch or less mesh from 12:00 pm (noon) June 16, 2016 until further notice.
EO 3-S-WR-5-16	July 7, 2016 until further notice	<p>Subsistence fishing is allowed for qualified Alaska residents from the YDNWR boundary at the mouth of the Kuskokwim River to the headwaters of the Kuskokwim River until further notice. Gillnets must be 6-inch or less mesh.</p> <p>Subsistence fishing with gillnets is closed in the following areas:</p> <ul style="list-style-type: none"> <li>• The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough.</li> <li>• The Kasigluk and Kisarialik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.</li> <li>• The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately one mile to ADF&amp;G regulatory markers.</li> <li>• The Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River.</li> <li>• The Eek River.</li> <li>• The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W (Figure 3).</li> </ul>



**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016 (*continued from previous page*).

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-6-16	July 27, 2016-Until further notice	Effective 9:00 a.m. Wednesday, July 27, 2016, the following restrictions to the Kuskokwim River subsistence salmon fishery are rescinded: <ul style="list-style-type: none"> <li>• Gillnet use in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, Aniak and Eek Rivers;</li> <li>• 6-inch or less mesh requirements for subsistence gillnets; and</li> <li>• The closed waters at the mouth of the Aniak River.</li> </ul>
EO 3-S-WR-7-16	July 29, 2016	Subdistrict 1-A will open to commercial <b>salmon</b> fishing for 6 hours from 2:00 p.m. until 8:00 p.m. Friday, July 29, 2016. This area is defined as that portion of District 1 upstream of regulatory markers located at Bethel to ADF&G regulatory markers at the mouth of Bogus Creek.  As there are no commercial salmon processors registered in the Kuskokwim Management Area, this opportunity is being provided for those individuals registered with the department as catcher/sellers.
EO 3-S-WR-8-16	August 12, 2016	Subdistrict 1-A will open to commercial <b>salmon</b> fishing for 6 hours from 2:00 p.m. until 8:00 p.m. Friday, August 12, 2016. This area is defined as that portion of District 1 upstream of regulatory markers located at Bethel to ADF&G regulatory markers at the mouth of Bogus Creek.  As there are no commercial <b>salmon</b> processors registered in the Kuskokwim Management Area, this opportunity is being provided for those individuals registered with ADF&G as catcher/sellers.

**SALMON MANAGEMENT IN 2017**

**Appendix Table 1-7.** Federal special actions, Kuskokwim River drainage, 2017

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Actions</b>
SA 3-KS-01-17	June 12 – August 10, 2017	Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the use of all gillnets by all users. All Chinook salmon caught with other legal methods must be immediately released.
FSA 17-03 (FSB ACTION)	June 12, 2017	Beginning on June 12, 2017, Federal public waters of the Kuskokwim River drainage were closed to the harvest of Chinook Salmon except by Federally qualified subsistence users
FSA 17-04 (FSB ACTION)	June 12, 2017	Beginning on June 12, 2017, Federal public waters of the Kuskokwim River drainage were closed to the harvest of Chinook Salmon except by Federally qualified subsistence users identified in the Section 804 subsistence users prioritization analysis. Those eligible to harvest Chinook Salmon under Federal regulations were restricted to Federally qualified subsistence users residing in the Kuskokwim River drainage and the coastal communities of Chefornak, Kongiganek, Kipnuk, and Kwigillingok.
SA 3-KS-02-17	June 12 – August 10, 2017	Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the harvest of Chinook salmon by all Federally qualified subsistence users.
SA 3-KS-03-17	June 12, 2017	<p>Opened a 12-hour opportunity for Federally qualified subsistence users identified in the Section 804 analysis, which included residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek, to harvest Chinook Salmon on Federal public waters of the Kuskokwim River on June 12, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Drift or set gillnets were limited to 6-inch or less mesh and could not exceed 45 meshes in depth. Nets from the Yukon Delta National Wildlife Refuge (Refuge) boundary at the Kuskokwim River mouth to the Johnson River could not exceed 50 fathoms (300 feet) in length. Nets up river from the Johnson River to the Refuge boundary at Aniak could not exceed 25 fathoms (150 feet) in length.</p> <p>The area around the Old Kuskokuak and the Kuskokuak were closed to the harvest of Chinook Salmon.</p>

**Appendix Table 1-7.** Federal special actions, Kuskokwim River drainage, 2017 (continued from previous page)

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Actions</b>
SA 3-KS-04-17	June 24, 2017	<p>Opened a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the mainstem of the Kuskokwim River on June 24, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Drift or set gillnets were limited to 6-inch or less mesh and could not exceed 45 meshes in depth. Nets could not exceed 25 fathoms (150 feet) in length.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p> <p>The waters of the Kuskokwim River around the boundary of the Yukon Delta NWR near Aniak was closed to subsistence gillnet fishing.</p> <p>Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel were allowed to be used during this opportunity. However, there were some restrictions to fish wheel regulations. Any Chinook Salmon caught in these other gear types had to be returned to the water alive.</p>
SA 3-KS-05-17	July 1, 2017	<p>Opened a 6-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River from the mouth of the river to approximately 10 miles upriver from Upper Kalskag on July 1, 2017, from 3:00 p.m. until 9:00 p.m.</p> <p>Gear restrictions and authorizations, as well as Chinook Salmon release requirements for non-gillnet gear types were the same as SA 3-KS-04-17.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p>
SA 3-KS-06-17	July 3, 2017	<p>Opened a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River on July 3, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Gear restrictions and authorizations, as well as Chinook Salmon release requirements for non-gillnet gear types were the same as SA 3-KS-04-17.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p> <p>The waters of the Kuskokwim River around the boundary of the Yukon Delta NWR near Aniak was closed to subsistence gillnet fishing</p>
SA 3-KS-07-17	July 7, 2017	<p>Rescinded all previously issued special actions regarding the management of Chinook Salmon in the Kuskokwim River drainage.</p> <p>Federal public waters within the Yukon Delta NWR opened to the harvest of Chinook Salmon by non-Federally qualified subsistence users.</p>

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017.

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-01-17	Multiple effective dates depending on area of Kuskokwim River (May 20, 2017 – June 4, 2017)	<p>Subsistence fishing with gillnets in the Kuskokwim River will be closed during the following times and areas:</p> <ul style="list-style-type: none"> <li>• Beginning 12:01 a.m. Saturday, May 20, 2017, the Kuskokwim River Drainage from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River to ADF&amp;G markers approximately one-half mile upstream of the Tuluksak River mouth;</li> <li>• Beginning 12:01 a.m. Thursday, May 25, 2017, from the ADF&amp;G markers approximately one-half mile upstream of the Tuluksak River mouth to the Yukon Delta Refuge boundary near Aniak;</li> <li>• Beginning 12:01 a.m. Thursday, June 1, 2017, from the Yukon Delta Refuge boundary near Aniak to the ADF&amp;G regulatory markers near the Holitna River mouth; and</li> <li>• Beginning 12:01 a.m. Sunday, June 4, 2017, upstream of the ADF&amp;G regulatory markers located near the Holitna River mouth to the headwaters of the Kuskokwim River.</li> </ul> <p>The following subsistence fishing restrictions and tributary gillnet fishing closures will also go into effect beginning 12:01 a.m. Saturday, May 20, 2017, until further notice:</p> <ul style="list-style-type: none"> <li>• The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough.</li> <li>• The Kasigluk and Kisaralik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.</li> <li>• The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately 1-mile to ADF&amp;G regulatory markers.</li> <li>• The Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River.</li> </ul> <p>Additionally, subsistence fishing with hook and line for Chinook Salmon will close until further notice. Subsistence fishing with fish wheels will be allowed until further notice. Subsistence fishing with dip nets and beach seines is currently allowed until further notice. Any Chinook salmon caught in a dip net or beach seine must be returned immediately to the water alive.</p>

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017 (*continued from previous page*).

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-02-17	May 27, 2017	Subsistence fishing will be allowed on the Kuskokwim River mainstem within the Yukon Delta Refuge boundaries with 4-inch or less mesh size set gillnets from 9:00 a.m. until 9:00 p.m. Saturday, May 27, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark.
EO 3-S-WR-03-17	June 3, 2017	Subsistence fishing will be allowed within the mainstem Kuskokwim River from the Yukon Delta Refuge boundaries at the mouth of the Kuskokwim River to the ADF&G regulatory markers downstream of the mouth of the Holitna River with 4-inch or less mesh size set gillnets from 9:00 a.m. until 9:00 p.m. Saturday, June 3, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark.
EO 3-S-WR-04-17	June 10, 2017	Subsistence fishing will be allowed within the mainstem Kuskokwim River from the Yukon Delta Refuge boundary at the mouth of the Kuskokwim River to the headwaters with 4-inch or less mesh size set gillnets from 10:00 a.m. until 10:00 p.m. Saturday, June 10, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark. Chinook salmon incidentally harvested in gillnets during this opportunity may be retained.
EO 3-S-WR-05-17	June 12, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gillnets, not to exceed 25 fathoms in length, will be allowed for 24 hours from 12:00 p.m. noon, Monday, June 12 until 12:00 p.m. noon, Tuesday, June 13, 2017.
EO 3-S-WR-06-17	June 12, 2017	From the Holitna River mouth to the headwaters of the Kuskokwim River: Section 5 Subsistence fishing with 6-inch or less mesh gillnets will be allowed from 12:00 p.m. noon, Monday, June 12 until further notice.
EO 3-S-WR-07-17	June 13, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with hook and line, fish wheels equipped with live boxes or chutes, beach seines, and dip nets is currently allowed until further notice, however retention of Chinook salmon caught with these gear types will close at 12:00 p.m. noon, Tuesday, June 13, 2017. Any Chinook salmon caught with these gear types must be returned immediately to the water alive
EO 3-S-WR-08-17	June 24, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gillnets, not to exceed 25 fathoms in length and 45 meshes in depth, will be allowed for approximately 12 hours from 12:01 p.m. until 11:59 p.m., Saturday, June 24, 2017.

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017 (continued from previous page).

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-09-17	July 3, 2017	<p>From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gill-nets, not to exceed 25 fathoms in length and 45 meshes in depth, will be allowed for approximately 12 hours from 12:01 p.m. until 11:59 p.m., Monday, July 3, 2017.</p> <p>The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak upstream to a line formed between two points lat 61° 35.308' N, long 159° 29.167' W and lat 61° 34.731' N, long 159° 28.939'W (Figure 1) will be closed to subsistence fishing with gillnets from 12:01 p.m. until 11:59 p.m., Monday, July 3, 2017.</p>
EO 3-S-WR-10-17	July 7, 2017	<p>Subsistence fishing in the Kuskokwim River Drainage, from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River up to the mouth of the Holitna River (Sections 1–4), will be allowed from 12:01 p.m. Saturday, July 8, 2017 until further notice. Gillnets are restricted to 6-inch or less mesh, 45 meshes deep, and 25 fathoms in length. The waters of the Kuskokwim River from a line formed between two points lat 61° 35.264' N, long 159° 33.459' W and lat 61° 35.611' N, long 159° 33.260'W upstream to a line formed between two points lat 61° 35.308' N, long 159° 29.167' W and lat 61° 34.731' N, long 159° 28.939'W will be closed to subsistence fishing with gillnets from 12:01p.m.Saturday, July 8, 2017 until further notice.</p>
EO 3-S-WR-11-17	July 13, 2017	<p>Subsistence fishing in the Kuskokwim River Drainage, from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River up to the confluence of the Johnson River (Section 1), will be allowed from 12:01 p.m. Thursday, July 13, 2017 with gillnets restricted to 6-inch or less mesh, 45 meshes deep, and 50 fathoms in length until further notice.</p>
EO 3-S-WR-12-17	July 27, 2017	<p>Kuskokwim River Drainage: Effective 12:01 p.m. Thursday, July 27, 2017, the following restrictions to the mainstem Kuskokwim River subsistence salmon fishery are rescinded:</p> <ul style="list-style-type: none"> <li>• 6-inch or less mesh requirements for subsistence gillnets;</li> <li>• 25 fathom gillnet length restrictions from the mouth of the Johnson River up to the mouth of the Holitna River (Sections 2–4);</li> <li>• The live release requirement of Chinook salmon caught in beach seines, fish wheels, and by hook and line;</li> <li>• The use of dip nets for the taking of salmon; and</li> <li>• The closed waters within Kuskokuak and Old Kuskokuak sloughs and around the mouth of the Aniak River.</li> </ul> <p>Subsistence fishing with gillnets will remain closed in the following tributaries:</p> <ul style="list-style-type: none"> <li>• The Kwethluk River drainage to its confluence with Kuskokuak Slough.</li> <li>• The Kasigluk and Kisaralik river drainages to their confluence with Old Kuskokuak Slough.</li> </ul>
EO 3-S-WR-13-17	August 23, 2017	<p>All subsistence fishing restrictions in Kuskokwim River tributaries have been lifted.</p>

### FP19–12 Executive Summary

<b>General Description</b>	Proposal FP19-12 requests the Federal Subsistence Board revise section § __.27(e)(10)(iv)(I) of the CFR that authorizes the take of salmon through an experimental community gillnet fishery in the Kasilof River. This fishery currently has a five-year window in which to operate before it expires, starting with the date of the first approved operational plan that occurred in July 2015. The requested change is to establish the fishery as a permanent fishery, name the Ninilchik Traditional Council as the operator of the fishery, and to align requirements in the regulations for this fishery with those for the Kenai River community gillnet fishery. <i>Submitted by: Ninilchik Traditional Council.</i>
<b>Proposed Regulation</b>	<i>See pages 248 to 250 of this analysis for proposed regulations.</i>
<b>OSM Conclusion</b>	<b>Support with modification</b> to clarify that the fishery can use a set net, a drift net, or a pole net.  <i>The modified regulation can be found on page 262 of this analysis.</i>
<b>Southcentral Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS**  
**FP19-12**

**ISSUES**

Proposal FP19-12, submitted by the Ninilchik Traditional Council, requests the Federal Subsistence Board (Board) revise section §\_\_\_\_.27(e)(10)(iv)(I) of the CFR that authorizes the take of salmon through an experimental community gillnet fishery in the Kasilof River. This fishery currently has a five-year window in which to operate before it expires, starting with the date of the first approved operational plan that occurred in July 2015. The requested change is to establish the fishery as a permanent fishery, name the Ninilchik Traditional Council as the operator of the fishery, and to align requirements in the regulations for this fishery with those for the Kenai River community gillnet fishery.

**DISCUSSION**

The proponent is seeking to: establish the Kasilof River community gillnet fishery as a permanent fishery; remove the operating plan and provide compliance with the regulatory process that has already been successfully implemented with the Kenai River community gillnet fishery; establish the Ninilchik Traditional Council as the organization that, as the gillnet owner, is responsible for its use; remove repeated language in the regulations and align Kenai River and Kasilof River gillnet regulations; provide reasonable choices to the subsistence users pertaining to harvest efforts and areas; and remove arbitrary and capricious management issues.

They have stated that these changes will improve fish management and populations associated with the fisheries. They also note that these changes will establish a harvestable fishery for subsistence users as mandated through ANILCA and provide continuity with subsistence regulations.

**Existing Federal Regulation****§\_\_\_\_.27(e)(10) Cook Inlet Area**

*(iv) You may take only salmon, trout, Dolly Varden, and other char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56 and 5 AAC 57) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:*

*(I) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through an experimental community gillnet fishery in the Federal public waters of the upper mainstem of the Kasilof River from a Federal regulatory marker on the river below the outlet of Tustumena Lake downstream to the Tustumena Lake boat launch June 16-August 15. The experimental community gillnet fishery will expire 5 years after*



*approval of the first operational plan.*

*(1) Only one community gillnet can be operated on the Kasilof River. The gillnet cannot be over 10 fathoms in length, and may not obstruct more than half of the river width with stationary fishing gear. Subsistence stationary gillnet gear may not be set within 200 feet of other subsistence stationary gear.*

*(2) One registration permit will be available and will be awarded by the Federal in-season fishery manager, in consultation with the Kenai National Wildlife Refuge manager, based on the merits of the operational plan. The registration permit will be issued to an organization that, as the community gillnet owner, will be responsible for its use in consultation with the Federal fishery manager. The experimental community gillnet will be subject to compliance with Kenai National Wildlife Refuge regulations and restrictions.*

*(i) Prior to the season, provide a written operational plan to the Federal fishery manager including a description of fishing method, mesh size requirements, fishing time and location, and how fish will be offered and distributed among households and residents of Ninilchik;*

*(ii) After the season, provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or released.*

*(3) The gillnet owner (organization) may operate the net for subsistence purposes on behalf of residents of Ninilchik by requesting a subsistence fishing permit that:*

*(i) Identifies a person who will be responsible for fishing the gillnet;*

*(ii) Includes provisions for recording daily catches, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.*

*(4) Fishing for Sockeye, Chinook, Coho and Pink salmon will be closed by Federal Special Action prior to the operational plan end dates if the annual*

*total harvest limits for any salmon species is reached or suspended.*

*(5) Salmon taken in the gillnet fishery will be included as part of dip net/rod and reel fishery annual total harvest limits for the Kasilof River. All fish harvested must be reported to the in-season manager within 72 hours of leaving the fishing location.*

*(i) A portion of the total annual harvest limits for the Kasilof River will be allocated to the experimental community gillnet fishery.*

*(ii) The gillnet fishery will be closed once the allocation limit is reached.*

*(6) Salmon taken in the experimental community gillnet fishery will be included as part of the dip net/rod and reel fishery annual household limits for the Kasilof River.*

*(7) Residents of Ninilchik may retain other species incidentally caught in the Kasilof River. When the retention of rainbow/steelhead trout has been restricted under Federal subsistence regulations, the gillnet fishery will be closed.*

*(8) Before leaving the site, all harvested fish must be marked by removing their dorsal fin, and all retained fish must be recorded on the fishing permit.*

*(9) Failure to respond to reporting requirements or return the completed harvest permit by the due date listed on the permit may result in issuance of a violation notice and will make you ineligible to receive a subsistence permit during the following regulatory year.*

## **Proposed Federal Regulation**

### **§ \_\_.27(e)(10) Cook Inlet Area**

*(iv) You may take only salmon, trout, Dolly Varden, and other char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56 and 5 AAC 57) unless modified herein. Additionally for Federally managed waters of*

*the Kasilof and Kenai River drainages:*

*(1) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through ~~an experimental~~ community gillnet fishery in the Federal public waters of the upper mainstem of the Kasilof River from a Federal regulatory marker on the river below the outlet of Tustumena Lake downstream to the Tustumena Lake boat launch June 16-August 15. ~~The experimental community gillnet fishery will expire 5 years after approval of the first operational plan.~~*

*(1) Only one community gillnet can be operated on the Kasilof River. The gillnet cannot be over 10 fathoms in length, **must be no larger than 5.25-inch mesh**, and may not obstruct more than half of the river width with stationary fishing gear. Subsistence stationary gillnet gear may not be set within 200 feet of other subsistence stationary gear.*

*(2) One registration permit will be available and will be awarded by the Federal in-season fishery manager, in consultation with the Kenai National Wildlife Refuge manager, ~~based on the merits of the operational plan.~~ The registration permit will be issued to ~~an organization that,~~ **the Ninilchik Traditional Council.***

*(i) ~~As the community gillnet owner,~~ **the Ninilchik Traditional Council** will be responsible for its use **and removal** in consultation with the Federal fishery manager. ~~The experimental community gillnet will be subject to compliance with Kenai National Wildlife Refuge regulations and restrictions.~~*

*(i) ~~Prior to the season, provide a written operational plan to the Federal fishery manager including a description of fishing method, mesh size requirements, fishing time and location, and how fish will be offered and distributed among households and residents of Ninilchik;~~*

*(ii) **As part of the permit, A**fter the season, **the Ninilchik Traditional Council must** provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or released.*

*(3) ~~The gillnet owner (organization)~~ **Ninilchik Traditional Council** may*

*operate the net for subsistence purposes on behalf of residents of Ninilchik by requesting a subsistence fishing permit that:*

*(i) Identifies a person who will be responsible for fishing the gillnet;*

*(ii) Includes provisions for recording daily catches **within 72 hours**, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.*

*(4) Fishing for Sockeye, Chinook, Coho and Pink salmon will be closed by Federal Special Action prior to the ~~operational plan~~ fishery end dates if the annual total harvest limits for any salmon species is reached or suspended.*

*(5) Salmon taken in the gillnet fishery will be included as part of dip net/rod and reel fishery annual total harvest limits for the Kasilof River. All fish harvested must be reported to the in-season manager within 72 hours of leaving the fishing location.*

*(i) A portion of the total annual harvest limits for the Kasilof River will be allocated to the ~~experimental~~ community gillnet fishery.*

*(ii) The gillnet fishery will be closed once the allocation limit is reached.*

*(6) Salmon taken in the ~~experimental~~-community gillnet fishery will be included as part of the dip net/rod and reel fishery annual household limits for the Kasilof River.*

\* \* \* \*

### **Existing State Regulation**

In 1992, the State classified most of the Cook Inlet Area, including the Kenai and Kasilof River drainages, as part of the Anchorage-Matsu-Kenai Nonsubsistence Area (5AAC 99.015(3)). The only State subsistence fisheries in Cook Inlet occur in areas that are not accessible from the road system, including the Tyonek, Windy Bay, Port Chatham, and Port Graham Subdistricts, as well as portions of Seldovia Bay and the Yentna River drainage. The State's subsistence priority does not apply on the Kenai Peninsula, and the Alaska Board of Fisheries may not authorize subsistence fisheries in this area.

Under State regulations, personal use fisheries and educational fishery permits provide opportunities for harvesting fish with gear other than rod and reel in nonsubsistence areas.

Statewide, the State of Alaska manages commercial and sport salmon fisheries based on the principles and criteria listed in the State's Policy for the management of sustainable salmon fisheries (5 AAC 39.222). There are multiple management plans that apply to the Kasilof River salmon stocks. These include the Upper Cook Inlet Management Plan (5 AAC 21.363), the Kenai River and Kasilof River Early-Run King Salmon Conservation Management Plan (5 AAC 57.160), the Kasilof River Salmon Management Plan (5 AAC 21.365), the Kenai River Late-Run Sockeye Salmon Management Plan (5 AAC 21.360), and the Central District Drift Gillnet Fishery Management Plan (5 AAC 21.353). These plans provide goals for sustained yield, guidance for mixed-species and mixed-stock fisheries, and instructions for allocation between competing fisheries. General and special provisions for sport fisheries on the Kenai Peninsula (including the Kasilof River) are found at 5 AAC 56.120 and 5 AAC 56.122, and provisions for the personal use gillnet and dip net fisheries on Kasilof River stocks are found at 5 AAC 77.540.

### **Extent of Federal Public Waters**

For purposes of this discussion, the phrase "Federal public waters" is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. For the Kasilof River, Federal public waters under consideration include all waters of the Kasilof River within and adjacent to the exterior boundaries of the Kenai National Wildlife Refuge (**Figure 1**). This includes approximately the upper seven miles of the Kasilof River from the outlet of Tustumena Lake downstream to Silver Salmon Rapids. This proposal applies to the area within those waters from a Federal regulatory marker on the Kasilof River below the outlet of Tustumena Lake downstream to the Tustumena Lake boat launch.

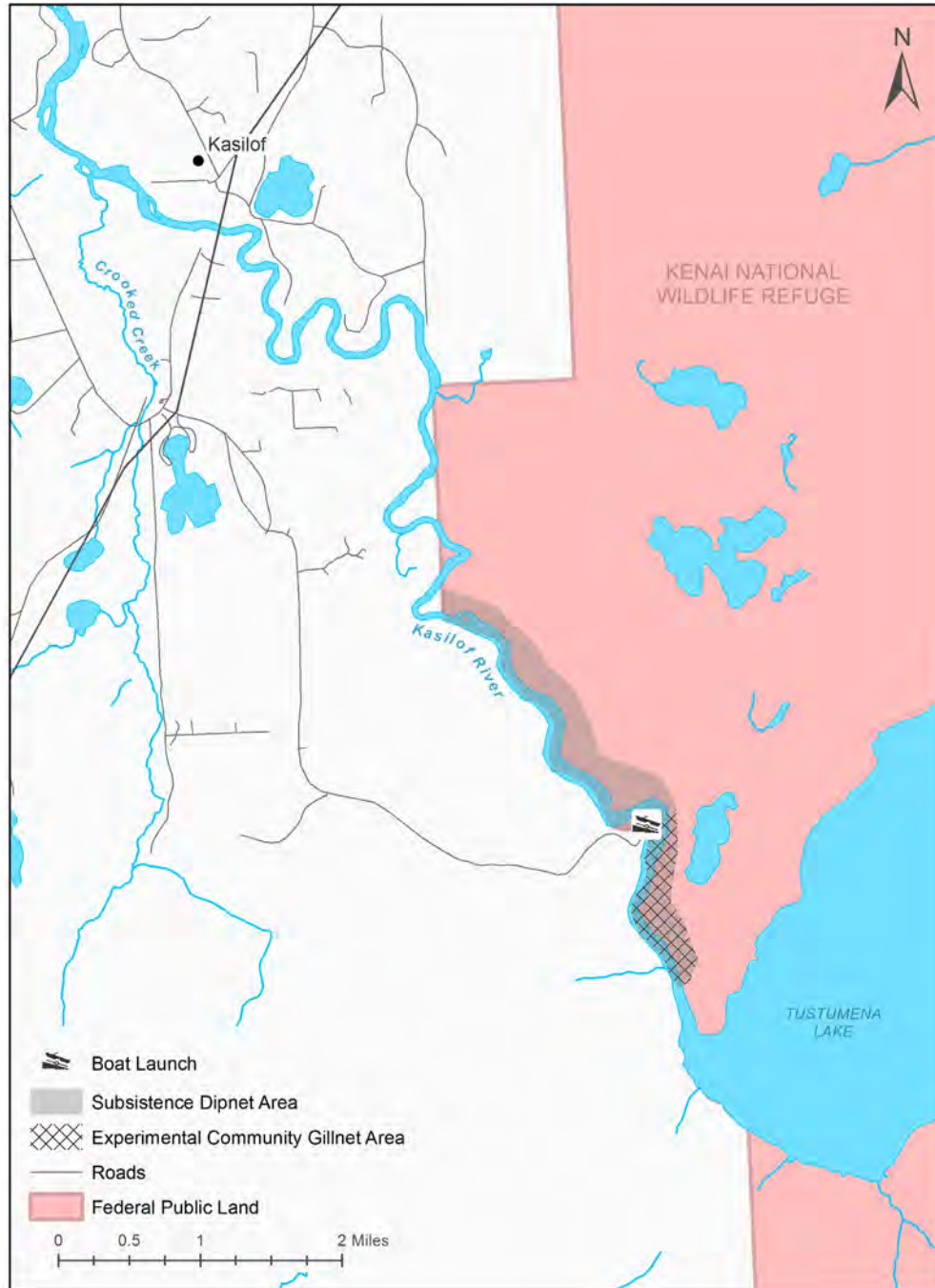
### **Customary and Traditional Use Determinations**

Rural residents of Ninilchik have a customary and traditional use determination for all fish for waters within the Kasilof River drainage within the Kenai National Wildlife Refuge.

### **Regulatory History**

In 2001, Federal subsistence management regulations for harvest in the Cook Inlet Area were established for salmon, trout, and Dolly Varden through Board passage of fisheries proposal FP02-11 (FSB 2001). A Federal subsistence permit was required, and seasons, harvest and possession limits, and methods and means for take were the same as those in Alaska sport fishing regulations. This fishery was established as an interim measure to provide some subsistence opportunity in the Cook Inlet Area for Federally qualified subsistence users. Initially, there were no customary and traditional use determinations for salmon, trout and Dolly Varden in Cook Inlet; so all rural residents could harvest under Federal regulations.

In January 2006, the Board made customary and traditional use determinations for Hope and Cooper Landing residents for all fish in the Kenai River Area, and for Ninilchik residents for all fish within the



**Figure 1.** Location of the Kenai National Wildlife Boundary at the outflow of Tustumena Lake and along the upper reaches of the Kasilof River, including the area where the community gillnet fishery takes place.

Kasilof River drainage within the Kenai National Wildlife Refuge through passage of fisheries proposal FP06-09, which had been deferred from the 2002 proposal cycle (FSB 2006). The Ninilchik Traditional Council submitted a proposal for the 2009 cycle (FP09-07) requesting a customary and traditional use determination for all fish in the Kenai River Area within the Kenai National Wildlife Refuge and the Chugach National Forest by Ninilchik residents (OSM 2009). The Board chose not to adopt that

proposal at the time (FSB 2009), but reversed that decision in November 2010 (FSB 2010), following a request for reconsideration, RFR09-01.

During the 2007 regulatory cycle, two additional steps were added to the analysis and review process for regulatory proposals. First, the Southcentral Alaska Subsistence Regional Advisory Council (Council) formed a stakeholder subcommittee, which met twice in Soldotna in February 2007, to review the analyses and suggest changes. Second, the Ninilchik Traditional Council (NTC), a proponent of some of the proposals, provided a review to assess and give feedback on the changes suggested by the subcommittee, and suggest other changes. Both of these steps took place prior to the Council's March 2007 meeting. Several suggested changes from these extra steps were incorporated into the analyses as modifications to the proposed regulations, and were presented to the Council and, ultimately, the Board (OSM 2007).

At the time, the Board typically held public meetings twice a year to make decisions on proposals to change Federal subsistence management regulations throughout the State; once in the spring (April or May) for wildlife regulations and once in the winter (December or January) for fisheries proposals. In May 2007, the Board held a third public meeting solely to hear public testimony on, deliberate, and make decisions for the Kenai Peninsula fisheries proposals of the 2007 regulatory cycle (FSB 2007a).

During its May 2007 meeting, the Board adopted proposal FP07-27, which covered both the Kenai and Kasilof river drainages (FSB 2007a). This established dip net/rod and reel salmon fisheries on both rivers, increased previously established harvest, possession, and annual limits for salmon and selected resident species for existing Federal subsistence rod and reel fisheries, and allowed use of up to two single or treble hooks and bait for rod and reel fishing during specified dates. Sockeye Salmon annual harvest limits were set at 4,000 fish, with an annual household limit of 25 for each permit holder, and an additional 5 per each household member. Chinook, Coho, and Pink Salmon annual harvest limits were each set at 500 fish, with an annual household limit of 10 for each permit holder, and an additional 2 per each household member. The Board adopted proposals FP07-27D and FP07-30, which established a winter season subsistence fishery at Tustumena Lake with jigging through the ice and gillnets fished under the ice for Lake Trout, Rainbow Trout and Dolly Varden/Arctic Char (FSB 2007a).

Additionally, during the 2007 regulatory cycle, there were two proposals that included requests for the use of gillnets. These included Proposals FP07-27B and C (submitted by NTC) and FP07-29 (submitted by Mr. Robert Gibson of Cooper Landing). FP07-27B and C requested a community set gillnet fishery for Chinook, Sockeye, and Pink Salmon in the Kasilof and Kenai Rivers and a community set gillnet fishery for Coho Salmon in the Kenai River. FP07-29 requested that gillnets with different mesh sizes be used to harvest Sockeye Salmon, Coho Salmon, Pink Salmon, Rainbow Trout, Dolly Varden, Lake Trout, and whitefish species in several lakes in the Kenai River drainage. The proposals did not gain support of the Council, and the Board rejected them (FSB 2007a).

During the 2008 cycle, the Council submitted Proposal FP08-09 to establish a temporary community fish wheel on both the Kenai and Kasilof Rivers for residents of Ninilchik, Hope, and Cooper Landing. The Council contended that fish wheels would provide a more effective means for Federally qualified subsistence users to harvest salmon. The Council requested the establishment of fish wheels as a gear type be temporary to evaluate the feasibility of operating this type of gear. The Board, at its December 2007

meeting, adopted the proposal, with modification, to allow fish wheels to be classified as a gear type, but only in the Kasilof River. The Board felt that there were too many logistical issues to be dealt with on the Kenai River, especially with three communities having the possibility of running a single fish wheel. The Board specified that only one fish wheel with a live box would be allowed in the upper mainstem of the Kasilof River. A permit would be required to use the fish wheel and that an operational plan must be submitted to and approved by the Federal in-season manager, before the permit would be awarded. Individuals operating the fish wheel would need to have a Federal subsistence fishing permit and all harvest limits on the permit would apply to the fish wheel. Salmon harvested by the fish wheel were included as part of each household's annual limit and all fish harvested were to be reported to the in-season manager with 72 hours of leaving the fishing location (FSB 2007b). The Board adopted proposal FP13-15 at its January 2013 meeting to remove the expiration date and making permanent the community fish wheel salmon fishery on the Kasilof River (FSB 2013).

For the 2015 regulatory cycle, the Ninilchik Traditional Council submitted Proposal FP15-11 to establish a community gillnet fishery on the Kasilof River. They contended that previous efforts to establish a meaningful subsistence fishery had been unsuccessful, and that good faith efforts had been made to attempt to use the fish wheel. They requested a single community net to avoid the proliferation of nets and decrease conservation concerns, and suggested an operational plan similar to what had been done with the fish wheel. The Council supported the proposal and stated that conservation concerns raised by the U.S. Fish and Wildlife Service (USFWS) could be addressed through an operational plan (OSM 2015).

Although the USFWS had concerns with implementing this fishery using a gear type with the potential to harvest large numbers of fish in relatively short periods of time, they supported initiating the experimental fishery based on their assessment that the Service's three primary concerns associated with gillnet use in the Kasilof River could be addressed (Anderson 2016, pers. comm.). These concerns include: 1) fishing a gillnet in a known spawning area for Steelhead; 2) potential for take of Steelhead and late-run Chinook Salmon, which are in low abundance in the watershed and cannot sustain much increased harvest; and 3) establishing a fishery that conflicts with existing Federal subsistence management regulations that prohibit the harvest of Steelhead after August 15. USFWS staff recommendations for modifying Proposal FP15-11 to address these primary concerns included establishing time and area restrictions for the fishery to avoid fishing in important salmon spawning areas and the harvest of spawning fish and restricting gillnet use to a period of time when Steelhead are not present in the system. USFWS supported the modified fishery as all fish captured in the experimental gillnet fishery, regardless of species or size, would be legal to harvest under Federal subsistence management regulations. The Board adopted Proposal FP15-11 at its January 2015 meeting with modification as developed and offered by the USFWS (FSB 2015). Modifications included an expiration date five years from approval of the first operational plan, a July 1 season start date to provide conservation measures for Steelhead kelts (Steelhead that return to the sea following spawning) that leave the river by late June, and a season end date of July 31 to provide conservation measures for late-run Chinook Salmon that begin entering the system towards the end of July. The first operational plan was approved on July 13, 2015, and fishing commenced that same day.

For the 2017 regulatory cycle, the Ninilchik Traditional Council submitted Proposal FP17-09 to revise the Kasilof River gillnet regulations. The proposal requested changes to the fishery including removing



the experimental designation, replacing the operational plan requirement with permit conditions, expansion of fishery dates to May 1 through November 15, and naming the Ninilchik Traditional Council as the specific operator of the fishery. Due to the volume of changes requested in the single proposal, analysts at the Office of Subsistence Management split the proposal into seven separate requests examined in the same analysis (OSM 2017). The Council supported Proposal FP17-09 with modification only to match the dates in place already for the harvest of Chinook and Sockeye Salmon (June 16 to August 15) and require the continuation of annual reporting at the end of the season. The Board action on this proposal was to change only the dates of the fishery to June 16 through August 15, stating that the debate on the remaining aspects of the proposal could take place at the end of the experimental period (FSB 2017).

Approval and signature of the operational plan for 2016 took place on June 10, 2016, with no substantial changes from the 2015 plan. The 2016 fishery was operational between July 1 and 27, 2016.

Approval and signature of the 2017 operational plan took place on April 18, 2017, with no substantial changes from the 2015 plan apart from new fishery dates of June 16 to August 15. The fishery was operational between June 16 and August 7, 2017.

## **Biological Background**

### Sockeye Salmon

Sockeye Salmon are the most abundant salmon species in the Kasilof River drainage, with a current optimal escapement goal of 160,000-390,000 fish and a biological escapement goal of 160,000-340,000. Returns to this system are greatly influenced by openings and closings to the Upper Cook Inlet commercial salmon fisheries, and have been within or above the escapement goal ranges in place between 2008 and 2017 (ADF&G 2018). There are no current conservation concerns for this run.

### Chinook Salmon

The Kasilof River supports both early and late runs of Chinook Salmon. There is a weir on Crooked Creek that provides assessment of early-run Chinook Salmon abundance for the Kasilof River. The sport fishery is supported primarily by stocked fish of Crooked Creek hatchery origin (Begich et al. 2017). The last assessment of late-run Chinook Salmon abundance was for the years 2005 to 2008 (Reimer and Fleishman 2012). The mark-recapture study found returns were most likely near 10,000 wild, age 2+ fish for 2006-2008. The largest age class was 4 ocean fish in 2006 and 2007 and 3 ocean fish in 2008. The department initiated a sonar assessment project in 2018 for Late-Run Chinook Salmon that counts large Chinook Salmon (>750 mm mid-eye to tail fork) with no associated sampling program (Miller et al. 2018).

Early-run Chinook Salmon, including the hatchery-produced component, spawn in Crooked Creek during late May and June. Only the headwaters of Crooked Creek lie within the Kenai National Wildlife Refuge, so early-run Chinook Salmon are not generally available for harvest in Federal public waters.

Identified spawning areas for late-run Chinook Salmon include Crooked Creek, the mainstem Kasilof River near the mouth of Crooked Creek at river mile (RM) 6.9, the mainstem upstream of the Sterling Highway bridge between RM 9 and 12, and the upper mainstem between RM15 and 18 within the Kenai National Wildlife Refuge (Faurot and Jones 1990, Reimer and Fleishman 2012). Late-run Chinook Salmon spawn in the upper river during August and September, making them available for harvest by Federally qualified subsistence users. As with many Chinook Salmon stocks in the Cook Inlet Area, fisheries targeting this relatively small late-run Chinook stock have been managed in a conservative manner over the past few seasons.

### Coho Salmon

Coho Salmon are likely the second most abundant salmon species in the Kasilof River drainage. Radio-telemetry experiments during the 2007-2009 seasons found the upper mainstem to be an important spawning area (Gates et al. 2010). Of those tagged fish that were assigned to a spawning location, the majority were found to be spawning in the mainstem Kasilof River above RM 15 and downstream of the Tustumena Lake boat ramp. Smaller spawning populations were found in Tustumena Lake tributaries, the mainstem Kasilof River below RM 15, or in lower river tributaries. The run extends from as early as late-July to beyond late-October. Several of the comparatively small lake tributary populations appear to comprise the majority of the early portion of the run, which could make them susceptible to overexploitation in fisheries that target the early component of the run (Bromaghin et al. 2010).

### Steelhead

The Kasilof River supports a small fall-run population of Steelhead. These fish enter freshwater in the fall to overwinter, spawn in the spring, and a significant portion of the population emigrate back to the marine environment following spawning (Gates 2009). The majority of overwintering, which occurs between December and March, takes place in the mainstem Kasilof at the outlet to Tustumena Lake, in the lake, and in the mainstem from Crooked Creek to the outlet, in that order (Gates and Boersma 2010). Spawning locations include the mainstem Kasilof River, Kasilof River tributaries, and tributaries to Tustumena Lake. Spawn timing is between late April and late June, and takes place in the mainstem Kasilof River, tributaries of the Kasilof River, and tributaries to Tustumena Lake. Post-spawn kelt emigration occurs between early May and late June. The 2008 and 2009 tagging studies conducted by Gates and Boersma (2010) indicate that while these fish are present throughout the mainstem from RM 5 of the Kasilof River all the way to Tustumena Lake in April, they have generally departed the upper river area by May, and are concentrated downstream of RM 16 in June.

## **Harvest History**

### Sockeye Salmon

Kasilof River Sockeye Salmon are harvested in large numbers in mixed-stock commercial salmon fisheries in Cook Inlet (Shields and Dupuis 2016). The Upper Cook Inlet commercial Sockeye Salmon estimated harvest has ranged from 2,045,794 to 5,277,995 Sockeye Salmon during 2007–2016, with a

10-year average harvest of 2,885,203 fish. The estimated sport fishery harvest in the mainstem Kasilof River has ranged from 3,693 to 19,819 Sockeye Salmon during the years 2007–2016, with a 10-year mean estimated harvest of 9,907 fish (Alaska Sport Fishing Survey Database 2006-2018). Sport fishing for Sockeye Salmon is not permitted within Tustumena Lake or its tributaries. The combined estimated harvests from the personal use gillnet and dip net fisheries for Kasilof River Sockeye Salmon have ranged between 58,236 to 116,567 fish during the years 2007–2016, with a 10-year mean harvest of 89,612 fish (Shields and Dupuis 2017). Educational fisheries harvests ranged between 18 and 300 fish during the years 2007–2016, with an average harvest of 95 (Begich et al. 2017).

Federal subsistence harvest for the Kasilof River is restricted to Federal public waters by the residents of the Ninilchik area. A low level of Sockeye Salmon harvest has taken place since the start of these fisheries, with harvest increasing following the addition of a community gillnet fishery in 2015 (**Table 1**). Harvest by dip net has occurred in all years since 2007, and has ranged between 1 and 108 fish taken. Zero harvest has occurred through the rod and reel fishery. An experimental community gillnet fishery has taken place during the years 2015, 2016, and 2017, with a total harvest over the three years of 632 Sockeye Salmon.

**Table 1.** Federal subsistence fishery harvests in the Kasilof River drainage by residents of the Ninilchik area (USFWS 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016b, 2017, and 2018).

Kasilof River Federal Subsistence Harvests										
Year	Dip Net			Rod and Reel			Community Gillnet			Total
	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	
2007	30	-	-	-	-	-				30
2008	108	-	2	-	-	-				110
2009	7	-	-	-	-	-				7
2010	40	-	-	-	-	-				40
2011	1	-	-	-	-	-				1
2012	24	-	-	-	-	-				24
2013	107	-	-	-	-	-				107
2014	45	-	-	-	-	-				45
2015	65	-	-	-	-	2	223	-	-	290
2016	7	-	-	-	-	-	94	-	-	101
2017	16	-	-	-	-	-	315	-	-	331
TOTAL	450	n/a	2	-	-	2	632	-	-	1,086
Average	41	n/a	0	-	-	0	211	-	-	252

### Chinook Salmon

The early-run supports the larger recreational fishery. Sport fishing for Chinook Salmon occurs on the mainstem Kasilof River, is focused on the enhanced early run of Crooked Creek Chinook Salmon, which can be identified by an adipose fin clip, and is not allowed above the Sterling Highway Bridge after 30 June. Sport fish harvest of wild Chinook Salmon (with an adipose fin), above the bridge prior to July 1, is restricted to Tuesdays, Thursday and Saturdays by regulation. The early-run sport fishery started under precautionary restrictive measures for 2014 and 2015 due to area wide suppressed runs, but restrictions were relaxed in 2016 (Begich et al. 2017). The estimated harvests of early-run Chinook

Salmon have ranged between 323 and 2,654 during the years 2006-2015, with a mean of 1,490. The late-run sport fishery was restricted for 2014, began restricted in 2015 but returned to standard regulations before the end of the season, and was managed under standard regulations for 2016. The estimated harvests of late-run Chinook Salmon have ranged between 2,164 and 55 during the years 2006-2015, with a mean of 979.

Kasilof River Chinook Salmon are also subject to small levels of harvest through personal use and educational fisheries. The estimated Kasilof River personal use fishery harvests between 2007 and 2016 have ranged from 50 and 343 by gillnet and from 46 and zero by dip net (Shields and Dupuis 2017). Educational fisheries harvests have ranged between zero and 8 fish during the years 2007–2016, with a mean harvest over that span of 3 fish (Begich et al. 2017).

Lastly, Chinook Salmon are harvested during mixed-stock commercial salmon fisheries in Upper Cook Inlet management area. This area consists of that portion of Cook Inlet north of a latitude of Anchor Point. There is delineation of Kasilof River Chinook Salmon harvest from the East Side Set Net fishery by data stratum and area stratum. Chinook Salmon of Kasilof and Kenai River origin are harvested along in all geographic areas of this fishery, and make up the bulk of the Chinook Salmon taken in this fishery (Eskelin and Barclay 2016). There is no specific delineation of Kasilof River Chinook Salmon for these fisheries. The most recent 10 year average of Upper Cook Inlet Chinook harvest in the commercial fishery is estimated at 10,227 (Shields and Dupuis 2017).

Harvests of Chinook Salmon in the Federal subsistence fisheries for the Kasilof River has been almost nonexistent (**Table 1**). A total of four fish have been reported as taken since these fisheries started in 2007.

### Coho Salmon

Coho Salmon are harvested during mixed-stock commercial salmon fisheries in Cook Inlet. Total annual estimated harvest within these fisheries is usually hundreds of thousands of Coho Salmon. The contribution of Kasilof River Coho Salmon to these harvests is unknown. Estimates of sport fishery harvest in the mainstem Kasilof River ranged from 1,673 to 4,037 fish during the years 2007–2016, with an average harvest of 2,968 fish (Alaska Sport Fishing Survey Database 2018). The combined harvests from the personal use gillnet and dip net fisheries for Kasilof River Coho Salmon have ranged between 555 and 2,914 fish during the years 2007–2016, with a 10-year mean harvest of 1,550 fish (Shields and Dupuis 2017). Educational fisheries harvests ranged between zero and 45 fish during the years 2007–2016, with an average harvest of 32 (Begich et al. 2017).

There has been no documented harvest of Coho Salmon in the Federal subsistence fisheries for the Kasilof River (**Table 1**).

### Steelhead

The Kasilof River Steelhead run is primarily targeted by sport fishermen. This run was enhanced by ADF&G to provide additional angling opportunity between the early 1980's and 1996, and the 1993

harvest exceeded 2,000 fish (Begich et al. 2017). Present catch and harvest is supported by natural populations. Estimates of contemporary sport fishing harvest range between zero and 47 for the years 2007–2016, with estimates of zero harvest during half of the years in that range.

There has been no documented harvest of Steelhead in the Federal subsistence fishery.

### **Cultural Knowledge and Traditional Practice**

The Ninilchik community is comprised of two census-designated places (CDPs): Ninilchik and Happy Valley. ADF&G subsistence use studies conducted in 2002–03 on Ninilchik included Ninilchik and Happy Valley CDPs (Fall et al. 2004). Thus, when reference is made to Ninilchik in this analysis, it includes people living in the Ninilchik CDP as well as the Happy Valley CDP. In the 2010 U.S. Census, Ninilchik CDP had 883 year-round, permanent residents and Happy Valley had 593 year-round permanent residents (U.S. Census 2010); thus the total population for the two CDPs from the last census is 1,476.

The Ninilchik tribal government (which is the NTC) is the only local government in the immediate Ninilchik area. The community does not have its own local municipal government however Ninilchik is part of the Kenai Peninsula Borough. The community of Ninilchik is similar to road-connected rural portions of the Copper River Basin where the local governments of communities are tribal, not municipal (Stratton and Georgette 1984).

The community of Ninilchik is within the traditional territory of the Dena'ina Athabaskans, which dates back to around at least 1000 A.D. The area extends from Kachemak Bay on the Kenai Peninsula, west across Cook Inlet to the Stony River and northeast to the Susitna Basin. Borders are shared with the traditional territory of the Sugpiaq (Alutiiq) which includes the southern portion of the Kenai Peninsula, bridging the Sugpiaq territories of Prince William Sound with Kodiak Island and the Alaska Peninsula (de Laguna 1934, Stanek 1980, Krauss 1982).

Non-Native settlement of the Kenai Peninsula began in the 18th century with the Russians and the fur trade, and later mining efforts in Kachemak Bay. At the end of the 19th century, commercial fishing brought about new settlements, such as the herring saltery at Seldovia in 1896. The next major non-Native settlement period began during the Gold Rush era at the end of the 19th century. With the construction of roads and local oil development in the 1950's, the population of the Kenai Peninsula increased substantially through in-migration of people born outside Alaska.

From the early 1900's, the annual subsistence pattern of the *Dena'ina* included commercial fishing in the spring and summer at the mouth of the Kenai River before moving up-river in the fall to harvest Coho Salmon and freshwater fish, hunt moose, and trap furbearers. This cycle continued until the 1940s when the creation of the Kenai National Moose Range disrupted traditional harvest patterns. Despite new Federal refuge enforcement efforts, many *Dena'ina* continued to access their Stepanka camps; long used settlements up the Kenai River near the outlet of Skilak Lake (Fall et al. 2004:16–20).

Subsistence fishing in the freshwaters of the Kenai Peninsula was prohibited from 1952 until the Federal

Subsistence Board created a subsistence fishery in 2002 which mirrored the State sport fishing regulations. Since statehood, legal availability of fishery resources in Federal public waters has been defined by State sport fishing regulations, and these regulations do not provide for harvest of all species or harvest by traditional methods and means. In this area, preferred traditional methods and means include nets, an efficient method and means of harvest for subsistence users who traditionally harvest as much fish as they can process at once. Rod and reel is considered a traditional subsistence gear type under Federal subsistence management regulations and under State regulations in some parts of the state. In some cases under State regulations, rod and reel has been recognized as traditional gear in places where fish fences or traps are no longer a legal means to harvest fish and rod and reel is the only legal alternative (Williams et al. 2005:31–32). Georgette (1983:185) noted that some Ninilchik residents said they have never learned to fish successfully with a rod and reel and that fishing with a rod and reel consumes too much of their time.

In 1952, gillnets were made illegal in many freshwaters, and the Kenai Peninsula *Dena'ina* ceased using gillnets during their fall occupation of their upriver harvest sites. The Stepanka fishery, which had been a traditional, long-standing source of salmon for the Dena'ina (Kenaitze) Indians, was closed. As a result of this closure, snagging became the primary harvest method until it was made illegal in 1973. Local residents turned to sport fishing without snagging, and continued to fish the beaches of Cook Inlet with gillnets in the State subsistence fishery. In the 1970's, sport fishing had grown and the Kenai Peninsula became a favorite spot for sport fishing. The Kenai Peninsula is unique in that rural communities are interspersed among much larger nonrural communities. By the early 1980's, the Alaska Board of Fisheries added more restrictions on subsistence and personal use fishing along the Cook Inlet beaches, closing beaches to subsistence gillnetting. By the mid-1990s, only two personal use fisheries remained at the mouth of the Kenai and Kasilof rivers (Fall et al. 2004:22–23; 30).

Regulations relating to areas, seasons, and methods have changed consistently over the past 54 years and become more restrictive. The changing regulations have affected access by Ninilchik residents to fish resources over time and have encouraged multiple approaches to obtaining subsistence resources. For example, in the case of salmon, as regulations and conditions have changed, residents have adapted their traditional practices to continue to obtain salmon—trade it, buy it, or harvest it in new ways under various regulatory regimes (Georgette 1983:186–187). In 1993, ten years after the above cited-report was written, a State judge ordered the development of educational fisheries for the NTC, the Knik Tribal Council, the Native Village of Eklutna and the Kenaitze Tribe (Loshbaugh 1993:1, 14). These fisheries were established as the result of lawsuit filed by the Kenaitze Tribe. The educational fishery provided another means for residents of Ninilchik to harvest salmon using gillnets. The educational permits, however, were a compromise: “Villagers—who have traditionally focused on early-run king salmon will be catching mostly reds under the proposed permit” (Loshbaugh 1993:14).

### **Effects of the Proposal**

If adopted, this proposal would make the community gillnet fishery more permanent after four years of operation under the experimental title. The Board approved this fishery in January 2015 with a five-year experimental designation following the approval of the first operational plan. This change

would provide continued opportunity for Federally qualified subsistence users from Ninilchik to obtain salmon from this community gillnet fishery.

If the Board does not change this designation, the fishery would expire, and would not be available the last season (2020) before the next regulatory cycle. This would decrease harvest opportunity for Federally qualified subsistence users from Ninilchik.

The Ninilchik Traditional Council would be named as the organization that operates the Kasilof River community gillnet fishery. The current regulation did not specify a particular organization to operate the fishery. The Ninilchik Traditional Council is the organization that has run the fishery for all seasons that it has taken place, and has the capacity to continue to do so. This change would align the regulations for the Kenai River community gillnet fishery, which they also operate. There have been no issues to date with their operation of this fishery. This change is not expected to affect Federally qualified subsistence users.

The operational plan requirement for the fishery would be replaced with standard permit conditions. The permit conditions provided in the request would require a post season report of evaluation information including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or released. The permit would also identify those responsible for fishing the gillnet, and contain provisions for recording daily catches within 72 hours, households the fish are distributed to, and any other information determined necessary for effective management by the Federal in-season manager. Additional aspects of the current operational plan, such as details of the gillnet, how it may be fished, and who is responsible for operation and removal, would be included in the regulation for the fishery.

The operational plan currently describes how fishing time and fish will be offered and distributed among households and residents of Ninilchik. Replacing this requirement with static permit conditions would reduce the burden on the proponent prior to, during, and following the fishery each year. The removal of the operational plan requirement may decrease the ability of the Federal in-season manager to make annual adjustments to the fishery as necessary, based on the prior years' harvest. The Federal in-season manager's delegated authority would still allow for issuance of emergency special actions to: open and close Federal subsistence fishing periods or areas provided under codified regulations; specify methods and means; specify permit requirements; set harvest and possession limits; and close and re-open Federal waters to non-subsistence fishing. Removal of the operational plan may limit the ability to address issues with distribution of harvested fish in the community, should any arise. However, this change would match the current operation for the Kenai River community gillnet fishery, which has operated with set permit conditions and no operational plan for the past few seasons.

There are a handful of other provisions in the operational plan that direct how the fishery is to be conducted that now would be included as permit conditions. For instance, the operational plan requires the gillnet to be actively monitored at all times and removed from the water when not in use. The operational plan provides specifics for removing the gear when not in use, instructions for leaving the gear on site in a locked box, and leaving the anchor and buoy in the water during the season when they

are not in use. The operational plan also requires specific information be collected and provided to the USFWS during each gillnet soak to inform management in current and future years. Transferring these provisions from the operational plan to permit conditions would result in no effective change to the users or resource.

There are two items from the fishery in the operational plan that are not addressed in the proposal as written. First, the operational plan allows for the gillnet to be fished as set gear, as drift gear, or as a pole net, and provides specifics about operations by these different methods. The current and proposed regulations do not mention using the gear to drift or pole net fish, but instead speak to the fishery as a community gillnet fishery with specifics only about the use of the gillnet as set gear. Without some clarification, the other two methods not mentioned (drift gillnet and pole net) may be lost as options for the fishery. Second, a specific allocation of Sockeye Salmon for the gillnet fishery has been provided in the operational plan, while the current and proposed regulations only state that salmon taken in the fishery will be included in the annual total harvest limits for the Kasilof River. The ability to explicitly state how many fish are allocated to this fishery (for example in 2018, 2,000 of the 4,000 Sockeye Salmon allowed for harvest in the Kasilof River were allocated to this fishery) will be lost.

As this is a continuing fishery, removing the experimental designation and allowing the fishery to continue into the future with changes to provisions of how the fishery is permitted is not expected to have any different impacts on the populations of fish in the Kasilof River.

If the proposal is adopted, residents of Ninilchik will continue to have subsistence harvest opportunities for Sockeye Salmon and other fish on the Kasilof River that have been shown to be superior to that when using other gear types, while still harvesting considerably less than the sport and personal use fisheries.

## OSM CONCLUSION

**Support Proposal FP19-12 with modification** to clarify that the fishery can use a set net, a drift net, or a pole net.

The modified regulation should read:

### **§ \_\_.27(e)(10) Cook Inlet Area**

*(iv) You may take only salmon, trout, Dolly Varden, and other char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56 and 5 AAC 57) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:*

*(I) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through ~~an experimental~~ community gillnet fishery in the Federal public waters of the upper*



*mainstem of the Kasilof River from a Federal regulatory marker on the river below the outlet of Tustumena Lake downstream to the Tustumena Lake boat launch June 16-August 15. ~~The experimental community gillnet fishery will expire 5 years after approval of the first operational plan.~~*

*(1) Only one community gillnet can be operated on the Kasilof River. The gillnet cannot be over 10 fathoms in length, **must be no larger than 5.25-inch mesh**, and may not obstruct more than half of the river width with stationary fishing gear. Subsistence stationary gillnet gear may not be set within 200 feet of other subsistence stationary gear.*

*(i) **The gillnet may be operated as a set gillnet in a fixed location, as a pole-net system drifted through an area while wading, or as a drift net from a boat.***

*(2) One registration permit will be available and will be awarded by the Federal in-season fishery manager, in consultation with the Kenai National Wildlife Refuge manager, ~~based on the merits of the operational plan.~~ The registration permit will be issued to ~~an organization that,~~ **the Ninilchik Traditional Council.***

*(i) ~~As the community gillnet owner,~~ **the Ninilchik Traditional Council** will be responsible for its use **and removal** in consultation with the Federal fishery manager. ~~The experimental community gillnet will be subject to compliance with Kenai National Wildlife Refuge regulations and restrictions.~~*

*(i) ~~Prior to the season, provide a written operational plan to the Federal fishery manager including a description of fishing method, mesh size requirements, fishing time and location, and how fish will be offered and distributed among households and residents of Ninilchik;~~*

*(ii) **As part of the permit, A**after the season, **the Ninilchik Traditional Council must** provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or released.*

*(3) ~~The gillnet owner (organization)~~ **Ninilchik Traditional Council** may*

*operate the net for subsistence purposes on behalf of residents of Ninilchik by requesting a subsistence fishing permit that:*

*(i) Identifies a person who will be responsible for fishing the gillnet;*

*(ii) Includes provisions for recording daily catches **within 72 hours**, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.*

*(4) Fishing for Sockeye, Chinook, Coho and Pink salmon will be closed by Federal Special Action prior to the ~~operational plan~~ fishery end dates if the annual total harvest limits for any salmon species is reached or suspended.*

*(5) Salmon taken in the gillnet fishery will be included as part of dip net/rod and reel fishery annual total harvest limits for the Kasilof River. All fish harvested must be reported to the in-season manager within 72 hours of leaving the fishing location.*

*(i) A portion of the total annual harvest limits for the Kasilof River will be allocated to the ~~experimental~~ community gillnet fishery.*

*(ii) The gillnet fishery will be closed once the allocation limit is reached.*

*(6) Salmon taken in the ~~experimental~~ community gillnet fishery will be included as part of the dip net/rod and reel fishery annual household limits for the Kasilof River.*

\* \* \* \*

## **Justification**

The Board put this experimental period in place to examine the performance of this fishery for a relatively short time before deciding on its ultimate fate. A similar request to make this fishery permanent was submitted during the last regulatory cycle, and the Board opted to wait and continue to examine the fishery at that time. The first operational plan for the gillnet fishery was approved in 2015, and so this regulatory cycle is an appropriate time for the Board to review the status of this fishery. The fishery has taken place for three seasons without operational or conservation issues, so making it more permanent is a logical next step.

There have been no concerns raised to the Federal in-season manager, over the first few years of this fishery, about operation of this fishery by the Ninilchik Traditional Council. They are the organization named in regulation to operate the Kenai River community gillnet fishery. Making this change for the Kasilof River community gillnet fishery would provide for regulatory clarity and conformity.

Adding the methods by which the net may be fished will ensure that all three will continue to be available options.

Using an operational plan for this fishery was an appropriate way to understand how the fishery would perform for the first few years. It allowed managers to work out finer details of operations, and to make changes to any specific items from season to season. However, after four years of operation in this manner, the finer points of the fishery have been resolved. Its operation has shown that conservation concerns can be addressed, and there have been no adverse impacts to non-target species. It is appropriate to grant the request to take the points of the operational plan and make them into permit conditions or specific points in regulation. This follows the same path that the Kenai River community gillnet fishery has taken.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southcentral Alaska Subsistence Regional Advisory Council

**Support FP19-12 as modified by OSM.** The Council noted that the Ninilchik Traditional Council successfully implemented the experimental fishery to minimize bycatch. The Council supported the proposal that benefits subsistence users, aligns requirements in regulations for this fishery for those for Kenai River community gillnet fishery, also operated by Ninilchik Traditional Council. The Council found there were fewer conservation concerns for salmon stocks on the Kasilof River than on the Kenai River and the proposed methods do not have the potential to create conservation concerns on the Kasilof River. There was no opposition expressed by the public.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fishery Proposal FP19-12:** This proposal was submitted by the Ninilchik Traditional Council and would establish the experimental community gillnet fishery in the Kasilof River as a permanent fishery, name the Ninilchik Traditional Council as the operator of the fishery, and align requirements in the regulations for this fishery with those for the Kenai River community gillnet fishery.

**Background:** The Alaska Department of Fish and Game (department) manages Kasilof sockeye salmon stocks to achieve an optimal escapement goal of 160,000- 390,000 sockeye salmon. For the last ten years (2009-2018) the goal has been achieved six years and exceeded four times. The department initiated a Chinook salmon assessment project in the Kasilof River in 2018. No goal for Kasilof Chinook salmon has been established. There is no assessment for coho or steelhead salmon.

**Impact on Subsistence Users:** This would create an exclusive inriver gillnet fishery on the Kasilof River for Ninilchik Traditional Council and provide them another opportunity to harvest salmon. This would prohibit any other group or individual from administering the permit process.

**Impact on Other Users:** If harvest remains near current levels the impact on other users should be minimal. It is possible that other users may be restricted if Federal action were taken to limit downriver fisheries in order to provide for federal subsistence harvests in times of low abundance.

**Opportunities Provided by the State:** In 1992, the State classified most of the Cook Inlet Area, including the Kenai and Kasilof River drainages, as part of the Anchorage-Matsu-Kenai Nonsubsistence Area (5AAC 99.015(3)). The only State subsistence fisheries in Cook Inlet occur in areas that are not accessible from the road system, including the Tyonek, Windy Bay, Port Chatham, and Port Graham

subdistricts, as well as portions of Seldovia Bay and the Yentna River drainage. The State's subsistence priority does not apply on the Kenai Peninsula, and the Alaska Board of Fisheries may not authorize subsistence fisheries in this area. Under State regulations, personal use fisheries and educational fishery permits provide opportunities for harvesting fish with gear other than rod and reel in nonsubsistence areas.

The State of Alaska manages commercial and sport salmon fisheries based on the principles and criteria listed in the State's *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222). The three primary management plans that apply to the Kasilof River salmon stocks are the *Upper Cook Inlet Management Plan* (5 AAC 21.363), the *Kenai River and Kasilof River Early-Run King Salmon Conservation Management Plan* (5 AAC 57.160), and the *Kasilof River Salmon Management Plan* (5 AAC 21.365). These plans provide goals for sustained yield, guidance for mixed-species and mixed-stock fisheries, and instructions for allocation between competing fisheries. General and special provisions for sport fisheries on the Kenai Peninsula (including the Kasilof River) are found in 5 AAC 56.120 and 5 AAC 56.122. The *Kenai River Late-Run Sockeye Salmon Management Plan* (5 AAC 21.360) and the *Central District Drift Gillnet Fishery Management Plan* (5 AAC 21.353) also apply to Kasilof River salmon stocks. There is also a personal use gillnet fishery and a personal use dipnet fishery on Kasilof River stocks that are managed by the state under regulations found in 5 AAC 77.540.

**Recommendation:** ADF&G is **NEUTRAL** on this proposal. There are no conservation issues with Kasilof River sockeye salmon stocks. The department is estimating Chinook salmon abundance with a new sonar project but there is no escapement goal to measure those runs against. The department does not assess coho and steelhead salmon runs.



<b>FP19–15 Executive Summary</b>	
<b>General Description</b>	<p>Proposal FP19-15 requests the Federal Subsistence Board revise sections § __.27(e)(11)(xii) and § __.27(e)(11)(xiii) of the CFR that specify the requirements of fish wheel owners and operators in the Upper Copper River for the take of salmon. The requested change is to move the requirement to check the fish wheel every ten hours and remove all fish from the fish wheel owner to the fish wheel operator. <i>Submitted by: Wrangell-St. Elias National Park and Preserve.</i></p>
<b>Proposed Regulation</b>	<p><b>§ __.27(e)(11) Prince William Sound Area – Salmon</b></p> <p><i>(xii) If you are a fish wheel owner:</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><del><i>(D) You must check your fish wheel at least once every 10 hours and remove all fish;</i></del></p> <p style="text-align: center;">* * * *</p> <p><i>(xiii) If you are operating a fish wheel:</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><b><i>(E) You must check your fish wheel at least once every 10 hours and remove all fish.</i></b></p>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Southcentral Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>
<b>ADF&amp;G Comments</b>	<b>Support</b>
<b>Written Public Comments</b>	<b>2 Support</b>

**STAFF ANALYSIS  
FP19-15**

**ISSUES**

Proposal FP19-15, submitted by Wrangell-St. Elias National Park and Preserve, requests the Federal Subsistence Board (Board) revise sections §\_\_\_\_.27(e)(11)(xii) and §\_\_\_\_.27(e)(11)(xiii) of the CFR that specify the requirements of fish wheel owners and operators in the Upper Copper River for the take of salmon. The requested change is to move the requirement to check the fish wheel every ten hours and remove all fish from the fish wheel owner to the fish wheel operator.

**DISCUSSION**

The proponent has stated that it is more appropriate for the fish wheel operator to be responsible for checking the fish wheel every ten hours to remove all fish. The fish wheel owner does not need to be a Federally qualified subsistence user or have a Federal subsistence fishing permit to use the fish wheel. They may be qualified to use this gear type under State subsistence regulations.

**Existing Federal Regulation**

**§\_\_\_\_.27(e)(11) Prince William Sound Area**

*(xi) The following apply to Upper Copper River District subsistence salmon fishing permits:*

*(A) Only one subsistence fishing permit per subdistrict will be issued to each household per year. If a household has been issued permits for both subdistricts in the same year, both permits must in your possession and readily available for inspection while fishing or transporting subsistence-taken fish in either subdistrict. A qualified household may also be issued a Batzulnetas salmon fishery permit in the same year;*

*(B) Multiple types of gear may be specified on a permit, although only one unit of gear may be operated at a time.*

\* \* \* \*

*(D) A fish wheel may be operated only by one permit holder at a time; that permit holder must have the fish wheel marked as required by paragraph (e)(11) of this section and during fishing operations;*

*(E) Only the permit holder and the authorized member(s) of the household listed on the*

*subsistence permit may take salmon;*

*(F) You must personally operate your fish wheel or dip net;*

*(G) You may not loan or transfer a subsistence fish wheel or dip net permit except as permitted.*

*(xii) If you are a fish wheel owner:*

*(A) You must register your fish wheel with ADF&G or the Federal Subsistence Board;*

*(B) Your registration number and a wood, metal, or plastic plate at least 12 inches high by 12 inches wide bearing either your name and address, or your Alaska driver's license number, or your Alaska State identification card number in letters and numerals at least 1 inch high, must be permanently affixed and plainly visible on the fish wheel when the fish wheel is in the water;*

*(C) Only the current year's registration number may be affixed to the fish wheel; you must remove any other registration number from the fish wheel;*

*(D) You must check your fish wheel at least once every 10 hours and remove all fish;*

*(E) You are responsible for the fish wheel; you must remove the fish wheel from the water at the end of the permit period;*

*(F) You may not rent, lease, or otherwise use your fish wheel used for subsistence fishing for personal gain.*

*(xiii) If you are operating a fish wheel:*

*(A) You may operate only one fish wheel at any one time;*

*(B) You may not set or operate a fish wheel within 75 feet of another fish wheel;*

*(C) No fish wheel may have more than two baskets;*

*(D) If you are a permittee other than the owner, you must attach an additional wood,*

*metal, or plastic plate at least 12 inches high by 12 inches wide, bearing your name and address in letters and numerals at least 1 inch high, to the fish wheel so that the name and address are plainly visible.*

**Proposed Federal Regulation**

**§ \_\_.27(e)(11) Prince William Sound Area**

*(xii) If you are a fish wheel owner:*

*\* \* \* \**

*~~(D) You must check your fish wheel at least once every 10 hours and remove all fish;~~*

*\* \* \* \**

*(xiii) If you are operating a fish wheel:*

*\* \* \* \**

*(E) You must check your fish wheel at least once every 10 hours and remove all fish.*

**Existing State Regulation**

**5 AAC 01.620 Lawful gear and gear specifications for the Prince William Sound Area**

*(b) Salmon may be taken only by the following types of gear:*

*(1) in the Glennallen Subdistrict by fish wheels or dip nets.*

*(c) Fish wheels used for subsistence fishing may be operated only as follows:*

*(1) the owner of a fish wheel shall register that fish wheel with the department; the department shall issue a registration number for the fish wheel; that registration number, and either the owner's name and address or the owner's permanent identification number from a valid Alaska driver's license or a state identification card, must be permanently affixed and plainly visible on the fish wheel on a wood, metal, or plastic plate that is at least 12 inches high by 12 inches wide, in letters and numerals at least one inch high, when the fish wheel is in the water; only the registration number from the current year may be affixed to the fish wheel; any other registration number must be removed from the fish wheel;*

*(2) the owner of a fish wheel registered under (1) of this subsection is responsible for the fish wheel when the fish wheel is in the water;*

*(3) when the permit holder is a person other than the owner of the fish wheel, in addition to the requirements of (1) of this subsection, an additional plate of wood, metal, or plastic, that is at least 12 inches high by 12 inches wide bearing the permit holder's name and address in letters and numerals at least one inch high must be attached to each fish wheel so that the name and address are plainly visible;*

*(4) a permit holder may operate only one fish wheel at a time and a fish wheel may be operated only by one permit holder at a time; that permit holder must;*

*(A) have the fish wheel marked as specified in this subsection during fishing operations; and*

*(B) check the fish wheel at least once every 10 hours and remove all fish caught by the fish wheel;*

*(5) a person may not set or operate a fish wheel within 75 feet of another fish wheel;*

*(6) a fish wheel*

*(A) may not have more than two baskets;*

*(B) must be removed from the water at the end of the permit period; and*

*(C) may not be rented, leased, or otherwise used for personal gain*

### **Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR 242.3 and 50 CFR 100.3. Federal public waters comprise those waters within and adjacent to the exterior boundaries of Wrangell-St. Elias National Park and Preserve (**Figure 1**).

### **Customary and Traditional Use Determinations**

Rural residents of Cantwell, Chickaloon, Chisana, Chistochina, Chitina, Copper Center, Dot Lake, Gakona, Gakona Junction, Glennallen, Gulkana, Healy Lake, Kenny Lake, Lower Tonsina, McCarthy, Mentasta Lake, Nabesna, Northway, Paxson-Sourdough, Slana, Tanacross, Tazlina, Tetlin, Tok, Tonsina, and those individuals that live along the Tok Cutoff from Tok to Mentasta Pass, and along the Nabesna Road have a customary and traditional use determination for salmon in the Chitina Subdistrict of the Upper Copper River District.

Rural residents of the Prince William Sound Area and residents of Cantwell, Chickaloon, Chisana, Dot Lake, Dry Creek, Healy Lake, Northway, Tanacross, Tetlin, Tok, and those individuals living along the

Alaska Highway from the Alaskan/Canadian border to Dot Lake, along the Tok Cutoff from Tok to Mentasta Pass, and along the Nabesna Road have a customary and traditional use determination for salmon in the Glennallen Subdistrict of the Upper Copper River District.

Rural residents of Mentasta Lake and Dot Lake have a customary and traditional use determination for salmon in the waters of the Copper River between National Park Service regulatory markers located near the mouth of Tanada Creek, and in Tanada Creek between National Park Service regulatory markers identifying the open waters of the creek (Batzulnetas Area).

### **Regulatory History**

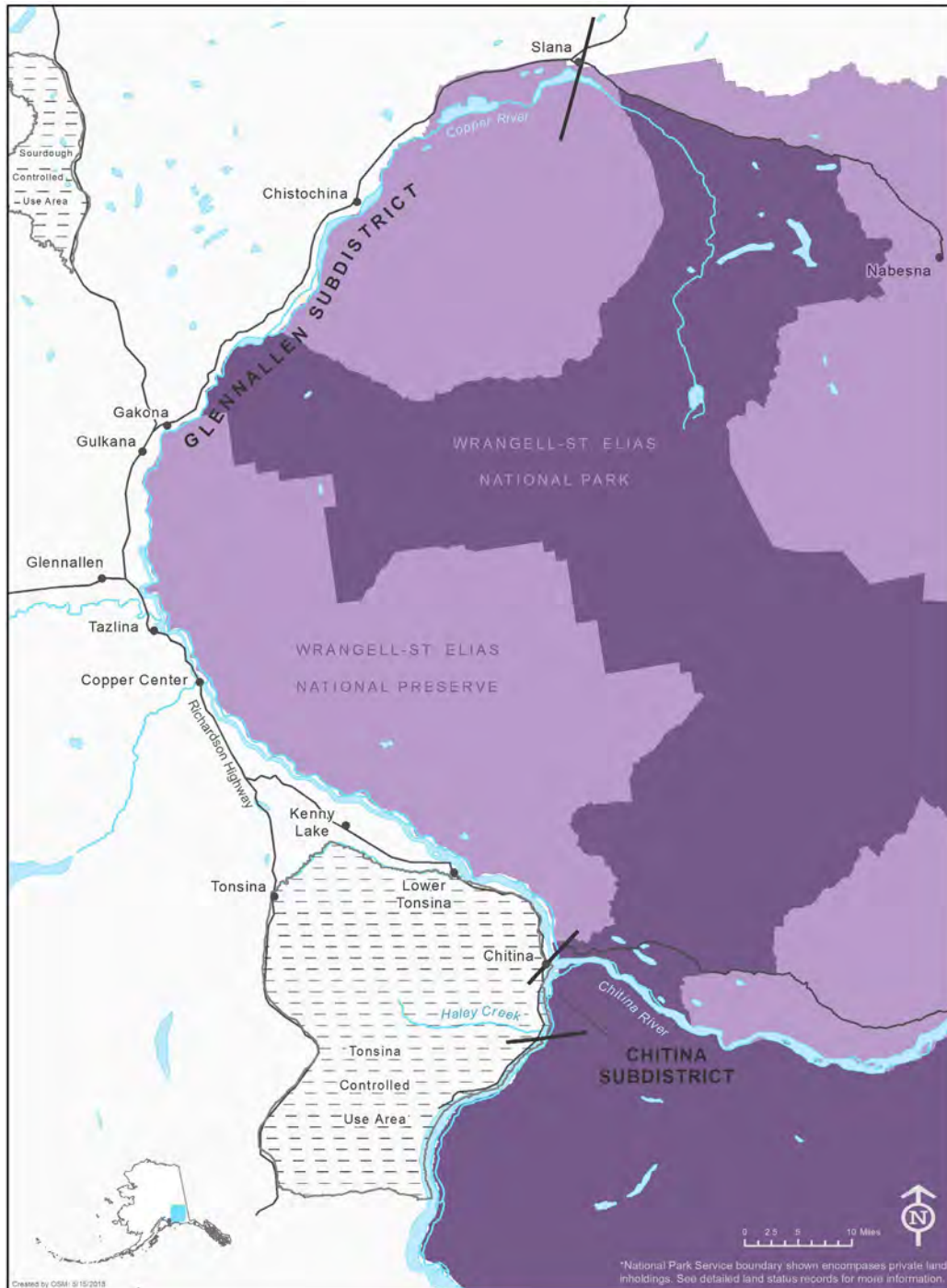
The Board adopted the current regulatory framework for the Prince William Sound Management Area from existing State subsistence regulations in 1999. Since that time, a handful of regulatory changes have been made related to fish wheel use in the Upper Copper River through Board action. However, specific to the checking of the fish wheel, there is a single proposal submitted in 2006. Proposal FP06-21, submitted by the Ahtna Tene Nene' Subsistence Committee requested an addition to the Federal subsistence management regulations that required fish wheels to be checked at least once during each 24 hour period to remove all fish (OSM 2006). At that time, there had been no hourly requirement to check fish wheels. The Eastern Interior Alaska Subsistence Regional Advisory Council opposed the proposal, but the Southcentral Alaska Subsistence Regional Advisory Council supported it with modification to require checking every 48 hours for removal of all fish. At the January 2006 Board meeting, the Ahtna Subsistence Committee submitted additional comments requesting that the proposal be modified to require checking every 8 hours instead of 24 hours (FSB 2006). The Board was also notified that the Alaska Board of Fisheries took action on similar request in December of 2005 to requiring fish wheels to be checked every 10 hours in the State subsistence fishery. The Board took action to adopt FP06-21 with modification to require that fish wheels be checked every 10 hours and all fish removed consistent with concerns raised by the Ahtna Subsistence Committee and consistent with the recent Board of Fish action. The proposal did not specify whether this regulation would pertain directly to fish wheel owners or fish wheel operators, and Board discussion did not cover that topic.

### **Biological Background and Harvest History**

This proposal requests changing responsibility for checking fish wheels, and should not affect harvest practices or totals. As such, a minimal background for biology and harvest history is provided.

The Copper River supports multiple runs of salmon, but Sockeye Salmon *Oncorhynchus nerka*, Chinook Salmon *O. tshawytscha*, and Coho Salmon *O. kisutch* are the three species primarily targeted in the fisheries of the Upper Copper River. Sockeye Salmon is the most abundant species, and is the main fish targeted by all user groups in both the Chitina and Glennallen Subdistricts (**Table 1, Table 2, Table 3, Table 4**). While there have been no biological concerns for this species, and returns have been within or exceeded the current escapement goal of 360,000 to 750,000 as measured by the Miles Lake sonar during the past five years (ADF&G 2018), returns in 2018 have been substantially lower. This has prompted closures to the State commercial fishery at the mouth of the river, closures to the State personal use

fishery in the Chitina Subdistrict, and closures to non-Federally qualified users in the Chitina Subdistrict by the Federal in-season manager.



**Figure 1.** Upper Copper River drainage, showing exterior boundary of Wrangell-St. Elias National Park and Preserve as well as the Chitina and Glennallen Subdistricts of the Upper Copper River District.

Chinook Salmon in-river abundance averaged around 40,000 fish between 2003 and 2011 (**Figure 2**). However, returns over the past five years (2012-2016) have been notably smaller, averaging around

27,000, and conservation measures have been put into place for the various fisheries that target these species during some years.

Harvests of Chinook Salmon have been the largest in the State personal use and subsistence fisheries, but have declined across all four fisheries in the past five years (**Table 1, Table 2, Table 3, Table 4**). This matches with declines in returns over that same period (**Figure 2**).

Coho Salmon return to the Copper River following the Sockeye and Chinook Salmon runs. Other than counts from the Long Lake weir, there are no abundance estimates for Coho Salmon in the drainage.

Although harvests of Coho Salmon are on a similar scale to those for Chinook Salmon in the Chitina Subdistrict Federal subsistence and State personal use fisheries, they are substantially smaller for the two Glennallen Subdistrict fisheries.

**Table 1.** Estimated harvest of Sockeye, Chinook, and Coho Salmon by Federally qualified subsistence users in the Chitina Subdistrict, 2002-2017 (Sarafin 2018, pers. comm.).

Chitina Subdistrict Federal Subsistence Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salm-on Harvest	Estimated Chinook Salm-on Harvest	Estimated Coho Salmon Harvest
2002	122	73.0	788	45	0
2003	100	82.0	874	22	85
2004	109	76.0	1,599	9	24
2005	76	84.0	1,506	26	0
2006	75	85.0	1,622	15	24
2007	98	89.0	1,044	29	45
2008	82	85.0	928	26	87
2009	68	91.0	898	9	12
2010	92	86.0	2,397	20	38
2011	85	85.9	2,137	15	9
2012	90	94.4	1,419	6	8
2013	99	90.9	2,199	19	9
2014	113	94.7	1,628	15	72
2015	111	92.8	2,404	14	15
2016	128	80.5	1,925	20	41
2017	132	79.5	1,828	15	9
<b>5-yr avg.</b>	-	88	1,997	17	29
<b>10-yr avg.</b>	-	88	1,776	16	30
<b>Mean</b>	-	86	1,575	19	30



**Table 2.** Estimated harvest of Sockeye, Chinook, and Coho Salmon in the Chitina Subdistrict State personal use fishery, 2002-2017 (Somerville 2018, pers. comm.).

Chitina Subdistrict State Personal Use Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salmon Harvest	Estimated Chinook Salmon Harvest	Estimated Coho Salmon Harvest
2002	6,804	65.8	85,968	2,023	1,934
2003	6,441	66.1	80,796	1,903	2,533
2004	8,156	60.8	107,312	2,495	2,860
2005	8,230	64.8	120,013	2,043	1,869
2006	8,497	62.3	123,261	2,663	2,715
2007	8,377	66.2	125,126	2,694	1,742
2008	8,041	59.7	81,359	1,999	2,711
2009	7,958	60.7	90,035	214	1,712
2010	9,970	60.9	138,487	700	2,013
2011	9,217	62.0	128,052	1,067	1,702
2012	10,016	57.7	127,143	567	1,385
2013	10,592	63.9	180,663	744	797
2014	11,717	60.7	157,215	719	1,129
2015	12,635	62.0	223,080	1,570	841
2016	11,394	54.6	148,982	711	1,182
2017	9,490	64.9	132,694	1,961	715
<b>5-yr avg.</b>	-	61	168,527	1,141	933
<b>10-yr avg.</b>	-	61	140,771	1,025	1,419
<b>Mean</b>	-	62	128,137	1,505	1,740

### Cultural Knowledge and Traditional Practice

For the Ahtna Athabascans, salmon has been a staple resource and a symbol of wealth. Sockeye have been especially important to the Ahtna's cultural and economic survival for at least 1,000 years and remains a vital resource to the subsistence lifeways of those living in the Copper River Basin today (Reckord 1983, Brady et al. 2013). Other salmon species that are important to those living in the region include Chinook and Coho Salmon. Late season Coho Salmon became a more important resource with the introduction of the fish wheel into the Cooper River Basin in the early 1900s (De Laguna and McClellan 1981).

Many of the Ahtna elders who grew up in the 1920-1930s remember the fish wheels being very productive during this period. Elder Robert Marshall noted that "his family's fish wheel caught 200 or 300 fish a night" (Simeone et al. 2007, p.14). In a 2010 report, the United States Fish and Wildlife Service reported a significant increase in fish wheel use for the region since the 1980s. The report also notes that the region has had an increase in users over time, which has resulted in added pressures on the salmon fisheries (Brady et al. 2013).

**Table 3.** Estimated harvest of Sockeye, Chinook, and Coho Salmon by Federally qualified subsistence users in the Glennallen Subdistrict, 2002-2017 (Sarafin 2018, pers. comm.).

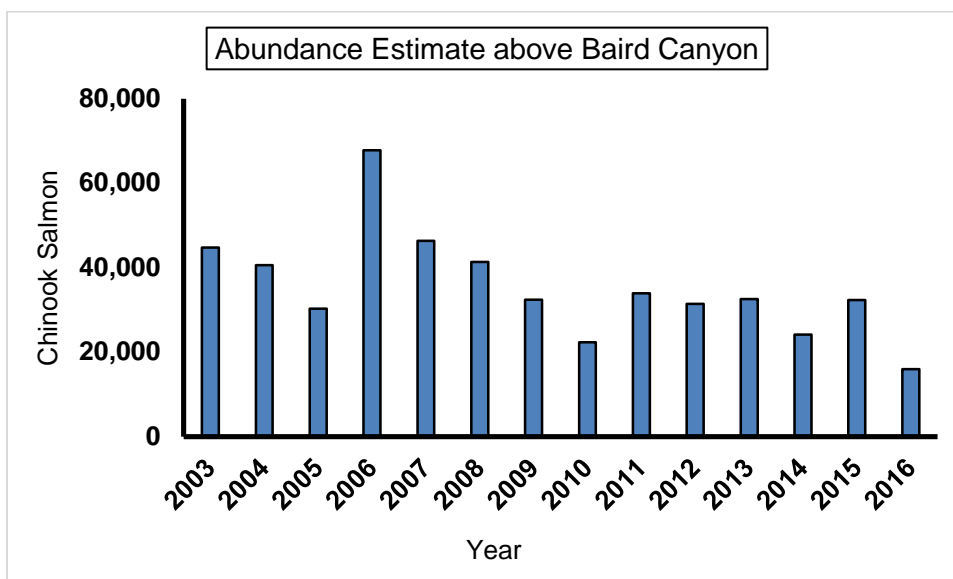
Glennallen Subdistrict Federal Subsistence Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salm-on Harvest	Estimated Chinook Salm-on Harvest	Estimated Coho Salmon Harvest
2002	201	81.0	9,807	696	100
2003	221	83.0	16,405	667	183
2004	262	79.0	22,410	805	192
2005	267	86.0	23,224	401	147
2006	254	87.0	19,208	494	32
2007	281	84.0	18,125	677	40
2008	270	81.0	14,009	870	183
2009	274	85.0	13,925	581	40
2010	269	88.0	14,601	341	73
2011	277	87.7	16,066	799	60
2012	275	92.0	15,718	403	85
2013	273	89.0	17,789	372	27
2014	315	90.5	23,889	439	25
2015	325	92.3	26,753	416	14
2016	320	82.8	19,181	446	11
2017	338	84.3	18,550	473	1
<b>5-yr avg.</b>	-	88	21,232	429	16
<b>10-yr avg.</b>	-	87	18,048	514	52
<b>Mean</b>	-	86	18,104	555	76

Multiple reports recognize the Copper River Basin as a focal point of intense salmon harvest for multiple users under State and Federal regulations. Many of these activities are occurring side by side and simultaneously. This includes people utilizing fish wheels under State and Federal regulations side by side (Simeone et al. 2007, Brady et al. 2013).

In recent comprehensive subsistence surveys conducted by the Alaska Department of Fish and Game (ADF&G), it was noted that salmon composed a majority of the annual harvest in most communities along the Copper River. The per capita salmon harvest from communities in the Upper Copper River ranged from about 192 lbs. per person in Chitina to approximately 46 lbs. per person in McCarthy (Holen et al. 2014, La Vine and Zimpelman 2014). Fish wheels are a major gear type utilized in the majority of the communities with the exception of Paxson. The community of Paxson did not utilize fish wheels during the study year of 2013 (Holen et al. 2015). Salmon harvest via fish wheel ranged from a high of 93% in Chistochina to a low of 15% in Mentasta Lake (Kukkonen and Zimpelman 2012, La Vine et al. 2013).

**Table 4.** Estimated harvest of Sockeye, Chinook, and Coho Salmon in the Glennallen Subdistrict State personal use fishery, 2002-2017 (Somerville 2018, pers. comm.).

Glennallen Subdistrict State Subsistence Fisheries					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salmon Harvest	Estimated Chinook Salmon Harvest	Estimated Coho Salmon Harvest
2002	1,121	73.1	50,850	3,653	530
2003	1,012	77.1	47,007	2,538	467
2004	956	76.6	55,510	3,346	577
2005	961	76.0	64,213	2,229	154
2006	984	76.6	57,710	2,769	212
2007	1,174	75.0	65,714	3,276	238
2008	1,186	72.3	43,157	2,381	493
2009	1,090	71.6	46,849	2,493	228
2010	1,321	72.1	70,719	2,099	293
2011	1,306	73.9	59,622	2,319	372
2012	1,527	68.6	76,305	2,095	335
2013	1,339	72.7	73,728	2,148	143
2014	1,656	66.4	75,501	1,365	233
2015	1,631	70.1	81,800	2,212	77
2016	1,769	64.3	62,474	2,075	45
2017	1,632	64.0	39,859	2,935	57
<b>5-yr avg.</b>	-	67	66,672	2,147	111
<b>10-yr avg.</b>	-	70	63,001	2,212	228
<b>Mean</b>	-	72	60,689	2,496	278



**Figure 2.** Estimated in-river abundance of Chinook Salmon above Baird Canyon on the Copper River based on mark-recapture methods, 2003-2016 (Piche et al. 2017).

## **Effects of the Proposal**

Moving this requirement from fish wheel owners to fish wheel operators will relieve owners of confirming that operators of the wheels are following through with regulations put into place to limit wanton waste. It will have the effect of putting the burden of checking the fish wheel every 10 hours on the operators of the wheels. This would match existing State subsistence regulations that require operators of the wheels to check them and empty them of fish every 10 hours, which will provide ease for enforcement. The move will also correct conflicting regulations in this section. Regulations at (xi)(E) allow only the permit holder to take salmon, while current fish wheel regulations at (xii)(D) require the fish wheel owner, who is not always the fish wheel operator, to check the fish wheel at least once every 10 hours and remove all fish.

## **OSM CONCLUSION**

**Support** Proposal FP19-15.

## **Justification**

The Upper Copper River fisheries allow the use of fish wheel under Federal and State subsistence regulations. Both fisheries require that fish wheels be checked every 10 hours and emptied of fish; however, State regulations require that operators of the wheel do this while Federal regulations require that fish wheel owners do this. Fish wheel owners that are Non-Federally qualified may allow Federally qualified subsistence users to operate their fish wheel under a Federal subsistence fishing permit. Operators of a fish wheel should be obligated to perform checks and remove fish as they are the individuals responsible for operation of the gear. In addition, this will align Federal and State regulations, which will enhance the enforcement capability without placing additional restrictions on Federally qualified subsistence users.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southcentral Alaska Subsistence Regional Advisory Council

**Support FP19-15.** The Council noted it was sensible and a good collaborative effort with the land managing agency and subsistence users. Additionally, the proposal will align Federal and State regulations and makes things easier for law enforcement. It shifts the responsibility logically to the person at the wheel.

### Eastern Interior Alaska Subsistence Regional Advisory Council

**Support FP19-15.** The Council remarked that it is a common sense proposal to have the operator of a fish wheel be responsible for checking it and removing the fish. If adopted, the Federal regulations language would match the State regulations. The Council also noted that the owner of a fish wheel may sometimes live a long distance from the wheel, so it is unreasonable to require the owner to supervise the wheel. Some Council members expressed an opinion that the requirement to check your fish wheel at least once every 10 hours and remove all fish might set up a too short of a time period and felt that 24 hours requirement might be more reasonable, especially for the Yukon River, since one might have engine trouble or other delays. The other Council members noted that the ten-hour requirement on the Copper River is related to keeping a higher quality of fish for human consumption, compared to the Yukon River where in the fall the harvest is mostly for dog food.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fisheries Proposal FP19-15:** This proposal, submitted by the Wrangell-St. Elias National Park and Preserve, would shift, from the fish wheel owner to the fish wheel operator, the requirements to check a fish wheel every 10 hours and to remove all the fish.

**Introduction:** In 2006, the state Board of Fisheries adopted regulations requiring subsistence permit holders operating a fish wheel to check their wheel a minimum of every 10 hours and to remove all the fish from the wheel. Federal regulations were changed sometime after this but erroneously placed the requirement of fish wheel checks on the fish wheel owner rather than the permitted fish wheel operator.

**Impact on Subsistence Users:** If adopted this proposal would have no impact on state permitted subsistence users. Federally-qualified subsistence fish wheel owners would benefit from clearer regulations regarding their obligations in the subsistence fish wheel fishery.

**Impact on Other Users:** If adopted this proposal would have no impact on other users of the Copper River.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for salmon stocks of the Glennallen Subdistrict of the Upper Copper River District described in 5 AAC 01.605(2).

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has made the following salmon ANS findings for the Glennallen Subdistrict:

In that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;

In that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon; and

In that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River near Cordova: 12,00–12,500 salmon.

Under state regulation 5 AAC 01.620(c)(4)(B) permit holders operating a fish wheel are required to check the fish wheel at least once every 10 hours and remove all the fish from the wheel.

**Conservation Issues:** There are no conservation issues associated with this proposal.

**Enforcement Issues:** If adopted, this proposal would align federal regulations with state regulations and simplify enforcement in this fishery.

**Recommendation:** ADF&G **SUPPORTS** this proposal which would align state and federal regulation in the operation of fish wheels in the Glennallen Subdistrict.

**Ahtna Tene Nene' Committee**  
**P.O Box 649**  
**Glennallen, Alaska 99588**  
**(907) 822-3476**

June 28, 2018

Federal Subsistence Board  
Office of Subsistence Management  
(Attn: Mr. Matuskowitz)  
1011 E. Tudor Road, MS-121  
Anchorage, Alaska 99503-6199

Dear Mr. Matuskowitz:

Ahtna Tene Nene' is pleased to submit comments on the 2019-2021 federal fisheries proposals. We hope that the Federal Subsistence Board and Inter-Agency Staff Committee will take our comments into consideration.

Enclosed are Ahtna Tene Nene's comments on 2019-2021 Fisheries Proposals. Please contact Ms. Stickwan, if there are any questions at (907) 822-3476.

Sincerely,

*Gloria Stickwan*  
*for*  
*Linda Pete*  
Linda Pete,  
Chair

[www.ahtna-inc.com](http://www.ahtna-inc.com)



**2019-2021 Fisheries Proposals****Prince William Sound Area****FP19-13****Comments:**

We support WP19-13 with modification to add the words "except for the Copper River drainage upstream of Haley Creek," after the words "Freshwaters Prince William Sound Area" to proposal WP19-13 so that it clearly specifies where the proposed regulatory language applies. (Tables on page 34 of the proposal booklet.)

The regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* is confusing and unclear. The conditions on permit FFPW01 should also be included in the regulations. Subsistence users should be able to read and understand the regulations in the federal fisheries regulatory booklet before they apply for a permit.

**WP19-14****Comments:**

We support WP19-14 with modification to change the fishing areas to the following:

"In the Copper River Delta and mainstem Copper River, from the 37 Mile Bridge to a boundary extending 0.5 mile downriver of road crossings of the mainstem Copper River east of 27 Mile on the Copper River Highway, you may take salmon only by dip net and rod and reel; dip netting from a boat is prohibited."

The fishing areas as proposed in WP19-14 are too expansive. The population of Cordova is large and they may take too many fish. We would be very concerned about the potential of over harvest of salmon.

The harvest limit for Chinook with rod and reel or dip net should be the same as the Upper Copper River.

Inseason management authority of fisheries will be under the auspice of the Superintendent of Wrangell St. Elias National Park and Preserve in Copper Center, Alaska. We want to allow and keep inseason management with the Superintendent to manage the fisheries in the mainstem of the Copper River to protect salmon strength and runs.

**FP19-15**

**Comments:**

We support WP19-15 to clarify the PWS federal regulations by moving the requirement to “check your fish wheel once every 10 hours and remove all fish” from the fish wheel owner to the fish wheel operator. Permittees who are federally qualified subsistence users, and State fisheries permittees, who are using the owner’s fish wheel should be responsible for checking and removing fish from the fish wheel. The owner of the fish wheel should not be legally responsible for removing fish from the fish wheel.

**FP19-16**

**Comments:**

We oppose WP19-16 to change the regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* to allow the use of “one unit of gear per person.”

We do not support one unit of gear per person. Keep federal fisheries regulations as it is now written, do not change it. Opportunity to harvest fish is not taken away by keeping regulations in place. Household members, who fish together can take turns using one gear type to catch their household limit.

**Wrangell-St. Elias National Park  
Subsistence Resource Commission**

P.O. Box 439  
Mile 106.8 Richardson Hwy.  
Copper Center, AK 99573

October 26, 2018

Anthony Christianson, Chair  
Federal Subsistence Board  
U.S. Fish and Wildlife Service  
Office of Subsistence Management  
1011 E. Tudor Road, MS-121  
Anchorage, AK 99503

Subject: Federal Subsistence Management Program Fisheries Proposals for 2019-2021

Dear Mr. Christianson:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Copper Center, Alaska, on October 25 and 26, 2018. The commission is a federal advisory committee that represents subsistence users of federal lands within Wrangell-St. Elias National Park and Preserve. At this meeting, the SRC reviewed the federal subsistence fisheries proposals for the Wrangell-St. Elias area being considered for the 2019-2021 regulatory cycle and would like to provide the following comments:

**FP19-13: Add current fish permit conditions to regulations in a portion of the Prince William Sound Area**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-13 as modified by OSM. Adding the current fish permit conditions to the regulations will clarify the rules for subsistence users. The modification is important to clarify that the conditions would apply specifically to the Chugach National Forest portion of the Prince William Sound Area.

**FP19-14: Allow a dip net and rod and reel fishery in a portion of the lower Copper River**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-14 as modified by OSM. This proposal would provide harvest opportunity for federally qualified subsistence users and support the satisfaction of subsistence needs.

**FP19-15: Move requirement to check fish wheel from fish wheel owner to fish wheel operator**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-15. This is a housekeeping proposal. It is common sense that the fish wheel operator, rather than the owner, is required to check the fish wheel. There are no conservation concerns with the proposal, nor is it detrimental to subsistence needs.

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

**FP19-16: Clarify gear usage for Upper Copper River District subsistence salmon fishing permits**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-16. This proposal clarifies the regulations and provides for subsistence opportunity. Federal subsistence regulations should not be more restrictive than state regulations. Additionally any additional harvest is likely to be small.

**FP19-17: Change C&T for all fish in the Yakutat and the Southeast Alaska Regions**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-17. This change simplifies the regulations and supports subsistence for federally qualified subsistence users.

Thank you for the opportunity to comment.

Sincerely, 

Daniel E. Stevens  
Chair

cc: NPS Alaska Regional Director  
Superintendent, Wrangell-St. Elias National Park and Preserve  
Southeast, Southcentral and Eastern Interior Regional Advisory Councils  
Governor of Alaska

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

<b>FP19-17 Executive Summary</b>	
<b>General Description</b>	Proposal FP19-17 requests to modify the customary and traditional use determination for all fish in the Southeast Region to include all residents of the Southeast Region. <i>Submitted by: the Southeast Alaska Subsistence Regional Advisory Council.</i>
<b>Proposed Regulation</b>	<i>See pages 296 to 299 of this analysis for proposed regulations.</i>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Southeast Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>1 Support</b>

**STAFF ANALYSIS  
FP19-17**

**ISSUES**

Proposal FP19-17, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests modifying the customary and traditional use determination for all fish in the Southeast Region to include all residents of the Southeast Region.

**DISCUSSION**

The proponent states that many existing customary and traditional use determinations for fish were carried over from State regulations and used commercial fishing districts as boundaries. This requested change will better reflect the actual patterns of fish use in the Southeast Region and reduce unnecessary regulatory complexity. The proponent states that the take of fishes is not managed by customary and traditional use determinations, and there should be no direct effect on the conservation of fish populations, nor on sport, recreational, and commercial uses. Subsistence users will be able to continue their historical fish harvest and use patterns without worrying about restrictive geographic boundaries of existing customary and traditional use determinations that define where they are eligible to fish under Federal regulations.

For the purposes of fisheries management, the Southeast Region is comprised of two management areas: the Yakutat Fisheries Management Area (Yakutat Area) and the Southeastern Alaska Fisheries Management Area (Southeastern Alaska Area).

A significant factor affecting fishing effort in the Southeastern Alaska Area is the heavily populated Juneau road system (31,000 people), and Ketchikan road system (13,500 people) (ADLWD 2017). Federal regulations recognize residents of these areas as nonrural and prohibit them from participating in Federal hunting, fishing, and trapping. Therefore, a description of their customary and traditional uses of fishes is not included in the analysis. Additionally, Glacier Bay National Park is situated in the northern part of the Southeastern Alaska Area. Federal public lands within the Park are closed to all subsistence hunting, fishing, and trapping, and fisheries management in the Park is not within the Federal Subsistence Board (Board) jurisdiction.

**Existing Federal Regulation**

**Customary and Traditional Use Determination—All fish**

**Yakutat Area**

<i>Fresh water upstream from the terminus of streams and rivers of the</i>	<i>Salmon</i>	<i>Residents of the area east of Yakutat Bay, including the islands within Yakutat Bay, west of the Situk River drainage, and south of and</i>
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<i>Yakutat Area from the Doame River to the Tsiu River</i>		<i>including Knight Island.</i>
<i>Fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to Point Manby</i>	<i>Dolly Varden, steelhead trout, and smelt</i>	<i>Residents of the area east of Yakutat Bay, including the islands within Yakutat Bay, west of the Situk River drainage, and south of and including Knight Island.</i>
<i>Remainder of the Yakutat Area</i>	<i>Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of Southeastern Alaska and Yakutat Areas.</i>
	<i>Salmon</i>	<i>All rural residents.</i>

**Southeastern Alaska Area**

<i>District 1—Section 1E in waters of the Naha River and Roosevelt Lagoon</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Saxman.</i>
<i>District 1—Section 1F in Boca de Quadra in waters of Sockeye Creek and Hugh Smith Lake within 500 yards of the terminus of Sockeye Creek</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Saxman.</i>
<i>Districts 2, 3, and 5 (south of a line from Point Barrie to Boulder Point) and waters draining into those Districts</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents living south of Sumner Strait and west of Clarence Strait and Kashevaroff Passage.</i>
<i>District 5—North of a line from Point Barrie to Boulder Point</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</i>

<i>District 6 and waters draining into that District</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents living south of Sumner Strait and west of Clarence Strait and Kashevaroff Passage; residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island); residents of drainages flowing into Districts 7 &amp; 8, including the communities of Petersburg &amp; Wrangell; and residents of the communities of Meyers Chuck and Kake.</i>
<i>District 7 and waters draining into that District</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island); residents of drainages flowing into Districts 7 &amp; 8, including the communities of Petersburg &amp; Wrangell; and residents of the communities of Meyers Chuck and Kake.</i>
<i>District 8 and waters draining into that District</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of drainages flowing into Districts 7 &amp; 8, residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island), and residents of Meyers Chuck.</i>
<i>District 9—Section 9A</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</i>
<i>District 9—Section 9B north of the latitude of Swain Point</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</i>
<i>District 10—West of a line from Pinta Point to False Point Pybus</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</i>
<i>District 12—Section 12A, excluding the area south of a line from Fishery Point to South Passage Point</i>	<i>All fish</i>	<i>Residents of drainages flowing into Districts 12 and 14.</i>
<i>District 12—Section 12B</i>	<i>All fish</i>	<i>Residents of drainages flowing into Districts 12 and 14.</i>



<i>District 12—Section 12A, the area south of a line from Fishery Point to South Passage Point</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134°30' West longitude, including Killisnoo Island.</i>
<i>District 13—Section 13A, excluding the area south of the latitude of Cape Edward</i>	<i>All fish</i>	<i>Residents of drainages flowing into Sections 13A, 13B, and District 14.</i>
<i>District 13—Section 13A, south of the latitude of Cape Edward</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B, north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13B north of the latitude of Redfish Cape</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13C</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13C east of the longitude of Point Elizabeth</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134°30' West longitude, including Killisnoo Island.</i>
<i>District 14</i>	<i>All fish</i>	<i>Residents of drainages flowing into Sections 12A, 13A, and District 14.</i>
<i>Remainder of the Southeastern Alaska Area</i>	<i>Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of Southeastern Alaska and Yakutat Areas.</i>
	<i>Salmon</i>	<i>All rural residents.</i>

**Proposed Federal Regulation**

**Customary and Traditional Use Determination—All fish**

<i>Yakutat Area</i>	<i>All fish</i>	<i>Rural residents of Yakutat and Southeastern Alaska Fishery Management Areas</i>
<i>Southeastern Alaska Area</i>	<i>All fish</i>	<i>Rural residents of Yakutat and Southeastern Alaska Fishery Management Areas</i>

**~~Yakutat Area~~**

~~*Fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to the Tsiu River*~~      ~~*Salmon*~~      ~~*Residents of the area east of Yakutat Bay, including the islands within Yakutat Bay, west of the Situk River drainage, and south of and including Knight Island.*~~

~~*Fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to Point Manby*~~      ~~*Dolly Varden, steelhead trout, and smelt*~~      ~~*Residents of the area east of Yakutat Bay, including the islands within Yakutat Bay, west of the Situk River drainage, and south of and including Knight Island.*~~

~~*Remainder of the Yakutat Area*~~      ~~*Dolly Varden, trout, smelt, and eulachon*~~      ~~*Residents of Southeastern Alaska and Yakutat Areas.*~~

~~*Salmon*~~      ~~*All rural residents.*~~

**~~Southeastern Alaska Area~~**

~~*District 1—Section 1E in waters of the Naha River and Roosevelt Lagoon*~~      ~~*Salmon, Dolly Varden, trout, smelt, and eulachon*~~      ~~*Residents of the City of Saxman.*~~

~~*District 1—Section 1F in Boca de Quadra in waters of Sockeye Creek and Hugh Smith Lake within 500 yards of the terminus of Sockeye Creek*~~      ~~*Salmon, Dolly Varden, trout, smelt, and eulachon*~~      ~~*Residents of the City of Saxman.*~~

<i><del>Districts 2, 3, and 5 (south of a line from Point Barrie to Boulder Point) and waters draining into those Districts</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents living south of Sumner Strait and west of Clarence Strait and Kashevaroff Passage.</del></i>
<i><del>District 5—North of a line from Point Barrie to Boulder Point</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</del></i>
<i><del>District 6 and waters draining into that District</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents living south of Sumner Strait and west of Clarence Strait and Kashevaroff Passage; residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island); residents of drainages flowing into Districts 7 &amp; 8, including the communities of Petersburg &amp; Wrangell; and residents of the communities of Meyers Chuck and Kake.</del></i>
<i><del>District 7 and waters draining into that District</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island); residents of drainages flowing into Districts 7 &amp; 8, including the communities of Petersburg &amp; Wrangell; and residents of the communities of Meyers Chuck and Kake.</del></i>
<i><del>District 8 and waters draining into that District</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents of drainages flowing into Districts 7 &amp; 8, residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island), and residents of Meyers Chuck.</del></i>
<i><del>District 9—Section 9A</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</del></i>
<i><del>District 9—Section 9B north of the latitude of Swain Point</del></i>	<i><del>Salmon, Dolly Varden, trout, smelt, and eulachon</del></i>	<i><del>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</del></i>

<i>District 10—West of a line from Pinta Point to False Point Pybus</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor.</i>
<i>District 12—Section 12A, excluding the area south of a line from Fishery Point to South Passage Point</i>	<i>All fish</i>	<i>Residents of drainages flowing into Districts 12 and 14.</i>
<i>District 12—Section 12B</i>	<i>All fish</i>	<i>Residents of drainages flowing into Districts 12 and 14.</i>
<i>District 12—Section 12A, the area south of a line from Fishery Point to South Passage Point</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134°30' West longitude, including Killisnoo Island.</i>
<i>District 13—Section 13A, excluding the area south of the latitude of Cape Edward</i>	<i>All fish</i>	<i>Residents of drainages flowing into Sections 13A, 13B, and District 14.</i>
<i>District 13—Section 13A, south of the latitude of Cape Edward</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B, north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13B north of the latitude of Redfish Cape</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13C</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City and Borough of Sitka in drainages that empty into Section 13B north of the latitude of Dorothy Narrows.</i>
<i>District 13—Section 13C east of the longitude of Point Elizabeth</i>	<i>Salmon, Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134°30' West longitude, including Killisnoo Island.</i>

<i>District 14</i>	<i>All fish</i>	<i>Residents of drainages flowing into Sections 12A, 13A, and District 14.</i>
<i>Remainder of the Southeastern Alaska Area</i>	<i>Dolly Varden, trout, smelt, and eulachon</i>	<i>Residents of Southeastern Alaska and Yakutat Areas.</i>
	<i>Salmon</i>	<i>All rural residents.</i>

### Extent of Federal Public Waters

For the Southeastern Alaska Area, Federal public waters are comprised of fresh waters within and adjacent to the exterior boundaries of Tongass National Forest, including Admiralty Island National Monument and Misty Fjords National Monument, and some marine waters in the Makhnati Island Area in Sitka Bay (see **Southeastern Alaska Area Map**). Glacier Bay National Park is closed to subsistence fishing.

For the Yakutat Area, Federal public waters are comprised of fresh waters within and adjacent to the exterior boundaries of Wrangell-St. Elias National Park and Preserve, Glacier Bay National Preserve, and Tongass National Forest (see **Yakutat Area Map**). In order to engage in subsistence in Wrangell-St. Elias National Park, the National Park Service requires that subsistence users either live within the park resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the Park Superintendent. Yakutat is the only Southeast Alaska community within the Wrangell-St. Elias resident zone.

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3.

### Regulatory History

In the late 1980s, the State of Alaska Board of Fisheries made customary and traditional use determinations that applied to individual communities and specific fish species in particular geographic areas. At that time, 12 Southeast Region communities—Angoon, Craig, Haines, Hoonah, Hydaburg, Kake, Kasaan, Klawock, Klukwan, Saxman, Sitka, and Yakutat—were recognized as having a customary and traditional pattern of use of various fish species in the Southeast Region. The Joint Board did not make positive determinations for 17 other rural communities: Coffman Cove, Edna Bay, Elfin Cove, Gustavus, Hollis, Hyder, Meyers Chuck, Pelican, Petersburg, Point Baker, Port Alexander, Port Protection, Skagway, Tenakee Springs, Thorne Bay, Whale Pass, and Wrangell, or for any residents of the region living outside the boundaries of any organized community (Bosworth 1991).

The “Subsistence Management Regulations for Public Lands in Alaska; Final Rule” was published in the Federal Register (57 FR 22940–22964) on May 29, 1992. The rule generally excluded navigable waters from Federal subsistence management (57 FR 22940, 22942). In a lawsuit consolidated with *Alaska v. Babbitt*, the United States Court of Appeals for the Ninth Circuit ruled that the Board has clear authority

under Title VIII of the Alaska National Interest Lands Conservation Act to administer the subsistence priority in navigable waters that the United States had an interest by virtue of the reserved water rights doctrine and also directed that Federal agencies that administer the subsistence priority were responsible for identifying those waters (64 FR 5, 1276, January 8, 1999). In Southeast Alaska, Federal public waters that are marine waters are described under 36 CFR §242.3 and 50 CFR §100.3 and consist of small areas, the largest of which is the Makhnati Island area near Sitka.

In 1998, the Board adopted the State customary and traditional use determinations for fish (except herring) on Federal public lands and waters in the Southeast Region (63 FR 35343–35344, June 29, 1998), and then modified them to include, at the request of the Council, all species of salmon and Dolly Varden, trout, smelt, and Eulachon (64 FR 1300–1301, January 8, 1999).

As a consequence, customary and traditional use determinations for salmon, Dolly Varden, trout, smelt, and Eulachon were adopted in all or portions of Districts 1, 2, 3, 5, 9, 10, 12, 13, and 14, but no specific determinations were made for Districts 4, 6, 7, 8, 11, and 15—the remainder area. Therefore, all rural residents of Alaska were eligible to harvest fish under Federal subsistence regulations in the remainder area.

In 2000, Proposal FP01-22 was submitted by Bruce Eagle of Wrangell, Alaska, and requested the customary and traditional use determination for Cutthroat Trout, Rainbow Trout, and Dolly Varden be expanded to include all rural residents of the Southeast Region, for the entire Southeastern Alaska Area geographically. The Council recommended expanding the requested determination to include Dolly Varden, trout, smelt and Eulachon in all of the Southeast Region (OSM 2000). The Board expanded the customary and traditional use determination to include Dolly Varden, trout, smelt, and Eulachon, but only to “the remainder areas” of the Southeast Region (66 FR 10146, 10147, February 13, 2001).

In 2004, five proposals (FP04-23 through FP04-27) were submitted to modify customary and traditional use determinations fish in the Prince of Wales Island area, described in the table below (**Table 1**). The Board took no action on four proposals. The Board adopted Proposal FP04-24 as modified by the Council, including all residents of Prince of Wales Island in the customary and traditional use determination for salmon, Dolly Varden, trout, smelt, and Eulachon in the Prince of Wales Island area (OSM 2005).

In 2004, Proposal FP04-28 was submitted by Dick Stokes of Wrangell, Alaska, and requested a customary and traditional use determination for salmon, Dolly Varden, trout, smelt, and Eulachon in waters flowing into Districts 6 and 7 for residents of Petersburg, Kake, and Wrangell. The Board adopted the proposal with the Council modification to include residents of Meyers Chuck.

In 2004, Proposal FP04-29 was submitted by Dick Stokes of Wrangell and Dolly Garza of Ketchikan, Alaska, and requested a customary and traditional use determination for salmon, Dolly Varden, trout, smelt and Eulachon in waters flowing into District 8 including the Stikine River and its delta for residents of Petersburg, Kake, and Wrangell. The Council modified the proposal to include salmon only and only residents of Wrangell. The Board adopted the proposal with modification to include residents of Meyers Chuck, Petersburg, and Wrangell.

**Table 1.** Proposals to modify customary and traditional use determinations for fish in the Prince of Wales Island area submitted in 2004 (OSM 2005).

Proposal and proponent	Fish species	Area	Rural residents	Council recommendation	Board action
FP04-23 Lewis Hiatt (Hollis)	Salmon, Dolly Varden, trout, smelt, and eulachon	Waters flowing into District 2 north of the northern-most tip of Chasina Point and west of a line from the northern-most tip of Chasina Point to the eastern-most tip of Grindall Island to the eastern-most tip of the Kasaan Peninsula.	Residents of Kasaan, Hollis and drainage of the southeastern shore of the Kasaan Peninsula west of 132° 20'W long. and east of 132° 25'W. long.	No action	No action
FP04-24 Don Hernandez (Point Baker)	Salmon, Dolly Varden, trout, smelt, and eulachon	Waters flowing into District 2 remainder, 3B remainder, 3C remainder, 5 remainder, and 6	Residents of POWI and Edna Bay	Support Districts 1, 2, 5, and 6 all residents POWI	Adopt as modified
FP04-25 Brandy Prefontaine (Naukati)	Salmon, Dolly Varden, trout, smelt, and eulachon	Waters draining into remainder of District 3B, and Districts 3C, 5, and 6.	Residents of Naukati, Whale Pass, Coffman Cove, Lab Bay, Edna Bay, Port Protection, Point Baker	No action	No action
FP04-26 Gary Souza (Ketchikan)	Salmon, Dolly Varden, trout, smelt, and eulachon	Streams flowing into District 106-30 and 106-35 north of the Sweetwater drainage.	Residents of Whale Pass	No action	No action
		Streams flowing into Districts 106-41, 105-41, and 105-42	Residents of Pt Baker/Pt. Protection.		
		Streams flowing into Districts 103-80 and 103-90 except the Sarkar drainage	Residents of Naukati		
FP04-27 Gary Souza (Ketchikan)	Salmon, Dolly Varden, trout, smelt, and eulachon	Streams flowing into District 102-70 and 106-10 south of and including Ratz Creek	Residents of Thorne Bay	No action	No action
		Streams flowing into Districts 106-10 north of Ratz Creek and 106-30 south of and including the Sweetwater drainage	Residents of Coffman Cove		

In 2005, Proposal FP06-23 was submitted by Chuck Burkhardt of Gustavus, Alaska, and requested a customary and traditional use determination for fish for Gustavus in Districts 14B and 14C. The Board adopted the Council recommendation and tabled the proposal. The Council stated that it would submit a customary and traditional use proposal for this area that would call for more comprehensive determinations (OSM 2006, see Proposal FP07-17 below).

Chuck Burkhardt, the proponent of Proposal FP06-23, submitted Fisheries Request for Reconsideration FRFR06-01 in May 2006 requesting the Board reconsider its action on Proposal FP10-17. The Board considered FRFR06-01 at its November 16, 2006 work session. The Board adopted Proposal FP06-23 (FSB 2006:176–197).

In 2007, the Council submitted Proposal FP07-17 and requested to modify the customary and traditional use determinations in Districts 12, 13, and 14 to include all fish and all residents of Districts 12, 13, and 14. The Council recommended that the Board adopt the proposal with the OSM staff modification (OSM 2007a). The Board adopted the Council modification. Residents of drainages flowing into Districts 12 and 14 were added to a determination for all fish in District 12A excluding the area south of line from Fishery point to South Passage Point and 12B. Residents of drainages flowing into Sections 13A, 13B, and District 14 were added to a determination for all fish in District 13A excluding the area south of the latitude of Cape Edward. Finally, residents of drainages flowing into Districts 12A, 13A, and District 14 were added to a determination for all fish in District 14.

In 2007, Proposal FP08-04 was submitted by the Alaska Department of Fish and Game (ADF&G) requesting that a “no Federal subsistence priority” determination be made for customary and traditional uses of fish in the Juneau road system area. The Council recommended the Board reject the proposal (OSM 2007b). At its December 2007 meeting, the Board agreed with the Council and rejected the proposal.

In 2008, Proposal FP09-15 was submitted by ADF&G requesting, again, that a “no Federal subsistence priority” determination be made for customary and traditional uses of fish in the Juneau road system area. The Council similarly recommended the Board reject the proposal (OSM 2009). At its December 2008 meeting, the Board again agreed with the Council and rejected the proposal.

In 2010, the Secretary of the Interior asked the Board to review, with Regional Advisory Council input, the customary and traditional use determination process and present recommendations for regulatory changes. In April 2014, as part of its review of the process, the Council sent a letter to the Board requesting an analysis of the effects of possible changes to the customary and traditional use determination process. The Council observed that some customary and traditional use determinations have resulted in unnecessary closures to other rural residents when no concerns for the viability of a resource population have existed and that if these concerns did exist, there was already a process in regulation to restrict who can fish, hunt, or trap. The process involves a determination of who is most customarily dependent on the resource based on three criteria found in ANILCA Section 804. The Office of Subsistence Management reported back to the Council in winter 2015 in a briefing that was presented to all 10 Regional Advisory Councils (OSM 2015). The briefing indicated that Councils have recommended, and the Board has adopted, determinations that include entire management units or entire management areas when residents of a community have demonstrated taking fish or wildlife in only a portion of a management unit or a management area. The Council has not submitted a request to the Secretary of the Interior to modify the customary and traditional use determine process in Federal regulations. Instead, the Councils stated intent is to submit regulatory proposals to the Board requesting to broaden the patchwork of customary and traditional use determinations that currently exist in the Southeast Region. Recently, the Council submitted Wildlife Proposal WP18-02 to expand customary and traditional use determinations for deer to include all Southeast Region rural residents for deer in Units 1–5 comprising the Southeast Region. The Board adopted that proposal at its April 2018 regulatory meeting.



## Community Characteristics

The rural area of the Southeast Region is comprised of about 33 small to medium sized communities, ranging in population from 20 or less (Point Baker, Elfin Cove, and Game Creek) to over 8,000 (Sitka) (**Table 2**). Many were established by Tlingit and are situated at historical village sites or were established by Haida (Hydaburg) or Tsimshian (Metlakatla). Population growth in the Southeast Region during the historical period (beginning about 1750) has been affected by several waves of in-migration, first by Russian fur traders who established Sitka as their headquarters in the late 1700s. After the sale of Alaska to the United States in 1867, new industries (such as commercial fishing, canneries, mining, and fox farming) and commercial trade, were pursued with the associated influx of outsiders during every decade of the 20<sup>th</sup> century (George and Bosworth 1988 and Smythe 1988). Beginning in the 1970s, timber logging camps sprang up and some have persisted as new communities, such as Game Creek and Thorne Bay. Many rural communities in the Southeast Region have at their core a *kwaan* or tribe of Alaska Natives. The territories mapped in 1947 by Goldschmidt and Haas covered all of the Southeast Region (Goldschmidt and Haas 1998). Since 1960 the rural population of the Southeast Region has doubled from 13,102 people in 1960 to 26,343 people in 2010 (**Table 2**). Some of this growth has been from new communities established near logging activities and growth in the recreation and tourism industries.

## Eight Factors for Determining Customary and Traditional Use

Customary and traditional uses in a community or area is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes

**Table 2.** The number of people living at Southeast Region rural communities, 1960–2010  
(Sources: ADLWD 2017, ADCCED 2017, and U.S. Bureau of the Census 1995).

Community	1960	1970	1980	1990	2000	2010	Number of households
Angoon	395	400	465	638	572	459	167
Coffman Cove	0	0	193	186	199	176	89
Craig	273	272	527	1,260	1,397	1,201	523
Edna Bay	135	112	6	86	49	42	19
Elfin Cove	0	49	28	57	32	20	15
Game Creek	0	0	0	61	35	18	10
Gustavus	107	64	98	258	429	442	199
Haines borough	1,000	1,504	1,680	2,117	2,392	2,508	991
Hollis CDP	0	0	0	111	139	112	55
Hoonah	686	748	680	795	860	760	300
Hydaburg	251	214	298	384	382	376	133
Hyder	32	49	77	99	97	87	47
Kake	455	448	555	700	710	557	246
Kasaan	36	30	25	54	39	49	17
Klawock	251	213	318	722	854	755	313
Klukwan	112	103	135	129	139	95	44
Kupreanof	26	36	47	23	23	27	15
Metlakatla	1,135	1,245	1,333	1,464	1,375	1,405	469
Naukati Bay	0	0	0	93	135	113	60
Pelican	135	133	180	222	163	88	70
Petersburg borough	1,502	2,042	2,821	3,207	3,224	2,948	1,252
Point Baker	0	80	90	39	35	15	8
Port Alexander	18	36	86	119	81	52	22
Port Protection	0	0	40	62	63	48	26
Saxman	153	135	273	369	431	411	120
Sitka borough	3,237	6,109	7,803	8,588	8,835	8,881	3,545
Skagway	659	675	814	692	862	920	410
Tenakee Springs	109	86	138	94	104	131	72
Thorne Bay	0	443	377	569	557	471	214
Whale Pass	0	0	90	75	58	31	20
Whitestone	0	0	NA	164	116	114	30
Wrangell borough	2,165	2,358	2,658	2,479	2,448	2,369	1,053
Yakutat borough	230	190	449	534	808	662	270
<b>Total</b>	<b>13,102</b>	<b>17,774</b>	<b>22,284</b>	<b>26,450</b>	<b>27,643</b>	<b>26,343</b>	<b>10,824</b>

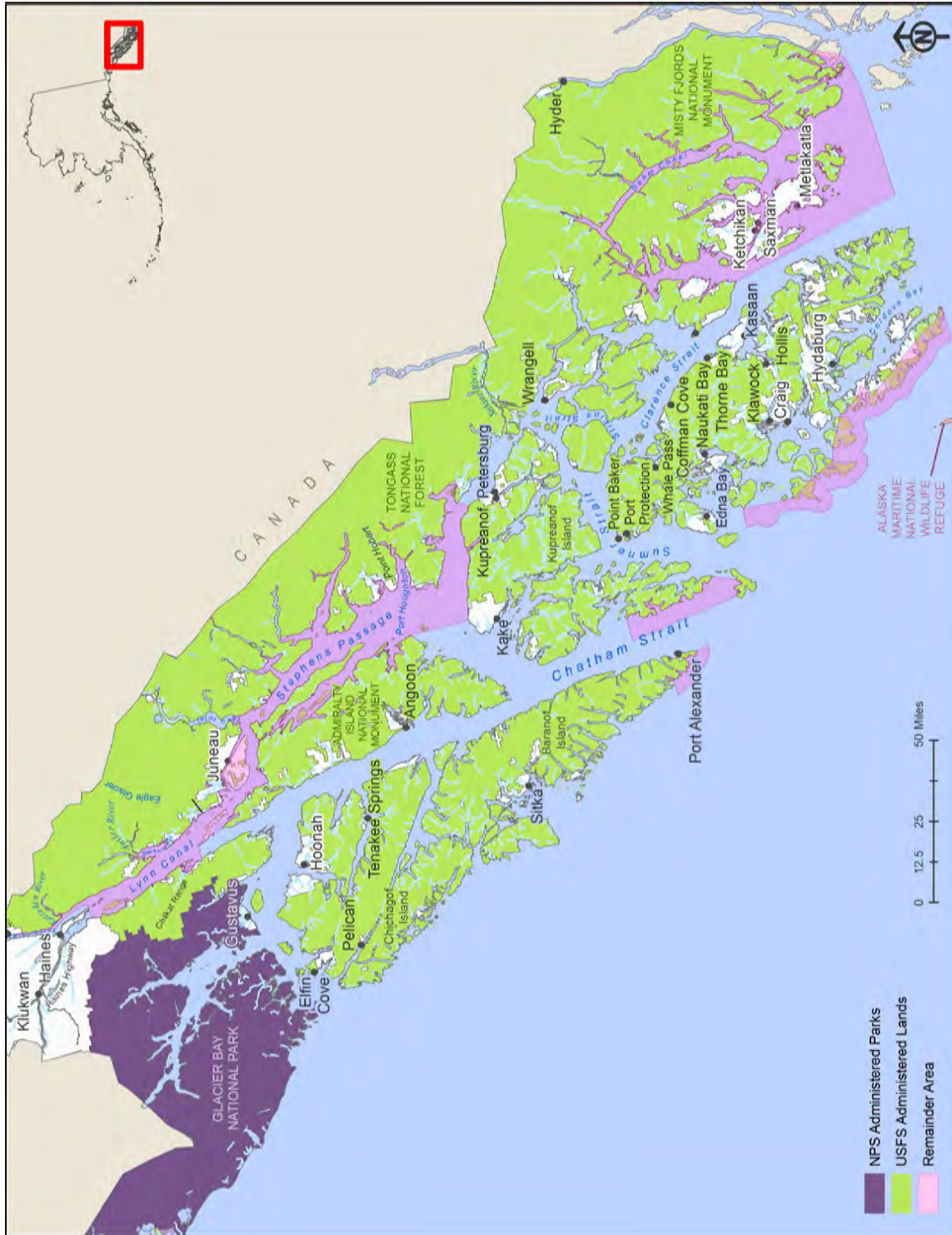
customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or for restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than through adjustments to customary and traditional use findings.

### Introduction

The customary and traditional use determinations for fishes in the Southeast Region generally include only salmon, Dolly Varden, trout, smelt, and Eulachon because these fishes are present in freshwaters; however, some marine waters are Federal public waters (for example, around Makhnati Island near Sitka).

1. Angoon, Hoonah, Tenakee Springs, Elfin Cove, Pelican, and Gustavus have customary and use determinations for all fish. If adopted, the proposal would expand these determinations geographically to include all of the Southeast Region.
2. Other communities have customary and traditional use determinations for only salmon, Dolly Varden, trout, smelt, and Eulachon. If adopted, the proposal would expand these determinations geographically to include all of the Southeast Region.
3. District 1 remainder, 4, 9B remainder, 10 remainder, 11, 13B remainder, and 15 in the Southeastern Alaska Area and the remainder of the Yakutat Area have no customary and traditional use determinations for salmon, and all rural residents of Alaska are therefore Federally qualified subsistence users (**Figure 1** and **Figure 2**). If adopted, the proposal would limit eligibility to include only residents of the Southeast Region.
4. Customary and traditional use determinations for marine fishes have not been adopted for most of the Southeast Region, and all rural residents of Alaska are therefore Federally qualified subsistence users. If adopted, the proposal would limit eligibility to include only residents of the Southeast Region.

Fishes have been seasonally harvested and used by Tlingit, Haida, and Tsimshian communities in the Southeast Region since well before historic contact and continue to the present as documented in numerous ethnographies and studies of subsistence uses in the Southeast Region. Non-Natives throughout the region have also established long-term patterns of harvest and use of these fish in the streams, lakes, and marine waters where they are found (see Gmelch and Gmelch 1983; Ellanna and Sherrod 1986; Mills and Firman 1986; Cohen 1988; George and Bosworth 1988; Smythe 1988; Firman and Bosworth 1990; Goldschmidt and Haas 1998; Turek 2005; Brock and Coiley-Kenner 2009; Paige et al. 2009; Meuret-Woody et al. 2010; Langdon 2012; Deur et al. 2014; Sill and Koster 2017a, 2017b; and Sill et al. 2017).



**Figure 1.** Map of the remainder area of the customary and traditional use determinations for salmon in the Southeastern Alaska Area. All rural residents are eligible to harvest salmon in this remainder area under Federal regulations.



**Figure 2.** Map of the remainder area of the customary and traditional use determination for salmon in the Yakutat Area. All rural residents are eligible to harvest salmon in this remainder area under Federal regulations.

Many rural communities in the Southeast Region are characterized by large extended families with long history and experience in their local areas. Residents of rural communities in the Southeast Region still possess considerable depth of knowledge regarding resource skills, values, and cultural connections to salmon, trout, char, smelt and Eulachon, and other marine fishes.

### Methods and Means

Variation from traditional patterns stem from, at least: (1) regulatory restrictions on eligibility, seasons, daily and annual harvest limits, gear types, bait, and so on; (2) increased competition from out-of-state and non-rural residents; (3) variation in availability due to abundance related to habitat, over harvest, commercial harvest, and so on; and (4) changes in available technology. Where not restricted, rural residents of the region tend to adopt new harvest technologies, such as outboard boat motors and mechanical rod and reel gear, in addition to techniques such as the use of nets, gaffs, and spears. Many patterns of use, including the use of resources obtained through gifting and exchange, remain the same throughout the region as long as access to those resources is not restricted. Patterns of use include various kinds of processing and preservation for individual and household consumption and for customary trade, but also include display as part of traditional Alaska Native gifting traditions and of sharing between individuals and groups of Natives and non-Natives.

Traditional methods and means among Tlingit, Haida, and Tsimshian included (1) trolling and setting with hook and line, (2) weirs and fish traps, and (3) gaffs and spears. Modifications of traditional gear occurred as new regulations were established and new gear was introduced, including modifications to trolling and hooking gear, and replacement of wood, bone, and stone hooks and sinkers with lead and other metals. Cotton and nylon line replaced natural fibers, and rubber and plastic replaced wood and skin floats. Rod and reel gear evolved from carved wooden rods and rectangular frame reels to manufactured rods and reels by the 1950s. Regulatory restrictions have not allowed subsistence users to harvest in many of the traditional ways, but traditional patterns have adapted to some degree and persist in contemporary harvest and use.

### Use Areas

Historically people in the Southeast Region have taken fish from bays and streams that they either traditionally owned or had permission to use. Traditional clans moved to specific streams, and clan leaders controlled access and use of the resources there. Infringement on streams was a serious offense and could result in retribution. These clan-owned areas are documented in many forms, including Goldschmidt and Haas' report "*Haa Aani, Our Land*" (1998) and many ethnographies. Not all of the streams that were traditionally used were adjacent to villages, and historically people sometimes traveled quite far to get fish, or they acquired fish while engaged in hunting or trapping. As people throughout the Southeast Region began taking part in commercial fisheries, subsistence fishing often took place immediately before, during, or after commercial openings. This pattern of harvest, including fishing in streams closely accessible and those in different parts of the region persists in contemporary life. People in the Southeast Region travel from home to other communities for many reasons such as to visit family

and friends, to harvest wild resources, to commercial fish, for potlatches and other cultural celebrations, and to return to traditional clan and kwaan territories.

### Harvest and Use Estimates

Harvest estimates that are readily available were collected by the ADF&G Division of Subsistence in collaboration with rural communities in the Southeast Region for specific study years between 1983 and 2015. Annual community harvests of fishes have consistently been over 50% of all wild resources harvested for subsistence, in lbs. edible weight (**Appendix Table 1**). Data are organized around the harvest of salmon and the harvest of nonsalmon fishes. Salmon were used by over 80% of households in all but six of 70 survey years and ranged from a low of 54% of households using salmon at Sitka in 1987 to a high of 100% of households at Beecher Pass (1987), Edna Bay (1998), Elfin Cove (1987), Game Creek (1996), Hydaburg (2012), and Klukwan and Point Baker (1996) (**Appendix Table 2**). Results for nonsalmon fishes are similar (**Appendix Table 3**).

In rural communities in the Southeast Region, halibut, herring (including roe and spawn), and Rockfish (Black and Yellow Eye) are harvested at the highest levels compared to other fishes. In some communities, smelt, Eulachon, Cod (Pacific and Tom), Dolly Varden, Trout (Cutthroat, Rainbow, and Steelhead), and sole are also harvested at high levels compared to other fishes. Smaller numbers of Sable Fish (Black Cod), greenling, Lingcod, shark, and sculpin are harvested (ADF&G 2018). Halibut harvests have commonly been in the 20,000 to 30,000 lb. range per study year per community; however, the Board does not manage the subsistence harvest of halibut. Rural residents of the Southeast Region also harvest herring at high levels; however, data describing the harvest of herring, herring roe, and herring spawn are not combined in harvest reports, and therefore require substantial additional work to describe here. Rockfish harvest levels have been as high as 22,800 fish, at Sitka in 1987 (**Appendix Table 4**). Rockfish harvest rates have ranged from a low of no harvest at Klukwan in 1983 and 1996 to a high of 77 lbs. per person at Edna Bay in 1998.

Salmon were, and continue to be, the mainstay of the economy and the most important group of subsistence species for Southeast Region communities compared to other categories such as land mammals, marine mammals, and birds and eggs (**Appendix Table 5**). Salmon fishing has been augmented by, and is complementary to, the seasonal round of collecting other kinds of fish, hunting for terrestrial and marine mammals, collecting intertidal resources, and harvesting plants from beaches, forests, and elsewhere. The harvest and use of other fishes is widespread across the region and similarly fits in the seasonal round of subsistence activities.

### **Effects of the Proposal**

If this proposal is adopted, residents of Angoon, Hoonah, Tenakee Springs, Elfin Cove, Pelican, and Gustavus, and rural residents living outside of an organized community but who reside in the area, currently included in a patchwork of customary and use determinations for all fish, will be able harvest all fishes under Federal regulations across the entire Southeast Region.

All other rural residents of the Southeast Region are currently included in a patchwork of determinations for Dolly Varden, trout, smelt, and Eulachon only, and if this proposal is adopted, will be eligible to harvest these fishes under Federal regulations across the entire Southeast Region.

All rural residents of Alaska are currently Federally qualified subsistence users of salmon in District 1 remainder, 4, 9B remainder, 10 remainder, 11, 13B remainder, and 15 in the Southeastern Alaska Area and the remainder of the Yakutat Area. If the proposal is adopted, rural residents that do not reside in the Southeast Region will no longer be eligible to harvest salmon under Federal regulations in the Southeast Region.

## **OSM CONCLUSION**

### **Support Proposal FP19-17**

#### **Justification**

Rural residents of the Southeast Region have demonstrated customary and traditional uses of fishes in the Southeast Region according to ethnographic descriptions and harvest documentation. The Board adopted the State customary and traditional use determinations into regulations. Customary and traditional use determinations adopted from State regulations constitute a patchwork of restrictive determinations where other Southeast Region rural residents cannot fish under Federal subsistence management regulations. This history has created an unnecessary and confusing regulatory complexity in which it has been difficult for subsistence users to know where they can fish under Federal regulations. People in the Southeast Region travel from home to other communities for many reasons such as to visit family and friends, to harvest wild resources, to commercial fish, for potlatches and other cultural celebrations, and to return to traditional clan and kwaan territories. At these times, they need to be able to continue long-standing patterns of fishing. Expanding the Southeast Region customary and traditional use determinations for fish to include all rural residents of the Southeast Region will allow these uses.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southeast Alaska Subsistence Regional Advisory Council

**Support** FP19-17. This proposal is a culmination of Council efforts over many years in reviewing customary and traditional use determinations. The Council wanted this process to accurately reflect subsistence uses as they are and as they exist in the Southeastern Alaska and Yakutat Areas, to take care of unnecessary restrictions on subsistence uses due to customary and traditional use determinations, and to be in line with the clear intent of ANILCA. Eight factors were considered during the formation of this customary and traditional use determination proposal. The Council feels the analysis from OSM is complete in that respect, and the Council supports the OSM preliminary conclusion based on those factors and the literature cited in the analysis.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### STATE OF ALASKA COMMENTS

**Fisheries Proposal FP19-17:** This proposal, submitted by the Southeast Alaska Subsistence Regional Advisory Council, would modify the customary and traditional (C&T) use determination for all fish in the Southeast Alaska and Yakutat Areas to include all federally-qualified residents of the Southeast Alaska and Yakutat Areas.

**Introduction:** Salmon are harvested in Southeast/Yakutat waters for home use under state regulations (subsistence, personal use, sport, and commercial removals) and federal regulations (subsistence). Most fish harvests take place in marine waters under state regulations. Permits are required for both federal and state subsistence salmon fisheries. Fresh waters within the Tongass National Forest are managed under federal authority; few marine waters are federal. Harvest limits for sockeye salmon in federal waters are generally (except for the Stikine River) the same as provided for in adjacent state subsistence or personal use fisheries.

Traditionally, Tlingit people harvested salmon and other fish from areas within their clan's territory. Clans moved seasonally to specific streams and clan leaders controlled access and use of the resources. Permission to use areas outside of clan ownership was sought and granted before using.

Federal C&T use determinations were adopted from the state's C&T findings, which were crafted when the state's subsistence law recognized a rural priority, and so were based on local resource uses. The local harvest patterns took into account a community's traditional use areas (not on the broader fishery management districts as stated in the proposal). Because of the nonsubsistence areas around Juneau and

Ketchikan described in state regulations, waters of District 111 near Juneau, including the transboundary Taku River, which is managed under the auspices of the Pacific Salmon Treaty, and some waters in District 101 near Ketchikan were not included in any C&T determination. Additionally, no C&T findings exist in state regulations for waters of districts that are outside the local community use areas. While salmon are found and harvested throughout the Southeast Alaska and Yakutat areas, steelhead trout and eulachon are found in discrete systems. Not all people have traditionally harvested these species. Federally qualified users are also subsistence users under state regulations and are able to fish in any state subsistence fishery.

**Impact on Subsistence Users:** Adoption of this proposal would increase the pool of subsistence users eligible to participate in opportunities provided under ANILCA

Currently, federally-qualified subsistence users are limited to their own community's C&T areas. If this proposal were adopted, users from outside the community will be able to harvest fish from systems potentially unable to provide the desired amounts, challenging the state's ability to manage fishery resources sustainably.

**Impact on Other Users:** If this proposal were adopted, impact to other users would depend on actions taken by the Federal Subsistence Board or the Alaska Board of Fisheries to provide opportunities to a larger pool of users eligible for fishing under ANILCA.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made various C&T findings for fish stocks found throughout the Southeast and Yakutat areas. The C&T findings are listed below.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for C&T uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for C&T uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

Subsistence fisheries are provided throughout the Southeast Alaska/Yakutat areas under state regulations. State C&T use areas were originally determined based on a specific community's traditional use, thus providing historical continuity for customary subsistence practices.

Current state C&T and ANS determinations for the Southeast Area outside the Juneau and Ketchikan nonsubsistence areas:

(1) District 1:

(A) eulachon in the waters of Section 1C and Section 1D;

- (B) *salmon and Dolly Varden char, as follows:*
- (i) *in the waters of the Naha River;*
  - (ii) *in Boca de Quadra, in the waters of Sockeye Creek, and within 500 yards of the terminus of Sockeye Creek, and in Hugh Smith Lake;*
- (2) *District 2:*
- (A) *salmon, herring, herring spawn, bottomfish, halibut, and Dolly Varden char in the waters of District 2 north of the latitude of the northernmost tip of Chasina Point and west of a line from the northernmost tip of Chasina Point to the easternmost tip of Grindall Island to the easternmost tip of the Kasaan Peninsula;*
  - (B) *salmon and Dolly Varden char in the waters of District 2 in Nichols Bay north of 54° 42.12' N. lat.;*
- (3) *District 3:*
- (A) *Section 3A:*
    - (i) *salmon, bottomfish, halibut, and Dolly Varden char in the waters of Section 3A;*
    - (ii) *herring and herring spawn in the waters of Section 3A in Tlevak Strait north of the latitude of High Point and south of the latitude of Eolus Point;*
  - (B) *Section 3B:*
    - (i) *bottomfish and halibut in the waters of Section 3B;*
    - (ii) *herring and herring spawn in the waters of Section 3B in San Alberto Bay north of the latitude of the southernmost tip of Cape Suspiro and east of 133° 20' W. long.;*
    - (iii) *salmon, Dolly Varden char, and steelhead trout in the waters of Section 3B east of a line from Point Ildefonso to Tranquil Point and the waters of Warm Chuck Inlet north of a line from a point on Hecata Island at 55° 44' N. lat., 133° 25' W. long. to Bay Point;*
  - (C) *Section 3C: salmon, Dolly Varden char, and steelhead trout in the waters of Karheen Passage north of 55° 48' N. lat. and east of 133° 20' W. long. and in the waters of Sarkar Cove and Sarkar Lake;*
- (4) *District 5: salmon, herring, herring spawn, bottomfish, halibut, and Dolly Varden char in the waters of District 5 north of a line from Point St. Albans to Cape Pole;*
- (5) *District 6: salmon, herring, herring spawn, bottomfish, halibut, and Dolly Varden char, as follows:*
- (A) *in the waters of Section 6A west of a line from Macnamara Point to Mitchell Point;*
  - (B) *in the waters of Section 6B west of the longitude of Macnamara Point;*
- (6) *District 7: salmon, herring, herring spawn, bottomfish, halibut, Dolly Varden char, eulachon, and steelhead trout in the waters of District 7, excluding enhanced king, chum, and coho salmon within the waters of the Anita Bay Terminal Harvest Area;*
- (7) *District 8: salmon, herring, herring spawn, bottomfish, halibut, Dolly Varden char, eulachon, and steelhead trout in the waters of District 8;*
- (8) *District 9:*
- (A) *salmon and Dolly Varden char in the waters of District 9 north of the latitude of Swain Point;*
  - (B) *herring, herring spawn, bottomfish, and halibut in the waters of Section 9B north of the latitude of Point Ellis;*

(9) District 10:

(A) salmon and Dolly Varden char in the waters of District 10 west of a line from Pinta Point to False Point Pybus;

(B) herring, herring spawn, bottomfish, and halibut in the waters of District 10 west of a line from Pinta Point to Point Pybus;

(10) District 12:

(A) salmon, smelt, and Dolly Varden char in the waters of District 12 in Basket Bay west of 134° 53.88' W. long.;

(B) herring, herring spawn, bottomfish, and halibut in the waters of District 12 between the latitude of Parker Point and the latitude of Point Caution, including the waters of Whitewater Bay;

(C) salmon and Dolly Varden char in the waters of District 12 south of a line from Fishery Point to South Passage Point and north of the latitude of Point Caution, including the waters of Whitewater Bay;

(11) District 13:

(A) salmon, other than sockeye salmon, bottomfish, and halibut in the waters of District 13;

(B) sockeye salmon, as follows:

(i) in the waters of Section 13A south of the latitude of Cape Edward and the waters along the western shore of Yakobi Island east of a line from Cape Spencer Light to Surge Bay Light;

(ii) in the waters of Section 13B north of the latitude of Redfish Cape;

(iii) in the waters of Section 13C;

(C) smelt and Dolly Varden char in the waters of District 13 along the western shore of Yakobi Island east of a line from Cape Spencer Light to Surge Bay Light;

(D) herring and herring spawn, as follows:

(i) in the waters of Section 13A;

(ii) in the waters of Section 13B north of the latitude of Aspid Cape;

(E) herring, herring spawn, and Dolly Varden char in the waters of Section 13C east of the longitude of Point Elizabeth, including the waters of Rodman Bay;

(12) District 14:

(A) herring, herring spawn, bottomfish, and halibut in the waters of District 14 east of the longitude of Point Dundas;

(B) salmon, smelt, and Dolly Varden char in the waters of Section 14B and Section 14C;

(13) District 15:

(A) salmon and smelt, as follows:

(i) in all waters of the Chilkat River and Chilkat Inlet north of the latitude of Glacier Point;

(ii) in the Chilkoot River, Lutak Inlet, and Chilkoot Inlet north of the latitude of Battery Point, excluding waters of Taiya Inlet north of the latitude of the tip of Taiya Point;

(B) herring, herring spawn, bottomfish, and halibut in the waters of Section 15A.

*(b) The Board of Fisheries finds that 136,000–227,000 pounds of herring spawn are reasonably necessary for subsistence uses in Section 13A, and Section 13B north of the latitude of Aspid Cape.*

*(c) The Board of Fisheries finds that the following numbers of salmon are reasonably necessary for subsistence uses in the Southeastern Alaska Area:*

- (1) Districts 1 through 4: 9,068–17,503 salmon;*
- (2) Districts 5 through 8, District 10, and Section 9B: 4,120–7,345 salmon;*
- (3) Section 9A and District 13: 10,487–20,225 salmon;*
- (4) District 12: 1,100–1,700 salmon;*
- (5) District 14: 600–1,500 salmon;*
- (6) District 15: 7,174–10,414 salmon.*

In the Yakutat Area, the Alaska Board of Fisheries finds that the following fish stocks are customarily and traditionally taken or used for subsistence:

- (1) herring and herring spawn in waters of Yakutat Bay, including Russell Fjord, within a line from the westernmost point of Point Manby to the southernmost point of Ocean Cape;*
- (2) bottomfish and halibut in waters of Yakutat Bay, including Russell Fjord, and in waters of Alaska bounded by a line from Point Manby, at 59° 41.66' N. lat., 140° 19.57' W. long., to 59° 39.17' N. lat., 140° 26.75' W. long. to Ocean Cape, at 59° 31.62' N. lat., 139° 49.87' W. long., to 59° 29.69' N. lat., 139° 55.18' W. long.;*
- (3) salmon in fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to the Tsiu River, in waters of Yakutat Bay and Russell Fjord inside a line from the Westernmost point of Point Manby to the southernmost point of Ocean Cape, and in waters of Icy Bay inside a line from the westernmost tip of Point Riou to Icy Cape Light;*
- (4) Dolly Varden char, steelhead trout, and smelt in fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to Point Manby, and in waters of Yakutat Bay and Russell Fjord inside a line from the westernmost point of Point Manby to the southernmost point of Ocean Cape.*

The Board of Fisheries has found that 5,800–7,832 salmon are reasonably necessary for subsistence uses in the Yakutat Area.

**Conservation Issues:** Conservation concerns exist throughout the Southeast and Yakutat areas for certain populations of Chinook and sockeye salmon, steelhead trout, and eulachon. Several Chinook salmon systems – the Chilkat, King Salmon, and Unuk rivers – were recently defined as stocks of concern by the state Board of Fisheries, and detailed management plans were adopted limiting harvest opportunities in subsistence, personal use, recreational, and commercial fisheries.

**Enforcement Issues:** None

**Recommendation:** ADF&G is **NEUTRAL** on eligibility requirements for participation in the subsistence program provided under ANILCA. ADF&G recommends the Federal Subsistence Board thoroughly and carefully review the data relevant to the 8 criteria for those communities that currently lack a C&T finding.



## WRITTEN PUBLIC COMMENT

**Wrangell-St. Elias National Park  
Subsistence Resource Commission**

P.O. Box 439  
Mile 106.8 Richardson Hwy.  
Copper Center, AK 99573

October 26, 2018

Anthony Christianson, Chair  
Federal Subsistence Board  
U.S. Fish and Wildlife Service  
Office of Subsistence Management  
1011 E. Tudor Road, MS-121  
Anchorage, AK 99503

Subject: Federal Subsistence Management Program Fisheries Proposals for 2019-2021

Dear Mr. Christianson:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Copper Center, Alaska, on October 25 and 26, 2018. The commission is a federal advisory committee that represents subsistence users of federal lands within Wrangell-St. Elias National Park and Preserve. At this meeting, the SRC reviewed the federal subsistence fisheries proposals for the Wrangell-St. Elias area being considered for the 2019-2021 regulatory cycle and would like to provide the following comments:

**FP19-13: Add current fish permit conditions to regulations in a portion of the Prince William Sound Area**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-13 as modified by OSM. Adding the current fish permit conditions to the regulations will clarify the rules for subsistence users. The modification is important to clarify that the conditions would apply specifically to the Chugach National Forest portion of the Prince William Sound Area.

**FP19-14: Allow a dip net and rod and reel fishery in a portion of the lower Copper River**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-14 as modified by OSM. This proposal would provide harvest opportunity for federally qualified subsistence users and support the satisfaction of subsistence needs.

**FP19-15: Move requirement to check fish wheel from fish wheel owner to fish wheel operator**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-15. This is a housekeeping proposal. It is common sense that the fish wheel operator, rather than the owner, is required to check the fish wheel. There are no conservation concerns with the proposal, nor is it detrimental to subsistence needs.

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

**FP19-16: Clarify gear usage for Upper Copper River District subsistence salmon fishing permits**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-16. This proposal clarifies the regulations and provides for subsistence opportunity. Federal subsistence regulations should not be more restrictive than state regulations. Additionally any additional harvest is likely to be small.

**FP19-17: Change C&T for all fish in the Yakutat and the Southeast Alaska Regions**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-17. This change simplifies the regulations and supports subsistence for federally qualified subsistence users.

Thank you for the opportunity to comment.

Sincerely,



Daniel E. Stevens  
Chair

cc: NPS Alaska Regional Director  
Superintendent, Wrangell-St. Elias National Park and Preserve  
Southeast, Southcentral and Eastern Interior Regional Advisory Councils  
Governor of Alaska

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

## APPENDIX

**Appendix Table 1.** The estimated harvest of all wildlife resources, all fishes, salmon, and nonsalmon fishes by rural communities in the Southeast Alaska Region during one year study periods between 1983 and 2015 (source: ADF&G 2018).

Community	Study year	All Wild Resources Per person harvest in lbs. edible weight	Percentage Salmon	Percentage Nonsalmon Fishes	Percentage Fish
Angoon	1984	216	34%	21%	55%
Angoon	1987	244	29%	14%	43%
Angoon	1996	224	36%	21%	58%
Angoon	2012	183	20%	29%	50%
Beecher Pass	1987	477	27%	23%	50%
Coffman Cove	1987	183	28%	31%	59%
Coffman Cove	1998	276	23%	30%	53%
Craig	1987	185	22%	33%	55%
Craig	1997	232	28%	27%	55%
Edna Bay	1987	479	21%	28%	49%
Edna Bay	1998	383	14%	49%	63%
Elfin Cove	1987	263	31%	22%	53%
Game Creek	1996	187	15%	29%	43%
Gustavus	1987	241	23%	34%	57%
Haines	1983	126	36%	26%	63%
Haines	1987	97	28%	38%	66%
Haines	1996	196	30%	41%	71%
Haines	2012	135	34%	28%	62%
Hollis	1987	183	24%	19%	43%
Hollis	1998	169	23%	18%	42%
Hoonah	1985	210	22%	19%	41%
Hoonah	1987	385	26%	20%	46%
Hoonah	1996	372	30%	18%	48%
Hoonah	2012	343	21%	35%	56%
Hydaburg	1987	336	41%	25%	65%
Hydaburg	1997	384	30%	28%	59%
Hydaburg	2012	531	40%	25%	65%
Hyder	1987	345	35%	25%	60%
Kake	1985	218	32%	21%	53%
Kake	1987	163	22%	20%	42%
Kake	1996	179	24%	23%	48%
Kasaan	1987	182	18%	18%	35%
Kasaan	1998	452	21%	41%	61%
Klawock	1984	223	31%	26%	57%
Klawock	1987	247	30%	29%	60%
Klawock	1997	320	33%	24%	57%

*Continued on next page*

Community	Study year	All Wild Resources Per person harvest in lbs. edible weight	Percentage Salmon	Percentage Nonsalmon Fishes	Percentage Fish
Klukwan	1983	170	67%	20%	86%
Klukwan	1987	238	52%	34%	86%
Klukwan	1996	608	44%	41%	85%
Metlakatla	1987	70	29%	25%	54%
Meyers Chuck	1987	414	25%	42%	67%
Pelican	1987	355	17%	34%	50%
Petersburg	1987	198	23%	22%	45%
Petersburg	2000	161	37%	26%	63%
Point Baker	1987	346	26%	19%	45%
Point Baker	1996	289	29%	31%	59%
Port Alexander	1987	312	22%	22%	45%
Port Protection	1987	304	37%	29%	66%
Port Protection	1996	451	13%	25%	38%
Saxman	1987	94	36%	20%	56%
Saxman	1999	217	38%	21%	60%
Sitka	1987	145	27%	30%	56%
Sitka	1996	205	28%	26%	54%
Sitka	2013	175	27%	39%	66%
Skagway	1987	48	37%	32%	69%
Tenakee Springs	1984	250	28%	17%	45%
Tenakee Springs	1987	330	15%	25%	40%
Thorne Bay	1987	189	25%	38%	64%
Thorne Bay	1998	179	35%	20%	55%
Whale Pass	1987	179	23%	21%	44%
Whale Pass	1998	185	15%	20%	35%
Whale Pass	2012	247	21%	31%	52%
Whitestone Camp	1996	178	12%	40%	51%
Wrangell	1987	155	19%	28%	47%
Wrangell	2000	168	15%	20%	36%
Yakutat	1984	369	35%	22%	57%
Yakutat	1987	398	54%	19%	74%
Yakutat	2000	386	38%	23%	60%
Yakutat	2015	262	35%	18%	53%

**Appendix Table 2.** The harvest and use of salmon by rural communities in the Southeast Region during one year study periods between 1983 and 2015 (Blank cell=question not asked; Source: ADF&G 2018).

Community	Study year	Households using salmon	Households attempting to harvest salmon	Households harvesting salmon	Households giving away salmon	Households receiving salmon
Angoon	1984	79%	74%	71%	24%	29%
Angoon	1987	85%		64%	37%	51%
Angoon	1996	80%	65%	65%	42%	62%
Angoon	2012	92%	65%	65%	47%	77%
Beecher Pass	1987	100%		100%	60%	80%
Coffman Cove	1987	71%		68%	26%	21%
Coffman Cove	1998	94%	84%	82%	44%	46%
Craig	1987	84%		65%	34%	47%
Craig	1997	88%	71%	69%	46%	51%
Edna Bay	1987	90%		85%	55%	50%
Edna Bay	1998	100%	100%	100%	25%	25%
Elfin Cove	1987	100%		100%	62%	69%
Game Creek	1996	100%	50%	50%	33%	100%
Gustavus	1987	92%		74%	51%	48%
Haines	1983	82%	68%	61%	25%	44%
Haines	1987	80%		49%	38%	47%
Haines	1996	89%	61%	61%	40%	68%
Haines	2012	92%	66%	64%	44%	58%
Hollis	1987	81%		70%	33%	44%
Hollis	1998	80%	63%	61%	28%	48%
Hoonah	1985	86%		55%	34%	
Hoonah	1987	92%		69%	49%	64%
Hoonah	1996	86%	77%	74%	57%	64%
Hoonah	2012	89%	66%	61%	51%	63%
Hydaburg	1987	94%		67%	51%	60%
Hydaburg	1997	96%	73%	69%	65%	63%
Hydaburg	2012	100%	73%	73%	71%	90%
Hyder	1987	67%		55%	18%	33%
Kake	1985	87%		61%	34%	
Kake	1987	88%		56%	35%	57%
Kake	1996	99%	67%	62%	43%	75%
Kasaan	1987	100%		57%	36%	71%
Kasaan	1998	93%	57%	50%	50%	64%
Klawock	1984	89%	72%	72%	44%	50%
Klawock	1987	81%		71%	36%	41%
Klawock	1997	89%	70%	69%	50%	59%
Klukwan	1983	94%	88%	85%	52%	30%
Klukwan	1987	98%		76%	43%	59%
Klukwan	1996	100%	74%	71%	68%	81%
Metlakatla	1987	82%		28%	19%	71%
Meyers Chuck	1987	100%		100%	40%	30%
Naukatli Bay	1998	88%	68%	68%	42%	44%

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Community	Study year	Households using salmon	Households attempting to harvest salmon	Households harvesting salmon	Households giving away salmon	Households receiving salmon
Pelican	1987	95%		74%	41%	81%
Petersburg	1987	97%		75%	55%	61%
Petersburg	2000	78%	52%	47%	30%	51%
Point Baker	1987	90%		74%	37%	47%
Point Baker	1996	100%	69%	69%	50%	50%
Port Alexander	1987	94%		71%	53%	62%
Port Protection	1987	96%		88%	44%	60%
Port Protection	1996	96%	80%	80%	44%	64%
Saxman	1987	89%		58%	15%	51%
Saxman	1999	90%	58%	53%	44%	70%
Sitka	1987	54%		54%	0%	0%
Sitka	1996	89%	60%	58%	51%	64%
Sitka	2013	88%	58%	54%	46%	66%
Skagway	1987	73%		39%	17%	54%
Tenakee Springs	1984	88%	63%	63%	38%	71%
Tenakee Springs	1987	77%		48%	29%	58%
Thorne Bay	1987	86%		73%	39%	30%
Thorne Bay	1998	85%	82%	79%	36%	32%
Whale Pass	1987	89%		67%	33%	33%
Whale Pass	1998	93%	73%	73%	53%	67%
Whale Pass	2012	95%	62%	57%	48%	57%
Whitestone	1996	83%	88%	83%	33%	38%
Wrangell	1987	82%		53%	25%	62%
Wrangell	2000	81%	49%	46%	38%	54%
Yakutat	1984	96%	76%	74%	50%	60%
Yakutat	1987	88%		86%	63%	57%
Yakutat	2000	98%	81%	78%	68%	73%
Yakutat	2015	94%	78%	74%	61%	73%

**Appendix Table 3.** The harvest and use of nonsalmon fishes by rural communities in the Southeast Region during one year study periods between 1983 and 2015 (Blank cell=not asked; source: ADF&G 2018).

Community	Study year	Households using nonsalmon fishes	Households attempting to harvest nonsalmon fishes	Households harvesting nonsalmon fishes	Households giving away nonsalmon fishes	Households receiving nonsalmon fishes
Angoon	1984	90%	87%	84%	50%	71%
Angoon	1987	99%		68%	51%	86%
Angoon	1996	82%	61%	61%	30%	70%
Angoon	2012	86%	63%	59%	51%	69%
Beecher Pass	1987	100%		100%	100%	60%
Coffman Cove	1987	82%		74%	47%	40%
Coffman Cove	1998	98%	90%	90%	44%	48%
Craig	1987	81%		63%	33%	63%
Craig	1997	91%	70%	67%	47%	61%
Edna Bay	1987	100%		100%	95%	85%
Edna Bay	1998	100%	100%	100%	33%	33%
Elfin Cove	1987	92%		77%	62%	85%
Game Creek	1996	100%	75%	75%	75%	100%
Gustavus	1987	96%		82%	74%	57%
Haines	1983	80%	68%	62%	23%	38%
Haines	1987	85%		57%	35%	58%
Haines	1996	86%	58%	58%	37%	71%
Haines	2012	84%	50%	48%	30%	63%
Hollis	1987	81%		64%	17%	57%
Hollis	1998	76%	54%	50%	17%	44%
Hoonah	1985	100%		76%		
Hoonah	1987	99%		83%	63%	83%
Hoonah	1996	83%	75%	71%	47%	68%
Hoonah	2012	94%	68%	63%	58%	87%
Hydaburg	1987	96%		73%	51%	93%
Hydaburg	1997	100%	57%	57%	57%	98%
Hydaburg	2012	98%	67%	65%	75%	96%
Hyder	1987	82%		58%	15%	49%
Kake	1985	91%		57%		
Kake	1987	96%		62%	30%	83%
Kake	1996	99%	62%	58%	34%	77%
Kasaan	1987	100%		71%	64%	79%
Kasaan	1998	100%	71%	71%	43%	71%
Klawock	1984	86%	64%	61%	42%	67%
Klawock	1987	91%		74%	51%	61%
Klawock	1997	94%	68%	68%	47%	72%
Klukwan	1983	91%	85%	76%	18%	55%
Klukwan	1987	100%		74%	55%	93%
Klukwan	1996	100%	84%	77%	71%	100%
Metlakatla	1987	82%		31%	22%	80%
Meyers Chuck	1987	80%		80%	50%	50%

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Community	Study year	Households using nonsalmon fishes	Households attempting to harvest nonsalmon fishes	Households harvesting nonsalmon fishes	Households giving away nonsalmon fishes	Households receiving nonsalmon fishes
Naukati Bay	1998	84%	62%	58%	28%	52%
Pelican	1987	100%		83%	74%	88%
Petersburg	1987	88%		77%	53%	52%
Petersburg	2000	80%	50%	46%	25%	58%
Point Baker	1987	95%		79%	58%	84%
Point Baker	1996	100%	81%	81%	63%	75%
Port Alexander	1987	100%		74%	53%	79%
Port Protection	1987	96%		76%	52%	84%
Port Protection	1996	96%	80%	80%	56%	84%
Saxman	1987	89%		60%	25%	79%
Saxman	1999	84%	45%	42%	40%	73%
Sitka	1987	56%		56%	0%	0%
Sitka	1996	92%	60%	57%	47%	67%
Sitka	2013	91%	55%	54%	43%	73%
Skagway	1987	81%		35%	12%	62%
Tenakee Springs	1984	92%	63%	63%	46%	83%
Tenakee Springs	1987	97%		58%	45%	77%
Thorne Bay	1987	91%		79%	41%	52%
Thorne Bay	1998	69%	66%	64%	25%	25%
Whale Pass	1987	94%		89%	39%	50%
Whale Pass	1998	80%	60%	60%	40%	47%
Whale Pass	2012	95%	76%	71%	38%	52%
Whitestone Camp	1996	100%	88%	88%	25%	29%
Wrangell	1987	92%		64%	40%	73%
Wrangell	2000	80%	49%	47%	39%	63%
Yakutat	1984	98%	76%	72%	56%	94%
Yakutat	1987	96%		87%	57%	82%
Yakutat	2000	95%	63%	60%	58%	81%
Yakutat	2015	94%	66%	62%	57%	84%



**Appendix Table 4.** The estimated harvest of rockfishes by rural communities in the Southeast Region during one year study periods between 1983 and 2015 (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source: ADF&G 2018).

Community	Study year	Unit	Rockfish estimated harvest	Lower harvest estimate	Upper harvest estimate	Per person harvest in lbs.
Angoon	1984	Ind.	439	132	746	2.1
Angoon	1987	Ind.	309	195	423	1.2
Angoon	1996	Ind.	292	134	498	1.7
Angoon	2012	Lbs.	935	334	340	2.7
Beecher Pass	1987	Ind.	262	77	461	11.9
Coffman Cove	1987	Ind.	385	248	522	4.1
Coffman Cove	1998	Ind.	940	732	1,149	9.9
Craig	1987	Ind.	4,439	2,561	6,318	7.5
Craig	1997	Ind.	4,762	3,232	6,292	8.9
Edna Bay	1987	Ind.	1,148	1,093	1,320	33.1
Edna Bay	1998	Ind.	1,298	916	2,161	77.0
Elfin Cove	1987	Ind.	210	144	329	7.0
Game Creek	1996	Ind.	38	30	57	2.0
Gustavus	1987	Ind.	90	59	120	1.2
Haines	1983	Lbs.	1,015	378	1,652	0.5
Haines	1987	Ind.	323	58	589	0.4
Haines	1996	Ind.	1,390	164	2,624	2.5
Haines	2012	Lbs.	886	384	385	0.5
Hollis	1987	Ind.	318	318	318	8.0
Hollis	1998	Ind.	248	193	346	3.5
Hoonah	1985	Lbs.	1,006	442	1,570	1.1
Hoonah	1987	Ind.	5,547	2,141	8,954	15.9
Hoonah	1996	Ind.	1,462	402	2,603	5.8
Hoonah	2012	Lbs.	2,090	737	742	2.9
Hydaburg	1987	Ind.	2,513	963	4,062	13.3
Hydaburg	1997	Ind.	2,232	1,086	3,378	18.0
Hydaburg	2012	Lbs.	5,241	1,939	1,958	15.8
Hyder	1987	Ind.	141	119	232	3.6
Kake	1985	Lbs.	1,151	710	1,592	1.8
Kake	1987	Ind.	579	239	918	1.8
Kake	1996	Ind.	181	53	343	0.8
Kasaan	1987	Ind.	69	69	69	3.5
Kasaan	1998	Ind.	46	36	68	3.5
Klawock	1984	Ind.	1,354	1,354	1,354	4.6
Klawock	1987	Ind.	3,173	1,663	4,684	8.0
Klawock	1997	Ind.	2,781	1,152	4,411	9.4
Klukwan	1983	Ind.	0	0	0	0.0
Klukwan	1987	Ind.	54	>1	125	0.8
Klukwan	1996	Ind.	0	0	0	0.0
Metlakatla	1987	Ind.	2,354	1,541	3,167	3.0
Meyers Chuck	1987	Ind.	686	686	686	45.7

*Continued on next page*

Community	Study year	Unit	Rockfish estimated harvest	Lower harvest estimate	Upper harvest estimate	Per person harvest in lbs.
Naukati Bay	1998	Ind.	1,055	799	1,387	27.0
Pelican	1987	Ind.	2,306	2,306	2,306	19.3
Petersburg	1987	Ind.	3,085	515	5,655	1.7
Petersburg	2000	Ind.	2,106	771	3,440	2.9
Point Baker	1987	Ind.	318	318	318	18.2
Point Baker	1996	Ind.	310	229	391	16.0
Port Alexander	1987	Ind.	1,173	857	1,490	22.0
Port Protection	1987	Ind.	789	648	930	27.1
Port Protection	1996	Ind.	1,262	858	1,667	31.8
Saxman	1987	Ind.	625	191	1,059	4.8
Saxman	1999	ind.	545	371	719	3.8
Sitka	1987	Ind.	22,764	15,847	29,681	5.7
Sitka	1996	Ind.	13,260	4,258	22,261	5.1
Sitka	2013	Lbs.	30,769	7,947	12,089	3.9
Skagway	1987	Ind.	209	-89	508	0.7
Tenakee Springs	1984	Ind.	123	45	201	3.9
Tenakee Springs	1987	Ind.	470	333	607	9.9
Thorne Bay	1987	Ind.	1,709	1,133	2,285	7.1
Thorne Bay	1998	Ind.	1,160	787	1,532	6.3
Whale Pass	1987	Ind.	33	33	33	1.3
Whale Pass	1998	Ind.	97	40	154	6.5
Whale Pass	2012	Lbs.	180	68	71	3.3
Whitestone	1996	Ind.	63	18	108	1.5
Wrangell	1987	Ind.	3,019	1,210	4,827	2.1
Wrangell	2000	Ind.	3,842	686	6,998	7.8
Yakutat	1984	Ind.	615	615	615	3.2
Yakutat	1987	Ind.	285	156	415	1.0
Yakutat	2000	Ind.	284	184	385	1.1
Yakutat	2015	Lbs.	1,490	320	764	2.5

**Appendix Table 5.** The estimated harvest of wild resources for subsistence, in lbs. edible weight per person, by rural communities in the Southeast Region during one year study periods between 1983 and 2015 (source: ADF&G 2018).

Community	Study year	Salmon	Non-salmon fishes	Land mammals	Marine mammals	Birds and eggs	Marine invertebrates	Plants and berries	Total
Angoon	1984	74	46	58	17	1	13	8	216
Angoon	1987	71	35	73	32	1	26	7	244
Angoon	1996	82	48	51	9	0	30	4	224
Angoon	2012	37	53	51	5	0	22	13	183
Beecher Pass	1987	131	108	109	0	23	93	13	477
Coffman Cove	1987	52	56	60	1	1	9	5	183
Coffman Cove	1998	63	83	66	1	3	49	11	276
Craig	1987	40	62	42	5	1	29	6	185
Craig	1997	65	63	47	10	1	29	19	232
Edna Bay	1987	99	135	147	0	4	67	26	479
Edna Bay	1998	55	186	90	0	0	16	36	383
Elfin Cove	1987	81	59	72	0	0	24	27	263
Game Creek	1996	27	54	47	0	3	36	20	187
Gustavus	1987	55	82	64	0	2	28	10	241
Haines	1983	46	33	34	1	3	3	5	126
Haines	1987	28	37	23	0	1	4	5	97
Haines	1996	58	81	29	1	1	11	15	196
Haines	2012	47	38	28	0	1	12	10	135
Hollis	1987	44	35	42	0	1	49	11	183
Hollis	1998	40	31	40	0	0	53	6	169
Hoonah	1985	47	40	58	21	1	22	21	210
Hoonah	1987	100	78	90	53	1	49	13	385
Hoonah	1996	113	67	81	23	1	58	30	372
Hoonah	2012	72	120	52	13	2	41	44	343
Hydaburg	1987	137	83	43	7	1	51	14	336
Hydaburg	1997	117	109	35	3	1	101	19	384
Hydaburg	2012	214	133	68	5	0	83	27	531
Hyder	1987	121	86	32	8	6	85	7	345
Kake	1985	69	46	27	26	1	19	29	218
Kake	1987	35	33	39	23	1	18	15	163
Kake	1996	44	42	52	10	1	22	9	179
Kasaan	1987	32	32	40	2	0	69	6	182
Kasaan	1998	93	184	70	25	0	61	19	452
Klawock	1984	69	58	36	14	1	28	18	223
Klawock	1987	75	72	47	5	1	40	7	247
Klawock	1997	105	78	54	21	1	37	24	320
Klukwan	1983	114	33	14	2	1	0	6	170
Klukwan	1987	124	81	14	8	1	1	10	238
Klukwan	1996	267	252	28	3	1	14	45	608
Metlakatla	1987	20	17	11	1	1	15	5	70
Meyers Chuck	1987	105	174	48	0	9	64	14	414

Continued on next page

Community	Study year	Salmon	Non-salmon fishes	Land mammals	Marine mammals	Birds and eggs	Marine invertebrates	Plants and berries	Total
Naukati Bay	1998	49	73	51	1	2	54	12	242
Pelican	1987	60	119	111	8	1	47	9	355
Petersburg	1987	45	44	57	0	4	39	9	198
Petersburg	2000	60	42	17	0	1	37	4	161
Point Baker	1987	89	66	101	0	3	66	20	346
Point Baker	1996	82	89	47	0	0	58	12	289
Port Alexander	1987	70	70	108	3	1	31	28	312
Port Protection	1987	111	88	41	0	2	43	19	304
Port Protection	1996	59	111	101	9	2	139	30	451
Saxman	1987	33	19	20	2	0	14	4	94
Saxman	1999	84	47	29	12	0	23	23	217
Sitka	1987	39	43	38	1	1	18	5	145
Sitka	1996	58	54	51	7	1	27	7	205
Sitka	2013	46	68	26	3	0	19	12	175
Skagway	1987	18	16	4	0	0	9	2	48
Tenakee Springs	1984	71	42	65	4	0	61	7	250
Tenakee Springs	1987	49	82	135	8	2	43	11	330
Thorne Bay	1987	48	73	40	0	1	24	4	189
Thorne Bay	1998	62	37	36	11	1	26	6	179
Whale Pass	1987	41	37	60	2	1	33	5	179
Whale Pass	1998	28	36	51	0	0	57	13	185
Whale Pass	2012	52	76	80	0	13	24	3	247
Whitestone	1996	21	71	57	0	1	23	5	178
Wrangell	1987	30	43	32	7	1	38	4	155
Wrangell	2000	26	34	39	0	1	60	8	168
Yakutat	1984	129	82	52	24	10	46	26	369
Yakutat	1987	216	77	15	31	2	40	17	398
Yakutat	2000	145	87	34	35	3	54	27	386
Yakutat	2015	93	47	49	33	4	12	25	262

## FP19–18 Executive Summary

<p><b>General Description</b></p>	<p>Proposal FP19–18 requests that the gillnet stretched mesh size for the Stikine River Sockeye and Coho Salmon subsistence fisheries be changed from a maximum of 5.5 inches to a maximum of 6.25 inches. <i>Submitted by: Chris Ottesen of Wrangell.</i></p>
<p><b>Proposed Regulation</b></p>	<p><b>§ __.27(e)(13) Southeastern Alaska Area</b></p> <p>* * * *</p> <p><i>(xiii) You may take Chinook, Sockeye, and Coho Salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. The maximum gillnet mesh size is <del>5-1/2</del> <b>1/4</b> inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.</i></p>
<p><b>OSM Conclusion</b></p>	<p><b>Support FP19-18 with modification</b> to preserve the 5.5 inch mesh size restriction during the Sockeye Salmon season and eliminate the gillnet mesh size restriction for the Coho Salmon season. In keeping with the cooperative approach being taken on the Stikine River due to the management of transboundary salmon stocks, the Federal Subsistence Board will need to coordinate with and obtain concurrence from the Transboundary Panel of the Pacific Salmon Commission.</p> <p>The modified regulation should read:</p> <p><b>§ __.27(e)(13) Southeastern Alaska Area</b></p> <p><i>(xiii) You may take Chinook, Sockeye, and Coho Salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. <del>The maximum gillnet mesh size is 5-1/2 inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.</del> <b>The maximum gillnet stretched mesh size is 8 inches during the Chinook Salmon season and 5 1/2 inches during the Sockeye Salmon season. There is no maximum mesh size during the Coho Salmon season.</b></i></p>

<b>FP19–18 Executive Summary</b>	
<b>Southeast Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Support as modified by OSM</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS  
FP19-18**

**ISSUES**

Proposal FP19-18, submitted by Chris Ottesen of Wrangell, requests that the gillnet stretched mesh size for the Stikine River Sockeye and Coho Salmon subsistence fisheries be changed from a maximum of 5.5 inches to a maximum of 6.25 inches.

**DISCUSSION**

The proponent stated that 6.25 inch mesh gillnet is standard gear for Coho Salmon. The larger mesh size is more efficient for catching Coho Salmon and allowing it would provide Federally qualified subsistence users an opportunity to use their existing gear rather than buying new nets. The proponent believes there will be no effect on Sockeye Salmon catch because many will pass through the larger mesh. This proposal would not change the Chinook Salmon regulations.

**Existing Federal Regulation**

§ \_\_.27(e)(13) *Southeastern Alaska Area*

\* \* \* \*

*(xiii) You may take Chinook, Sockeye, and Coho Salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. The maximum gillnet mesh size is 5 1/2 inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.*

*(A) You may take Chinook Salmon from May 15 through June 20. The annual limit is 5 Chinook Salmon per household.*

*(B) You may take Sockeye Salmon from June 21 through July 31. The annual limit is 40 Sockeye Salmon per household.*

*(C) You may take Coho Salmon from August 1 through October 1. The annual limit is 20 Coho Salmon per household.*

*(D) You may retain other salmon taken incidentally by gear operated under terms of this*

*permit. The incidentally taken salmon must be reported on your permit calendar.*

*(E) Fishing nets must be checked at least twice each day. The total annual guideline harvest level for the Stikine River fishery is 125 Chinook, 600 Sockeye, and 400 Coho Salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species.*

\* \* \* \*

### **Proposed Federal Regulation**

#### **§ \_\_.27(e)(13) Southeastern Alaska Area**

\* \* \* \*

*(xiii) You may take Chinook, Sockeye, and Coho Salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. The maximum gillnet mesh size is ~~5-1/2~~ 1/4 inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.*

\* \* \* \*

### **Existing State Regulation**

#### **5 AAC 33.361 United States-Canada Salmon Management Plan**

*(a) The department shall manage the recreational, troll, purse seine and gillnet salmon fisheries in the Southeastern Alaska and Yakutat Areas in accordance with the conservation and harvest goals, and the understandings, of the United States-Canada Pacific Salmon Treaty.*

#### **5 AAC 47.022 General Provisions for Season and Bag, Possession, Annual, and Size Limits for the Fresh Waters of the Southeast Alaska Area**

*(b) In the fresh waters east of the longitude of Cape Fairweather:*

*(1) king salmon: sport fishing for king salmon is closed;*

*(c) In the fresh waters between the longitude of Cape Suckling and the longitude of Cape Fairweather:*



*(1) king salmon: may be taken from January 1 – December 31; no size limit, bag, possession, and annual limits, as follows:*

*(A) 20 inches or greater in length; bag and possession limit of one fish*

*(B) less than 20 inches in length; bag and possession limit of 10 fish*

*(2) salmon, other than king salmon: may be taken from January 1 – December 31; no annual limit, no size limit, bag and possession limits, as follows:*

*(A) coho salmon 16 inches or greater in length; bag limit of four fish; possession limit of eight fish;*

*(B) chum, pink, and sockeye salmon 16 inches or greater in length; bag limit of six fish per species; possession limit of 12 fish per species.*

*(C) salmon, other than king salmon: less than 16 inches in length, bag and possession limit of 10 fish per species;*

### **Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. All waters of the Stikine River downstream from the Canadian border that are within the exterior boundaries of the Tongass National Forest are considered Federal public waters for the purposes of Federal subsistence fisheries management. For the Stikine River, non-marine waters include all portions of the Stikine River inland from the point of Federal jurisdiction at Point Rothsay to the Canadian border (**Figure 1**). All portions of the Stikine watershed in the United States are part of the Stikine-LeConte Wilderness Area which is managed by the United States Forest Service, Wrangell Ranger District.



**Figure 1.** Stikine River, Federal Public Waters and prominent features.

### Customary and Traditional Use Determinations

Rural residents of drainages flowing into Districts 7 and 8, residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island), and residents of Meyers Chuck have a customary and traditional use determination for salmon, Dolly Varden, trout, smelt, and Eulachon in District 8 and waters draining into that District.

### Regulatory History

The Stikine River Federal subsistence salmon fishery is regulated by Federal subsistence fishing regulations and within the terms of Annex IV of the U.S./Canada Pacific Salmon Treaty of 1985, as last amended in January 2009 (Treaty). There is a Total Allowable Catch for Chinook and Sockeye Salmon apportioned between Canada and the United States. The Federal subsistence fisheries harvest is a component of the U.S. Total Allowable Catch. The Treaty and its annexes do not address allowable gear for the Stikine River. The Treaty specifies guidelines for harvests, seasons, and reporting requirements. However, there is a clause stipulating that any proposed regulatory changes to the fishery would need to be reviewed by the bilateral Transboundary Panel (TBR) and approved by the Pacific Salmon Commission

(PSC). The Federal Subsistence Management Program, in keeping with the cooperative approach taken for management of transboundary salmon stocks, has coordinated action on proposals with the PSC or authorized State representatives.

A proposal to establish a Federal subsistence salmon fishery on the Stikine River (FP01-27) was submitted in 2000 by Mr. Richard Stokes, a resident of Wrangell. That proposal requested a Chinook Salmon fishery from June 1 to August 1, a Sockeye Salmon fishery from June 15 to September 1, and a Coho Salmon fishery from July 15 to October 1 (OSM 2000). The Board deferred action on this proposal, pending coordination with the TBR (FSB 2000).

In 2004, through proposal FP04-29, the Board made a customary and traditional use determination for salmon, Dolly Varden, trout, smelt and Eulachon in District 8 for residents living in or near the communities of Wrangell, Petersburg, and Meyers Chuck (FSB 2003). The Board also took action on fisheries proposal FP04-40 and adopted methods, a season, and guideline harvest limits for Chinook, Sockeye, and Coho Salmon for the Stikine River (FSB 2003). The TBR and the PSC concurred with the Board and a subsistence fishery for Sockeye Salmon was opened during the 2004 season, but with a season starting date of July 1 instead of June 15. The original guideline harvest levels (GHLs) were identified because there was a management need for a subsistence fishery harvest estimate and it was unknown whether in-season reporting was going to be successful. There was also considerable uncertainty regarding the potential harvest (catch per unit effort and level of participation). The GHLs specified in regulation and in the Treaty were the Federal and State managers best estimates of potential harvest based on the information that was available at that time and were not intended to be harvest allocations or quotas.

The Board, in coordination with the TBR and PSC, added directed fisheries for Chinook and Coho Salmon prior to the 2005 season. With concurrence of the PSC, the Board also approved a change in the mesh size from 5.5 inches to 8 inches (FSA05-01) for the new 2005 Chinook Salmon fishery. Regulatory changes for the 2006 season included an increase in the mesh size of gillnets during the Chinook Salmon fishery to 8 inch stretched mesh through Board action on proposal FP06-27, and an earlier starting date for the Sockeye Salmon fishery through action on proposals FP06-28 and 29 (FSB 2006).

During the 2008 regulatory cycle, the Board adopted proposal FP08-03, which made Federal subsistence fishing permits valid for the length of the fishing season, May 15 through October 1, and changed the start date of the subsistence Coho Salmon fishery from August 15 to August 1 (FSB 2007, OSM 2007). Changing the Coho Salmon fishery start date allowed continuous subsistence fishing between May 15 and October 1. In 2013, the Board deferred action on proposal FP13-19, which called for revising the Stikine River guideline harvest levels, until it could be considered by the TBR and PSC (FSB 2013). In 2015, two proposals (FP15-13 and FP15-14) were submitted requesting multiple similar modifications to the Federal subsistence fishery in the Stikine River (OSM 2015). The Board adopted proposal FP15-13 requiring subsistence fishing nets to be checked twice each day, and took no action on proposal FP15-14 and deferred proposal FP13-19 (FSB 2015).

The Federal Chinook Salmon subsistence fishery was closed by Emergency Special Action prior to the season in 2013(FSA13-01), 2014(FSA14-05), 2017(FSA17-02), and 2018(FSA13-KS-03-18) due to low

pre-season abundance estimates (OSM 2013, 2015, 2017; USFS 2018). Once the in-season return estimate provided for an allowable catch, the fishery was reopened on June 15, 2013 and June 14, 2014 for the remainder of the season. There was a Chinook Salmon allowable catch for the U.S. in 2015 and 2016, and the subsistence fishery was not restricted during those years. In 2016, the in-season return estimates fell below the minimum escapement. However, the estimate came too late in the season to close the fishery. The 2017, Chinook Salmon season was closed by the Board due to a low pre-season abundance estimate and it remained closed due to low in-season return. The 2018 season was also closed pre-season due to conservation concerns. The Sockeye and Coho Salmon seasons have remained open since 2005. In 2017, the Wrangell District Ranger was delegated authority by the Board to open or close Federal public waters on transboundary rivers to the taking of fish for subsistence or nonsubsistence uses to comply with the terms of the Pacific Salmon Treaty.

### Biological Background

All species of Pacific salmon return to spawn in the Stikine River with the majority of fish produced in the Canadian section. The State managed directed Chinook, Sockeye and Coho Salmon sport and commercial fisheries are dependent on whether there is an Allowable Catch as determined by the pre-season forecast of Canadian origin Stikine River salmon stocks. Subsequent openings are dependent on in-season abundance estimates determined by test fisheries and fishery performance information and stock of origin calculations. Methods of determining harvest sharing for the Chinook, Sockeye and Coho Salmon fisheries between Canada and the United States are contained within the Treaty (PSC 2017).

There is an in-season stock assessment program for Chinook and Sockeye Salmon. In 2017, the pre-season Chinook Salmon abundance estimate was 24,700 large (>659 mm) Chinook Salmon, which was less than the 1996–2016 average of 43,197 large Chinook salmon (**Table 1**) (PSC 2018). The Treaty requires a minimum of 28,100 large Chinook Salmon in the forecast before there is sufficient salmon for a directed fishery Allowable Catch. The estimated final Chinook Salmon return to the Stikine River was 8,131, significantly lower than the forecast. The 2017 pre-season Sockeye Salmon abundance estimate was 185,000. According to the terms of the harvest sharing agreement with Canada, the U.S. Allowable Catch was 62,300 Sockeye Salmon. The 1993–2015 average U.S. catch is about 64,000 Sockeye Salmon (**Table 2**). Federal management action was not necessary for the U.S. to remain within its allocation.

**Table 1.** Stikine River Chinook Salmon pre-season run forecasts vs. post season run size estimates. Adjusted forecast accounts for 5-year average sibling model error (PSC 2018).

Year	<u>Forecast Estimate</u>		Post Season Run Size	<u>Forecast Performance</u>	
	Sibling	Adjusted		Sibling	Adjusted
1996	32,747		34,203	-4%	
1997	37,662		33,978	10%	
1998	25,760		30,337	-18%	
1999	26,833		25,547	-5%	
2000	42,049		32,675	22%	

Year	<u>Forecast Estimate</u>		<u>Forecast Performance</u>		
	Sibling	Adjusted	Post Season Run Size	Sibling	Adjusted
2001	72,638		71,868	1%	
2002	50,530		57,570	-14%	
2003	46,325		46,917	-1%	
2004	65,900		62,137	6%	
2005	80,300		87,767	-9%	
2006	60,600		62,241	-3%	
2007	37,400		35,954	4%	
2008	46,100		33,619	37%	
2009	31,900		16,468	94%	
2010	22,900		19,615	17%	
2011	30,000		19,796	52%	
2012	40,800		29,911	36%	
2013	32,000	22,400	21,720	47%	3%
2014	37,000	26,100	29,323	29%	-11%
2015	40,600	30,200	27,354	48%	10%
2016	47,100	33,900	15,496	204%	119%
2017	24,700	18,300	8,131	204%	125%
2018	15,700	6,900			
<b>Average</b>	<b>41,198</b>		<b>36,483</b>		

**Table 2.** Stikine River Sockeye Salmon harvests, escapement, and total run size (PSC 2017). US marine catch includes Federal subsistence harvest.

Year	In-river Run Size	In-river Catch (CA)	Escapement	Marine Catch (US)	Terminal Run Size
1993	176,100	52,698	123,402	104,630	280,730
1994	127,527	53,380	74,147	80,509	208,036
1995	142,308	66,777	75,531	76,420	218,728
1996	184,400	90,148	94,252	188,385	372,785
1997	125,657	68,197	57,460	101,258	226,915
1998	90,459	50,486	39,973	30,989	121,448
1999	65,879	47,202	18,677	58,765	124,644
2000	53,145	31,535	21,610	25,359	78,504
2001	103,755	29,341	74,414	23,500	127,255
2002	71,253	22,607	48,646	8,076	79,329
2003	194,425	69,571	124,854	46,552	240,977
2004	189,395	88,451	100,944	122,592	311,987
2005	167,570	88,089	79,481	92,362	259,932
2006	193,768	102,733	91,035	74,817	268,585

Year	In-river Run Size	In-river Catch (CA)	Escapement	Marine Catch (US)	Terminal Run Size
2007	110,132	61,472	48,660	86,654	196,786
2008	74,267	37,097	37,170	45,942	120,209
2009	111,780	51,082	60,698	73,495	185,275
2010	116,354	55,471	60,883	40,647	157,001
2011	139,541	61,947	77,594	73,857	213,398
2012	95,840	34,922	60,918	28,700	124,540
2013	84,380	36,371	48,009	29,136	113,516
2014	129,442	44,056	85,386	23,881	153,323
2015	142,334	61,911	80,423	31,958	174,292
<b>Average</b>	<b>125,640</b>	<b>56,763</b>	<b>68,877</b>	<b>63,847</b>	<b>189,487</b>

Coho Salmon are abundant in the Stikine River watershed as demonstrated by the terminal area commercial gillnet harvest (**Table 3**). There is no formal terminal area abundance estimate for Coho Salmon nor is there a directed fishery U.S. catch allocation. There is a 5,000 Coho Salmon catch limit for the Canadian fisheries.

**Table 3.** Stikine River terminal area, District 8, Coho Salmon commercial gillnet harvest (PSC 2017, 2018).

Year	Coho Salmon Harvest
2004	26,617
2005	42,203
2006	34,430
2007	19,880
2008	34,479
2009	30,860
2010	42,772
2011	20,720
2012	20,100
2013	43,669
2014	30,184
2015	30,153
<b>Average</b>	<b>31,339</b>

### Harvest History

Between 1995 and 2001, the Alaska Department of Fish and Game (ADF&G) authorized an in-river personal use fishery for Sockeye Salmon in the Stikine River. Participation in the personal use fishery was minimal, and only 28 Sockeye Salmon were reported harvested in 2001. The personal use fishery was not opened in 2002 due to conservation concerns for the Tahltan River stock, a Canadian tributary to the Stikine River.

The Alaska Board of Fisheries adopted a positive customary and traditional use determination for the Stikine River, but ADF&G does not issue subsistence fishing permits for the Stikine River.

Sport fishing for Chinook Salmon is prohibited on the Stikine River, as it is for all freshwaters of the Southeast Region unless specifically designated. There is a small harvest of other salmon by sport fishers in the U.S. tributaries to the Stikine River, but harvest numbers are too low to be included in any site-specific sport fishing harvest estimates (Fleming 2014, pers. comm.). A small, but unknown number of Sockeye and Coho Salmon, and steelhead are harvested by sport fishers in Canada.

Federal subsistence fishing permits for the Stikine River are required and are issued by the U.S. Forest Service (USFS) offices in Wrangell and Petersburg. Weekly harvest is estimated by USFS personnel and derived from telephone interviews and fishery performance data. The use of permits and in-season reporting are designed to provide Federal, State, and Canadian fishery managers with real time harvest estimates.

Gillnets are the preferred method for harvesting salmon in the Stikine River Federal subsistence fishery. Gillnet fisheries often have mesh size restrictions to protect certain species or size classes within a species. As gillnet mesh size increases so does the average size of fish that are caught (Hamley 1975; Bromaghin 2004; Howard and Evenson 2010). For Chinook Salmon fisheries there is an interest in protecting fish larger than about 659 mm because there is a high likelihood fish larger than this are female. The maximum mesh size of 8 inches during the Chinook Salmon fishery was designed to protect large Chinook Salmon while the 5.5 inch mesh restriction during the Sockeye and Coho Salmon seasons is designed to minimize Chinook Salmon incidental catch.

The first harvests under Federal subsistence management regulations occurred in 2004, when 40 permits were issued and 243 Sockeye Salmon were harvested (OSM 2018). Participation and harvest increased through the 2011 season, and have remained fairly steady since then (**Table 4**). The harvest reported to the TBR includes only the salmon taken during the directed fishing seasons; that means that for reporting purposes, the total Chinook Salmon catch in 2017 was zero, with 14 as incidental harvest (**Table 5**). Within the context of the Treaty, the forecasted in-season return estimates and catches reference only Chinook Salmon greater than 659 mm mid-eye to tail fork; roughly 30 inches total length. Catches within the season are the portion of the subsistence catch that applies to the total U.S. Allowable Catch for each species. Chinook Salmon taken outside the season or less than 30 inches in total length are reported separately.

Harvests of Chinook Salmon during the designated Chinook Salmon season have been low since its inception in 2005 (**Table 5**). Most of the effort in the Stikine River Federal subsistence fishery occurs during the Sockeye Salmon season, and special actions closing the Chinook Salmon fishery pre-season were issued in 2013, 2014, 2017, and 2018.

There have not been any Federal in-season special actions to curtail harvests of either Sockeye or Coho Salmon. The Sockeye Salmon fishery has taken over the 600 fish guideline harvest limit since 2009 (**Table 6**). There were no special actions issued as the catches remained well within the U.S. Allowable Catch. The 2017 season Coho Salmon harvest was above average at 110 (**Table 7**).

**Table 4.** Total numbers of permits and total annual harvest (including incidental catch), Stikine River Federal subsistence fishery (OSM 2018).

Year	Permits	Large Chinook ≥ 30in	Chum	Coho	Dolly Varden	Pink	Rainbow Trout	Sockeye	Steel head
2004	40	12	11	0	1	22	0	243	1
2005	35	15	22	53	4	69	0	252	0
2006	48	37	20	21	3	23	0	390	0
2007	44	36	11	23	1	59	0	244	2
2008	50	25	12	42	5	18	0	428	0
2009	80	31	46	21	20	66	1	723	2
2010	107	61	37	135	12	60	0	1,653	7
2011	129	66	74	40	3	189	0	1,755	5
2012	130	53	47	112	1	32	0	1,302	0
2013	124	54	87	186	15	156	0	1,655	2
2014	125	56	60	143	4	93	0	1,534	0
2015	125	45	46	130	6	171	0	1,949	1
2016	136	37	29	73	11	68	0	2,187	3
2017	130	14	150	117	8	303	14	1,727	2
<b>Average</b>	<b>93</b>	<b>39</b>	<b>47</b>	<b>78</b>	<b>7</b>	<b>95</b>	<b>1</b>	<b>1,146</b>	<b>2</b>

**Table 5.** Total harvest during Chinook Salmon season (May 15 – June 20), Stikine River Federal subsistence fishery (OSM 2018).

Year	Large Chinook > 30in	Chum	Coho	Dolly Varden	Pink	Rainbow Trout	Sockeye	Steelhead
2004				No Chinook season				
2005	13	0	0	2	4	0	18	0
2006	13	1	0	0	0	0	8	0
2007	24	0	0	0	0	0	61	0
2008	8	0	0	1	0	0	2	0
2009	9	0	0	2	0	1	17	2
2010	14	0	0	1	0	0	65	3
2011	16	0	0	0	0	0	64	0
2012	16	0	0	0	0	0	137	0
2013	2	0	0	0	0	0	32	0
2014	3	0	0	0	0	0	2	0
2015	8	7	0	0	4	0	21	1
2016	8	0	0	0	0	0	81	0
2017	0	4	0	2	0	0	12	0
<b>Average</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>40</b>	<b>0</b>



**Table 6.** Total harvest during Sockeye Salmon season (June 21 – July 31), Stikine River Federal subsistence fishery (OSM 2018).

Year	Large Chinook > 30in	Chum	Coho	Dolly Varden	Pink	Rainbow Trout	Sockeye	Steelhead
2004	12	11	0	1	22	0	243	1
2005	2	22	1	2	65	0	233	0
2006	24	19	0	3	23	0	377	0
2007	12	11	0	1	57	0	178	1
2008	17	5	0	4	0	0	426	0
2009	22	46	0	18	66	0	706	0
2010	44	33	13	11	38	0	1,554	4
2011	48	64	1	3	189	0	1,686	0
2012	34	40	2	1	23	0	1,155	0
2013	52	84	10	15	149	0	1,516	2
2014	53	56	0	4	90	0	1,489	0
2015	30	36	4	6	158	0	1,858	0
2016	29	23	14	11	68	0	2,089	3
2017	14	121	7	8	257	14	1,682	2
<b>Average</b>	<b>28</b>	<b>41</b>	<b>4</b>	<b>6</b>	<b>86</b>	<b>1</b>	<b>1,085</b>	<b>1</b>

**Table 7.** Total harvest during Coho Salmon season (August 1 – October 1), Stikine River Federal subsistence fishery (OSM 2018).

Year	Large Chinook > 30in	Chum	Coho	Dolly Varden	Pink	Rainbow Trout	Sockeye	Steelhead
2004			No Coho Salmon season in 2004					
2005	0	0	52	0	0	0	1	0
2006	0	0	21	0	0	0	5	0
2007	0	0	23	0	2	0	5	1
2008	0	7	42	0	18	0	0	0
2009	0	0	21	0	0	0	0	0
2010	3	4	122	0	22	0	34	0
2011	2	10	39	0	0	0	5	5
2012	3	7	110	0	9	0	10	0
2013	0	3	176	0	7	0	107	0
2014	0	4	143	0	3	0	43	0
2015	7	3	126	0	9	0	70	0
2016	0	6	59	0	0	0	17	0
2017	0	33	110	2	46	0	57	0
<b>Average</b>	<b>1</b>	<b>6</b>	<b>80</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>27</b>	<b>0</b>

The total catch in the Chinook and Coho Salmon marine sport fishery is a calculation based on the results of a creel census sampling program. Stock of origin for Chinook Salmon taken in the District 8 terminal area by the sport, commercial gillnet, and commercial troll fisheries is determined by a genetic stock identification sampling program.

### **Cultural Knowledge and Traditional Practices**

The historical harvest of salmon by Alaska Native peoples in the Stikine River is well documented in a number of ethnographic reports and publications. There were Tlingit fishing and hunting camps and villages at various sites at the mouth, along the middle and upper reaches, and along the tributaries of the Stikine River as far upriver as Telegraph Creek. The methods of harvesting fish in the Stikine River and its tributaries depended on the physical features and requirements of the locations where fishing occurred (Paige et al. 2009, Ream and Merriam 2017): “Fishing sites were located on the main stem, on the middle and south arms, and along the sloughs, creeks and rivers draining into the main stem. Key respondents described fishing with set and drift gillnets, dip nets, spears, and hook and line.”

With the introduction of contemporary materials, gillnets were often used for subsistence fishing. One of the respondent interviews (from Paige et al. 2009) describes subsistence fishing in the 1930s at a location on the lower Stikine River.

*[But when you were fishing for your own use, you usually just used a setnet?] Oh, yes, just a little setnet. Right above our place, like a hundred yards. There was a big rock pile out there, the river came down around there, and there was a big eddy behind it. Dad put a great big rock there with a buoy on it to rope off that rock, and then we just tied up to it and it stayed there all the time, until it'd have to be cleaned out. [Would you be catching Sockeyes that way at all?] Yeah, you could. Starting in March, you'd get a king or two. They're the first ones to show up, and then the Sockeyes follow them. Every once in a while you'd get a humpy or two. [The net was] about sixty-five feet. [And it was just attached to the shore?] Yes, we'd set it out and put an anchor on the other end, so it had a nice hook in it, so that when the fish came in they couldn't get through, so they'd hit the net. Then we'd go out and take the fish out of the net. It was angled down the river a ways, and they'd swim up along the shore and hit that net and get caught. [Were there any rules in those days, or could you put your net out (on the river) any time?] You could put it out any time, whenever we needed to start canning our salmon and stuff.*

### **Effects of the Proposal**

If this proposal was adopted, Federally qualified subsistence users would be able to use a wider variety of gillnets during the Sockeye and Coho Salmon season, likely leading to increased efficiency in catching Coho Salmon. The larger mesh size would probably not lead to a substantial increase in Sockeye Salmon harvest because many will be able to swim through the larger mesh. Furthermore, there is currently no conservation concern for Stikine River Sockeye and Coho Salmon stocks.

Incidentally caught Chinook Salmon are allowed to be kept during the Sockeye and Coho Salmon seasons. Larger mesh is more efficient at capturing Chinook Salmon because they are typically larger fish and more likely to be gilled when running into the mesh. The larger mesh size would likely result in higher Chinook Salmon incidental catch during the subsistence Sockeye Salmon season, the period when Chinook Salmon are most likely to be harvested in this fishery. Increasing overall Chinook Salmon catch is not desirable at this time due to conservation concerns.

## OSM CONCLUSION

**Support** Proposal FP19-18 **with modification** to preserve the 5.5 inch mesh size restriction during the Sockeye Salmon season and eliminate the gillnet mesh size restriction for the Coho Salmon season. In keeping with the cooperative approach being taken on the Stikine River due to the management of transboundary salmon stocks, the Federal Subsistence Board will need to coordinate with and obtain concurrence from the TBR.

The modified regulation should read:

**§ \_\_.27(e)(13) Southeastern Alaska Area**

\* \* \* \*

*(xiii) You may take Chinook, Sockeye, and Coho Salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. ~~The maximum gillnet mesh size is 5 1/2 inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.~~ **The maximum gillnet stretched mesh size is 8 inches during the Chinook Salmon season and 5 1/2 inches during the Sockeye Salmon season. There is no maximum mesh size during the Coho Salmon season.***

\* \* \* \*

## Justification

Chinook Salmon are present in the Stikine River Federal subsistence fishing area during the Federal subsistence Sockeye Salmon season. In fact, more large Chinook Salmon are harvested during the Sockeye Salmon fishery with 5.5 inch maximum stretched gill net mesh than the Chinook Salmon fishery with 8 inch maximum gillnet mesh size (**Table 5** and **Table 6**). This is reflective of the fact that Stikine River subsistence fishers focus primarily on harvesting Sockeye Salmon. Increasing gillnet mesh size during the Sockeye Salmon season may result in substantially increased Chinook Salmon incidental catch regardless of the health of the stock or if there is an Allowable Catch. Modifying this proposal to keep the 5.5 inch maximum mesh size during the Sockeye Salmon season and eliminate the maximum mesh size for the Coho

Salmon season may better address the proponent's stated intent and result in simplified regulations, while alleviating the possibility of extensive Chinook Salmon incidental catch. Few Chinook Salmon are present in the mainstem of the Stikine River during the Coho Salmon season so incidental catch of Chinook Salmon is expected to be negligible to non-existent.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southeast Alaska Subsistence Regional Advisory Council

**Support FP19-18 as modified by OSM.** The Council found that this proposal was reflective of the Stikine River subsistence fishers focusing primarily on harvesting Sockeye Salmon. Although increasing gillnet mesh size during the Sockeye Salmon season may result in substantially increased Chinook Salmon incidental catch, this proposal addresses protection of Chinook on the Stikine River. The Proponent recognized the conservation concern of Chinook salmon early in the season and was willing to modify his original proposal to address this concern. Modifying this proposal to keep the 5.5 inch maximum mesh size during the Sockeye Salmon season and eliminate the maximum mesh size for the Coho Salmon season may better address the proponent's stated intent and result in simplified regulations, while alleviating the possibility of extensive Chinook Salmon incidental catch. Few Chinook Salmon are present in the mainstem of the Stikine River during the Coho Salmon season so incidental catch of Chinook Salmon is expected to be negligible to non-existent. The Council finds that larger nets will allow for release of fish that are in good shape to release. The Council believes there is no intent to limit any other fishing that is taking place.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### STATE COMMENTS

**Fisheries Proposal FP19-18:** This proposal, submitted by Chris Ottesen of Farm Island and Wrangell, would change the maximum gillnet mesh size in the Stikine River subsistence sockeye and coho salmon fisheries from 5.5 inches to 6.25 inches.

**Introduction:** Salmon returning to the Stikine River are harvested by subsistence, sport, and commercial users in both the U.S. and Canada. Harvest sharing is dictated by the Pacific Salmon Treaty. Chinook, sockeye, and coho salmon runs are closely monitored by joint U.S./Canada stock assessment projects.

The Stikine River has returns of all 5 species of salmon found in Alaska, and there are overlaps in their run timing. The Stikine River Chinook salmon run begins in late-April/early May and continues through mid-July. The federal open season is May 15 through June 20. The Stikine River sockeye salmon run typically begins in mid-June and continues through mid-August. The federal open season for sockeye salmon is June 21 through July 31. The Stikine coho salmon run begins in August and continues into November. The federal open season for coho salmon is August 1 through October 1.

There are annual limits in the sockeye and coho salmon fisheries of 40 sockeye salmon and 20 coho salmon per household.

Incidental harvest of Chinook salmon does occur in the Stikine sockeye subsistence fishery because the majority of the Chinook salmon are harvested during the sockeye salmon fishing period. Incidentally-harvested Chinook salmon may be retained, and do not count against the federal guideline harvest limit of 125 Chinook salmon. In 2017 (the latest year for which data are available), 60 Chinook salmon were reported harvested. The rest of the total harvest of 2,357 salmon was 1,727 sockeye, 303 pink, 117 coho, and 150 chum salmon.

Mesh size does affect harvest. The catchability of Chinook salmon increases as mesh size increases. The most effective mesh size for harvesting Chinook salmon is 7 to 8 inches. Limitations of a 6 inch maximum mesh size are implemented in commercial drift gillnet fisheries to reduce incidental harvest. Canada utilizes a 5.5 inch maximum mesh and requires release of all incidentally caught Chinook salmon during the duration of Canada's sockeye salmon fishery on the Stikine River.

**Impact on Subsistence Users:** Increase harvests on Chinook salmon could impact future runs and therefore future opportunity for harvests.

**Impact on Other Users:** If adopted, Chinook salmon harvests could increase, which would impact Chinook salmon escapement and therefore future runs and future opportunity for harvests.

**Opportunity Provided by State:** None: due to treaty provisions, no state permits are issued for subsistence fishing on the Stikine River drainages.

**Conservation Issues:** Chinook salmon runs through Alaska and northern British Columbia have been in a state of decline for almost a decade: the 2017 and 2018 Stikine River Chinook salmon runs were the lowest on record. Steps have been taken in all fisheries to reduce harvest and increase escapement.

**Enforcement Issues:** None.

**Recommendation:** ADF&G **SUPPORTS** as modified by OSM for the proposal to allow larger mesh during the coho salmon fishery after August 1<sup>st</sup> to reduce the incidental catch of large Chinook salmon.

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### FP19–01 Executive Summary

<b>General Description</b>	Proposal FP19-01 requests an expansion of the area and fishing time for the Federal subsistence drift gillnet fishery in Subdistricts 4B and 4C of the Yukon/Northern Federal Subsistence Fishery Management Area. The proponent also requests repealing the maximum mesh depth restriction of 35 meshes deep for drift gill nets used in Subdistricts 4B and 4C in the fishery. <i>Submitted by: Jack Reakoff.</i>
<b>Proposed Regulation</b>	<i>See pages 353 to 354 of this book for proposed regulations.</i>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Seward Peninsula Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>
<b>ADF&amp;G Comments</b>	<b>Support</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS  
FP19-01**

**ISSUES**

Proposal FP19-01, submitted by Jack Reakoff of Wiseman, requests an expansion of the area and fishing time for the Federal subsistence drift gillnet fishery in Subdistricts 4B and 4C of the Yukon/Northern Federal Subsistence Fishery Management Area. The proponent also requests repealing the maximum mesh depth restriction of 35 meshes deep for drift gill nets used in Subdistricts 4B and 4C in the fishery.

**DISCUSSION**

The proponent states that adoption of this proposal would align Federal subsistence fisheries methods, means, seasons, and area regulations with recent State regulatory changes for the drift gillnet fisheries in Subdistricts 4B and 4C of the Yukon River drainage, and would mirror the State's absence of a drift gillnet mesh depth limit. The proponent indicates adoption of this proposal will reduce the amount of travel time and associated expenses for subsistence users who choose to use drift gillnets to harvest salmon. The proponent indicates that removing the drift gillnet mesh depth maximum, combined with more liberal fishing season dates for fall Chum Salmon, would reflect recent changes made by the State and will increase compliance with regulations as well as reduce enforcement concerns.

The proponent also states adoption of this proposal will result in a negligible increase in salmon harvests and therefore, would not present a conservation concern. If this proposal is adopted, drift gill nets in this area may be utilized only if Chinook and/or Chum Salmon abundances allow for a harvestable surplus. The Western Interior Alaska Subsistence Regional Advisory Council (Council) submitted written comments to the BOF in support of Proposal 230, which lead to the submission of this proposal to the Federal Subsistence Board. Although the proponent is the Council's chair, Mr. Reakoff submitted the proposal as a private citizen.

**Existing Federal Regulation**

§ \_\_\_\_.27(e)(3) *Yukon-Northern Area*

\* \* \* \*

*(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:*

*(A) In Subdistrict 4A upstream from the mouth of Stink Creek, you may take Chinook salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2; unless closed by the Federal In-season*

*Manager; from June 10 through August 2, the Federal In-season Manager may open fishing periods during which chum salmon may be taken by drift gillnets.*

*(B) In Subdistrict 4A downstream from the mouth of Stink Creek, you may take Chinook salmon by drift gillnets less than 150 feet in length from June 10 through July 14; unless closed by the Federal In-season Manager; from June 10 through August 2, the Federal In-season Manager may open fishing periods during which chum salmon may be taken by drift gillnets.*

*(C) In the Yukon River mainstem, Subdistricts 4B and 4C you may take Chinook salmon during the weekly subsistence fishing opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.*

### **Proposed Federal Regulation**

§ \_\_\_\_.27(e)(3) ***Yukon-Northern Area***

\* \* \* \*

*(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:*

*(A) In Subdistrict 4A upstream from the mouth of Stink Creek, you may take Chinook salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2; unless closed by the Federal In-season Manager; from June 10 through August 2, the Federal In-season Manager may open fishing periods during which chum salmon may be taken by drift gillnets*

*(B) In Subdistrict 4A downstream from the mouth of Stink Creek, you may take Chinook salmon by drift gillnets less than 150 feet in length from June 10 through July 14; unless closed by the Federal In-season Manager; from June 10 through August 2, the Federal In-season Manager may open fishing periods during which chum salmon may be taken by drift gillnets.*

*(C) In the Yukon River mainstem, Subdistricts 4B and 4C: ~~you may take Chinook salmon during the weekly subsistence fishing opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.~~*

***(1) Chinook salmon may be taken by drift gillnets from June 10 through July***

*14, unless closed by special action by the Federal in-season manager;*

*(2) From June 10 through August 2, the Federal in-season manager may open, by special action, fishing periods during which chum salmon may be taken by drift gillnets; and*

*(3) Chum salmon may be taken drift gillnets after August 2.*

*(D) A person may not operate a drift gillnet that is more than 150 feet in length during seasons described in (C)(1), (2), and (3) of this subsection.*

### **Existing State Regulation**

*5 AAC 01.220. Lawful Gear and Gear Specifications.*

*(a) Salmon may be taken only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheel, subject to the restrictions set out in this section, 5 AAC 01.210, and 5 AAC 01.225 – 5 AAC 01.249.*

*(e) In Districts 4, 5, and 6, salmon may not be taken for subsistence purposes by drift gillnets, except as follows:*

*(3) in Subdistricts 4-B and 4-C,*

*(A) king salmon may be taken by drift gillnets from June 10 through July 14, unless closed by emergency order;*

*(B) from June 10 through August 2, the commissioner may open, by emergency order, fishing periods during which chum salmon may be taken by drift gillnets; and*

*(C) chum salmon may be taken by drift gillnets after August 2.*

*(4) a person may not operate a drift gillnet that is more than 150 feet in length during the seasons described in (1) and (2) and (3) of this subsection.*

### **Extent of Federal Public Lands**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR 242.3 and 50 CFR 100.3. The Federal public waters addressed by this proposal are those portions of the Yukon River located within, or adjacent to, the external boundaries of the Nowitna National Wildlife Refuge (NWR) and the northern unit of the Innoko NWR within fishing Subdistricts

4B and 4C of the Yukon/Northern Federal Subsistence Fishery Management Area. This includes approximately 74 river miles of the Nowitna NWR and 16 river miles of the Innoko NWR (**Figure 1**).

### **Customary and Traditional Use Determinations**

Rural residents of the Yukon River drainage and the community of Stebbins have a customary and traditional use determination for salmon other than Fall Chum Salmon in the Yukon River drainage.

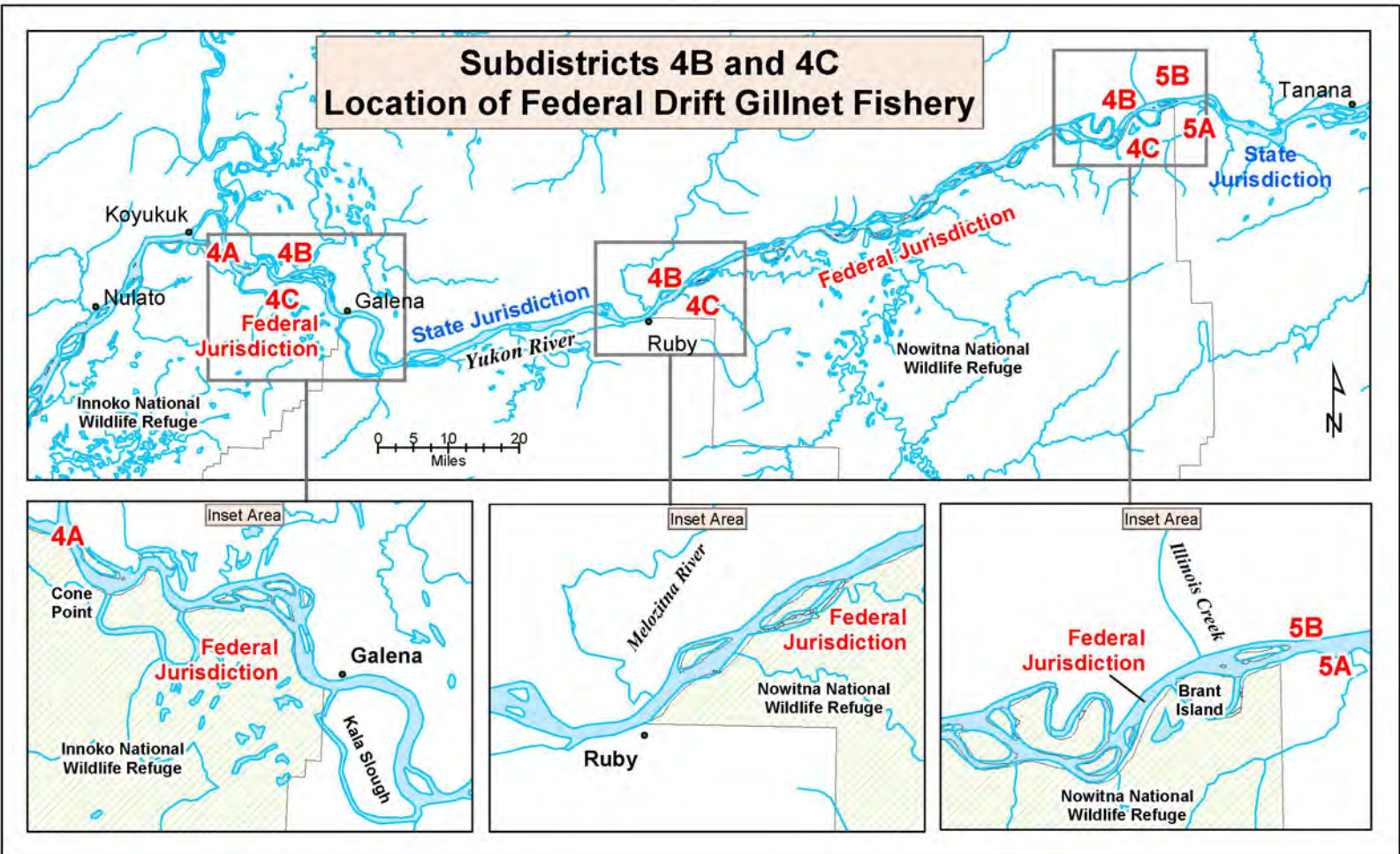
Rural residents of the Yukon River drainage and the communities of Chevak, Hooper Bay, Scammon Bay have a customary and traditional use determination for Fall Chum Salmon in the Yukon River drainage.

### **Regulatory History**

In 2003, the Council submitted fisheries Proposal FP04-05 (FWS 2003) to the Federal Subsistence Board (Board), which requested that the subsistence drift gillnet fishery on the Yukon River include Subdistricts 4B and 4C. The proposal requested that regulations allow Chinook Salmon to be harvested by drift gillnets less than 150 feet in length from June 10 through July 14, and Chum Salmon to be harvested by drift gillnets after August 2. The subsistence drift gillnet fishing area in Subdistrict 4A is about 30 miles downriver from Galena and is primarily utilized by the residents of the village of Koyukuk. However, fishers from Huslia, Galena, and Ruby also travel to Subdistrict 4A to drift gillnet fish because of the lack of legal drift gillnet fishing opportunities near their communities. In FP04-05, the Council argued that spreading the fishing pressure to other areas would help relieve the competition for the few desirable fishing sites in Subdistrict 4A, especially near the village of Koyukuk, without increasing the harvest of Chinook Salmon.

The Council supported its Proposal FP04-05, with modification, to include the conservation measure of limiting nets used for subsistence salmon fishing to a maximum of 7-inch stretch mesh, no deeper than 35 meshes (WIASRAC 2003). The Eastern Interior Alaska Subsistence Regional Advisory Council and Yukon-Kuskokwim Delta Regional Advisory Council opposed the original proposal to expand the use of drift gillnets. The proposal and the Western Interior Council's recommendation were considered, but rejected, by the Board in December 2003 (FSB 2003).

In 2004, the Council submitted Proposal (FP05-04), which again requested expansion of the subsistence drift gillnet fishery on the Yukon River to include Subdistricts 4B and 4C, as well as District 5 (FWS 2005). The Council recommended the Board adopt the proposal with modification to only apply to Subdistricts 4B and 4C; that it be limited to the harvest of Chinook Salmon from June 10 – July 14, to the harvest of Chum Salmon after August 2; and that drift gillnets could only be used during the final 18 hours of the Federal subsistence fishing periods. The Board adopted Proposal FP05-04 with modification to allow the harvest of only Chinook Salmon (and not Chum Salmon) by drift gillnet in the Federal public waters of Subdistricts 4B and 4C during the final 18 hours of the weekly regulatory openings under a Federal subsistence fishing permit (FSB 2005).



**Figure 1.** Map of the Subdistricts 4A, 4B, and 4C of the Yukon River. Inset area maps identify Federal subsistence fisheries jurisdiction.

During the 2007 fishing season, State and Federal subsistence fisheries in Subdistricts 4B and 4C were liberalized, by State emergency order and Federal special action, from two 48-hour openings per week to one 5-consecutive days opening per week beginning on July 1. Additionally, the Federal in-season manager liberalized the Federal subsistence drift gillnet fishing time (final 18 hours of the weekly regulatory openings) by a similar, pro-rated amount to two 22-hour periods per opening. On July 6, the State and Federal subsistence fisheries in Subdistricts 4B and 4C were further liberalized to 7 days per week by State emergency order and Federal special action. In addition, the Federal drift gillnet fishing time was liberalized by a similar pro-rated amount to two 31-hour periods for the week of July 8.

During its December 2007 public meeting, the Board adopted fisheries Proposal FP08-15, which requested the use of drift gillnets for Chinook Salmon harvest during the entire weekly subsistence opening(s) in Subdistricts 4B and 4C (FSB 2007). At the same time, the Board rejected FP08-16, which requested the elimination of the Federal drift gillnet fishery in Subdistricts 4B and 4C, finding no basis for such a request (FSB 2007).

During its January 2011 meeting, the Board voted to withdraw FP11-07, at the request of the proponent Mountain Village Working Group. The proponent had proposed the use of drift gillnets be prohibited for the harvest of salmon in Districts 4 and 5 of the Yukon Area. The Board's action to approve withdrawal of the proposal was based on public testimony, the proponent's request, and the fact all four Councils in the region opposed the proposal (FSB 2011).

In January 2013, the Board adopted fisheries Proposal FP13-01, which eliminated the requirement for a Federal subsistence permit for the Chinook Salmon drift gill net fishery for the Yukon River Subdistricts 4B and 4C. The two prominent concerns that resulted in the permit requirement for operating a drift gillnet in this area were that 1) Chinook Salmon harvest was already fully allocated and by allowing another gear type, there was the potential for attracting additional subsistence fishermen who may compete with those already participating in a long established fishery, and 2) the additional fishing gear type would target different Chinook Salmon stocks, with unknown, adverse consequences for upriver harvesters and escapement potential. By shifting some harvest to mid-stream locations, there was a possibility the harvest could be redirected to Canadian stocks, which may migrate further offshore and at greater depths. Due to the low participation and harvest in this fishery, the Board removed the permit requirement (FSB 2013).

### **Current Events Involving the Species**

In March 2018, the Alaska Board of Fisheries (BOF) adopted modified Proposal 230, which was submitted by the Loudon, Nulato, and Koyukuk Tribes, and authorized salmon to be taken with drift gillnets in this area during subsistence fishing periods, as abundance allows. The proponent indicates the adoption of the modified proposal allows subsistence users to save time and travel expenses associated with the use of drift gillnets for harvesting salmon, especially at locations that are distant from the user's community of residence.

The Council supported BOF Proposal 230 with the amendment to remove the maximum net depth limit and have the drift gillnet fishery area be expanded to the entirety of Subdistricts 4B and 4C. The

Council also passed a motion to have a Fisheries Special Action reflecting the above liberalization automatically submitted to the Board for the 2018 season if the BOF passed Proposal 230 as modified. Additionally, the Council moved to submit a parallel proposal to the Board for the 2019/2020 fisheries regulatory cycle to ensure State and Federal regulations were parallel in this area. The Council Chair submitted Proposal FP19-01 as a private individual since the Council did not have a scheduled public meeting between the BOF final action on Proposal 230 and the deadline for Federal subsistence fisheries proposals (WSIRAC 2018).

## **Biological Background**

### Chinook Salmon

Recent analyses indicate that Yukon River Chinook Salmon stocks appear to be in the third year of increasing productivity after the low returns of 2015. Historically, the stocks showed periods of above-average abundance (1982-1997) and periods of below-average abundance (1998 onwards), as well as periods of generally higher productivity (brood years 1993 and earlier) mixed with years of low productivity (brood years 1994-1996 and 2002-2005; Schindler et al. 2013).

The 2014 run was expected to be the smallest on record, with a projected size of 64,000-121,000 fish. Despite initial concerns, the cumulative passage estimate at the mainstem Yukon River sonar project in Pilot Station were approximately 138,000±17,000 (90% CI) fish (**Figure 2**). The passage estimate was still below the historical average of 143,000 fish, and below the average of 195,800 fish for years with early run timing. As a result of very conservative management actions, all escapement goals that could be assessed were achieved, even with below average run sizes (JTC 2015).

The 2015 projected run size was 118,000-140,000 fish, which was once again below average yet higher than the previous year's projection. Cumulative passage estimates at the sonar station in Pilot Station were approximately 116,000±30,000 fish (90% CI) (**Figure 2**). As with the previous year, this number was still below the historical average. Very conservative actions were taken and all escapement goals were again met (JTC 2016).

The 2016 run outlook was a below-average run of 130,000–176,000 fish (JTC 2017). Cumulative passage estimates at the sonar station in Pilot Station were approximately 176,898±18,466 fish (90% CI) (Liller 2018, pers. comm.). This number was near the recent historical average of 178,300 fish (ADF&G 2018), but is considered preliminary at this time. Conservative actions were relaxed slightly from previous years and all escapement goals were met (JTC 2016).

The 2017 run outlook was slightly larger, but still below average: 140,000-194,000 fish (JTC 2017). Cumulative passage estimates at the Pilot Station sonar were approximately 263,000±29,000 fish (90% CI) (ADF&G 2018), which was the largest since 2003 (JTC 2017). These estimates are still considered preliminary. Subsistence management restrictions were further relaxed, which resulted in harvests of approximately two thirds of average and most escapement goals were met despite the poor water conditions that existed throughout the drainage.



The 2018 run outlook is larger than in recent years, with a run size of 173,000-251,000 fish (ADF&G 2018). The upper end of the range could support an average subsistence harvest, while the low end of the range would likely warrant implementing subsistence fishing restrictions.

### Summer Chum Salmon

Summer Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 15 years, 2003-2017. The 2018 projection is expected to be similar or slightly lower than the 2017 run of approximately 3.6 million fish (JTC 2018).

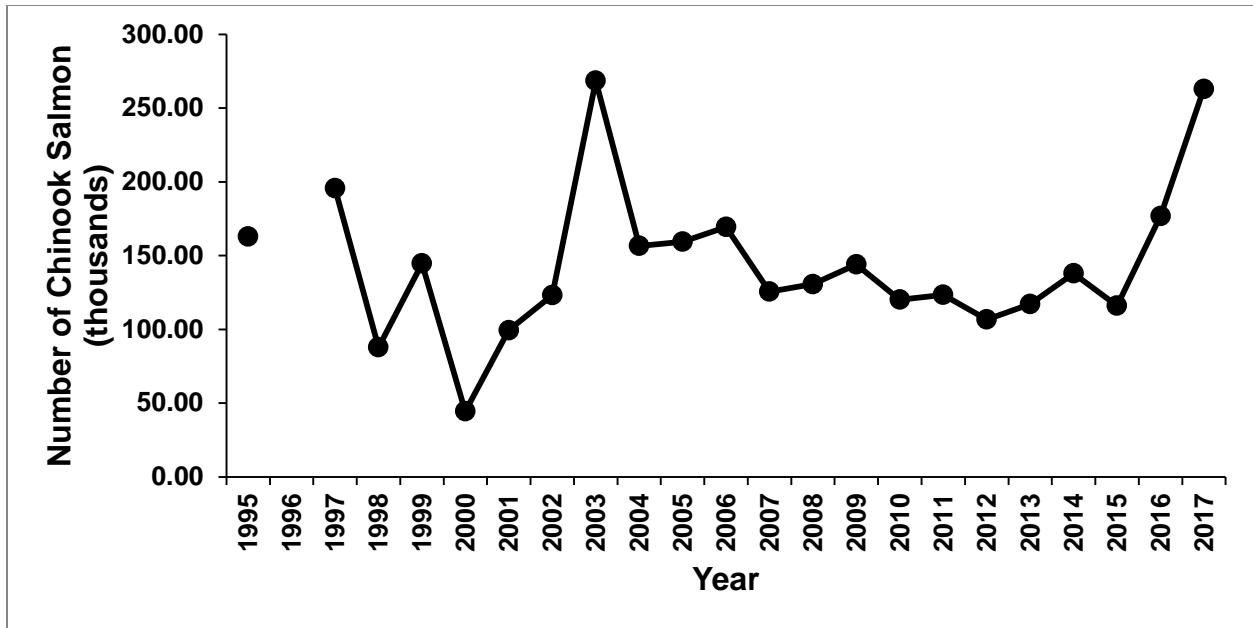
In 2016, approximately 1.92 million  $\pm 80,517$  (90% CI) fish passed the Yukon River sonar project at Pilot Station, which was near the historical median for the project of 1.90 million fish. In 2017, the passage estimate at Pilot Station increased to 3.09 million  $\pm 138,259$  (90% CI) (**Figure 3**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018). The Henshaw Creek weir counted a record number of Chum Salmon (360,687), which was only 13% smaller than the number counted at the Anvik River Sonar (415,139). Although all 2017 numbers are preliminary at this time, the 2018 run is anticipated to provide for escapement goals, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

### Fall Chum Salmon

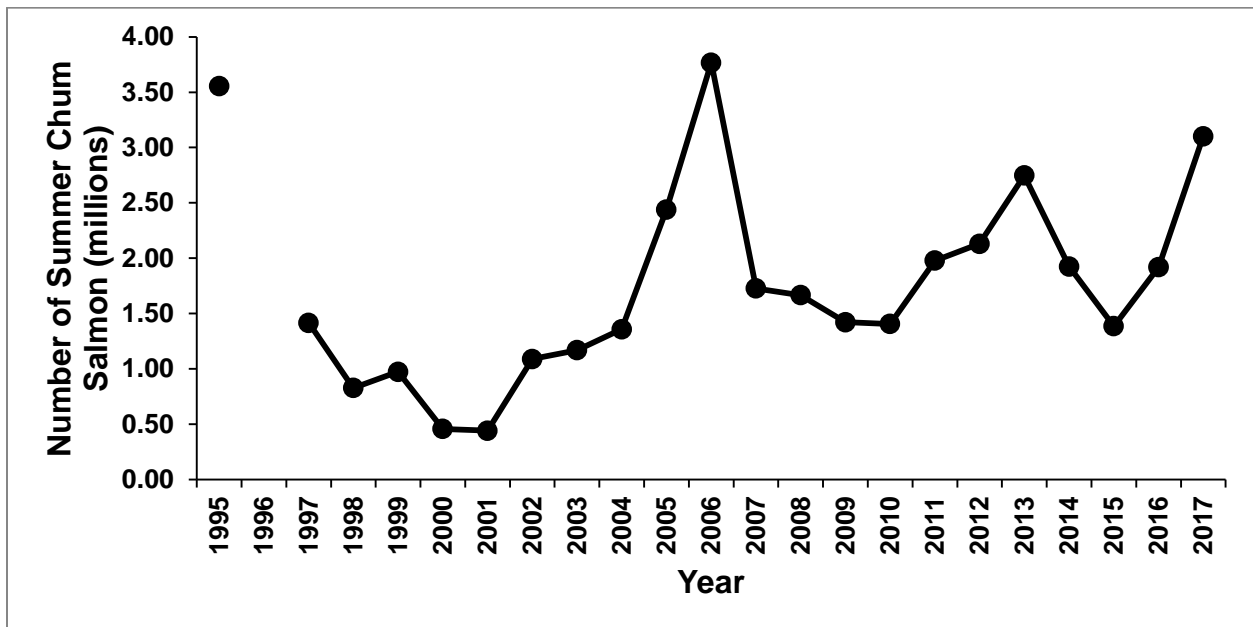
Fall Chum Salmon runs in the Yukon River have provided a harvestable surplus in each of the last 8 years, 2010-2017. In 2016, approximately 994,760 million  $\pm 64,434$  (90% CI) Fall Chum Salmon passed the Yukon River sonar project at Pilot Station, which was above the 1995-2016 median for the project of 688,057 fish. In 2017, the passage estimate at Pilot Station increased to 1.83 million  $\pm 54,179$  (90% CI) and was the second largest run in 43 years (**Figure 4**). Most tributaries experienced average to above-average escapement in 2017 (JTC 2018) although all 2017 numbers are preliminary at this time. In 2017, the projected outlooks were for a run size of approximately 1.4 to 1.7 million fish, while the 2018 projection of 1.6 to 1.8 million fish is lower than the 2017 run of approximately 2.3 million fish (JTC 2018). The 2018 run is anticipated to provide for escapement goals, normal subsistence harvest, and a surplus for commercial harvest (JTC 2018).

### Coho Salmon

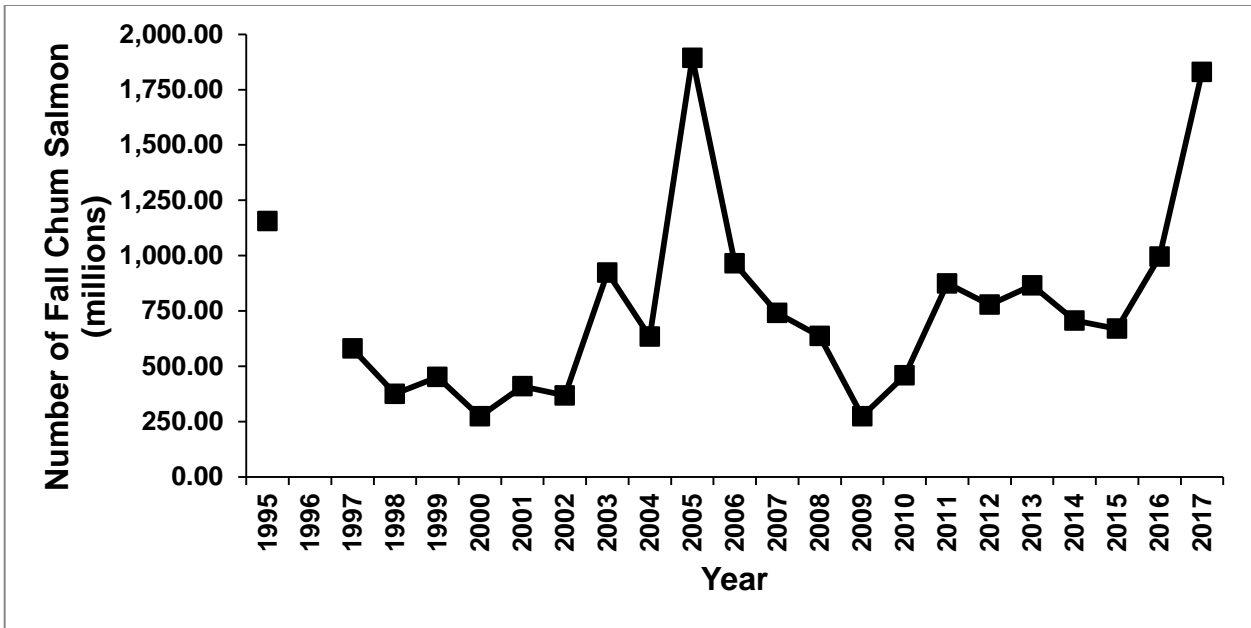
In 2016, approximately 168,297  $\pm 11,180$  (90% CI) Coho Salmon passed the Yukon River sonar project at Pilot Station, which was slightly above the historical median of 160,272 fish. In 2017, the passage estimate at Pilot Station increased to 166,330  $\pm 20,300$  (90% CI), which was also slightly above the historical median (**Figure 5**). All 2017 numbers are preliminary at this time. The Coho Salmon outlook is based upon parent year escapements assuming average survival. Since Coho Salmon predominantly return as age 2.1 fish (4 year old fish), the major contributor to the 2018 returns are from the 2014 parent year. Therefore, the 2018 outlook is for average to above average returns in 2018.



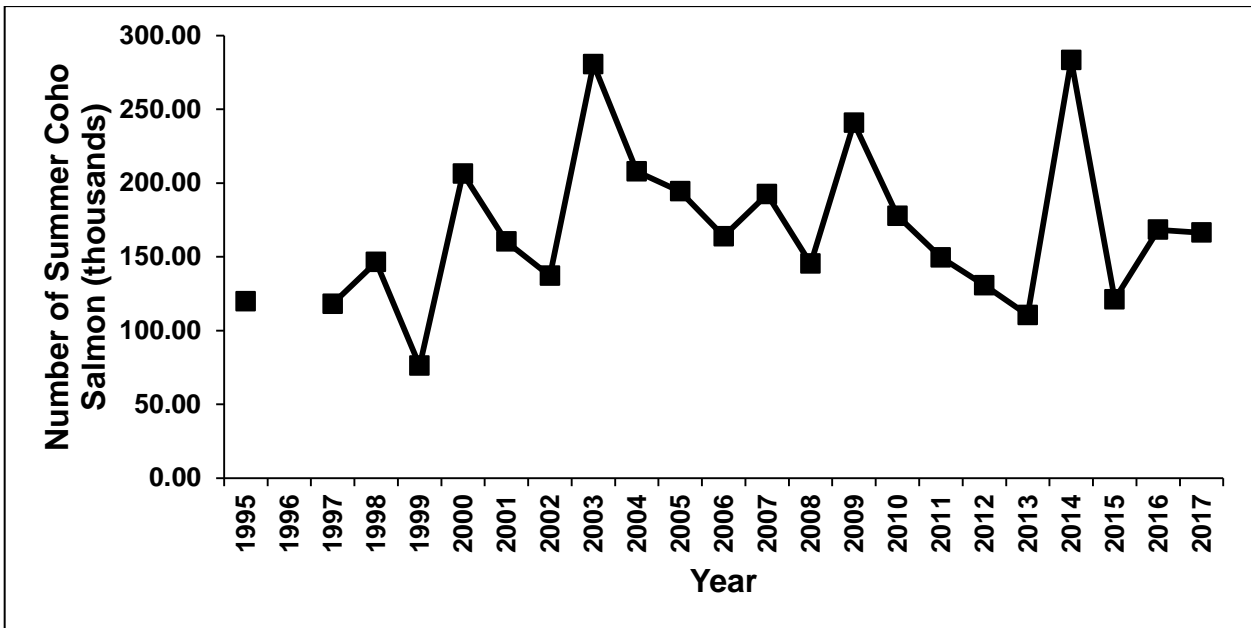
**Figure 2.** Chinook Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 3.** Summer Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 4.** Fall Chum Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.



**Figure 5.** Coho Salmon passage estimates based on the mainstem Yukon River sonar near Pilot Station, Yukon River drainage, 1995 and 1997-2017 (JTC 2018). Data from 2016 and 2017 are preliminary at this time.

## Harvest History

The Federal Subsistence drift gillnet fishery in 4B and 4C has been in place since 2005. In 2005, 70 Federal subsistence permits were issued and 9 permit holders fished for a total of 60 hours, resulting in a total harvest of 54 Chinook Salmon (**Table 1**). The catch per hours fished for Chinook Salmon was 0.9 (Holder et al. 2006). Feedback from Federal subsistence users indicated that productive drifting spots had not yet been located within the Federal public waters of Subdistricts 4B and 4C, but fishing effort would likely increase if productive drift sites were found. The 2005 Chinook Salmon harvest in the Federal drift gillnet fishery in 4B and 4C was not sufficient for ADF&G to conduct a special genetic sampling program that had been planned (Holder et al. 2006). The annual average Federal subsistence Chinook Salmon harvest in drift gill nets in this area was approximately 31 fish between 2005 and 2011, during which a total of 215 salmon was harvested in this fishery as reported on Federal subsistence permits when they were required.

**Table 1.** Subdistricts 4B and 4C summary of Federal permits issued, permittee post-season reporting, effort and harvest, 2005.

Residence	Number of permits issued	Number of permits returned	Total permits fished	Total hours fished	Harvests	
					Chinook Salmon	Chum Salmon
Galena	51	47	5	33	33	1
Ruby	13	12	3	22	21	0
Tanana	5	4	1	5	0	0
Koyukuk	1	1	0	0	0	0
<b>Total</b>	70	64	9	60	54	1

Source: Holder, et al. 2006

For 2005, the preliminary ADF&G Chinook Salmon post-season subsistence harvest estimates, encompassing all gear types, included 2,864 by Galena residents and 1,193 by Ruby residents for a total of 4,057 Chinook Salmon (Busher et al. 2007). A high proportion of the Galena harvest came from Subdistrict 4A drift gillnetting. The 54 Chinook Salmon harvested by Galena and Ruby Federally qualified subsistence users with drift gillnets in Subdistricts 4B and 4C represented only 1.33% of the total estimated harvest.

In 2006, participation in this Federal subsistence fishing opportunity declined. Only 18 permits were issued: 16 to Galena residents, one to a Ruby resident, and one to a Koyukuk resident (**Table 2**). Of the 18 permittees who reported their fishing activity, 13 people did not fish; and five fished approximately 18 hours, resulting in the harvest of 19 Chinook and 11 Chum Salmon. The catch per hour fished for Chinook Salmon was 1.7 (Holder et al., 2007).

**Table 2.** Subdistricts 4B and 4C summary of Federal permits issued, permittee post-season reporting, effort and harvest, 2006.

Residence	Number of permits issued	Number of permits returned	Total permits fished	Total hours fished	Harvest	
					Chinook Salmon	Chum Salmon and other species
Galena	16	16	4	10	4	0
Ruby	1	1	1	8	15	11
Koyukuk	1	1	0	0	0	0
<b>Total</b>	18	18	5	18	19	11

Source: Holder, et al., 2007

In 2007, participation in this Federal subsistence fishing opportunity continued to be exploratory. A total of 12 permits were issued (8 Galena, 1 Koyukuk, and 3 Ruby) with 6 permits returned as of the end of July, and a reported harvest of 13 Chinook Salmon in 8.5 hours of fishing. The low harvest numbers and the reality that not all drift gillnet caught salmon are bound for Canada, minimized any preconceived notions about the impact of this fishery on U.S./Canada treaty obligations.

Subsistence post season harvest surveys conducted by ADF&G from 2007 through 2017 (Busher et al. 2009; Jallen et al. 2011; Jallen et al. 2012a; Jallen et al. 2012b; Jallen et al. 2015; Jallen et al. 2017; Jallen et al. 2017b; Jallen et al. 2017c; Padilla 2018, unpublished data) indicated the communities of Galena and Ruby are the only two Yukon River drainage communities that are nearest to and consistently harvest salmon from all three Subdistricts 4A, 4B, and 4C (**Table 3**). This survey information also identifies the percentage of Chinook and Chum Salmon harvested by different gear type used in Subdistricts 4A, 4B, and 4C (**Table 4**). The lack of drift gillnet harvest in Subdistrict 4C from both communities' collected harvest information is due to the prohibition of use of drift gillnets for the harvest of Chinook Salmon due to conservation concerns in this area. Prior to the recent change in State regulations which authorized use of drift gillnet in Subdistricts 4B and 4C, subsistence users from Galena and Ruby who choose to use a drift gillnet to harvest fish other than Chinook Salmon had to travel to Subdistrict 4A and a portion of 4B. Distances traveled to favored drift gill net fishing spots required travel of over 100 river miles for some (**Map 1**).

**Table 3.** Subsistence salmon harvest by Yukon River subdistricts 4A, 4B, and 4C for the residents of Galena and Ruby from 2007-2017. (Busher et al. 2009; Jallen et al. 2011; Jallen et al. 2012a; Jallen et al. 2012b; Jallen et al. 2015; Jallen et al. 2017a; Jallen et al. 2017b; Jallen et al. 2017c; Padilla 2018, unpublished data)

Salmon Species	Year	4A		4B		4C	
		Galena	Ruby	Galena	Ruby	Galena	Ruby
Chinook	2007	1,936	-	472	219	103	1,375
	2008	813	-	404	21	1,014	616
	2009	965	-	290	42	115	500
	2010	549	-	255	87	547	1,015
	2011	662	108	195	302	537	72

Salmon Species	Year	4A		4B		4C	
		Galena	Ruby	Galena	Ruby	Galena	Ruby
<b>Chinook</b>	2012	99	-	296	-	347	1,316
	2013	145	-	15	-	-	357
	2014	-	-	-	5	1	2
	2015	99	-	141	-	126	68
	2016	636	67	81	128	276	-
	2017	1,091	-	328	174	827	97
<b>Summer Chum</b>	2007	242	-	216	69	113	347
	2008	105	-	121	449	532	206
	2009	126	-	1,088	47	504	556
	2010	22	-	498	-	958	1,971
	2011	46	-	3,043	728	325	47
	2012	20	-	583	-	115	3,891
	2013	127	-	52	-	-	681
	2014	-	-	377	29	-	-
	2015	559	-	500	-	-	88
	2016	588	19	16	303	940	356
	2017	14	-	979	98	236	-
<b>Fall Chum</b>	2007	476	-	130	868	865	1,091
	2008	48	-	26	233	1,290	424
	2009	108	-	2,382	84	1,816	50
	2010	46	-	317	20	1,284	1,006
	2011	198	-	902	592	1,458	-
<b>Fall Chum</b>	2012	92	-	2,393	-	462	4,408
	2013	29	-	533	-	40	2,505
	2014	1,450	-	676	369	947	603
	2015	381	-	1,054	324	1,107	389
	2016	211	-	449	526	2,659	-
<b>Coho</b>	2017	345	-	2,868	-	1,561	-
	2007	325	-	100	-	-	168
	2008	106	-	135	83	317	208
	2009	327	-	1,885	2	141	312
	2010	-	-	175	148	84	-
	2011	2	-	950	312	43	-
	2012	-	-	162	-	114	1,806
	2013	1	-	58	-	111	345
	2014	191	-	269	115	258	220
	2015	41	-	102	89	511	96
2016	18	-	32	226	151	-	
2017	5	-	36	-	95	-	

**Table 4.** Percentage of subsistence Chinook Salmon harvest for selected Yukon River communities by gear type for Subdistricts 4A, 4B, and 4C for the residents of Galena and Ruby from 2010-2015. (Busher et al. 2009; Jallen et al. 2011; Jallen et al. 2012a; Jallen et al. 2012b; Jallen et al. 2015; Jallen et al. 2017a; Jallen et al 2017b; Jallen et al 2017c; Padilla 2018, unpublished).

Year	Subdistrict community located in	Community	Percentage of total harvest by gear type			
			Set Net	Drift Net	Fish Wheel	Other
2010	4A	Anvik	36	64	0	0
		Grayling	1	99	0	0
		Kaltag	0	100	0	0
		Nulato	14	86	0	0
		Koyukuk	7	93	0	0
	4B	Galena	32	61	7	0
4C	Ruby	45	0	55	0	
2011	4A	Anvik	51	49	0	0
		Grayling	35	65	0	0
		Kaltag	0	100	0	0
		Nulato	7	93	0	0
		Koyukuk	10	90	0	0
	4B	Galena	57	43	0	0
4C	Ruby	32	0	68	0	
2012	4A	Anvik	52	48	0	0
		Grayling	13	87	0	0
		Kaltag	6	94	0	0
		Nulato	0	100	0	0
		Koyukuk	35	65	0	0
	4B	Galena	73	27	0	0
4C	Ruby	72	0	28	0	
2013	4A	Anvik	72	28	0	0
		Grayling	41	59	0	0
		Kaltag	0	100	0	0
		Nulato	0	100	0	0
		Koyukuk	62	38	0	0
	4B	Galena	6	94	0	0
4C	Ruby	29	0	71	0	
2014	4A	Anvik	–	–	–	–
		Grayling	0	100	0	0
		Kaltag	0	100	0	0
		Nulato	–	–	–	–
		Koyukuk	0	100	0	0
	4B	Galena	0	0	100	0
	4C	Ruby	100	0	0	0
	4A	Anvik	2	86	0	12
	4C	Grayling	7	93	0	0

Year	Subdistrict community located in	Community	Percentage of total harvest by gear type			
			Set Net	Drift Net	Fish Wheel	Other
2015	4A 4B 4C	Kaltag	0	100	0	0
		Nulato	0	100	0	0
		Koyukuk	50	50	0	0
		Galena	52	48	0	0
		Ruby	100	0	0	0

### Cultural Knowledge

The use and importance of salmon for Yukon River communities has been documented through oral histories and harvest surveys conducted in the area. Historically, many Yukon communities followed a semi-nomadic, subsistence way of life, spending time at seasonal camps, migrating with the resources and harvesting various species of fish, along with hunting and gathering subsistence resources. Humans have likely lived in the Yukon area for over 10,000 years (Rainey 1940, Cinq-Mars 1979) and fishing was a family and community activity, deeply ingrained in the cultures of the people in this area. People traditionally used weirs and fish traps, and nets made of animal sinew and willow bark and more recently employed set nets along with fish wheels for salmon at their fish camps. Multi-generational family groups would travel to seasonal camps to harvest fish and wildlife. Although fewer young people spend time at seasonal camps now due to employment, school, and other responsibilities, subsistence fishing continues to be important for communities up and down the river. According to surveys, many older people recall whole families spending long hours at their fish camps, harvesting, processing, and preserving fish. Children learned about subsistence activities from their elders at fish camp (Brown et al. 2010, Brown et al. 2015).

Salmon is considered the most reliable and significant subsistence resource on the Lower Yukon River. Salmon has always been an important part of the culture, economically and socially, and the knowledge of how to catch, process, and preserve fish has been passed down from generation to generation. Before contact by outsiders, dried fish was regularly traded between Yukon villages along with other commodities such as furs and sea mammal products (Wolfe 1981).

Yukon River residents are dependent on the harvest of salmon, especially Chinook Salmon, for both subsistence and commercial uses. Starting in the late 1990s, Chinook Salmon began to decline so people harvested more summer and fall Chum Salmon along with other subsistence resources (Brown et al. 2015). In the 1960s, people started using gillnets to drift fish for salmon for personal and commercial use. Today fishing still plays an important cultural role in the communities along the lower and middle Yukon River, and the knowledge of how and when to fish is still passed down from generation to generation. Population characteristics of the four primary communities within or in proximity to Yukon River Subdistricts 4B and 4C from 1960 to 2010 are presented in **Table 5**.



**Table 5.** U.S. Census Bureau population estimates for communities within or in proximity to Yukon River Subdistricts 4B and 4C, 1960-2010 (ADCCED 2018).

Community	1960	1970	1980	1990	2000	2010	2010 No. Households
Nulato CDP	183	308	350	359	336	264	92
Koyukuk city	128	124	98	126	101	96	42
Galena city	261	302	765	833	675	470	190
Ruby city	179	145	197	170	188	166	62

Customary trade of fish is an important part of continuing trade networks in rural areas of Alaska. Salmon fishing takes place in the summer and timing is based on the runs for various species. Local residents also use gill nets under the ice to fish for pike, whitefish, or sheefish in the spring before breakup. Communities have used various types of nets and fish wheels to harvest fish through the generations. Fish wheels are used less now than they were in the past when people were catching more fish to feed sled dogs, but are still used in some areas, mainly to catch fish for human consumption (Brown et al. 2010). Chum Salmon, once primarily used for dog food, were caught using nets set from the shore but are now consumed largely by people in the US and overseas who purchase through the commercial market. As more village runways were built, increasing air travel, and more snow machines were brought to the villages, the dependency on sled dogs was reduced, reducing the need for harvesting fish to feed dogs (Brown et al. 2015).

ADF&G's Division of Subsistence occasionally undertakes comprehensive household surveys as time and resources allow. These document the use, harvest, and sharing of all wild foods harvested in a community in a given year and can thus provide insights on the importance of individual resources within the overall harvest and the cultural contexts of these harvests, including patterns of sharing. For the region represented by this proposal, comprehensive household surveys that include Chinook Salmon and Chum Salmon harvest were conducted in 1985 for Galena and in 2010 for Nulato, Galena, and Ruby (**Table 3**). No comprehensive household surveys have been conducted in Koyukuk to date.

The Chinook Salmon and Chum Salmon harvests and use in **Table 6** include all gear types including commercial retention, though the latter represents a small proportion of the harvest. A large percentage of households in these communities used Chinook Salmon during the study years. Sharing of Chinook Salmon is common in these communities as is evidenced by the percentage of households giving away and receiving the resource. Sharing represents fish given away and received both within the community and with other communities.

Chum Salmon was used by fewer households as compared to Chinook Salmon in Nulato, Galena, and Ruby. Notably, the use of Chum Salmon declined substantially in Galena between 1985 (76% of households) and 2010 (43% of households) (Marcotte and Haynes, 1985). Sharing of Chum Salmon is also less prevalent in these communities compared to sharing of Chinook Salmon. In Galena, the percentage of households giving away Chum Salmon was consistent between 1985 (13.5%) and 2010

(16.3%), though the percentage of households receiving this resource declined substantially during the same period.

**Table 6.** Chinook Salmon and Chum Salmon harvest in communities located within or in proximity to Yukon River Subdistricts 4B and 4C as determined through available ADF&G household subsistence harvest surveys (ADF&G 2018).

Community		1985		2010	
		Chinook	Chum	Chinook	Chum
<b>Nulato</b>					
Household Participation	% Using	-	-	86.9	36.9
	% Giving Away	-	-	35.7	13.1
	% Receiving	-	-	45.2	14.3
Estimated Level of Harvest	Total Number Harvested	-	-	1,999.9	991.1
	Pounds per Capita	-	-	72.5	19.4
<b>Galena</b>					
Household Participation	% Using	74.4	75.7	67.5	42.5
	% Giving Away	10.8	13.5	30	16.3
	% Receiving	51.4	50	40	20
Estimated Level of Harvest	Total Number Harvested	3,057.0	70,180.0	1,688.5	5,360.2
	Pounds per Capita	61.1	483.2	37.5	64.2
<b>Ruby</b>					
Household Participation	% Using	-	-	76.6	55.3
	% Giving Away	-	-	31.9	17
	% Receiving	-	-	46.8	23.4
Estimated Level of Harvest	Total Number Harvested	-	-	1,530.3	2,735.5
	Pounds per Capita	-	-	90.4	77.4

**Effects of the Proposal**

Adoption of this proposal will have two effects. If the proposal were adopted, additional harvest opportunities would be provided to Federally qualified subsistence users by removing the depth restrictions on drift gill nets in Subdistricts 4B and 4C of the Yukon River. Increasing gillnet mesh depth allows users to fish in deeper waters when targeting fish. Additionally, adoption of this proposal may increase the efficiency of subsistence users who have used legally permissible modified gill nets where users have reduced the number of meshes by binding up excess meshes to the legal limit onto the floating line of net. If this proposal is adopted, any depth net could be utilized.

If the proposal was adopted, a Federal subsistence drift gillnet Fall Chum Salmon fishing season within Subdistricts 4B and 4C of the Yukon River beginning August 2 would be provided. Currently, the drift gillnet subsistence fishery for Fall Chum Salmon in this area is authorized under State regulation but not under Federal subsistence regulation. If this proposal is adopted, Federally qualified users could drift

gillnet fish under Federal regulations, which would be independent to State regulations during the referenced time frame.

Aligning the Federal subsistence drift gillnet allowance with State regulations will likely result in less confusion by fishers and less administrative actions by the Federal In-season Manager. Adoption of this proposal will align State and Federal subsistence fishing regulations, which will reduce enforcement concerns and user confusion. If this proposal is not adopted, the Federal subsistence fishery in this area will be more restrictive than allowed under State of Alaska regulations. As such, it could be seen to not comply with the rural subsistence priority in Title VIII of the Alaska National Interest Lands Conservation Act.

The Federal In-season Manager, under the management authority delegated by the Board, will continue to have the authority to make in-season adjustments in fishing time and gear types in response to Chinook Salmon run strength.

## **OSM CONCLUSION**

**Support** Proposal FP19-01.

### **Justification**

This proposal was submitted to mirror recently adopted fisheries liberalizations by the State. Currently the Federal drift gillnet fishery in Subdistricts 4B and 4C of the Yukon River is more restrictive than the State managed fisheries.

Adoption of this proposal will allow Federally qualified users to fish deeper waters with drift gillnets in the identified area without mesh depth restrictions. Allowing the use of deeper nets may increase user efficiency by reducing the amount of time used to harvest the same number of fish in a deeper net in less time than it would take to do so with a shallower net.

Adoption of this proposal will also create a fall Chum Salmon drift gillnet Federal subsistence fishery beginning August 2 allowing users to target fall Chum Salmon if a harvestable surplus is determined by the in-season Federal fisheries managers with the management authority granted by the Federal Subsistence Board.

Adoption of this proposal is not expected to increase subsistence harvests as the fisheries in the affected subdistricts as participation and salmon harvest in this area has been consistently low. Although an increase in harvest is not expected, adoption of this proposal may affect management of other Federally qualified users harvesting salmon outside of Subdistricts 4B and 4C.

As the fisheries management for this area and species is abundance-based and experiences both low participation and harvest levels under Federal subsistence regulations, adoption of this proposal should not result in a conservation concern for any salmon species.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Support** FP19-01. The Council heard reports from State and Federal managers as well as positive feedback from communities on the Yukon River in this area that there would be no conservation concern by this change – but would allow residents in 4B and C to be able to drift fish in their own area on the river. The Council supported this subsistence opportunity for communities in that area of the Yukon River and noted it would also help alleviate crowding and competition for drift fishing in the lower river since they would not have to travel there in order to fish.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Support** FP19-01. Changes to this regulation will align state and Federal regulations and provide elimination of the unnecessary maximum mesh depth restriction of 35 feet. The Council also believes that the addition of a chum fishery after August 2 is a positive aspect of this proposal. The Council is in agreement with the position of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council that FP19-01 will alleviate crowding on the state waters for Ruby residents, and be more economical for Federally Qualified Users who live upriver from Ruby. This proposal recognizes the traditional style of drift net fishing in the middle Yukon River that has occurred since at least 1850.

### **Seward Peninsula Subsistence Regional Advisory Council**

**Support** FP19-01. Council members noted that subsistence use needs to be given a meaningful priority, and if there isn't a priority over commercial harvest, then the Council is not doing the communities a service. If there is a conservation issue, Commercial fishing should be curtailed if there is a conservation concern, not subsistence. Council members also noted that Chinook Salmon are often intercepted on the high seas. One Council member stated that FP19-01 would allow users from 4B and 4C to harvest fish closer to home. The ability to fish locally is critical for most subsistence users.

### **Eastern Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-01. The Council was appalled by this proposal and opposed it on the basis that, if passed, it will allow more liberal, efficient fishing practices that will specifically target larger fish, which should not be allowed during the time of salmon conservation. If approved, this proposal will have a huge impact on the long term sustainability, undermine rebuilding efforts, and hinder achieving the quality of escapement. The Council stressed that reducing the mesh restrictions allows fishers to fish deeper, which further allows them to be more effective at catching the large fish, instead of allowing them to swim to the spawning grounds. Expanding Subsistence drift gillnet fishery will allow the catch of larger, older fish with larger eggs that swim further offshore. The Council considered this proposal as undermining all that had been done over the course of the last seven to eight years for salmon conservation and opined that OSM analyses did not recognize the impacts of the proposal on rebuilding salmon stocks and conservation for the long-term sustainability of Chinook Salmon on the Yukon River.

The Council noted that the State Board of Fisheries (BOF) rejected similar type of proposals for the last 20 years, however, approved it in March 2018. The Council recognized that if the Federal Subsistence Board does not pass this regulation, there would be conflicting regulations in different parts of the Yukon River due to a varied and complex land status, and, ideally, the Council would like to have regulations that are easy to understand.

The Council, however, stressed that there is a lot of evidence that points out that stripping and selling of fish not just as subsistence barter but also as commercial activity. The Council questioned the subsistence harvest numbers given by ADF&G because of the way this data is collected. The Council noted that illegal stripping and selling for fish during time of low abundance of king salmon ads a great uncontrolled variable for the managers to consider. Therefore, the liberalization of methods of subsistence harvest, opens up an opportunity for a greater harvest, which in turn will morph into a commercialized activity that is completely unregulated. The Council also stated that just because BOF approved a similar proposal, it does not mean that the Federal Subsistence Board should.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the three Regional Council recommendations supporting this proposal and Federal Subsistence Board action on the proposal.

The Yukon Kuskokwim Delta, Western Interior Alaska, and Seward Peninsula Subsistence Regional Advisory Councils all supported this proposal while the Eastern Interior Alaska Subsistence Regional Advisory Council opposed the proposal citing conservation concerns. It is important to note that the OSM analysis acknowledged that Fisheries Proposal FP19-01 will result in increased efficiency for Federally qualified subsistence users as they would be harvesting closer to home rather than having to travel to district 4A to use drift nets. However, the analysis concludes that no conservation concerns are anticipated because the increase in harvest would be minimal. Harvest restrictions can be implemented or modified by Federal managers in fishing districts if conservation concerns occur.

### ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fisheries Proposal FP19-01:** This proposal, submitted by Jack Reakoff of Wiseman, would expand the fishing area/time in the Yukon River drift gillnet fishery and repeal the maximum depth restriction of 35 meshes deep for drift gillnets in Subdistricts 4-B and 4-C.

**Introduction:** The proposal would align Federal subsistence regulations with recent Alaska Board of Fisheries (BOF) regulatory changes that were made in Spring 2018 for the drift gillnet fisheries in Subdistricts 4-B and 4-C of the Yukon River, and would mirror the State of Alaska's absence of a drift gillnet mesh depth limit. The expanding area where the use of drift gillnets is authorized, combined with more liberal fishing season dates, reflect the recent changes made by the BOF.



**Impact on Subsistence Users:** Adoption of this proposal would reduce complexity in the regulations by aligning Federal and State regulations. It would also reduce the amount of travel time and associated expenses for subsistence users who choose to use drift gillnets to harvest salmon in Subdistricts 4-B and 4-C of the Yukon River.

**Impact on Other Users:** None.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

For salmon in the Yukon Area, the BOF has made the following ANS findings

45,500–66,704 king salmon

83,500–142,192 summer chum salmon

89,500–167,900 fall chum salmon

20,500–51,980 coho salmon

2,100–9,700 pink salmon

The state directs the lawful gear and specifications in Subdistricts 4-B and 4-C in 5AAC 01.210.

**5 AAC 01.220. Lawful gear and gear specifications.**

(a) Salmon may be taken only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheel, subject to the restrictions set out in this section, 5 AAC 01.210, and 5 AAC 01.225 - 5 AAC 01.249.

(e) In Districts 4, 5, and 6, salmon may not be taken for subsistence purposes by drift gillnets, except as follows:

(1) in Subdistrict 4-A upstream from the mouth of Stink Creek, and in Subdistricts 4-B and 4-C,

(A) king salmon may be taken by drift gillnets from June 10 through July 14, unless closed by emergency order;

(B) from June 10 through August 2, the commissioner may open, by emergency order, fishing periods during which chum salmon may be taken by drift gillnets; and

(C) chum salmon may be taken by drift gillnets after August 2;

(2) in Subdistrict 4-A downstream from the mouth of Stink Creek,

(A) king salmon may be taken by drift gillnets from June 10 through July 14, unless closed by emergency order;

(B) from June 10 through August 2, the commissioner may open, by emergency order, fishing periods during which chum salmon may be taken by drift gillnets;

(3) a person may not operate a drift gillnet that is more than 150 feet in length during the seasons described in (1) and (2) of this subsection.

**Conservation Issues:** This proposal as written does not provide a conservation concern. It would align federal regulation with current state regulations. Under current state regulations the department has EO authority to restrict time, area, and gear for any salmon species if there is a conservation concern to achieve escapement goals.

**Enforcement Issues:** This proposal would reflect the recent changes made by the BOF. Reduced complexity helps increase compliance with regulations as well as reduce enforcement concerns.

**Recommendation:** ADF&G **SUPPORTS** this proposal that will align state and federal regulations.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 87 and 98 are especially relevant to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

<b>FP19-09 Executive Summary</b>	
<b>General Description</b>	Proposal FP19-09 requests that prior to June 1 the use of six-inch or less mesh size gillnets shall not be restricted in the Kuskokwim River drainage. <i>Submitted by: Alissa N. Rogers.</i>
<b>Proposed Regulation</b>	<p>§ __.27(e)(4) <i>Kuskokwim Area</i></p> <p><i>(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), except the use of gillnets with 6-inch or less mesh size shall not be restricted before June 1 in the Kuskokwim River drainage, unless superseded by a Federal Special Action;</i></p>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Oppose</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS**  
**FP19-09**

**ISSUES**

Proposal FP19-09, submitted by Alissa N. Rogers, requests that prior to June 1 the use of six-inch or less mesh size gillnets shall not be restricted in the Kuskokwim River drainage.

**DISCUSSION**

The proponent states that the Alaska Department of Fish and Game's (ADF&G) Kuskokwim Salmon Management Plan, which requires the State to close the Chinook Salmon subsistence fisheries through June 11, inhibits subsistence users from customary and traditional harvest of other species of fish with gillnets, especially whitefishes and larger Sheefish typically harvested with six-inch mesh size gillnets. The proponent says the State's closure of the Chinook Salmon fishery is implemented through a complete restriction to gillnets, which began on May 20 in 2016 and 2017. The proponent believes few Chinook Salmon migrate past the mouth of the Kuskokwim River by June 1 so any restrictions to six-inch or less mesh size should not happen until after June 1 in order to allow users to harvest fish other than Chinook Salmon.

**Existing Federal Regulation**

**§ \_\_.27(e)(4) Kuskokwim Area**

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

**Proposed Federal Regulation**

**§ \_\_.27(e)(4) Kuskokwim Area**

*(ii) For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), except the use of gillnets with 6-inch or less mesh size shall not be restricted before June 1 in the Kuskokwim River drainage, unless superseded by a Federal Special Action;*

## Existing State Regulation

### Kuskokwim Area—Subsistence Fishing

#### 5 AAC 01.255. Description of districts, subdistricts, and sections

(a) *Districts and subdistricts are as described in 5 AAC 07.200.*

(b) *During times of king salmon conservation, the Kuskokwim River may be divided into the following sections by emergency order:*

(1) *Section 1: from a line at the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim River at 59\_ 59.96' N. lat., 162\_ 30.46' W. long. to 59\_ 59.95' N. lat., 162\_ 11.15' W. long. to the confluence of the Johnson River and Kuskokwim River;*

(2) *Section 2: from the confluence of the Johnson River and Kuskokwim River to a line between ADF&G regulatory markers located approximately one-half mile upstream of the Tuluksak River mouth;*

(3) *Section 3: from a line between ADF&G regulatory markers located approximately one-half mile upstream of the Tuluksak River mouth to a line between ADF&G regulatory markers at the Yukon Delta National Wildlife Refuge boundary near Aniak;*

(4) *Section 4: from a line between ADF&G regulatory markers at the Yukon Delta National Wildlife Refuge boundary near Aniak to a line between ADF&G regulatory markers located downstream of the Holitna River mouth;*

(5) *Section 5: from a line between ADF&G regulatory markers located downstream of the Holitna River mouth to the headwaters of the Kuskokwim River.*

#### 5 AAC 07.365. Kuskokwim River Salmon Management Plan

(c) *In the king salmon fishery,*

(1) *when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries;*

(2) *when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:*

(A) *the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, to the extent*

*practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs,*

*(B) after June 11, fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;*

*(C) notwithstanding (c)(2)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark;*

*(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range,*

*(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, the directed subsistence king salmon fishery will be open seven days per week; and*

*(B) after June 11, the commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs.*

*(C) notwithstanding (c)(3)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark;*

*(4) notwithstanding the provisions of (2) and (3) of this subsection, if the department determines there is a harvestable surplus of king salmon, the commissioner may open, by emergency order, a subsistence king salmon fishery during which*

*(A) king salmon may be taken only by a person 60 years of age or older; and*

*(B) a person authorized to take king salmon under this paragraph may not authorize a proxy to take or attempt to take king salmon under AS 16.05.405 or 5 AAC 01.011, but the participant may be assisted by family members within the second degree of kindred; in this subparagraph, "within the second degree of kindred" has the meaning given in 5 AAC 92.990(a).*

*(d) In the subsistence fishery, in the Kuskokwim River drainage, in the waters of the mainstem of the river and other salmon spawning tributaries, unless otherwise specified by the department,*

*(1) the subsistence salmon net and fish wheel fisheries will be open seven days per week, except that if the commissioner determines that it is necessary in order to achieve escapement goals, the commissioner may alter fishing periods, by emergency order, based on run abundance;*

*(2) the commissioner may implement one or more of the gear limitations as described in 5 AAC 01.270(n) during times the commissioner determines that it is necessary for the conservation of king salmon;*

*(A) the gillnet mesh size may not exceed four inches until sockeye and chum salmon abundance exceeds the king salmon abundance;*

*(B) a gillnet may not exceed 25 fathoms in length, except that a longer gillnet may be used if no more than 25 fathoms of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;*

*(C) a person may fish for salmon with a dip net, as defined in 5 AAC 39.105, and all king salmon caught by a dip net must be returned immediately to the water unharmed;*

*(3) actions to conserve king salmon may be applied to the entire Kuskokwim River, its sections, or tributaries, consistent with harvest trends and variability in abundance of king salmon available for harvest as the run progresses upstream;*

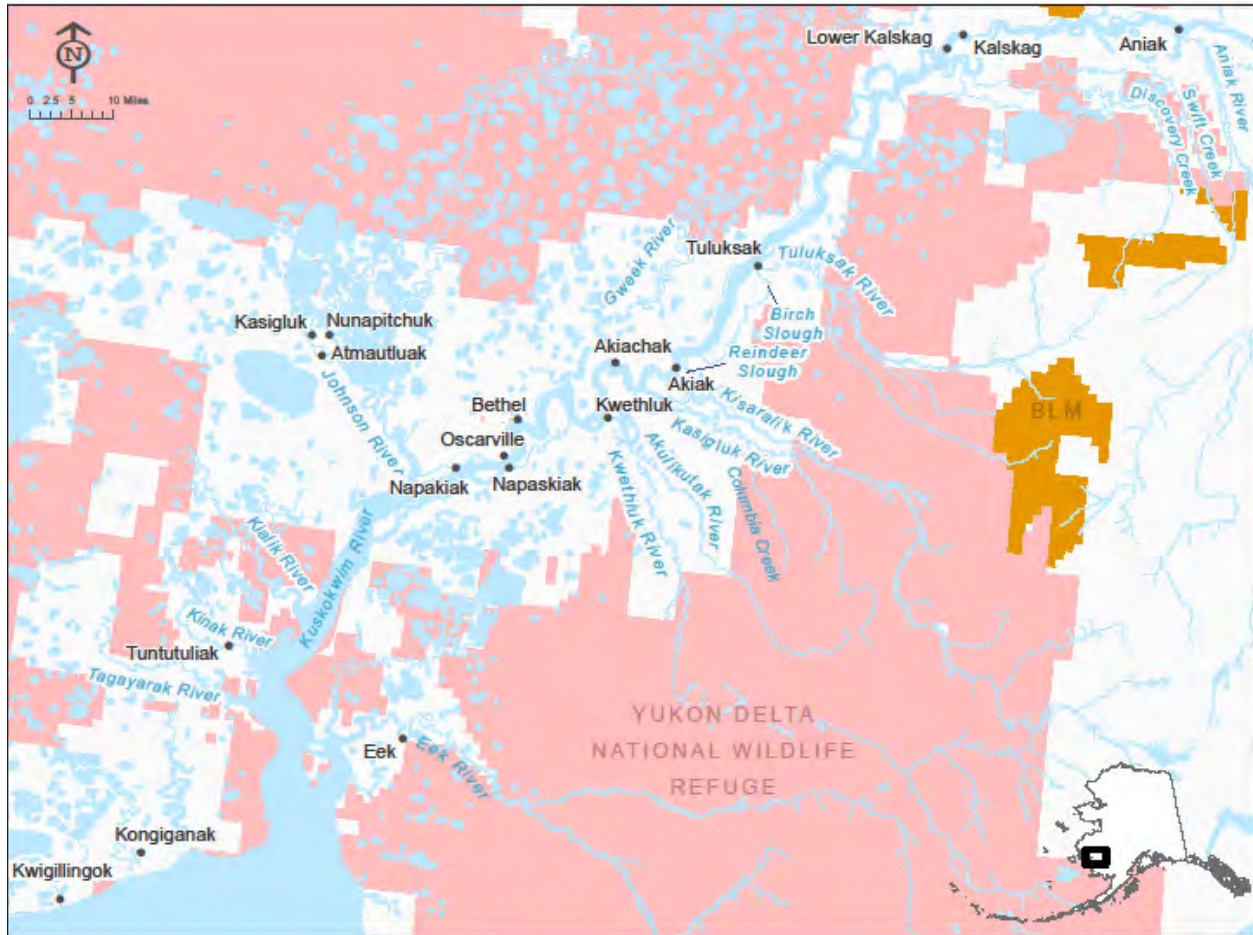
*(4) the commissioner may alter the subsistence hook and line bag and possession limits specified in 5 AAC 01.295, by emergency order, if the commissioner determines that inseason information indicates it is necessary for conservation purposes.*

### **Extent of Federal Public Waters**

For purposes of this analysis, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The affected area consists of those waters of the Kuskokwim River drainage that are within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge (Refuge), including District 1 and portions of District 2 of the Kuskokwim Fishery Management Area. The waters are generally described as the lower Kuskokwim River drainage from the mouth upriver to and including about 30 miles of the Aniak River (**Figure 1**).

### Customary and Traditional Use Determinations

Residents of the Kuskokwim Area, except those persons residing on United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB, have a customary and traditional use determination for salmon (50 CFR 100.24 and 36 CFR 242.24).



**Figure 1.** Yukon Delta National Wildlife Refuge.

### Regulatory History

Given that the proponent refers to the Kuskokwim River Salmon Management Plan, this analysis will start with the regulatory history timeline in 2013, which was the year the Alaska Board of Fisheries (BOF) adopted the current plan that contains information on the front-end closure the proponent is trying to rectify in Federal regulations. For Federal special actions and State emergency orders issued 2014-2017, see **Appendix 1**. The regulatory history section below will provide information on restrictions to the Chinook Salmon subsistence fishery before or around June 1.

Another important note to mention is that deferred fisheries proposal FP17-05 will have an effect on this proposal. FP17-05 is requested that Federal subsistence management plans, strategies, fishing schedules, openings, closings and fishing methods for the Kuskokwim Area be issued independently by



the Federal Subsistence Management Program in consultation with appropriate agencies and entities. The front-end closure is mandated by State regulations and is implemented through emergency orders. If FP17-05 were to be adopted, ADF&G emergency orders would not pertain to Federally qualified users located within Refuge waters; thus, the front-end closure issued through State emergency orders would not apply to Federally qualified users within Refuge waters.

#### Salmon Management in 2013 Prior to June 1

In 2013, the Alaska Board of Fisheries (BOF) adopted the Kuskokwim River Salmon Management Plan (5 AAC 07.365). The plan provided guidelines for managing the Kuskokwim River salmon fishery to meet escapement goals and State subsistence use priority (Tiernan and Poetter 2015). It is important to note that this subsistence priority is not the rural subsistence priority mandated in Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA), and that the State has no authority to manage that priority.

On June 1, subsistence Chinook Salmon fishing with gillnets was restricted by the State to four-inch or less mesh not to exceed 60 feet in the Kwethluk River drainage including its confluence with Kuskokuak Slough, as well as the Kasigluk, Kisaralik, Tuluksak, Aniak river drainages. This restriction was to conserve Chinook Salmon in the salmon-bearing tributaries of the Kuskokwim River, while allowing the harvest of non-salmon species such as whitefish, Northern Pike, and Burbot (Tiernan and Poetter 2015). No Federal in season management actions were taken prior to June 1.

#### Salmon Management in 2014 Prior to June 1

On May 20, 2014, the Federal in-season manager issued an emergency special action, through his delegation of authority provided to him by the Board, that closed Refuge waters from the mouth of the Kuskokwim River upriver to Tuluksak River to the harvest of Chinook Salmon by all users, and on May 27 continued the closure from the Tuluksak River to the Aniak River. Gillnets were restricted to 4-inch or less mesh size set nets not exceeding 60 feet in length through Federal emergency special actions issued by the Federal in-season manager. Chinook Salmon incidentally caught in gillnets could be retained by Federally qualified subsistence users.

#### Salmon Management in 2015 Prior to June 1

In February and March 2015, five separate Temporary Special Action Requests, FSA15-02, 03, 05, 07, and 08, were submitted by Akiak, Napakiak, Akiachak, Chuathbaluk, and Lower Kalskag Tribal Councils, respectively. All requested that the Board close Refuge waters to the harvest of all salmon by non-Federally qualified users, further reduce the pool of eligible harvesters based on the ANILCA Section 804 subsistence user prioritization analysis that was implemented in 2014, and implement an allocation strategy among eligible users. Several requested implementation of an interim Tribal co-management system for the 2015 season. At its work session on April 16, 2015, the Board deferred action on all the special action requests until such time, during the season, the Chair determined it necessary for Federal involvement (FWS 2015a).

On May 6, 2015, the Board adopted the ANILCA Section 804 subsistence user prioritization for the harvest of Chinook Salmon only, including a Bethel allocation strategy based on Section 804, and left the final decision concerning whether or not to close Refuge waters to the harvest of Chinook Salmon to the Federal in-season manager (FWS 2015b).

On May 16, 2015, the Federal in-season manager issued a special action to close Refuge waters from the Kuskokwim River mouth to its confluence with the Tuluksak River and salmon tributaries (Eek, Kwethluk, Kasigluk, Kisarialik, and Tuluksak rivers) to the harvest of Chinook Salmon from May 21 through July 20. The closure restricted everyone from harvesting Chinook Salmon except for Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization analysis including the Bethel allocation strategy based on Section 804.

From May 21 – May 28, the Federal in-season manager restricted gillnets to 4-inch mesh size set nets and could be used only three days a week. Non-salmon species could be targeted with these nets and any incidentally caught Chinook Salmon could be retained. On May 28, 2015, the Federal in-season manager closed the harvest of Chinook Salmon in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary to all users. Subsistence fishing did not resume again until June 5.

#### Salmon Management in 2016 Prior to June 1

On March 31, the Akiak Tribal Council submitted Temporary Special Action Request FSA16-01. It requested the Board to close Federal public waters of the Kuskokwim River drainage to the harvest of salmon except by Federally qualified subsistence users, further reduce the pool of eligible harvesters based on the ANILCA Section 804 subsistence user prioritization analysis implemented in 2015, and employ an allocation strategy among eligible users, similar to the one implemented in 2015, for Chinook, Chum, Sockeye, and Coho Salmon.

The ADF&G closed subsistence fishing with gillnets starting on May 20 based on new regulation passed in 2016 by the BOF that closed the Kuskokwim area Chinook Salmon subsistence fishery before June 12.

On June 1, 2016, the Board approved FSA16-01 with modification, closing Federal public waters of the Kuskokwim River drainage to the harvest of Chinook and Chum salmon except by Federally qualified users identified in a Section 804 subsistence user prioritization analysis. Additionally, the Board determined the Federal in-season manager would provide harvest opportunity for Chinook and Chum Salmon subsistence fisheries with a combination of management tools including area, timing, and gear restrictions developed in consultation with the Kuskokwim River Inter-Tribal Fish Commission pursuant to the Memorandum of Understanding between the U.S. Fish and Wildlife Service and the Commission (FWS 2016).

On June 3, 2016, the Federal in-season manager closed Refuge waters to the harvest of Chinook and Chum Salmon by Federally qualified subsistence users.

### Salmon Management in 2017 Prior to June 1

On March 1, 2017, Lamont Albertson, the Executive Director of the Kuskokwim River Inter-Tribal Fish Commission, submitted Temporary Special Action Request FSA17-03. It requested that the Board support a pre-season management strategy that would close Federal public waters in the Kuskokwim River drainage to the harvest of Chinook Salmon except by Federally qualified subsistence users if the forecast run size was less than a target identified by the Kuskokwim River Inter-Tribal Fish Commission.

On March 14, 2017, the Akiak Tribal Council submitted Temporary Special Action Request FSA17-04. It requested that the Board close Federal public waters of the Kuskokwim River drainage to the harvest of salmon except by Federal qualified subsistence users, further reduce the pool of eligible harvesters based on the ANILCA Section 804 subsistence user prioritization analysis that was implemented in 2016, and implement an allocation strategy among eligible users. The Akiak Tribal Council clarified at a later date that an allocation strategy was not requested and that the harvestable surplus of Chinook Salmon did not seem to require a permit system, but could rather be managed through timing and gear restrictions, as was done in 2016.

On May 3, 2017, the Federal in-season manager closed Federal public waters in the Kuskokwim River drainage to the use of all gillnets by all users, effective June 12, 2017 to August 10, 2017, to provide for escapement of Chinook Salmon.

On May 19, 2017, the Board met via teleconference (and in a subsequent email poll on May 22, 2017 to clarify the intent of the Board action) and approved Temporary Special Action Requests FSA17-03 and FSA17-04 with modification. On June 12, 2017, Federal public waters of the Kuskokwim River drainage were closed to the harvest of Chinook Salmon except by Federally qualified subsistence users identified in a Section 804 subsistence user prioritization analysis. The Board determined there was a need to restrict the harvest of Chinook Salmon for the conservation of healthy populations and to protect the continuation of subsistence uses as mandated under ANILCA Section 815. Those eligible to harvest Chinook Salmon under Federal regulations were the following: Federally qualified subsistence users residing in the Kuskokwim River drainage and the coastal communities of Chefornak, Kongiganek, Kipnuk, and Kwigillingok. Additionally, the Board determined the Federal in-season manager may provide harvest opportunity for Chinook Salmon subsistence fisheries with a combination of management tools including area, timing, and gear restrictions developed in consultation with the Kuskokwim River Inter-Tribal Fish Commission, pursuant to the Memorandum of Understanding between the U.S. Fish and Wildlife Service and the Commission. These Temporary Special Actions would expire when the Federal in-season manager re-opened Federal public waters of the Kuskokwim River drainage to the harvest of Chinook Salmon by non-Federally qualified users, or when they were superseded by subsequent special actions, or at the end of the regulatory year on March 31, 2018, whichever came first. This Board action superseded the previous special action issued by the Federal in-season manager on May 3, 2017 (FWS 2017).

The Federal in-season manager issued another special action on May 24, 2017, following the Board actions taken on the previous temporary special action requests, to close Federal public waters of the

Kuskokwim River mainstem and salmon bearing tributaries (including Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak Rivers) to the harvest of Chinook Salmon by all Federally qualified subsistence users. The special action was effective from June 12 until August 10, 2017.

Refuge waters were closed to subsistence gillnet fishing starting on May 25 by ADF&G. Two days after this closure, ADF&G provided a 12 hour subsistence fishing opportunity with 4-inch or less set gillnets to harvest non-salmon species and incidentally retain any Chinook Salmon harvested. On June 1, the closure to subsistence gillnet fishing extended from the Refuge boundary near Aniak to the Holitna River mouth, which was then followed up by a second 12 hour subsistence fishing opportunity on June 3. On June 4, the entire Kuskokwim River was closed to subsistence fishing with gillnets. On June 10, ADF&G provided the last 12-hour subsistence opportunity with 4-inch or less set gillnets. In total, three four-inch set gillnet opportunities, totaling 36 hours, were allowed during the early season Chinook Salmon fishery closure in 2017. These opportunities were provided based on a new BOF regulation passed in 2017 that allowed at least one opportunity per week for four-inch or less mesh set gillnets before June 12.

## **Biological Background**

### Whitefish Species

Six common whitefish species are present in the Kuskokwim River: Inconnu (Sheefish), Broad Whitefish, Humpback Whitefish, Least Cisco, Bering Cisco, and Round Whitefish. Biological data on distribution, migration, and life history that exist for these whitefish species come from directed sampling and radio telemetry studies in the drainage. Some age and length data are available for some of the species in the Kuskokwim River drainage, but is not adequate enough to provide a complete assessment of their populations.

Sheefish, Broad Whitefish, Humpback Whitefish, and Least Cisco are generally distributed from the Kuskokwim River mouth to the Swift Fork of the Kuskokwim River. Bering Cisco appear to have a limited distribution, which ranges from the mouth to the South Fork of the Kuskokwim River (Brown et al. 2012, Alt 1973). Based on weirs operated in several of the Kuskokwim River's salmon tributaries, it does not appear as though large whitefish migrations occur in most salmon spawning streams; however, data is limited to (~ 3 month) windows when the weirs do operate.

Sheefish are known to be seasonally migratory, moving to the marine environment during the winter then returning to the river during the summer and fall to feed and spawn (Alt 1977, Stuby 2010). Most appear to overwinter from lower Holitna River to Kuskokwim Bay (Alt 1977, Stuby 2010). Summer feeding habitats include slow flowing reaches of numerous tributaries in the lower river into the North Fork of the Kuskokwim River. Fall spawning habitats are known to exist in four primary areas in upper river tributaries: Swift Fork, Big River, Middle Fork, Slow Fork near Tonzona (Alt 1972, 1981, Stuby 2010). Spawning typically occurs between late September and mid-October. Sheefish, as well as the other riverine whitefish species, are broadcast spawners, spreading their eggs over gravel substrate in the fall and larvae emerge after a winter of developing, where they are distributed downstream by river currents to feeding areas (McPhail and Lindsey 1970, Gates et al. 2017).

Riverine populations of Broad Whitefish, Humpback Whitefish, and Least Cisco rear, feed, and overwinter in the lower drainage and in Kuskokwim Bay (Maciolek 1986; Harper et al. 2007, 2008, 2009). Beginning mid to late summer, pre-spawning individuals migrate from feeding habitats to upstream spawning habitats in gravel substrate reaches of the drainage (for example: Big River, Swift Fork, lower Holitna River, etc.). Spawning for Broad Whitefish typically occurs later than most species of whitefish, usually beginning in early November (Harper et al. 2009). Spawning for Humpback Whitefish usually begins in late September or early October (Stein et al. 1973, Alt 1979, Brown 2006). Migration data are not available for Least Cisco, Bering Cisco, or Round Whitefish populations in the Kuskokwim River drainage. These species generally start migrating toward overwintering grounds by the end of the fall (late October, early November).

### Chinook Salmon

#### *Run-Size*

Estimates of drainage-wide run size are produced by the Chinook Salmon run-reconstruction model. This model uses multiple sources of data such as weir and aerial escapement indices, commercial catch and effort, mark-recapture estimates, and harvest to estimate annual returns (Liller and Smith 2018). As of May 2018, the run-reconstruction model has been updated to include newly available mark-recapture information from 2014-2017, as well as additional model changes and data updates (Hamazaki et al. 2018).

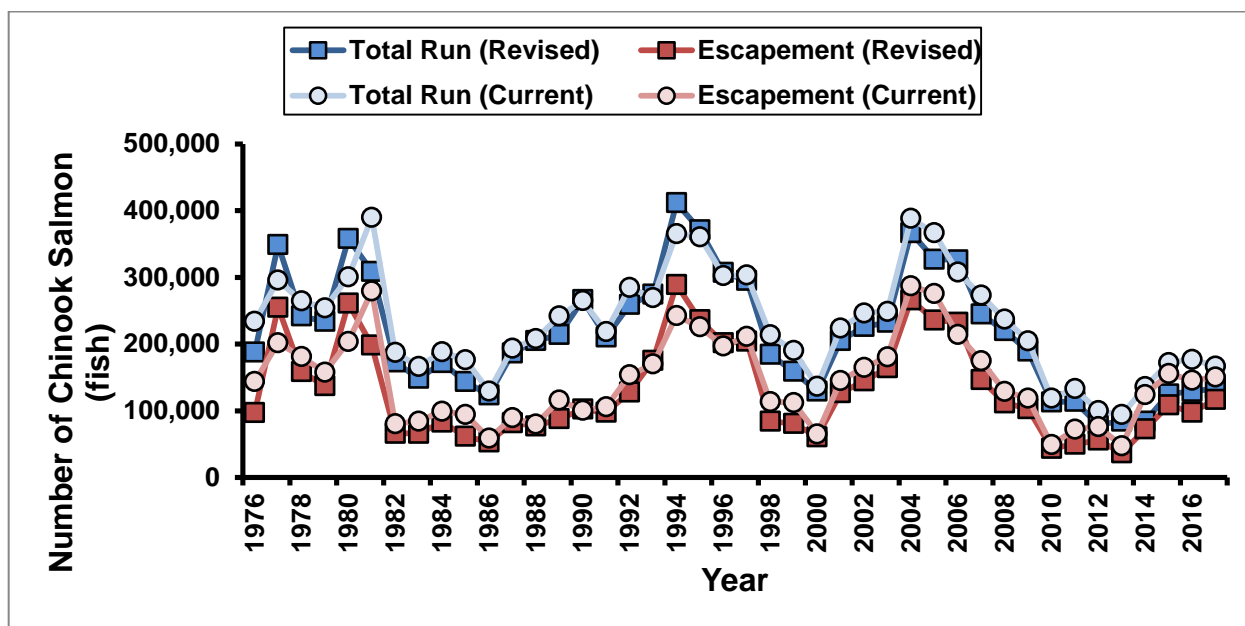
Chinook Salmon abundance in the Kuskokwim River system has been highly variable with cyclical (~10 years) peaks around 379,000 and valleys around 120,000 fish. The last peak run-size occurred in 2004 with an estimated size of 366,725 Chinook Salmon. Run-sizes have dropped steadily from that peak until reaching an all-time low of 79,238 salmon in 2012. Since 2012, the population appeared to be on an increasing trend, with the 2017 run size estimated at 133,267 Chinook Salmon, which is a slight increase from the 2016 run-size of 128,855 Chinook Salmon. The Chinook Salmon run-size has remained effectively consistent from 2015 to 2017 (**Table 1, Figure 2**). In relation to the previously published run-size estimates (Liller and Smith 2018), run-size estimates have decreased on average by 11% across the entirety of the time series, with 2014-2017 estimates being, on average, 28% lower due to the influence of the new scalar information from mark-recapture projects conducted from 2014-2017 (Hamazaki et al. 2018).

**Table 1.** Published comparison of estimates for Kuskokwim River Chinook Salmon run-size, escapement, and harvest from 1976 to 2017. Estimates produced by Liller and Smith 2018 are in parentheses, revised estimates from Hamazaki et al. 2018 are not.

Kuskokwim River Drainage							
Year	Total Run	Escapement	Harvest				
			Subsistence	Commercial	Sport	Test Fish	Total
1976	187,584 (233,967)	97,037 (143,420)	58,606	30,735		1,206	90,547
1977	348,824 (295,559)	255,117 (201,852)	56,580	35,830	33	1,264	93,707
1978	241,781 (264,325)	158,309 (180,853)	36,270	45,641	116	1,445	83,472
1979	233,787 (253,970)	137,485 (157,668)	56,283	38,966	74	979	96,302
1980	357,950 (300,573)	260,982 (203,605)	59,892	35,881	162	1,033	96,968
1981	308,660 (389,791)	198,261 (279,392)	61,329	47,663	189	1,218	110,399
1982	173,072 (187,354)	66,071 (80,353)	58,018	48,234	207	542	107,001
1983	148,278 (166,333)	66,133 (84,188)	47,412	33,174	420	1,139	82,145
1984	171,853 (188,238)	82,677 (99,062)	56,930	31,742	273	231	89,176
1985	143,568 (176,292)	61,641 (94,365)	43,874	37,889	85	79	81,927
1986	123,452 (129,168)	52,840 (58,556)	51,019	19,414	49	130	70,612
1987	186,184 (193,465)	81,941 (89,222)	67,325	36,179	355	384	104,243
1988	204,824 (207,818)	77,061 (80,055)	70,943	55,716	528	576	127,763
1989	214,081 (241,857)	87,928 (115,704)	81,175	43,217	1,218	543	126,153
1990	266,353 (264,802)	102,167 (100,614)	109,778	53,502	394	512	164,186
1991	210,525 (218,705)	97,377 (105,589)	74,820	37,778	401	149	113,148
1992	259,154 (284,846)	127,881 (153,573)	82,654	46,872	367	1,380	131,273
1993	274,830 (269,305)	175,319 (169,816)	87,674	8,735	587	2,515	99,511
1994	411,724 (365,246)	289,094 (242,616)	103,343	16,211	1,139	1,937	122,630
1995	371,079 (360,513)	236,161 (225,595)	102,110	30,846	541	1,421	134,918
1996	307,072 (302,603)	201,561 (197,092)	96,413	7,419	1,432	247	105,511
1997	295,259 (303,189)	203,878 (211,247)	79,381	10,441	1,227	332	91,381
1998	184,356 (213,873)	84,140 (113,627)	81,213	17,359	1,434	210	100,216
1999	158,770 (189,939)	80,940 (112,082)	72,775	4,705	252	98	77,830
2000	129,138 (136,618)	60,905 (65,180)	67,620	444	105	64	68,233
2001	205,152 (223,707)	126,677 (145,232)	78,009	90	290	86	78,475
2002	226,106 (246,296)	144,445 (164,635)	80,982	72	319	288	81,661
2003	232,282 (248,789)	164,180 (180,687)	67,134	158	401	409	68,102
2004	366,725 (388,136)	266,084 (287,178)	96,788	2,305	857	691	100,641
2005	326,904 (366,601)	235,901 (275,598)	85,090	4,784	572	557	91,003
2006	326,067 (307,662)	232,409 (214,004)	90,085	2,777	444	352	93,658

Table 1 (Continued).

Kuskokwim River Drainage							
Year	Total Run	Escapement	Harvest				
			Subsistence	Commercial	Sport	Test Fish	Total
2007	244,754 (273,060)	146,637 (174,943)	96,155	179	1,478	305	98,117
2008	219,709 (237,074)	111,613 (128,978)	98,103	8,865	708	420	108,096
2009	189,370 (204,747)	103,101 (118,478)	78,231	6,664	904	470	86,269
2010	112,975 (118,507)	43,541 (49,073)	66,056	2,732	354	292	69,434
2011	113,749 (133,059)	49,718 (72,097)	62,368	747	579	337	64,031
2012	79,238 (99,807)	55,746 (76,074)	22,544	627	0	321	23,492
2013	84,311 (94,166)	36,823 (47,315)	47,113	174	0	201	47,488
2014	84,326 (135,749)	72,560 (123,987)	11,234	35	0	497	11,766
2015	125,058 (172,055)	108,454 (155,464)	16,124	8	0	472	16,604
2016	128,855 (176,916)	97,640 (145,718)	30,693	0	0	522	31,215
2017	133,267 (166,863)	116,579 (150,193)	16,380	0	0	290	16,670



**Figure 2.** Comparison of Estimates for Kuskokwim River Chinook Salmon total run-sizes and escapements from 1976 to 2017. Estimates are produced from the Kuskokwim River Chinook Salmon Run-Reconstruction Model (Liller and Smith 2018) and the revised Kuskokwim River Chinook Salmon Run-Reconstruction Model (Hamazaki et al. 2018). Circles indicate estimates produced by Liller and Smith 2018, while squares indicate revised estimates produced by Hamazaki et al. 2018.

### *Escapement*

ADF&G and U.S. Fish and Wildlife Service monitor Chinook Salmon escapement throughout the Kuskokwim River drainage with a variety of weir and aerial surveys. Six weirs are utilized as data sources in the run-reconstruction model: two in the lower river (Kwethluk, Tuluksak) and four in the upper river (George, Kogruklu, Tatlawiksuk, and Takotna). ADF&G discontinued the Takotna weir in 2014, restarted the weir in 2017, and then discontinued the weir in 2018. Two other weirs in the drainage are not used as data inputs in the run-reconstruction model (Salmon River of the Aniak drainage, Salmon River of the Pitka Fork drainage). In addition to the weir projects, 14 aerial index surveys are utilized as inputs into the run-reconstruction model: three in the lower river (Kwethluk, Tuluksak, and Kisaralik) and 11 in the upper river (Salmon-Aniak, Kipchuk, Aniak, Holokuk, Oskawalik, Holitna, Cheeneetuk, Gagaryah, Pitka, Bear, and Salmon-Pitka). The drainage-wide sustainable escapement goal for Chinook Salmon is 65,000 – 120,000 fish and was established in 2013. The drainage-wide escapement goal is currently under review and will be determined during the BOF Arctic-Yukon-Kuskokwim Finfish meeting in January 2019.

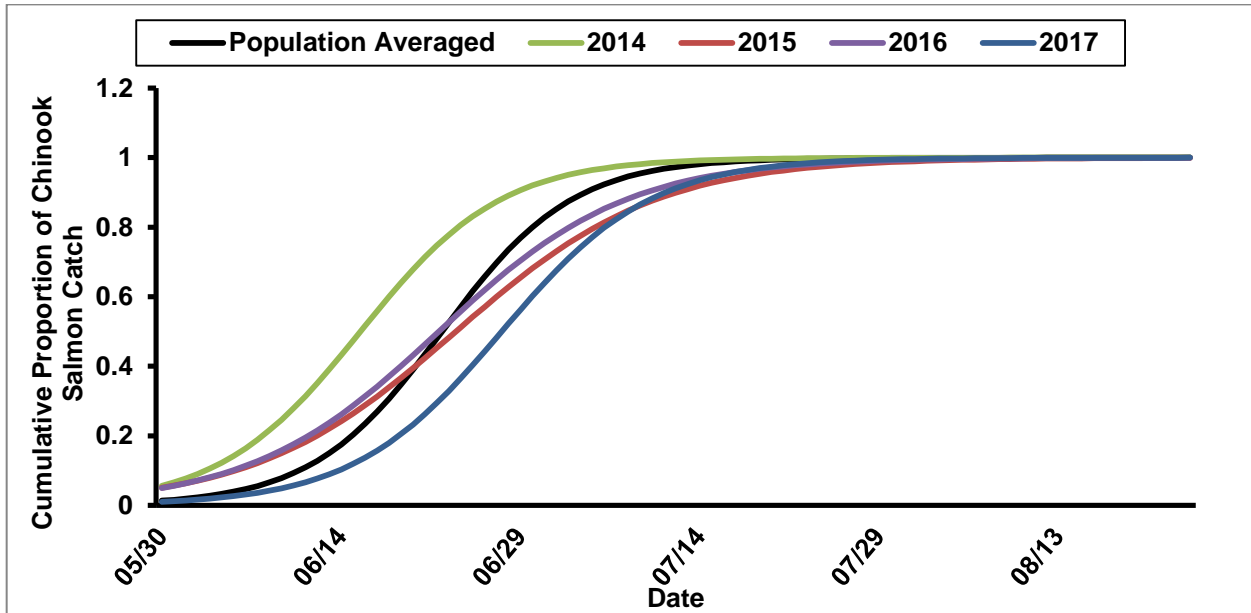
Total escapement estimates of Chinook Salmon follow the same general trend as total run estimates with cyclical peaks and valleys. Average high escapement years were around 268,000 fish, while average low escapements were around 77,000 fish (**Table 1, Figure 21**). The last peak was in 2004, with an escapement of around 266,084 Chinook Salmon (**Table 1, Figure 2**). After the last peak, the escapement dropped to a record low of around 36,823 fish in 2013 (**Table 1, Figure 2**). Since the record low, escapement has steadily increased although it appears as though the rate of increased escapement is slower than escapement cycles in the past despite heavy restrictions to harvest. Since 2015, conservative fisheries management has led to escapement being held between 98,000 - 117,000 (**Table 1, Figure 2**). Before revised escapement estimates were published, conservative fisheries management targeted escapement for the upper quartile of the State's drainage-wide sustainable escapement goal range (100,000 – 120,000 Chinook Salmon), which resulted in maintaining escapement around 150,000 fish under the previously estimated run-reconstruction model (Liller and Smith 2018). Due to model revisions, the evaluation of management objectives with revised numbers is complicated without a revision to the drainage-wide sustainable escapement goal.

### *Run-Timing and Migration Patterns*

In-season run-timing heavily relies on information gathered from the Bethel Test Fishery. The Bethel Test Fishery has been operated upstream of Bethel since 1984, and provides a long term data set on species composition, relative abundances, and run-timing. There are complications with using data from the test fishery to help in-season management both because in-river abundance during the season is confounded with run-timing, as well as the test fishery being located upstream of where much of the Chinook Salmon harvest takes place. There is also a large amount of variation in historical run-timing, which complicates in-season predictions of run abundance. During in-season operations, run-timing becomes more informed as the season progresses with more data being collected from the Bethel Test Fishery, but is not well known or approximated until the end of June/beginning of July, by which time most of the run has progressed through the Bethel Test Fishery.

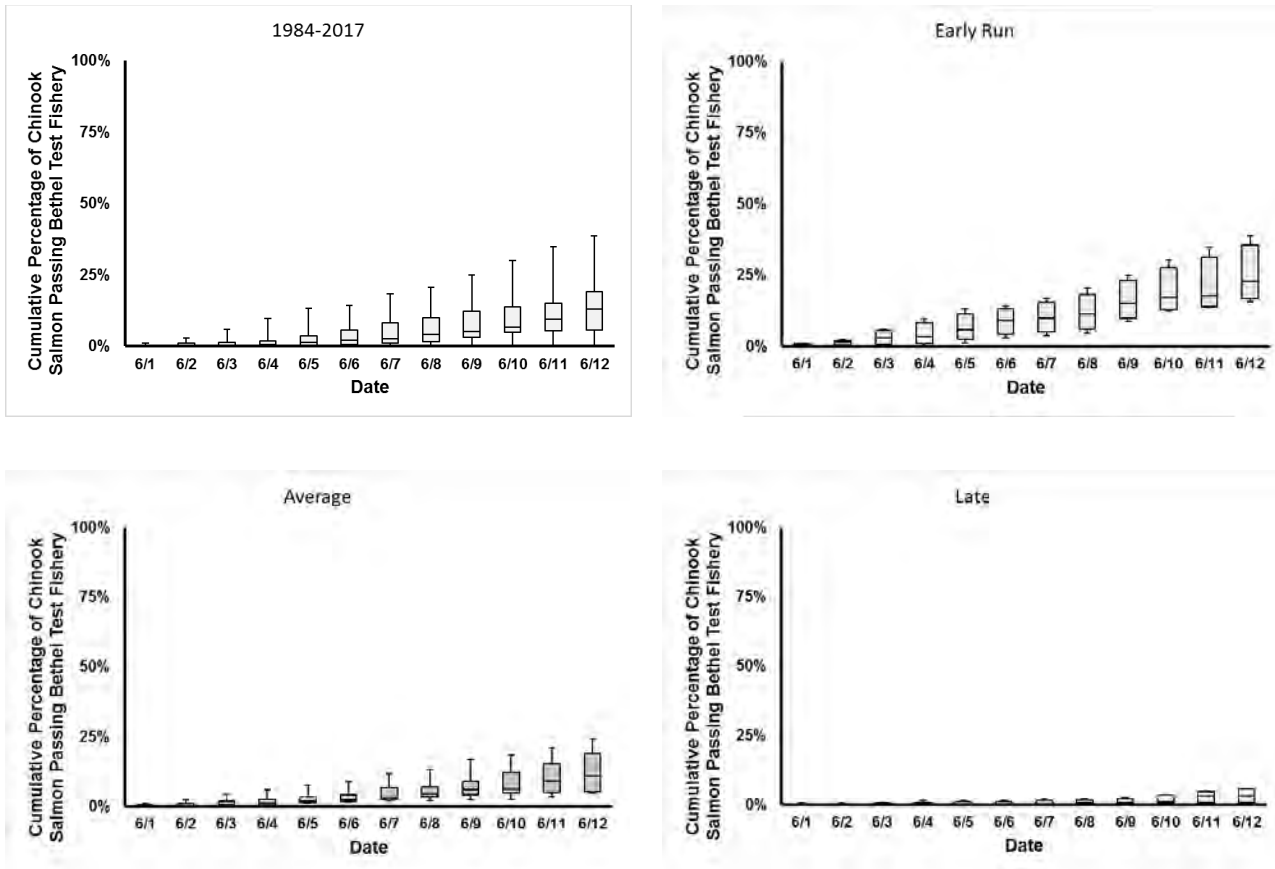


Chinook Salmon enter the Kuskokwim River beginning in late May and continue through early August. The Bethel Test Fishery starts operating around the end of May (latest: June 1) and continues until late August. The cumulative catch of Chinook Salmon at the test fishery can best be described by a sigmoidal shaped curve (i.e. S-shaped), and can be utilized to generalize run-strength, run-timing, and species composition (**Figure 3**).



**Figure 3.** Estimated average of the cumulative proportion of Chinook Salmon catch collected by date at the Bethel test fishery from 1984 to 2017. The most recent three years of the cumulative proportion of catch at the Bethel test fishery is also plotted for comparison purposes. Dates were estimated using non-linear version of the logistic equation.

Across early, average, and late run-timing scenarios, the cumulative proportion of Chinook Salmon passing by the Bethel Test Fishery by June 1 is less than or equal to 1%. In average or late run-timing years, the cumulative proportion of Chinook Salmon passing the Bethel Test Fishery by June 6 increased to around 1 – 4%, while in early run-timing scenarios the cumulative proportion is much higher, around 4 – 13% (**Figure 4**).



**Figure 4.** Box and Whisker plot for the cumulative percentage of Chinook Salmon passing through the Bethel Test Fishery from June 1 to June 12 under various run-timing scenarios.

In the earliest run-timing years, the median cumulative proportion of Chinook Salmon passing the Bethel Test Fishery by June 12 was approximately 23%, with most values falling between 17-35%. In the latest run-timing years, the median cumulative proportion of Chinook Salmon passing the Bethel Test Fishery by June 12 was approximately 3%, with most values falling between 1 – 6%. During average run-timing years, the median cumulative proportion of Chinook Salmon passing the Bethel Test Fishery by June 12 was approximately 11%, with most values falling between 5 – 19% (**Figure 4**).

From 1984 to 2017, the estimated dates at which 50% of the Chinook Salmon run has passed the Bethel Test Fishery (D50) ranges from June 14 to July 2, with an average of June 22 ± 4 days (**Figure 3**).

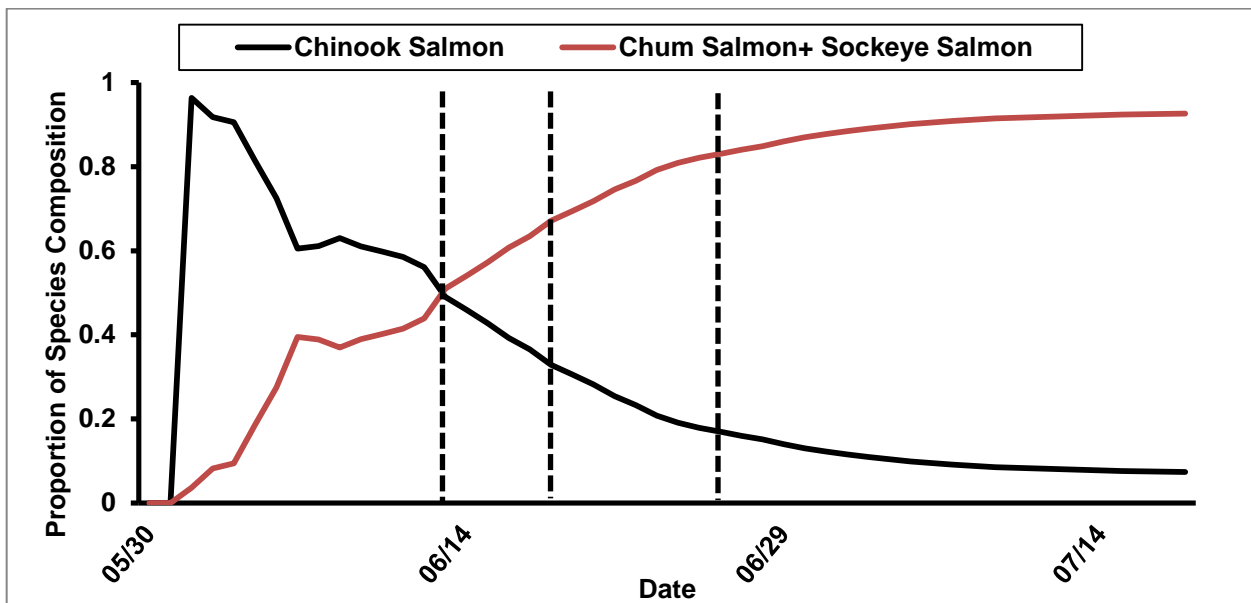
Past research has shown that Chinook Salmon migrating to the upriver portions of the drainage tend to migrate earlier in this range than Chinook Salmon migrating to the middle or lower portions of the drainage (Stuby 2007, Smith and Liller 2017a, 2017b). Tagging studies performed by ADF&G in 2015 and 2016 performed near the confluence of the Johnson and Kuskokwim rivers, showed headwater Chinook Salmon comprised between 50 - 67% of the studies’ catches during the end of May/beginning of June, while toward the middle/end of June the same sub-stock only comprised 5% or less of the catch. Additional evidence from the Salmon Pitka Fork weir located in the headwaters of the Kuskokwim River drainage also support this pattern. The absence of a lower river Chinook Salmon subsistence fishery

before June 12 for the last three years has resulted in some of the largest Chinook Salmon escapements at the Salmon Pitka Fork weir (6,000 – 8,000 fish from 2015 – 2017). During the traditional timing of the Chinook Salmon subsistence fishery, these headwater stocks likely were harvested at a higher rate than the lower and middle river stocks given that the lower river subsistence fishery prefers harvesting in the early part of June when the headwater stocks are moving through the lower river to their final destination.

The tagging studies in 2015 and 2016 showed that all sub-stocks display similar migration rates. Between the tagging site near the confluence of the Johnson and Kuskokwim rivers to the area near Bethel (rkm 112), tagged Chinook Salmon migrated at a rate between 9 – 16 rkm/day. Chinook Salmon passing between these locations took 3 – 5 days to pass rkm 112 near Bethel. Chinook Salmon migrating past this point proceed at a faster rate between 31 – 45 rkm/day (Smith and Liller 2017a, 2017b).

*Composition*

Chinook Salmon are the main salmon species moving in the Kuskokwim River at the beginning of the season; however, the composition of the run transitions to Chum and Sockeye Salmon by mid-June (Figure 5). From 1984 to 2017, the average date at which the proportions of Chinook Salmon is equal to that of Chum Salmon plus Sockeye Salmon at the Bethel test fishery (1:1 ratio) is June 13 (Figure 5). Before June 12, a majority of the salmon in the Kuskokwim River near Bethel are Chinook Salmon.



**Figure 5.** Average proportion of species composition by date caught at the Bethel test fishery from 1984 to 2017. Three vertical dashed lines represent three increasing ratios of Chum and Sockeye to Chinook Salmon, which occur approximately on June 13 (1:1), June 18 (2:1), and June 26 (5:1).

## Harvest History

### Whitefish Species

Harvest of whitefish throughout Alaska is mostly unmanaged. Federal and State subsistence regulations in the Kuskokwim River area allow for unlimited year-round harvest of all species. The only limitation is found in State sportfish regulations for Sheefish (10 per day, 10 possession, and no size limit). The primary harvest of these species occurs in the subsistence fishery, which occurs in the main-stem of the Kuskokwim River and connected tundra ponds within the Yukon Delta National Wildlife Refuge (Gates et al. 2017). Much of the harvest in the area is community or area-specific and generally lacks species specific reporting (Brown et al. 2012, Gates et al. 2017).

### *Commercial/Sport Fish*

Limited commercial fisheries for whitefish species take place in the Kuskokwim drainage. Harvest averaged approximately 3,993 pounds of white during years for which there are harvest, which includes 1978 – 2003, excluding 1983-84, 1986, and 1998 – 2001 (Whitmore et al. 2008). These harvest estimates represents all whitefish captured and does not break out species specific harvest. Since 1992, fishers registered for this fishery were typically located in the lower Kuskokwim River (Brown et al. 2012).

Sport fishing for whitefish exist in the Kuskokwim River drainage, occur primarily in the summer months, and typically target Sheefish. Harvest data are collected through statewide, voluntary, mail-in surveys, designed to provide estimates of effort, harvest, and catch on a site-by-site basis. However, the survey for the Kuskokwim drainage generally yields low response levels. As a result precise harvest information is not available, through estimates indicate a continued low level of use. From 1996 to 2016, estimated sport fishery harvest of Sheefish in the Kuskokwim River ranged from 8 – 1,079 fish, with an average of 202 fish (**Table 2**). From 1996 to 2016, estimated sport fishery harvest of whitefish other than Sheefish in the Kuskokwim River ranged from 0 – 1,482 fish, with an average of 369 fish (**Table 2**).

**Table 2.** Sportfish harvest estimates of Sheefish and Whitefish from the Kuskokwim River drainage from 1996 – 2016. Results are collected from statewide post-season sportfish harvest surveys conducted by ADF&G Sportfish Division (ADF&G 2018)

Year	Sheefish	Whitefish
1996	107	0
1997	508	614
1998	119	1219
1999	268	9
2000	250	200
2001	124	0
2002	81	54
2003	45	89
2004	182	975
2005	1079	209
2006	173	58
2007	435	324
2008	191	96
2009	161	664
2010	67	54
2011	114	58
2012	60	1216
2013	74	1482
2014	93	424
2015	107	0
2016	8	0
<b>Five-Year Average (2012 - 2016)</b>	68	624
<b>Ten-Year Average (2007 - 2016)</b>	131	432
<b>Overall Average (1996 - 2016)</b>	202	369

### *Subsistence*

People participate in postseason house-to-house salmon harvest surveys each year. Since 2014 they have answered questions concerning their harvests of Humpback Whitefish, Broad Whitefish, Ciscoes, Sheefish, Burbot, and Northern Pike as part of these surveys (see **Table 3**).

Subsistence harvest information is also collected through periodic comprehensive household harvest surveys. The primary purpose of comprehensive household harvest surveys is to document subsistence uses of wild resources. These studies focus on a one-year time period; however, they may not be the “typical” year. In fact, annual variation in subsistence patterns can be significant as subsistence harvesters respond, for example, to the availability of resources or environmental conditions that may

vary considerably from year to year. Additionally, some community harvest estimates from surveys are imprecise ranges. Only by observing large data sets can we begin to see trends.

Estimated harvest levels of Humpback Whitefish, Broad Whitefish, and Sheefish, are displayed in **Table 3, Table 4, Table 5, and Table 6**. These are the fishes that are available for harvest in June, and when harvested in June, are taken primarily with gillnets, which are the focus of this analysis.

**Table 3.** The estimated harvest of nonsalmon fishes for subsistence in lower (Eek to Tuntutuliak) and middle (Lower Kalskag to Chuathbaluk) Kuskokwim River drainage communities, based on annual postseason household surveys, 2014–2015 (Shelden et al. 2016a and 2016b).

Year	Location	Humpback whitefish harvest	Broad whitefish harvest	Cisco whitefish harvest	Sheefish harvest	Burbot harvest	Pike harvest
2014	Lower	40,403 ( $\pm$ 5,126)	15,701 ( $\pm$ 2,787)	7,165 ( $\pm$ 2,600)	4,390 ( $\pm$ 1,591)	21,529 ( $\pm$ 7,383)	38,072 ( $\pm$ 4,949)
	Middle	1,638 ( $\pm$ 426)	1,741 ( $\pm$ 355)	1,619 ( $\pm$ 699)	744 ( $\pm$ 221)	466 ( $\pm$ 250)	941 ( $\pm$ 437)
2015	Lower	26,618 ( $\pm$ 6,453)	19,437 ( $\pm$ 2,949)	8,495 ( $\pm$ 4,340)	3,279 ( $\pm$ 1,050)	17,114 ( $\pm$ 3,758)	62,845 ( $\pm$ 8,750)
	Middle	1,743 ( $\pm$ 1,064)	1,928 ( $\pm$ 1,884)	6,257 ( $\pm$ 8,799)	359 ( $\pm$ 86)	414 ( $\pm$ 218)	448 ( $\pm$ 210)

**Table 4.** The harvest of Humpback Whitefish by communities in the lower and middle (Eek to Chuathbaluk) Kuskokwim River drainage, based on household harvest surveys (ADF&G 2018a).

Community	Study year	Humpback Whitefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	7,233	5,588	8,878
Akiak	2010	7,089	981	13,197
Aniak	2009	919	762	1,413
Bethel	2012	10,427	10,423	10,430
Chuathbaluk	2009	78	65	113
Eek	2005	1,726	1,683	1,789
Eek	2013	674	672	675
Kalskag	2009	1,091	873	1,446
Kwethluk	2010	8,375	1,998	14,751
Lower Kalskag	2009	1,109	932	1,324
Napakiak	2011	2,591	2,581	2,601
Napaskiak	2011	7,269	7,188	7,350
Nunapitchuk	2005	3,373	4,157	4,157
Oscarville	2010	1,430	469	2,392
Tuluksak	2010	2,687	1,733	3,641
Tuntutuliak	2005	4,334	3,425	4,661
Tuntutuliak	2013	2,496	2,491	2,501

**Table 5.** The harvest of Broad Whitefish by communities in the lower and middle (Eek to Chuathbaluk) Kuskokwim River drainage, based on household harvest surveys (ADF&G 2018a).

Community	Study year	Broad Whitefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	4,168	3,145	5,191
Akiak	2010	1,232	722	1,742
Aniak	2009	599	497	755
Bethel	2012	5,633	5,631	5,635
Chuathbaluk	2009	125	104	187
Eek	2005	532	519	572
Eek	2013	333	332	334
Kalskag	2009	703	563	878
Kwethluk	2010	865	533	1,197
Lower Kalskag	2009	728	612	920
Napakiak	2011	1,799	1,791	1,806
Napaskiak	2011	1,505	1,493	1,517
Nunapitchuk	2005	2,321	3,026	3,026
Oscarville	2010	53	27	78
Tuluksak	2010	738	525	951
Tuntutuliak	2005	1,975	1,561	2,104
Tuntutuliak	2013	1,934	1,930	1,939

**Table 6.** The harvest of Sheefish by communities in the lower and middle (Eek to Chuathbaluk) Kuskokwim River drainage, based on household harvest surveys (ADF&G 2018a).

Community	Study year	Sheefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	205	149	262
Akiak	2010	2,036	734	3,337
Aniak	2001	701	544	859
Aniak	2009	667	553	892
Bethel	2012	1,854	1,853	1,854
Chuathbaluk	2001	187	129	245
Chuathbaluk	2009	119	99	142
Eek	2005	235	230	270
Eek	2013	37	36	37
Kwethluk	1986	2,119	2,119	2,119
Kwethluk	2010	253	123	384
Lower Kalskag	2009	242	203	304
Napakiak	2011	168	167	170
Napaskiak	2011	271	269	273
Nunapitchuk	1983	12	3	27
Nunapitchuk	2005	53	75	75
Oscarville	2010	36	7	65
Tuluksak	2010	271	207	334
Tuntutuliak	2005	372	294	432
Tuntutuliak	2013	356	353	357
Upper Kalskag	2009	453	363	626

### Chinook Salmon

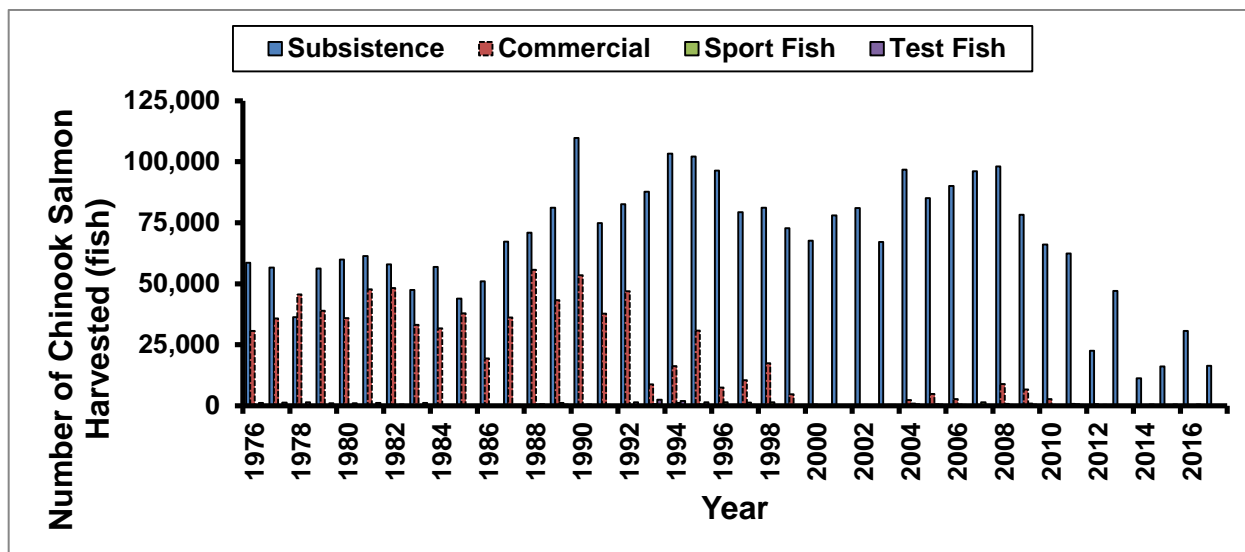
#### *Commercial*

The beginnings of the commercial salmon fishery on the Kuskokwim occurred in the 1800s (Brown 1983, Oswald 1990). The exportation of salmon commercially harvested from the Kuskokwim area has occurred since about 1935 (Pennoyer et al. 1965); however, the fishery did not stabilize until statehood. During the 1960s and 70s, commercial salmon fisheries management in the Kuskokwim area were considered experimental and were managed using adaptive fisheries management. The directed Chinook Salmon commercial fishery was formally closed in 1987 to insure subsistence needs were met, but incidental catch in the Chum and Sockeye Salmon fisheries was still allowed (Schindler et al. 2013). Incidental harvest of Chinook Salmon in the Chum and Sockeye fisheries is limited to 50,000 fish (Hamazaki et al. 2012).

Commercial Chinook Salmon harvest in the Kuskokwim River averaged 23,000 per year during the 1960s and peaked in the 1980s with an average annual harvest of around 39,000 fish. From the 1990s to present commercial harvest of Chinook Salmon has dropped drastically from a peak of around 53,000



fish in 1990 to 0 fish in 2017. The average harvest during this period was around 9,800 Chinook Salmon (Table 1, Figure 6, Liller and Smith 2018).



**Figure 6.** Number of Chinook Salmon harvested in the Kuskokwim River from 1976 to 2017 for Subsistence, Commercial, Sport Fish, and the Bethel Test Fishery (Liller and Smith 2018).

#### *Subsistence*

The Kuskokwim River Chinook Salmon subsistence fishery is the largest in Alaska. Before 1990, annual harvest surveys employed various non-standard, ad hoc methods that were not always comparable between years. In 1990, a formal statistical survey protocol was established (Walker and Coffing 1993, Simon et al. 2007). Since 2009, the harvest of Chinook Salmon has been restricted during most years. From 1990 to 2016, annual subsistence harvest averaged 73,303 fish, with a range of 67,596 fish in 2000 to 109,778 fish in 1990. Since 2009, the annual subsistence harvest has gone down, including the lowest annual harvest on record in 2014 of 11,234 fish (Table 1, Figure 6). The most recent five-year (2013–2017), ten-year (2008–2017), and 20-year (1998–2017) average annual subsistence harvest estimates for Chinook Salmon are: 24,305 fish, 44,883 fish, and 63,234 fish, respectively (Table 7, Liller and Smith 2018). The Chinook Salmon subsistence harvest for 2017 was 16,380 fish (Liller and Smith 2018). The majority of harvest occurs in the lower river, where the majority of the human population of the drainage resides (Table 8).

**Table 7.** Summary statistics (average, standard deviation, minimum, first quartile, median, third quartile, and maximum) of Chinook Salmon subsistence harvest on the Kuskokwim River by time periods (overall, five year, ten years, twenty years) in comparison to ANS range set by the Alaska Board of Fisheries in 2013.

<b>Chinook Salmon Harvest in Kuskokwim River Subsistence Fishery</b>							
<b>Time Period</b>	<b>Average</b>	<b>SD</b>	<b>Min</b>	<b>1st Quartile (25%)</b>	<b>Median (50%)</b>	<b>3rd Quartile (75%)</b>	<b>Max</b>
<b>Overall (1976-2017)</b>	68,052	23,319	11,234	56,432	67,620	83,872	109,778
<b>Five Year (2013-2017)</b>	24,305	14,675	11,234	13,679	16,380	38,895	47,113
<b>10 Year (2008-2017)</b>	44,883	30,141	11,234	16,316	38,895	69,100	98,103
<b>20 Year Average (1998-2017)</b>	63,234	28,959	11,234	34,785	70,198	84,121	98,103
<b>ANS (set in 2013)</b>	88,500	-	67,228	-	-	-	109,778

### **Cultural Knowledge and Traditional Practices**

Seventeen communities are situated in the lower (Eek to Tuluksak) and middle (Lower Kalskag to Chuathbaluk) Kuskokwim River drainage (Table 2). The majority self-recognize as belonging to the Kusquqvagmiut confederation of villages and Yup'ik cultural tradition (Oswalt 1980, Fienup-Riordan 1984). Most non-Natives living in the area reside in Bethel and Aniak, the regional hubs of Federal and State governments, transportation, trade, and services. The population of the area almost tripled in the 50 years between 1960 and 2010. In 1960, the U.S. Census Bureau estimated that 4,023 people lived in the area. In 2010, an estimated 12,133 people living in 3,482 households were described as permanent residents of these villages.

Springtime can be difficult for people waiting for salmon runs and “feeling the pinch of dwindling food supplies” (Brown et al. 2013:36). To compensate for low salmon stores in the spring, people rely more heavily on non-salmon fishes, especially whitefishes (cf. Andrews and Peterson 1983; Brown et al 2012, 2013; Coffing 1991; Coffing et al. 2001; Ikuta et al. 2013, 2014, 2016; Krauthoefer et al. 2007; Oswalt 1959; Ray et al. 2010). Humpback whitefish, Broad Whitefish, ciscoes, Pike, smelt, Burbot (locally called lush), Alaska Blackfish, char, Arctic Grayling, and Rainbow Trout are harvested for subsistence. People use traps, hook and line, gillnets, and dip nets to harvest these fishes. Levels of harvest varies from community to community and from year to year depending on availability of fishes and environmental conditions, for example if it is safe to jig through the ice. Dip nets are generally used in the mainstem to harvest smelts and some salmon. People use traps (taluyak) to harvest Blackfish and some Burbot. Many fishes are harvested with hook and line by jigging through the ice and by nets set under the ice. Gillnets are used year round and catch whitefishes, Sheefish, Pike, Burbot, char, Grayling and suckers. In some communities, whitefishes are taken primarily with gillnets from open water (Coffing et al. 1991:137). Many whitefish and Sheefish are harvested with gillnets in open water following spring breakup in the mainstem and tributaries. In late spring and summer, whitefishes, Sheefish, and Pike are incidentally caught in commercial and subsistence gillnets during salmon season and are preserved by drying and smoking along with salmon at summer fish camps and by freezing, and

are eaten either fresh, boiled, or baked. Other types of fishes taken incidentally in salmon nets are generally eaten fresh.

**Table 8.** The population of communities in the lower and middle Kuskokwim River drainage, based on U.S. Census Bureau estimates, 1960-2010, (blank cell=0 or not available, ADCCED 2014).

Community	1960	1970	1980	1990	2000	2010	2010 number of households
<b>Lower Kuskokwim River Drainage</b>							
Tuntutuliak	144	158	216	300	370	408	96
Eek	200	186	228	254	280	296	91
Napakiak	190		262	318	353	354	96
Napaskiak	154	259	244	328	390	405	94
Oscarville	51	41	56	57	61	70	15
Kasigluk	244		342	425	543	569	113
Nunapitchuk	327	526	299	378	466	496	124
Atmautluak			219	258	294	277	63
Bethel	1,258	2,416	3,576	4,674	5,471	6,080	1,896
Kwethluk	325	408	454	558	713	721	192
Akiachak	229	312	438	481	585	627	183
Akiak	187	171	198	285	309	346	90
Tuluksak	137	195	236	358	428	373	92
<b>Subtotal</b>	<b>3,446</b>	<b>4,672</b>	<b>6,768</b>	<b>8,674</b>	<b>10,263</b>	<b>11,022</b>	<b>3,145</b>
<b>Middle Kuskokwim River Drainage</b>							
Lower Kalskag	122	183	246	291	267	282	75
Kalskag	147	122	129	172	230	210	60
Aniak	308	205	341	540	572	501	166
Chuathbaluk		94	105	97	119	118	36
<b>Subtotal</b>	<b>577</b>	<b>604</b>	<b>821</b>	<b>1,100</b>	<b>1,188</b>	<b>1111</b>	<b>337</b>
<b>TOTAL</b>	<b>4,023</b>	<b>5,276</b>	<b>7,589</b>	<b>9,774</b>	<b>11,451</b>	<b>12,133</b>	<b>3,482</b>

In research conducted between 2009 and 2013, residents of lower Kuskokwim River drainage communities (Eek to Tuluksak) harvested high levels of non-salmon fishes, 23–46% of annual harvests of all wild resources in lbs. edible weight. Harvest levels in other resource categories (large land mammals, small land mammals, birds and eggs, marine invertebrates, and berries and plants) except salmon were considerably lower. Non-salmon fishes harvested by residents of communities in the lower river included Pike and whitefishes and smaller amounts of Blackfish, Burbot, and smelt. Some char, trout, and Grayling were reported in these harvests (ADF&G 2018a). Typically, communities in the middle Kuskokwim River drainage, from Lower Kalskag to Chuathbaluk, reported harvesting non-salmon fishes at a lower rate, 5–17% of annual wild food harvests, than lower river communities. The most common non-salmon fishes harvested in middle river communities were whitefishes. Other fish included smelt, Alaska Blackfish, and Arctic Grayling (ADF&G 2018a).

People in the area rely heavily on non-salmon fishes. In household surveys between 1983 and 2013, almost all households reported using non-salmon fishes and majorities reported harvesting them. They are widely shared within and between communities, and annual harvests rates of over 200 lbs. edible weight per person have been common (see **Table 9**).

**Table 9.** The harvest and use of non-salmon fishes by communities situated in the lower (Eek to Tuluksak) and middle (Lower Kalskag to Chuathbaluk) Kuskokwim River drainage, based on household harvest surveys (blank cell=question not asked; ADF&G 2018a).

Community	Study year	Households using non-salmon fishes	Households attempting to harvest non-salmon fishes	Households harvesting non-salmon fishes	Households giving away non-salmon fishes	Households receiving non-salmon fishes	Pounds harvested per person
Akiachak	1998	99%	96%	95%	70%	73%	248
Akiak	2010	83%	73%	71%	43%	46%	209
Aniak	2001	91%	74%	65%	25%	72%	37
Aniak	2009	70%	70%	51%	27%	46%	50
Bethel	2012	76%	55%	54%	37%	60%	31
Chuathbaluk	2001	85%	65%	65%	12%	38%	175
Chuathbaluk	2009	80%	80%	57%	27%	53%	20
Eek	2005	91%	87%	87%	50%	15%	550
Eek	2013	88%	72%	67%	55%	63%	61
Kalskag	2009	90%	90%	69%	52%	63%	48
Kwethluk	1986		87%	87%	64%	72%	269
Kwethluk	2010	88%	75%	75%	41%	61%	84
Lower Kalskag	2009	89%	89%	67%	33%	70%	32
Napakiak	2011	82%	64%	64%	46%	54%	151
Napaskiak	2011	88%	68%	66%	41%	63%	105
Nunapitchuk	1983			100%			365
Nunapitchuk	2005	65%	61%	65%	39%	30%	812
Oscarville	2010	100%	100%	100%	67%	75%	169
Tuluksak	2010	91%	81%	79%	49%	60%	87
Tuntutuliak	2013	97%	78%	76%	49%	76%	98

## Current Events

Proposals FP19-08, FP19-09, and FP19-10 request the Board to adopt into regulation actions that have been previously accomplished by special actions issued to manage the harvest of Chinook Salmon in Refuge waters since 2016. Proposals FP19-08 and FP19-09 deal with the timing of gillnet restrictions and how harvest opportunity will be managed during gillnet restrictions, while FP19-10 deals with what parts of Refuge waters remain open during gillnet restrictions. All of these requests deal with specifics about timing and manner of the fishery closures and harvest opportunities, and the location of harvest opportunities during closures. These are management topics that could benefit from a more coordinated and collaborative effort to develop permanent Federal regulations related to Chinook Salmon on the Kuskokwim River. Regardless of whether or not Proposal FP17-05 is approved, the adoption of any of these proposals would require the Federal in-season manager to continue to issue emergency special actions in order to adjust for in-season management in the absence of a comprehensive plan for Federal subsistence fisheries management.

## **Other Alternatives Considered**

If adopted, Proposal FP17-05 in combination with any of the other Kuskokwim area proposals submitted during this cycle (FP19-08, FP19-09, and FP19-10) would affect Federal subsistence management for the Kuskokwim Area. A potential alternative for consideration would be to defer all of the Kuskokwim area proposals (FP17-05, FP19-08, FP19-09, and FP19-10) and direct OSM staff to facilitate the development of a collaborative Federal subsistence management plan that would outline strategies for management of Federal subsistence fisheries in the Kuskokwim Area. The approaches suggested in the current fisheries regulatory proposals for the Kuskokwim Area are valid approaches to fisheries management. However, it may be more effective to develop a full suite of permanent regulations through coordinated efforts with the parties identified in the Kuskokwim Area delegation of authority letter. This potential alternative would provide a mechanism to allow a larger group involving all entities the time to submit a comprehensive proposal or recommended plan that would become a Federal subsistence fisheries management plan for the Kuskokwim area.

## **Effects of the Proposal**

If the proposal were adopted, the use of six-inch or less mesh size gillnets will not be restricted before June 1 in Federal public waters of the Kuskokwim River drainage. Current Federal regulations for the Kuskokwim area state that Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issue for the subsistence taking of fish under ADF&G emergency orders issued, unless superseded by Federal Special Action. This proposed regulation would supersede any State emergency orders that restricts six-inch or less gillnets in Federal public waters of the Kuskokwim River drainage before June 1. As such, current State regulation and recent State management actions regarding the closure of the Chinook Salmon subsistence fishery before June 11 via implementation of a gillnet restriction would not apply to Federally qualified subsistence users until June 1.

The Federal in-season manager for the Kuskokwim area or the Federal Subsistence Board could still issue Federal special actions to restrict the use of six-inch or less mesh size gillnets before June 1 if pre-season data suggests conservation of healthy populations concerns, continuation of subsistence uses concerns, population viability issues, or for public safety.

If adopted, it is unknown what biological effects the proposed changes will have on whitefish and other non-salmon species. However, more whitefish would likely be harvested in the Kuskokwim River by Federally qualified subsistence users because this new regulation would supersede any front-end gillnet closure implemented by the State before June 1.

If adopted, the effect on Chinook Salmon conservation may differ depending on run-timing and area. Chinook Salmon are widely known to be migrating into the mouth of the Kuskokwim River by the end of May through early June. Given this, and the data on run timing from the Bethel Test Fishery, fishing below the Johnson River before June 1 would result in some Chinook Salmon harvest, while fishing above Bethel would not likely result in any Chinook Salmon harvest. There would be more harvest on years with early run timing and less harvest on years with late run timing. Those Chinook Salmon harvested prior to June 1 would likely be headed for spawning locations in the headwaters. Depending

on harvest totals, this could negatively affect headwater stocks. Alternatively, early harvest may provide some relief to lower- and middle-river stocks by spreading take over the entire run.

If adopted, the proposed changes will provide more traditional, early fishing opportunities for non-salmon species than are currently provided under recent State actions. Federally qualified users above Bethel would likely see more benefit than users below Bethel in terms of non-salmon fishing. Federally qualified subsistence users below/around Bethel would likely have opportunity for more traditional salmon fishing.

If adopted, the proposed changes would provide some clarity to the in-season manager on when gillnet restrictions can take place in absence of any in-season information or uncertain pre-season information. Closures to non-Federally qualified users for Chinook Salmon would be situated around June 1 because Federally qualified subsistence users would be unaffected by current State regulation that requires Chinook Salmon subsistence fishery to close before June 11.

If the proposed changes are not adopted, Federal subsistence fishing schedules, openings, closings, and fishing methods would be the same as those issued for the subsistence taking of fish under ADF&G emergency orders issued, unless superseded by Federal Special Action. The Federal in-season manager for the Kuskokwim area would still retain emergency order authority through the delegation of authority letter authorized by the Board.

## **OSM CONCLUSION**

**Support** Proposal FP19-09.

### **Justification**

Since 2013, the Chinook Salmon subsistence fishery has been restricted in some manner before June 1 by either Federal and/or State management agencies. Since 2016, restrictions before June 1 have become ingrained in management of the Kuskokwim River due to State of Alaska regulations that require the closing of the Chinook Salmon fisheries in the Kuskokwim River drainage before June 12. These closures have been implemented through a complete restriction of subsistence fishing with gillnets, which have occurred within Refuge waters from 2016 – 2018 before June 1, between May 20 and May 30. During this closure, limited opportunities have been provided to target non-salmon species with four-inch or less mesh size set gillnets.

Although the intent of the early season closures are to protect the front-end of the Chinook Salmon run (known to return to the upper Kuskokwim River drainage) in order to equitably distribute Chinook Salmon harvest to the middle and upper communities within the drainage, the initial timing of the closures have severely limited gillnet opportunities for nonsalmon species, such as whitefish and Sheefish, by Federally qualified subsistence users. Limited opportunities have been provided by the State since 2017, but have only consisted of one opportunity a week with four-inch or less mesh set gillnets.

Supporting this proposal would provide a clear priority to Federally qualified subsistence users prior to June 1 given State regulations require ADF&G to close the Chinook Salmon subsistence fishery before June 11, which is implemented via a complete restriction to gillnets that occurs within Federal public waters of the Refuge generally before June 1. Federally qualified subsistence users would be allowed to harvest fish with six-inch or less mesh gillnets before June 1, which has not been allowed since the new State regulation was put into place in 2016. However, the Federal in-season manager for the Kuskokwim area, as well as the Board, could still restrict the use of six-inch or less mesh gillnets through Federal special action if pre-season data suggests conservation of healthy population concerns, population viability issues, or for public safety. Because of this, the proposed regulation provides a priority for Federally qualified subsistence users, while still allowing management flexibility during the in-season process.

The date of June 1 in the proposed regulation will provide additional opportunities for Federal qualified subsistence users, especially for Federally qualified subsistence users above the Bethel area. Long-term data collected at the Bethel Test Fishery suggests that Chinook Salmon are unlikely to be in that portion of the river in large numbers before June 1. On the other hand, the Bethel Test Fishery data, as well as telemetry data, suggests that Chinook Salmon are present in some magnitude below the Bethel area by June 1. Federally qualified users residing in the area near or below Bethel would have greater opportunity to harvest Chinook Salmon migrating from the lower portions of the Kuskokwim River drainage, in addition to targeted non-salmon species. However, during conservation concerns for Chinook Salmon, the Federal in-season manager can still mitigate the risk of Chinook Salmon harvest by issuing an emergency Federal special action restricting the use of six-inch or less mesh gillnets if initial data suggests too much Chinook Salmon harvest is occurring in these portions of the Kuskokwim River before June 1. This proposed regulation would help clarify and guide management, as well as subsistence users as to the date in which stakeholders could reasonably expect to see restrictions to subsistence fishing with gillnets.

Ultimately, this proposal would help continue traditional subsistence uses for non-salmon species such as whitefish and Sheefish in the lower parts of the river, while also benefitting the users located above Bethel by providing users more time to fish for larger whitefish and Sheefish than what has otherwise been provided through more recent State regulatory actions. This would also help continue traditional subsistence uses for Chinook Salmon in the lower river by providing a chance for subsistence users in that area to fish for Chinook Salmon that might be in the lower river before June 1, as well as providing a chance for subsistence users in that area to fish for larger whitefish and Sheefish. If conservation concerns continue into the future, the Federal in-season manager would still retain the authority to restrict six-inch or less mesh gillnet usage.

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## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**

**Support** FP19-09. The Council discussed support for the opportunity to harvest Sheefish and other larger whitefish right at ice out as a very important source of fresh fish after subsistence foods put away for the winter have run low. The Council discussed local knowledge observations that indicate there are no or very few Chinook Salmon in the river prior to June 1<sup>st</sup> and thus this proposal should not impact Chinook conservation. Sheefish are large and Council members noted that larger mesh nets such as 6-inch mesh is needed to catch them. They stressed that 4-inch whitefish nets are not effective for Sheefish and in recent years with 6-inch mesh restrictions people have not been able to catch that early run of Sheefish that is a very important source of fresh fish first thing in the spring. It was also noted that Sheefish are preferred by some Elders and can be dried or half-dried and put up for the year similar to salmon. Council members also noted that 5 1/2 inch mesh may also catch Burbot and large Pike and it is all good fresh food first thing in the spring right after break-up.

### **Western Interior Alaska Subsistence Regional Advisory Council**

**Oppose** FP19-09. While the Council was sympathetic to the Yukon Kuskokwim Delta Subsistence Regional Advisory Council's desire to catch fresh sheefish early in the season, it recognized that using 6" mesh is counterproductive to Chinook Salmon conservation. The Council agreed with the position of member Ray Collins, longtime designee for the Council's representation on Kuskokwim fisheries issues, that there needs to be as much protection as possible for the first run of Chinook Salmon on the river. Intertribal leaders and managers can adjust when needed to allow for sheefish harvest without interfering with the Chinook Salmon run. The Council also opposed this proposal because it believes the current management regime is working

## **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee supports Fisheries Proposal FP19-09. This proposal would increase the opportunity for harvest of important subsistence species during a period that likely will have little or no impact on Chinook Salmon conservation, depending on run timing. The proposal would provide a clear priority to Federally qualified subsistence users prior to June 1 to harvest non-salmon and salmon species using 6-inch mesh gillnets. Long-term data from the Bethel Test Fishery indicates that few Chinook Salmon are likely to be in the lower portion of the Kuskokwim River before June 1. In 2018, as supported by the Federal in season manager and many stakeholders, all users were restricted under State regulations to the use of 4-inch set nets for one day between May 25 to June 1. The 2018 restrictions reduced the ability for users to effectively harvest non-salmon species like large sheefish and whitefish. The proposed regulation would provide assurance to Federally qualified subsistence users that use of 6 inch or less mesh gillnets could be used to harvest customarily and traditionally important fish species until June 1 of each year. The Federal in-season manager or the Federal Subsistence Board would still have the ability to issue Federal special actions to restrict the use of six-inch or less mesh size

gillnets before June 1 if pre-season data suggests conservation concerns related to maintaining healthy populations of Chinook Salmon, continuation of subsistence uses concerns, population viability issues, or for public safety.

Adopting this proposal as Federal regulation may result in regulatory differences between State and Federal regulations that could cause confusion for some users. Chinook Salmon harvest should be monitored prior to June 1 to validate the assumption that harvest of Chinook Salmon would be minimal, to incorporate harvest information into future in-season decisions, and to identify if a closure may be warranted prior to June 1. Adopting this proposal may also result in increased discussions between upper and lower river subsistence users.

Chinook Salmon remain a species of conservation concern and restricted harvest of the species will likely continue in 2019 and beyond. Adoption of this regulation will not affect the ability of the local in-season management stakeholder group to continue meeting to identify and recommend in-season management actions.

### **ALASKA DEPARTMENT OF FISH AND GAME COMMENTS**

**Introduction:** Since 2010, the Kuskokwim River has experienced poor Chinook salmon runs. Total run estimates for Kuskokwim River Chinook salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved. In 2014 and 2015, the subsistence fishery was closed at the beginning of the Chinook salmon run by Emergency Order in anticipation of low runs. Specific management actions were taken to close the subsistence and sport Chinook salmon fisheries with the intent of reducing Chinook salmon harvest to a level that would allow for achievement of escapement goals. Due to these management actions, the drainagewide escapement goal has been met since 2014 and the majority of tributary escapement goals have been achieved in recent years. Additionally, USFWS enacted special actions to limit the harvest of Chinook salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the Alaska Board of Fisheries in 2013 found the following amount of Chinook salmon is reasonably necessary for subsistence uses, range 67,200–109,800 fish. The subsistence harvest of Chinook salmon has fallen below the lower end of this range since 2011 in an effort to achieve escapement goals.

The Kuskokwim Subsistence Salmon Panel was established at the Alaska Board of Fisheries (BOF) work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel was composed of Board of Fisheries members as well as a broad cross-section of Kuskokwim River residents with longstanding traditional ecological knowledge. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the BOF. Subsequently, in January 2016, the BOF met in Fairbanks to consider proposals concerning the Arctic-Yukon-Kuskokwim areas. An early season Chinook salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group

of Kuskokwim River residents who were in attendance. The BOF adopted a regulation that would annually suspend directed subsistence fishing for Chinook salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equability of harvest opportunity. This “front end closure” also conserves fish for escapement purposes. In 2017, the BOF provided the department additional guidance about fishing for non-salmon fish during the closure and provided at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the closure. The board’s intent was to allow subsistence fishers the opportunity to harvest species other than salmon (e.g., sheefish, whitefish, burbot, and northern pike) during the regulatory front end closure.

Since the introduction of the front end closure in 2016, the Chinook salmon subsistence fishery has been closed beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species, at a time when there were little to no salmon present that early in the season. After the June 11 end date of the early season closure, the fishery is managed by emergency order authority (state waters upstream of Aniak) and Federal Special Actions (federal water down stream of Aniak), with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) and based on in-season run indicators.

**Impact on Subsistence Users:** If this proposal were adopted, people fishing in the lower river would have some additional opportunity. There is potential for fish headed to the upper river to be harvested down river. In 2016 and 2017, for example, subsistence users would have had 12 days of additional opportunity. In 2018, subsistence users would have had 7 days of additional opportunity. Additional harvest of Chinook salmon in the lower river may impact abundance in the upper river.

**Impact on Other Users:** If adopted, this would not have a significant impact on other users.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for all finfish in the Kuskokwim Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has made the following salmon ANS findings for the Kuskokwim River drainage:

67,200–109,800 king salmon

41,200–116,400 chum salmon

32,200–58,700 sockeye salmon

27,400–57,600 coho salmon

500–2,000 pink salmon

**5 AAC 01.270. Lawful gear and gear specifications and operation.**

(n) Notwithstanding (b) and (j) of this section, during times when the commissioner determines that it is necessary for the conservation of king salmon, the commissioner, by emergency order, may close the fishing season in any portion of the Kuskokwim Area and immediately reopen the season in that portion during which one or more of the following gear limitations may be implemented:

(1) for gillnets;

(A) a gillnet mesh size may not exceed six inches;

(B) a gillnet mesh size may not exceed four inches and the gillnet may only be operated as a set gillnet; no part of a set gillnet may be more than 100 feet from the ordinary high water mark;

(C) a gillnet may not exceed the length specified by the commissioner in the emergency order, except that a longer gillnet may be used if no more than the specified length of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;

**5 AAC 07.365. Kuskokwim River Salmon Management Plan**

(a) The purpose of this management plan is to provide guidelines for management of the Kuskokwim River salmon fisheries that result in the sustained yield of salmon stocks large enough to meet escapement goals, amounts reasonably necessary for subsistence uses, and for nonsubsistence fisheries. The department shall use the best available data, including pre-season and in-season run projections, test fishing indices, age and sex composition, harvest reports, passage escapement estimates, and recognized uncertainty, to assess run abundance for the purpose of implementing this plan.

(b) It is the intent of the Board of Fisheries that the Kuskokwim River salmon stocks shall be managed in a conservative manner consistent with the Policy for the Management of Sustainable Salmon Fisheries under 5 AAC 39.222 to meet escapement goals and the subsistence priority.

(c) In the king salmon fishery,

(1) when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries;

(2) when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, to the extent practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs;

(B) after June 11, fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(2)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high-water mark;

(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range,

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, the directed subsistence king salmon fishery will be open seven days per week; and

(B) after June 11, the commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(3)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high-water mark;

Special instructions: *none*.

**Conservation Issues:** Since 2011 the Kuskokwim River has experienced poor Chinook salmon runs. This proposal may lead to additional harvest of Chinook salmon.



**Enforcement Issues:** The department does not foresee any enforcement issues if this proposal were adopted.

**Recommendation:** ADF&G is **NEUTRAL** on this proposal. The Board of Fisheries adopted the front-end closure after hearing directly from users of the Kuskokwim Area at various meetings about how to have more equitable harvest throughout the drainage.

If passed, this proposal would allow subsistence fishing with gillnets to occur until June 1, with the only restriction being a 6-inch or less mesh gillnet. The department, as well as the Federal Inseason Manager, already has the authority within current regulatory structure to determine the beginning date of the front-end closure. Maintaining flexibility with the start date of the front-end closure would be beneficial if total run sizes of Kuskokwim River Chinook salmon increase or drop below current levels. However, in most circumstances the number of Chinook salmon present prior to June 1 is small and any harvest that occurs would not greatly impact overall escapement.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 110, 113, 114, 115, 116, and 117 are especially relevant to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

**APPENDIX 1**

**FEDERAL SPECIAL ACTIONS AND STATE EMERGENCY ORDERS 2014–2017**

**Appendix Table 1-1.** Federal special actions, Kuskokwim River drainage, 2014.

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-14	May 20–July 18, 2014	Federal public waters of the Kuskokwim drainage are closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-02-14	May 20–July 14, 2014	Mouth upriver to Tuluksak is closed to the harvest of Chinook salmon by all users.
SA 3-KS-03-14	May 27–July 18, 2014	Tuluksak upriver to Refuge boundary at Aniak is closed to the harvest of Chinook salmon by all users
SA 3-KS-04-14	June 11–June 30, 2014	Federal public waters of the Kuskokwim drainage are closed to the harvest of Chinook salmon except by residents of communities issued Social and Cultural Permits fishing with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep.
SA 3-KS-05-14 (see EO 3-S-WR-07-14)	June 20, 2014	Mouth upriver to Tuluksak is closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek fishing with gillnets 6-inches or less mesh size not exceeding 50-fathoms long and 45-meshes deep, for 4 hours.
SA 3-KS-06-14	June 20–July 14, 2014	Below the southern tip of Eek Island is closed to the harvest of Chinook salmon except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek fishing with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep.
SA 3-KS-07-14	June 24–July 14, 2014	For the Kuskokwim area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060). Two Special Actions remain in effect, 3-KS-01-14 and 3-KS-04-14, unless superseded by a Federal Special Action.

**SALMON MANAGEMENT IN 2014**

**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014.

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
Board of Fisheries (3/17/14)	Emergency regulation that was adopted into permanent regulations	Dip nets are legal gear for harvesting salmon other than Chinook salmon during times of Chinook salmon conservation. A dip net is a bag-shaped net supported on all sides by a rigid frame; the maximum distance between any two points on the net frame may not exceed 5 feet; the bag of the frame must be at least one-half the distance of the maximum frame opening; the webbing of the net may not exceed 4.5-inches stretch mesh.
Board of Fisheries (3/17/14)	Emergency regulation that was adopted into permanent regulations	Only gillnets less than 25 fathoms are legal gear during times of Chinook salmon conservation. Gillnets may be over 25-fathoms in total length, but must be tied and/or bagged in such a way that only 25-fathoms can be used to fish.
EO 3-KS-01-14 Sport fishing	May 1, 2014	All waters of the Kuskokwim–Goodnews Area are closed to sport fishing for Chinook salmon. Only one unbaited, single-hook, artificial lure may be used. All Chinook salmon caught unintentionally in the Kuskokwim-Goodnews Area while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-WR-01-14	June 1, 2014	Aniak River upriver to Holitna River, fishing for Chinook salmon is closed. Fishing for non-salmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep.
	June 4, 2014	Holitna River upriver to headwaters, fishing for Chinook salmon is closed. Fishing for non-salmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep.
EO 3-S-WR-02-14	June 1, 2014	Marine waters near the Kuskokwim River mouth (Ishkowik River to the northern boundary of District W-4 at Weelung Creek) are closed to salmon fishing.
EO 3-S-WR-03-14	June 3, 2014	Naskonat Peninsula to Ishkowik River (coastal waters including Nelson Island), fishing for salmon is restricted to gillnets with 6-inch or less mesh size.
	June 10, 2014	Aniak River upriver to Holitna River, fishing for Chinook salmon with a hook and line attached to a rod or pole is closed.

*Continued on next page.*

**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

<b>2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-05-14	June 14–30, 2014	Mouth to Tuluksak, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any king salmon caught in a dip net must be returned immediately to the water unharmed.
	June 17–30, 2014	Tuluksak to Refuge boundary at Aniak, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any king salmon caught in a dip net must be returned immediately to the water unharmed. This section does not include the slough (locally known as Utak Slough) on the northwest side of the Kuskokwim River adjacent to the Tuluksak River mouth.
EO 3-S-WR-06-14	June 19, 2014 until further notice	Aniak River to headwaters, fishing with dip nets will be allowed for 12 hours daily, from 9:00 a.m. to 9:00 p.m. Any Chinook salmon caught in a dip net must be returned immediately to the water unharmed.
	June 19, 2014 until further notice	Aniak River to headwaters, fishing with fish wheels will be allowed. Fish wheels are required to have a live box with no less than 45 cubic feet of water, must be checked at least every 6 hours, and all Chinook salmon must be returned to the water alive.
EO 3-S-WR-07-14 (see SA 3KS-05-14 and 3-KS-06-14)	June 20, 2014	Johnson River downriver to southern tip of Eek Island, fishing for chum and sockeye salmon is allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, for 4 hours.
	June 20, 2014	Marine waters near the Kuskokwim River mouth (Ishkowiik River to the northern boundary of District W-4 at Weelung Creek), fishing for chum and sockeye salmon is allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, until further notice.
EO 3-S-WR-08-14	June 24, 2014 until further notice	Johnson River downriver to southern tip of Eek Island, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long and 45-meshes deep, until further notice from 8:00 a.m. until 4:00 p.m.
	June 24, 2014	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 25-fathoms long and 45-meshes deep from 10:00 a.m. until 2:00 p.m. (4 hours). This section includes the slough (locally known as Utak Slough) on the northwest side of the Kuskokwim River adjacent to the Tuluksak River mouth.

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**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

2014 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING		
State Emergency Orders	Effective Date	Action
EO 3-S-WR-09-14	June 24, 2014 until further notice	Aniak River downriver to southern tip of Eek Island, fishing will remain open to gillnets with 4-inch or less mesh size not exceeding 60-feet long and 45 meshes deep. Fishing for Chinook salmon with a hook and line attached to a rod or pole will remain closed until further notice [already closed].
EO 3-S-WR-10-14	June 27, 2014 until further notice	Johnson River to southern tip of Eek Island, fishing for chum and sockeye salmon will be allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long.
	June 27, 2014	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathom long from 10:00 a.m. until 6:00 p.m. (8 hours).
	June 27, 2014	Tuluksak upriver to Chuathbaluk, fishing for chum and sockeye salmon will be allowed with gillnets 6-inch or less mesh size not exceeding 50-fathoms long from 10:00 a.m. until 6:00 p.m. (8 hours).
EO 3-S-WR-11-14	June 30, 2014 until further notice.	Tuluksak downriver to Johnson River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	June 30, 2014 until further notice.	Tuluksak upriver to Chuathbaluk, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	June 30, 2014	Chuathbaluk upriver to Holitna River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long from 10:00 a.m. to 6:00 p.m.
EO 3-S-WR-12-14	June 30–July 12, 2014	Mouth upriver to Chuathbaluk, fishing with dip nets will be allowed, 24 hours per day, from 9:00 p.m. Monday, until 9:00 p.m. Saturday. Any king salmon caught in a dip net must be returned immediately to the water unharmed.
EO 3-S-WR-13-14	July 1, 2014 until further notice	Naskonat Peninsula to Ishkowiik River (coastal waters including Nelson Island), fishing with gillnets with unrestricted mesh size will be allowed.

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**Appendix Table 1-2.** State emergency orders, Kuskokwim River drainage, 2014 (*continued from previous page*).

<b>2014</b>		
<b>KUSKOKWIM RIVER DRAINAGE</b>		
<b>SUBSISTENCE FISHING</b>		
<b>State Emergency Orders</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-14-14	July 3, 2014 until further notice	Chuathbaluk upriver to Holitna River, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	July 3, 2014 until further notice	Holitna River upriver to headwaters, fishing for chum and sockeye salmon will be allowed with gillnets with 6-inch or less mesh size not exceeding 50-fathoms long.
	July 3, 2014 until further notice	Chinook salmon fishing with hook and line gear with a daily bag limit of 3 and no possession, season, or size limits will be allowed.

**SALMON MANAGEMENT IN 2015**

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015.

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE–SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-15	May 21–July 20, 2015	All waters within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-02-15	May 21–28, 2015	The mouth of the Kuskokwim River upriver to Tuluksak and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon by all users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, and Tuluksak rivers and their salmon tributaries. Gillnets must be set and are restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, only 72 hours/week, 6:00 am Thur.–6:00 am Sunday.
SA 3-KS-03-15	May 28–July 20, 2015	The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon by all users (Appendix Figure C-1).
SA 3-KS-04-15	June 7–July 20, 2015	Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers and their salmon tributaries within and adjacent to the boundaries of the Refuge are closed to the use of gillnets by all users (Appendix Figure C-2). Nonsalmon tributaries are Birch Creek, Akulikutak River, Columbia Creek, and Reindeer Slough 100-yards upstream from their confluences with salmon tributaries.
SA 3-KS-05-15 supersedes SA 3-KS-03-15	June 5–July 20, 2015	All waters within and adjacent to the Refuge boundary are closed to the harvest of all fish except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek. The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon by all users. Gillnets must be set and are restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, only 72 hours per week, 6:00 am Thur.–6:00 am Sunday (Appendix Figure C-2).

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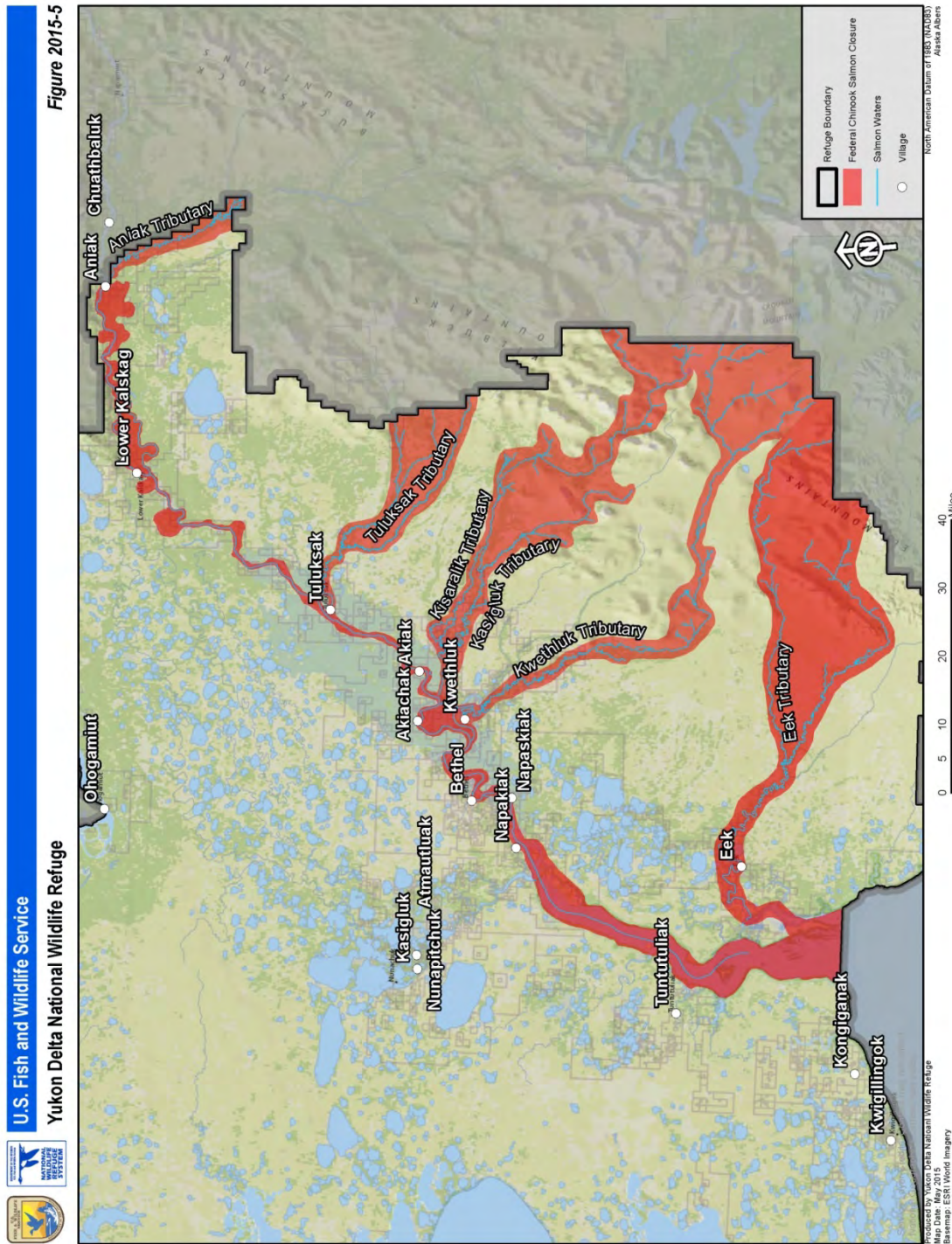
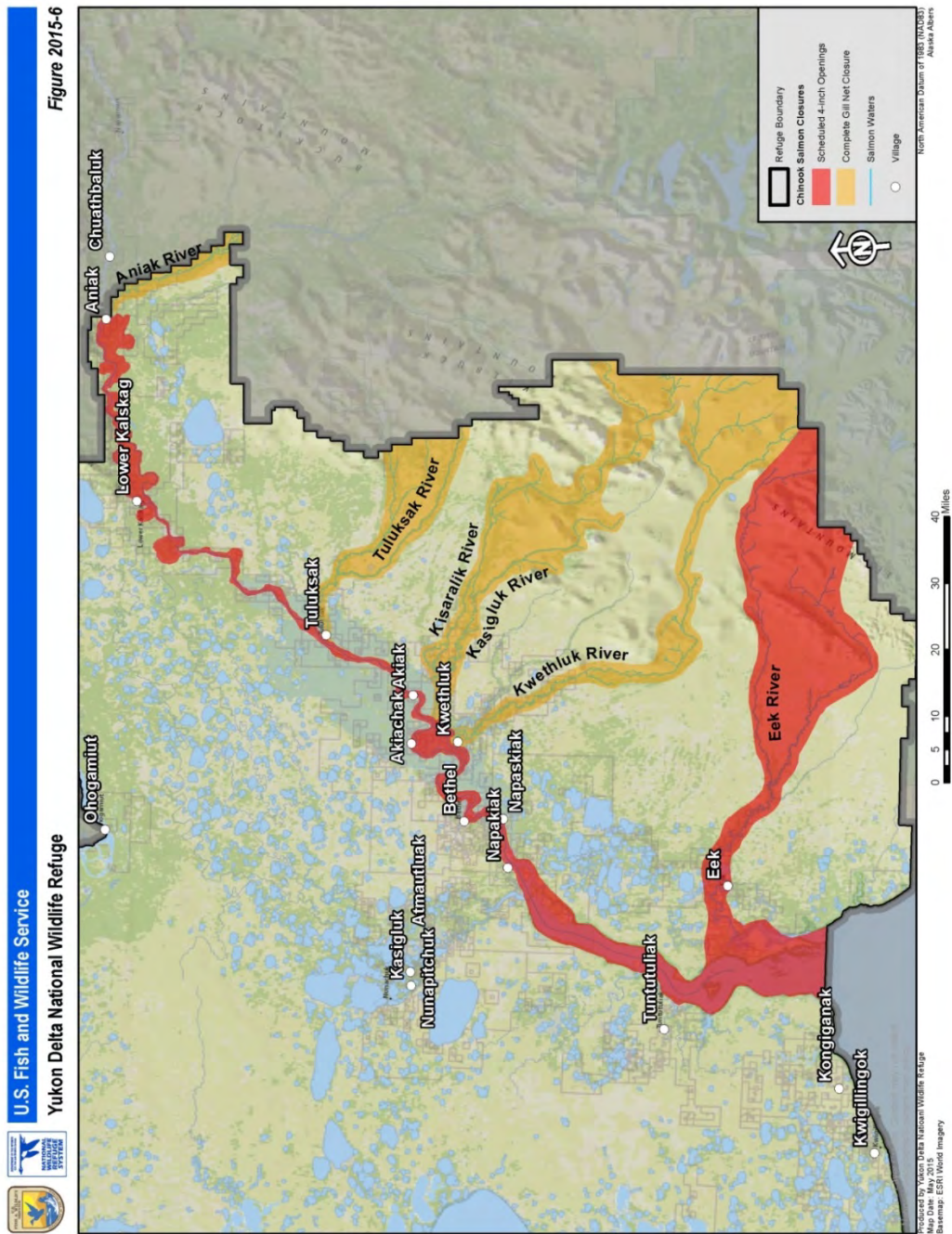


Figure 2015-5

**Appendix Figure 1-1.** Federal Special Action SA 3-KS-03-15 closure to the harvest of Chinook Salmon by all users.

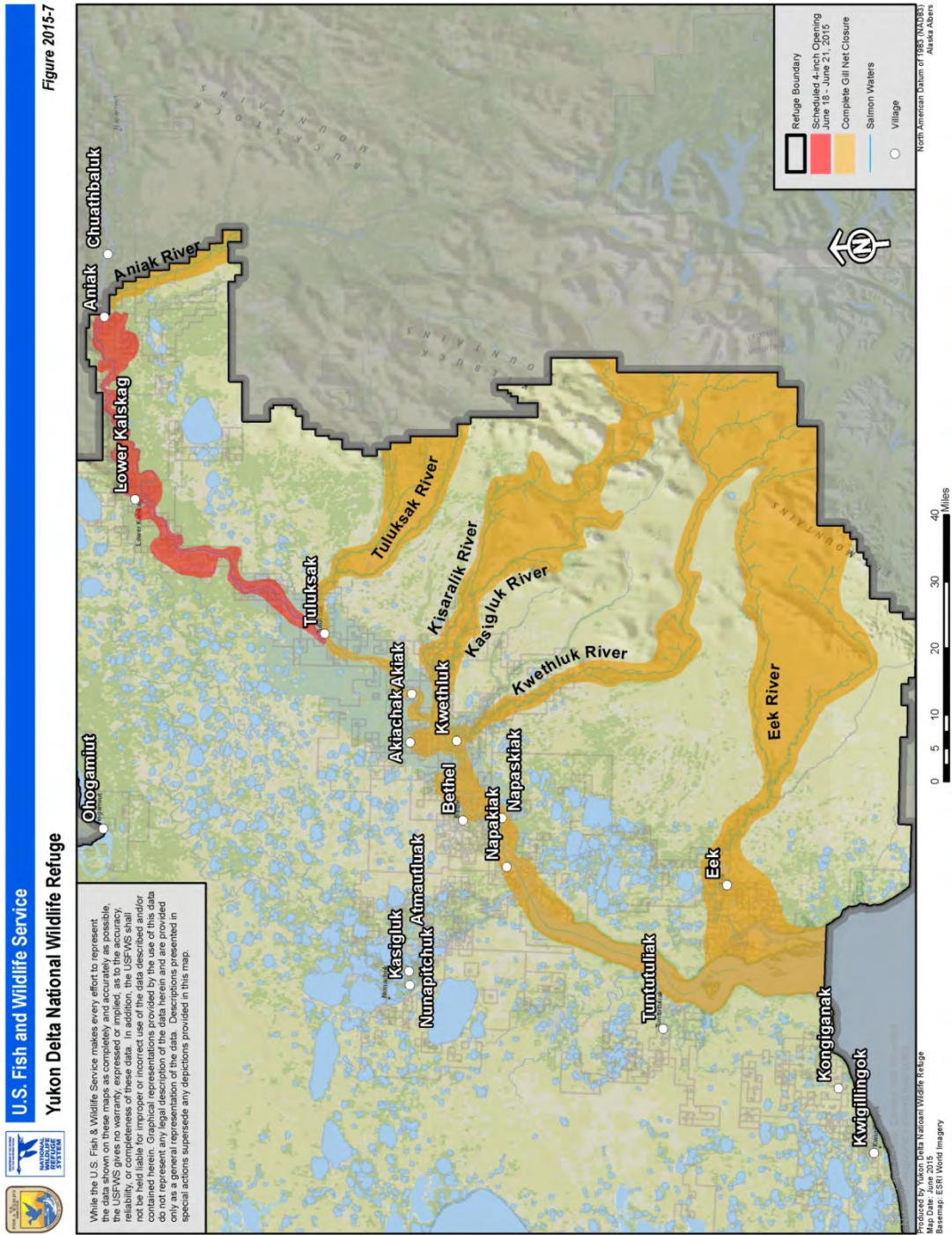


**Appendix Figure 1-2.** Federal Special Actions SA 3-KS-04-15 (closure to gillnets) and SA 3-KS-05-15 (scheduled openings to 4-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE—SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-06-15	June 10–30, 2015	Unless superseded by subsequent Special Action, waters within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon except by Federally qualified subsistence users in possession of a Federal Community Harvest Permit. Dates and harvest limits will be described on each permit. Chinook Salmon may be targeted using dip-nets, beach seines, fish wheels, and gillnets. Gillnets are restricted to 6-inch or less mesh, not exceeding 300-feet long, and 45-meshes deep, and shall be drift net only. Chinook Salmon fishing is only permitted in the Kuskokwim River, the Eek River, and salmon tributaries of the Eek River. This permit is not valid on the Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers and their salmon tributaries.
SA 3-KS-07-15 Supersedes SA 3-KS-05-15	June 18–July 20, 2015	Waters within and adjacent to the Refuge boundary are closed to the harvest of all fish except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek. The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon by all users. The Kuskokwim River and its salmon tributaries downstream of Tuluksak within and adjacent to the boundaries of the Refuge are closed to the use of gillnets by all users (Appendix Figure 1-3). The closure does not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15).
SA 3-KS-08-15	June 18–21, 2015	Federal public waters of the Kuskokwim River drainage upriver from the Tuluksak River are closed to the harvest of nonsalmon fishes except by Federally qualified subsistence users using 4-inch or less mesh set gillnets not exceeding 60-feet long and 45-meshes deep, only 72 hours per week, 6:00 am Thur.–6:00 am Sunday (Appendix Figure 1-3).

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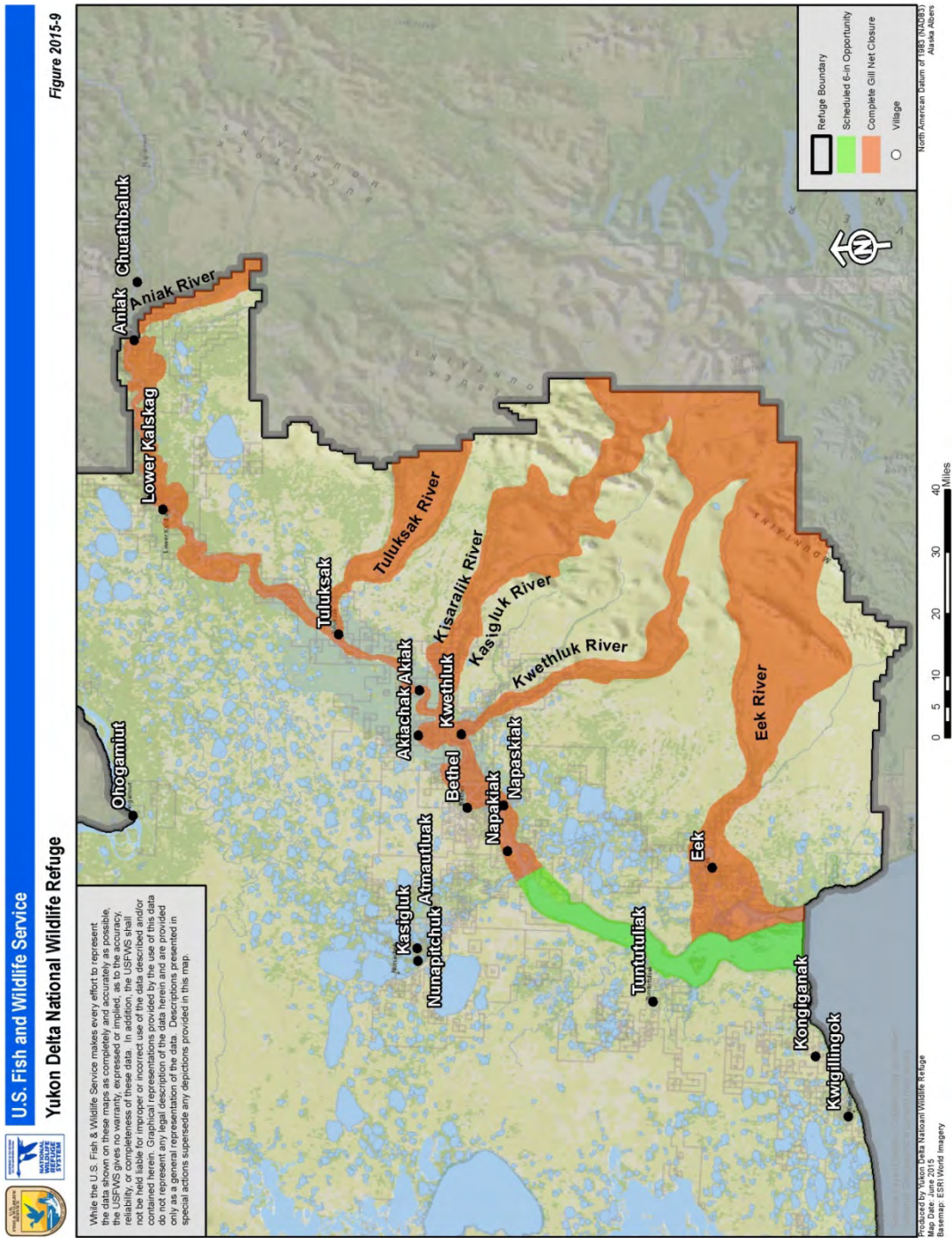


**Appendix Figure 1-3.** Federal Special Actions SA 3-KS-07-15 (closure to gillnets) and SA 3-KS-08-15 (scheduled opening to 4-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE—SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-09-15 Supersedes SA 3-KS-08-15	June 22–July 20, 2015	<p>Waters within and adjacent to the Refuge boundary are closed to the harvest of all fish except by residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>The closure does not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15).</p> <p>Waters within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon except by Federally qualified subsistence users on Monday June 22, 4:00 pm–8:00 pm.</p> <p>Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used. Fishing is only permitted in the Kuskokwim River below the mouth of the Johnson River, excluding the Eek River and its salmon tributaries, within and adjacent to the Refuge boundary (Appendix Figure 1-4).</p> <p>Except for users with a Federal Community Harvest Permit or participating in a temporary opening, all gillnets are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>Subsistence fishing in the Kuskokwim River and its salmon tributaries by Federally qualified subsistence users is open with all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>

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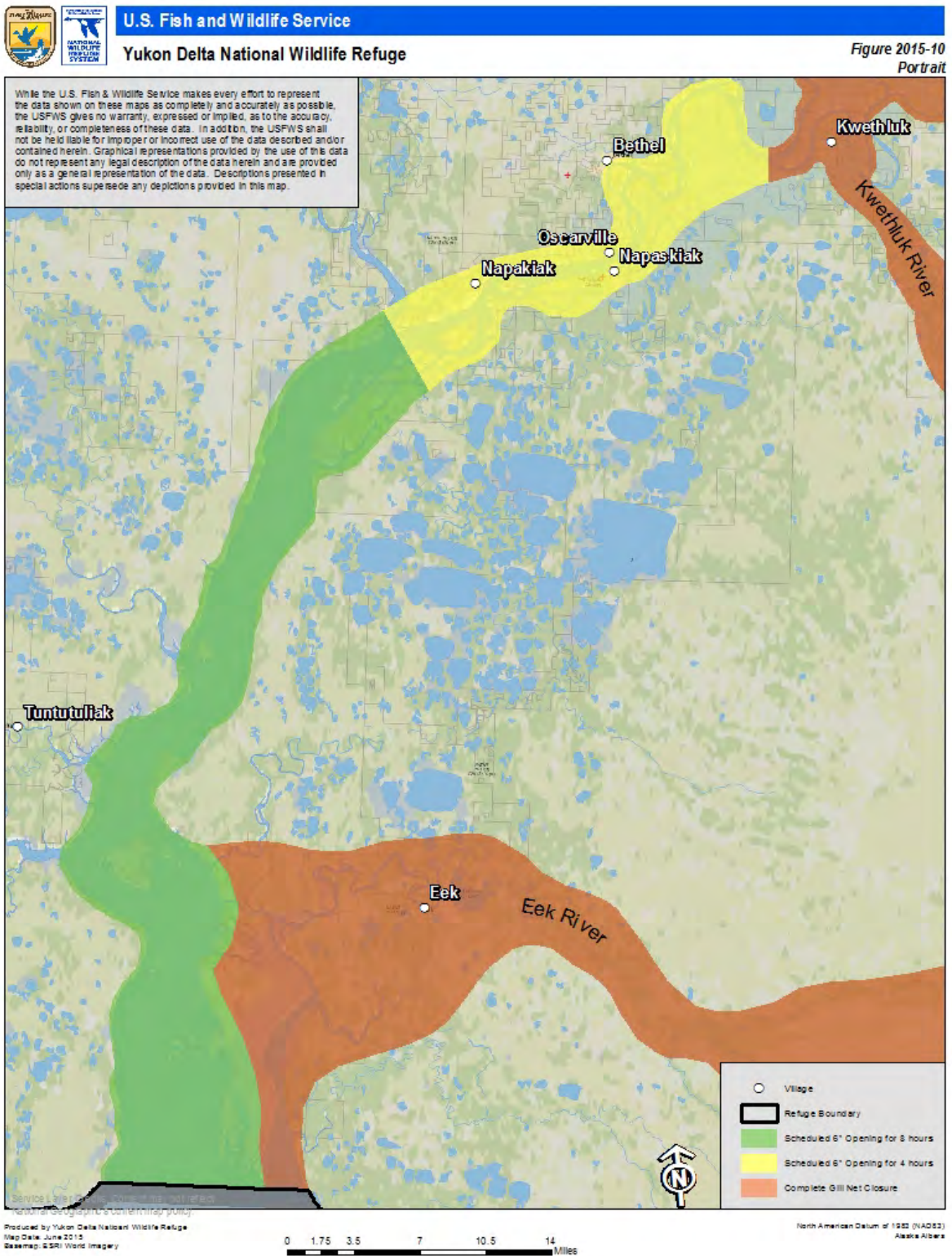


**Appendix Figure 1-4.** Federal Special Actions SA 3-KS-09-15 (scheduled opening to 6-inch mesh nets).

**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE—SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-10-15 Supersedes SA 3-KS-09-15	June 26–July 20, 2015	<p>Waters within and adjacent to the Refuge boundary are closed to the harvest of all fish except by residents of the Kuskokwim drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon except:</p> <p style="padding-left: 40px;">The Kuskokwim River below the mouth of the Johnson River is open to the harvest of Chinook Salmon by Federally qualified subsistence users Friday June 26, 2:00 pm–10:00 pm.</p> <p style="padding-left: 40px;">The Kuskokwim River between Kuskokuak Slough and the Johnson River are open to the harvest of Chinook Salmon by Federally qualified subsistence users Friday June 26, 6:00 pm–10:00 pm.</p> <p style="padding-left: 40px;">Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used (Appendix Figure 1-5).</p> <p>The closures do not affect the Chinook Salmon harvest opportunity with Federal Community Harvest Permits (SA 3-KS-06-15). Except for users with a Federal Community Harvest Permit or fishing in a temporary opening, all gillnets are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>The Kuskokwim River and its salmon tributaries are closed to the harvest of all fish except Federally qualified subsistence users using all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>

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**Appendix Figure 1-5.** Federal Special Actions SA 3-KS-10-15 (scheduled opening to 6-inch mesh nets).



**Appendix Table 1-3.** Federal special actions, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 YUKON DELTA NATIONAL WILDLIFE REFUGE KUSKOKWIM RIVER DRAINAGE—SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-11-15 Supersedes SA 3-KS-10-15	June 30–July 20, 2015	<p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of all fish except by Federally qualified subsistence users</p> <p>The Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary are closed to the harvest of Chinook Salmon except:</p> <p style="padding-left: 40px;">The Kuskokwim River below the mouth of the Johnson River is open to the harvest of all fish by Federally qualified subsistence users Tuesday June 30, 2:00 pm–6:00 pm.</p> <p style="padding-left: 40px;">The Kuskokwim River between the Johnson River and the Aniak River are open to the harvest of all fish by Federally qualified subsistence users Tuesday June 30, 6:00 pm–6:00 pm.</p> <p style="padding-left: 40px;">Only drift gillnets with 6-inch or less mesh, not exceeding 300-feet long and 45-meshes deep may be used.</p> <p>Except for users with a Federal Community Harvest Permit or fishing in a temporary opening, all gillnets are prohibited in the Kuskokwim River and its salmon tributaries within and adjacent to the Refuge boundary.</p> <p>The Kuskokwim River and its salmon tributaries are closed to the harvest of all fish except Federally qualified subsistence users using all other legal subsistence gear, which are dip net, beach seine, fish wheel, or rod and reel. However, Chinook Salmon must be immediately released.</p>
SA 3-KS-12-15	July 2, 2015	For the Kuskokwim Fishery Management Area, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes.

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-KS-01-15	April 1–July 25, 2015	The Kuskokwim River drainage and Kuskokwim Bay tributaries are closed to sport fishing for Chinook Salmon Wednesday, April 1 through Saturday, July 25, 2015. All Chinook Salmon caught while fishing for other species may not be removed from the water and must be released immediately. In addition, anglers may use only one unbaited, single-hook, artificial lure in the entire Kuskokwim-Goodnews Area.
EO 3-S-WR-01-15	June 4, 2015, until further notice	From the Aniak River upriver to the Holitna River fishing for salmon is closed. Fishing for nonsalmon species with gillnets is restricted to 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep, setnets only 6:00 a.m. Thursday, June 4 until 6:00 a.m. Sunday, June 7; 6:00 a.m. Thursday, June 11 until 6:00 a.m. Sunday, June 14; 6:00 a.m. Thursday, June 18 until 6:00 a.m. Sunday, June 21; 6:00 a.m. Thursday, June 25 until 6:00 a.m. Sunday, June 28. Subsistence fishing with hook and line for Chinook Salmon is closed; any Chinook Salmon caught must be returned alive to the water. Subsistence fishing with dip nets is allowed; any Chinook Salmon caught in a dip net must be returned immediately to the water alive. Subsistence fishing with fish wheels is allowed; fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours; fish wheels can be equipped with a chute and must be closely attended while in operation; any Chinook Salmon caught must be returned alive to the water.
EO 3-S-WR-02-15	June 7, 2015 until further notice	The Aniak River is closed to the use of all gillnets. All other legal subsistence fishing gear is allowed (beach seine, hook and line, handline, or fishwheel); any Chinook Salmon caught must be returned alive to the water.
EO 3-S-WR-03-15	May 28, 2015 until further	Marine waters near the Kuskokwim River mouth (Ishkowik River to the northern boundary of District W-4 at Weelung Creek), fishing for salmon is closed.

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**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-04-15	June 11–July 2, 2015	<p>From the Holitna River mouth to the headwaters of the Kuskokwim River subsistence salmon fishing is closed.</p> <p>Subsistence fishing for nonsalmon fish is restricted to the use of set gillnets with 4-inch or less mesh size not exceeding 60-feet long and 45-meshes deep:</p> <p>6:00 a.m. Thursday, June 11 until 6:00 a.m. Sunday, June 14;          6:00 a.m. Thursday, June 18 until 6:00 a.m. Sunday, June 21;          6:00 a.m. Thursday, June 25 until 6:00 a.m. Sunday, June 28;          6:00 a.m. Thursday, July 2 until 6:00 a.m. Sunday, July 5.</p> <p>Subsistence fishing with hook and line for Chinook Salmon is closed; any Chinook Salmon caught must be returned alive to the water.</p> <p>Subsistence fishing with dip nets is allowed; any Chinook Salmon caught in a dip net must be returned immediately to the water alive.</p> <p>Subsistence fishing with fish wheels is allowed; fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours; fish wheels can be equipped with a chute and must be closely attended while in operation; any Chinook Salmon caught must be returned alive to the water.</p>
EO 3-S-WR-05-15	June 20, 2015	<p>From the Aniak River to the headwaters of the Kuskokwim River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, for Alaska residents 60 years of age or older, Saturday June 20, 2:00 p.m.–6:00 p.m.</p> <p>An Alaska resident 60 years of age or older must be present while fishing activities are being conducted but may be assisted by family members within the second degree of kindred. A gillnet longer than 10 fathoms may be used as long as only 10 fathoms is in a fishable condition and the remainder of the gillnet is either tied up or secured so that it is not in the water in a fishing condition.</p>
EO 3-S-WR-06-15	June 27, 2015	<p>From the Aniak River to the headwaters of the Kuskokwim River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, Saturday June 27, 12:00 p.m.–6:00 p.m.</p>
EO 3-S-WR-07-15	June 27, 2015	<p>The Kuskokwim River and its tributaries from the Holitna River to the headwaters is open to subsistence fishing with a hook and line for Chinook Salmon, Saturday June 27 for 24 hours,. The Chinook Salmon harvest limit for this hook and line opportunity is 5 fish.</p>

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**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (continued from previous page).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emer- gency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-08-15	July 1, 2015	The Kuskokwim River from the Aniak River to the headwaters of the Kuskokwim River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 10-fathoms long, Wednesday, July 1, 12:00 p.m.–8:00 p.m.
EO 3-S-WR-09-15	July 1, 2015	The Kuskokwim River and its tributaries, from the Holitna River to the headwaters of the Kuskokwim River, is open to subsistence fishing with a hook and line for Chinook Salmon, Wednesday, July 1, 12:01 a.m.–11:59 p.m. The Chinook Salmon bag limit for this hook and line opportunity is 5 fish.
EO 3-S-WR-10-15	July 1, 2015 until further notice	Subsistence fishing on the Stony River upstream of the confluence with the Stink River is unrestricted.
EO 3-S-WR-11-15	July 2, 2015 until further notice	The Kuskokwim River drainage from the mouth of the Kuskokwim River to the Aniak River subsistence fishing for Chinook Salmon with hook and line is closed. Any Chinook Salmon caught must be released alive to the water. Subsistence fishing with fish wheels is allowed. Fish wheels are required to have a live box with no less than 45 cubic feet of water, must be checked at least every 6 hours. Fish wheels can be equipped with a chute and must be closely attended while in operation. All Chinook salmon must be returned alive to the water. Subsistence fishing with dip nets is closed. Subsistence fishing with gillnets is closed in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak river drainages and the Kuskokwim River.
EO 3-S-WR-12-15	July 4, 2015	The Kuskokwim River from the mouth of the Kuskokwim River to the mouth of the Johnson River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Saturday, July 4, 12:00 p.m.–8:00 p.m. From the Johnson River to Tuluksak with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 25-fathoms long, Saturday, July 4, 4:00 p.m.–8:00 p.m. From the Tuluksak to the Holitna River with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 25-fathoms long, Saturday, July 4, 12:00 p.m.–8:00 p.m.
EO 3-S-WR-13-15	July 4, 2015 until further notice	The Kuskokwim River and its tributaries from the Holitna River to the headwaters of the Kuskokwim River is open to subsistence fishing with a hook and line for Chinook Salmon. The Chinook Salmon limit for this hook and line opportunity will be 3 fish per day, 6 in possession.

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**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-CS-01-15	July 6–August 31, 2015	The Kuskokwim River drainage is closed to sport fishing for Chum Salmon. Only unbaited, single-hook, artificial lures may be used in the Kuskokwim-Goodnews Area. All Chum Salmon caught unintentionally while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-CS-02-15 supersedes EO 3-S-CS-01-15	July 10–Aug. 31, 2015	The Kuskokwim River drainage (excluding Kuskokwim Bay) is closed to sport fishing for Chum Salmon. Only unbaited, single-hook, artificial lures may be used in the Kuskokwim-Goodnews Area. All Chum Salmon caught unintentionally while fishing for other species may not be removed from the water and must be released immediately.
EO 3-S-WR-14-15	July 8, 2015	The Kuskokwim River from the mouth of the Kuskokwim River to the mouth of the Johnson River is open to subsistence salmon fishing with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 9:00 a.m.–9:00 p.m. From the Johnson River to Tuluksak with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 5:00 p.m.–9:00 p.m. From Tuluksak to the headwaters of the Kuskokwim River with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Wednesday, July 8, 9:00 a.m.–9:00 p.m. The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W is closed to subsistence fishing with gillnets Wednesday, July 8, 9:00 a.m.–9:00 p.m. (Appendix Figure 1-6).
EO 3-S-WR-15-15	July 8, 2015 until further notice	Subsistence fishing in the Stony River and its tributaries is unrestricted. The Chinook salmon limit for subsistence hook and line is 3 fish per day, 6 in possession.
EO 3-S-WR-16-15	July 8, 2015 until further notice	From the Holitna River to the headwaters of the Kuskokwim River (excluding the Holitna and Swift rivers), subsistence fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long. The use of dip nets for subsistence salmon fishing is discontinued in the Kuskokwim River drainage from the Holitna River to the headwaters of the Kuskokwim River. The use of a live box or chute is not required while operating a fish wheel from the Holitna River to the headwaters of the Kuskokwim River.

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**Appendix Figure 1-6.** State of Alaska Emergency Order EO 3-S-WR-14-15 (closed area in front of Aniak).

**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-17-15	July 11, 2015	From the Johnson River to the mouth of the Kuskokwim River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long Saturday, July 11, 9:00 a.m.–9:00 p.m. From the Johnson River to Tuluksak subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45 meshes deep, and not to exceed 50-fathoms long Saturday, July 11, 10:00 a.m.–2:00 p.m. From Tuluksak to the Holitna River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50- fathoms long Saturday, July 11, 9:00 a.m.–9:00 p.m.
EO 3-S-WR-18-15	July 11, 2015	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W (Appendix Figure 1-6) is closed to subsistence fishing with gillnets Saturday, July 11, 9:00 a.m.–9:00 p.m.
EO 3-S-WR-19-15	July 11, 2015 until further notice	The use of dip nets for subsistence salmon fishing is discontinued in the Kuskokwim River drainage from Aniak to the Holitna River.
EO 3-S-WR-20-15	July 13 and 15, 2015	From the Johnson River to the mouth of the Kuskokwim River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 2015, 9:00 a.m.–9:00 p.m. From the Johnson River to Tuluksak subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Monday, July 13, 1:00 p.m.–7:00 p.m., and Wednesday, July 15, 3:00 p.m.–9:00 p.m. From Tuluksak to the Holitna River subsistence salmon fishing is allowed with 6-inch or less mesh gillnets, 45-meshes deep, and not to exceed 50-fathoms long, Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 9:00 a.m.–9:00 p.m.
EO 3-S-WR-21-15	July 13 and 15, 2015	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088'W (Appendix Figure 1-6) is closed to subsistence fishing with gillnets Monday, July 13, 9:00 a.m.–9:00 p.m., and Wednesday, July 15, 9:00 a.m.–9:00 p.m.

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**Appendix Table 1-4.** State emergency orders, Kuskokwim River drainage, 2015 (*continued from previous page*).

<b>2015 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emer- gency Order</b>	<b>Effective Date</b>	<b>Action</b>
EO 3-S-WR-22-15	July 13, 2015 until further notice	Marine waters near the Kuskokwim River mouth (Ishkowik River to the northern boundary of District W-4 at Weelung Creek) are open to subsistence fishing.
EO 3-S-WR-23-15	July 15, 2015 until further notice	Subsistence salmon fishing with gillnets is allowed in the Kuskokwim River from the mouth of the Kuskokwim River to the Holitna River, with 6-inch or less mesh gillnets.
EO 3-S-WR-24-15	July 15, 2015 until further notice	The use of a live box or chute is not required while operating a fish wheel from the mouth of the Kuskokwim River to the Holitna River.
EO 3-S-WR-25-15	July 15, 2015 until further notice	The waters of the Kuskokwim River from Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W (Appendix Figure 1-6) is closed to subsistence fishing with gillnets.
EO 3-S-WR-26-15	August 4, 2015	The following restrictions to the Kuskokwim River subsistence salmon fishery are rescinded: gillnet use in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers (EO 3-S-WR-11-15); 6-inch or less mesh requirements for subsistence gillnets (EO 3-S-WR-16-15; EO 3-S-WR-23-15; EO 3-S-WR-25-15); closed waters at the mouth of the Aniak (EO 3-S-WR-25-15); and restrictions to hook and line bag and possession limits for Chinook salmon (EO 3-S-WR-01-15, 3-S-WR-02-15, EO 3-S-WR-11-15).



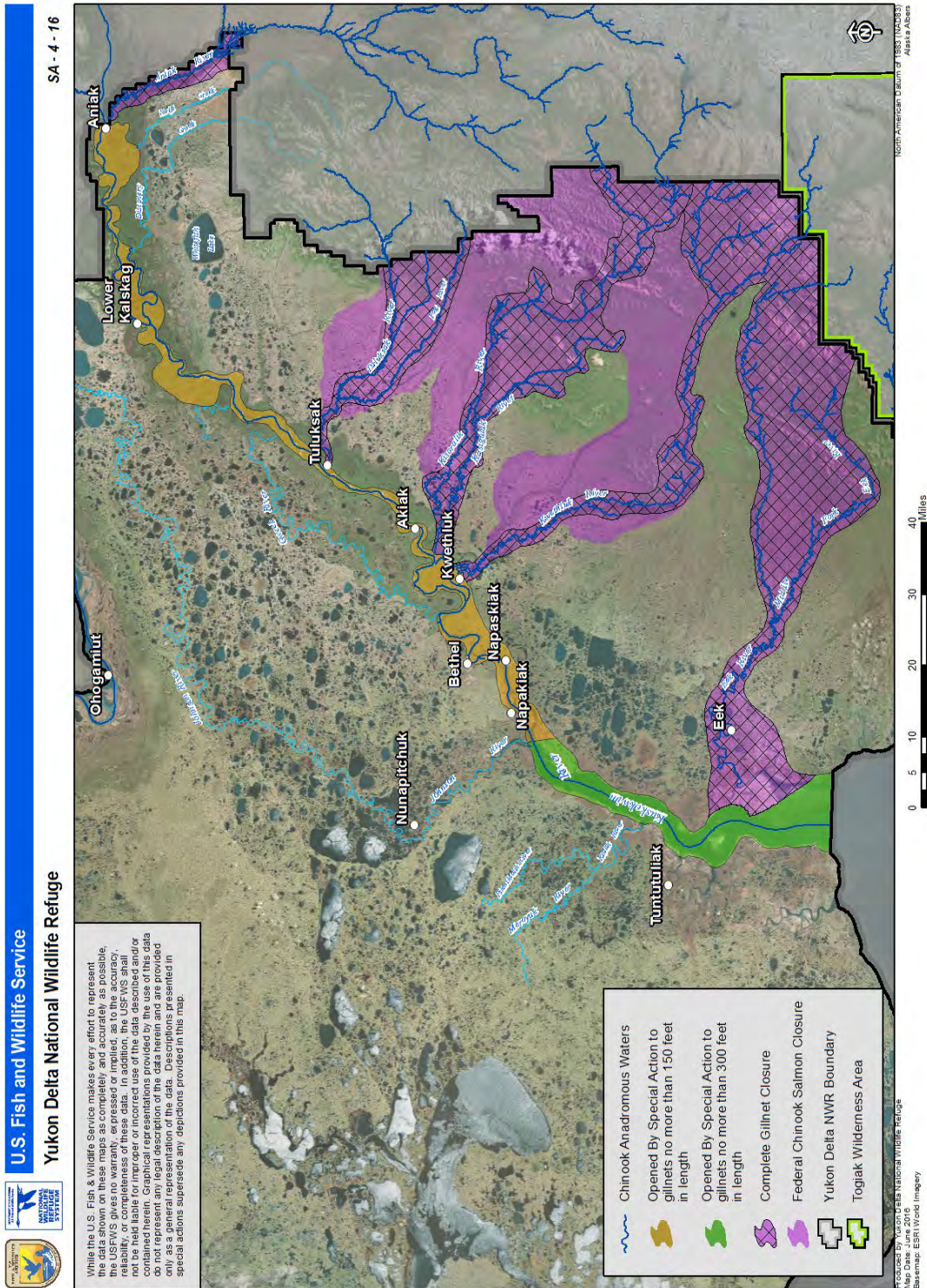
**SALMON MANAGEMENT IN 2016**

**Appendix Table 1-5.** Federal special actions, Kuskokwim River drainage, 2016.

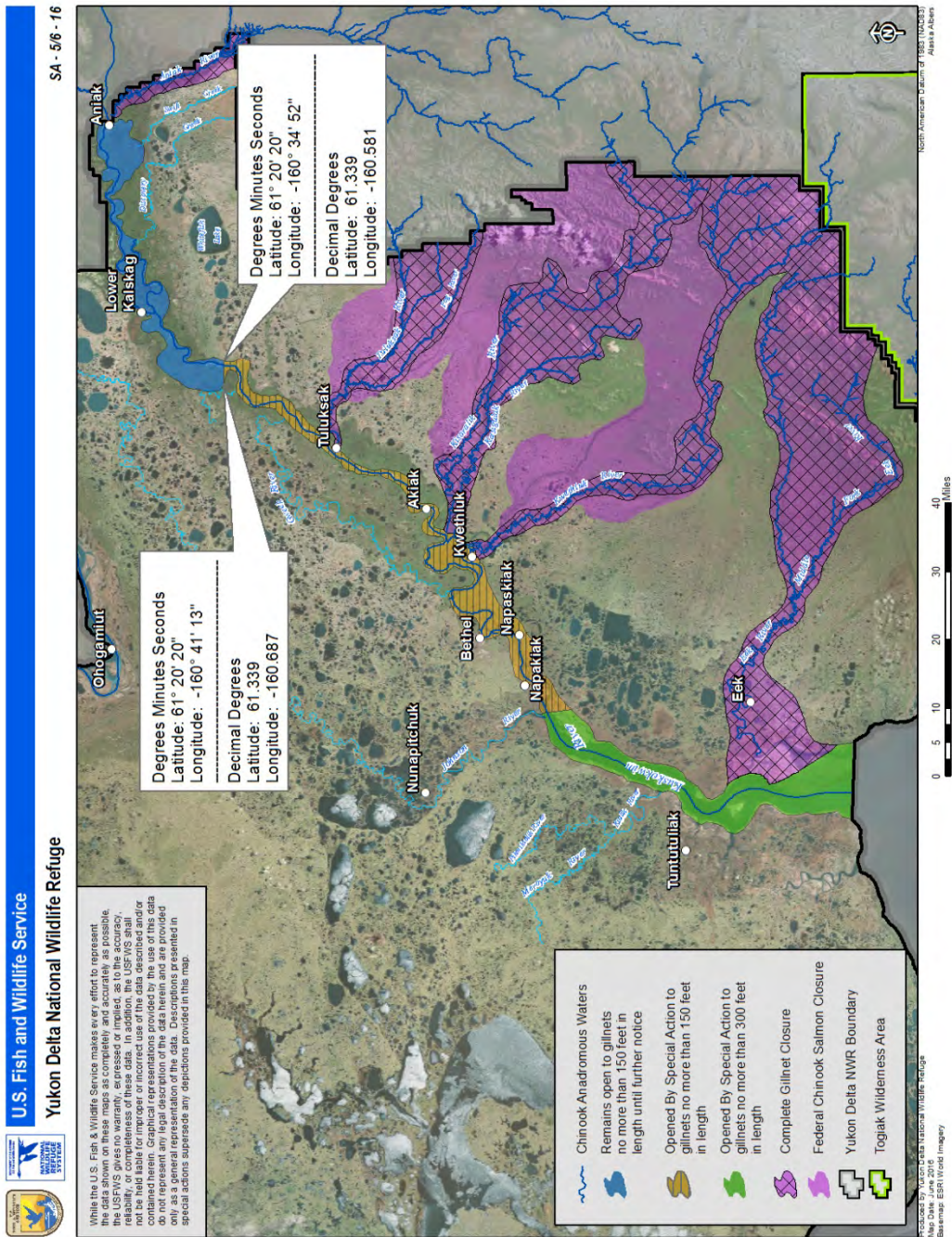
<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Ac- tions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-01-16	June 1, 2016- June 12, 2016	All waters within and adjacent to the Refuge boundary are closed to the harvest of <b>Chinook and Chum Salmon</b> except by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.
SA 3-KS-01a-16	June 3, 2016-July 7, 2016	Federal waters of the Kuskokwim River are closed to the harvest of <b>Chinook and Chum Salmon</b> by Federally qualified users. Fishing openings, closings, and fishing methods for Federally qualified subsistence users will be announced by subsequent Federal Special Actions.
SA 3-KS-02-16	June 12, 2016	Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and Chum Salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.  Legal gear includes drift and set gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak. Harvest allowed for 12 hours only from June 12, 2016 from 12:01 pm (noon) until 11:59 pm (midnight).
SA 3-KS-03-16	June 12, 2016-July 7, 2016	The use of gillnets for fishing on the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak Rivers as well as their salmon tributaries are closed within the boundaries of the Refuge ( <b>Appendix Figure 1-7</b> ).
SA 3-KS-04-16	June 16, 2016- June 17, 2016	Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.  Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-feet long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-feet long from the Johnson River to the Refuge boundary at Aniak ( <b>Appendix 1-7</b> ). Harvest allowed for 24 hours only from June 16, 2016 from 12:01 pm (noon) until June 17, 2016 at 11:59 am (noon).

**Appendix Table 1-5.** Federal special actions, Kuskokwim River drainage, 2016 (continued from previous page.)

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Action</b>
SA 3-KS-05-16	June 21, 2016-July 7, 2016	<p>Federal public waters of the Kuskokwim River from a line downstream of Kalskag at the south edge of Uknarik Slough and then due east to the edge of the bluff line to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>) are open to harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek until further notice.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, and 150-foot long</p>
SA 3-KS-06-16	June 21, 2016-June 24, 2016	<p>Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-foot long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-foot long from the Johnson River to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>). Harvest allowed for 72 hours only from June 21, 2016 from 12:01 pm (noon) until June 24, 2016 at 11:59 am (noon).</p>
SA 3-KS-07-16	June 29, 2016-July 2, 2016	<p>Federal public waters of the Kuskokwim River drainage are open to the harvest of <b>Chinook and chum salmon</b> by Federally qualified subsistence users that are residents of the Kuskokwim drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.</p> <p>Legal gear includes drift and set gillnets, hook and line, fish wheels, dip nets, beach seines and all other gear types identified in Federal subsistence regulations. Gillnets restricted to 6-inch or less mesh size, not exceeding 45-meshes deep, 300-foot long from the Refuge boundary at the mouth of the Kuskokwim to the Johnson River, and 150-foot long from the Johnson River to the Refuge boundary at Aniak (<b>Appendix Figure 1-8</b>). Harvest allowed for 72 hours only from June 29, 2016 from 12:01 pm (noon) until July 2, 2016 at 11:59 am (noon).</p>
SA 3-KS-08-16	July 7, 2016-present	For the Kuskokwim River drainage, all previously issued special actions were rescinded.



**Appendix Figure 1-7.** Federal Special Actions SA 3-KS-04-16, temporary harvest of Chinook and Chum salmon by Federally qualified subsistence users and SA-3-KS-03-16, temporary closure of rivers in Refuge boundary.



**Appendix Figure 1-8.** Federal Special Actions SA 3-KS-05-16, SA 3-KS-06-16, and SA 3-KS-07-16, temporary harvest of Chinook and Chum salmon by Federally qualified subsistence users.

**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016.

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergen- cy Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-KS-01-16	May 1, 2016- July 25, 2016	The Kuskokwim River drainage and tributaries are closed to sport fishing for <b>Chinook Salmon</b> Sunday May 1, 2016 through Monday July 25, 2016. All Chinook Salmon caught while fishing for other species may not be removed from the water and must be released immediately. In addition, anglers may use only one unbaited, single-hook, artificial lure in the entire Kuskokwim Area.
EO 3-S-WR-01-16	May 20, 2016-June 12, 2016;  June 1, 2016-June 12, 2016	<p>On May 20, subsistence fishing with gillnets is closed in the Kuskokwim River drainage from the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim River to the ADF&amp;G markers downstream of the Holitna River mouth until further notice. Subsistence fishing with hook and line for <b>Chinook salmon</b> is closed in this area to further notice. Subsistence fishing with fish wheels, dip nets, and beach seines are allowed in this area until further notice, but all <b>Chinook salmon</b> caught must be immediately be released alive.</p> <p>Subsistence fishing with gillnets is closed beginning on June 1 in the Kuskokwim River upstream from the ADF&amp;G markers near the Holitna River mouth to the headwaters of the Kuskokwim River, the Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough, the Kasigluk and Kisarialik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough, the Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately one mile to ADF&amp;G regulatory markers, and the Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River until further notice.</p> <p>Beginning on June 1, Subsistence fishing with hook and line for Chinook salmon is closed to further notice on the Kuskokwim River above the ADF&amp;G markers downstream of the Holitna River mouth until further notice. Subsistence fishing with fish wheels, dip nets, and beach seines are allowed in this area until further notice, but all Chinook salmon caught must be immediately be released alive.</p>

**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016 (continued from previous page).

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergen- cy Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-02-16, EO 3-S-WR-03-16	June 12, 2016-June 14, 2016;  June 12, 2016 until fur- ther notice	<p>The area from the YDNWR border at Aniak to the mouth of the Holitna River (not including the Aniak River) is open to subsistence fishing with 6-inch or less mesh, 25-fathoms (150 ft.) long or less gillnets for 48 hours from June 12, 12:00 pm (noon)-June 14, 12:00 pm (noon).</p> <p>The area from the mouth of the Holitna River to the Kuskokwim River headwaters is open to subsistence fishing with 6-inch or less mesh gillnets from June 12, 2016 at 12:00 pm (noon) until further notice.</p> <p>Subsistence fishing is also allowed with beach seines, dip nets, and hook and line from the YDNWR boundary at Aniak to the Kuskokwim River headwaters from June 12, 2016 at 12:00 pm (noon) until further notice.</p>
EO 3-S-WR-04-16	June 16, 2016 until fur- ther notice	The area from the YDNWR border at Aniak to the headwaters of the Kuskokwim River (not including the Aniak River) is open to subsistence fishing with 6-inch or less mesh from 12:00 pm (noon) June 16, 2016 until further notice.
EO 3-S-WR-5-16	July 7, 2016 until further notice	<p>Subsistence fishing is allowed for qualified Alaska residents from the YDNWR boundary at the mouth of the Kuskokwim River to the headwaters of the Kuskokwim River until further notice. Gillnets must be 6-inch or less mesh.</p> <p>Subsistence fishing with gillnets is closed in the following areas:</p> <ul style="list-style-type: none"> <li>• The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough.</li> <li>• The Kasigluk and Kisaralik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.</li> <li>• The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately one mile to ADF&amp;G regulatory markers.</li> <li>• The Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River.</li> <li>• The Eek River.</li> <li>• The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed between two points lat 61° 35.076' N, long 159° 32.527' W and lat 61° 35.263' N, long 159° 32.088' W (Figure 3).</li> </ul>

**Appendix Table 1-6.** State emergency orders, Kuskokwim River drainage, 2016 (*continued from previous page*).

<b>2016 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergen- cy Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-6-16	July 27, 2016-Until further notice	Effective 9:00 a.m. Wednesday, July 27, 2016, the following restrictions to the Kuskokwim River subsistence salmon fishery are rescinded: <ul style="list-style-type: none"> <li>• Gillnet use in the Kwethluk, Kasigluk, Kisaralik, Tuluksak, Aniak and Eek Rivers;</li> <li>• 6-inch or less mesh requirements for subsistence gillnets; and</li> <li>• The closed waters at the mouth of the Aniak River.</li> </ul>
EO 3-S-WR-7-16	July 29, 2016	Subdistrict 1-A will open to commercial <b>salmon</b> fishing for 6 hours from 2:00 p.m. until 8:00 p.m. Friday, July 29, 2016. This area is defined as that portion of District 1 upstream of regulatory markers located at Bethel to ADF&G regulatory markers at the mouth of Bogus Creek.  As there are no commercial salmon processors registered in the Kuskokwim Management Area, this opportunity is being provided for those individuals registered with the department as catcher/sellers.
EO 3-S-WR-8-16	August 12, 2016	Subdistrict 1-A will open to commercial <b>salmon</b> fishing for 6 hours from 2:00 p.m. until 8:00 p.m. Friday, August 12, 2016. This area is defined as that portion of District 1 upstream of regulatory markers located at Bethel to ADF&G regulatory markers at the mouth of Bogus Creek.  As there are no commercial <b>salmon</b> processors registered in the Kuskokwim Management Area, this opportunity is being provided for those individuals registered with ADF&G as catcher/sellers.

**SALMON MANAGEMENT IN 2017****Appendix Table 1-7.** Federal special actions, Kuskokwim River drainage, 2017

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Actions</b>
SA 3-KS-01-17	June 12 – August 10, 2017	Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the use of all gillnets by all users. All Chinook salmon caught with other legal methods must be immediately released.
FSA 17-03 (FSB ACTION)	June 12, 2017	Beginning on June 12, 2017, Federal public waters of the Kuskokwim River drainage were closed to the harvest of Chinook Salmon except by Federally qualified subsistence users
FSA 17-04 (FSB ACTION)	June 12, 2017	Beginning on June 12, 2017, Federal public waters of the Kuskokwim River drainage were closed to the harvest of Chinook Salmon except by Federally qualified subsistence users identified in the Section 804 subsistence users prioritization analysis. Those eligible to harvest Chinook Salmon under Federal regulations were restricted to Federally qualified subsistence users residing in the Kuskokwim River drainage and the coastal communities of Chefornak, Kongiganek, Kipnuk, and Kwigillingok.
SA 3-KS-02-17	June 12 – August 10, 2017	Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the harvest of Chinook salmon by all Federally qualified subsistence users.
SA 3-KS-03-17	June 12, 2017	<p>Opened a 12-hour opportunity for Federally qualified subsistence users identified in the Section 804 analysis, which included residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek, to harvest Chinook Salmon on Federal public waters of the Kuskokwim River on June 12, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Drift or set gillnets were limited to 6-inch or less mesh and could not exceed 45 meshes in depth. Nets from the Yukon Delta National Wildlife Refuge (Refuge) boundary at the Kuskokwim River mouth to the Johnson River could not exceed 50 fathoms (300 feet) in length. Nets up river from the Johnson River to the Refuge boundary at Aniak could not exceed 25 fathoms (150 feet) in length.</p> <p>The area around the Old Kuskokuak and the Kuskokuak were closed to the harvest of Chinook Salmon.</p>



**Appendix Table 1-7.** Federal special actions, Kuskokwim River drainage, 2017 (*continued from previous page*)

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>Federal Special Actions</b>	<b>Effective Date</b>	<b>Actions</b>
SA 3-KS-04-17	June 24, 2017	<p>Opened a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the mainstem of the Kuskokwim River on June 24, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Drift or set gillnets were limited to 6-inch or less mesh and could not exceed 45 meshes in depth. Nets could not exceed 25 fathoms (150 feet) in length.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p> <p>The waters of the Kuskokwim River around the boundary of the Yukon Delta NWR near Aniak was closed to subsistence gillnet fishing.</p> <p>Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel were allowed to be used during this opportunity. However, there were some restrictions to fish wheel regulations. Any Chinook Salmon caught in these other gear types had to be returned to the water alive.</p>
SA 3-KS-05-17	July 1, 2017	<p>Opened a 6-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River from the mouth of the river to approximately 10 miles upriver from Upper Kalskag on July 1, 2017, from 3:00 p.m. until 9:00 p.m.</p> <p>Gear restrictions and authorizations, as well as Chinook Salmon release requirements for non-gillnet gear types were the same as SA 3-KS-04-17.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p>
SA 3-KS-06-17	July 3, 2017	<p>Opened a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River on July 3, 2017, from 12:01 p.m. until 11:59 p.m.</p> <p>Gear restrictions and authorizations, as well as Chinook Salmon release requirements for non-gillnet gear types were the same as SA 3-KS-04-17.</p> <p>Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization could retain Chinook Salmon incidentally harvested in gillnets.</p> <p>The waters of the Kuskokwim River around the boundary of the Yukon Delta NWR near Aniak was closed to subsistence gillnet fishing</p>
SA 3-KS-07-17	July 7, 2017	<p>Rescinded all previously issued special actions regarding the management of Chinook Salmon in the Kuskokwim River drainage.</p> <p>Federal public waters within the Yukon Delta NWR opened to the harvest of Chinook Salmon by non-Federally qualified subsistence users.</p>

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017.

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergen- cy Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-01-17	Multiple effective dates depending on area of Kuskokwim River (May 20, 2017 – June 4, 2017)	<p>Subsistence fishing with gillnets in the Kuskokwim River will be closed during the following times and areas:</p> <ul style="list-style-type: none"> <li>• Beginning 12:01 a.m. Saturday, May 20, 2017, the Kuskokwim River Drainage from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River to ADF&amp;G markers approximately one-half mile upstream of the Tuluksak River mouth;</li> <li>• Beginning 12:01 a.m. Thursday, May 25, 2017, from the ADF&amp;G markers approximately one-half mile upstream of the Tuluksak River mouth to the Yukon Delta Refuge boundary near Aniak;</li> <li>• Beginning 12:01 a.m. Thursday, June 1, 2017, from the Yukon Delta Refuge boundary near Aniak to the ADF&amp;G regulatory markers near the Holitna River mouth; and</li> <li>• Beginning 12:01 a.m. Sunday, June 4, 2017, upstream of the ADF&amp;G regulatory markers located near the Holitna River mouth to the headwaters of the Kuskokwim River.</li> </ul> <p>The following subsistence fishing restrictions and tributary gillnet fishing closures will also go into effect beginning 12:01 a.m. Saturday, May 20, 2017, until further notice:</p> <ul style="list-style-type: none"> <li>• The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&amp;G regulatory markers located at the downstream mouth of the slough.</li> <li>• The Kasigluk and Kisaralik river drainages including Old Kuskokuak Slough to ADF&amp;G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.</li> <li>• The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately 1-mile to ADF&amp;G regulatory markers.</li> <li>• The Aniak River drainage to ADF&amp;G regulatory markers at its confluence with the Kuskokwim River.</li> </ul> <p>Additionally, subsistence fishing with hook and line for Chinook Salmon will close until further notice. Subsistence fishing with fish wheels will be allowed until further notice. Subsistence fishing with dip nets and beach seines is currently allowed until further notice. Any Chinook salmon caught in a dip net or beach seine must be returned immediately to the water alive.</p>

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017 (continued from previous page).

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-02-17	May 27, 2017	Subsistence fishing will be allowed on the Kuskokwim River mainstem within the Yukon Delta Refuge boundaries with 4-inch or less mesh size set gillnets from 9:00 a.m. until 9:00 p.m. Saturday, May 27, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark.
EO 3-S-WR-03-17	June 3, 2017	Subsistence fishing will be allowed within the mainstem Kuskokwim River from the Yukon Delta Refuge boundaries at the mouth of the Kuskokwim River to the ADF&G regulatory markers downstream of the mouth of the Holitna River with 4-inch or less mesh size set gillnets from 9:00 a.m. until 9:00 p.m. Saturday, June 3, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark.
EO 3-S-WR-04-17	June 10, 2017	Subsistence fishing will be allowed within the mainstem Kuskokwim River from the Yukon Delta Refuge boundary at the mouth of the Kuskokwim River to the headwaters with 4-inch or less mesh size set gillnets from 10:00 a.m. until 10:00 p.m. Saturday, June 10, 2017. Gillnets may not exceed 60 feet in length or 45 meshes in depth and may not be operated more than 100 feet from the ordinary high water mark. Chinook salmon incidentally harvested in gillnets during this opportunity may be retained.
EO 3-S-WR-05-17	June 12, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gillnets, not to exceed 25 fathoms in length, will be allowed for 24 hours from 12:00 p.m. noon, Monday, June 12 until 12:00 p.m. noon, Tuesday, June 13, 2017.
EO 3-S-WR-06-17	June 12, 2017	From the Holitna River mouth to the headwaters of the Kuskokwim River: Section 5 Subsistence fishing with 6-inch or less mesh gillnets will be allowed from 12:00 p.m. noon, Monday, June 12 until further notice.
EO 3-S-WR-07-17	June 13, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with hook and line, fish wheels equipped with live boxes or chutes, beach seines, and dip nets is currently allowed until further notice, however retention of Chinook salmon caught with these gear types will close at 12:00 p.m. noon, Tuesday, June 13, 2017. Any Chinook salmon caught with these gear types must be returned immediately to the water alive
EO 3-S-WR-08-17	June 24, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gillnets, not to exceed 25 fathoms in length and 45 meshes in depth, will be allowed for approximately 12 hours from 12:01 p.m. until 11:59 p.m., Saturday, June 24, 2017.

**Appendix Table 1-8.** State emergency orders, Kuskokwim River drainage, 2017 (continued from previous page).

<b>2017 KUSKOKWIM RIVER DRAINAGE SUBSISTENCE FISHING</b>		
<b>State Emergency Order</b>	<b>Effective Date</b>	<b>Actions</b>
EO 3-S-WR-09-17	July 3, 2017	From the Yukon Delta NWR boundary at Aniak up to the Holitna River mouth: Section 4. Subsistence fishing with 6-inch or less mesh gill-nets, not to exceed 25 fathoms in length and 45 meshes in depth, will be allowed for approximately 12 hours from 12:01 p.m. until 11:59 p.m., Monday, July 3, 2017. The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak upstream to a line formed between two points lat 61° 35.308' N, long 159° 29.167' W and lat 61° 34.731' N, long 159° 28.939'W (Figure 1) will be closed to subsistence fishing with gillnets from 12:01 p.m. until 11:59 p.m., Monday, July 3, 2017.
EO 3-S-WR-10-17	July 7, 2017	Subsistence fishing in the Kuskokwim River Drainage, from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River up to the mouth of the Holitna River (Sections 1–4), will be allowed from 12:01 p.m. Saturday, July 8, 2017 until further notice. Gillnets are restricted to 6-inch or less mesh, 45 meshes deep, and 25 fathoms in length. The waters of the Kuskokwim River from a line formed between two points lat 61° 35.264' N, long 159° 33.459' W and lat 61° 35.611' N, long 159° 33.260'W upstream to a line formed between two points lat 61° 35.308' N, long 159° 29.167' W and lat 61° 34.731' N, long 159° 28.939'W will be closed to subsistence fishing with gillnets from 12:01p.m.Saturday, July 8, 2017 until further notice.
EO 3-S-WR-11-17	July 13, 2017	Subsistence fishing in the Kuskokwim River Drainage, from the Yukon Delta NWR boundary at the mouth of the Kuskokwim River up to the confluence of the Johnson River (Section 1), will be allowed from 12:01 p.m. Thursday, July 13, 2017 with gillnets restricted to 6-inch or less mesh, 45 meshes deep, and 50 fathoms in length until further notice.
EO 3-S-WR-12-17	July 27, 2017	Kuskokwim River Drainage: Effective 12:01 p.m. Thursday, July 27, 2017, the following restrictions to the mainstem Kuskokwim River subsistence salmon fishery are rescinded: <ul style="list-style-type: none"> <li>• 6-inch or less mesh requirements for subsistence gillnets;</li> <li>• 25 fathom gillnet length restrictions from the mouth of the Johnson River up to the mouth of the Holitna River (Sections 2–4);</li> <li>• The live release requirement of Chinook salmon caught in beach seines, fish wheels, and by hook and line;</li> <li>• The use of dip nets for the taking of salmon; and</li> <li>• The closed waters within Kuskokuak and Old Kuskokuak sloughs and around the mouth of the Aniak River.</li> </ul> Subsistence fishing with gillnets will remain closed in the following tributaries: <ul style="list-style-type: none"> <li>• The Kwethluk River drainage to its confluence with Kuskokuak Slough.</li> <li>• The Kasigluk and Kisaralik river drainages to their confluence with Old Kuskokuak Slough.</li> </ul>
EO 3-S-WR-13-17	August 23, 2017	All subsistence fishing restrictions in Kuskokwim River tributaries have been lifted.

### FP19-10 Executive Summary

<b>General Description</b>	Proposal FP19-10 requests that during times of salmon fishing closures, any tributary of the Kuskokwim River in which salmon do not spawn remain open to the use of gillnets more than 100 yards upstream of its confluence with the Kuskokwim River. <i>Submitted by James Charles.</i>
<b>Proposed Regulation</b>	<p><b>§___.27(e)(4) Kuskokwim Area</b></p> <p><i>(xvii) Tributaries of the Kuskokwim River in which salmon do not spawn remain open to the use of gillnets. Gillnets can be used more than 100 yards upriver from the confluence of each tributary in which salmon do not spawn and the Kuskokwim River in times of restriction for salmon conservation.</i></p>
<b>OSM Conclusion</b>	<p><b>Support with modification</b> to clarify that nonsalmon tributaries would be identified by the Federal in-season manager in special actions.</p> <p>The modified regulation should read:</p> <p><b>§___.27(e)(4) Kuskokwim Area</b></p> <p><i>(xvii) Tributaries of the Kuskokwim River in which salmon do not spawn will remain open to the use of gillnets. Gillnets can be used more than 100 yards upstream from the confluence of each tributary in which salmon do not spawn and the Kuskokwim River. Tributaries to which this applies will be identified in special actions that prohibit the use of gillnets.</i></p>
<b>Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Western Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>

<b>FP19-10 Executive Summary</b>	
<b>Interagency Staff Committee Comments</b>	<p><b>Support with modification</b> to clarify the original intent of the proponent’s proposal. The proponent is seeking a Federal regulation to ensure that the closure to the use of gillnets by Federally qualified subsistence users will not increase beyond 100 yards of the mouths of all non-salmon spawning tributaries.</p> <p>The modified regulatory language should read:</p> <p style="text-align: center;"><b>§ __.27(e)(4) Kuskokwim Area</b></p> <p style="text-align: center;"><i>(xvii) All tributaries not expressly closed by order of the Federal in-season manager or Federal Subsistence Board remain open to the use of gillnets more than 100 yards upstream from their confluence with the Kuskokwim River.</i></p>
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>None</b>

## STAFF ANALYSIS

### FP19-10

#### ISSUES

Proposal FP19-10, submitted by James Charles of Tuntutuliak, requests that during times of salmon fishing closures, any tributary of the Kuskokwim River in which salmon do not spawn remain open to the use of gillnets more than 100 yards upstream of its confluence with the Kuskokwim River.

#### DISCUSSION

The proponent states that in recent years, the Federal in-season manager has closed the Kuskokwim River drainage, except in areas more than 100 yards upstream of the mouth of any tributary in which salmon do not spawn, to the use of gillnets in order to protect Chinook Salmon from harvest. He states that these tributaries are important to residents of Tuntutuliak and other villages because they can use gillnets to harvest nonsalmon fishes even when the rest of the drainage is closed to the use of gillnets. The proponent specifically identifies the Kialik, Tagayarak, Kinak, and Tuntutuliak rivers as the most important tributaries near Tuntutuliak for harvesting fish (**Figure 1**). These tributaries are preferred over the main-stem Kuskokwim River because heavy tidal influences and winds negatively impact harvesting fish in the wide channel of the lower Kuskokwim River near Tuntutuliak. The proponent states Chinook Salmon have been known to get “lost” in, or to stray into, these tributaries, but a majority of residents harvest important nonsalmon fishes, such as whitefish, Northern Pike, and Burbot in these tributaries, too. Keeping these tributaries in which salmon do not spawn open to the use of gillnets more than 100 yards upstream of their mouths helps Tuntutuliak residents meet subsistence harvest goals for fish, especially when other areas of the drainage have been closed to the use of gillnets in order to protect Chinook Salmon from harvest. The proponent states the community of Tuntutuliak seeks this permanent regulation because nonsalmon fish harvesting is vitally important to the community and the regulation will have no impact on salmon conservation.

The proponent is seeking this regulation because he does not want the closure to the use of gillnets to increase beyond 100 yards of the mouths of these tributaries.

In January 2019, the Alaska Board of Fisheries will consider Proposals 110, 115, 116, and 117 (ADF&G 2018a). Proposal 110, submitted by the Organized Village of Kwethluk, requests to close all fishing in non-salmon spawning tributaries within five miles of their confluence with the Kuskokwim River during times of Chinook Salmon conservation.

Proposal 115, submitted by the Native Village of Tuntutuliak and the Qinarmiut Corporation, requests that during subsistence salmon fishing closures, portions of Tuntutuliak, Tagayarak, Kialik and Johnson rivers from a line between ADF&G regulatory markers to 100 yards upstream from their confluences with the Kuskokwim River, shall remain open to subsistence fishing with gillnets that are eight-inch or smaller mesh, with a maximum length of 50 fathoms.

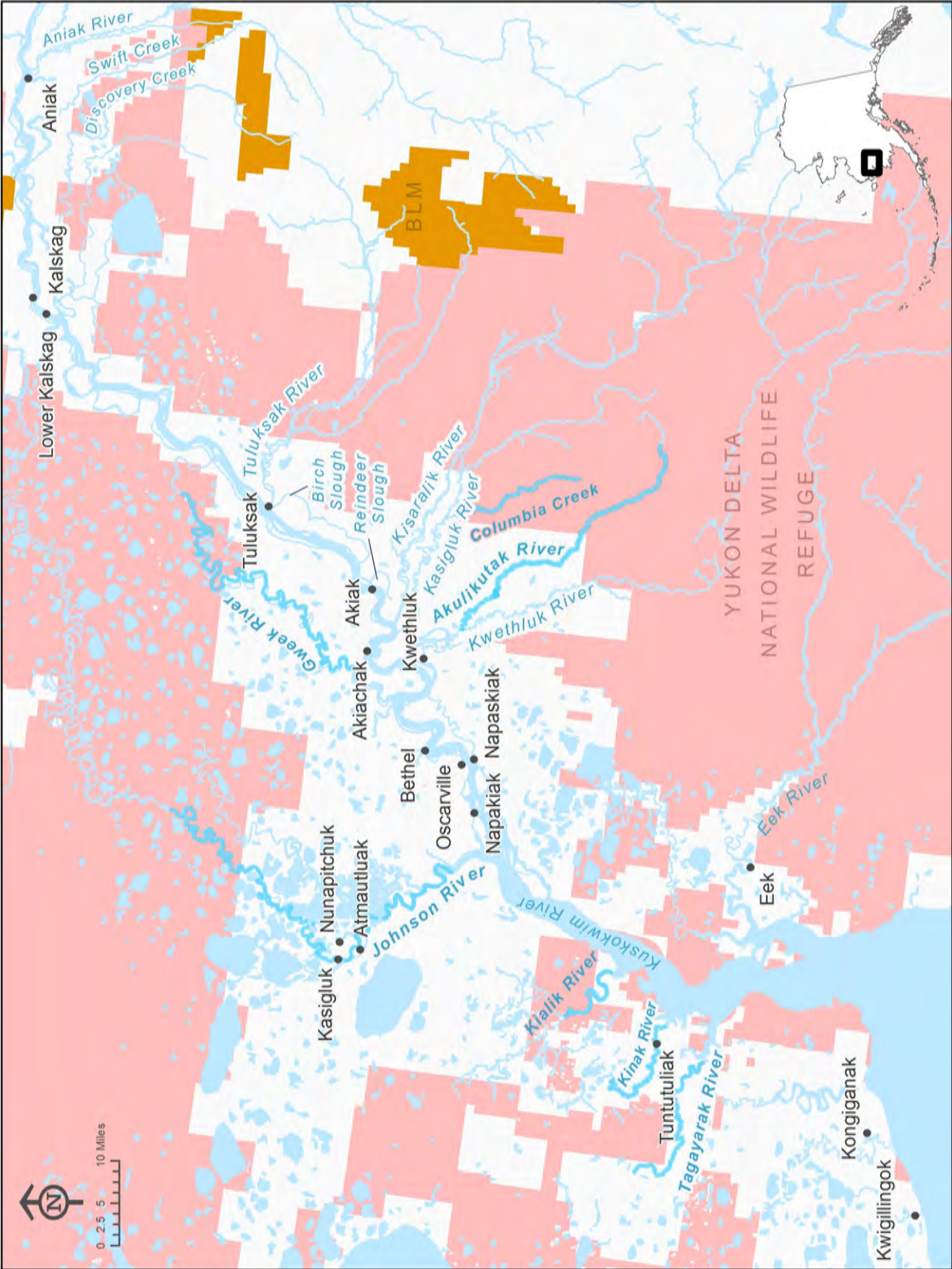


Figure 1. Map of the lower Kuskokwim River drainage.



Proposal 116, submitted by the Tuntutuliak Traditional Council, requests that during subsistence salmon fishing closures, the mouths of Johnson, Kialiq, Kinak, Tagyaraq and Pailleq rivers remain open for subsistence fishing.

Proposal 117, submitted by William Charlie Brown, requests that during subsistence salmon fishing closures, that portion of Pailleq Slough from the mouth to 100 yards upstream from its confluence with the Kuskokwim River shall remain open to subsistence fishing with gillnets.

### **Existing Federal Regulation**

No regulation.

### **Proposed Federal Regulation**

#### **§ \_\_.27(e)(4) Kuskokwim Area**

*(xvii) Tributaries of the Kuskokwim River in which salmon do not spawn will remain open to the use of gillnets. Gillnets can be used more than 100 yards upriver from the confluence of each tributary in which salmon do not spawn and the Kuskokwim River in times of restriction for salmon conservation.*

### **Existing State Regulation**

No regulation.

### **Extent of Federal Public Waters**

For purposes of this analysis, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The affected area consists of those waters of the Kuskokwim River drainage that are within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge (Refuge), including District 1 and portions of District 2 of the Kuskokwim Fishery Management Area. The waters are generally described as the lower Kuskokwim River drainage from the mouth upriver to and including about 30 miles of the Aniak River (see **Kuskokwim Area Map**).

Federal public waters of the Kuskokwim River drainage are hereafter referred to as Refuge waters.

### **Customary and Traditional Use Determinations**

Residents of the Kuskokwim Area, except those persons residing on the United States military installations located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB have a customary and traditional use determination for salmon in the Kuskokwim Area. Residents of the communities of Akiachak, Akiak, Aniak, Atmautluak, Bethel, Chuathbaluk, Crooked Creek, Eek, Goodnews Bay, Kasigluk, Kwethluk, Lower Kalskag, Napakiak, Napaskiak, Nunapitchuk, Oscarville, Platinum, Quinhagak, Tuluksak, Tuntutuliak, and Upper Kalskag have a customary and traditional use determination for Rainbow Trout in the Kuskokwim Area. Residents of the Kuskokwim Area, except

those persons residing on the United States military installation located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB have a customary and traditional use determination for Pacific Cod. Residents of the Kuskokwim Area, except those persons residing on the United States military installation located on Cape Newenham, Sparrevohn USAFB, and Tatalina USAFB have a customary and traditional use determination for all other fish other than herring.

### **Regulatory History**

The 2012 Kuskokwim Chinook Salmon run was the smallest on record, and because of a continuous 12-day closure to subsistence fishing during the peak of the run, it resulted in the lowest subsistence harvest on record. The Federal government declared an economic disaster due to low commercial income and very small Chinook Salmon subsistence harvest (Elison et al. 2015). The 2013 Kuskokwim Chinook Salmon escapement was the smallest on record and below the sustainable escapement goal range of 65,000–120,000 fish (Tiernan and Poetter 2015).

In 2014, the Federal in-season manager (hereafter referred to as the Refuge manager) closed Refuge waters, except those waters more than 100 yards upstream from the mouths of some tributaries in which salmon do not spawn (specifically, Kinak, Kialik, Tagayarak, Johnson, and Gweek rivers) to the harvest of Chinook Salmon by all users because of low run-size indicators (Federal Special Action 3-KS-02-14, **Figure 1**). In 2014, the Refuge manager implemented this closure by allowing only the use of gear types in which Chinook Salmon could be live released, and any Chinook Salmon caught had to be immediately released back to the water. However, all subsistence users could use up to 4-inch mesh gillnets in all Refuge waters to target nonsalmon fishes, but for the first time in the Kuskokwim River drainage, they had to be set and could not be drifted. These restrictions were implemented in order to reduce incidental harvests of Chinook Salmon.

The year 2014 was the first year that the Refuge manager prohibited gillnets in the first 100 yards of tributaries in which salmon do not spawn. This was intended to prevent the harvest of Chinook Salmon straying past the mouths of these tributaries. This was necessary because the goal of management was to prevent the harvest of any Chinook Salmon in Refuge waters except through extremely limited opportunities. Prior to 2014, through ADF&G emergency orders, closures to the use of gillnets occurred on a schedule in order to allow passage of Chinook Salmon to middle and upper river tributaries and subsistence users. In contrast, since 2014 extremely limited opportunity to harvest Chinook Salmon has been provided. During closures, restrictions on the use of most nets in the first 100 yards of tributaries in which salmon do not spawn have been necessary to prevent harvest of Chinook Salmon that may have strayed past mouths of these tributaries. In 2015, 2016, and 2017, the Refuge manager closed the mainstem Kuskokwim River and salmon spawning tributaries, specifically the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers and their salmon spawning tributaries, to the use of all gillnets in order to protect Chinook Salmon from harvest because of low run-size indicators (**Figure 1**). Tributaries to these rivers in which salmon *do not* spawn and that remained open were specifically Birch Creek, Akulikutak River, Columbia Creek, and Reindeer Slough. In 2015, up to 4-inch mesh gillnets had to be set, and in contrast to previous years when there were no time restrictions, they could be used only three days per week in 2015 (ADF&G Emergency Order 3-S-WR-04-15). In 2016 and 2017, no

opportunity to use up to 4-inch mesh gillnets was provided in these waters. Up to 6-inch mesh gillnets were allowed more than 100 yards upstream from the mouths of tributaries other than the Eek, Kwethluk, Kasigluk, Kisarialik, Tuluksak, and Aniak rivers and their salmon spawning tributaries (Federal Special Actions 3-KS-04-15, 3-KS-01a-16, 3KS-12-16, 3-KS-03-16, 3-KS-01-17, **Table 1**).

**Table 1.** The effect of Federal special actions closing tributaries in which salmon do not spawn, to the use of gillnets within 100 yards upstream of their confluences with the Kuskokwim River.

Year	Length of closure to the harvest of Chinook Salmon	Federally qualified subsistence users' opportunity to use gillnets within 100 yards upstream of the mouths of tributaries in which salmon do not spawn during closure
2015	May 28–July 2 (36 days)	9 days (up to 4-inch mesh gillnets)
2016	June 3–July 7 (36 days)	8.5 days (up to 6-inch mesh gillnets)
2017	June 12–July 7 (26 days)	1.75 days (up to 6-inch mesh gillnets)

## Biological Background

### Whitefish Species

Six common whitefish species are present in the Kuskokwim River: Inconnu (Sheefish), Broad Whitefish, Humpback Whitefish, Least Cisco, Bering Cisco, and Round Whitefish. Biological data on distribution, migration, and life history that exist for these whitefish species come from directed sampling and radio telemetry studies in the drainage. Some age and length data are available for some of the species in the Kuskokwim River drainage, but is not adequate enough to provide a complete assessment of their populations.

Sheefish, Broad Whitefish, Humpback Whitefish, and Least Cisco are generally distributed from the Kuskokwim River mouth to the Swift Fork of the Kuskokwim River. Bering Cisco appear to have a much more limited distribution, which ranges from the mouth to the South Fork of the Kuskokwim River (Alt 1973, Brown et al. 2012). Based on weirs operated in several of the Kuskokwim River's salmon tributaries, it does not appear as though large whitefish migrations occur in the most salmon spawning streams; however, data is limited to (~ 3 month) windows when the weirs operate.

Sheefish are known to be seasonally migratory, moving towards the marine environment during the winter then returning to the river during the summer and fall to feed and spawn (Alt 1977, Stuby 2010). Most appear to overwinter from lower Holitna River to Kuskokwim Bay (Alt 1977, Stuby 2010). Summer feeding habitats include slow flowing reaches of numerous tributaries in the lower river into the North Fork of the Kuskokwim River. Fall spawning habitats include four primary areas in upper river tributaries: Swift Fork, Big River, Middle Fork, Slow Fork near Tonzona (Alt 1972, 1981, Stuby 2010). Spawning typically occurs between late September and mid-October. Sheefish, as well as the other riverine whitefish species, are broadcast spawners, spreading their eggs over gravel substrate in the fall and larvae emerge after a winter of developing, where they are distributed downstream by river currents to feeding areas (Gates et al. 2017, McPhail and Lindsey 1970).

Riverine populations of Broad Whitefish, Humpback Whitefish, and Least Cisco rear, feed, and overwinter in the lower drainage and in Kuskokwim Bay (Maciolek 1986, Harper et al. 2007, 2008, 2009). Beginning mid to late summer, pre-spawning individuals migrate to feeding habitats to upstream spawning habitats in the gravel substrate reaches of the drainage (for example: Big River, Swift Fork, lower Holitna River, etc.). Spawning for Broad Whitefish typically occurs later than most species of whitefish, usually beginning in early November (Harper et al. 2009). Spawning for Humpback Whitefish usually begins in late September or early October (Stein et al. 1973, Alt 1979, Brown 2006). Migration data are not available for Least Cisco, Bering Cisco, or Round Whitefish populations in the Kuskokwim River drainage. These species generally start migrating toward overwintering grounds by the end of the fall (late October, early November).

### Northern Pike

Northern Pike are native to northern and western Alaska, including the Kuskokwim River drainage. The vast majority of Northern Pike fisheries are well off the road system and far from human settlements. Most populations are considered stable, but localized depletion of abundance can occur (e.g., Harding and Volkmar Lakes in Interior Alaska; ADF&G 2018b).

Northern Pike spawn in the spring of the year soon after the ice goes out. A 25-pound female may contain up to 500,000 eggs, which she deposits in the grassy margins of a lake shore, slow-moving stream, or slough. The eggs drop to the bottom where they stick to grass, rocks, or other debris (ADF&G 2018b).

Because ice-covered, shallow lakes become depleted of oxygen, most Northern Pike overwinter in the deep, slow waters of large rivers. Spring migration from overwintering areas to spawning ground and then to summer feeding areas are generally short distances. Movement during the summer is localized between warm, shallow feeding areas. In Interior Alaska, 12-inch Pike may be two to three years old, while a 25-inch Pike may be six to eight years old. Very large fish (15+ pounds) ages range from 10 to 17 years old (ADF&G 2018b).

Juvenile Northern Pike feed on small crustaceans and insects. Once they reach two inches in length, they begin to eat smaller fish. Adult Northern Pike eat other fish, including Longnose Suckers, Burbot, smaller Northern Pike, and juvenile salmon. Large adults have been known to eat small rodents and waterfowl (ADF&G 2018b).

### Burbot

Burbot are distributed in fresh waters throughout Alaska except Southeast Alaska. Robust populations of Burbot exist in the Kuskokwim River. Most lake populations are also healthy, but overfishing is known to have occurred in road accessible lakes in the interior portions of Alaska. Burbot are relatively long-lived and slow-growing species. In Alaska, Burbot older than 20 years are not uncommon. Burbot typically take from five to seven years to reach 18 inches in length, which coincides with sexual maturity. Burbot spawn under the ice in late winter (February–March) and have been observed to mill

together forming a large writhing ball while spawning. Burbot are broadcast spawners (ADF&G 2018c).

Juvenile Burbot diet consists mainly of insects and other invertebrates. Closer to sexual maturity, Burbot diets switch to almost exclusively fish, where common prey types include whitefish, sculpins, lampreys, other Burbot, and occasionally small rodents (ADF&G 2018c).

### Cultural Knowledge and Traditional Practices

Seventeen communities are situated in the lower and middle Kuskokwim River drainage (**Table 2**). The majority belong to the *Kusquqvagmiut* confederation of villages and *Yup'ik* cultural tradition (Oswalt 1980, Fienup-Riordan 1984). Most non-Natives living in the area reside in Bethel and Aniak, the regional hubs of Federal and State governments, transportation, trade, and services. The population of the area tripled in the 50 years between 1960 and 2010. In 1960, the U.S. Census Bureau's population estimate was 4,023 people. In 2010, it estimated 12,133 people living in 3,482 households were permanent residents of these villages.

**Table 2.** The population of communities in the lower and middle Kuskokwim River drainage, based on U.S. Census Bureau estimates, 1960-2010, (blank cell=0 or not available, ADCCED 2014).

Community	1960	1970	1980	1990	2000	2010	2010 number of households
<b>Lower</b>							
Tuntutuliak	144	158	216	300	370	408	96
Eek	200	186	228	254	280	296	91
Napakiak	190		262	318	353	354	96
Napaskiak	154	259	244	328	390	405	94
Oscarville	51	41	56	57	61	70	15
Kasiqluk	244		342	425	543	569	113
Nunapitchuk	327	526	299	378	466	496	124
Atmautluak			219	258	294	277	63
Bethel	1,258	2,416	3,576	4,674	5,471	6,080	1,896
Kwethluk	325	408	454	558	713	721	192
Akiachak	229	312	438	481	585	627	183
Akiak	187	171	198	285	309	346	90
Tuluksak	137	195	236	358	428	373	92
<b>Subtotal</b>	<b>3,446</b>	<b>4,672</b>	<b>6,768</b>	<b>8,674</b>	<b>10,263</b>	<b>11,022</b>	<b>3,145</b>
<b>Middle</b>							
Lower Kalskaq	122	183	246	291	267	282	75
Kalskaq	147	122	129	172	230	210	60
Aniak	308	205	341	540	572	501	166
Chuathbaluk		94	105	97	119	118	36
<b>Subtotal</b>	<b>577</b>	<b>604</b>	<b>821</b>	<b>1,100</b>	<b>1,188</b>	<b>1,111</b>	<b>337</b>
<b>TOTAL</b>	<b>4,023</b>	<b>5,276</b>	<b>7,589</b>	<b>9,774</b>	<b>11,451</b>	<b>12,133</b>	<b>3,482</b>

Springtime can be difficult for people waiting for salmon runs and “feeling the pinch of dwindling food supplies” (Brown et al. 2013:36). To compensate for low salmon stores in the spring, people rely more heavily on nonsalmon fishes, especially whitefishes (cf. Andrews and Peterson 1983; Brown et al 2012, 2013; Coffing 1991; Coffing et al. 2001; Ikuta et al. 2013, 2014, 2016; Krauthoefer et al. 2007; Oswalt 1959; Ray et al. 2010). Humpback Whitefish, Broad Whitefish, ciscoes, Pike, smelt, Burbot, Alaska Blackfish, char, Arctic Grayling, and Rainbow Trout are harvested for subsistence. People use traps,

hook and line, gillnets, and dip nets to harvest these fishes. Levels of harvest vary from community to community and from year to year depending on availability of fishes and environmental conditions, such as if it is safe to jig through the ice. Dip nets are generally used in the mainstem to harvest smelts and some salmon. People use traps (*taluyak*) to harvest Alaska Blackfish and some Burbot. Many fishes are harvested with hook and line by jigging through the ice and by nets set under the ice. Gillnets are used year round and catch whitefishes, Sheefish, Pike, Burbot, char, grayling and suckers. In some communities, whitefishes are taken primarily with gillnets from open water (Coffing 1991:137). Many whitefishes and Sheefish are harvested with gillnets in open water following spring breakup in the mainstem and tributaries. In late spring and summer, whitefishes, Sheefish, and pike are incidentally caught in commercial and subsistence gillnets during salmon season and are preserved by drying and smoking along with salmon at summer fish camps and by freezing, and are eaten either fresh, boiled, or baked. Other types of fishes taken incidentally in salmon nets are generally eaten fresh.

Research conducted between 2009 and 2013 shows that residents of lower Kuskokwim River drainage communities (Eek to Tuluksak) harvested high levels of nonsalmon fishes, 23–46% of annual harvests of all wild resources in lbs. edible weight. Harvest levels in other resource categories (large land mammals, small land mammals, birds and eggs, marine invertebrates, and berries and plants) except salmon were considerably lower. Nonsalmon fishes harvested by residents of communities in the lower river were primarily Pike and whitefishes and smaller amounts of blackfish, Burbot, and smelt. Few char, trout, or grayling were reported in these harvests (ADF&G 2018d). Typically, communities in the middle Kuskokwim River drainage, from Lower Kalskag to Chuathbaluk, reported harvesting nonsalmon fishes at a lower rate, 5–17% of annual wild food harvests, than lower river communities. The most common nonsalmon fishes harvested in middle river communities were whitefishes. Other fish harvested included smelt, blackfish, and grayling (ADF&G 2018d).

People who reside in the lower and middle Kuskokwim River drainage rely heavily on nonsalmon fishes. In household surveys between 1983 and 2013, almost all households reported using nonsalmon fishes and majorities reported harvesting them. They are widely shared within and between communities, and annual harvests rates of over 200 lbs. edible weight per person have been common (**Table 3**).

### **Harvest History**

People participate in annual postseason house-to-house salmon harvest surveys. Since 2014, they have answered questions concerning harvests of Humpback Whitefish, Broad Whitefish, ciscoes, Sheefish, Burbot, and pike as part of these surveys, and drainage-wide harvests have been estimated (**Table 4**).

Subsistence harvest information is also collected through periodic comprehensive household harvest surveys. The primary purpose of comprehensive household harvest surveys is to document subsistence uses of wild resources. These studies focus on a one-year time period; however, they may not be the “typical” year. In fact, annual variation in subsistence patterns can be significant as subsistence harvesters respond, for example, to the availability of resources or environmental conditions that may

vary considerably from year to year. Additionally, some community harvest estimates from surveys are imprecise ranges. Only by observing large data sets can we begin to see trends.

Estimated harvest levels of Humpback Whitefish, Broad Whitefish, Sheefish, Pike, and Burbot are displayed in **Table 5**, **Table 6**, **Table 7**, **Table 8**, and **Table 9**. These are the fishes that are available for harvest in June, and when harvested in June, are taken primarily with gillnets, which are the focus of this analysis.

**Table 3.** The harvest and use of nonsalmon fishes by communities situated in the lower and middle Kuskokwim River drainage, based on household harvest surveys (blank cell=question not asked, Source: ADF&G 2018d).

Community	Study year	Households using nonsalmon fishes	Households attempting to harvest nonsalmon fishes	Households harvesting nonsalmon fishes	Households giving away nonsalmon fishes	Households receiving nonsalmon fishes	Pounds harvested per person
Akiachak	1998	99%	96%	95%	70%	73%	248
Akiak	2010	83%	73%	71%	43%	46%	209
Aniak	2001	91%	74%	65%	25%	72%	37
Aniak	2009	70%	70%	51%	27%	46%	50
Bethel	2012	76%	55%	54%	37%	60%	31
Chuathbaluk	2001	85%	65%	65%	12%	38%	175
Chuathbaluk	2009	80%	80%	57%	27%	53%	20
Eek	2005	91%	87%	87%	50%	15%	550
Eek	2013	88%	72%	67%	55%	63%	61
Kalskag	2009	90%	90%	69%	52%	63%	48
Kwethluk	1986		87%	87%	64%	72%	269
Kwethluk	2010	88%	75%	75%	41%	61%	84
Lower Kalskag	2009	89%	89%	67%	33%	70%	32
Napakiak	2011	82%	64%	64%	46%	54%	151
Napaskiak	2011	88%	68%	66%	41%	63%	105
Nunapitchuk	1983			100%			365
Nunapitchuk	2005	65%	61%	65%	39%	30%	812
Oscarville	2010	100%	100%	100%	67%	75%	169
Tuluksak	2010	91%	81%	79%	49%	60%	87
Tuntutuliak	2013	97%	78%	76%	49%	76%	98

**Table 4.** The estimated harvest of nonsalmon fishes, in numbers of fish, for subsistence in lower and middle Kuskokwim River drainage communities, based on annual postseason household surveys, 2014 and 2015 (CI 95%, the reported harvest is not available) (Source: Sheldon et al. 2016a and 2016b).

Year	Kuskokwim drainage	Humpback whitefish harvest	Broad whitefish harvest	Cisco harvest	Sheefish harvest	Burbot harvest	Pike harvest
2014	Lower	40,403 (±5,126)	15,701 (±2,787)	7,165 (±2,600)	4,390 (±1,591)	21,529 (±7,383)	38,072 (±4,949)
	Middle	1,638 (±426)	1,741 (±355)	1,619 (±699)	744 (±221)	466 (±250)	941 (±437)
2015	Lower	26,618 (±6,453)	19,437 (±2,949)	8,495 (±4,340)	3,279 (±1,050)	17,114 (±3,758)	62,845 (±8,750)
	Middle	1,743 (±1,064)	1,928 (±1,884)	6,257 (±8,799)	359 (±86)	414 (±218)	448 (±210)

**Table 5.** The estimated harvest, in numbers of fish, of Humpback Whitefish by communities in the lower and middle Kuskokwim River drainage, based on household harvest surveys (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source ADF&G 2018d).

Community	Study year	Humpback Whitefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	7,233	5,588	8,878
Akiak	2010	7,089	5,018	13,197
Aniak	2009	919	762	1,413
Bethel	2012	10,427	10,423	10,430
Chuathbaluk	2009	78	65	113
EEK	2005	1,726	1,683	1,789
EEK	2013	674	672	675
Kalskag	2009	1,091	873	1,446
Kwethluk	2010	8,375	4,849	14,751
Lower Kalskag	2009	1,109	932	1,324
Napakiak	2011	2,591	2,581	2,601
Nunapitchuk	2005	3,373	4,157	4,157
Oscarville	2010	1,430	1,226	2,392
Tuluksak	2010	2,687	2,124	3,641
Tuntutuliak	2005	4,334	3,425	4,661
Tuntutuliak	2013	2,496	2,491	2,501

**Current Events**

Proposals FP19-08, FP19-09, and FP19-10 request the Board to adopt into regulation actions that have been previously accomplished by special actions issued to manage the harvest of Chinook Salmon in Refuge waters since 2016. Proposals FP19-08 and FP19-09 deal with the timing of gillnet restrictions and how harvest opportunity will be managed during gillnet restrictions, while FP19-10 deals with what parts of Refuge waters remain open during gillnet restrictions. All of these requests deal with specifics



about timing and manner of the fishery closures and harvest opportunities, and the location of harvest opportunities during closures. These are management topics that could benefit from a more coordinated and collaborative effort to develop permanent Federal regulations related to Chinook Salmon on the Kuskokwim River. Regardless of whether or not Proposal FP17-05 is approved, the adoption of any of these proposals would require the Federal in-season manager to continue to issue emergency special actions in order to adjust for in-season management in the absence of a comprehensive plan for Federal subsistence fisheries management.

**Table 6.** The estimated harvest, in numbers of fish, of Broad Whitefish by communities in the lower and middle Kuskokwim River drainage, based on household harvest surveys (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source ADF&G 2018d).

Community	Study year	Broad Whitefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	4,168	3,145	5,191
Akiak	2010	1,232	872	1,742
Aniak	2009	599	497	755
Bethel	2012	5,633	5,631	5,635
Chuathbaluk	2009	125	104	187
Eek	2005	532	519	572
Eek	2013	333	332	334
Kalskag	2009	703	563	878
Kwethluk	2010	865	533	1,197
Lower Kalskag	2009	728	612	920
Napakiak	2011	1,799	1,791	1,806
Napaskiak	2011	1,505	1,493	1,517
Nunapitchuk	2005	2,321	3,026	3,026
Oscarville	2010	53	45	78
Tuluksak	2010	738	525	951
Tuntutuliak	2005	1,975	1,561	2,104
Tuntutuliak	2013	1,934	1,930	1,939

### Other Alternatives Considered

If adopted, Proposal FP17-05 in combination with any of the other Kuskokwim area proposals submitted during this cycle (FP19-08, FP19-09, and FP19-10) would affect Federal subsistence management for the Kuskokwim Area. A potential alternative for consideration would be to defer all of the Kuskokwim area proposals (FP17-05, FP19-08, FP19-09, and FP19-10) and direct OSM staff to facilitate the development of a collaborative Federal subsistence management plan that would outline strategies for management of Federal subsistence fisheries in the Kuskokwim Area. The approaches suggested in the current fisheries regulatory proposals for the Kuskokwim Area are valid approaches to fisheries management. However, it may be more effective to develop a full suite of permanent regulations through coordinated efforts with the parties identified in the Kuskokwim Area delegation of authority letter. This potential alternative would provide a mechanism to allow a larger group involving

all entities the time to submit a comprehensive proposal or recommended plan that would become a Federal subsistence fisheries management plan for the Kuskokwim area.

**Table 7.** The estimated harvest, in numbers of fish, of Sheefish by communities in the lower and middle Kuskokwim River drainage, based on household harvest surveys (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source ADF&G 2018d).

Community	Study year	Sheefish estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	205	149	262
Akiak	2010	2,036	1,441	3,337
Aniak	2001	701	544	859
Aniak	2009	667	553	892
Bethel	2012	1,854	1,853	1,854
Chuathbaluk	2001	187	152	245
Chuathbaluk	2009	119	99	142
Eek	2005	235	230	270
Eek	2013	37	36	37
Kalskag	2009	453	363	626
Kwethluk	1986	2,119	2,119	2,119
Kwethluk	2010	253	152	384
Lower Kalskag	2009	242	203	304
Napakiak	2011	168	167	170
Napaskiak	2011	271	269	273
Nunapitchuk	1983	12	3	27
Nunapitchuk	2005	53	31	75
Oscarville	2010	36	31	65
Tuluksak	2010	271	2	334
Tuntutuliak	2005	372	294	432
Tuntutuliak	2013	356	353	357

### Effects of the Proposal

If the proposal was adopted, then during closures to the harvest of salmon in Refuge waters, the common practice of the Refuge manager of closing by special action the first 100 yards of Kuskokwim River tributaries in which salmon do not spawn, to the use of gillnets would become a regulation. There would be no effect on subsistence users, nonsubsistence users, or fish. The Refuge manager would be required to provide additional justification in order to increase the closure to the use of gillnets in a tributary in which salmon do not spawn, beyond 100 yards of the confluence with the Kuskokwim River.

If the proposal was not adopted, then during closures to the harvest of salmon in Refuge waters, the Refuge manager would likely continue to close by special action the first 100 yards of Kuskokwim River tributaries in which salmon do not spawn, to the use of gillnets. There would be no effect on subsistence users, nonsubsistence users, or fish.

**Table 8.** The estimated harvest, in numbers of fish, of Northern Pike by communities in the lower and middle Kuskokwim River drainage, based on household harvest surveys (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source ADF&G 2018d).

Community	Study year	Pike estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	4,400	3,811	4,988
Akiak	2010	2,220	1,566	2,875
Aniak	2001	503	420	586
Aniak	2009	342	284	414
Bethel	2012	12,804	12,802	12,807
Chuathbaluk	2001	81	66	140
Chuathbaluk	2009	57	48	84
Eek	2005	5,520	5,382	5,632
Eek	2013	1,436	1,431	1,441
Kalskag	2009	230	184	299
Kwethluk	1986	9,043	9,043	9,043
Kwethluk	2010	5,361	3,794	6,929
Lower Kalskag	2009	335	281	403
Napakiak	2011	5,665	5,651	5,679
Napaskiak	2011	3,296	3,286	3,305
Nunapitchuk	1983	26,925	17,295	36,555
Nunapitchuk	2005	14,816	12,742	16,989
Oscarville	2010	1,096	774	1,417
Tuluksak	2010	2,622	2,066	3,177
Tuntutuliak	2005	8,679	6,858	9,174
Tuntutuliak	2013	2,685	2,679	2,692

## OSM CONCLUSION

**Support** Proposal FP19-10 **with modification** to clarify that nonsalmon tributaries would be identified by the Federal in-season manager in special actions.

The modified regulation should read:

### § \_\_.27(e)(4) Kuskokwim Area

*(xvii) Tributaries of the Kuskokwim River in which salmon do not spawn will remain open to the use of gillnets. Gillnets can be used more than 100 yards upstream from the confluence of each tributary in which salmon do not spawn and the Kuskokwim River. Tributaries to which this applies will be identified in special actions that prohibit the use of gillnets.*

**Table 9.** The estimated harvest, in numbers of fish, of Burbot by communities in the lower and middle Kuskokwim River drainage, based on household harvest surveys (CI 95%, lower harvest estimate is the lower bound of the estimate or the reported harvest, whichever is larger) (Source ADF&G 2018d).

Community	Study year	Burbot estimated harvest	Lower harvest estimate	Upper harvest estimate
Akiachak	1998	5,090	4,545	5,635
Akiak	2010	10,076	6,912	15,712
Aniak	2001	1,258	938	1,831
Aniak	2009	5,131	4,256	9,088
Bethel	2012	6,430	6,428	6,432
Chuathbaluk	2001	3,915	3,181	8,203
Chuathbaluk	2009	77	64	127
Eek	2005	746	728	770
Eek	2013	1,796	1,790	1,802
Kalskag	2009	50	40	75
Kwethluk	1986	7,497	7,497	7,497
Kwethluk	2010	808	586	1,029
Lower Kalskag	2009	2	2	4
Napakiak	2011	732	728	735
Napaskiak	2011	922	919	924
Nunapitchuk	1983	1,342	326	2,477
Nunapitchuk	2005	115	159	159
Oscarville	2010	201	172	264
Tuluksak	2010	2,675	2,115	3,787
Tuntutuliak	2005	1,330	1,051	1,436
Tuntutuliak	2013	1,717	1,712	1,722

### Justification

Before 2014, closures to the use of gillnets over 4-inch mesh size occurred on a schedule of three days a week by ADF&G emergency orders in order to allow passage of more Chinook Salmon to middle and upper river tributaries and subsistence users (the exception was 2012 when 12 days of continuous closures occurred, the longest ever at that time). The use of up to 4-inch mesh gillnets remained legal throughout the drainage to allow harvest of nonsalmon fishes.

In contrast, since 2014 the Refuge manager has provided extremely limited opportunities to harvest Chinook Salmon in Refuge waters because of low run-size indicators. The use of all gillnets, from early June to early July, has been prohibited in Refuge waters except past 100 yards from the mouths of tributaries in which salmon do not spawn. Gillnet fishing remained legal in these tributaries so that Federally qualified subsistence users could continue to harvest nonsalmon fishes. One-hundred yards have been deemed adequate (until further scientific data is collected) to prevent the harvest of Chinook Salmon that have strayed past the mouths of these tributaries.

The harvest and use of nonsalmon fishes have been important to Federally qualified subsistence users, and subsistence users rely on nonsalmon fishes harvested year round. Many whitefish and Sheefish are harvested with gillnets in open water following spring breakup in the Kuskokwim River mainstem and

tributaries. In late spring and summer, whitefishes, Sheefish, and Pike have often been incidentally caught in commercial and subsistence gillnets during salmon season, and some have been preserved by drying and smoking along with salmon at summer fish camps.

Since 2014, it is likely that some Federally qualified subsistence users have increased their efforts to harvest nonsalmon fishes because subsistence users' opportunity to harvest Chinook Salmon in the Kuskokwim River drainage has been significantly reduced. While effort to harvest nonsalmon fishes in most Refuge waters has been legal using any gear type that allows live release of Chinook Salmon, the use of gillnets has only been legal past 100 yards from the mouths of tributaries in which salmon do not spawn. The Refuge manager has continued to allow the use of gillnets in these tributaries so that subsistence users may continue to harvest nonsalmon fishes in an efficient manner in areas where salmon are shown not to migrate, thereby continuing to protect Chinook Salmon from harvest.

Therefore, the ability for Federally qualified subsistence users to continue to use gillnets in tributaries in which salmon do not spawn more than 100 yards upstream from their confluences with the Kuskokwim River should be required and in Federal regulations. The Refuge manager will have to provide adequate justification for a special action to increase the closure to beyond 100 yards from the confluence with the Kuskokwim River.

Although specific nonsalmon spawning tributaries will not be listed in Federal regulations, the modification to the proposal would compel the Refuge manager to specify which non-salmon spawning tributaries are excluded from closures to gillnets; thus, the proposed modification keeps the proponents original intent and keeps Federal regulation from being vague since no complete list of nonsalmon spawning tributaries in the Kuskokwim area exists.

This proposed change does not present any conservation issues for nonsalmon species, such as whitefishes, Sheefish, Northern Pike, and Burbot. However, if conservation issues do arise, the Federal in-season manager would still have the authority to restrict gillnet use in tributaries in which salmon do not spawn, if information became available to indicate a problem. There is little to no harvest information on Chinook Salmon harvest within these tributaries. The 100-yard barrier does prevent subsistence users from straddling the confluence of the tributaries with the main-stem Kuskokwim River where more Chinook Salmon may be at risk to harvest.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

**Support FP19-10.** The Council supported subsistence opportunity to fish on non-salmon bearing tributaries as these rivers have traditionally been very important for local communities for subsistence fishing for many non-salmon species. The Council discussed at length the concerns for catching salmon that may come up these non-spawning rivers and Council members who fish in those areas note that few salmon are caught. A member of the public participating in the Y-K Delta RAC meeting reported that they heard rumors about being able to catch a lot of salmon in these non-salmon spawning tributaries so he went and tried it out himself with various sized nets and did not catch salmon. Council members appreciated hearing these other accounts and felt this helped to confirm that this proposal would not cause a conservation concern for Chinook Salmon. Council members stressed that especially in times of Chinook conservation closures these non-salmon tributaries are extremely important to be able to harvest some fish and are able to get large Humpback Whitefish and Broad Whitefish, Burbot, and pike. A Council member from the tundra village of Tuntutuliak noted that historically they used to stay on these non-salmon spawning rivers year round to fish and they have always been traditionally very important for the harvest of nonsalmon fish for the communities' subsistence needs.

### Western Interior Subsistence Regional Advisory Council

**Support FP19-10 as modified by OSM.** The OSM modification would allow Federal managers to permit fishing with gill nets in non-salmon streams more than 100 yards upstream from their confluence with the Kuskokwim River. The Council shared concerns about larger tides bringing salmon into these drainages and was assured that managers have the ability to change zones if there were a conservation concern.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee (ISC) supports Fisheries Proposal FP19-10 with modified regulatory language to clarify the original intent of the proponent's proposal. The proponent is seeking a Federal regulation to ensure that the closure to the use of gillnets by Federally qualified subsistence users will not increase beyond 100 yards of the mouths of all non-salmon spawning tributaries.

The modified regulatory language should read:

### § \_\_.27(e)(4) Kuskokwim Area

*(xvii) All tributaries not expressly closed by order of the Federal in-season manager or Federal Subsistence Board remain open to the use of gillnets more than 100 yards upstream from their confluence with the Kuskokwim River.*

The regulatory language suggested by the ISC clarifies the original intent of the proponent's proposal and aligns with the desired regulatory changes supported and recommended by the Western Interior Alaska (WI) and Yukon-Kuskokwim Delta (YKD) Subsistence Regional Advisory Councils. Although the WI Council recommended support for the OSM modified regulatory language, the Council did not state the need to identify non-salmon spawning tributaries in their justification.

The OSM analysis identifies that "no complete list of non-salmon spawning tributaries in the Kuskokwim area exists," therefore the OSM modification requirement to list non-salmon spawning tributaries in special actions would be very difficult and unnecessarily complex. The rivers and/or waters closed to salmon harvest or the use of certain gear types are clearly articulated within special actions issued in the current process, by default. Therefore, adoption of the ISC modified regulation would result in all other areas remaining open to the harvest of non-salmon subsistence species as intended by the proponent. It is important to note that the "100 yard" restriction language has been the standard language used in special actions issued by the Federal in season manager for the past several years. Creating this regulation does not restrict the Federal in season manager from changing the 100 yard distance in the future, if new information justifies a change.

#### **ALASKA DEPARTMENT OF FISH AND GAME COMMENTS**

**Introduction:** Since 2010, the Kuskokwim River has experienced poor Chinook salmon runs. Total run estimates for Kuskokwim River Chinook salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved. In 2014 and 2015, the subsistence fishery was closed at the beginning of the Chinook salmon run by Emergency Order in anticipation of low runs. Specific management actions were taken to close the subsistence and sport Chinook salmon fisheries with the intent of reducing Chinook salmon harvest to a level that would allow for achievement of escapement goals. Due to these management actions, the drainagewide escapement goal has been met since 2014 and the majority of tributary escapement goals have been achieved in recent years. Additionally, USFWS enacted special actions to limit the harvest of Chinook salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the Alaska Board of Fisheries in 2013 found the following amount of Chinook salmon is reasonably necessary for subsistence uses, range 67,200–109,800 fish. The subsistence harvest of Chinook salmon has fallen below the lower end of this range since 2011 in an effort to achieve escapement goals.

The Kuskokwim Subsistence Salmon Panel was established at the Alaska Board of Fisheries (BOF) work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel was composed of Board of Fisheries members as well as a broad cross-section of Kuskokwim River residents with longstanding traditional ecological knowledge. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the BOF. Subsequently, in January 2016, the BOF met in Fairbanks to consider pro-

posals concerning the Arctic-Yukon-Kuskokwim areas. An early season Chinook salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group of Kuskokwim River residents who were in attendance. The BOF adopted a regulation that would annually suspend directed subsistence fishing for Chinook salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equability of harvest opportunity. This “front end closure” also conserves fish for escapement purposes. In 2017, the BOF provided the department additional guidance about fishing for non-salmon fish during the closure and provided at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the closure. The board’s intent was to allow subsistence fishers the opportunity to harvest species other than salmon (e.g., sheefish, whitefish, burbot, and northern pike) during the regulatory front end closure.

Since the introduction of the front end closure in 2016, the Chinook salmon subsistence fishery has been closed beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species, at a time when there were little to no salmon present that early in the season. After the June 11 end date of the early season closure, the fishery is was managed by emergency order authority (state waters upstream of Aniak) and Federal Special Actions (federal water down stream of Aniak), with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) and based on in-season run indicators.

**Impact on Subsistence Users:** If this proposal were adopted, people fishing in the lower river would have some additional opportunity. There is potential for fish headed to the upper river to be harvested down river. In 2016 and 2017, for example, subsistence users would have had 12 days of additional opportunity. In 2018, subsistence users would have had 7 days of additional opportunity. Additional harvest of Chinook salmon in the lower river may impact abundance in the upper river.

**Impact on Other Users:** If adopted, this would not have a significant impact on other users.

#### **Opportunity Provided by State:**

**State customary and traditional use findings:** The Alaska Board of Fisheries has made a positive customary and traditional use finding for all finfish in the Kuskokwim Area.

**Amounts Reasonably Necessary for Subsistence:** Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has made the following salmon ANS findings for the Kuskokwim River drainage:

67,200–109,800 king salmon

41,200–116,400 chum salmon

32,200–58,700 sockeye salmon

27,400–57,600 coho salmon

500–2,000 pink salmon

**5 AAC 01.270. Lawful gear and gear specifications and operation.**

(n) Notwithstanding (b) and (j) of this section, during times when the commissioner determines that it is necessary for the conservation of king salmon, the commissioner, by emergency order, may close the fishing season in any portion of the Kuskokwim Area and immediately reopen the season in that portion during which one or more of the following gear limitations may be implemented:

(1) for gillnets;

(A) a gillnet mesh size may not exceed six inches;

(B) a gillnet mesh size may not exceed four inches and the gillnet may only be operated as a set gillnet; no part of a set gillnet may be more than 100 feet from the ordinary high water mark;

(C) a gillnet may not exceed the length specified by the commissioner in the emergency order, except that a longer gillnet may be used if no more than the specified length of the gillnet is in a fishing condition and the remainder of the gillnet is tied up or secured so that it is not in the water in a fishing condition;

**5 AAC 07.365. Kuskokwim River Salmon Management Plan**

(a) The purpose of this management plan is to provide guidelines for management of the Kuskokwim River salmon fisheries that result in the sustained yield of salmon stocks large enough to meet escapement goals, amounts reasonably necessary for subsistence uses, and for nonsubsistence fisheries. The department shall use the best available data, including pre-season and in-season run projections, test fishing indices, age and sex composition, harvest reports, passage escapement estimates, and recognized uncertainty, to assess run abundance for the purpose of implementing this plan.

(b) It is the intent of the Board of Fisheries that the Kuskokwim River salmon stocks shall be managed in a conservative manner consistent with the Policy for the Management of Sustainable Salmon Fisheries under 5 AAC 39.222 to meet escapement goals and the subsistence priority.

(c) In the king salmon fishery,

(1) when the projected escapement of king salmon is below the drainagewide escapement goal range, the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries;

(2) when the projected escapement of king salmon is within the drainagewide escapement goal range, the commissioner shall open and close fishing periods, by emergency order, as follows:

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, to the extent practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs;

(B) after June 11, fishing may be opened for commercial and sport fisheries to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(2)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high-water mark;

(3) when the projected escapement of king salmon exceeds the drainagewide escapement goal range,

(A) the commissioner shall close, by emergency order, the commercial, sport, and subsistence king salmon fisheries, and after June 11, the directed subsistence king salmon fishery will be open seven days per week; and

(B) after June 11, the commercial and sport fisheries will be managed to provide harvest opportunity on surplus king salmon in excess of escapement and subsistence needs;

(C) notwithstanding (c)(3)(A) of this section, before June 12 the commissioner shall open, by emergency order, at least one subsistence fishing period per week with four-inch or smaller mesh gillnets; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high-water mark;

Special instructions: *none*.

**Conservation Issues:** Since 2011 the Kuskokwim River has experienced poor Chinook salmon runs. This proposal may lead to additional harvest of Chinook salmon.

**Enforcement Issues:** The department does not foresee any enforcement issues if this proposal were adopted.

**Recommendation:** ADF&G is **NEUTRAL** on this proposal. The Board of Fisheries adopted the front-end closure after hearing directly from users of the Kuskokwim Area at various meetings about how to have more equitable harvest throughout the drainage.

If passed, this proposal would allow subsistence fishing with gillnets to occur until June 1, with the only restriction being a 6-inch or less mesh gillnet. The department, as well as the Federal Inseason Manager, already has the authority within current regulatory structure to determine the beginning date of the front-end closure. Maintaining flexibility with the start date of the front-end closure would be beneficial if total run sizes of Kuskokwim River Chinook salmon increase or drop below current levels. However, in most circumstances the number of Chinook salmon present prior to June 1 is small and any harvest that occurs would not greatly impact overall escapement.

The BOF will meet January 15–19, 2019, in Anchorage, to consider proposals for the Arctic-Yukon-Kuskokwim area. BOF proposals 110, 113, 114, 115, 116, and 117 are especially relevant to this proposal. ADF&G may modify these preliminary comments to reflect any BOF actions made.

**FP19–11 Executive Summary**

<p><b>General Description</b></p>	<p>Proposal FP19-11 requests the Federal Subsistence Board revise section §____.27(e)(5)(vii)(C) of the CFR that authorizes the take of salmon without a permit in Lake Clark and its tributaries. This section currently allows use of snagging (by handline or rod and reel), spear, bow and arrow, or capture by bare hand for the take of salmon in these areas. The requested change is to add Sixmile Lake and its tributaries to the regulation, and add rod and reel as a specified allowable methods and means. <i>Submitted by: Bristol Bay Native Association on behalf of the Nondalton Tribal Council.</i></p>
<p><b>Proposed Regulation</b></p>	<p><b>§____.27(e)(5) Bristol Bay Area – Salmon</b></p> <p><i>(v) You may not subsistence fish with nets in the Tazimina River and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14.</i></p> <p>* * * *</p> <p><i>(vii) Outside the boundaries of any district, unless otherwise specified, you may take salmon by set gillnet only.</i></p> <p>* * * *</p> <p><i>(C) You may also take salmon without a permit in Lake Clark, <b>Sixmile Lake</b>, and <del>its</del><b>their</b> tributaries by snagging (by handline or rod and reel), using a spear, bow and arrow, <b>rod and reel</b>, or capturing by bare hand.</i></p> <p>* * * *</p>

FP19–11 Executive Summary	
<b>OSM Conclusion</b>	<p><b>Support with modification</b> to specify limits for the Sixmile Lake tributaries to within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve, unless otherwise prohibited.</p> <p>The modified language should read:</p> <p><b>§ __.27(e)(5) Bristol Bay Area</b></p> <p><i>(v) You may not subsistence fish with nets in the Tazimina River and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14.</i></p> <p style="text-align: center;">* * * *</p> <p><i>(C) You may also take salmon without a permit in Sixmile Lake and its tributaries within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve unless otherwise prohibited, and Lake Clark and its tributaries, by snagging (by handline or rod and reel), using a spear, bow and arrow, <b>rod and reel</b>, or capturing by bare hand.</i></p>
<b>Bristol Bay Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Take no action</b>
<b>Written Public Comments</b>	<b>1 Support</b>



**STAFF ANALYSIS**  
**FP19-11**

**ISSUES**

Proposal FP19-11, submitted by the Bristol Bay Native Association on behalf of the Nondalton Tribal Council, requests the Federal Subsistence Board (Board) revise section § \_\_.27(e)(5)(vii)(C) of the CFR that authorizes the take of salmon without a permit in Lake Clark and its tributaries. This section currently allows use of snagging (by handline or rod and reel), spear, bow and arrow, or capture by bare hand for the take of salmon in these areas. The requested change is to add Sixmile Lake and its tributaries to the regulation, and add rod and reel as a specified allowable methods and means.

**DISCUSSION**

According to the proponent, the intents of the proposal are to include Sixmile Lake in this specific regulation for the harvest of salmon, and add rod and reel as an additional allowable methods and means in this regulation. The proponents notes that the waters of Sixmile Lake are within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve, and the regulations should extend to them. They also identify that rod and reel is currently only allowed for snagging, which is defined as hooking or attempting to hook a fish elsewhere than in the mouth. The proponent further clarified that past interactions between state law enforcement and subsistence fishers on Sixmile Lake led to local concerns regarding legal harvest methods and was an impetus behind the submission of the proposal.

The intent of the proposal was clarified with the proponent on June 25, 2018. The proponent noted that the proposal was submitted on behalf of the Nondalton Tribal Council, which wanted rod and reel to be legal subsistence harvest method. They mentioned that Federal subsistence management regulations only allow this gear type in the area for the harvest of Rainbow Trout, that rod and reel is a documented historic subsistence gear type for salmon in this area, and that a similar proposal was submitted for consideration with the Alaska Board of Fisheries.

**Existing Federal Regulation**

**§ \_\_.25 *Subsistence taking of fish, wildlife, and shellfish: general regulations***

*(a) Definitions. The following definitions apply to all regulations contained in this part:*

*Rod and reel means either a device upon which a line is stored on a fixed or revolving spool and is deployed through guides mounted on a flexible pole, or a line that is attached to a pole. In either case, bait or an artificial fly or lure is used as terminal tackle. This definition does not include the use of rod and reel gear for snagging.*

*Snagging means hooking or attempting to hook a fish elsewhere than in the mouth.*

**§ \_\_.27(e)(5) Bristol Bay Area**

*(v) You may not subsistence fish with nets in the Tazimina River and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14.*

\* \* \* \*

*(vii) Outside the boundaries of any district, unless otherwise specified, you may take salmon by set gillnet only.*

*(A) You may also take salmon by spear in the Togiak River, excluding its tributaries.*

*(B) You may also use drift gillnets not greater than 10 fathoms in length to take salmon in the Togiak River in the first two river miles upstream from the mouth of the Togiak River to the ADF&G regulatory markers.*

*(C) You may also take salmon without a permit in Lake Clark and its tributaries by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand.*

\* \* \* \*

*(xvii) You may take rainbow trout only by rod and reel or jigging gear. Rainbow trout daily harvest and possession limits are two per day/two in possession with no size limit from April 10 through October 31 and five per day/five in possession with no size limit from November 1 through April 9.*

**Proposed Federal Regulation**

**§ \_\_.27(e)(5) Bristol Bay Area**

*(v) You may not subsistence fish with nets in the Tazimina River and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14.*

\* \* \* \*

*(vii) Outside the boundaries of any district, unless otherwise specified, you may take salmon by*

*set gillnet only.*

\* \* \* \*

*(C) You may also take salmon without a permit in Lake Clark, Sixmile Lake, and ~~its~~ their tributaries by snagging (by handline or rod and reel), using a spear, bow and arrow, rod and reel, or capturing by bare hand.*

\* \* \* \*

*(xvii) You may take rainbow trout only by rod and reel or jigging gear. Rainbow trout daily harvest and possession limits are two per day/two in possession with no size limit from April 10 through October 31 and five per day/five in possession with no size limit from November 1 through April 9.*

## **Existing State Regulation**

### **5 AAC 01.005. Subsistence fishing permitted**

*Finfish other than salmon, rainbow trout, and steelhead trout may be taken for subsistence purposes at any time in any area of the state by any method unless restricted by the subsistence fishing regulations in this chapter. Salmon may be taken for subsistence purposes only as provided in this chapter.*

### **5 AAC 01.310. Fishing seasons and periods**

*(a) Unless restricted in this section and 5 AAC 01.325, or unless restricted under the terms of a subsistence fishing permit, fish, other than rainbow trout, may be taken at any time in the Bristol Bay Area.*

### **5 AAC 01.320. Lawful gear and gear specifications**

*(b) Outside the boundaries of any district, salmon may be taken by set gillnet, except that salmon may also be taken as follows:*

*(5) by spear in Lake Clark, excluding its tributaries;*

*(6) by gillnet and beach seine in Iliamna Lake, Six Mile Lake, and Lake Clark*

*(l) Subsistence fishing by the use of a hook and line attached to a pole is prohibited, except when fishing through the ice.*

**5 AAC 01.330. Subsistence fishing permits**

(a) *Salmon may only be taken under authority of a subsistence fishing permit.\**

(b) *Repealed 4/15/81.*

(c) *Only one subsistence fishing permit may be issued to each household per year.*

**5 AAC 01.325. Waters closed to subsistence fishing**

(c) *From September 1 through June 14, subsistence fishing with a net is prohibited in the following waters and within one-fourth mile of the terminus of those waters:*

(9) *Tazimina River;*

\*A copy of the current State subsistence permit can be found in **Appendix 1**.

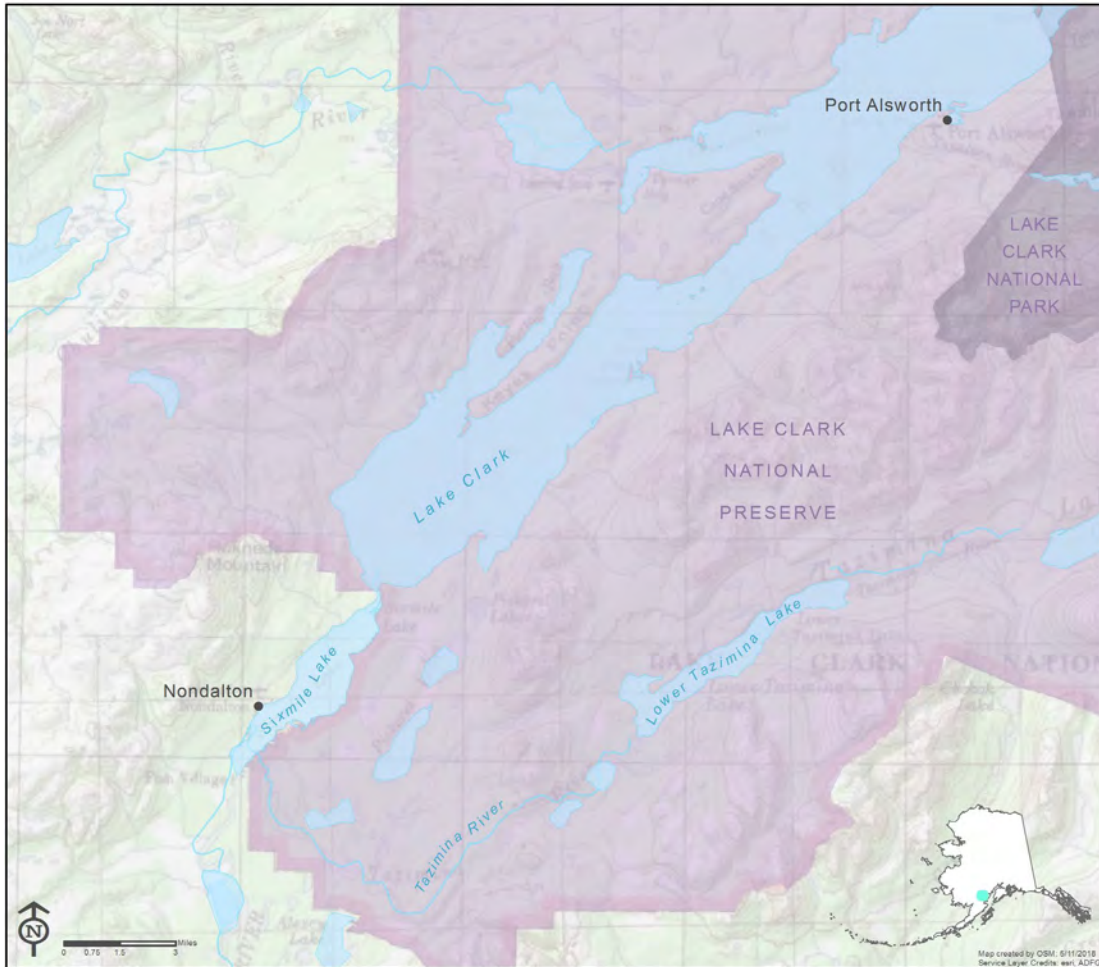
**Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. Federal public waters comprise those waters within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve (**Figure 1**).

**Customary and Traditional Use Determinations**

Rural residents of the Kvichak/Iliamna-Lake Clark drainage have a customary and traditional use determination for salmon and freshwater fish in the Naknek-Kvichak District–Kvichak/Iliamna–Lake Clark drainage.

Under the guidelines of Alaska National Interest Lands Conservation Act (ANILCA), National Park Service regulations identify qualified local rural subsistence users in National Parks and National Monuments by: (1) identifying Resident Zone Communities, which includes a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and (2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the Resident Zone Communities who have a personal or family history of subsistence use within the park or monument.



**Figure 1.** Lake Clark, Sixmile Lake, and the Newhalen River drainage.

### Regulatory History

The Board adopted the current regulatory framework for the Bristol Bay Fishery Management Area from existing State subsistence regulations in 1999. The closure to fishing with nets in the Tazimina River (a tributary of Sixmile Lake) and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14, was incorporated into Federal subsistence management regulations at this time.

During the 2007 regulatory cycle, the Lake Clark National Park Subsistence Resource Commission (Lake Clark SRC) submitted proposal FP07-06 to add the use of snagging (with rod and reel), spear or arrow, and hand capture be permitted as legal methods and gear type for use in Lake Clark by Federally qualified subsistence users of Nondalton, Port Alsworth, Pedro Bay, Iliamna, and Newhalen (OSM 2007a). The Board adopted proposal FP07-06, with modification to allow the take of salmon in Lake Clark and its tributaries by snagging (by handline or rod and reel), using a spear, bow and arrow, and capturing by bare hand (FSB 2007a).

During that same regulatory cycle, the Lake Clark SRC submitted a separate proposal (FP07-07) requesting that beach seine be added as a legal gear type for use in Lake Clark and tributaries by the same Federally qualified users as for FP7-06 (OSM 2007a). The Board adopted the proposal with a modification recommended by the Bristol Bay Subsistence Regional Advisory Council (Council) to exclude tributaries of Lake Clark and to limit the length of the net to 25 fathoms (FSB 2007a). The Board also discussed whether Sixmile Lake and its tributaries could be included in the proposal. Concerns were raised during Board discussion of whether Sixmile Lake and all of its tributaries were considered Federal public waters as not all of them were within the boundary of Lake Clark National Park and Preserve. The Board moved forward on the proposal without including Sixmile Lake, with the intent of bringing up the topic again at a future meeting following clarification of the jurisdiction issue. During its May 2007 meeting, the Board was notified that the Solicitor's Office did find Federal jurisdiction for Sixmile Lake as it is adjacent to the Park boundary. However, the Board took no further action on adding these waters to the beach seine regulation (FSB 2007b).

For the 2008 regulatory cycle, the Lake Clark SRC submitted Proposal FP08-12 that requested the addition of traditional small scale subsistence fish traps and weirs made of wooden stakes to the list of legal subsistence fishing gear for tributaries of Lake Clark (OSM 2007b). The Board adopted the proposal with modification to specify that fyke net and lead could be used to target fish other than Rainbow Trout, and to limit the scope to the tributaries of Lake Clark and the tributaries of Sixmile Lake within and adjacent to Lake Clark National Park and Preserve (FSB 2007c). They further specified that the fyke net trap had to be constructed of wood materials, and that a Federal permit was required.

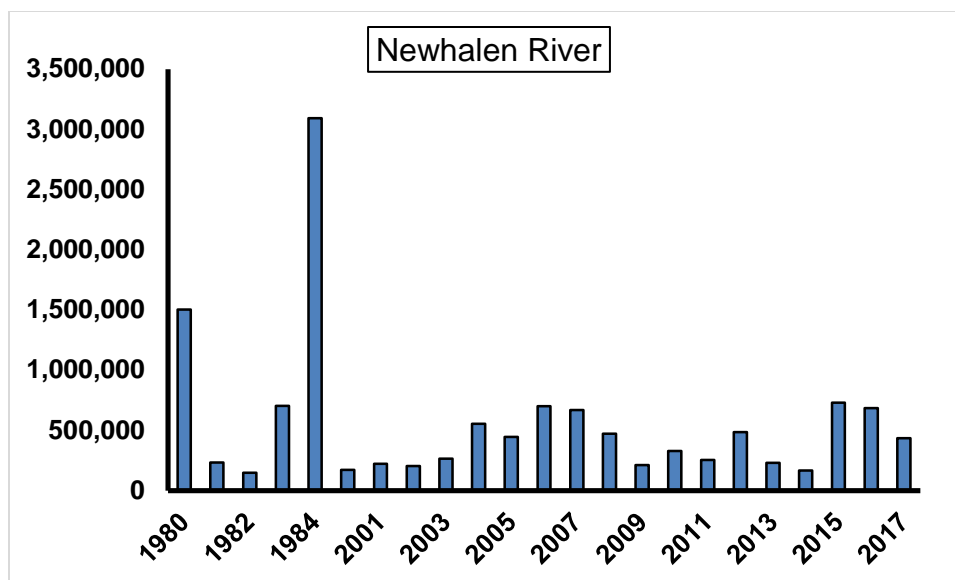
### **Current Events**

A similar proposal has been submitted to the State Board of Fisheries by the Nondalton Tribal Council. The request is to allow hook and line attached to a rod or pole in Sixmile Lake and within one-half mile of the outlet as a subsistence gear type. The request asks for the same limits specified in the sport fishing regulations for the area, and stipulates that a person may not sport fish for salmon and take salmon under a subsistence permit on the same day.

The State Board of Fisheries will take up the proposal at its Bristol Bay Finfish meeting in Dillingham. The meeting is scheduled for November 28 to December 4, 2018.

### **Biological Background**

Sixmile Lake is host to Chinook, Coho, and Sockeye Salmon, Arctic Char, Arctic Grayling, Humpback Whitefish, Lake Trout, Longnose Sucker, Ninespine Stickleback, Rainbow Trout, Round Whitefish, sculpin, and Threespine Stickleback (ADF&G and NPS 1980, Johnson and Blossom 2017, AFFI 2018). Sockeye Salmon predominate the salmon returns into and through the lake. Observed tower counts on the Newhalen River downstream of the lake have ranged between 147,294 and 3,091,620 Sockeye Salmon between the years 1980 and 2017, although median returns are closer to 400,000 fish per year (**Figure 2**). In 2018, Sockeye Salmon returns to the area were low early in the season, prompting some restrictions to sport and commercial harvests. However, the drainage ultimately met escapement before the end of the run.



**Figure 2.** Sockeye Salmon passage counts at the Newhalen Counting Tower, 1980-2017 (Young 2018, pers. comm.).

There are two primary tributary systems apart from Lake Clark that feed into Sixmile Lake; the Pickerel Lakes and Tazimina Lakes drainages (**Figure 1**). Both systems enter the lake on its eastern edge, and are wholly contained within the Lake Clark National Park and Preserve borders. The Pickerel Lakes drainage is the smaller of the two, includes three lakes, and has been found to contain Arctic Grayling, Humpback Whitefish, Northern Pike, Least Cisco, Round Whitefish, Sockeye Salmon, and Slimy Sculpin (ADF&G and NPS 1980). The Tazimina Lakes drainage contains two lakes that are both substantially larger and deeper than any of the Pickerel Lakes, as well as a waterfall nine miles upstream from its confluence with Sixmile Lake. The waterfall is also the site of a hydroelectric plant that provides power to Nondalton, Newhalen, and Iliamna. The lakes are host to Arctic Char, Arctic Grayling, Dolly Varden, Slimy Sculpin, and Threespine Stickleback. Fish species in the river below the falls include Arctic Char, Arctic Grayling, Dolly Varden, Longnose Sucker, Round Whitefish, Slimy Sculpin, Sockeye Salmon, and Threespine Stickleback (ADF&G and NPS 1980). The lower portion of the river supports both subsistence and recreational fisheries.

The popular Rainbow Trout recreational fishery in lower Tazimina River was designated as a catch-and-release special management area for the species following adoption of the Southwest Alaska Rainbow Trout Management Plan. The plan has a conservative wild stock management philosophy and seeks a more orderly and comprehensive mix of rainbow trout opportunities throughout the two areas it covers (Dye and Schwanke 2009). Although the Rainbow Trout population was deemed healthy during cooperative studies by the Alaska Department of Fish and Game and the National Park Service, which examined sport angler effort, catch, harvest, and boat use in the Tazimina River in 1987 and 1988 (Brookover 1989), concern over the stock was raised in the 1990's by local residents and recreational anglers. This prompted another study in 2004, which found that although the proportion of larger fish (over 500 mm) was lower than in past surveys, there was an increase in the total number of Rainbow Trout (Schwanke and Evans 2005). Limitations to the Rainbow Trout fisheries at the time, catch and

release only for sport fishing, and rod and reel as the only gear type allowed for Federal subsistence harvest, may have played a large part in the increase in abundance. Fishing with nets in the Tazimina River and within one-fourth mile of the terminus of those waters between September 1 and June 14 is prohibited under both Federal and State subsistence regulations as an additional conservation measure for these fish.

**Harvest History**

Subsistence

A permit is not required for Federal subsistence fishing for salmon in Lake Clark and its tributaries. As such, there is no information on Federal subsistence salmon harvest for this area.

State subsistence fishing requires a permit (**Appendix 1**) to harvest salmon in this area. Estimates of harvest by residents of Nondalton over the last ten-year period with data available (**Table 1**) show that Sockeye Salmon is the predominant fish species harvested by the community. Mean estimated harvest in this fishery has been around 8,000 Sockeye Salmon per year during this time, with average estimated harvests ranging between 250 and 400 Sockeye Salmon per permit.

Sport Fishing

Sport fishing harvest estimates are not available specific to Sixmile Lake. However, there are estimates for the Newhalen River drainage, which includes Sixmile Lake. Similar to subsistence fishing, Sockeye Salmon are the dominant species harvested over the last ten year period with data available (**Table 2**). Rainbow Trout, Lake Trout, Arctic Char/Dolly Varden, and Arctic Grayling are also regularly caught in the sport fishery, with lesser catches of Northern Pike and whitefishes also reported (Alaska Sport Fishing Survey 2018).

**Table 1.** Estimated salmon harvest by residents of the community of Nondalton, 2006-2015 (Fall et al. 2009a, 2009b, 2011, 2012, 2013a, 2013b, 2014, 2015, 2017, 2018).

Year	Permits Issued	Permits Returned	Chinook Salmon	Sockeye Salmon	Total
2006	26	24	0	8,885	8,885
2007	29	26	0	7,902	7,902
2008	28	24	0	8,917	8,917
2009	20	19	8	5,846	5,854
2010	14	14	0	3,185	3,185
2011	25	25	0	7,947	7,947
2012	31	30	0	9,327	9,327
2013	29	16	0	10,565	10,565
2014	29	21	0	9,004	9,004
2015	22	14	0	8,762	8,762



**Table 2.** Estimates of sport fish harvest for the Newhalen River drainage, 2006-2015 (Alaska Sport Fishing Survey 2018)

YEAR	Coho Salmon	Sockeye Salmon	Pink Salmon	Salmon Total
2006	0	2,085	0	2,085
2007	58	1,886	0	1,944
2008	54	1,039	18	1,189
2009	0	2,662	0	2,662
2010	32	753	0	785
2013	115	2,182	0	2,297
2015	148	4,598	0	4,746
YEAR	Rainbow Trout	Lake Trout	Dolly Varden/ Arctic Char	Arctic Grayling
2006	72	10	37	96
2007	10	26	69	15
2008	272	115	137	107
2009	0	0	22	17
2010	87	17	70	65
2013	35	33	0	67
2015	20	16	20	45

### Cultural Knowledge and Traditional Practices

For people living in Nondalton, salmon have long been a staple resource and fish camps continue to be an important part of the subsistence way of life (Townsend 1981, Fall et al. 2010). Prior to the early twentieth century, the Dena'ina Athabascans utilized weirs, basket traps, dip nets, and antler spears to harvest salmon. Eventually, gillnets became the dominate gear type for catching salmon (Townsend 1981), but rod and reel also was and continues to be highly utilized in the Kvichak watershed (Krieg et al. 2005, Fall et al. 2010). In the 1960's, Townsend (1981) noted fish camps strung out along the mouth of the Newhalen River and the shore line of Sixmile Lake by Nondalton. An Alaska Department of Fish and Game technical report documented the continued significance of Nondalton fish camps in the area, most of which were located on Sixmile Lake (Fall et al. 2010).

The ADF&G Division of Subsistence conducted comprehensive subsistence surveys in Nondalton for the 2004 harvest year and subsistence salmon surveys for both the 2007 and 2008 harvest years (Fall et al. 2006, Fall et al. 2010). For the 2004 survey year, salmon made up 62% of the estimated community harvest of all wild foods, or about 204 lbs. per capita. Salmon were reported used by 92% of Nondalton households and approximately 87% of households reported harvesting salmon, which is a markedly high level of community participation in the fishery. Likewise, the harvest and use of nonsalmon fish was also high. Nonsalmon fish made up 9% of Nondalton's total community harvest for 2004, or about 40 lbs. per capita. An estimated 82% of the households used nonsalmon fish and an estimated 76% of households reported harvesting nonsalmon fish. The majority of the salmon harvested in 2004 was taken by set net (approximately 74%) or seine (19%), and a very small percentage was reported

harvested by rod and reel (5%). Nonsalmon fish were reported harvested by set net, seine, handline, jigging through the ice, and rod and reel.

By 2007 and 2008, the documented harvest of salmon had declined significantly, down to 74 lbs. per capita in 2007 and 68 lbs. per capita in 2008. However, household use of the resource remained high. In 2007, all households in the community were estimated to have used salmon and 96% reported harvesting salmon. In 2008, 91% of households were estimated to have used salmon and 81% of households were estimated as having harvested salmon. The 2010 report did not describe the percentage of the total salmon harvest by gear type as in the 2006 report and instead described the percentage of households using a particular gear type for salmon harvest for each season. Many households used more than one gear type to harvest salmon depending on the species and location of harvest. Gear type used to harvest salmon in 2007 was reported as gillnet (69% of the households), seine (42% of the households), and rod and reel (35% of the households). In 2008, gillnet was used by 66% of the households, seine by 34% of households, and rod and reel by 28% of households.

### **Effects of the Proposal**

If adopted, and current regulations governing fishing for salmon in Lake Clark and its tributaries are extended to Sixmile Lake and its tributaries, and rod and reel are added as an additional gear type, both actions will result in additional opportunity for Federally qualified subsistence users.

Sixmile Lake is adjacent to Lake Clark National Park and Preserve, and is already included in Federal subsistence management regulations that allow the use of fyke net and lead for the take of fish (except Rainbow Trout) in tributaries of Lake Clark and tributaries of Sixmile Lake. The current regulation limits the Sixmile Lake tributaries to within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve, unless otherwise prohibited. There is a prohibition on fishing with nets in the Tazimina River and within one-quarter mile of the terminus of those waters between September 1 and June 14 in both Federal and State regulations. Extending these additional capture methods and means to Sixmile Lake and its tributaries would benefit Federally qualified subsistence users that harvest salmon in this area.

The proposed regulation may create regulatory conflict as tributaries on the North and West side of the lake are outside of the boundaries of Lake Clark National Park and Preserve. The Solicitor's office has advised that it is not clear that the tributaries fall within the jurisdiction of the Board, so they are not being considered in this analysis.

The addition of rod and reel as a gear type would allow for the targeted taking of salmon by hooking in the mouth. This change would apply to those areas currently in regulation for this set of regulations, Lake Clark and its tributaries, as well as Sixmile Lake and its tributaries if they are added through this process. Currently, rod and reel is an approved gear type only for the take of salmon by snagging, which is defined as hooking or attempting to hook a fish elsewhere than in the mouth. Rod and reel is not an approved gear type for this area under State subsistence regulations. Rod and reel is an allowable harvest method under State sport fishing regulations, but requires the purchase of a sport fishing license. This addition would allow Federally qualified subsistence users to specifically target salmon by hooking

in the mouth without the requirement to purchase a sport fishing license. Snagging is a method commonly used for the taking of Sockeye Salmon as they are not always prone to bite at hooks/lures. This change may allow Federally qualified subsistence users to target salmon species that are more prone to taking a hook in the mouth (e.g., Coho Salmon), and may increase the harvest of these species through means other than set gillnet.

Currently, State subsistence regulations only allow for the use of gillnets and beach seine for salmon in Sixmile Lake. Adding these additional gear types to Federal subsistence management regulations will create additional disparity between the two sets of subsistence regulations, and may create difficulties for enforcement.

If not adopted, salmon taken in Sixmile Lake will be restricted to fyke net and lead (only with a permit) or set gillnet. Additionally, Federally qualified subsistence users in Lake Clark and its tributaries or Sixmile Lake and its tributaries will not have the flexibility to target salmon under Federal regulations with rod and reel other than by snagging.

## OSM CONCLUSION

**Support** Proposal FP19-11 **with modification** to specify limits for the Sixmile Lake tributaries to within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve, unless otherwise prohibited.

The modified regulation should read:

### **§ \_\_.27(e)(5) Bristol Bay Area**

*(v) You may not subsistence fish with nets in the Tazimina River and within one-fourth mile of the terminus of those waters during the period from September 1 through June 14.*

*(C) You may also take salmon without a permit in Sixmile Lake and its tributaries within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve unless otherwise prohibited, and Lake Clark and its tributaries, by snagging (by handline or rod and reel), using a spear, bow and arrow, **rod and reel**, or capturing by bare hand.*

## **Justification**

Extending these gear types, which are already currently in use for Lake Clark and its tributaries, to Sixmile Lake and some of its tributaries will provide additional opportunity for Federally qualified users of Nondalton and other communities with a customary and traditional use of salmon in this area. There have been no identified issues related to these gear types in Lake Clark and its tributaries, and so allowing them slightly further down this drainage should not create biological concerns. Extending these gear allowances is reasonable as there are currently existing Federal regulations for Sixmile Lake tributaries for the use of fyke nets.

Similar to the fyke net fishery, this fishery should be restricted to Sixmile Lake and those tributaries of Sixmile Lake within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve. This is in line with advisement from the Solicitor's office regarding ambiguity over the Board's jurisdiction for the other tributaries to Sixmile Lake.

Adding rod and reel to the allowed list of gear types is reasonable, as this gear type is already available for snagging salmon. This change would provide an additional user opportunity for harvest of salmon species that will take hooks in the mouth in Lake Clark and its tributaries and Sixmile Lake and its restricted set of tributaries. This gear type has been and continues to be used by residents of this area for harvest of fish. This additional opportunity will be particularly meaningful to those residents of Nondalton who wish to take advantage of different gear types while at fish camp. There have been no identified concerns related to the harvest of salmon by rod and reel for these locations. As the State currently prohibits the use of this gear type in Sixmile Lake, allowing this gear type under Federal regulations will provide a meaningful rural priority.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Bristol Bay Subsistence Regional Advisory Council

**Support FP19-11 as modified by OSM.** The Council stated this regulation is needed to continue subsistence practices. The regulation will provide additional opportunity for Federally qualified users of Nondalton and other communities with customary and traditional use of salmon in the area of Lake Iliamna.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fishery Proposal FP19-11:** This proposal was submitted by Bristol Bay Native Association in Dillingham. This would allow for the use of rod and reel to take salmon in the freshwater drainages of Sixmile Lake and tributaries.

**Background:** Sixmile Lake and tributaries are closed to all sport fishing April 10 – June 7, and legal gear is restricted to only unbaited, single-hook artificial lures all year. The State does not allow snagging with rod and reel in its freshwaters. Subsistence fishing with a line attached to a rod or pole is not allowed in open water but is allowed in the winter through ice.

**Impact on Subsistence Users:** This would increase complexity in regulations by creating further separation between Federal and State regulations. Harvest of salmon and resident species may increase by an unknown, but likely small, amount.

**Impact on Other Users:** This would create a different set of regulations between user groups complicating regulations and enforcement.

**Opportunities Provided by the State:** State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for all finfish in the Bristol Bay Area.

**Amounts Reasonably Necessary for Subsistence:** Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has found that 157,000–172,171 salmon are reasonably necessary for subsistence uses in the Bristol Bay Area, including 55,000–65,000 Kvichak River drainage sockeye salmon; this finding does not include salmon stocks in the Alagnak River. Additionally, the Board of Fisheries has found that 250,000 usable pounds of finfish other than salmon are reasonably necessary for subsistence uses in the Bristol Bay Area.

5 AAC 01.320. Lawful gear and gear specifications (b)(6) allows for salmon to be taken by subsistence users in Six Mile Lake by gillnet and beach seine. The Alaska Board of Fisheries will address Proposal 21 during its Bristol Bay meeting November 28 – December 3 that requests the use of rod and reel as subsistence gear to take fish in Sixmile Lake and within a ½ mile of the lake outlet.

**Recommendation:** ADF&G has no position on this proposal at this time and recommends taking no action on this proposal. The Alaska Board of Fisheries deliberated on Proposal 21 at the Bristol Bay meeting, November 28 – December 3 and took No Action on the state proposal and formed a committee to review rod and reel subsistence regulations and statewide implications. There are already more efficient legal gear types allowed to harvest subsistence salmon in this drainage. Enforcement may be complicated by creating inconsistencies between federal and state subsistence regulations as well as sport and subsistence regulations.



LAKE CLARK NATIONAL PARK  
SUBSISTENCE RESOURCE COMMISSION  
General Delivery  
Port Alsworth, AK 99653

October 22, 2018

Ms. Molly B. Chythlook, Chair  
Bristol Bay Regional Advisory Council  
c/o U.S. Fish and Wildlife Service  
1011 East Tudor Road MS 121  
Anchorage, Alaska 99503

Dear Ms. Chythlook,

The Lake Clark National Park Subsistence Resource Commission (SRC) met in Nondalton, Alaska on October 4, 2018. The SRC reviewed the federal subsistence fish proposal for the Lake Clark area being considered for the 2019-2021 regulatory cycle and would like to provide comments:

**FP19-11: Proposal to revise snagging regulations to allow fishing for salmon in Sixmile Lake and tributaries**

The Lake Clark National Park Subsistence Resource Commission supports FP19-11 with the suggested modifications to specify limits for the Sixmile Lake tributaries to within and adjacent to the exterior boundaries of Lake Clark National Park and Preserve, unless otherwise prohibited. This proposal will also address the current prohibition on Federally qualified residents of Nondalton and other nearby communities keeping a salmon without a permit that was caught in the mouth with a rod and reel instead of snagged elsewhere on the body.

Thank you for the opportunity to comment.

Sincerely,



Glen Alsworth Sr., Chair  
Lake Clark National Park  
Subsistence Resource Commission

cc: NPS Alaska Regional Director  
Superintendent, Lake Clark National Park and Preserve

**Chair:** Glen Alsworth Sr.; **Members:** Lary Hill, George Alexie, Agnes Rychnovsky, Warren Hill, Tinny Hedlund,  
Lyle Wilder, Steve Kahn

APPENDIX 1



**Alaska Department of Fish & Game**  
**Bristol Bay Subsistence Salmon Fishery Permit**  
**ALASKA RESIDENTS ONLY**

Community	_____
Permit No.	_____
Year	_____

First Name \_\_\_\_\_ Initial  Last Name \_\_\_\_\_  
 Permanent Mailing Address \_\_\_\_\_ City \_\_\_\_\_  
 State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone number \_\_\_\_\_  
 Number of year-round residents in household ▶

Names of household members who will assist in operation of subsistence net:  
 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 4. \_\_\_\_\_ 5. \_\_\_\_\_ 6. \_\_\_\_\_

Drainage to be fished: Naknek  Kvichak  Egegik  Ugashik   
 Nushagak  Togiak  Other \_\_\_\_\_

Primary fishing location (specific): \_\_\_\_\_

Number of fathoms allowed at this site: 10  25  Gear type: \_\_\_\_\_  
Please specify set gear, drift gear, spear, or dip net.

I understand that I am applying for a subsistence fishing permit for my household in accordance with current regulations and hereby swear the information contained on this application is a true statement as witnessed by my signature below; and that I have been an Alaska resident for the last calendar year.

Applicant's signature \_\_\_\_\_ Date \_\_\_\_\_

**TO BE COMPLETED BY ISSUING OFFICER ONLY**

The above-named person and designated household members are authorized to fish for salmon for subsistence purposes in the Bristol Bay Area during the calendar year of \_\_\_\_\_ according to current laws and regulations of the State of Alaska.

Authorizing Officer \_\_\_\_\_ Date \_\_\_\_\_

1. Only one subsistence salmon fishing permit may be issued to each household per year. People using the net/site and not of this household are required to have their own permit and file a separate report of their harvest.
  2. Fish caught for subsistence uses may not be sold or allowed to enter commercial use.
  3. An accurate record of fish taken under authority of this permit must be returned to the Alaska Department of Fish and Game when the permit expires. Failure to return subsistence catch records is grounds for denial of future permit privileges.
- NOTE: Commercially-caught salmon may also be utilized for subsistence purposes and must be reported on the back of this form as well as a Commercial Fish ticket.**

**Return form to:** (fax) 907-267-2450/ (email) [dfg.sub.permits@alaska.gov](mailto:dfg.sub.permits@alaska.gov) /  
 Division of Subsistence, ADF&G, 333 Raspberry Rd, Anchorage, AK 99518

### FP19–13 Executive Summary

<b>General Description</b>	Proposal FP19–13 requests that conditions for the Federal subsistence permit (FFPW01) for the Prince William Sound Area be placed in Federal subsistence management regulations for the Prince William Sound Area at section § __.27(e)(11). The proponent would like to include the seasons, harvest limits, and methods and means of harvest for this fishery in these regulations. <i>Submitted by: the United States Forest Service, Cordova Ranger District.</i>
<b>Proposed Regulation</b>	<i>See pages 499-501 of this analysis for proposed regulations</i>
<b>OSM Conclusion</b>	<b>Support FP19-13 with modification</b> to specify the geographic area where these regulations apply. <i>The modified regulation can be found on pages 512-513 of this analysis.</i>
<b>Southcentral Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support as modified by OSM</b>
<b>Interagency Staff Committee Comments</b>	<b>Support as modified by OSM</b>
<b>ADF&amp;G Comments</b>	<b>Support with modification</b> to align cutthroat trout regulations. The regulation should include the following language: Cutthroat trout may be taken only from June 15 - April 14; bag and possession limit of two fish, and with a size limit of at least 11 inches in length but not more than 16 inches in length.
<b>Written Public Comments</b>	<b>2 support</b>

**STAFF ANALYSIS**  
**FP19-13**

**ISSUES**

Proposal FP19-13, submitted by the United States Forest Service, Cordova Ranger District requests that conditions for the Federal subsistence permit (FFPW01) for the Prince William Sound Area be placed in Federal subsistence management regulations for the Prince William Sound Area at section §\_\_.27(e)(11). The proponent would like to include the seasons, harvest limits, and methods and means of harvest for this fishery in these regulations.

**DISCUSSION**

The proponent states that currently the season, harvest limits, and method and means for this fishery are located only on the back of the FFPW01 permit as “conditions of the permit”. The proponent wishes to have these conditions appear in Federal subsistence management regulations, and be readily available to users in the Federal subsistence management regulations summary book, as they are for other areas of the State. They note that adding the information into regulations would provide one place where all applicable regulations are located, as users currently need both the FFPW01 permit and a copy of the regulations book to have all of the necessary information. The proponent is not attempting to change the intent of these permit conditions.

**Existing Federal Regulation**

*§\_\_.27(e)(11) Prince William Sound Area. The Prince William Sound Area includes all waters and drainages of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling.*

*(i) You may take fish, other than rainbow/steelhead trout, in the Prince William Sound Area only under authority of a subsistence fishing permit, except that a permit is not required to take eulachon. You may not take rainbow/steelhead trout, except as otherwise provided for in paragraph (e) (11) of this section.*

*(A) In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek you may accumulate Federal subsistence fishing harvest limits with harvest limits under State of Alaska sport fishing regulations provided that accumulation of fishing harvest limits does not occur during the same day.*

\* \* \* \*

*(ii) You may take fish by gear listed in paragraph (b) (1) of this section unless restricted in this*

*section or under the terms of a subsistence fishing permit.*

*(iii) If you catch rainbow/steelhead trout incidentally in other subsistence net fisheries, you may retain them for subsistence purposes, unless restricted in this section.*

\* \* \* \*

*(xvi) You may take pink salmon for subsistence purposes from fresh water with a dip net from May 15 through September 30, 7 days per week, with no harvest or possession limits in the following areas:*

*(A) Green Island, Knight Island, Chenega Island, Bainbridge Island, Evans Island, Elrington Island, Latouche Island, and adjacent islands, and the mainland waters from the outer point of Granite Bay located in Knight Island Passage to Cape Fairfield;*

*(B) Waters north of a line from Porcupine Point to Granite Point, and south of a line from Point Lowe to Tongue Point.*

### **Proposed Federal Regulation**

**§ \_\_.27(e)(11) Prince William Sound Area.** *The Prince William Sound Area includes all waters and drainages of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling.*

*(i) You may take fish, other than rainbow/steelhead trout, in the Prince William Sound Area only under authority of a subsistence fishing permit, except that a permit is not required to take eulachon. You may not take rainbow/steelhead trout, except as otherwise provided for in paragraph (e) (11) of this section.*

*(A) In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek you may accumulate Federal subsistence fishing harvest limits with harvest limits under State of Alaska sport fishing regulations provided that accumulation of fishing harvest limits does not occur during the same day.*

\* \* \* \*

*(ii) You may take fish by gear listed in paragraph (b) (1) of this section unless restricted in this section or under the terms of a subsistence fishing permit.*

*(iii) If you catch rainbow/steelhead trout incidentally in other subsistence net fisheries, you may retain them for subsistence purposes, unless restricted in this section.*

\* \* \* \*

*(xvi) You may take pink salmon for subsistence purposes from fresh water with a dip net from May 15 through September 30, 7 days per week, with no harvest or possession limits in the following areas:*

*(A) Green Island, Knight Island, Chenega Island, Bainbridge Island, Evans Island, Elrington Island, Latouche Island, and adjacent islands, and the mainland waters from the outer point of Granite Bay located in Knight Island Passage to Cape Fairfield;*

*(B) Waters north of a line from Porcupine Point to Granite Point, and south of a line from Point Lowe to Tongue Point.*

***(xvii) In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek you must possess a Federal subsistence fishing permit to take salmon, trout, whitefish, Grayling, Dolly Varden, or char. Permits are available from the Cordova Ranger District.***

*(A) Salmon harvest is not allowed in Eyak Lake and its tributaries, Copper River and its tributaries and Eyak River upstream from the Copper River Highway bridge.*

*(B) You must record on your subsistence permit the number of subsistence fish taken. You must record all harvested fish prior to leaving the fishing site, and return the permit by the due date marked on the permit.*

*(C) You must remove both lobes of the caudal (tail) fin from subsistence-caught salmon before leaving the fishing site.*

*(D) You may take salmon by rod and reel, dip net, spear and gaff year round.*

*(E) For a household with 1 person, 15 salmon (other than pink) may be taken. 5 Cutthroat Trout with only 2 over 20 inches may be taken. Pink Salmon: See the conditions of the permit.*

*(F) For a household with 2 persons, 30 salmon (other than pink) may be taken, plus an additional 10 salmon for each additional persons in a household over 2. 5 Cutthroat Trout with only 2 over 20 inches per each household member with a maximum household limit of 30 cutthroat trout. Pink Salmon: See the conditions of the permit.*

*(G) You may take Dolly Varden, Arctic Char, Whitefish and Grayling with rod and reel, and spear year round and with a gill net from January 1 – April 1. The maximum incidental gill net harvest of trout is 10.*

*(H) You may take Cutthroat Trout with Rod and reel, and spear from June 15 to April*

***14th and with a gill net from January 1 to April 1.***

***(I) You may not retain Rainbow/Steelhead trout for subsistence unless taken incidentally in a subsistence gillnet fishery. Rainbow/Steelhead trout must be immediately released from a dip net without harm.***

## **Existing State Regulation**

### ***5 AAC 55.001. Application of this chapter***

*This chapter applies to sport fishing in the Prince William Sound Area, including all of the drainages which flow into the Prince William Sound Area, excluding the waters of the Upper Copper River.*

### ***5 AAC 55.005. Description of the Prince William Sound Area***

*The Prince William Sound Area consists of all waters of the Gulf of Alaska and its drainages, west of the longitude of Cape Suckling (144\_EW. long.), and east of the longitude of Cape Fairfield (148\_E50.25' W. long.), excluding the Copper River drainage upstream of a line crossing the Copper River between the south bank of the confluence of Haley Creek and the south bank of the confluence of Canyon Creek in Wood Canyon.*

\* \* \* \*

### ***5 AAC 55.022. General provisions for seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area***

*(a) Unless otherwise specified in 5 AAC 55.023, or by an emergency order issued under AS 16.05.060, the following are the seasons, bag, possession, and size limits, and methods and means that apply to sport fishing for finfish and shellfish in the Prince William Sound Area:*

*(1) in all fresh waters of the Prince William Sound Area, only unbaited, artificial lures may be used from April 15 - June 14;*

*(2) king salmon: may be taken from January 1 - December 31, as follows:*

*(A) in fresh waters, as follows:*

*(i) king salmon 20 inches or greater in length; bag limit of two fish; possession limit of four fish;*

*(ii) king salmon less than 20 inches in length; bag and possession limit of 10 fish;*

\* \* \* \*

(3) salmon, other than king salmon: may be taken from January 1 - December 31; bag limit of six fish; possession limit of 12 fish, of which only three fish per day and in possession may be coho salmon; no size limit;

(4) rainbow/steelhead/cutthroat trout, as follows:

\* \* \* \*

(B) in stocked lakes: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no size limit; for the purposes of this subparagraph, "stocked lakes" includes Ruth Lake and Blueberry Lake;

(C) in all other waters not specified in this paragraph: may be taken only from June 15 - April 14; bag and possession limit of two fish, and notwithstanding 5 AAC 75.222, with a size limit of at least 11 inches in length but not more than 16 inches in length;

(5) Dolly Varden/Arctic char: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no size limit;

(6) Arctic grayling: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no size limit;

\* \* \* \*

**5 AAC 55.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Prince William Sound Area**

Unless otherwise specified by an emergency order issued under AS 16.05.060, the following are special provisions to seasons, bag, possession, and size limits, and methods and means provisions under 5 AAC 55.022 in the Prince William Sound Area:

(1) the following special provisions apply to salmon, other than king salmon:

(A) in all freshwater drainages crossed by the Copper River Highway from and including Eyak River to the Million Dollar Bridge, including Clear Creek at mile 42 downstream of the Carbon Mountain Road Bridge,

(i) the bag and possession limit is three fish; a coho salmon removed from the water shall be retained and becomes part of the bag limit of the person originally hooking it; a person may not remove a coho salmon from the water before releasing the fish;

(ii) from August 15 - September 15, after taking and retaining a bag limit of coho salmon, a person may not sport fish with bait for the



*remainder of that day in any of the waters described in this subparagraph;*

\* \* \* \*

*(C) Shelter Bay: in salt waters of Shelter Bay of Hinchinbrook Island and all fresh waters draining into Shelter Bay; bag limit of six fish and possession limit of 12 fish, of which only one fish may be a coho salmon;*

*(2) snagging is prohibited*

\* \* \* \*

*(7) in the Eyak River from a point 200 yards upstream from the Eyak Lake water control structure to a point 200 yards downstream from the bridge at the outlet of Eyak Lake, from June 1 - September 30, only single-hook, artificial flies with a gap between the point and the shank of 3/8 inch or less with no additional weight attached to the line may be used;*

*(8) the following waters of the Prince William Sound Area are closed to sport fishing for salmon:*

*(A) repealed 3/29/2018;*

*(B) Eccles Creek;*

*(C) Eyak Lake and its tributaries;*

*(D) Hartney Creek upstream from Whitshed Road;*

*(9) Ibeck Creek is closed to sport fishing in the waters upstream from ADF&G regulatory markers located approximately three miles upstream from the Copper River Highway Bridge;*

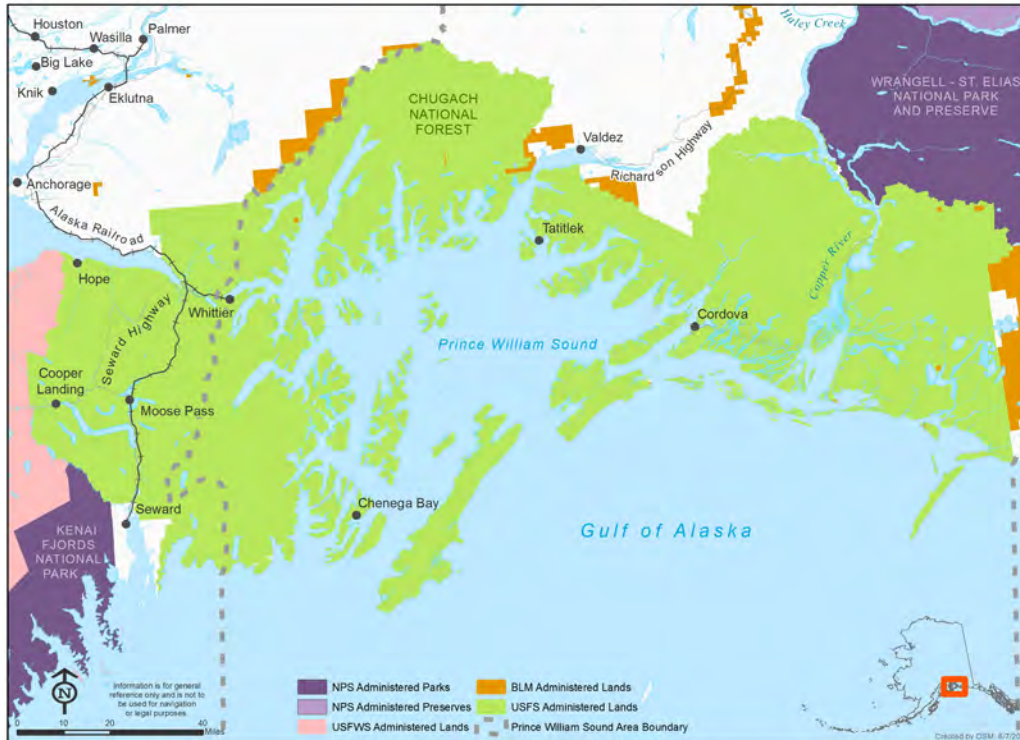
***5 AAC 55.025. Use of pink and chum salmon as bait in the Prince William Sound Area***

*Notwithstanding 5 AAC 75.026, in the Prince William Sound Area, pink and chum salmon taken in a sport fishery may be used for bait in a sport, personal use, or subsistence fishery.*

**Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR §100.3 and 36 CFR §242.3. Federal public waters under consideration in this analysis are all waters excluding marine waters, but including all inland waters, both navigable and non-navigable, within and adjacent to the exterior boundaries of the Chugach National Forest.

The Prince William Sound Area “includes all water of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling” including lands managed by the Chugach National Forest, Bureau of Land Management, and Wrangell-St. Elias National Park and Preserve. This analysis will focus on Chugach National Forest managed lands of the Prince William Sound Area (**Figure 1**).



**Figure 1.** Map of U.S. Forest Service managed lands within the Prince William Sound Area.

**Customary and Traditional Use Determinations**

Residents of the Prince William Sound Area have a customary and traditional use determination for salmon in the remainder of the Prince William Sound Area, as described in Federal regulation. Residents of the Prince William Sound Area, except those living in the Copper River drainage upstream of Haley Creek, have a customary and traditional use determination for freshwater fish, including trout, char, whitefish, Arctic Grayling, suckers, and Burbot in the waters of the Prince William Sound Area, except for the Copper River Drainage upstream of Haley Creek. Residents of Cordova have a customary and traditional use determination for Eulachon in the waters of the Bering River area from Point Martin to Cape Suckling. Residents of Cordova, Chenega Bay, and Tatitlek have a customary and traditional use determination for Eulachon in the waters of the Copper River Delta from Eyak River to Point Martin.

**Regulatory History**

Subsistence users in the Cordova area have fulfilled their subsistence needs utilizing the state of Alaska Copper River/Bering River/Prince William Sound Salmon Subsistence Fishery or under State of Alas-

ka's sport fishing regulations. Starting in 2004, there was increasing interest in a Federal subsistence fishery within the Chugach National Forest portion of the Prince William Sound Area by rural residents of the Prince William Sound Area, particularly of Cordova. Federal subsistence management regulations required qualified subsistence users to have a permit to harvest fish, but did not broadly establish seasons, harvest limits, or methods and means of harvest.

During the Southcentral Alaska Subsistence Regional Advisory Council (Council) meeting on October 13, 2004, the Federal subsistence fish biologist for the Chugach National Forest expressed concerns over the methods and means for a fishery within the Chugach National Forest portion of the Prince William Sound Area and requested a working group to meet (SCRAC 2004). In December 2004, a working group met consisting of participants from the Ahtna Subsistence Committee, Native Village of Eyak, Copper River/Prince William Sound Fish and Game Advisory Committee, the Southcentral Council, Alaska Department of Fish and Game, Commercial and Sport Fish Divisions, National Park Service, U.S. Forest Service, and the U.S. Fish and Wildlife Service (OSM 2006). Permit stipulations were created and included on the permit for the 2005 fishing season as a result of this working group's efforts.

Since 2005, permit conditions located on the Federal subsistence fishing permit for the Chugach National Forest portion of the Prince William Sound Area (FFPW01) have regulated the seasons, harvest limits and methods and means of harvest.

Federal subsistence management of fisheries in Alaska began in 1999, however, no Federal permits were requested for the Prince William Sound Area below Haley Creek until 2004 when three permits were requested and then in 2005 forty-four permits were requested. Issuance of the Federal Subsistence permit has grown since its inception (**Table 1**).

**Table 1.** Federal subsistence permits issued for FFPW01 from 2005 through 2016 (USFWS 2018).

<b>Year</b>	<b>Permits Issued</b>	<b>Permits Fished</b>
2005	44	22
2006	48	23
2007	32	16
2008	44	24
2009	38	22
2010	48	21
2011	66	29
2012	63	31
2013	65	23
2014	88	41
2015	94	47
2016	110	51

Four proposals were submitted in the 2006 fisheries cycle attempting to change the regulations for the federal subsistence fisheries in the lower Copper River and Chugach National Forest portions of the Prince William Sound Area (OSM 2006). The Southcentral Council reviewed these proposals its September 2005 meeting. Proposal FP06-16 requested that State sport fishing harvest limits would not be affected by the Federal/State subsistence harvest limits. The proposed regulation read:

In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek you may accumulate Federal subsistence fishing harvest limits with harvest under State of Alaska sport fishing regulations provided that accumulation of fishing harvest limits does not occur during the same day. 36 CFR 242.27(e)(11)(A).

This proposal was adopted by the Federal Subsistence Board during their January 2006 meeting (FSB 2006).

FP06-17 attempted to establish a fly-fishing only area directly downstream of the Lake Eyak Dam. While this proposal was rejected, the discussion led to a change in permit conditions for FFPW01. The discussion noted that under regulation no subsistence fishing is allowed within 300 feet from a dam. To align the conditions of the permit with current regulations “only rod and reel may be used within 200 yards of the Eyak Lake dam” was removed (FSB 2006). “Subsistence fishing in Eyak River allowed only downstream of the Copper River highway bridge” replaced the original condition of the permit.

Proposals FP06-18 and FP06-19 restricted subsistence uses and were rejected by the Federal Subsistence Board (FSB 2006).

In October 2006, the Southcentral Council debated proposal FP07-14 which “requested that the lower Copper River downstream of the bridge over the Copper River at 52-Mile of the Copper River Highway (Million Dollar Bridge) be opened to Federal subsistence harvest of salmon using dip nets and rod and reel with bait for three months (May, June, and July)”. The Southcentral Council opposed this proposal

and it was rejected by the Federal Subsistence Board as a part of the consensus agenda at its January 2007 meeting (OSM 2007). Since proposal of FP07-14, there have been no other proposals or modifications to change the subsistence fishing regulations for the Chugach National Forest portion of the Prince William Sound Area.

### Biological Background

Little recent population data exists for fish species in fresh waters of the Prince William Sound Area, with the exception of salmon in the Copper River drainage. While this proposal covers freshwaters of the Chugach National Forest portion of the Prince William Sound Area (excluding salmon in the Copper River and its tributaries), over 95% of the harvest by Federally qualified subsistence users occurs in three river systems of the west Copper River Delta near Cordova: Ibeck Creek, Eyak River, and Alaganik Slough (**Figure 2**) (USFWS 2018). This analysis will focus on the effects to these three systems. ADF&G uses aerial surveys of Copper River Delta spawning habitat to develop escapement indices of Coho and Sockeye Salmon (**Table 2**). Between 2006 and 2016, the indices for these systems have shown variability but no distinct population trends in streams on the west Copper River Delta (Russell 2017). Over the past decade, Coho and Sockeye Salmon escapement in these systems have consistently met target escapement goals (Botz 2018, pers. comm).



**Figure 2.** Map of primary stream systems fished on the west Copper River Delta under the Chugach National Forest permit for the Prince William Sound Area (FFPW01): Ibeck Creek, Eyak River, and Alaganik Slough

**Table 2.** Escapement of Sockeye and Coho Salmon in the Eyak River, Ibeck Creek, and Alaganik Slough systems of the west Copper River Delta, 2006-2016

Year	Copper River and Bering River area Sockeye Salmon escapement indices, 2006–2016.			Copper River Delta and Bering River Coho Salmon escapement indices, 2006–2016.		
	Eyak River <sup>a</sup>	Ibeck Creek	Alaganik Slough <sup>b</sup>	Eyak River <sup>a</sup>	Ibeck Creek	Alaganik Slough <sup>b</sup>
2006	31,310	620	8,966	2,460	36,300	2,340
2007	30,650	142	6,370	7,320	13,200	980
2008	10070	41	4,330	18,540	10,265	1,161
2009	12920	100	4,020	4,260	9,963	2,140
2010	27,723	10	4,350	14,350	3,381	1,504
2011	25,475	475	5,860	5,160	14,200	2,005
2012	27,650	870	7,825	4,200	7,600	1,850
2013	20,505	200	7,900	3,970	9,150	1,370
2014	21450	400	one	6,510	12,500	2,800
2015	17,250	800	7,300	6,250	8,100	2,800
2016	16,400	50	4,500	8,200	31,500	3,400
Average 2006-2016	21,946	337	6,142	7,384	14,196	2,032

<sup>a</sup> Ibeck Creek escapement indices include Eyak River, Power Creek and Hatchery Creek

<sup>b</sup> Alaganik Slough escapement indices include 18/20 mile, McKinley Lake, Salmon Creek

## Harvest History

While this proposal covers freshwaters of the Chugach National Forest portion of the Prince William Sound Area, over 95% of the harvest by Federally qualified subsistence users occurs in three river systems of the west Copper River Delta near Cordova: Ibeck Creek, Eyak River, and Alaganik Slough (USFWS 2018). The analysis for the proposal will focus on these 3 systems. This fishery is open to other rural Prince William Sound communities, including Tatitlek, Chenega Bay, and Whittier; however, it has not been utilized by these communities because of limited freshwater systems that host species other than Pink and Chum Salmon.

Federally qualified subsistence users harvest fish under both Federal subsistence management regulations and State sport and subsistence regulations. Subsistence users can combine Federal subsistence limits with state sport fishing limits as long as the harvest does not occur during the same day. However, the Federal subsistence limit cannot be added to the limit for the State Copper River/Bering River/Prince William Sound Salmon Subsistence harvest limit.

Ibeck Creek is located approximately 6 miles east of Cordova and is accessed from the Copper River Highway by anglers on foot. It has the highest subsistence and sport fishing use in the area (**Table 3**).

Fishing for Coho Salmon on Ibeck Creek has gained in popularity in the past 10 years. Up to 8% of the Federal subsistence Coho Salmon harvest under the FFPW01 permit has come from Ibeck Creek since 2007 (USFWS 2018). There has been only a single instance of a subsistence user harvesting Cutthroat Trout from Ibeck Creek. This occurred in 2014, and the subsistence harvest was eight Cutthroat Trout compared to an estimated 86 Cutthroat Trout harvested under sport fishing regulations. From 2007 to 2016, there were 2,771 (277 per year) Coho Salmon harvested under Federal subsistence management regulations compared to an estimated 53,965 (5,397 per year) Coho Salmon harvested under State sport fishing regulations from Ibeck Creek. While only rural residents may harvest fish under Federal subsistence management regulations, both rural and non-rural residents, including out-of-state anglers, harvest fish under State fishing regulations.

**Table 3.** State sport and Federal subsistence (“Subsist”) harvest of salmon from Ibeck, Eyak, and Alaganik systems of the west Copper River Delta (Alaska Sport Fishing Survey database 2018; USFWS 2018).

	Ibeck Coho		Eyak Coho		Alaganik Coho		Eyak Sockeye		Alaganik Sockeye	
	Sport	Subsist	Sport	Subsist	Sport	Subsist	Sport	Subsist	Sport	Subsist
2007	927	17	4,677	28	1,052	17	1,586	20	0	13
2008	620	0	4,714	97	1,738	20	675	6	0	26
2009	3,780	183	8,464	2	1,379	0	474	22	96	24
2010	4,818	108	8,379	80	2,208	43	719	0	501	0
2011	7,351	439	5,206	10	1,332	36	548	17	123	18
2012	7,430	331	7,010	61	623	36	459	60	305	23
2013	6,986	202	7,229	104	2,752	20	343	19	0	101
2014	6,274	543	7,857	25	1,728	42	87	44	0	32
2015	10,315	596	8,338	101	5,862	168	91	117	14	33
2016	5,464	352	5,217	23	2,413	136	246	199	0	20

The Eyak River is approximately 4 miles east of Cordova and is largely fished by anglers in small boats. The Eyak River accounts for the second highest salmon harvest totals on the Copper River Delta. Both Coho and Sockeye Salmon are harvested from this system. Subsistence harvest has fluctuated since 2007, generally increasing as more rural residents have utilized the fishery (**Table 3**). At no point has the subsistence harvest exceeded 2% of total estimated Coho Salmon sport harvest. Subsistence harvest of Sockeye Salmon has fluctuated, but has generally increased since 2012. Estimated sport harvest has been generally decreasing since 2007.

Alaganik Slough is approximately 18 miles east of Cordova, supports both Coho and Sockeye Salmon, and is accessed by anglers on foot and boat. Although use is not as great as Ibeck Creek or Eyak River, it remains a popular fishery, especially for Coho (**Table 3**). Harvest of Coho Salmon has remained relatively stable, while Sockeye Salmon harvest shows greater variability due to variable effort and suitable water conditions in systems containing Sockeye.

Harvest of trout is allowed under permit FFPW01, however, total harvest is much smaller than reported for salmon (**Table 4**). This is due to a common local preference for salmon over trout as a subsistence food. A total of 77 trout and Dolly Varden were reported harvested between 2007 and 2016 (USFWS 2018). A small number of subsistence users participate in trout fishing under this permit, although some harvest by Federally qualified rural residents also occurs under State sport fishing regulations. Trout harvest was reported from Cabin Lake, Ibeck Creek, Alaganik Slough, and Eyak River.

**Table 4.** Harvest of non-salmon species (trout and Dolly Varden) by Federal subsistence users under FFPW01, from 2007-2016 (USFWS 2018).

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Harvest	0	0	0	0	0	0	7	12	23	35	77

### Cultural Knowledge & Traditional Practices

The mouth of the Copper River is located within the traditional territory of the Eyak culture. At the time of contact with Europeans, multiple Eyak communities were present in the vicinity of the river's delta including both the community of Eyak and that of Alaganik (Sherman 2012, Fall and Zimpelman 2016). This area was also in proximity to the traditional territories of the Ahtna, Chugach, and Tlingit cultures.

Orca Inlet, where the present day town of Cordova is located, was originally named Puerto Cordoba by the Spanish explorer Don Salvador Fidalgo, who landed there in 1790 (ADCCED 2018). Two canneries opened in the area by the late 1880s and many more followed in the subsequent decades (Sherman 2012, Fall and Zimpelman 2016). Seasonal commercial fishing, clamming, and cannery work quickly became the dominant economic enterprises and remain so today (Fall and Zimpelman 2016). The population of Cordova exploded in 1906, when Michael Henry founded the community as the railroad terminus for the Kennecott Mine (Sherman 2012, Fall and Zimpelman 2016). Henry named the community Cordova and it was formally established in 1909 (ADCCED 2018). The mine closed in 1938, but many former workers remained in the town and participated in the commercial fisheries. Today, there is also a large local, state, and Federal government sector including various U.S. Coast Guard units (Fall and Zimpelman 2016).

The population of Cordova has been steadily rising since 1960, and as of 2010 there were 2,239 residents (ADCCED 2018). Cordova continues to have a significant Eyak population with an active village council (ADCCED 2018). Commercial fishing and subsistence activities are considered central to the culture of the community (ADCCED 2018). In 2014, approximately 77% of residents participated in the harvest of wild resources taking 116 pounds per capita (Fall and Zimpelman 2016).

Salmon made up the largest portion of the 2014 harvest (35% of the total harvest representing 43.8 lbs. per capita) and were used by approximately 92% of households. Sockeye salmon were used and harvested by Cordova households more than any other salmon (73%; 19 lbs. per capita), followed by Coho Salmon (71%; 16 lbs. per capita) and Chinook Salmon (63%; 8 lbs. per capita). Still, the 2014 estimated per capita salmon harvest for the community was the lowest estimated for Cordova since 1985 (Fall and Zimpelman 2016).



After ‘home pack’ of commercially caught salmon for household use, rod and reel was the second most commonly used gear type for harvesting salmon during the 2014 study year. Salmon caught by rod and reel composed 38% of the total salmon harvest by weight (Fall and Zimpelman 2016). Subsistence gear (primarily drift gillnets) was used for 19% of the overall salmon harvest and 27% of the Sockeye Salmon harvest (Fall and Zimpelman 2016). Cordovans have limited freshwater access to Sockeye salmon locally and in 2014, only 10% of the harvest of this species was by rod and reel (Fall and Zimpelman 2016). Residents who do not have boat access to the state subsistence drift gillnet fishery harvest Coho Salmon in larger numbers (Fall and Zimpelman 2016). The Federal subsistence and State rod and reel fisheries are especially important to Cordova residents because they are accessible by road and include the heavily used Ibeck Creek, Alaganik Slough, and Eyak River (Fall and Zimpelman 2016).

### Regulatory Conflicts

Fall and Zimpelman (2016) reported that some residents of Cordova experience regulatory conflicts that affect their ability to harvest salmon. These residents indicated that subsistence fishing opportunities are limited in both time and space, especially for those that are engaged in commercial fisheries. Dual subsistence / commercial salmon openers require these individuals to choose between economic opportunities and subsistence needs. Other Cordova residents indicated that subsistence fisheries cannot be accessed because of a lack of appropriate motorized boats suitable to access the Copper River flats, the need to work when fishery openings occur (in 2014 openings were almost exclusively on weekdays), or increasing fuel and boat maintenance costs. Furthermore, even when time and resources are available, weather and tides must also align if they are to safely access the State subsistence fishery (Fall and Zimpelman 2016). Fall and Zimpleman (2016) report that “the overall sentiment of the community is that current fishing regulations are not working and that more subsistence opportunity, separate from the commercial opportunity, is needed.”

### **Effects of the Proposal**

Federal subsistence management regulations for fish in the Prince William Sound Area require Federally qualified subsistence users to have a permit to harvest fish, but do not establish seasons, harvest limits, or methods of harvest for much of the management area. Permit conditions on the Federal subsistence fishing permit for the Chugach National Forest portion of the Prince William Sound Area (FFPW01) regulate the methods of harvest and establish harvest limits. This proposal would establish seasons, harvest limits, and methods of harvest in regulation. This proposal does not preclude any other proposals for fisheries within the Prince William Sound Area, including the main stem Copper River.

Since the intent of this proposal is to take permit conditions that have been in effect and largely unchanged for 12 years and place them in Federal subsistence management regulations, there will be little effect to subsistence users or fish populations within the Chugach National Forest portion of the Prince William Sound Area, other than to provide more public notice of what the fishing requirements are for the area. These permit conditions have remained unchanged since 2006 and have served rural residents of the Cordova area since that time. Subsistence users will see no change in seasons, harvest limits or harvest methods and means. This information will be more readily available to users because

they will appear in the Federal Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska, as they do for other areas of the state.

## OSM CONCLUSION

**Support** Proposal FP19-13 **with modification** to specify the geographic area where these regulations apply.

The modified regulation should read:

**§ \_\_.27(e)(11) Prince William Sound Area.** *The Prince William Sound Area includes all waters and drainages of Alaska between the longitude of Cape Fairfield and the longitude of Cape Suckling.*

*(i) You may take fish, other than rainbow/steelhead trout, in the Prince William Sound Area only under authority of a subsistence fishing permit, except that a permit is not required to take eulachon. You may not take rainbow/steelhead trout, except as otherwise provided for in paragraph (e) (11) of this section.*

*(A) In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek you may accumulate Federal subsistence fishing harvest limits with harvest limits under State of Alaska sport fishing regulations provided that accumulation of fishing harvest limits does not occur during the same day.*

\* \* \* \*

*(ii) You may take fish by gear listed in paragraph (b) (1) of this section unless restricted in this section or under the terms of a subsistence fishing permit.*

*(iii) If you catch rainbow/steelhead trout incidentally in other subsistence net fisheries, you may retain them for subsistence purposes, unless restricted in this section.*

\* \* \* \*

*(xvi) You may take pink salmon for subsistence purposes from fresh water with a dip net from May 15 through September 30, 7 days per week, with no harvest or possession limits in the following areas:*

*(A) Green Island, Knight Island, Chenega Island, Bainbridge Island, Evans Island, Elrington Island, Latouche Island, and adjacent islands, and the mainland waters from the outer point of Granite Bay located in Knight Island Passage to Cape Fairfield;*

*(B) Waters north of a line from Porcupine Point to Granite Point, and south of a line from Point Lowe to Tongue Point.*

*(xvii) In the Prince William Sound Area within Chugach National Forest and in the Copper River drainage downstream of Haley Creek Chugach National Forest portion of the Prince William Sound Area you must possess a Federal subsistence fishing permit to take salmon, trout, whitefish, Grayling, Dolly Varden, or char. Permits are available from the Cordova Ranger District.*

*(A) Salmon harvest is not allowed in Eyak Lake and its tributaries, Copper River and its tributaries and Eyak River upstream from the Copper River Highway bridge.*

*(B) You must record on your subsistence permit the number of subsistence fish taken. You must record all harvested fish prior to leaving the fishing site, and return the permit by the due date marked on the permit.*

*(C) You must remove both lobes of the caudal (tail) fin from subsistence-caught salmon before leaving the fishing site.*

*(D) You may take salmon by rod and reel, dip net, spear and gaff year round.*

*(E) For a household with 1 person, 15 salmon (other than pink) may be taken. 5 Cutthroat Trout with only 2 over 20 inches may be taken. Pink Salmon: See the conditions of the permit.*

*(F) For a household with 2 persons, 30 salmon (other than pink) may be taken, plus an additional 10 salmon for each additional persons in a household over 2. 5 Cutthroat Trout with only 2 over 20 inches per each household member with a maximum household limit of 30 cutthroat trout. Pink Salmon: See the conditions of the permit.*

*(G) You may take Dolly Varden, Arctic Char, Whitefish and Grayling with rod and reel, and spear year round and with a gill net from January 1 – April 1. The maximum incidental gill net harvest of trout is 10.*

*(H) You may take Cutthroat Trout with Rod and reel, and spear from June 15 to April 14th and with a gill net from January 1 to April 1.*

*(I) You may not retain Rainbow/Steelhead trout for subsistence unless taken incidentally in a subsistence gillnet fishery. Rainbow/Steelhead trout must be immediately released from a dip net without harm.*

## **Justification**

This proposal will codify existing permit conditions for the Chugach National Forest portion of the Prince William Sound Area. This will make regulations more readily available to qualified rural residents, and will not change seasons, harvest limits and harvest methods and means that have been in practice for over 12 years, for subsistence fishing under permit FFPW01. Codifying these permit

conditions provides greater transparency and notice to the public regarding Federal subsistence opportunities in the Prince William Sound area, as is done for other areas of the state.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southcentral Alaska Subsistence Regional Advisory Council

**Support** WP19-13 as modified by OSM. The Council stated that it was a reasonable proposal that would benefit subsistence users by making the regulations more user friendly. The Council stated that this regulation is a housecleaning/administrative proposal to clarify current Coho Salmon regulations.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

### ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fishery Proposal FP19-13:** This proposal was submitted by the United States Forest Service, Cordova Ranger District and would add the current “permit conditions” to the federal register for subsistence regulations.

**Introduction:** Much of the current federal regulation for subsistence fishing on the Copper River Delta are only found as “Conditions of the Permit.” However, these permit conditions are inconsistent with themselves and do not follow state sport fish harvest regulations for cutthroat trout or salmon on the Copper River Delta. The conditions list “rod and reel and spear” as subsistence gear types allowed for taking cutthroat trout, char, whitefish, grayling and salmon, and states that no snagging is allowed with rod and reel. It then provides a season to take salmon and cutthroat trout with a gillnet. Gillnets are not a legal subsistence gear type in fresh water on the Copper River Delta. The state does not list a specific limit for cutthroat trout in subsistence regulations, so the regulations would default to the sport fish bag limit of 11 inch minimum and 16 inch maximum 2 per day and 2 in possession.

Wild trout regulations for state sport fisheries (applying to rainbow, cutthroat, and steelhead trout) are guided by the *Statewide management standards for wild trout* (5 AAC 75.220) which instruct ADF&G to manage wild trout stocks for optimal sustained yield, based on management objectives that maximize benefits of the fisheries while maintaining genetic diversity, biologically desirable size composition, and abundance levels. Prior to 2012, the bag and possession limits for wild trout in all waters of the Prince William Sound Management Area adhered to statewide standards of two per day, two in possession, only one per day could be 20 inches or greater in length, with an annual limit of two rainbow/steelhead/cutthroat trout 20 inches or greater in length. Department studies conducted on cutthroat trout indicate Prince William Sound cutthroat trout typically reach sexual maturity at 11 inches and that only a small proportion exceeds a length of 16 inches. Using this information, the Alaska Board of Fisheries modified the sport fish bag and possession limits in December 2011 in order to manage

Prince William Sound trout stocks in a more appropriate manner than the more liberal size restrictions described in the *Statewide management standards for wild trout* and is consistent with the management objectives of that plan.

**Impact on Subsistence Users:** Aligning these “conditions of permit” more closely with state regulation would reduce complexity in the regulations and make these regulations easier to enforce.

**Impact on Other Users:** None.

**Opportunities Provided by the State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for salmon, groundfish, herring, herring spawn on kelp, and smelt in various salt waters of Prince William Sound. The board has also made a positive C&T finding for all finfish (except salmon) in the fresh waters of the Prince William Sound Area.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The board has made various ANS findings throughout the Prince William Sound Area.

In the Copper River District and other locations open to commercial salmon fishing, the annual subsistence salmon limit is as follows: (1) 15 salmon for a household of one person; (2) 30 salmon for a household of two persons; (3) 10 salmon for each additional person in a household over those specified in (2) of this subsection; (4) no more than five king salmon may be taken per permit. In Prince William Sound area, salmon are taken under the terms of a permit. Allowable gear includes fish wheels, dip nets, gillnets, and purse seines. However, there are no state subsistence salmon fishing gear regulations that apply in the area under consideration by this proposal.

The subsistence bag, possession, and annual limits for whitefish are 1,000 fish.

The subsistence bag and possession limit for Arctic grayling is five fish, with an annual limit of 20 fish per water body, excluding stocked lakes. A person may not take or possess Arctic grayling under sport fishing regulations and subsistence fishing regulations on the same day.

The subsistence bag and possession limit for lake trout is two fish, with an annual limit of 10 fish per water body. A person may not take or possess lake trout under sport fishing regulations and subsistence fishing regulations on the same day.

The subsistence bag and possession limit for burbot is five fish, except in those waters specified in 5 AAC 52.023, where the bag and possession limit is two fish. The annual limit for burbot is 10 fish per water body. A person may not take or possess burbot under sport fishing regulations and subsistence fishing regulations on the same day.

The Board of Fisheries also provides definitions of legal sport fishing gear under 5 AAC 75.020 as well as sport fishing opportunity in Prince William Sound waters under 5 AAC 55.022. In the fresh waters of 5 AAC 75.022 (a) (3) a person is not allowed to sport fish in fresh water with a spear or (c) “snag” a fish (which means intentionally hook a fish elsewhere than in the mouth). Unless specified in special provision 5 AAC 55.023, in fresh waters the sport fishing season and bag and possession limit for salmon, other than Chinook salmon, is open year round to fishing with a bag limit of 6 fish per day, 12 fish in possession of which only 3 per day, 3 in possession maybe coho salmon. In freshwater drainages crossed by the Copper River Highway from and including the Eyak River to the Million Dollar Bridge, including Clear Creek at mile 42 downstream of the Carbon Mountain bridge, the following special provisions 5 AAC 55.023 apply in the sport fishery: (A)(i) the bag and possession is three fish; a coho salmon removed from the water shall be retained and becomes part of the bag and possession limit of the person originally hooking it; a person may not remove a coho salmon from the water before releasing the fish. (2) from August 15 – September 15, after taking and retaining a bag limit of coho salmon, a person may not sport fish with bait for the remainder of the day in the water described in 5 AAC 55.023(1)(A). The sport bag and possession limit for Arctic char / Dolly Varden and arctic grayling is 10 per day and 10 in possession. Sport harvest is only allowed from June 15 – April 14 and the bag and possession limit for cutthroat trout is 2 fish between 11 inches to 16 inches in total length.

**Recommendation:** ADF&G **SUPPORTS this proposal with modifications** to align cutthroat trout regulations. State and federal regulations are currently out of alignment regarding bag and possession limits for cutthroat trout, and this proposal would make them aligned. The current federal limits were first adopted to align with state limits. Since that time, the state limits have changed but the federal limits have not been updated to remain in alignment. The minimum size limit adopted by the state is the size at first sexual maturity. By reducing harvest of immature trout, individual trout have the chance to reproduce at least once prior to recruiting to the fishery. The upper size limit protects the larger, more fecund individuals (greater than 16 inches in length) and potentially increases the number of large trout. Adoption of this modified proposal would simplify enforcement by providing consistency between federal and state regulations. Failure to adopt this modification would result in state and federal regulations that conflict and lead to mutually exclusive population outcomes; thereby violating recognized principles of fish and wildlife conservation on a resource that is on the northern and westernmost edge of its natural distribution.

The regulation should include the following language: Cutthroat trout may be taken only from June 15 - April 14; bag and possession limit of two fish, and with a size limit of at least 11 inches in length but not more than 16 inches in length.

**Ahtna Tene Nene' Committee**  
**P.O Box 649**  
**Glennallen, Alaska 99588**  
**(907) 822-3476**

June 28, 2018

Federal Subsistence Board  
Office of Subsistence Management  
(Attn: Mr. Matuskowitz)  
1011 E. Tudor Road, MS-121  
Anchorage, Alaska 99503-6199

Dear Mr. Matuskowitz:

Ahtna Tene Nene' is pleased to submit comments on the 2019-2021 federal fisheries proposals. We hope that the Federal Subsistence Board and Inter-Agency Staff Committee will take our comments into consideration.

Enclosed are Ahtna Tene Nene's comments on 2019-2021 Fisheries Proposals. Please contact Ms. Stickwan, if there are any questions at (907) 822-3476.

Sincerely,

*Gloria Stickwan*  
*for*  
*Linda Pete*  
Linda Pete,  
Chair

[www.ahtna-inc.com](http://www.ahtna-inc.com)



**2019-2021 Fisheries Proposals****Prince William Sound Area****FP19-13****Comments:**

We support WP19-13 with modification to add the words “except for the Copper River drainage upstream of Haley Creek,” after the words “Freshwaters Prince William Sound Area” to proposal WP19-13 so that it clearly specifies where the proposed regulatory language applies. (Tables on page 34 of the proposal booklet.)

The regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* is confusing and unclear. The conditions on permit FFPW01 should also be included in the regulations. Subsistence users should be able to read and understand the regulations in the federal fisheries regulatory booklet before they apply for a permit.

**WP19-14****Comments:**

We support WP19-14 with modification to change the fishing areas to the following:

“In the Copper River Delta and mainstem Copper River, from the 37 Mile Bridge to a boundary extending 0.5 mile downriver of road crossings of the mainstem Copper River east of 27 Mile on the Copper River Highway, you may take salmon only by dip net and rod and reel; dip netting from a boat is prohibited.”

The fishing areas as proposed in WP19-14 are too expansive. The population of Cordova is large and they may take too many fish. We would be very concerned about the potential of over harvest of salmon.

The harvest limit for Chinook with rod and reel or dip net should be the same as the Upper Copper River.

Inseason management authority of fisheries will be under the auspice of the Superintendent of Wrangell St. Elias National Park and Preserve in Copper Center, Alaska. We want to allow and keep inseason management with the Superintendent to manage the fisheries in the mainstem of the Copper River to protect salmon strength and runs.

**FP19-15**

**Comments:**

We support WP19-15 to clarify the PWS federal regulations by moving the requirement to “check your fish wheel once every 10 hours and remove all fish” from the fish wheel owner to the fish wheel operator. Permittees who are federally qualified subsistence users, and State fisheries permittees, who are using the owner’s fish wheel should be responsible for checking and removing fish from the fish wheel. The owner of the fish wheel should not be legally responsible for removing fish from the fish wheel.

**FP19-16**

**Comments:**

We oppose WP19-16 to change the regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* to allow the use of “one unit of gear per person.”

We do not support one unit of gear per person. Keep federal fisheries regulations as it is now written, do not change it. Opportunity to harvest fish is not taken away by keeping regulations in place. Household members, who fish together can take turns using one gear type to catch their household limit.

**Wrangell-St. Elias National Park  
Subsistence Resource Commission**

P.O. Box 439  
Mile 106.8 Richardson Hwy.  
Copper Center, AK 99573

October 26, 2018

Anthony Christianson, Chair  
Federal Subsistence Board  
U.S. Fish and Wildlife Service  
Office of Subsistence Management  
1011 E. Tudor Road, MS-121  
Anchorage, AK 99503

Subject: Federal Subsistence Management Program Fisheries Proposals for 2019-2021

Dear Mr. Christianson:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Copper Center, Alaska, on October 25 and 26, 2018. The commission is a federal advisory committee that represents subsistence users of federal lands within Wrangell-St. Elias National Park and Preserve. At this meeting, the SRC reviewed the federal subsistence fisheries proposals for the Wrangell-St. Elias area being considered for the 2019-2021 regulatory cycle and would like to provide the following comments:

**FP19-13: Add current fish permit conditions to regulations in a portion of the Prince William Sound Area**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-13 as modified by OSM. Adding the current fish permit conditions to the regulations will clarify the rules for subsistence users. The modification is important to clarify that the conditions would apply specifically to the Chugach National Forest portion of the Prince William Sound Area.

**FP19-14: Allow a dip net and rod and reel fishery in a portion of the lower Copper River**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-14 as modified by OSM. This proposal would provide harvest opportunity for federally qualified subsistence users and support the satisfaction of subsistence needs.

**FP19-15: Move requirement to check fish wheel from fish wheel owner to fish wheel operator**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-15. This is a housekeeping proposal. It is common sense that the fish wheel operator, rather than the owner, is required to check the fish wheel. There are no conservation concerns with the proposal, nor is it detrimental to subsistence needs.

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

**FP19-16: Clarify gear usage for Upper Copper River District subsistence salmon fishing permits**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-16. This proposal clarifies the regulations and provides for subsistence opportunity. Federal subsistence regulations should not be more restrictive than state regulations. Additionally any additional harvest is likely to be small.

**FP19-17: Change C&T for all fish in the Yakutat and the Southeast Alaska Regions**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-17. This change simplifies the regulations and supports subsistence for federally qualified subsistence users.

Thank you for the opportunity to comment.

Sincerely,



Daniel E. Stevens  
Chair

cc: NPS Alaska Regional Director  
Superintendent, Wrangell-St. Elias National Park and Preserve  
Southeast, Southcentral and Eastern Interior Regional Advisory Councils  
Governor of Alaska

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

<b>FP19–16 Executive Summary</b>	
<b>General Description</b>	<p>Proposal FP19-16 requests the Federal Subsistence Board revise section § ____.27(e)(11)(xi)(B) of the CFR, which states that multiple types of gear may be specified on a permit. The current language allows only one unit of gear to be operated at any one time. The requested change is to allow only one unit of gear <i>per person</i> to be operated at any one time. <i>Submitted by: Wrangell-St. Elias National Park and Preserve.</i></p>
<b>Proposed Regulation</b>	<p><b>§ ____.27(e)(11) Prince William Sound Area – Salmon</b>  <i>(v) In the Upper Copper River District, you may take salmon only by fish wheels, rod and reel, or dip nets.</i></p> <p style="text-align: center;">* * * *</p> <p><i>(xi) The following apply to Upper Copper River District subsistence salmon fishing permits:</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><i>(B) Multiple types of gear may be specified on a permit, although only one unit of gear <b>per person</b> may be operated at any one time;</i></p> <p style="text-align: center;">* * * *</p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Southcentral Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>

FP19–16 Executive Summary	
<b>ADF&amp;G Comments</b>	<p><b>Support with modification</b> to clarify regulatory language.</p> <p>The modified regulation should read:</p> <p><i>(xi) The following apply to Upper Copper River District subsistence salmon fishing permits:</i></p> <p style="text-align: center;">* * * *</p> <p><i>(B) Multiple types of gear may be specified on a permit, although only <b>one type of gear may be used per day and only one fish wheel per permit or one unit of gear dip net or rod and reel per person</b> may be operated at any one time;</i></p>
<b>Written Public Comments</b>	<b>1 Oppose, 1 Support</b>

**STAFF ANALYSIS**  
**FP19-16**

**ISSUES**

Proposal FP19-16, submitted by Wrangell-St. Elias National Park and Preserve, requests the Federal Subsistence Board (Board) revise section §\_\_\_\_.27(e)(11)(xi)(B) of the CFR, which states that multiple types of gear may be specified on a permit. The current language allows only one unit of gear to be operated at any one time. The requested change is to allow only one unit of gear *per person* to be operated at any one time.

**DISCUSSION**

The proponent notes that gear types allowed in the Upper Copper River District subsistence fisheries consist of fish wheel, dip net, and rod and reel. They state that changing this regulation from “unit of gear” to “unit of gear per person” would allow multiple individuals under a single Federal subsistence fishing permit to operate a single type of gear at one time, such as multiple people in a family dip netting at one time. This has been the practice over the years, and the proponent wants the regulation adjusted to ensure that it is being conducted legally.

**Existing Federal Regulation**

*§\_\_\_\_.27(e)(11) Prince William Sound Area*

*(v) In the Upper Copper River District, you may take salmon only by fish wheels, rod and reel, or dip nets.*

*(xi) The following apply to Upper Copper River District subsistence salmon fishing permits:*

*(A) Only one subsistence fishing permit per subdistrict will be issued to each household per year. If a household has been issued permits for both subdistricts in the same year, both permits must be in your possession and readily available for inspection while fishing or transporting subsistence-taken fish in either subdistrict. A qualified household may also be issued a Batzulnetas salmon fishery permit in the same year;*

*(B) Multiple types of gear may be specified on a permit, although only one unit of gear may be operated at any one time;*

*(C) You must return your permit no later than October 31 of the year in which the permit is issued, or you may be denied a permit for the following year;*

*(D) A fish wheel may be operated only by one permit holder at one time; that permit holder must have the fish wheel marked as required by paragraph (e)(11) of this section and during fishing operations;*

*(E) Only the permit holder and the authorized member(s) of the household listed on the subsistence permit may take salmon;*

*(F) You must personally operate your fish wheel or dip net;*

*(G) You may not loan or transfer a subsistence fish wheel or dip net permit except as permitted.*

**Proposed Federal Regulation**

***§\_\_\_\_.27(e)(11) Prince William Sound Area***

*(v) In the Upper Copper River District, you may take salmon only by fish wheels, rod and reel, or dip nets.*

*(xi) The following apply to Upper Copper River District subsistence salmon fishing permits:*

*\* \* \* \**

*(B) Multiple types of gear may be specified on a permit, although only one unit of gear per person may be operated at any one time;*

*\* \* \* \**

**Existing State Regulation**

***5 AAC 01.620 Lawful gear and gear specifications for the Prince William Sound Area***

*(b) Salmon may be taken only by the following types of gear:*

*(1) in the Glennallen Subdistrict by fish wheels or dip nets.*

***5 AAC 01.630 Lawful gear and gear specifications for the Prince William Sound Area***

*(b) Salmon and freshwater fish species may be taken only under authority of a subsistence fishing permit.*



*(d) Only one subsistence fishing permit will be issued to each household per year.*

*(e) The following apply to Glennallen Subdistrict subsistence salmon fishing permits:*

*(1) only one type of gear may be specified on the permit;*

...

*(7) only the permit holder and the authorized member of the household listed on the subsistence permit may take salmon;*

...

### **Extent of Federal Public Waters**

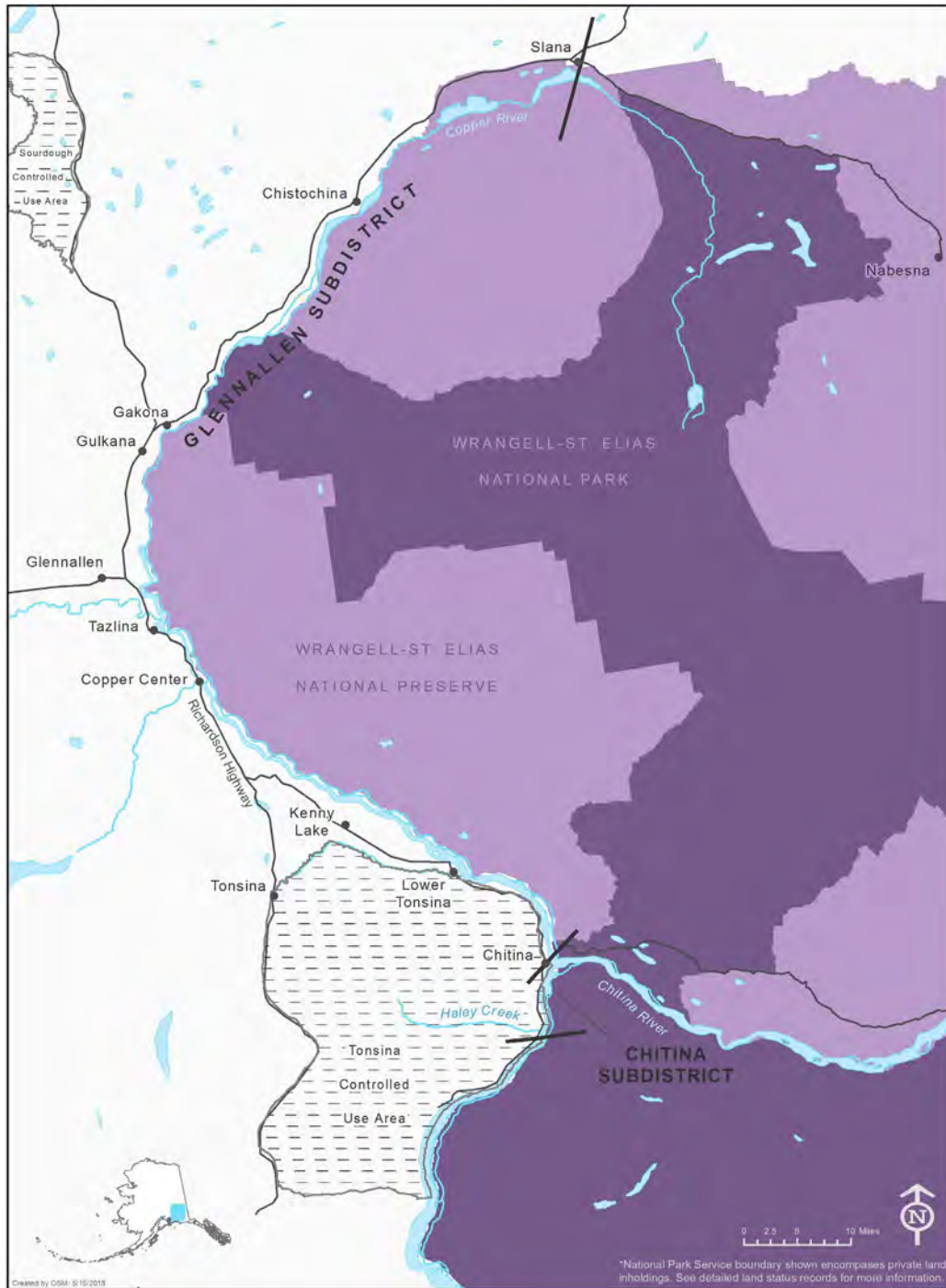
For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR 242.3 and 50 CFR 100.3. Federal public waters comprise those waters within and adjacent to the exterior boundaries of Wrangell-St. Elias National Park and Preserve (**Figure 1**).

### **Customary and Traditional Use Determinations**

Rural residents of Cantwell, Chickaloon, Chisana, Chistochina, Chitina, Copper Center, Dot Lake, Gakona, Gakona Junction, Glennallen, Gulkana, Healy Lake, Kenny Lake, Lower Tonsina, McCarthy, Mentasta Lake, Nabesna, Northway, Paxson-Sourdough, Slana, Tanacross, Tazlina, Tetlin, Tok, Tonsina, and those individuals that live along the Tok Cutoff from Tok to Mentasta Pass, and along the Nabesna Road have a customary and traditional use determination for salmon in the Chitina Subdistrict of the Upper Copper River District.

Rural residents of the Prince William Sound Area and residents of Cantwell, Chickaloon, Chisana, Dot Lake, Dry Creek, Healy Lake, Northway, Tanacross, Tetlin, Tok, and those individuals living along the Alaska Highway from the Alaskan/Canadian border to Dot Lake, along the Tok Cutoff from Tok to Mentasta Pass, and along the Nabesna Road have a customary and traditional use determination for salmon in the Glennallen Subdistrict of the Upper Copper River District.

Rural residents of Mentasta Lake and Dot Lake have a customary and traditional use determination for salmon in waters of the Copper River between National Park Service regulatory markers located near the mouth of Tanada Creek, and in Tanada Creek between National Park Service regulatory markers identifying the open waters of the creek (Batzulnetas Area).



**Figure 1.** Upper Copper River drainage, showing exterior boundary of Wrangell-St. Elias National Park and Preserve as well as the Chitina and Glennallen Subdistricts of the Upper Copper River District.

**Regulatory History**

The Board adopted the current regulatory framework for the Prince William Sound Management Area from existing State subsistence regulations in 1999. Included in this was a permit limitation to operate only one fish wheel at a time.

For the 2002 regulatory cycle, the Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) submitted proposal FP02-17b to establish seasons, harvest limits, and methods for the Chitina Subdistrict, and allow more than one gear type to be specified on the permit for the Glennallen Subdistrict (OSM 2001). The Southcentral Alaska Subsistence Regional Advisory Council supported the proposal with modification to stipulate that only one unit of gear may be operated at a time, and that if a household is issued permits for both Subdistricts, a person must have both permits in possession when fishing or transporting subsistence caught fish. This would also identify the permit as a Federal issued permit, rather than a permit issued by the State as had been the case before. The Eastern Interior Alaska Subsistence Regional Advisory Council deferred to the home region on this proposal. The Interagency Staff Committee recommended adoption with the modifications as recommended by the Southcentral Alaska Subsistence Regional Advisory Council. At its December 2001 meeting, the Board adopted this proposal as recommended by the Interagency Staff Committee (FSB 2001).

### **Current Events**

In 2018, National Park Service (NPS) personnel identified a discrepancy between the regulations and the Federal subsistence permit and Federal subsistence management regulations for the harvest of fish and shellfish booklet pertaining to this topic. Whereas the Code of Federal Regulations states “only one *unit* of gear may be operated at any one time”, the permit and the regulations booklet both state “only one *type* of gear may be operated at any one time”. Action was immediately implemented to update the draft of the next regulations booklet. NPS personnel identified making changes to this regulation as a chance to provide additional opportunity for Federally qualified subsistence users with a small regulatory language modification.

### **Biological Background and Harvest History**

The primary emphasis of this analysis is on how many units of gear may be operated under a single permit at one time, and does not involve specifics of harvest for a species or group of species. As such, minimal background for biology and harvest history is provided.

The Copper River supports multiple runs of salmon, but Sockeye Salmon *Oncorhynchus nerka*, Chinook Salmon *O. tshawytscha*, and Coho Salmon *O. kisutch* are the three species primarily targeted in the fisheries of the Upper Copper River. Sockeye Salmon is the most abundant species, and is the main fish targeted by all user groups in both the Chitina and Glennallen subdistricts (**Table 1, Table 2, Table 3, Table 4**). While there have been no biological concerns for this species, and returns have been within or exceeded the current escapement goal of 360,000 to 750,000 as measured by the Miles Lake sonar during the past five years (ADF&G 2018), returns in 2018 have been substantially lower. This has prompted restrictions to the State commercial fishery at the mouth of the river; restrictions to the State personal use fishery in the Chitina Subdistrict; and restrictions to non-Federally qualified users in the Chitina Subdistrict by the Federal in-season manager.

**Table 1.** Estimated harvest of Sockeye, Chinook, and Coho Salmon by Federally qualified subsistence users in the Chitina Subdistrict, 2002-2017 (Sarafin 2018, pers. comm.).

Chitina Subdistrict Federal Subsistence Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salm-on Harvest	Estimated Chinook Salm-on Harvest	Estimated Coho Salmon Harvest
2002	122	73.0	788	45	0
2003	100	82.0	874	22	85
2004	109	76.0	1,599	9	24
2005	76	84.0	1,506	26	0
2006	75	85.0	1,622	15	24
2007	98	89.0	1,044	29	45
2008	82	85.0	928	26	87
2009	68	91.0	898	9	12
2010	92	86.0	2,397	20	38
2011	85	85.9	2,137	15	9
2012	90	94.4	1,419	6	8
2013	99	90.9	2,199	19	9
2014	113	94.7	1,628	15	72
2015	111	92.8	2,404	14	15
2016	128	80.5	1,925	20	41
2017	132	79.5	1,828	15	9
<b>5-yr avg.</b>	-	88	1,997	17	29
<b>10-yr avg.</b>	-	88	1,776	16	30
<b>Mean</b>	-	86	1,575	19	30

Chinook Salmon in-river abundance averaged around 40,000 fish between 2003 and 2011 (**Figure 2**). However, returns over the past five years (2012-2016) have been notably smaller, averaging around 27,000, and conservation measures have been put into place for the various fisheries that target these species during some years.

Harvests of Chinook Salmon have been the largest in the State personal use and subsistence fisheries, but have declined across all four fisheries in the past ten years compared to the years prior to that (**Table 1, Table 2, Table 3, Table 4**). This matches with declines in returns over that same period (**Figure 2**).

Coho Salmon return to the Copper River following the Sockeye and Chinook Salmon runs. Other than counts from the Long Lake weir, there are no abundance estimates for Coho Salmon in the drainage.

Although harvests of Coho Salmon are on a similar scale to that for Chinook Salmon in the Chitina Subdistrict Federal subsistence and State personal use fisheries, they are substantially smaller for the two Glennallen Subdistrict fisheries.

**Table 2.** Estimated harvest of Sockeye, Chinook, and Coho Salmon in the Chitina Subdistrict State personal use fishery, 2002-2017 (Somerville 2018, pers. comm.).

Chitina Subdistrict State Personal Use Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salmon Harvest	Estimated Chinook Salmon Harvest	Estimated Coho Salmon Harvest
2002	6,804	65.8	85,968	2,023	1,934
2003	6,441	66.1	80,796	1,903	2,533
2004	8,156	60.8	107,312	2,495	2,860
2005	8,230	64.8	120,013	2,043	1,869
2006	8,497	62.3	123,261	2,663	2,715
2007	8,377	66.2	125,126	2,694	1,742
2008	8,041	59.7	81,359	1,999	2,711
2009	7,958	60.7	90,035	214	1,712
2010	9,970	60.9	138,487	700	2,013
2011	9,217	62.0	128,052	1,067	1,702
2012	10,016	57.7	127,143	567	1,385
2013	10,592	63.9	180,663	744	797
2014	11,717	60.7	157,215	719	1,129
2015	12,635	62.0	223,080	1,570	841
2016	11,394	54.6	148,982	711	1,182
2017	9,490	64.9	132,694	1,961	715
<b>5-yr avg.</b>	-	61	168,527	1,141	933
<b>10-yr avg.</b>	-	61	140,771	1,025	1,419
<b>Mean</b>	-	62	128,137	1,505	1,740

### Cultural Knowledge and Traditional Practices

For the Ahtna Athabascans, salmon has been a staple resource and a symbol of wealth. Sockeye Salmon have been especially important to the Ahtna's cultural and economic survival for at least 1,000 years and remains a vital resource to the subsistence lifeways of those living in the Copper River Basin today (Reckord 1983, Brady et al. 2013). Other salmon species that are important to those living in the region include Chinook Salmon and Coho Salmon. Late season Coho Salmon became a more important resource with the introduction of the fish wheel into the Cooper River Basin in the early 1900s (De Laguna and McClellan 1981).

Multiple reports recognize the Copper River Basin as a focal point of intense salmon harvest for multiple users under State and Federal regulations. Many of these activities are occurring side by side and simultaneously (Simeone et al. 2007, Brady et al. 2013).

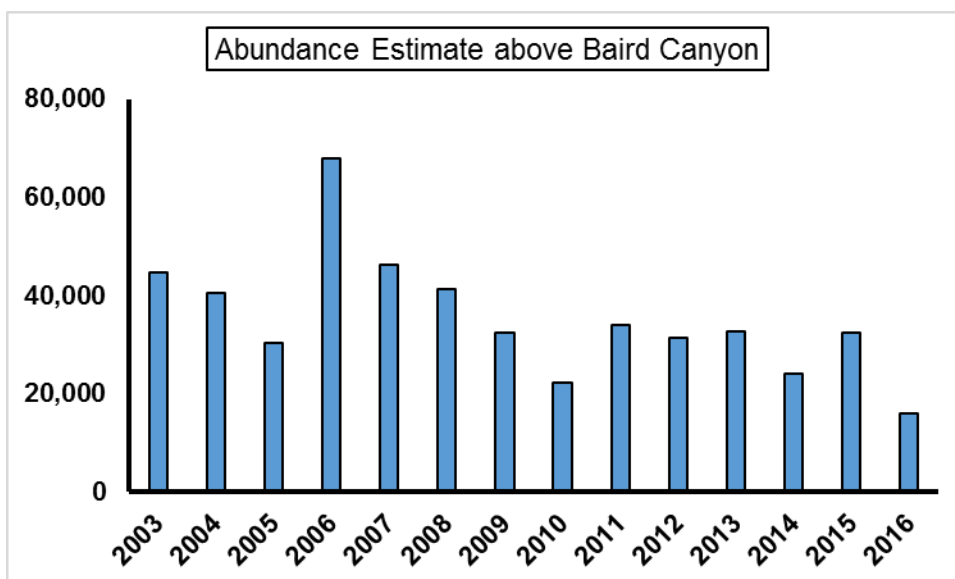
**Table 3.** Estimated harvest of Sockeye, Chinook, and Coho Salmon by Federally qualified subsistence users in the Glennallen Subdistrict, 2002-2017 (Sarafin 2018, pers. comm.).

Glennallen Subdistrict Federal Subsistence Fishery					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salm-on Harvest	Estimated Chinook Salm-on Harvest	Estimated Coho Salmon Harvest
2002	201	81.0	9,807	696	100
2003	221	83.0	16,405	667	183
2004	262	79.0	22,410	805	192
2005	267	86.0	23,224	401	147
2006	254	87.0	19,208	494	32
2007	281	84.0	18,125	677	40
2008	270	81.0	14,009	870	183
2009	274	85.0	13,925	581	40
2010	269	88.0	14,601	341	73
2011	277	87.7	16,066	799	60
2012	275	92.0	15,718	403	85
2013	273	89.0	17,789	372	27
2014	315	90.5	23,889	439	25
2015	325	92.3	26,753	416	14
2016	320	82.8	19,181	446	11
2017	338	84.3	18,550	473	1
<b>5-yr avg.</b>	-	88	21,232	429	16
<b>10-yr avg.</b>	-	87	18,048	514	52
<b>Mean</b>	-	86	18,104	555	76

In recent comprehensive subsistence surveys conducted by the Alaska Department of Fish and Game (ADF&G), it was noted that salmon composed a majority of the annual harvest in most communities along the Copper River drainage. The per capita salmon harvest from communities in the Copper River Basin ranged from about 192 lbs. person in Chitina to approximately 46 lbs. person in McCarthy (Holen et al. 2014, La Vine and Zimpelman 2014).

**Table 4.** Estimated harvest of Sockeye, Chinook, and Coho Salmon in the Glennallen Subdistrict State subsistence fishery, 2002-2017 (Somerville 2018, pers. comm.).

Glennallen Subdistrict State Subsistence Fisheries					
Year	Permits Issued	Percentage of Permits Reported Fished	Estimated Sockeye Salmon Harvest	Estimated Chinook Salmon Harvest	Estimated Coho Salmon Harvest
2002	1,121	73.1	50,850	3,653	530
2003	1,012	77.1	47,007	2,538	467
2004	956	76.6	55,510	3,346	577
2005	961	76.0	64,213	2,229	154
2006	984	76.6	57,710	2,769	212
2007	1,174	75.0	65,714	3,276	238
2008	1,186	72.3	43,157	2,381	493
2009	1,090	71.6	46,849	2,493	228
2010	1,321	72.1	70,719	2,099	293
2011	1,306	73.9	59,622	2,319	372
2012	1,527	68.6	76,305	2,095	335
2013	1,339	72.7	73,728	2,148	143
2014	1,656	66.4	75,501	1,365	233
2015	1,631	70.1	81,800	2,212	77
2016	1,769	64.3	62,474	2,075	45
2017	1,632	64.0	39,859	2,935	57
<b>5-yr avg.</b>	-	67	66,672	2,147	111
<b>10-yr avg.</b>	-	70	63,001	2,212	228
<b>Mean</b>	-	72	60,689	2,496	278



**Figure 2.** Estimated in-river abundance of Chinook Salmon above Baird Canyon on the Copper River based on mark-recapture methods, 2003-2016 (Piche et al. 2017).

The surveys document the gear type used by residents to harvest salmon. Fish wheels are the most common gear type utilized to harvest salmon in the Upper Copper River. The most recent surveys reported salmon harvest via fish wheel ranged from a high of 93% in Chistochina to a low of 15% in Mentasta Lake (Kukkonen and Zimpelman 2012, La Vine et al. 2013). The community of Paxson did not utilize fish wheels during the study year of 2013 (Holen et al. 2015). Dip nets are used by most communities, except for Chistochina, Mentasta Pass, and Slana/Nabesna Road, to harvest salmon in the Copper River. For communities using dip nets, salmon harvested by dip net ranged between a high of 30% in McCarthy to a low of 0.2% in Copper Center (Kukkonen and Zimpelman 2012, La Vine et al. 2013, La Vine and Zimpelman 2014). Rod and reel is also used to harvest salmon by most of the Copper River Basin communities with the exception of Mentasta Lake. Salmon harvested by rod and reel ranged between a high of 31% in Paxson to a low of 2% in Chitina (Holen et al. 2015, La Vine and Zimpelman 2014). The total community harvest of salmon reported in the recent surveys includes fish caught outside of the Copper River Basin by residents of the area with a variety of gear types that include gillnets, seine, and rod and reel (Holen et al. 2015).

### **Effects of the Proposal**

Federal subsistence fishing for salmon in the Upper Copper River District is limited to fish wheels, rod and reel, or dip net. As currently written, this regulation curtails the number of Federally qualified subsistence users on a Federal subsistence salmon fishing permit that may harvest fish to one at a time. By adding the new language “per person” to this regulation, additional household members listed on the permit would be able to harvest fish concurrently. Existing Federal subsistence management regulations (§\_\_\_.27(e)(11)(xi)(D)) prohibit the operation of multiple fish wheels by a single permit holder, and this change would not affect that restriction. However, one household member could be harvesting from a fish wheel, while another is using a rod and reel or dip net. In other instances, multiple household members listed on a single permit would be able to harvest by dip net or rod and reel at one time. The proposed change would benefit Federally qualified subsistence users and will allow a household to harvest fish in less time, should they choose to do so. This change should not cause an issue with enforcement as Federally qualified subsistence users are already required to have permits in possession and readily available for inspection while fishing or transporting subsistence-taken fish.

### **OSM CONCLUSION**

**Support Proposal FP19-16.**

### **Justification**

Making this small change to regulations will provide additional opportunity for Federally qualified individuals to harvest fish in a timely manner. Although this change may allow for different gear types (e.g., dip net and rod and reel) to be operated concurrently under a single permit by multiple members of a single household, this presents no conservation, regulatory, or enforcement concerns.



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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southcentral Alaska Subsistence Regional Advisory Council

**Support FP19-16.** The Council stated the proposal provides additional concurrent fishing opportunities and will liberalize fishing methods. The Council stated the proposal requires additional discussion to clarify the intent of the proposed regulations, which may lead to misunderstandings among fishing methods allowed under one fish wheel permit. One Council member voted in opposition stating that the proposal provided no clear intent and may lead to errors by fishers in the upper Copper River. This proposal presents no conservation concerns and is helpful to law enforcement. The Council suggested the presentation and analysis to the Federal Subsistence Board provide some examples of a permit holder and family and their opportunities to fish given this change.

### Eastern Interior Alaska Subsistence Regional Advisory Council

**Support FP19-16.** The Council noted that allowing this proposal would give people the opportunity to pass down knowledge of gear types from one generation to the next, and it would be a liberalization of regulations, not a restriction. The Council also stated that there is no conservation concern, as the practice is currently utilized. The proposal would be beneficial to subsistence users and not cause any restriction to other users.

## INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

## ALASKA DEPARTMENT OF FISH AND GAME COMMENTS

**Fisheries Proposal FP19-16:** This proposal, submitted by the Wrangell-St. Elias National Park and Preserve, would allow each person in a household to use one unit of gear at any one time.

**Introduction:** Under state regulations, a household must declare what type of gear, either a fish wheel or a dip net, household members will use in the Glennallen Subdistrict subsistence fishery. Under a state subsistence dip net permit, each household member listed on the permit may operate a dip net at any one time. For example, a household of 4 people could operate up to 4 dip nets in a day. Under current federal regulations that same household would only be allowed to operate a single dip net. Under federal regulations, the household can choose to operate a dip net, a fish wheel, or rod and reel.

**Impact on Subsistence Users:** If adopted this proposal would allow federally-qualified subsistence users to use dip nets or rod and reel in a single day. There would be no impacts to non-federally qualified subsistence users, since they can use multiple instances of allowable gear (such as 4 dip nets). There

would also be no impact to subsistence users who use fish wheels, since a fish wheel may be operated only by one permit holder at one time, and subsistence fishermen must personally operate the fish wheel.

**Impact on Other Users:** If adopted this proposal would have no impact on other users of the Copper River.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for salmon stocks of the Glennallen Subdistrict of the Upper Copper River District described in 5 AAC 01.605(2).

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Board of Fisheries has made the following salmon ANS findings for the Glennallen Subdistrict:

In that portion from the southern boundary of the subdistrict at the downstream edge of the Chitina-McCarthy Road bridge to the mouth of the Tonsina River: 25,500–39,000 salmon;

In that portion from the mouth of the Tonsina River upstream to the mouth of the Gakona River: 23,500–31,000 salmon; and

In that portion from the mouth of the Gakona River upstream to the mouth of the Slana River, and the waters of the Copper River near Cordova: 12,000–12,500 salmon.

Under state regulation 5 AAC 01.630(e)(1) only one type of gear – either fish wheel or dip net - may be specified on a Glennallen Subdistrict subsistence fishing permit.

**Conservation Issues:** There are no conservation issues associated with this proposal.

**Enforcement Issues:** If adopted, this proposal would cause federal subsistence regulations in the Glennallen Subdistrict to further diverge from state regulations, complicating enforcement.

**Recommendation:** ADF&G recommends **MODIFYING** this proposal. The proposal, as written, would allow each person on a federal household permit to operate a single unit of any type of gear on a given day. Thus it would allow one household member to use a fish wheel while another uses a dip net.

To achieve the proposer's intent of allowing household members the opportunity to each operate a dip net or rod and reel, the proposed regulation should be amended to read:

(B) Multiple types of gear may be specified on a permit, although **ONLY ONE TYPE OF GEAR MAY BE USED PER DAY AND ONLY ONE FISH WHEEL PER PERMIT** or one unit of **DIP NET OR ROD AND REEL per person** may be operated at any one time;

**Ahtna Tene Nene' Committee**  
**P.O Box 649**  
**Glennallen, Alaska 99588**  
**(907) 822-3476**

June 28, 2018

Federal Subsistence Board  
Office of Subsistence Management  
(Attn: Mr. Matuskowitz)  
1011 E. Tudor Road, MS-121  
Anchorage, Alaska 99503-6199

Dear Mr. Matuskowitz:

Ahtna Tene Nene' is pleased to submit comments on the 2019-2021 federal fisheries proposals. We hope that the Federal Subsistence Board and Inter-Agency Staff Committee will take our comments into consideration.

Enclosed are Ahtna Tene Nene's comments on 2019-2021 Fisheries Proposals. Please contact Ms. Stickwan, if there are any questions at (907) 822-3476.

Sincerely,

*Gloria Stickwan*  
*for*  
*Linda Pete*  
Linda Pete,  
Chair

[www.ahtna-inc.com](http://www.ahtna-inc.com)

**2019-2021 Fisheries Proposals****Prince William Sound Area****FP19-13****Comments:**

We support WP19-13 with modification to add the words “except for the Copper River drainage upstream of Haley Creek,” after the words “Freshwaters Prince William Sound Area” to proposal WP19-13 so that it clearly specifies where the proposed regulatory language applies. (Tables on page 34 of the proposal booklet.)

The regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* is confusing and unclear. The conditions on permit FFPW01 should also be included in the regulations. Subsistence users should be able to read and understand the regulations in the federal fisheries regulatory booklet before they apply for a permit.

**WP19-14****Comments:**

We support WP19-14 with modification to change the fishing areas to the following:

“In the Copper River Delta and mainstem Copper River, from the 37 Mile Bridge to a boundary extending 0.5 mile downriver of road crossings of the mainstem Copper River east of 27 Mile on the Copper River Highway, you may take salmon only by dip net and rod and reel; dip netting from a boat is prohibited.”

The fishing areas as proposed in WP19-14 are too expansive. The population of Cordova is large and they may take too many fish. We would be very concerned about the potential of over harvest of salmon.

The harvest limit for Chinook with rod and reel or dip net should be the same as the Upper Copper River.

Inseason management authority of fisheries will be under the auspice of the Superintendent of Wrangell St. Elias National Park and Preserve in Copper Center, Alaska. We want to allow and keep inseason management with the Superintendent to manage the fisheries in the mainstem of the Copper River to protect salmon strength and runs.

**FP19-15**

**Comments:**

We support WP19-15 to clarify the PWS federal regulations by moving the requirement to “check your fish wheel once every 10 hours and remove all fish” from the fish wheel owner to the fish wheel operator. Permittees who are federally qualified subsistence users, and State fisheries permittees, who are using the owner’s fish wheel should be responsible for checking and removing fish from the fish wheel. The owner of the fish wheel should not be legally responsible for removing fish from the fish wheel.

**FP19-16**

**Comments:**

We oppose WP19-16 to change the regulatory language for the Prince William Sound Area in the current *Management Regulations for the Subsistence Harvest of Fish and Shellfish on Federal Public Land and Waters in Alaska* to allow the use of “one unit of gear per person.”

We do not support one unit of gear per person. Keep federal fisheries regulations as it is now written, do not change it. Opportunity to harvest fish is not taken away by keeping regulations in place. Household members, who fish together can take turns using one gear type to catch their household limit.



**Wrangell-St. Elias National Park  
Subsistence Resource Commission**

P.O. Box 439  
Mile 106.8 Richardson Hwy.  
Copper Center, AK 99573

October 26, 2018

Anthony Christianson, Chair  
Federal Subsistence Board  
U.S. Fish and Wildlife Service  
Office of Subsistence Management  
1011 E. Tudor Road, MS-121  
Anchorage, AK 99503

Subject: Federal Subsistence Management Program Fisheries Proposals for 2019-2021

Dear Mr. Christianson:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Copper Center, Alaska, on October 25 and 26, 2018. The commission is a federal advisory committee that represents subsistence users of federal lands within Wrangell-St. Elias National Park and Preserve. At this meeting, the SRC reviewed the federal subsistence fisheries proposals for the Wrangell-St. Elias area being considered for the 2019-2021 regulatory cycle and would like to provide the following comments:

**FP19-13: Add current fish permit conditions to regulations in a portion of the Prince William Sound Area**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-13 as modified by OSM. Adding the current fish permit conditions to the regulations will clarify the rules for subsistence users. The modification is important to clarify that the conditions would apply specifically to the Chugach National Forest portion of the Prince William Sound Area.

**FP19-14: Allow a dip net and rod and reel fishery in a portion of the lower Copper River**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-14 as modified by OSM. This proposal would provide harvest opportunity for federally qualified subsistence users and support the satisfaction of subsistence needs.

**FP19-15: Move requirement to check fish wheel from fish wheel owner to fish wheel operator**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-15. This is a housekeeping proposal. It is common sense that the fish wheel operator, rather than the owner, is required to check the fish wheel. There are no conservation concerns with the proposal, nor is it detrimental to subsistence needs.

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

**FP19-16: Clarify gear usage for Upper Copper River District subsistence salmon fishing permits**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-16. This proposal clarifies the regulations and provides for subsistence opportunity. Federal subsistence regulations should not be more restrictive than state regulations. Additionally any additional harvest is likely to be small.

**FP19-17: Change C&T for all fish in the Yakutat and the Southeast Alaska Regions**

The Wrangell-St. Elias National Park Subsistence Resource Commission supports FP19-17. This change simplifies the regulations and supports subsistence for federally qualified subsistence users.

Thank you for the opportunity to comment.

Sincerely,



Daniel E. Stevens  
Chair

cc: NPS Alaska Regional Director  
Superintendent, Wrangell-St. Elias National Park and Preserve  
Southeast, Southcentral and Eastern Interior Regional Advisory Councils  
Governor of Alaska

Chair: Daniel Stevens; Members: Don Horrell, Gloria Stickwan, Jamie Marunde, Kaleb Rowland, Raymond Sensmeier, Sue Entsminger, and Suzanne McCarthy

### FP19–19 Executive Summary

<b>General Description</b>	Proposal FP19–19 requests that the Federal public waters of Neva Lake, Neva Creek, and South Creek be closed to the harvest of Sockeye Salmon by non-Federally qualified users. <i>Submitted by: Calvin Casipit of Gustavus.</i>
<b>Proposed Regulation</b>	<p>§____.27(e)(13) <i>Southeastern Alaska Area</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><i>(ii) You may possess a subsistence fishing permit to take salmon, trout, grayling, or char. You must possess a subsistence fishing permit to take eulachon from any freshwater stream flowing into fishing District 1.</i></p> <p style="text-align: center;">* * * *</p> <p style="text-align: center;"><i>(xxii) Only Federally qualified subsistence users may harvest sockeye salmon in Neva Lake, Neva Creek, and South Creek.</i></p>
<b>OSM Conclusion</b>	<b>Support</b>
<b>Southeast Alaska Subsistence Regional Advisory Council Recommendation</b>	<b>Support</b>
<b>Interagency Staff Committee Comments</b>	<b>Support</b>
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

**STAFF ANALYSIS**  
**FP19-19**

**ISSUES**

Proposal FP19-19, submitted by Calvin Casipit of Gustavus, requests that the Federal public waters of Neva Lake, Neva Creek, and South Creek be closed to the harvest of Sockeye Salmon by non-Federally qualified users.

**DISCUSSION**

The proponent states that “over the past few years the subsistence harvest limit for Sockeye has been reduced from 40 to 10 salmon, at the same time sport harvest and use by nonresidents and unguided charter boat renters from urban areas in the lower 48, have continued uncontrolled and unabated.” He further states that “this is a clear violation of Title VIII of ANILCA [the Alaska National Interest Lands Conservation Act],” and that “a meaningful preference for Federally qualified subsistence users is not being provided in this area.”

The proponent was contacted by telephone on May 25, 2018 to get a better understanding of the background of his proposal. He stated that nonresident anglers from a local lodge are occasionally directed to the Sockeye Salmon at South Creek as an alternative when weather prevents fishing in Icy Strait. He depends on Neva Creek to meet his needs for salmon, which have not been met in recent years. He was not able to catch any fish in the last two to three years, despite making several trips each year to fish. He feels that the combination of reduced limits, low abundance, and harvest by non-Federally qualified users prevents subsistence users at Neva Creek from meeting their needs, and that there needs to be a meaningful preference for Federally qualified subsistence users.

**Existing Federal Regulation**

*§ \_\_.27(e)(13) Southeastern Alaska Area*

\* \* \* \*

*(ii) You may possess a subsistence fishing permit to take salmon, trout, grayling, or char. You must possess a subsistence fishing permit to take eulachon from any freshwater stream flowing into fishing District 1.*

\* \* \* \*

*(xi) If a harvest limit is not otherwise listed for sockeye in paragraph (e)(13) of this section, the harvest limit for sockeye salmon is the same as provided for in adjacent State subsistence or*

*personal use fisheries. If a harvest limit is not established for the State subsistence or personal use fisheries, the possession limit is 10 sockeye and the annual harvest limit is 20 sockeye per household for that stream.*

\* \* \* \*

**Proposed Federal Regulation**

**§ \_\_.27(e)(13) Southeastern Alaska Area**

\* \* \* \*

*(ii) You may possess a subsistence fishing permit to take salmon, trout, grayling, or char. You must possess a subsistence fishing permit to take eulachon from any freshwater stream flowing into fishing District 1.*

\* \* \* \*

*(xxii) Only Federally qualified subsistence users may harvest sockeye salmon in Neva Lake, Neva Creek, and South Creek.*

**Existing State Regulation**

**5 AAC 01.745 Subsistence bag and possession limits; annual limits**

*(h) In the Juneau Management Area, in waters open to subsistence salmon fishing under a household subsistence salmon fishing permit, the possession and annual limits for salmon per household are as follows:*

\* \* \* \*

*(B) District 14: in the following waters, the following possession and annual limits apply:*

\* \* \* \*

*(ii) Neva Creek: the possession and annual limit is 10 sockeye salmon*

**5 AAC 47.022 General provisions for seasons and bag, possession, annual, and size limits for the fresh waters of Southeast Alaska Area**

\* \* \* \*

*(b) In the fresh waters east of the longitude of Cape Fairweather:*

\* \* \* \*

*(2) salmon, other than king salmon: may be taken from January 1 – December 31; no annual limit, no size limit, bag and possession limits as follows:*

*(A) 16 inches or greater in length; bag limit of six fish per species; possession limit of 12 fish per species;*

*(B) less than 16 inches in length; bag and possession limit of 10 fish in combination;*

*(3) rainbow and cutthroat trout, in combination: may be taken from January 1 - December 31; bag and possession limit of two fish; no annual limit; must be no less than 11 inches and no greater than 22 inches in length;*

*(4) steelhead: may be taken from January 1 - December 31; bag limit of one fish; possession limit of two fish; must be 36 inches or greater in length; annual limit of two fish; a harvest record is required as specified in 5 AAC 47.024(c) ;*

*(5) Dolly Varden: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no annual limit; no size limit;*

*(6) brook trout: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no annual limit; no size limit;*

*(7) grayling: may be taken from January 1 - December 31; bag and possession limit of 10 fish; no annual limit; no size limit;*

*(8) other freshwater finfish species not specified in this subsection: may be taken from January 1 - December 31; no bag, possession, annual, or size limits.*

### **Extent of Federal Public Waters**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. All fresh waters in Neva Lake and the Neva Creek area are within the exterior boundaries of the Tongass National Forest and are considered Federal public waters for the purposes of Federal subsistence fisheries management. Neva Lake, located near the community of Excursion Inlet, drains into Neva Creek, which flows into South Creek before emptying into the marine waters of Excursion Inlet (**Figures 1 and 2**).



**Figure 1.** Map of Neva Lake and Excursion Inlet area. The Federal public waters affected by the proposed regulation are highlighted in dark blue.

### **Customary and Traditional Use Determinations**

Rural residents of drainages flowing into Sections 12A, 13A, and District 14 have a customary and traditional use determination for all fish in District 14. This includes residents of the communities of Hoonah, Excursion Inlet, Gustavus, Angoon, and smaller communities of Icy Strait and northern Chatham Strait).

### **Regulatory History**

#### Federal Regulatory History

Before 2007, only residents of Hoonah had customary and traditional use determination for salmon, Dolly Varden, trout, smelt, and Eulachon in Sections 14B and 14C of District 14, which includes the Excursion Inlet/Neva area. In 2007, the Federal Subsistence Board (Board) adopted Fisheries Proposal FP07-17 to extend the customary and traditional use determination to include all fish to all residents of drainages flowing into Sections 12A, 13A, and District 14 (FSB 2007a).

For the 2008 regulatory cycle, Proposal FP08-06 proposed reducing the daily possession limit in Neva Creek from the 40 Sockeye Salmon limit provided in State regulation to 10 Sockeye Salmon, while eliminating the annual limit (OSM 2007). This proposal was rejected by the Board (FSB 2007b).



**Figure 2.** Map of the Icy Strait area, including Neva Lake and nearby communities.

#### State Regulatory History

Possession and annual limits on State subsistence permits were increased from 10 to 25 in 2002; and to 40 in 2004 in response to strong escapements. In 2015, the limit was decreased to 30 in response to a decline in escapements. The current bag and annual limit of 10 Sockeye Salmon for subsistence was established in 2016 (ADF&G 2016). Sport fishing falls under the Southeast Alaska general regulations and limits.



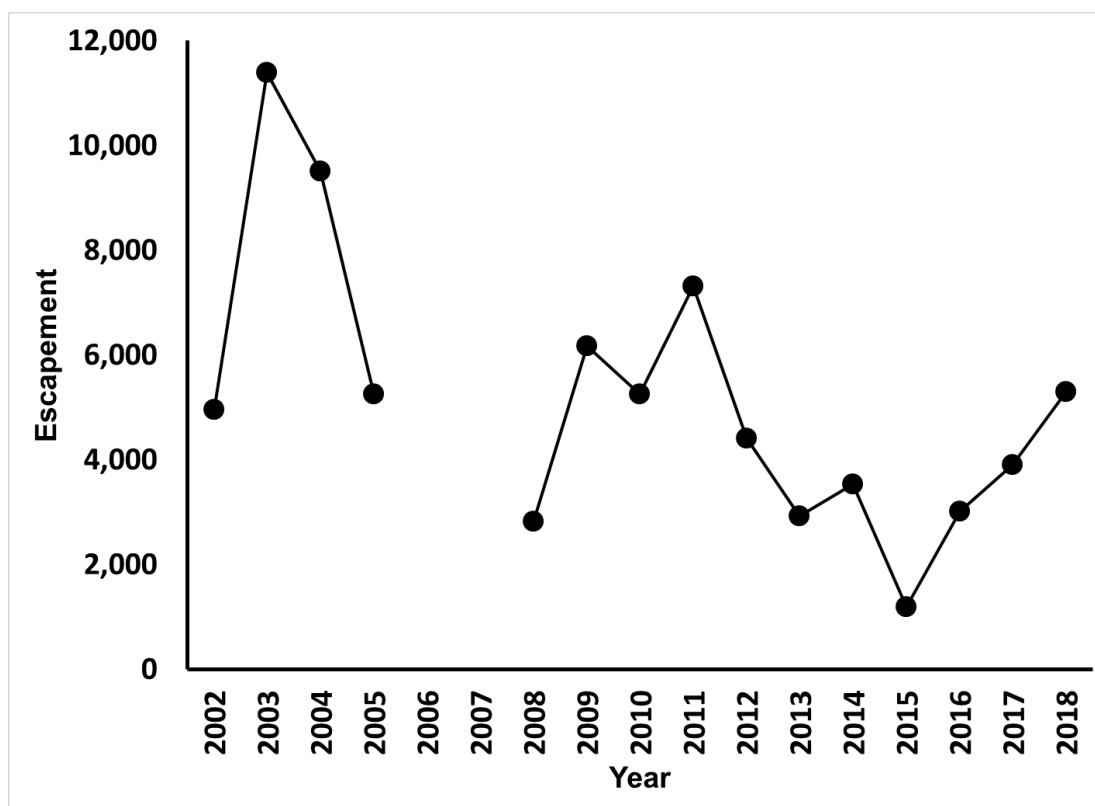
## Current Events

A current Federal subsistence fisheries proposal, FP19-17, submitted by the Southeast Alaska Regional Advisory Council, would extend the customary and traditional use determination for all of the Southeast Alaska and Yakutat areas to all residents of the Southeast Region. That proposal, like this one, will be considered by the Board at its January 2019 regulatory meeting.

## Biological Background

Neva Lake is a relatively small 64.5 acre (26.1 ha) lake. Neva Creek, the outlet stream, is a tributary to South Creek, which empties into Excursion Inlet immediately south of the Ocean Beauty Seafood processing plant. A Fishery Resource Monitoring Program-funded weir project estimated the annual escapement of Sockeye Salmon into Neva Lake from 2002 to 2005 and from 2008 to 2017 (Van Alen and Musslewhite 2017). Sockeye Salmon escapements have trended downward over the years of escapement monitoring, but have improved in the last three years (**Figure 3**).

Most Sockeye Salmon smolts out-migrate after spending a year rearing in the lake, and there is a good distribution of one-, two-, or three-ocean age fish in the escapements. Adult Sockeye Salmon enter the lake from June through October. The earlier running fish spawn in the main inlet stream in August and September and the later running fish spawn on lake beaches from mid-September to December.



**Figure 3.** Escapement of Sockeye Salmon to Neva Lake, 2002–2018.

### Habitat

The inlet stream to Neva Lake has been used as a water source for the Ocean Beauty seafood processing plant in Excursion Inlet. The inlet stream is a primary spawning area, and water withdrawals have likely adversely affected the quantity and temperature of water in the stream. Forest Service personnel have documented pre-spawn mortality of spawning Sockeye Salmon in the inlet stream during warm, dry periods. Ocean Beauty has been developing an alternative water source, but the status of the project is unknown.

### **Harvest History**

Sockeye Salmon returning to Neva Lake are targeted in both subsistence and sport fisheries occurring in the Neva/South Creek drainage and the marine waters of Excursion Inlet, as well as incidentally in mixed-stocked commercial fisheries in Icy Strait and Excursion Inlet. Subsistence fishing occurs in marine water at the mouth of South Creek, usually with beach seines or gillnets. In freshwater, salmon are taken with gaffs, dip nets, or spears. Sport fishing occurs both in marine waters and in fresh water.

The community of Excursion Inlet is home to a seafood processing plant, a number of seasonal recreational cabins, and a fishing lodge. The lodge specializes in “unguided anglers,” and provides clients with boats, equipment and local knowledge, but does not typically provide a fishing guide.

### Subsistence Fisheries

Subsistence fishing at the Neva/South Creek system takes place both in freshwater and in marine waters at the mouth of South Creek. Most subsistence fishing is done under the State permit system, though some harvest occurs using Federal permits (**Table 1**). The amount of unreported harvest is unknown, as only limited harvest monitoring has occurred at the Neva Creek area.

Residents of Icy Strait communities (primarily Hoonah, Gustavus, and Excursion Inlet) and Angoon are the principal Federally qualified subsistence users of Neva Lake Sockeye Salmon, while a substantial portion of the harvest goes to non-Federally qualified residents of the Juneau area (**Table 2**). The reported harvest of Sockeye Salmon by all users has declined sharply since 2015.

The permit holder’s community of residence and gear type are recorded on the State permits, but not whether salmon were harvested in fresh or marine waters. However, since some gear types are typically used in marine waters (beach seine, gillnets) and some only in fresh water (gaff, dip net, spear), the water type can be inferred in most cases. Some gear types (cast net, hook and line, unspecified) can be used in either fresh or marine water, so the water type is unknown.

**Figure 4** illustrates the recent reported harvest of Sockeye Salmon by both Federally qualified and non-Federally qualified users (based on residence community) in each water type as determined by the gear type. From 2008 to 2017, an average of 74 Sockeye Salmon were harvested annually in fresh water by non-Federally qualified users, out of a total average annual harvest of 438. In the last two years, only

about 20 Sockeye Salmon were harvested each year by non-Federally qualified users using freshwater gear types, part of a trend towards reduced harvests among all gear types and users.

**Table 1.** Subsistence Sockeye Salmon harvest at Neva Creek as reported on State and Federal permits, 1985–2016

Year	State Subsistence Permits <sup>a</sup>		Federal Subsistence Permits <sup>b</sup>		Total		
	Permits Fished	Sockeye	Permits Fished	Sockeye	Permits Fished	Sockeye	per permit
1985	0	0			0	0	
1986	0	0			0	0	
1987	0	0			0	0	
1988	0	0			0	0	
1989	0	0			0	0	
1990	1	25			1	25	25
1991	2	40			2	40	20
1992	16	348			16	348	22
1993	8	127			8	127	16
1994	5	151			5	151	30
1995	6	90			6	90	15
1996	19	411			19	411	22
1997	9	126			9	126	14
1998	4	25			4	25	6
1999	5	50			5	50	10
2000	22	197			22	197	9
2001	7	157			7	157	22
2002	6	36	0	0	6	36	6
2003	6	87	0	0	6	87	15
2004	23	397	0	0	23	397	17
2005	14	276	1	34	15	310	21
2006	11	140	0	0	11	140	13
2007	11	219	2	50	13	269	21
2008	26	601	0	0	26	601	23
2009	39	780	0	0	39	780	20
2010	26	329	1	13	27	342	13
2011	31	448	1	10	32	458	14
2012	38	607	1	20	39	627	16
2013	39	510	1	21	40	531	13
2014	36	459	2	6	38	465	12
2015	40	312	0	0	40	312	8
2016	24	136	1	8	25	144	6

<sup>a</sup>State subsistence data from ADF&G October 2017.

<sup>b</sup>Federal subsistence fishing permits were not issued before 2002.

**Table 2.** Harvest of Sockeye Salmon from Neva/South Creek by residence community, as reported on State permits, 2008–2017.

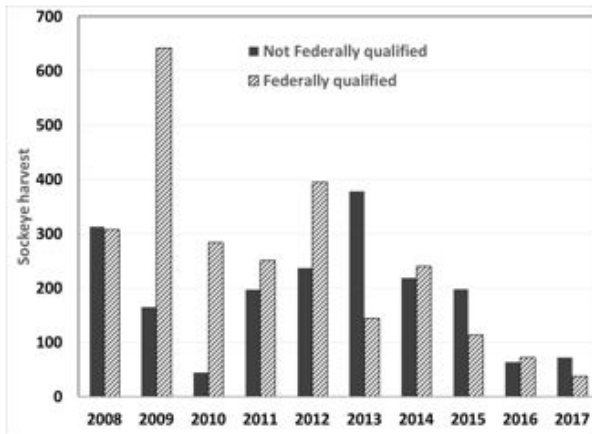
Year	Non-Federally Qualified				Federally Qualified				
	Juneau	Auke Bay	Douglas	Total	Excursion Inlet	Gustavus	Hoonah	Angoon	Total
2008	313			313	38	94	176		308
2009	165			165	40	155	447		642
2010	35		10	45	6	73	125	80	284
2011	182		15	197	0	187	64		251
2012	217		20	237	1	78	316		395
2013	368	4	6	378	0	122	22		144
2014	214		5	219		71	91	78	240
2015	160	15	23	198		103	11		114
2016	64		0	64		42	30		72
2017	65		7	72	10	17	11		38
<b>Total</b>	<b>1783</b>	<b>19</b>	<b>86</b>	<b>1888</b>	<b>95</b>	<b>942</b>	<b>1293</b>	<b>158</b>	<b>2488</b>

### Sport and commercial fisheries

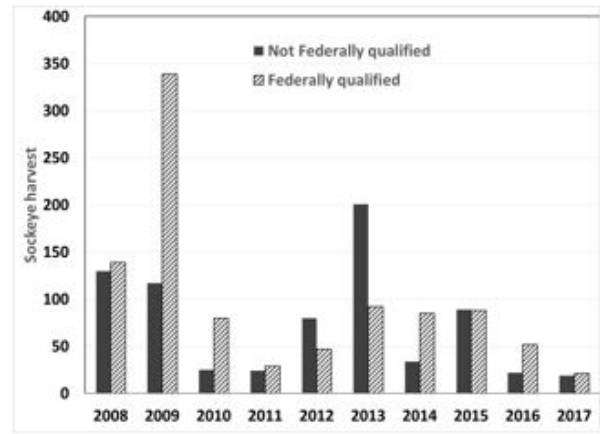
The Alaska Department of Fish and Game (ADF&G) Division of Sport Fish estimates sport effort, catch, and harvest from an annual statewide mail survey (Jennings et. al. 2015). This survey is sent to a portion of both resident and non-resident fishing license holders. In recent years, an average of less than one surveyed angler reported fishing at Neva or South Creeks, which does not provide enough data to make a statistically valid estimate of effort or catch. Therefore, conclusions about current harvest estimates and trends cannot be made with any level of certainty. Although not representative of the Neva and South Creek freshwater effort and catch, in the expanded survey area that includes all freshwater drainages of Glacier Bay, Cross Sound, and Icy Strait, the total average (2006–2016) freshwater effort is 3,392 angler-days with an average catch of 369 Sockeye Salmon and average harvest of 117 Sockeye Salmon (Teske 2018, pers. comm.).

Charter boat operators and fishing guides are required to record all salmon caught in the ADF&G logbook program. However, the lodge in Excursion Inlet has anglers that fish in freshwater and are unguided, so the number of Sockeye Salmon caught by clients of the lodge would be estimated from the Statewide Harvest Survey. Guided freshwater effort and harvest in the area is low. Freshwater logbook data (2006–2016) for all freshwater drainages of Glacier Bay, Cross Sound, and Icy Strait areas shows that average combined freshwater effort is 477 angler days with an average catch of 40 Sockeye Salmon and an average harvest of just over one Sockeye Salmon in the guided fishery (Teske 2018, pers. comm.).

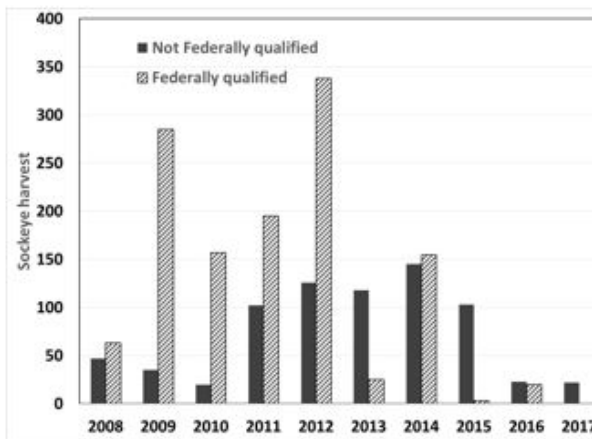
(A) Total harvest (all gear types)



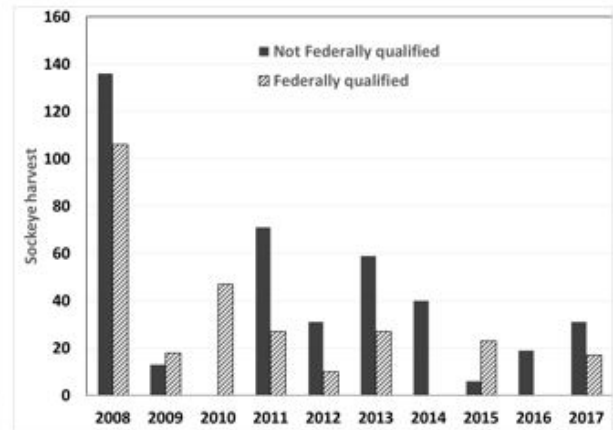
(B) Freshwater harvest (gaff, dip net spear)



(C) Saltwater harvest (beach seine, gillnet)



(D) Unknown harvest (Cast net, hook and line, unspecified)



**Figure 4.** Subsistence harvest of Sockeye Salmon from Neva/South Creek by subsistence user type and location of harvest as inferred by gear type, as reported on State permits, 2008–2017.

The commercial harvest of Neva Sockeye Salmon is unknown and probably negligible in years when there is little or no purse seine fishing in the northern half of 14B or 14C. Between 2004 and 2017, the commercial purse seine catch of Sockeye Salmon in Subdistrict 114-80 (Excursion Inlet) has ranged from 53 to 2,968 fish, with no catch reported in eight of the fourteen years (ADF&G 2018).

**Cultural Knowledge and Traditional Practices**

The Excursion Inlet/Neva area is in the traditional subsistence fishing area used by the Huna Tlingit (Goldschmidt and Haas 1946, 1998; Schroeder and Kookesh 1990). It is also thought to have been the traditional home of a Tlingit clan of the Raven moiety known as the Kuyeikeidi or the “People of Kuyeik (Excursion Inlet)” (Thornton 1999, de Laguna 1991). It is unclear if this clan dissipated or if it transformed into the Lukaaxadi clan of Haines (Thornton 1999, de Laguna 1991). Another clan from Glacier Bay, the Wooshkeetan, is thought to have established a settlement in Excursion Inlet circa 1700

when the glacier rapidly advanced and forced the resettlement of several groups (Crowell and Howell 2013). This village was known as Weitadi Noow (the young woman in seclusion).

Several published documents point to archaeological records and cultural accounts of historic occupation and use of the Excursion Inlet area. A pool in the lower part of Neva Creek is a traditional site for taking Sockeye Salmon with a gaff (Langdon 2006). Smythe (1988) reported that the area was important for trapping in the early to mid-1900s, especially as winter income for local salmon fishermen.

The modern settlement at Excursion Inlet began with the construction of a salmon cannery at the mouth of the inlet in 1908 (Ocean Beauty Seafoods 2018). The name was first reported in the 1943 Coast Pilot and it served as a resupply point for the Aleutian Campaign during World War II (ADCCED 2018). The population in 2000 and 2010 was 10 and 12 individuals respectively (ADCCED 2018). Of the 71 housing units present, most (65) were recorded as vacant in 2010 due to seasonal use (ADCCED 2018).

Land ownership is complicated in the vicinity of the Neva Creek watershed in part due to the former military use of the area (Ratner and Dizard 2006). Ocean Beauty Seafoods operates in some of the former military buildings and tidelands. Neva Lake and the outlet creek are not within the Tongass National Forest and some of the land was selected by the Haines Borough (Ratner and Dizard 2006).

As recently as 2012 Excursion Inlet was reported as an important salmon fishing area by residents of both Haines and Hoonah (Sill and Koster, 2017). The use of Neva Lake and South Creek was specifically mentioned by key respondents of an earlier study in 2003 and some residents of Hoonah reported that they are entirely dependent on Neva Creek for their subsistence salmon needs (Ratner and Dizard 2006). Several respondents grew up in the Excursion Inlet, learned to fish at Neva Creek, and continue to fish in the same holes that their ancestors did (Ratner and Dizard 2006).

Some Hoonah respondents indicated that they tend to fish in the Neva area when the Hoktaheen area is closed to salmon fishing. Others used one or the other site exclusively or, both in the same day:

On occasion, harvesters have fished Neva / South Creek very early in the morning, about four or five o'clock and then gone to Hoktaheen on the same day when they were unsuccessful at Neva / South Creek. Other respondents used one site exclusively for sockeye salmon. One respondent has fished only at the Neva Creek watershed his entire life, except for six years when he was in the Navy. (Ratner and Dizard 2006; p.16)

Other Hoonah respondents noted that they tend to choose Hoktaheen fishing sites over Neva / South Creek due to lower possession limits at Neva Creek (Ratner and Dizard 2006). According to the study, most Hoonah salmon fishermen that historically fished at Neva Creek switched to Hoktaheen when regulations reduced the harvest limit to ten Sockeye Salmon per household at Neva.

Fishers traveling to Neva / South Creek from Hoonah frequently return home the same evening (Ratner and Dizard 2006). Ratner and Dizard (2006) reported that many Hoonah respondents prefer beach seines over gillnets at Neva Creek. The latter are problematic in strong tidal currents at the mouth of the stream where there is debris and large rocks. Despite the preference, some fishers have switched to gillnets

because they are lighter when wet and make the crossing of Icy Strait safer and less costly. At least one respondent reported using traditional gaffs exclusively in Neva Creek.

It is believed that the actual number of Sockeye Salmon harvested for home use from Neva / South Creek by residents of Hoonah is underreported due in part to the individual household focus of fishing permits which do not account for the widespread sharing and distribution of salmon resources throughout the community (Ratner and Dizard 2006). There are a relatively small group of high harvesters in the community who provide Sockeye Salmon for many of its residents; these regularly provide for 7–14 households, elders, single mothers, and for ceremonial and cultural events (Ratner and Dizard 2006).

#### User Conflict

There is some indication of user conflict regarding salmon fishing in the Neva Lake / South Creek area. In Ratner and Dizard (2006) several respondents noted avoidance of the Neva Creek area because of competition among user groups. One respondent stated the following when asked about fishing locations: “Usually Hoktaheen, you have too much hassle going over to Neva Creek anymore or Excursion Inlet. They have tourists over there; they’ll watch you. A lot of cannery people over there getting fish. They are being over fished there pretty much” (Ratner and Dizard 2006; p.16).

Contentions have also been documented regarding monitoring and enforcement. Ratner and Dizard (2006) noted that some Hoonah residents felt that their subsistence harvests are monitored and restricted much more closely than non-resident clients of the Excursion Inlet lodges.

User conflicts in the area are also known regarding contaminants and water withdrawals. The military abandoned hazardous waste in the area and during the 1940s the creek was believed to be unsafe and elders warned their families not to eat the salmon (Ratner and Dizard 2006). Though local perceptions of water and fish safety appear to have improved over time, withdrawals from Neva Creek for the operations at the Ocean Beauty Seafoods facility has also been noted as concerning (Ratner and Dizard 2006). The water system was originally constructed in the 1940s and the water right was issued to Ocean Beauty Seafoods by the Alaska Department of Natural Resources in 1970, with no documented consideration of fisheries (Ratner and Dizard 2006).

#### **Other Alternatives Considered**

One possible alternative to the proposed regulation is to increase the annual harvest limit of Sockeye Salmon in the Federal public waters of Neva Lake, Neva Creek and South Creeks by Federally qualified subsistence users. While this alternative may improve the ability of Federally qualified subsistence users to meet their needs for Sockeye Salmon, it could also lead to additional harvest that reduces the escapement and exacerbates the conservation concern for Neva Lake Sockeye Salmon. Also, as stated by the proponent, subsistence fishers are having trouble catching the current harvest limit, so any benefit could be minor.

Another alternative is to reduce the annual harvest limit of Sockeye Salmon in the Federal public waters of Neva Lake, Neva Creek and South Creeks by non-Federally qualified subsistence users, rather than

closing the waters to harvest entirely. Given the small amount of harvest by non-Federally qualified subsistence users, this would likely have little effect on the abundance of Sockeye Salmon available to Federally qualified subsistence users. It would also do little to address the reported user conflicts in the area.

### **Effects of the Proposal**

The decline in escapements of Sockeye Salmon to Neva Lake over the past decade present a moderate conservation concern, which has prompted reductions in harvest limits. The lower abundance of Sockeye Salmon at an important subsistence fishing site, combined with the reduced harvest limits, has made it more difficult for subsistence users to meet their needs for Sockeye Salmon. The proposed regulation would provide Federally qualified subsistence users primary access to this resource in Federal public waters.

The reported harvest of Sockeye Salmon by non-Federally qualified users in Federal public waters is relatively small, so the proposed regulation would likely have only a small effect on the overall abundance of Sockeye Salmon, depending on the extent of unreported harvest. If the Neva Lake Sockeye Salmon run continues to recover, as has been seen in the past two years, the effect of the proposed regulation may be more substantial. An increase in abundance, along with increased harvest limits and fishing effort, would magnify the advantage that the proposed closure would give to Federally qualified users.

The closure of Federal public waters to harvest of Sockeye Salmon by non-Federally qualified users may also help reduce the reported user conflict with lodge guests, cannery workers, and non-resident anglers. The harvest of Sockeye Salmon in the Federal public waters of the Neva Creek area by these groups is not well documented, and may be more substantial than reflected in current harvest estimates. Non-Federally qualified users would continue to be able to harvest Sockeye Salmon in State marine waters in Excursion Inlet under State subsistence and sport regulations, so some degree of user conflict may persist.

The Federal Subsistence Board closure policy (Appendix 1) states that the “Board will not restrict the taking of fish and wildlife by users on Federal public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife resources, or to continue subsistence uses of those populations, or for public safety or administrative purposes or ‘pursuant to other applicable law’.” (FSB 2007b). In this case, the combination of low abundance, reduced harvest limits, and perceived user conflict is discouraging the continued subsistence use of the Neva Lake Sockeye Salmon population, as described by the proponent. The proposed regulation would likely have only a modest effect on the abundance of Sockeye Salmon available to users, but it would provide primary access to Federally qualified subsistence users and help reduce user conflicts in the area.



## OSM CONCLUSION

### Support Proposal FP19-19

#### Justification

Under the Board's Closure Policy, the Board may restrict the taking of fish and wildlife by users on Federal public lands if necessary to protect continued subsistence uses of those populations. The low abundance of Sockeye Salmon, the resulting reduced harvest limits, and the perception of user conflict are the primary reasons for the decline in subsistence use of the resource. While it may have only a modest effect on the abundance of Sockeye Salmon available, the proposed regulation would ensure primary access to this resource in Federal public waters by Federally qualified subsistence users. It would also help reduce the user conflicts in a location with a documented unreported harvest and enforcement issues.

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## SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

### Southeast Alaska Subsistence Regional Advisory Council

**Support** FP19-19. The Council identified a conservation concern based on information presented. On page 75 figure 3 of the analysis, escapements look to be down and it looks as though the 2016 harvest bag limit could not be filled. The Council discussed undocumented take from unguided – sportfish survey and Council members shared first-hand knowledge and experience. It is believed that there is a fairly high amount of non-Federally qualified sport fishing that goes on in fresh waters. It is known to exist, but is poorly documented; however, anecdotal evidence suggests a fair impact on subsistence users. The analysis shows documented user conflict. The Council’s recommendation on this proposal is supported by the available evidence and also by information and testimony from a council member with lifelong experience with Neva Creek. The Council values this traditional ecological knowledge and along with the biological knowledge of this area, the Council adopts this proposal to help ensure primary access to this resource is by Federally qualified subsistence users. It may also help to reduce the user conflicts. The Council does not believe leaving non-Federally qualified users out of the stream is an unnecessary restriction.

### INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Advisory Council recommendation and Federal Subsistence Board action on the proposal.

The Interagency Staff Committee (ISC) supports Fisheries Proposal FP19-19, but suggests additional outreach efforts to ensure that the public is informed that the intent of the closure is to allow harvest of Sockeye Salmon on Neva Lake, Neva Creek, and South Creek by Federally qualified subsistence users only. If this proposal is adopted, all Sockeye Salmon incidentally caught by other users fishing in these areas must be released alive. Due to the popularity of these areas by all user groups, the ISC recommends the public be widely informed of this change well in advance of the upcoming fishing season.

### STATE COMMENTS

**Fisheries Proposal WP19-19:** This proposal, submitted by Calvin Casipit of Gustavus, would close the federal waters of Neva Lake, Neva Creek, and South Creek to the harvest of sockeye salmon by non-federally qualified users.

**Introduction:** Although the entire Neva Lake/Neva Creek and South Creek watershed is located on non-federally owned land, the watershed is within the exterior boundary of the Tongass National Forest, described as extending from Dixon Entrance in the south to Yakutat in the north, and bordered on the east by Canada and on the west by the Gulf of Alaska (USFS Land and Resource Management Plan

Tongass National Forest R10-MB-769j, 2016). Therefore, these waters are considered federal public waters for the purposes of federal subsistence fisheries management. Comments made by the State of Alaska shall not be taken as a statement of any position on whether a particular waterway is navigable or not or whether such waterways or lands are subject to federal management for any particular purpose.

Sockeye salmon are harvested in the Neva Creek watershed under a State of Alaska subsistence salmon household permit. A weir has been in place at the outlet of Neva Lake since 2002 to monitor sockeye salmon escapements into the system. Escapements during this time have ranged from a high of 9,248 adult sockeye salmon in 2003 to a low of 1,129 adults in 2015. State subsistence permit limits have changed over time in response to escapement levels. In 2002 annual sockeye salmon subsistence limits were increased from 10 to 25 fish, and then to 40 in 2004 in response to strong escapements. In 2015, the limit was decreased to 30 in response to a decline in escapements. The current bag and annual limit of 10 sockeye salmon was established in 2016. Sport fishing falls under the Southeast Alaska general regulations, which allow a bag limit of six sockeye salmon per day and possession limit of 12.

During 2002–2015, reported harvests of sockeye salmon taken under a state subsistence permit ranged from 36 fish in 2002 to 807 fish in 2009. Reported harvests have generally declined since 2009, with 110 fish reported harvested in 2017, the most recent data available. Sockeye salmon harvest occurs both in salt waters at the mouth of South Creek and in the fresh waters of South and Neva creeks. Although not directly described in the reported harvest information, the proportion of harvest that occurs in fresh waters can be inferred by the reported gear utilized, which suggests an average of 43% of the annual harvest occurring in fresh water; this ranges from 1% in 2003 to 94% in 2006. From 2008 to 2017, an average of 43% of the reported harvest on state subsistence permits was by non-federally qualified residents, primarily from the Juneau area.

Information from the ADF&G Statewide Harvest Survey (SWHS) and freshwater sport fishing guide logbooks indicates that effort and harvest of sockeye salmon in the sport fishery for the Neva Lake/ Neva Creek and South Creek watershed is low. The SWHS is a mailout survey that is sent to a portion of both resident and nonresident sport fishing license holders. In recent years, an average of less than one surveyed angler reported fishing at Neva or South Creeks, indicating that sport effort and harvest is likely low. Additionally, freshwater logbook data (2006–2016) for all freshwater drainages of Yakobi Island, Lisianski, Glacier Bay, Cross Sound, and Icy Strait (Area G), which includes 14 documented sockeye salmon systems, show that combined annual freshwater guided effort for this expanded reporting area is around 477 angler-days, an average annual catch of 40 sockeye salmon, and an average annual harvest of just over 1 sockeye salmon in the guided sport fishery.

Thus it appears that “uncontrolled and unabated sport harvest” is not occurring, since it cannot be substantiated by available data.

**Impact on Subsistence Users:** Subsistence fishing by Alaska residents in salt waters would be unaffected by this proposal, but non-federally qualified residents would be excluded from participating in sockeye salmon fishing in the fresh waters of the Neva Lake/Neva Creek and South Creek watershed. Subsistence fishing for coho salmon and other species of salmon would be unaffected by this proposal.

**Impact on Other Users:** If adopted this proposal would exclude all nonresidents and non-federally qualified residents from participating in sport fisheries for sockeye salmon in the fresh waters of the Neva Lake/Neva Creek and South Creek watershed. Sport fishing for other salmon, as well as for trout and char by these user groups in these waters would be unaffected.

**Opportunity Provided by State:**

State customary and traditional use findings: The Alaska Board of Fisheries has made a positive customary and traditional use finding for salmon, smelt, and char in the waters of District 14C.

Amounts Reasonably Necessary for Subsistence: Alaska state law requires the Board of Fisheries to determine the amount of the harvestable portion of a fish population that is reasonably necessary for customary and traditional uses. This is an ANS. The board does this by reviewing extensive harvest data from all Alaskans, collected either by ADF&G or from other sources.

ANS provides regulatory boards with guidelines on typical numbers of fish harvested for customary and traditional uses under normal conditions. Fishing regulations can be re-examined if harvests for customary and traditional uses consistently fall below ANS. This may be for many reasons: fishing regulations, changes in fish abundance or distribution, or changes in human use patterns, just to name a few.

The Alaska Board of Fisheries has determined that 600–1,500 salmon are reasonably necessary for subsistence in District 14.

As previously mentioned, there are subsistence and sport fishing opportunities provided for this watershed.

**5 AAC 01.745 Subsistence bag and possession limits; annual limits**

(h) In the Juneau Management Area, in waters open to subsistence salmon fishing under a household subsistence salmon fishing permit, the possession and annual limits for salmon per household are as follows:

\* \* \* \*

(B) District 14: in the following waters, the following possession and annual limits apply:

\* \* \* \*

(ii) Neva Creek: the possession and annual limit is 10 sockeye salmon;

**5 AAC 47.022 General provisions for seasons and bag, possession, annual, and size limits for the fresh waters of Southeast Alaska Area**

\* \* \* \*

(b) In the fresh waters east of the longitude of Cape Fairweather:

\* \* \* \*

(2) salmon, other than king salmon: may be taken from January 1 – December 31; no annual limit, no size limit, bag and possession limits as follows:

(A) 16 inches or greater in length; bag limit of six fish per species; possession limit of 12 fish per species;

**Conservation Issues:** This proposal is unlikely to result in conservation issues for sockeye salmon in this system as it would likely result in an overall reduction in harvest by excluding non-federally qualified fishermen from harvesting sockeye.

**Enforcement Issues:** There would be enforcement challenges with respect to the non-federally qualified resident and nonresident sport fishermen who would still be allowed to fish for trout, char and coho salmon in the fresh waters of the Neva Lake/Neva Creek and South Creek watershed.

**Recommendation:** ADF&G **OPPOSES** this proposal. It would exclude non-federally qualified Alaska residents from participating in a subsistence fishery that they may have participated in historically and would exclude sport anglers from targeting sockeye salmon. The department recommends the proponent participate in the Board of Fisheries process if he wishes to amend regulations for sockeye salmon in the Neva Lake/Neva Creek and South Creek watershed.

## Appendix A

### POLICY ON CLOSURES TO HUNTING, TRAPPING AND FISHING

#### ON FEDERAL PUBLIC LANDS AND WATERS IN ALASKA

#### FEDERAL SUBSISTENCE BOARD

Adopted August 29, 2007

#### **PURPOSE**

This policy clarifies the internal management of the Federal Subsistence Board (Board) and provides transparency to the public regarding the process for addressing Federal closures (closures) to hunting, trapping, and fishing on Federal public lands and waters in Alaska. It also provides a process for periodic review of regulatory closures. This policy recognizes the unique status of the Regional Advisory Councils and does not diminish their role in any way. This policy is intended only to clarify existing practices under the current statute and regulations; it does not create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its agencies, officers, or employees, or any other person.

#### **INTRODUCTION**

Title VIII of the Alaska National Interest Land Conservation Act (ANILCA) establishes a priority for the taking of fish and wildlife on Federal public lands and waters for non-wasteful subsistence uses over the taking of fish and wildlife on such lands for other purposes (ANILCA Section 804). When necessary for the conservation of healthy populations of fish and wildlife or to continue subsistence uses of such populations, the Federal Subsistence Board is authorized to restrict or to close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Sections 804 and 815(3)). The Board may also close Federal public lands and waters to any taking of fish and wildlife for reasons of public safety, administration or to assure the continued viability of such population (ANILCA Section 816(b)).

#### **BOARD AUTHORITIES**

- ANILCA sections 804, 814, 815(3), and 816.
- 50 CFR Part 100 and 36 CFR Part 242, Section .10(d)(4).

#### **POLICY**

The decision to close Federal public lands or waters to Federally qualified or non-Federally qualified subsistence users is an important decision that will be made as set forth in Title VIII of ANILCA. The Board will not restrict the taking of fish and wildlife by users on Federal public lands (other than national parks and park monuments) unless necessary for the conservation of healthy populations of fish and wildlife resources, or to continue subsistence uses of those populations, or for public safety or administrative reasons, or “pursuant to other applicable law.” Any individual or organization may propose a closure. Proposed closures of Federal public lands and waters will be analyzed to determine whether such restricts are necessary to assure conservation of healthy populations of fish and wildlife resources or to provide a meaningful preference for qualified subsistence users. The analysis will identify the

availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users.

Like other Board decisions, closure actions are subject to change during the yearly regulatory cycle. In addition, closures will be periodically re-evaluated to determine whether the circumstances necessitating the original closure still exist and warrant continuation of the restriction. When a closure is no longer needed, actions to remove it will be initiated as soon as practicable. The Office of Subsistence Management will maintain a list of all closures.

### **Decision Making**

The Board will:

- Proceed on a case - by - case basis to address each particular situation regarding closures. In those cases for which conservation of healthy populations of fish and wildlife resources allows, the Board will authorize non-wasteful subsistence taking.
- Follow the statutory standard of “customary and traditional uses.” Need is not the standard. Established use of one species may not be diminished solely because another species is available. These established uses have both physical and cultural components, and each is protected against all unnecessary regulatory interference.
- Base its actions on substantial evidence contained within the administrative record, and on the best available information; complete certainty is not required.
- Consider the recommendations of the Regional Advisory Councils, with due deference (ANILCA § 805 (c)).
- Consider comments and recommendations from the State of Alaska and the public (ANILCA § 816 (b)).

### **Conditions for Establishing or Retaining Closures**

The Board will adopt closures to hunting, trapping or fishing by non-Federally qualified users or Federally qualified subsistence users when one or more of the following conditions are met:

- Closures are necessary for the conservation of healthy populations of fish and wildlife:
  - a) When a fish or wildlife population is not sufficient to provide for both Federally qualified subsistence users or other users, use by non-Federally qualified users may be reduced or prohibited, or
  - b) When a fish or wildlife population is insufficient to sustain all subsistence uses, the available resources shall be apportioned among subsistence users according to their:
    - 1) Customary and direct dependence upon the population as the mainstay of livelihood,
    - 2) Local residency, and
    - 3) Availability or alternative resources, or



c) When a fish or wildlife population is insufficient to sustain any use, all uses must be prohibited.

- Closures are necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users.
- Closures are necessary for public safety.
- Closures are necessary for administrative reasons.
- Closures are necessary “pursuant to other applicable law.”

### **Considerations in Deciding on Closures**

When acting upon proposals recommending closure of Federal public lands and waters to hunting, trapping, or fishing, the Board may take the following into consideration to the extent feasible:

- The biological history (data set) of the fish stock or wildlife population.
- The extent of affected lands and water necessary to accomplish the objective of the closure.
- The current status and trend of the fish stock or wildlife population in question.
- The current and historical subsistence and non-subsistence harvest, including descriptions of harvest amounts, effort levels, user groups, and success levels.
- Pertinent traditional ecological knowledge.
- Information provided by the affected Regional Advisory Councils and Alaska Department of Fish and Game.
- Relevant State and Federal management plans and their level of success as well as any relationship to other Federal or State laws or programs.
- Other Federal and State regulatory options that would conserve healthy populations and provide a meaningful preference for subsistence, but would be less restrictive than closures.
- The potential adverse and beneficial impacts of any proposed closure on affected fish and wildlife populations and uses of lands and waters both inside and outside the closed area.
- Other issues that influence the effectiveness and impact of any closure.

### **Reviews of Closures**


A closure should be removed as soon as practicable when conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. A Regional Council, a State or Federal agency, or a member of the public may submit, during the normal proposal period, a proposal requesting the opening or closing of an area. A closure may also be implemented, adjusted, or lifted based on a Special Action request according to the criteria in 50 CFR 100.19 and 36 CFR 242.19.

To ensure that the closures do not remain in place longer than necessary, all future closures will be reviewed by the Federal Subsistence Board no more than three years from the establishment of the closure

and at least every three years thereafter. Existing closures in place at the time this policy is implemented will be reviewed on a three-year rotational schedule, with at least one - third of the closures reviewed each year.

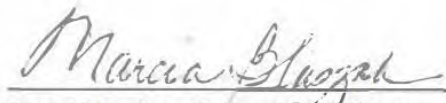
Closure reviews will consist of a written summary of the history and original justification for the closure and a current evaluation of the relevant considerations listed above. Except in some situations which may require immediate action through the Special Action process, closure review analyses will be presented to the affected Regional Council(s) during the normal regulatory proposal process in the form of proposals to retain, modify or rescind individual closures.

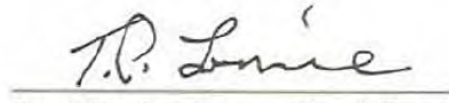
  
Chair, Federal Subsistence Board

  
Board Member, U.S. Fish and Wildlife Service

  
Board Member, Bureau of Indian Affairs

  
Board Member, U.S. Forest Service

  
Board Member, National Park Service

  
Board Member, Bureau of Land Management

**2021 NONRURAL DETERMINATION CYCLE  
PROPOSAL RP19-01 THRESHOLD REQUIREMENTS**

- 1. Proposal RP19-01 Request to change the Nonrural determination for Moose Pass**
- 2. Regional Advisory Council and Interagency Staff Committee Comments**
- 3. Policy on Nonrural Determinations**

Proposal to change Moose Pass, AK from Nonrural to Rural.

1. Jeffrey Bryden – Moose Pass, AK 99631

2. I request that Moose Pass, AK be considered a rural community. I feel we were improperly aggregated into the greater Seward area in order to make the area of Seward non-rural. The community of Moose Pass is a separate community and has maintained its separate culture. Under the new determination rules I feel Moose Pass will qualify as rural.

3. I request that the area to be considered is from Mile 25 Falls Creek to Mile 37 of the Seward Highway. I don't request any additional area be considered for this proposal south of Mile 25. Mile 25 is a natural break with falls creek being a distinguishing

landmark. It is also the break the US Postal Service uses. South of mile 25 is Seward Post 99664. North of Falls Creek is Moose Pass 99631. Mile 25 is also the break for electrical service. South of Mile 25 the electrical service is Seward Electrical. North of mile 25 is Chugach Electrical Service. Mile 37 is also a natural break point as no one lives North of Mile 37 on the Seward Highway and its already considered federally rural at the start of the Sterlying Highway. The "Y" at mile 37 is a distinguishing landmark.

4. The rationale for change is the board changed the rules for what makes community rural. Moose Pass should not have been aggregated together with several other distinct communities to begin with in order to make the port community of Seward Non-Rural. Moose Pass is an older Alaskan community that has kept its separate rural culture. Our residence still hunt, fish and harvest berry's, mushrooms and wood from the local federal lands. We have our own churches, community club origination, fire department, post office, businesses and school. Like a lot of rural areas we have families that home school and

send their older kids to better high schools then can be provided in the local area. The Chugach National Forest lands surrounds the community. It's impossible to travel North or South on the Seward Highways and not be in federal lands currently open for rural subsistence activities. Rural residences from other communities have in the past harvested animals, berries, and firewood from lands surrounding our community.

5. The facts that make Moose Pass rural area:  
Most of the residence lives closer to the rural community of Cooper Landing than Seward. We as a community generally shop in urban area of Anchorage where there is no sales tax or the Internet. These are the same places as rural residences of Hope, Copper Landing or any of the other Alaskan rural communities shop for the majority of their goods. A lot of our community works in the summer tourist related business or have home based business. Like other rural communities we also have members who work remote North Slope, government and fishing jobs. These individuals have chosen to make their permanent home here, but like other rural

areas lack of good paying jobs requires them to work outside the area. As stated before we have our own churches, community club, fire department, post office and school. A lot of our residence harvests a good portion of their own fish, game, edible berry's, mushrooms and firewood from the local federal lands.

6. Having lived in the area for 25 years, I have witnessed changes to the area. The majority of the area purposed for Moose Pass rural federal lands surround determination. As a result the community has not grow in size and the population is stable. The rural feel and culture that made me choose to live in Moose Pass is still very much alive in the area. As the local land agency: the Seward District of the Chugach National Forest opens more of its lands to subsistence harvesting including the lands around our community we as a community would like to partake in the harvest of our local resources.

## **SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS**

### **Southcentral Alaska Subsistence Regional Advisory Council**

The Council moved to accept the proposal and for OSM to proceed with the analysis of the rural character of Moose Pass, finding that the proposal met the threshold requirements for a recommendation to the Federal Subsistence Board (Board). The Council requested that the Office of Subsistence Management work closely with the proponent and residents of Moose Pass so that they may participate when the Board meets.

### **INTERAGENCY STAFF COMMITTEE COMMENTS**

The Interagency Staff Committee (ISC) supports moving forward with a full nonrural determination analysis of Nonrural Proposal RP19-01 submitted by Jeffrey Bryden requesting that Moose Pass be considered a rural community. The ISC believes that the proposal has met all nonrural determination threshold requirements based on the following:

- The Moose Pass community has not been previously considered by the Federal Subsistence Board as a distinct community. Moose Pass was aggregated into the Seward Nonrural Area in 1990.
- The Moose Pass nonrural proposal provides rationale and supporting evidence for the Moose Pass community to be considered for rural status.
- The proposal provides new information not previously considered by the Board to support a potential change to rural status.

The ISC recommends that Federal Subsistence Board direct OSM to modify the Nonrural Determination Policy to include a formal threshold analysis completed by the Office of Subsistence Management for each validated nonrural proposal submitted.



## **POLICY ON NONRURAL DETERMINATIONS**

### **FEDERAL SUBSISTENCE BOARD**

Adopted January 2017

#### **PURPOSE**

This policy clarifies the internal management of the Federal Subsistence Board (Board) and provides transparency to the public regarding the process of making or rescinding nonrural determinations of communities or areas for the purpose of identifying rural residents who may harvest fish and wildlife for subsistence uses on Federal public lands in Alaska. This policy is intended to clarify existing practices under the current statute and regulations. It does not create any right or benefit enforceable at law or in equity, against the United States, its agencies, officers, or employees, or any other person.

#### **INTRODUCTION**

Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) declares that,

the continuation of the opportunity for subsistence uses by rural residents of Alaska, including both Natives and non-Natives, on the public lands and by Alaska Natives on Native lands is essential to Native physical, economic, traditional, and cultural existence and to non-Native physical, economic, traditional, and social existence; the situation in Alaska is unique in that, in most cases, no practical alternative means are available to replace the food supplies and other items gathered from fish and wildlife which supply rural residents dependent on subsistence uses” (ANILCA Section 801).

Rural status provides the foundation for the subsistence priority on Federal public lands to help ensure the continuation of the subsistence way of life in Alaska. Prior to 2015, implementation of ANILCA Section 801 and rural determinations were based on criteria set forth in Subpart B of the Federal subsistence regulations.

In October 2009, the Secretary of the Interior, with the concurrence of the Secretary of Agriculture, directed the Board to review the process for rural determinations. On December 31, 2012, the Board initiated a public review of the rural determination process. That public process lasted nearly a year, producing 278 comments from individuals, 137 comments from members of Regional Advisory Councils (Councils), 37 comments from Alaska Native entities, and 25 comments from other entities (e.g., city and borough governments). Additionally, the Board engaged in government-to-government consultation with tribes and consultation with Alaska Native Claims Settlement Act (ANCSA) corporations. In general, the comments received indicated a broad dissatisfaction with the rural determination process. Among other comments, respondents indicated the aggregation criteria were perceived as arbitrary, the population thresholds were seen as inadequate to capture the reality of rural Alaska, and the decennial review was widely viewed to be unnecessary.

Based on this information, the Board held a public meeting on April 17, 2014 and decided to recommend a simplification of the process to the Secretaries of the Interior and Agriculture (Secretaries) to address rural status in the Federal Subsistence Management Program. The Board's recommended simplified process would eliminate the rural determination criteria from regulation and allows the Board to determine which areas or communities are nonrural in Alaska. All other communities or areas would, therefore, be considered "rural" in relation to the Federal subsistence priority in Alaska.

The Secretaries accepted the Board recommendation and published a Final Rule on November 4, 2015, revising the regulations governing the rural determination process for the Federal Subsistence Management Program in Alaska. The Secretaries removed specific rural determination guidelines and criteria, including requirements regarding population data, the aggregation of communities, and a decennial review. The final rule allowed the Board to make nonrural determinations using a comprehensive approach that may consider such factors as population size and density, economic indicators, military presence, industrial facilities, use of fish and wildlife, degree of remoteness and isolation, and any other relevant material, including information provided by the public.

By using a comprehensive approach and not relying on set guidelines and criteria, this new process will enable the Board to be more flexible in making decisions that take into account regional differences found throughout the State. This will also allow for greater input from the Councils, Federally recognized tribes of Alaska, Alaska Native Corporations, and the public in making nonrural determinations by incorporating the nonrural determination process into the subsistence regulatory schedule which has established comment periods and will allow for multiple opportunities for input. Simultaneously with the Final Rule, the Board published a Direct Final Rule (80 FR 68245; Nov. 4, 2015) (**Appendix B**) establishing the list of nonrural communities, those communities not subject to the Federal subsistence priority on Federal public lands, based on the list that predated the 2007 Final Rule (72 FR 25688; May 7, 2007).

As of November 4, 2015, the Board determined in accordance with 36 CFR 242.15 and 50 CFR 100.15 that the following communities or Census-designated Places (CDPs)<sup>1</sup> are nonrural: Fairbanks North Star Borough; Homer area – including Homer, Anchor Point, Kachemak City, and Fritz Creek; Juneau area – including Juneau, West Juneau, and Douglas; Kenai area – including Kenai, Soldotna, Sterling, Nikiski, Salamatof, Kalifornsky, Kasilof, and Clam Gulch; Ketchikan area – including Ketchikan City, Clover Pass, North Tongass Highway, Ketchikan East, Mountain Point, Herring Cove, Saxman East, Pennock Island, and parts of Gravina Island; Municipality of Anchorage; Seward area – including Seward and Moose Pass; Valdez; and Wasilla/Palmer area – including Wasilla, Palmer, Sutton, Big Lake, Houston, and Bodenber

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<sup>1</sup> Census Designated Place (CDP) is defined by the Federal Census Bureau as the statistical counterpart of incorporated places, delineated to provide data for settled concentrations of populations identifiable by name but not legally incorporated under the laws of the state in which they are located. CDPs are delineated cooperatively by state and local officials and the Census Bureau, following Census Bureau guidelines.

Butte (36 CFR 242.23 and 50 CFR 100.23). All other communities and areas in Alaska are, therefore, rural.

### **BOARD AUTHORITIES**

- ANILCA 16 U.S.C. 3101, 3126.
- Administrative Procedures Act (APA), 5 U.S.C. 551-559
- 36 CFR 242.15; 50 CFR 100.15
- 36 CFR 242.18(a); 50 CFR 100.18(a)
- 36 CFR 242.23; 50 CFR 100.23

### **POLICY**

In accordance with the Administrative Procedures Act (APA), Federal rulemaking undertaken by the Federal Subsistence Management Program requires that any individual, organization, or community be given the opportunity to submit proposals to change Federal regulations. The Board will only address changes to the nonrural status of communities or areas when requested in a proposal. This policy describes the Board's administrative process for addressing proposals to change the nonrural status of a community or area by outlining proposal requirements and submission, identifying a process schedule and general process timeline, and outlining Board decision making when acting on such proposals.

#### **SECTION A: Submitting a Proposal**

Proponents must submit a written proposal in accordance with the guidance provided in the same Federal Register notice that includes a call for proposals to revise subsistence taking of fish and shellfish regulations and nonrural determinations. This notice is published in even-numbered years. Proposals to revise nonrural determinations will be accepted every other fish and shellfish regulatory cycle, starting in 2018.

#### **SECTION B: Requirements for Proposals**

##### **Making a Nonrural Determination**

Proposals can be submitted to the Board to make a nonrural determination for a community or area. It is the proponent's responsibility to provide the Board with substantive narrative evidence to support their rationale of why the proposed nonrural determination should be considered. Proposals seeking a nonrural determination must also include the basic requirements and meet the threshold requirements outlined below.

##### ***Basic Requirements***

All proposals must contain the following information:

- Full name and mailing address of the proponent;
- A statement describing the proposed nonrural determination action requested;
- A detailed description of the community or area under consideration, including any current boundaries, borders, or distinguishing landmarks, so as to identify which Alaska residents would be affected by the change in nonrural status;

- Rationale and supporting evidence (law, policy, factors, or guidance) for the Board to consider in determining the nonrural status of a community or area;
- A detailed statement of the facts that illustrate that the community or area is nonrural or rural using the rationale and supporting evidence stated above; and
- Any additional information supporting the proposed change.

***Threshold Requirements***

In addition to the basic requirements outlined above, the following threshold requirements apply. The Board shall only accept a proposal to designate a community or area as nonrural, if the Board determines the proposal meets the following threshold requirements:

- The proposal is based upon information not previously considered by the Board;
- The proposal provides substantive rationale and supporting evidence for determining the nonrural status of a community or area that takes into consideration the unique qualities of the region; and
- The proposal provides substantive information that supports the proponent’s rationale that a community or area is nonrural.

The Board shall carefully weigh the initial recommendation from the affected Regional Advisory Council(s) when determining whether the proposal satisfies the threshold requirements outlined above. If the Board determines the proposal does not satisfy the threshold requirements, the proponent will be notified in writing. If it is determined the proposal does meet the threshold, it shall be considered in accordance with the process schedule and timeline set forth below.

***Limitation on Submission of Proposals Seeking Nonrural Determinations***

The Board is aware of the burden placed on rural communities and areas in defending their rural status. If the rural status of a community or area is maintained after a proposal to change its status to nonrural is rejected, then no proposals to change the rural status of that community or area shall be accepted until the next proposal cycle. If a new proposal is submitted during the next proposal cycle, then it must address a demonstrated change that was not previously considered by the Board. Additionally, the following considerations apply to resubmitting proposals to change a community’s status from rural to nonrural:

- Whether or not there has been a “demonstrated change” to the rural identity of a community or area is the burden of the proponent to illustrate by a preponderance of the evidence;
- Many characteristics, individually or in combination, may constitute a “demonstrated change” including, but not limited to, changes in population size and density, economic indicators, military presence, industrial facilities, use of fish and wildlife, or degree of remoteness and isolation; and

- The Board's most recent decision on the nonrural status of a community or area will be the baseline for any future proposals for that community or area, thus, a "demonstrated change", as referred to in this portion of the process, must occur after the Board's most recent decision.

### **Rescinding a Nonrural Determination**

For proposals seeking to have the Board rescind a nonrural determination, it is the proponent's responsibility to provide the Board with substantive narrative evidence to support their rationale of why the nonrural determination should be rescinded. Proposals seeking to have the Board rescind a nonrural determination must also include the basic requirements and meet the threshold requirements outlined below.

#### ***Basic Requirements***

All proposals must contain the following information:

- Full name and mailing address of the proponent;
- A statement describing the proposed nonrural determination action requested;
- A description of the community or area considered as nonrural, including any current boundaries, borders, or distinguishing landmarks, so as to identify what Alaska residents would be affected by the change in rural status;
- Rationale and supporting evidence (law, policy, factors, or guidance) for the Board to consider in determining the nonrural status of a community or area;
- A detailed statement of the facts that illustrate that the community or area is rural using the rationale stated above; and
- Any additional information supporting the proposed change.

#### ***Threshold Requirements***

In addition to the baseline information outlined above, the following threshold requirements apply. The Board shall only accept a proposal to rescind a nonrural determination, if the Board determines the proposal meets the following threshold requirements:

- The proposal is based upon information not previously considered by the Board;
- The proposal demonstrates that the information used and interpreted by the Board in designating the community as nonrural has changed since the original determination was made;
- The proposal provides substantive rationale and supporting evidence for determining the nonrural status of a community or area that takes into consideration the unique qualities of the region; and
- The proposal provides substantive information that supports the provided rationale that a community or area is rural instead of nonrural.

The Board shall determine whether the proposal satisfies the threshold requirements outlined above after considering the recommendation(s) from the affected Regional Advisory Council(s). If the Board determines the proposal does not satisfy the threshold

requirements, the proponent will be notified in writing. If it is determined the proposal does meet the threshold, it shall be considered in accordance with the process schedule and timeline set forth below.

### **SECTION C: Decision Making**

The Board will make nonrural determinations using a comprehensive approach that may consider such factors as population size and density, economic indicators, military presence, industrial facilities, use of fish and wildlife, degree of remoteness and isolation, and any other relevant material including information provided by the public. As part of its decision-making process, the Board may compare information from other, similarly-situated communities or areas if limited information exists for a certain community or area.

When acting on proposals to change the nonrural status of a community or area, the Board shall:

- Proceed on a case-by-case basis to address each proposal regarding nonrural determinations;
- Base its decision on nonrural status for a community or area on information of a reasonable and defensible nature contained within the administrative record;
- Make nonrural determinations based on a comprehensive application of evidence and considerations presented in the proposal that have been verified by the Board as accurate;
- Rely heavily on the recommendations from the affected Regional Advisory Council(s);
- Consider comments from government-to-government consultation with affected tribes;
- Consider comments from the public;
- Consider comments from the State of Alaska;
- Engage in consultation with affected ANCSA corporations;
- Have the discretion to clarify the geographical extent of the area relevant to the nonrural determination; and
- Implement a final decision on a nonrural determination in compliance with the APA.

#### **Regional Advisory Council Recommendations**

The Board intends to rely heavily on the recommendations of the Councils and recognizes that Council input will be critical in addressing regional differences in the nonrural determination process. The Board will look to the Regional Advisory Councils for confirmation that any relevant information brought forth during the nonrural determination process accurately describes the unique characteristics of the affected community or region.

**SECTION D: Process Schedule**

As authorized in 36 CFR 242.18(a) and 50 CFR 100.18(a), “The Board may establish a rotating schedule for accepting proposals on various sections of subpart C or D regulations over a period of years.” To ensure meaningful input from the Councils and allow opportunities for tribal and ANCSA corporation consultation and public comment, the Board will only accept nonrural determination proposals every other year in even-numbered years in conjunction with the call for proposals to revise subsistence taking of fish and shellfish regulations, and nonrural determinations. If accepted, the proposal will be deliberated during the regulatory Board meeting in the next fisheries regulatory cycle. This schedule creates a three-year period for proposal submission, review, analysis, Regional Advisory Council input, tribal and ANCSA corporation consultation, public comment, and Board deliberation and decision.

**SECTION E: General Process Timeline**

Outlined in Table 1 and Table 2

Table 1. General Process Timeline

<p><b>1. January to March (Even Year)</b> – A proposed rule is published in the Federal Register with the call for proposals to revise subsistence taking of fish and shellfish regulations and nonrural determinations.</p>
<p><b>2. April to July (Even Year)</b> – Staff will verify that proposals include the basic requirements and can be legally addressed by the Federal Subsistence Program. If the proposal is incomplete or cannot be addressed by the Federal Subsistence Program, the proponent will be notified in writing. Additionally for verified proposals, tribal consultation and ANCSA corporation consultation opportunities will be provided during this time.</p>
<p><b>3. August to November (Even Year)</b> –Affected Regional Advisory Council(s) reviews the verified proposals and provides a preliminary recommendation for the Board. The Council preliminary recommendation may include: relevant regional characteristics; whether or not the Council supports the proposal; and if, in the Council’s opinion, the proposal meets the threshold requirements with justification. This action shall occur at the affected Council’s fall meeting on the record.</p>
<p><b>4. November to December (Even Year)</b> – The Interagency Staff Committee (ISC) shall provide comments on each verified proposal. Staff shall organize nonrural determination proposal presentations that include the original proposal, the Council preliminary recommendation, tribal and ANCSA consultation comments, and the ISC comments.</p>
<p><b>5. January (Odd Year)</b> – At the Board’s public meeting, Staff will present the proposals, and the Board will determine if the threshold requirements have been met. If the Board determines the proposal does not satisfy the threshold requirements, the proponent will be notified in writing. If it is determined the proposal does meet the threshold requirements, the Board will direct staff to prepare a full analysis according to established guidelines and address the proposal in accordance with the process schedule and timeline set forth below.</p>
<p><b>6. February (Odd Year) to July (Even Year) (18 months)</b> – For proposals determined to satisfy the threshold requirements, the Board will conduct public hearings in the communities that may be affected should the proposal be adopted by the Board. During this time period, independent of the fall Council meetings, interested tribes may request formal government-to-government consultation and ANCSA corporations may also request consultation on the nonrural determination proposals.</p>
<p><b>7. August to November (Even Year)</b> –The Council(s) shall provide recommendations at their fall meetings and the ISC shall provide comments on the draft nonrural determination analyses.</p>
<p><b>8. November to December (Even Year)</b> – Staff incorporates Council recommendations and ISC comments into the draft nonrural determination analyses for the Board.</p>
<p><b>9. January (Odd Year)</b> – At the Board’s Fisheries Regulatory meeting, staff present the nonrural determination analyses to the Board. The Board adopts, adopts with modification, or rejects the proposals regarding nonrural determinations.</p>




Table 2. General Process Timeline Comparison with other Cycles

Wildlife & FRMP Cycle	Fishery Cycle	Dates	Board or Activity	Proposed Nonrural Determination Cycle		
		Council Cycle			Even Years	
	Fishery Review Cycle	January	Board FRMP Work Session	1	Nonrural Proposed Rule	
		February March	Fishery Proposed Rule Jan- Mar			
		April July	Board Meeting	2		Proposal verification, Tribal and ANCSA consultation
		August September October November	Fishery Proposal Review	3		Proposal Threshold Review by Councils
		December		4		Finalize Threshold presentations for the Board
			January	Board Meeting	5	Odd Years - Board determines which proposals meet the threshold requirements
	Wildlife & FRMP Review Cycle		February March	Wildlife Proposed Rule Jan - Mar	6	Odd to Even Years (18 months) - Public Hearings, government-government consultation with the tribes, ANCSA Corporation Consultation, and writing of Nonrural Determination Analyses for proposals that meet the threshold requirements as determined by the Board
			April July			
			August September October November	Wildlife Proposal & FRMP Project Review		
			December			
		January	Board FRMP Work Session			
Fishery Review Cycle			February March	Fishery Proposed Rule Jan- Mar		
			April July	Board Meeting		
	August September October November		Fishery Proposal Review	7	Even Years Analysis Review	
		December		8	Finalize Nonrural Determination Analyses	
		January	Board Meeting	9	Odd Years – Final Board Decision	

SIGNATORIES

In WITNESS THEREOF, the parties hereto have executed this Policy as of the last date written below.

  
Chair of the Federal Subsistence Board  
Date: 11-12-17

  
Regional Director  
U.S. Fish and Wildlife Service  
Date: 11/12/17

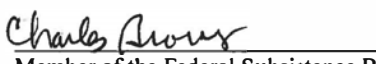
  
Regional Forester  
USDA Forest Service  
Date: 11/12/17

  
Regional Director  
National Park Service  
Date: 11/12/17

  
State Director  
Bureau of Land Management  
Date: 11/12/17

  
Regional Director  
Bureau of Indian Affairs  
Date: 11/12/2017

  
Member of the Federal Subsistence Board  
Date: 01/12/2017

  
Member of the Federal Subsistence Board  
Date: 01/12/17

## U.S. Fish & Wildlife Service

### Partners with ANSEP to Develop the Next Generation of Biologist

#### 2018 Alaska Native Science Engineering Program Student Internships

The U. S. Fish and Wildlife (USFWS) and the Alaska Native Science and Engineering Program (ANSEP) are working together to engage aspiring scientists from rural communities in natural resource management and biology internships. ANSEP has two youth programs that introduce students to fish and wildlife management: the Summer Bridge Program and University Success Program. The Summer Bridge Program is aimed at recent high school graduates who will be attending university in the fall. The four-week internships have proven to be career-visioning experiences for ANSEP students.

The University Success Program provides an academic community of students, faculty, staff, and mentors focused on students academic success, as well as personal and professional development. Students are enrolled in classes, participate in organized study groups, participate in weekly meetings, and complete summer internships in Alaska bush communities. Students present internship experiences during weekly meetings with one another.

#### University Success Students

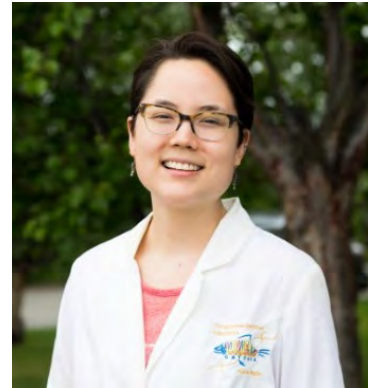
**Randall Friendly** participated in the Summer Bridge Program in 2015 researching brown bears at Kodiak National Wildlife Refuge. Through his work with Bryan Daniels on the Yukon Delta National Wildlife Refuge in 2016, he became interested in ornithology and has spent the last three summers studying Steller's and spectacled eiders. Randall's mentors provided him with opportunities to explore his passion, specifically with subsistence harvested birds from his region. This summer Randall assisted Neesha Stellrecht from the Fairbanks Fish and Wildlife Office on a Steller's and spectacled eider breeding ecology project at Utqiagvik during June and July. He helped record numbers and locations of eiders, as well as avian predators across the study area during the pre-nesting period. He also installed and maintained time-lapse cameras for monitoring sea duck activity at nests and at den sites of arctic foxes. He helped capture, band, and collect biological samples from sea ducks for disease monitoring purposes.



**Eugene Peltola** worked for British Petroleum as an engineer in the Summer Bridge Program in 2016, where he discovered his true passion in fish and wildlife management. During the summer of 2018, Eugene worked on two Fisheries Resource Monitoring Projects (FRMP) funded by the Office of Subsistence Management (OSM). First, he participated in a lake trout population study at Chandler Lake in the Gates of the Arctic National Park and Preserve. Later in the season, Eugene helped Bill Carter from Selawik National Wildlife Refuge and Ray Hander

from the Fairbanks Fish and Wildlife Field Office on a research project to study the effects of climate change on the population dynamics of Selawik River Sheefish. Eugene also had the opportunity to travel to Minto Flats and assist the Alaska Department of Fish & Game (ADF&G) to conduct a Northern Pike population survey.

**Clarissa Zeller** participated in the Summer Bridge Program in 2011 at the Nowitna National Wildlife Refuge, where she developed an interest in genetics. She spent the summers of 2016-2018 working in the Conservation Genetics Laboratory learning to prepare and analyze eDNA samples of Dolly Varden and Walrus tissue that helped better understand population genetics. Clarissa's mentor, Penelope Crane, helped develop Clarissa's interest in the application of genetics to conservation biology. She spent part of the last summer working with fishery managers in Bethel learning how to manage a mixed-stock fishery. Clarissa is graduating in the spring of 2019 with a degree in environmental science. She grew up in Red Devil on the Kuskokwim River and plans to return to the Kuskokwim River to work in fisheries management.



**Janelle Carl** participated in the Summer Bridge Program as a biology student intern at the Nowitna National Wildlife Refuge in 2015. In the summer of 2016, she worked for the Kenai Fish and Wildlife Field Office counting salmon at the Kwethluk River weir. In 2017, she expanded her skills in the Native Village of Napaimute teaching youth at the annual Math and Science Expedition. In 2018, Janelle worked with the Orutsaramiut Native Council in Bethel on a wide variety of projects that included building and installing tree swallow nesting bird boxes, and conducting subsistence

harvest surveys. Both the Native Village of Napaimute and the Orutsaramiut Native Council participate in the USFWS's Partners for Fisheries Monitoring Program. Janelle is continuing to develop her expertise in fisheries by taking distance learning courses from the University of Alaska, Fairbanks (UAF) Kuskokwim Campus, where she is pursuing a degree in biology.

**Danielle Lowery** is a student studying marine biology at the University of Alaska, Juneau. In 2018, she worked with the Bristol Bay Native Association, a participant in the USFWS's Partner for Fisheries Monitoring Program, and the University of Washington School of Aquatic and Fishery Science at Lake Nerka in Wood-Tikchik State Park. There, she assisted both undergraduate and graduate students taking limnological samples, measuring water temperature and studying relationships of salmon migrating to natal streams. She also

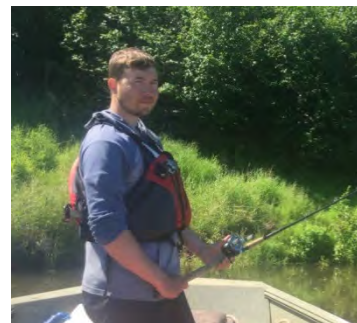


worked with biologists sampling freshwater invertebrates, adult resident fish species and juvenile salmonids to evaluate their effects on future returning salmon stocks.



**Kaelyn Stalker** participated in the Summer Bridge Program in 2017 helping conduct a Steller's eider nesting project in Utqiagvik with the USFWS. She also traveled to the Henshaw Creek salmon weir to assist in counting salmon and teaching students how to process or "cut" fish. During 2018, Kaelyn worked at the OSM office in Anchorage, where she learned from fisheries biologists about the Federal fisheries subsistence regulatory process. Kaelyn is interested in combining her interests in biology and education to engage more rural youth in the sciences.

**Peter Egrass** took time off from his mechanical engineering program to work with the Bristol Bay Native Association and the ADF&G Sportfish Division on a Nushagak River catch and release Chinook Salmon mortality study. Peter's day-to-day job consisted of catching Chinook Salmon with rod and reel, implanting radio transmitters, and tracking the fish using aerial radio-telemetry. The researchers were able to use radiotelemetry data to determine mortality rates of captured and released fish. This information will be used to better understand the effects of the sport fishery on an important subsistence resource. In addition to spending the summer in a beautiful place, Peter enjoyed learning how technology (developed by engineers) is applied to fisheries biology and management.



### **Summer Bridge Students**

**Summer Morse** is originally from Hawaii, though she now lives in Anchorage. She is attending the University of Alaska, Anchorage studying environmental science. Summer interned with OSM, where she worked with Jarred Stone to develop curriculum for a Science, Technology, Engineering and Math Career Exploration camp held in Bethel. The camp was designed to give rural middle school students an opportunity to explore careers in fish and wildlife management. Summer not only helped develop some of the course work, she also traveled to Bethel for the camp where she engaged students in daily activities as a youth peer mentor.





**Destiny Ropati** is Yup'ik born in Bethel but she now lives in Anchorage. In 2018, Destiny had the chance to return to Bethel through her internship with the Orutsaramiut Native Council. There, she worked alongside her mentor Janessa Esquible, a fisheries biologist, gaining experience in conducting fisheries subsistence harvest surveys and attending weekly Kuskokwim River salmon working group meetings where inseason management decisions were made. Destiny also installed and inspected tree swallow nesting boxes and had an opportunity to work at the ADF&G Kuskokwim River sonar site learning how to use hydroacoustics to count salmon. She is studying natural resource

management at the University of Anchorage, Alaska.

**Caitlyn Twito** is from Bethel and has participated in the ANSEP program for the past six years. Caitlyn is studying natural resource management at the University of Alaska, Anchorage. During the summer of 2018, she worked in the USFWS Conservation Genetics Laboratory alongside her mentor, Penelope Crane. Caitlyn gained skill in laboratory preparation of genetic tissue samples and batch processing of the samples for genetic analyses. Later in the summer, she assisted OSM as a youth peer mentor at the Science, Technology, Engineering and Math Career Exploration camp introducing middle school students to the field of natural resource management and biology.



**Ariel Schneider** is Yup'ik from Akiachak. During her senior year in high school she moved to Anchorage. Ariel wants to become a marine biologist and is pursuing college at the University of Alaska, Anchorage to gain knowledge and expertise studying marine animals. Ariel interned with mentor Neesha Stellrecht from the Fairbanks Fish and Wildlife Field Office surveying spectacled, king and Steller's eiders, as well as educating local hunters about the toxicity of using lead-shot for hunting. Ariel also spent a week in Bethel assisting as a youth peer mentor for middle school students attending a Science, Technology, Engineering and Math Career Exploration camp learning about natural resource management.

**Jaden Anavar** is Yup'ik and from Kipnuk, Alaska. He graduated from Chief Paul Memorial High School with excellent grades and ranked number one in his class. He is attending the University of Alaska, Fairbanks and wants to someday return to his community to be a leader in his Village. Jaden prides himself on living in the traditional ways of Yup'ik culture and wants to share it with the younger students to help continue the tradition. During his summer internship, Jaden travelled to Galena to assist the Koyukuk/Nowitna/Innoko National Wildlife Refuge Manager and mentor, Kenton Moss, where he banded migratory waterfowl. Jaden was exposed to a variety of tasks that broadened his understanding of natural resource management on national wildlife refuges in Alaska.





**Nadia Sherman** is from Anchorage; however, she has lived in Hawaii, as well. During the summer of 2018, Nadia worked on Kodiak National Wildlife Refuge, where she was mentored by Bill Pyle in management of invasive plants and monitoring of brown bear population composition and stream use. Nadia is attending the University of Alaska, Anchorage and pursuing a degree in biology. Nadia hopes to make a difference in Alaska by better understanding the complex ecological relationships we have with our food and natural resources. She is interested in learning more about sustainable farming and applying principles to help others learn about sustainable living practices.

**Paul Larson** is a Yup'ik from Napaskiak, Alaska; however, he graduated from Mt. Edgecumbe High School in Sitka. Paul is attending the University of Alaska Anchorage to study biology. During the summer, Paul also worked at the Kodiak National Wildlife Refuge and was mentored by wildlife biologist Bill Pyle. Paul learned about managing invasive plants and surveying brown bears for population composition in formation and stream use. He especially enjoyed learning about ecology and hopes to apply his new skills to better his community back home. Paul enjoyed Kodiak and would like to return for another summer to learn more about refuge management.



**Martin Alexie-Leonard** and his twin brother **Nels Alexie-Leonard** are Yup'ik and were raised in Bethel. They grew up subsistence fishing with their family and became interested in both engineering and science. During the 2018 summer, Martin and Nels worked on the Unalakleet River Weir estimating escapement of all five species of Alaska salmon. The Unalakleet River weir is funded through the FRMP program to provide fisheries subsistence information to in-season fisheries managers. Nels and Martin are both fluent in Yup'ik and English. This unique skill enables them to communicate complex ideas between the two cultures. They enjoyed the summer working together before heading to different schools to begin their university studies. Martin is planning to pursue a degree in either engineering or biology at the University of Alaska, Fairbanks. Nels will be pursuing his degree in biology at the University of Alaska, Anchorage.



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