

Public Comments

Work Session | Anchorage, October 25-26, 2022

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Board of Fisheries - Work Session Comment Form

Submitted Time: October 6, 2022 6:59 AM

First Name

Alfredo

Last Name

Abou-Eid

Community of Residence

Chignik Lagoon, Alaska

Write your comment here:

I, Alfredo Abou-Eid, strongly oppose proposal #9 which, if enacted, would remove vessel registration exclusivity for state-waters jig gear fisheries.

Super exclusive status is an important and appropriate tool to promote small local fishing fleets. The super exclusive Chignik jig GHL is designed to promote the jig fishery opportunity for local Chignik fishermen - not for a statewide jig fleet. And the reason that there is no active jig fishing in Chignik in recent years is that there is no local processor for the fish for our small boat jig fleet.

A more appropriate adjustment would be to move the Chignik jig quota to the Chignik pot fleet until the local conditions allow for a profitable fishery for the local Chignik jig fleet.

The regulations for Black rockfish should also remain the same.

Board of Fisheries - Work Session Comment Form

Submitted Time: October 9, 2022 10:17 PM

First Name

Lance

Last Name

Alldrin

Community of Residence

Chico CA/Kenai AK

Write your comment here:

During the spring 2022 BOF deliberations, one board member commented that they "liked" ACR 283/RC 22 but didn't like the fact that ACR's were allowed outside of the traditional BOF discussion schedule so they voted "no" on the proposal. ACR's are in fact, a tool to allow the board to address issues "out of cycle" and I'd like to acknowledge that we are in fact out of cycle due to the postponement of the regular Cook Inlet discussions due to covid. There is no better reason to consider ACRs than the situation that we find ourselves in now, a post covid delay.

There are numerous Cook Inlet ACRS being presented again and we ask for your consideration in finding a solution that allows us to fish while catching a minimum number of kings. Along with ACRs 11 - 20, you also have at your disposal the following current and past practice regulations/tools: Kasilof half mile, Kasilof terminal, NKB 600' fishery, ESSN 600' fishery and the East Forelands exemption. We do not see the immediate "blanket shut down of the ESSN" as being a workable solution to the problem when you have numerous tools in your toolbox that you have not used in the past few years. Before completely closing the fishery, please use the options available to you to lesson the king catch while allowing harvest of sockeye in specific areas or via specific gear type (29 mesh, 4 nets/70fm aggregate or flagged nets for example) .

Thank you for your consideration,
Lance Alldrin

ACR 11 - Support

ACR 12 - Support

ACR 13 - Support

ACR 14 - Oppose

ACR 15 - Support With Amendments

ACR 16 - Oppose

ACR 17 - Oppose

ACR 18 - Support

ACR 19 - Support

ACR 20 - Support

Past Over-Fishing, the Rebuild, and Present Decline of Black Lake Sockeye Escapement

Marit Carlson-VanDort and members of the board,

Chignik had in the past an escapement of 400,000 minimum to the Black Lake early run usually by June 30th and 250,000 sockeye minimum escapement for the Chignik Lake late run by August 31st (200,000 by July 31st). These escapements were employed after the early run in Chignik became over fished (figure 3), and lake studies commenced (figure 7-9,12) which led to optimum and threshold escapements to rebuild the runs to former levels (figure 8,18) while affording a fishery. One of the important findings of these studies was that lake competitor species (i.e. sticklebacks) should be suppressed by increasing escapement to Black Lake and by doing this, it was expected the overfished run would rebuild (figure 7). The run did in fact rebuild (figure 18) and for most of the 80's, 400,000 early run minimum escapement by June 30th and 250,000 late run minimum escapement by the end of August was achieved by management (figure 2,14-16, 18 and 19).

Then in the 90's Chignik escapements were recorded as goals rather than minimum goals of 400,000 and 250,000 (figure 20-26).

In 1995, the escapements were listed as BEG's (figure 27).

In 1998 the escapement degraded to BEG's with an upper range of 400,000 and 250,000 (figure 28).

In 2001 the escapements had become BEG's with ranges of 350,000-400,000 and 200,000-250,000 (figure 29-30). The minimum escapement total had effectively been lowered by 100,000 sockeye. The overall escapements implemented since 1966 (figure 18,19,21-22) had been overlooked or disregarded.

Subsequently in 2002 and through at least 2012, the ADFG managed the sockeye escapement in Black Lake and Chignik Lake largely based on zooplankton counts and thus targeted the new minimum escapements (figure 38,39). This decision, predicated on over-escapement, did not occur prior to 2002 although the early run cleared 500,000 by June 30th at least seven times since 1970 (figure 1). In fact, in the ten years presented as over escaped in figure 38, Black Lake was actually under escaped for four of the years based on 400,000 as the needed escapement. If the escapement were to have been left at 400,000 minimum for Black Lake, I doubt this would have ever been an issue. The letter makes reference to abundance of zooplankton Cyclops being a negative factor, however in figure 40, Cyclops are found more in the stomachs of juvenile sockeye and that sockeye are quite well adapted to eating them. Juvenile sockeye in Black Lake and other shallow lakes also eat winged and larval insects as a food base (figure 41,42).

The logic for targeting (from approx. 2002-2012) a lower escapement to Black Lake which is a shallow warm lake with the extra benefit of insect larva as food which can contribute to as much as 74% of juvenile sockeye diets in shallow lakes, seems poor at best in light of the knowledge that reducing escapements increases competitor species

(figure 7). This, along with the knowledge that increasing juvenile sockeye numbers suppresses competitor species and provides for greater sockeye production (Figure 13) should have been carefully considered and now reconsidered. If salmon escapement to Black Lake is not maintained to achieve 400,000 total by June 30th or soon thereafter as once was the normal practice the Chignik River system, the fishery will continue faltering, the communities will continue suffering, and the benefit of 1-3 million sockeye salmon to the local and state economies will be forgone. 400,000 was the minimum early run escapement and the minimum needed to maintain the health of Black Lake sockeye runs. 250,000 minimum for July and August late run/Chignik Lake.

Most recently, the Department of Fish and Game is proposing a change (lowering) of sockeye escapement goals in the Chignik River watershed and also plan to combine the runs (somehow) in the process. If this concept is put into practice, it will further weaken already faltering runs of which Chignik is now a management concern. Lowering escapements for the purpose of achieving harvest does not address the poor runs and will lessen future returns. If the optimum escapement into Black Lake is not maintained, returns will be jeopardized by competitor species (figure 7).

By misdiagnosing the problem, the solution will go unsolved. The impact on Chignik harvests from opening more area for interception in the South Pen in 2004 should have been more carefully evaluated. Shifting catch from Unimak to the Shumagins when the longstanding and historically based June GHL was removed in 2001 should have had more scrutiny. Targeting newly developed (and lowest) escapement for two salmon cycles in Chignik since 2002 should not have occurred. Adjusting weekly threshold escapements so that June total escapement count was lowered (figure 1) should not have been allowed. Realize that the minimum goals of the past (80's) didn't even factor in salmon that escaped in September and that the extra in September was not ever considered as over escapement. Manipulating escapements based on number trends without identifying the causes is reactionary but without comprehensive science. Lowered escapements rarely create increased returns. Chignik is one of the most studied sockeye systems in Alaska and the valid information found in the past should still be applied to inform present decisions today. Science doesn't have an expiration date.

Please do not allow the two separate Chignik lakes escapements, which differ in spawning location, timing of spawning migration, length of freshwater residence, and age of maturity (figure 19), to be combined as one overall escapement. Do not allow the minimum escapement to be lowered. Lowering escapements (especially to Black Lake) contradicts knowledge from past studies showing that increased escapement was necessary to rebuilding and maintaining the runs (figure 18). If the intention of lowering escapements is to keep Chignik fishermen fishing then open our Western and Perryville in June as well (because allowing escapements that do not adhere to 400,000 Black Lake/early run minimum escapement will serve to keep Chignik sockeye returns anemically less than what they could be in the future. It would be wrong to let us fish on only the returns of anemic escapements.

I have speculated if lowering the lower bounds of the escapement is for the purpose of certifying interception fisheries as sustainable. It will certainly make interception fisheries have less burden of conservation at times, such as when the Shumagins seining opened less in 2022 when Chignik didn't make escapements. If the purpose of merging runs and lowering the minimum escapement is not to get us out fishing or to regain sustainable fishery certification, then what is the benefit to the people and MSY and future escapements? There are allocative implications.

Again, if salmon escapement to Black Lake is not maintained to achieve 400,000 total near June 30th as once was the normal practice the Chignik River system, the fishery will continue faltering, the communities of Chignik will continue suffering, and the benefit of 1-3 million sockeye salmon to the local and state economies will be forgone. 400,000 was the minimum early run escapement and the minimum needed to maintain the health of Black Lake sockeye runs. 250,000 minimum for July and August late run/Chignik Lake. The fish and game had the knowledge to rebuild the Chignik run the last time it collapsed (over fished and under escaped early run), even making predictions (figure 8) of when it would be rebuilt and to what levels. It can be rebuilt again.

Please do not allow the Chignik sockeye escapements to be merged and the minimum escapement lowered. The success of each individual run is based on specifically timed and enumerated escapements. Future fisheries, communities and businesses rely on it.

Sincerely,

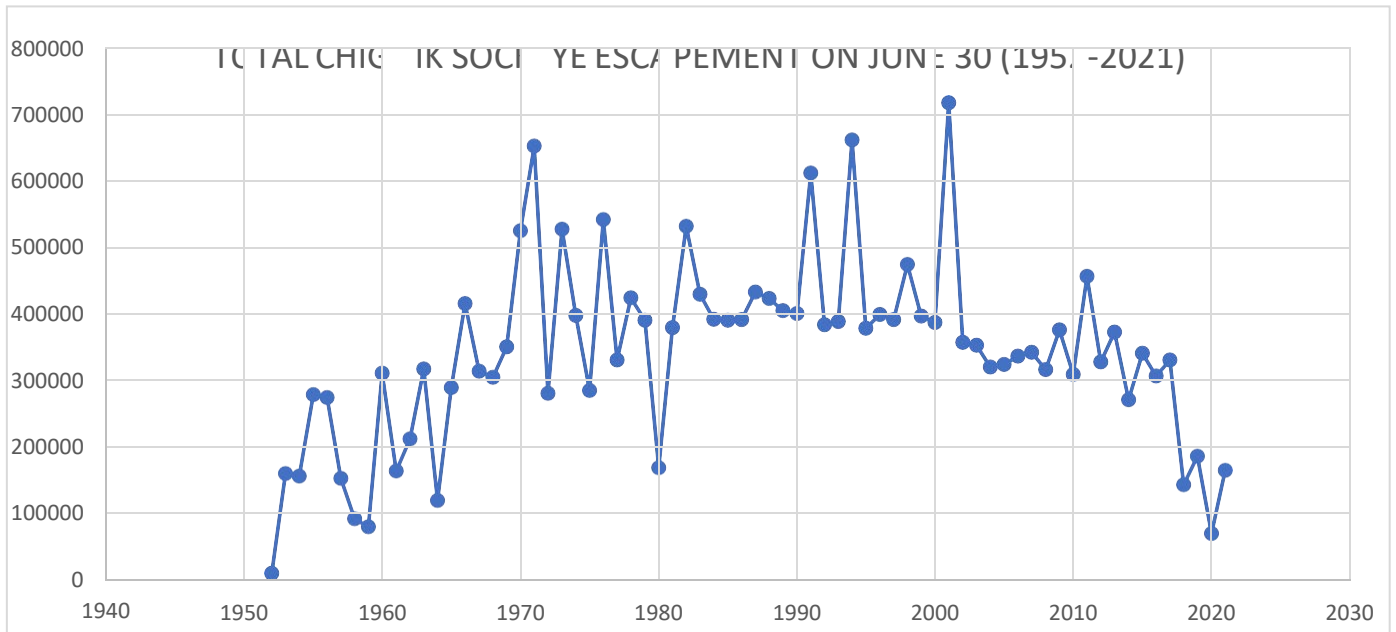
Raechel Allen

The following contains supporting literature:

Basic Index of Primary References

- The graph below (figure1) presents the total sockeye escapement at Chignik weir on June 30th from 1952-2021. June 30th was once the threshold date to have 400k sockeye escape through the weir
- Prior to the 60's the Black Lake run had been over fished. (figure 3)
- In the 60's it was determined that increasing escapement to Black Lake would suppress competitor species (i.e. stickleback) resulting in restoration of former production levels. (figures 4,5,6,7, 8 9, 12, 13, and 18)
- From 1966-1969 the optimum escapement to Black Lake was estimated at approximately 400,000 sockeye. (figure 10 and 11)

- By 1981 400,000 minimum escapement was implemented and continued through at least 1988 (figure 2, 14,15,16, 18 and 19)
- From 1989-1995 Black Lake escapement of 400,000 was only identified as a goal. (figure 20-26)
- In 1995 Black Lake escapement goal was stated as a BEG of 400,000. (figure 27)
- By 1998 Black Lake escapement goal of 400,000 had become a BEG upper range. (figure 28)
- In 2001 the Black Lake BEG was listed as a range of 350k-400k. (figure 29 and 30)
- In 2002, the department deemed it beneficial to approach the lower bounds of the Black Lake BEG. This continued at least until approximately 2012. During this time, daily thresholds were lowered in June as well. (figure 38 and 39)
- In 2018-2021 Black Lake did not achieve even the more recent minimum escapement of 350,000



1.) Above graph compiled from ADFG data.

Table 1.

CHIGNIK RIVER SYSTEM
 SOCKEYE ESCAPEMENT GOALS
 BLACK LAKE (EARLY) AND CHIGNIK LAKE (LATE) RUNS

The numbers in the escapement tables listed below were derived from averages over several years of escapements of various timing and magnitude. It should be noted that daily escapement levels will fluctuate considerably throughout the run. THE TABLES LISTED SERVE ONLY AS A GUIDE FOR ACHIEVING THE TOTAL ESCAPEMENT FOR EACH RUN. In-season variations from the figures listed may be due to variations in actual run timing and/or strength of the run.

EARLY RUN - 400,000 Minimum

1987 Chignik AMR p. 142

June 12	40,000
14	50 - 65,000
16	75 - 100,000
18	125 - 150,000
20	175 - 200,000
22	225 - 250,000
25	275 - 325,000
30	350 - 400,000

LATE RUN - 250,000 Minimum

WHEN EARLY ESCAPEMENT IS ACHIEVED	WHEN EARLY RUN ESCAPEMENT IS NOT ACHIEVED
July 6	40,000
8	45 - 50,000
10	55 - 65,000
12	65 - 75,000
14	75 - 80,000
16	80 - 90,000
19	100 - 115,000
21	125 - 135,000
23	150 - 160,000
26	170 - 180,000
29	190 - 195,000
31	195 - 200,000

2.) 1987 Chignik AMR p. 142

Conclusion

The Chignik system early run has always been the stocks that have contributed to producing the greatest historical annual runs into the Chignik system. Upon the decline of the early run, the late run has remained to be somewhat the same static producer. The late run has always received the needed escapement, due to past management policies allowing overharvest of early stocks and allowing the bulk of the escapement to occur during the late run.

3.) 1964 Chignik Area Annual Report, p. 43

The 1965 spawning ground surveys indicated good distribution of spawners in the Black Lake system with no abnormal egg loss due to superimposition. Areas where increased escapement is needed, such as the Alec River gravel bars, will have to gradually be built up over a period of years as competing species in the lake become more strongly dominated. At this time an escapement of 300,000 in the Black Lake system and 50,000 in the Black River system should be optimum. As the red salmon fry gradually suppress the stickleback population in Black Lake, it would appear that early escapements approaching 500,000 will be in order. This, of course, will depend on an annual assessment of the populations in Black Lake.

4.) 1965 Chignik Area Annual Report, p.39

A review of the age classes represented in the escapements during the productive period from 1920 to 1930 suggests that in certain years Chignik Lake served as a secondary rearing area for Black Lake system progeny. It is difficult to assume that the Black River system produced the large numbers of six year reds in the early portion of the run during those years. In late years it appears that Chignik Lake becomes a secondary rearing system only when the density of red salmon fry and stickleback exceed the carrying capacity of Black Lake, causing emigration. Chignik Lake functions as a secondary rearing area due to fry emigration at relatively low fry levels compared to former years, but as competing forms are depressed these levels should increase. At the present time, with competing forms at their present level, when a large early escapement occurs, late escapements into the Chignik Lake system should be depressed to 150 - 180,000 in preparation for fry emigration from the early system. Conversely, if the early escapement goals are not obtained, late escapement should be increased accord-

5.) 1965 Chignik Area Annual Report, p.39

ingly to fully utilize the Chignik Lake rearing capacity.

It will be necessary to closely monitor escapement for stock separation as the season progresses to make adjustments in goals.

The Fisheries Research Institute has been carrying on a tow netting program to establish fry indices as a measure of spawning success and rearing ground utilization. The index derived from the 1964 early reds is almost twice that of 1960 brood year index, and a substantial suppression of stickleback is evident. The 1965 tow netting index for Chignik Lake is not known at this time.

6.) 1965 Chignik Area Annual Report, p.40

5. The escapement levels into the Black Lake system must be kept yearly at an optimum level in order to suppress the Black Lake stickleback population by competing red salmon young during lake residency. Lake studies has shown that any reduction of escapement goals creates an increase of stickleback population, which have filled the biological niche of the red salmon young during the many years of under escapement into the Black Lake system. The complete suppression of the competing stickleback population should be a major step in returning the early system to the capabilities of past high production.

7.) 1965 Chignik Area Annual Report, p.43

Chignik River weir red salmon enumeration, comprehensive commercial catch analysis, limited tagging operations at points of interception of the Chignik system red salmon along the south side of the Alaska Peninsula, combined with age composition analysis of the separate segments of the run, is providing the data for the evaluation of the desired escapement levels for the two nursery areas in the Chignik River system. This combined data is currently being utilized for predicted red salmon returns to the Chignik system.

The Fisheries Research Institute is currently evaluating the impact of levels of red salmon escapement upon the carrying capacity of the two separate nursery areas to assist in the establishment of future desired escapement levels.

The former production level of the Chignik system is anticipated to be approximately 60% restored by 1969 and indicates possibilities of a commercial harvest of 800,000 to 1,000,000 annually within the years to follow.

8.) 1966 Chignik Area Annual Report, p.49

Nursery Lake Studies

Ecological studies of the nursery lakes conducted at Chignik by the Fisheries Research Institute since 1960 give corroborating evidence for a poor return in 1967. Tow net catches of juvenile sockeye salmon in the two lakes during late August are shown in Table 3.

The mean catch per tow of sockeye salmon fry (returning as age 1.3 fish in June, 1967) in Black Lake during 1963 was approximately one-half the six-year average. This is consistent with the low parent escapement to Black Lake in 1962. Further, growth of sockeye salmon fry was suppressed by abundant competitor species in Black Lake during 1963. Examination of the relationship between mean catch per tow of Black Lake fry and resultant adult returns indicates an early run of about 265,000 fish. More confidence, however, must be placed in the estimate of 189,000 based on the relationship between numbers of .2 fish one year and .3 fish the following year for two reasons: the paucity of tow net data and the fact that the tow net and adult return relationship does not contain any estimate of the variable of marine survival. The relationship between .2 and .3 fish of the same year class, however, does account for survival in two of the three years that .3 fish spend at sea.

9.) 1966 Chignik Area Annual Report, p.64

PRELIMINARY FORECAST

-Continued-

DISCUSSION OF 1970 FORECAST:

The optimum escapement for the Black Lake system has been estimated at approximately 400,000 red salmon. Assuming an actual return of 850,000 fish, this would indicate an early run commercial harvest of approximately 400,000 red salmon.

The Chignik Lake system should receive an escapement of approximately 200,000-250,000 spawners. This would leave approximately 150,000 red salmon for the late run commercial harvest.

In combination, the two systems should provide approximately 550,000 red salmon for commercial harvest in 1970.

The final forecast for the 1970 season was published as Informational Leaflet 144.

Prepared by: Paul Pedersen, Area Management Biologist
Division of Commercial Fisheries
Kodiak (Chignik)

10.) 1969 Chignik AMR

Discussion

The optimum escapement into the early system has been estimated at approximately 400,000 red salmon. With a predicted return of 1,336,000 fish, a possible commercial harvest of 936,000 can be anticipated prior to July 1.

The late system should receive an estimated 200-250,000 in escapement. With a forecast of only 370,000 fish, the possible harvest of this portion of the run would be near 150,000.

11.) 1970 Chignik Area Annual Report, p.35

8. A detailed study of the food habits, growth and interaction of juvenile sockeye, and potentially competing lake resident species was completed as a M.S. thesis. Results are summarized in the present report and two years of data are added to appropriate graphs and tables. Differences within and between lakes in summer food habits of the four species were analyzed. Black Lake fish generally contained more food and had higher growth rates than Chignik Lake fish, which was consistent with estimates of lake carrying capacity for juvenile sockeye. In Black Lake some evidence of interspecific competition for food was seen, but apparent effect on growth was seen only in the relationship between abundance of threespine stickleback and growth of ninespine stickleback, two species with similar diet. The most significant finding was that when age 0 sockeye in Black Lake were abundant, the abundance of the three non-sockeye species declined, supporting the hypothesis that higher levels of sockeye escapement and fry production in Black Lake would have the effect of reducing competitor species.

12.) 1974 *Optimum Escapement Studies of Chignik Sockeye Salmon* p.74 (the M.S Thesis was by William Parr)

Apparently, the increased abundance of juvenile sockeye salmon in the two lakes is suppressing the numbers of certain potential competitors for food and/or space which provides for greater sockeye salmon production in these resource areas. It was noted that when sockeye salmon were abundant in Black Lake, the abundance of three age classes of threespine sticklebacks (especially 0 to I) and age 0 ninespine sticklebacks was adversely affected. An effect on the abundance of all ages of pond smelt was noted, also, but the effect was not nearly as great as for the three- and ninespine sticklebacks.

13.) 1972, *Optimum Escapement Studies of Chignik Sockeye* p.9

FISHERIES RESEARCH INSTITUTE
College of Fisheries
University of Washington
Seattle, Washington 98195

OPTIMUM ESCAPEMENT STUDIES OF CHIGNIK SOCKEYE SALMON

Annual Progress Report - Anadromous Fish Project

Project No.: AFC-34
Contract No.: N-044-38-72G
Project Period: July 1, 1971-June 30, 1972

Prepared by: John W. Wells
and
Robert L. Burgner

II. 1981 SEASON SUMMARY

A. Overview of 1981 Season

During 1981, the early run proved to be extremely early and strong. Sockeye returning to Chignik were approximately 7 to 10 days early which caught fishermen, processors and Department of Fish and Game personnel completely off guard. As stated in the regulations, the Chignik salmon season was scheduled to open no earlier than June 9, and only if minimum escapement requirements were achieved by June 7. Due to the extremely heavy escapement of sockeye through June 6, the fishery was opened one day earlier than described in the regulation booklet (June 8, 1981). Minimum early run escapement requirements (400,000) were achieved by June 19. The fishery was closed June 19 by emergency order in order to build up the late run escapement and to analyze the most recent commercial catch scales. The Department was able to conclude that less than 50% of the sockeye currently entering the Chignik Bay district were late run, thus an emergency order was issued reopening the Central and Chignik Bay districts. Sockeye scales collected on June 22 indicated that 43% were late run fish; with this information it was anticipated that the number of late run sockeye would be greater than 50% by June 26. The closure announcement and emergency order was issued on June 23 closing the season at 10:00 p.m. Wednesday, June 24.

14.) 1981 Chignik Area Salmon Report to the Board of Fisheries December 1981

SOCKEYE SALMON

The total sockeye salmon run is forecasted to be approximately 4.4 million. The early run is expected to be stronger than any on record with a projected return of 3.2 million. The minimum early run escapement goal is 400,000, therefore, the projected harvest will be approximately 2.8 million. The total late run return is expected to be 1.2 million fish. The late run escapement goal is 250,000, which should allow a commercial harvest of approximately 950,000.

15.) 1984 Chignik Management Area Finfish Annual Report p. 33

1986 CHIGNIK AREA
SALMON MANAGEMENT PLAN

The following statements are intended as a guideline for managing the 1986 Chignik salmon runs. As in the past, frequent in-season emergency order adjustments will be made when necessary as the runs develop. No statements contained in this management plan in regards to numbers of fish or fishing time should be taken as a guarantee.

SOCKEYE SALMON

The total sockeye salmon run is forecast to be approximately 2.81 million fish. The early run is expected to be the stronger of the two with an expected 1.90 million total return. The minimum escapement goal on the early run is 400,000 fish, therefore the projected harvest will be 1.50 million sockeye. The total late run return is expected to be 1.30 million fish. The late run minimum escapement goal is 250,000 which should allow a commercial harvest of approximately 661,000 fish. Total estimated harvest for both runs should be 2.16 million fish, which includes fish that may be intercepted outside the Chignik area.

The first day of fishing could be as early as 1 June by regulation. However, compared to past years this would be highly unlikely, and only implemented if a minimum of 40,000 sockeye salmon have passed the weir and a strong buildup of fish in the lagoon is indicated by test fishing. The average opening for commercial fishing based on the past 10 years is 10 June. Additional openings will be based on escapements, fishery performance and test fishing results.

During the month of June, commercial fishery openings will be confined to the Chignik Bay District, Central District, and the Eastern District.

As adopted by the Board of Fisheries, the Eastern district will open and close to commercial salmon fishing simultaneously with the Chignik Bay and Central districts. The Eastern district may close to commercial salmon fishing during the overlap period, in late June and early July.

ACE 9594533

Table 3. Sockeye salmon early and late run escapements and the combined early and late run catch in the Chignik Management Area from 1954 through 1985.

YEAR	Escapement			TOTALS		
	Early	Late	Total	Catch	Escapement	Run
1954	170,000	281,675	451,675	63,298	451,675	514,973
1955	248,000	198,576	446,576	348,646	446,576	795,222
1956	266,000	491,099	757,099	668,522	757,099	1,425,621
1957	172,000	336,545	508,545	302,079	508,545	810,624
1958	108,000	213,127	321,127	325,322	321,127	646,449
1959	94,000	288,607	382,607	391,295	382,607	773,902
1960	251,567	357,229	608,796	715,969	608,796	1,324,765
1961	140,715	254,971	395,686	322,890	395,686	718,576
1962	167,603	324,861	492,464	364,753	492,464	857,217
1963	332,535	200,312	532,847	408,606	532,847	941,453
1964	137,072	166,624	303,696	560,703	303,696	864,399
1965	307,192	163,152	470,344	635,078	470,344	1,105,422
1966	383,546	183,526	567,072	224,615	567,072	791,687
1967	328,000	189,000	517,000	472,874	517,000	989,874
1968	342,343	244,836	587,179	878,449	587,179	1,465,628
1969	366,589	132,055	498,644	310,087	498,644	808,731
1970	536,257	119,952	656,209	1,327,664	656,209	1,983,873
1971	671,668	232,501	904,169	1,016,136	904,169	1,920,305
1972	326,320	231,270	557,590	378,669	557,590	936,259
1973	533,047	247,144	780,191	870,706	780,191	1,650,897
1974	351,701	324,245	675,946	662,905	675,946	1,338,851
1975	308,914	268,734	577,648	400,193	577,648	977,841
1976	551,254	270,000	821,254	1,135,572	821,254	1,956,826
1977	419,311	315,000	734,311	1,972,219	734,311	2,706,530
1978	458,660	223,887	682,547	1,576,283	682,547	2,258,830
1979	385,694	352,122	737,816	1,063,742	737,816	1,801,558
1980	311,332	352,729	664,061	846,356	664,061	1,510,417
1981	438,540	392,909	831,449	1,839,469	831,449	2,670,918
1982	616,117	221,601	837,718	1,521,857	837,718	2,359,575
1983	426,177	409,458	835,635	1,823,057	835,635	2,658,692
1984	597,712	268,496	866,208	2,662,449	866,208	3,528,657
1985	377,516	370,314	747,830	946,369	745,840	1,692,209
AVERAGE						
1954-1985	347,668	269,580	617,248	844,901	617,186	1,462,087
AVERAGE						
1975-1984	451,371	307,494	758,865	1,484,120	758,865	2,242,984

The averages reflect greater harvest when Black Lake escapement was increased to 400k minimum. (personal observation)

The average total return prior to the early 1970's was less than 1 million per year. Due to research conducted in the early 1960's and the subsequent establishment of escapement goals to Black Lake of 400,000 and to Chignik Lake of 250,000 the average total return increased to 1.75 million between 1968-1977 and 2.61 million from 1978 to 1987.

18.) 1987 Regional Information Report No. 4K88-4, p.2

I. PROJECT TITLE: Chignik Weir Salmon Enumeration

A. Problem Statement and Objectives

The Chignik River system sockeye run is comprised of two major stocks which are designated by the lake and the fish rear in as juveniles. The runs are termed early run (Black Lake run) and the late run (Chignik Lake run). The two lakes are interconnected and share a common outlet river. The stocks spawn in different areas, have a different time of spawning migration, and length of fresh water residence as juveniles and age at maturity (Higgins 1934; Narver 1963).

Minimum escapement goals for the Chignik sockeye salmon stocks are 400,000 for the Black Lake stock and 250,000 for the Chignik Lake stock. Since 1966 the Chignik sockeye returns have been managed to achieve these escapement goals. Managing for these escapement goals and a commercial harvest of the surplus is complicated by the overlap period (mid-June to mid-July) when both stocks are present in the fishery. Accurate escapement

ACE 8697604

19.) 1988 Chignik Operational Plan, Regional Information Report No.4K 88-26

Sockeye Salmon

Background Information

Economically, sockeye salmon are the most important commercial species in the Chignik Management Area. The local commercial fishery targets on sockeye salmon entering the Chignik Lakes system. Sockeye salmon of Chignik Lakes system origin are also intercepted outside the Chignik area in the Kodiak and Alaska Peninsula management areas.

Sockeye salmon returning to the Chignik Lakes system are comprised of two stocks one returning to Black Lake (early run) and the other to Chignik Lake (late run) (Figure 5). The ADF&G established the sockeye salmon escapement goals for Black Lake and Chignik Lake stocks at 400,000 and 250,000 fish, respectively. Commercial fishing time for sockeye salmon has been predicated on achieving a threshold level of escapement for each run by a specific date. Monitoring escapement with respect to achieving these threshold levels is complicated by an overlap in early and late run time of entry called the transition period. The transition period generally occurs from the last of June through mid-July. Two methods have been developed to estimate

2

ACE 9281478

20.) 1989 Chignik Management Area Salmon Fishery, Report to the Board of Fisheries, Regional Information Report No.4K89-37

The 1992 Chignik sockeye salmon fishery started on June 17. The cumulative escapement of 114,000 sockeye salmon past the weir was within the desired range of 75,000 - 100,000 sockeye salmon by June 16. A test fishery on June 16 indicated an estimated 150,000 - 200,000 sockeye salmon in Chignik Lagoon. Inseason escapement goals (Table 1) are set for June and July in order to assure that the overall escapement goals of 400,000 sockeye salmon for the Black Lake run and 250,000 sockeye salmon for the Chignik Lake run are achieved.

21.) Report to the Board, Regional Information Report1 No. 4K92-41, 1992, p.2

Narver (1966) and Dahlberg (1968) estimated the desired escapement goals for the Chignik sockeye salmon runs at 400,000 fish for Black Lake and 250,000 fish for Chignik Lake, respectively (Table 1). Since 1966, the sockeye salmon runs to Chignik have been managed to ensure that these escapement goals are met. The effectiveness of this management strategy is evident from the increase in the Chignik runs during the last 30 years. The total run averaged 2.10 million between 1963-1972, 2.49 million between 1973-1982, and 2.86 million between 1983-1992.

22.) Report to the Board of Fish, p.1, 1992 Regional Information Report1 No. 4K92-41

Sockeyes returning to the Chignik Lakes system are composed of one stock returning to Black Lake (early run) and the other to Chignik Lake (late run); sockeye escapement goals for Black and Chignik Lake stocks are 400,000 and 250,000 fish, respectively. Commercial fishing time for sockeyes have been based on a threshold level of escapement for each run by a specific date. To achieve these thresholds, the escapements are monitored; however, these monitoring efforts have been complicated by an overlapping in early and late runs' time of entry (i.e., transition period). The transition period generally occurs from the last of June through mid-July. Two methods have been developed to estimate daily proportions of each run during the transition period. The first method is based on tagging studies (Dahlberg 1968). These studies (1962-1967) enabled biologist to develop an average time of early entry curve (ATOEC) to apportion the Chignik sockeye runs into early and late components. A form of this method is currently used for in-season management of the fishery. The second method, developed in the late 1970s

31

23.) 1993 Chignik Regional Comprehensive Salmon Plan 1992-2001

Sockeye salmon escapement goals were 400,000 fish for Black Lake and 250,000 fish for the Chignik Lake stocks. Commercial fishing time for sockeye salmon has been regulated based on achieving interim threshold escapements goals by specific dates for each run. Achieving these thresholds is complicated due to overlap of the two runs. This run timing overlap (the transition period) generally occurs during the latter part of June to early July .

24.) 1994 Chignik AMR, Regional Information Report No. 4K97-18, p.3

Narver (1966) estimated the sockeye salmon escapement goals for Black Lake at 400,000 and for Chignik Lake at 250,000. Commercial fishing time for sockeye salmon has been regulated based on achieving threshold escapements by specific dates for each run (Table 8). Achieving these thresholds is complicated by the run timing overlap (the transition period), which generally occurs during the latter part of June to early July. This is a critical time for management biologists who must assess the catch using age and stock composition to determine which stock dominates.

25.) 1995 Chignik Management Report to The Board of Fisheries, p.3

Narver (1966) estimated the sockeye salmon escapement goals for Black Lake at 400,000 and for Chignik Lake at 250,000. Commercial fishing time for sockeye salmon has been regulated based on achieving threshold escapements by specific dates for each run (Table 8). Achieving these thresholds is complicated by the run timing overlap (the transition period), which generally occurs during the latter part of June to early July. This is a critical time for management biologists who must assess the catch using age and stock composition to determine which stock dominates.

26.) 1995 Chignik AMR, p.4

The BEG's for Sockeye salmon are 400,000 fish for Black Lake and 250,000 fish for the Chignik Lake stocks. Commercial fishing time for sockeye salmon is regulated based on achieving interim threshold escapements goals by specific dates for each run. Achieving these thresholds is complicated due to overlap of the two runs (the transition period) which generally occurs during the latter part of June to early July .

27.) 1995 Chignik AMR, Regional Information Report No. 4K98-12, p. 4

The upper range of BEGs for sockeye salmon are 400,000 fish for Black Lake and 250,000 fish for Chignik Lake. Commercial fishing time for sockeye salmon is regulated on achieving interim escapement goals by specific dates for each run (Owen 1998a). Achieving these goals is complicated due to overlap of the two runs (transition period).

28.) 1998 Chignik AMR, p.5, Regional Information Report No. 4K00-41

Appendix G. Sockeye salmon escapement goal summary for Chignik early and late run.

Regulatory Area: Chignik (Area L) – Chignik Bay District, Chignik Lagoon

Stock Unit: Chignik River

Primary Management Division: Commercial Fisheries

Primary Fisheries: Commercial purse seine; Subsistence

Biological Escapement Goal:

Early Run:	350,000 to 400,000
Late Run:	200,000 to 250,000 by September 1
Total:	550,000 to 650,000

Sustainable Escapement Goal: None specified

Optimal Escapement Goal: None specified

Inriver Goal: None specified

Action Points: None specified

Escapement Enumeration Method: Weir counts

History of Goal: Current escapement goals were fashioned in the mid- to late-1960s, based upon studies conducted by the University of Washington. One set of studies looked at the potential carrying capacity of Black Lake in terms of prey resources and utilized a ratio of mean fall fry per spawner of the Black Lake (early run) return to calculate an optimum number of spawners of 467,000. For Chignik Lake, with a lower density of non-sockeye species but more varied age classes of juvenile sockeye, plus the burden of supporting Black Lake fry during their outmigration, the optimum number of spawners was calculated as 200,000.

Another set of studies by UW in the late 1960s applied Ricker spawner-recruit analysis to returns to each lake for the period 1922-1960, deriving an optimum escapement for Black Lake of 383,000 and for Chignik Lake of 340,000. Given a presumption that the early part of the Black Lake return had been overfished during WWII, the goal for Black Lake was raised by 12.5% to a total of 438,000. For Chignik Lake, the goal was set at 200,000, with the intention that it would be increased to the calculated optimum of 340,000 once the suspected species composition of Black Lake would be predominated by sockeye fry and thus fewer of the Black Lake fry would need to rely on Chignik Lake.

In 1969 the various numbers for Black Lake and Chignik Lake were adjusted to an even 400,000 and 250,000 respectively. The goals have remained essentially unchanged for the past thirty years, although an additional goal of 25,000 was established in 1998 for the period September 1-15. With the benefit of recent smolt enumeration studies, and limnology studies, along with recent spawner-recruit data, CF will be reviewing the Chignik early and late run sockeye salmon BEG in accordance with the EGP and SSFP.

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29.) 2001 Escapement Goals for Pacific Salmon in the Kodiak, Chignik, and Alaska Peninsula Aleutian Islands Areas of Alaska Regional Information Report) No. 4K01-66 (Nelson and Lloyd)

Sockeye Salmon

The Chignik River sockeye salmon early run peaks in late-June and the late run peaks in July (Figure 7). The sockeye salmon BEGs for the early run (350,000 to 400,000) and late run (200,000 to 250,000) were established in the 1960s (Nelson and Lloyd 2001). The 2002

30.) 2002 Chignik AMR, p.9

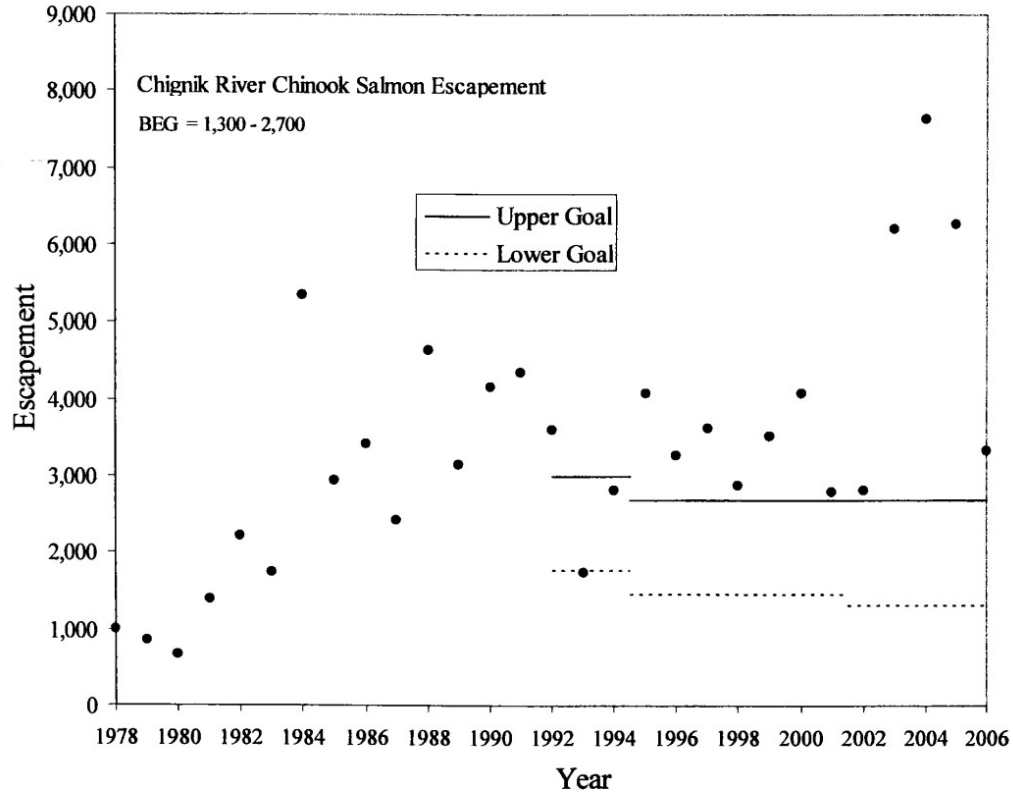
A brood table, based only on a few years of age class data from small sample sizes, has been used to establish an initial Chignik River system escapement goal of 1,450 fish (Owen and Sarafin, 1999a). To ensure the escapement goal is met, the department's inriver goal of 1,950 chinook salmon allows for a projected sport and subsistence harvest of 500 fish. If escapement in early July is weak and escapement goals are not likely to be met, the Hume's Point markers may be used to enhance escapement. Normally 50% of the chinook escapement passes through the weir by July 11. During 1999, 50% of the chinook escapement passed the weir by July 16 (Table 8).

31.) 1999 Chignik AMR

System: Chignik River

Species: Chinook salmon

Data available for analysis of escapement goals.



32.) 2007 Review of Escapement Goals in the Chignik Management Area, p.24

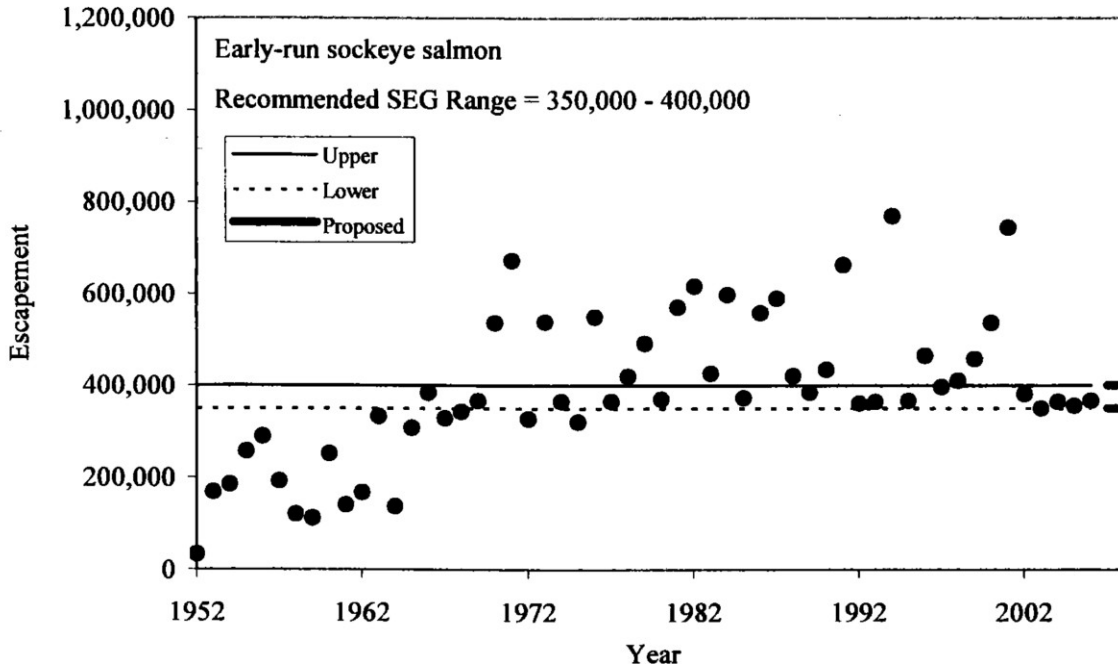
Biological sampling of the commercial red salmon catch in the Chignik Lagoon was again conducted for the purpose of furnishing data for the annual Chignik red salmon prognostication.

Close cooperation is maintained with the Fisheries Research Institute, who are currently conducting lacustrine and estuarian studies of the Chignik and Black Lakes red salmon run. Direct joint cooperation existed for conducting analysis of the lagoon biological sampling and the tag recovery of the Chignik River tagging program.

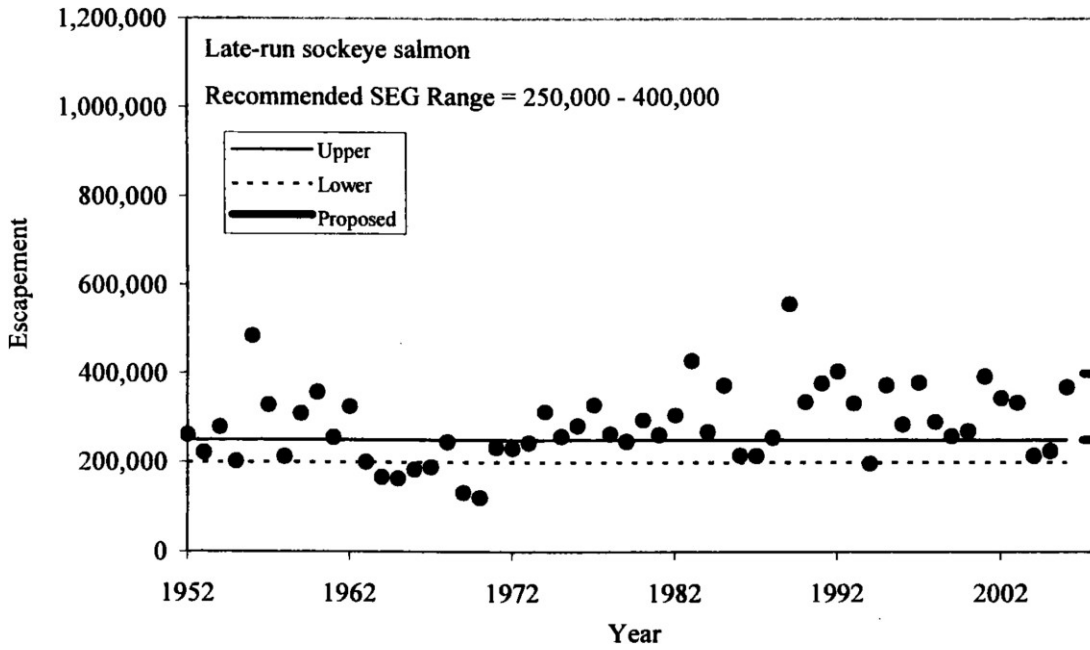
33.) 1963 Chignik AMR, p.20

In 1992 the ADF&G implemented an Escapement Goal Policy (EGP) that formalized the approach used to manage salmon fisheries on the sustained yield principle. The EGP documented the concepts, criteria, and procedures for establishing and modifying escapement goals. In addition, the EGP established a process that facilitated public review of allocative issues associated with establishing and modifying escapement goals. In 2001 the Alaska Board of Fisheries (BOF) adopted a modified version of the department's EGP into regulation. This new policy, 5 AAC 39.223. POLICY FOR STATEWIDE SALMON ESCAPEMENT GOALS, identifies the department's responsibilities regarding escapement goals. The first responsibility of the department is to document existing salmon escapement goals for all salmon stocks that are currently managed for an escapement goal. This document has been prepared to describe the establishment of currently applicable escapement goals for stocks of five Pacific salmon species (chinook *O. tshawytscha*, sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum *O. keta* salmon) spawning in the Kodiak, Chignik, and Alaska Peninsula/Aleutian Islands areas of Alaska.

34.) *Escapement Goals for Pacific Salmon in the Kodiak, Chignik, and Alaska Peninsula Aleutian Islands Areas of Alaska* (Nelson and Lloyd, 2001) *Regional Information Report*) No. 4K01-66, p. 2

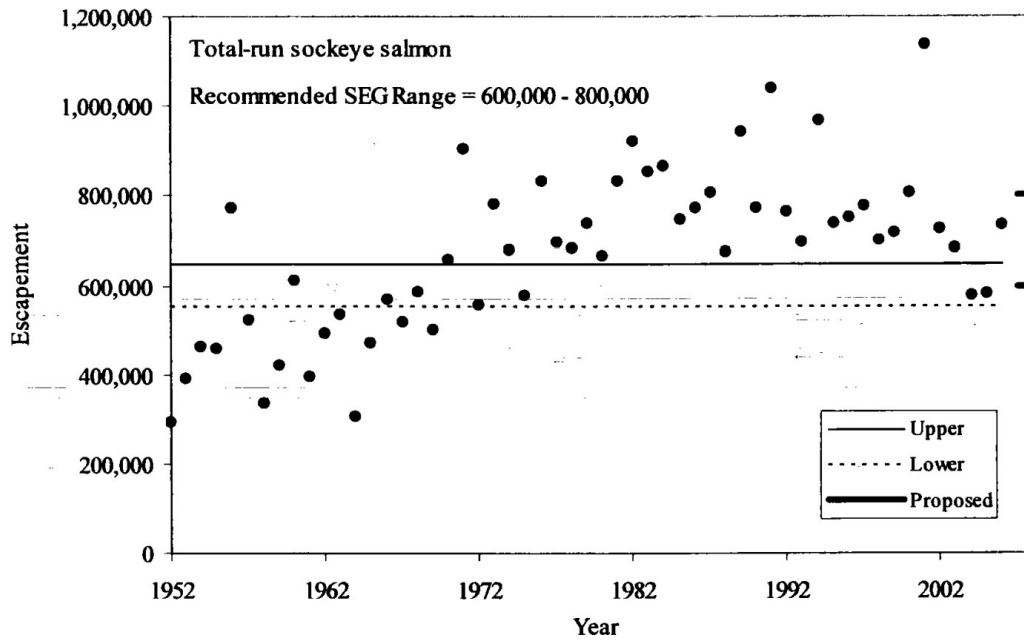


35.) 2007 Review of Escapement Goals in the Chignik Management Area, p.30



36.) 2007 Review of Escapement Goals in the Chignik Management Area, p.30

Appendix B2.—Page 4 of 4.



37.) 2007 Review of Escapement Goals in the Chignik Management Area, p.31



ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

MEMORANDUM

TO: Patti Nelson
Regional Research Supervisor
Division of Commercial Fisheries
Region IV – Kodiak

DATE: April 17, 2002

PHONE: (907) 486-1805

FAX: (907) 486-1841

FROM: Kenneth A. Bouwens
Finfish Research Biologist
Division of Commercial Fisheries
Region IV - Kodiak

SUBJECT: Chignik Escapement

The purpose of this memorandum is to discuss preliminary data from the Chignik Lake Assessment Project in terms of the health of the sockeye salmon rearing habitat at Chignik.

Sockeye salmon escapements have been well in excess of escapement goals for the past 10 years. In 2000 and 2001, escapement goals were exceeded by 155 and 487 thousand sockeye salmon, respectively:

Year	Black Lake	Chignik Lake	Total Escapement
	Escapement	Escapement	
1992	360,681	405,922	766,603
1993	364,263	333,114	697,377
1994	769,464	197,445	966,909
1995	366,163	373,757	739,920
1996	464,750	284,387	749,137
1997	396,668	378,950	775,618
1998	410,659	290,469	701,128
1999	457,425	258,541	715,966
2000	519,661	285,614	805,275
2001	744,013	392,905	1,136,918
Goal	350,000 - 400,000	200,000 - 250,000	550,000 - 650,000

(38.) April 17, 2002 Chignik Escapement Memorandum pg.1

Patti Nelson
Chignik Escapement

April 17, 2002

Preliminary limnology data from both Black Lake and Chignik Lake in 2000 and 2001 indicate that the forage base for sockeye salmon of the system was extremely taxed. Three lines of evidence suggest that the forage base has been overgrazed in both Black and Chignik Lakes:

- 1) Zooplankton species composition. *Bosmina* and *Cyclops* dominated the zooplankton and *Daphnia* were nearly absent in both Black and Chignik Lakes. Both of the dominant species are inefficient grazers and are poor transmitters of energy and nutrients through the food web, and are not preferred sockeye salmon forage. Their presence indicates high grazing rates by planktivorous fish.
- 2) Zooplankton size. The mean size of the available zooplankton is very small and below the elective feeding size threshold of sockeye salmon. This is further evidence that the zooplankton was heavily grazed.
- 3) Phytoplankton abundance. Chlorophyll *a* levels were extremely high in both lakes in both years. This is an indicator of a zooplankton community that is unable to transfer the energy and nutrients from the phytoplankton to sockeye salmon, indicating a bottleneck through top-down limitation of zooplankton production. The primary production of the system was high, but it was not transferred up the food web.

It is noteworthy, however, that preliminary stomach content analysis suggests that insects have been a major portion of the diet of rearing sockeye salmon in the Chignik watershed. Also, Chignik Lagoon has been identified as a major rearing area for juvenile sockeye salmon. These caveats may have buffered the magnitude of the effects that overgrazing of the plankton might have had.

Given the above evidence, it is recommended that the low ends of the escapement goals for both runs to Chignik should be targeted as management objectives in 2002.

cc: Lloyd
Campbell
Pappas
~~Witteveen~~

(38. continued) April 17, 2002 Chignik Escapement Memorandum pg.2

2012 CHIGNIK SALMON MANAGEMENT

ADF&G targeted the lower bounds of the sockeye salmon escapement goals during the 2012 season (Table 3) based on limnology data from 2000 through 2007 that suggested the forage base for juvenile sockeye salmon was depressed in Chignik Lake (Bouwens and Finkle 2003a, 2003b; Finkle 2005; Finkle 2006a, 2006b; Finkle and Bouwens 2001). ADF&G first adopted this practice in 2002 to improve juvenile sockeye salmon production by relieving grazing pressure on zooplankton in Chignik Lake (Bowens and Finkle 2003b).

(39.) 2012 Chignik AMR, p.3

Routine plankton sampling was conducted at five locations, three times during the summer in Chignik Lake. These three sampling periods coincided with the townet sampling periods. As in past years, the cyclopoid copepod *Cyclops* was by far the most abundant in the plankton samples (Table 4). Even though this plankter is not the largest of the Entomostracan species in the samples, it does occur more often in stomachs of sockeye and other limnetic-feeding fish than any of the other Entomostracans. Apparently the juvenile sockeye are quite well adapted to feeding on *Cyclops*.

(40.) *Optimum Escapement Studies of Chignik Sockeye Salmon, 1973, p.14*

2) Significant differences in food composition exist between lakes in all four fish species analyzed. Winged and larval insects are more abundant in the sockeye and stickleback diets in Black Lake than in Chignik Lake.

(41.) *Optimum Escapement Studies of Chignik Sockeye Salmon, 1972, p.9*

Percentile Approach

A SEG for Thin Point sockeye salmon was estimated according to the percentile algorithm using aerial survey escapement estimates from 1970 to 2003. High contrast in the escapement estimates and high exploitation of this stock resulted in an SEG of 7,475 to 22,325 (25th to 75th percentiles; Table 10).

Euphotic Volume Analysis

Based on average EV, the adult production of Thin Point Lake is expected to be roughly 78,000 sockeye salmon. A SEG of 19,000 to 32,000 sockeye salmon was estimated based on EV for Thin Point Lake (Table 7).

Smolt Biomass as a Function of Zooplankton Biomass

The zooplankton biomass for Thin Point Lake was very low. Depending on the size of the resultant smolt, the zooplankton model results in an estimated SEG of only 40 to 260 sockeye salmon for Thin Point Lake (Table 8). This model is probably not appropriate for Thin Point Lake because juvenile sockeye salmon are known to feed on non-zooplankton forage in shallow Alaska Peninsula lakes (Honnold et al. 1996; Bouwens and Finkle 2003).

Lake Surface Area

Based on the surface area of Thin Point Lake, Honnold et al. (1996) estimated the adult production of Thin Point Lake to be roughly 87,000 sockeye salmon annually. Based on this production level and an exploitation rate of 0.67, a SEG of 22,000 to 36,000 sockeye salmon was estimated for Thin Point Lake (Table 9). However, Honnold et al. (1996) suggested that this model may not be appropriate for shallow Alaska Peninsula lakes.

(42.) *Review of Salmon Escapement Goals in the Alaska Peninsula and Aleutian Islands Management Areas, Report to the Alaska Board of Fisheries, 2004 p.21*

Madame Chair and members of the board,

How did we get from a 400,000 minimum early run sockeye escapement goal by June 30th in the 80's when the Chignik salmon run and fishery was strong? Why has that number been progressively lowered to 276,000 minimum sockeye escapement by June 30th in 2021? The early sockeye run to Black Lake has collapsed since 2018 and has only shown sign of a rebound when the seine fishery in the Shumagins was restrained in 2022. The health of the Chignik River system doesn't reflect a benefit from lowering the minimum escapements. They used to be minimum 400,000 by June 30th considered early run; minimum 200,000 for the month of July, and 50,000 in August. 650,000 was the minimum by the end of August and September was extra.

By embracing new lower minimum escapements in about 2001, the higher volume of escapement during the natural peak of the run has been removed and/or shifted in a smoothed-out manner into July. But the high-volume peak time of escapement was found to represent spawners from all tributaries in the system in tagging studies in the 60's.

Unfortunately, after the minimum escapement was reset in Chignik at 350,000 for the early run and 200,000 for the late run in 2001, the department went immediately to managing for the lower escapement bounds from 2002-2012 (under the premise of increasing zooplankton forage). This allowed Chignik to commence its fishery on less fish which confounds any effects of regulation changes that occurred in interception fisheries such as when the South Peninsula GHL was removed and shifted more catch effort into the Shumagins, and when more area was opened to fishing in the South Pen in 2004.

Presently, any emergency safeguards and restraint on interception fisheries hinge on protecting the Chignik escapement. If the Chignik runs are merged and the combined escapement is lowered by another 100,000 to 450,000 minimum, it will serve to strengthen deceptive arguments that Chignik salmon don't need additional protection in migration pathways of intercept fisheries. And Chignik fishermen will fish albeit on less escapement thus producing smaller future returns which is not MSY.

And at what point does lowering escapement diminish future return? Decades ago, in the 60's, the fish and game realized that the Chignik early run to Black Lake had been overfished. They commenced indepth studies and determined they could rebuild the run and managed with intent to do so. In the process they found that competitor species were a problem in Black Lake and that "any reduction of escapement goals creates an increase in stickleback population which filled the biological niche of red salmon young." Likewise, the stickleback competitor species could be suppressed by increasing the escapements.

It is my understanding that the Black Lake has been geomorphically stable since 2002. Prior changes were gradual and didn't primarily occur just near 2002. The runs leading up to 2002 were quite productive. Something else other than Black Lake water levels has depressed the Chignik sockeye fishery and escapement. More recently eating habits of sockeye in other similar shallow lakes was studied in 2015 and it was found that the diet of juvenile sockeye consisted of 74% insects and insect larva and it was suggested that the carrying capacity of shallow lakes should be evaluated not just on zooplankton alone. I don't believe managing for a decade to approach the minimum of 350k to Black Lake was helpful based on older studies used to rebuild the early run. Lowering the amount of juveniles in the lake with the most abundant food source was not logical and likely competitor species filled the empty niche.

As a permit holder, originally purchasing in 1991 and crewing before that in the 80's, I believe that had the fishery in Chignik been managed as it was in the 80's with 400,000 sockeye as the minimum escapement to the early run and 250,000 minimum as the escapement from July to the end of August for the late run, we would not have the collapsed runs we face now. The increased interception would have been more identifiable. Do not allow the escapement goals to be degraded further as the department seems intent on doing. In fact, implementing a directive to rebuild the runs as was done before in the 60's and 70's and achieving the higher escapement minimums that once existed would be the right direction to restoring the resource to abundance.

With the Chignik's system in the current state it is in, and with the ADF&G unsure of the cause, it is imperative that the escapement returns to it's well studied, tried and proven level. If the Temperature Blob is the cause, then changing the escapement makes no sense. If ocean competition is the issue, then artificial hatchery fish should be reduced before natural stocks. If interception is the issue, then reducing escapement is foolish and reevaluating the efficiency and effectiveness with upgraded equipment (i.e. power blocks with hydraulic wheels that are just as effective as drum seining. Larger and more powerful vessels.) need to be looked at. The Department is tasked with MSY (maximum sustained yield), but is really only trying to achieve escapement and satisfied with lowering when not achieved to make sure fishing is allowable, with yield or not, making MSY nonexistent.

I Strongly object to the change proposed by ADF&G and the memos pertaining to combining the first and second run as well as reducing the escapement.

Thank you for taking the time to hear me.

Sincerely,

Benjamin Allen

The following is some supporting evidence:

II. 1981 SEASON SUMMARY

A. Overview of 1981 Season

During 1981, the early run proved to be extremely early and strong. Sockeye returning to Chignik were approximately 7 to 10 days early which caught fishermen, processors and Department of Fish and Game personnel completely off guard. As stated in the regulations, the Chignik salmon season was scheduled to open no earlier than June 9, and only if minimum escapement requirements were achieved by June 7. Due to the extremely heavy escapement of sockeye through June 6, the fishery was opened one day earlier than described in the regulation booklet (June 8, 1981). Minimum early run escapement requirements (400,000) were achieved by June 19. The fishery was closed June 19 by emergency order in order to build up the late run escapement and to analyze the most recent commercial catch scales. The Department was able to conclude that less than 50% of the sockeye currently entering the Chignik Bay district were late run, thus an emergency order was issued reopening the Central and Chignik Bay districts. Sockeye scales collected on June 22 indicated that 43% were late run fish; with this information it was anticipated that the number of late run sockeye would be greater than 50% by June 26. The closure announcement and emergency order was issued on June 23 closing the season at 10:00 p.m. Wednesday, June 24.

1.) 1981 Chignik Area Salmon Report to the Board of Fisheries December 1981

SOCKEYE SALMON

The total sockeye salmon run is forecasted to be approximately 4.4 million. The early run is expected to be stronger than any on record with a projected return of 3.2 million. The minimum early run escapement goal is 400,000, therefore, the projected harvest will be approximately 2.8 million. The total late run return is expected to be 1.2 million fish. The late run escapement goal is 250,000, which should allow a commercial harvest of approximately 950,000.

2.) 1984 Chignik Management Area Finfish Annual Report p. 33

1986 CHIGNIK AREA
SALMON MANAGEMENT PLAN

The following statements are intended as a guideline for managing the 1986 Chignik salmon runs. As in the past, frequent in-season emergency order adjustments will be made when necessary as the runs develop. No statements contained in this management plan in regards to numbers of fish or fishing time should be taken as a guarantee.

SOCKEYE SALMON

The total sockeye salmon run is forecast to be approximately 2.81 million fish. The early run is expected to be the stronger of the two with an expected 1.90 million total return. The minimum escapement goal on the early run is 400,000 fish, therefore the projected harvest will be 1.50 million sockeye. The total late run return is expected to be 1.30 million fish. The late run minimum escapement goal is 250,000 which should allow a commercial harvest of approximately 661,000 fish. Total estimated harvest for both runs should be 2.16 million fish, which includes fish that may be intercepted outside the Chignik area.

The first day of fishing could be as early as 1 June by regulation. However, compared to past years this would be highly unlikely, and only implemented if a minimum of 40,000 sockeye salmon have passed the weir and a strong buildup of fish in the lagoon is indicated by test fishing. The average opening for commercial fishing based on the past 10 years is 10 June. Additional openings will be based on escapements, fishery performance and test fishing results.

During the month of June, commercial fishery openings will be confined to the Chignik Bay District, Central District, and the Eastern District.

As adopted by the Board of Fisheries, the Eastern district will open and close to commercial salmon fishing simultaneously with the Chignik Bay and Central districts. The Eastern district may close to commercial salmon fishing during the overlap period, in late June and early July.

ACE 9594533

Table 1.

CHIGNIK RIVER SYSTEM
 SOCKEYE ESCAPEMENT GOALS
 BLACK LAKE (EARLY) AND CHIGNIK LAKE (LATE) RUNS

The numbers in the escapement tables listed below were derived from averages over several years of escapements of various timing and magnitude. It should be noted that daily escapement levels will fluctuate considerably throughout the run. THE TABLES LISTED SERVE ONLY AS A GUIDE FOR ACHIEVING THE TOTAL ESCAPEMENT FOR EACH RUN. In-season variations from the figures listed may be due to variations in actual run timing and/or strength of the run.

EARLY RUN - 400,000 Minimum

1987 Chignik AMR p. 142

June 12	40,000
14	50 - 65,000
16	75 - 100,000
18	125 - 150,000
20	175 - 200,000
22	225 - 250,000
25	275 - 325,000
30	350 - 400,000

LATE RUN - 250,000 Minimum

<u>WHEN EARLY ESCAPEMENT IS ACHIEVED</u>	<u>WHEN EARLY RUN ESCAPEMENT IS NOT ACHIEVED</u>
July 6	40,000
8	45 - 50,000
10	55 - 65,000
12	70 - 75,000
14	75 - 80,000
16	80 - 90,000
19	100 - 115,000
21	125 - 135,000
23	150 - 160,000
26	170 - 180,000
29	190 - 195,000
31	195 - 200,000

4.) 1987 Chignik AMR p. 142

I. PROJECT TITLE: Chignik Weir Salmon Enumeration

A. Problem Statement and Objectives

The Chignik River system sockeye run is comprised of two major stocks which are designated by the lake and the fish rear in as juveniles. The runs are termed early run (Black Lake run) and the late run (Chignik Lake run). The two lakes are interconnected and share a common outlet river. The stocks spawn in different areas, have a different time of spawning migration, and length of fresh water residence as juveniles and age at maturity (Higgins 1934; Narver 1963).

Minimum escapement goals for the Chignik sockeye salmon stocks are 400,000 for the Black Lake stock and 250,000 for the Chignik Lake stock. Since 1966 the Chignik sockeye returns have been managed to achieve these escapement goals. Managing for these escapement goals and a commercial harvest of the surplus is complicated by the overlap period (mid-June to mid-July) when both stocks are present in the fishery. Accurate escapement

ACE 8697604

5.) 1988 Chignik Operational Plan, Regional Information Report No.4K 88-26

Sockeye Salmon

Background Information

Economically, sockeye salmon are the most important commercial species in the Chignik Management Area. The local commercial fishery targets on sockeye salmon entering the Chignik Lakes system. Sockeye salmon of Chignik Lakes system origin are also intercepted outside the Chignik area in the Kodiak and Alaska Peninsula management areas.

Sockeye salmon returning to the Chignik Lakes system are comprised of two stocks one returning to Black Lake (early run) and the other to Chignik Lake (late run) (Figure 5). The ADF&G established the sockeye salmon escapement goals for Black Lake and Chignik Lake stocks at 400,000 and 250,000 fish, respectively. Commercial fishing time for sockeye salmon has been predicated on achieving a threshold level of escapement for each run by a specific date. Monitoring escapement with respect to achieving these threshold levels is complicated by an overlap in early and late run time of entry called the transition period. The transition period generally occurs from the last of June through mid-July. Two methods have been developed to estimate

2

ACE 9281478

6.) 1989 Chignik Management Area Salmon Fishery, Report to the Board of Fisheries, Regional Information Report No.4K89-37

The 1992 Chignik sockeye salmon fishery started on June 17. The cumulative escapement of 114,000 sockeye salmon past the weir was within the desired range of 75,000 - 100,000 sockeye salmon by June 16. A test fishery on June 16 indicated an estimated 150,000 - 200,000 sockeye salmon in Chignik Lagoon. Inseason escapement goals (Table 1) are set for June and July in order to assure that the overall escapement goals of 400,000 sockeye salmon for the Black Lake run and 250,000 sockeye salmon for the Chignik Lake run are achieved.

7.) Report to the Board, Regional Information Report1 No. 4K92-41, 1992, p.2

Narver (1966) and Dahlberg (1968) estimated the desired escapement goals for the Chignik sockeye salmon runs at 400,000 fish for Black Lake and 250,000 fish for Chignik Lake, respectively (Table 1). Since 1966, the sockeye salmon runs to Chignik have been managed to ensure that these escapement goals are met. The effectiveness of this management strategy is evident from the increase in the Chignik runs during the last 30 years. The total run averaged 2.10 million between 1963-1972, 2.49 million between 1973-1982, and 2.86 million between 1983-1992.

8.) *Report to the Board of Fish, p.1, 1992 Regional Information Report1 No. 4K92-41*

Sockeyes returning to the Chignik Lakes system are composed of one stock returning to Black Lake (early run) and the other to Chignik Lake (late run); sockeye escapement goals for Black and Chignik Lake stocks are 400,000 and 250,000 fish, respectively. Commercial fishing time for sockeyes have been based on a threshold level of escapement for each run by a specific date. To achieve these thresholds, the escapements are monitored; however, these monitoring efforts have been complicated by an overlapping in early and late runs' time of entry (i.e., transition period). The transition period generally occurs from the last of June through mid-July. Two methods have been developed to estimate daily proportions of each run during the transition period. The first method is based on tagging studies (Dahlberg 1968). These studies (1962-1967) enabled biologist to develop an average time of early entry curve (ATOE) to apportion the Chignik sockeye runs into early and late components. A form of this method is currently used for in-season management of the fishery. The second method, developed in the late 1970s

31

9.) *1993 Chignik Regional Comprehensive Salmon Plan 1992-2001*

Sockeye salmon escapement goals were 400,000 fish for Black Lake and 250,000 fish for the Chignik Lake stocks. Commercial fishing time for sockeye salmon has been regulated based on achieving interim threshold escapements goals by specific dates for each run. Achieving these thresholds is complicated due to overlap of the two runs. This run timing overlap (the transition period) generally occurs during the latter part of June to early July .

10.) *1994 Chignik AMR, Regional Information Report No. 4K97-18, p.3*

Narver (1966) estimated the sockeye salmon escapement goals for Black Lake at 400,000 and for Chignik Lake at 250,000. Commercial fishing time for sockeye salmon has been regulated based on achieving threshold escapements by specific dates for each run (Table 8). Achieving these thresholds is complicated by the run timing overlap (the transition period), which generally occurs during the latter part of June to early July. This is a critical time for management biologists who must assess the catch using age and stock composition to determine which stock dominates.

11.) *1995 Chignik Management Report to The Board of Fisheries, p.3*

The BEG's for Sockeye salmon are 400,000 fish for Black Lake and 250,000 fish for the Chignik Lake stocks. Commercial fishing time for sockeye salmon is regulated based on achieving interim threshold escapements goals by specific dates for each run. Achieving these thresholds is complicated due to overlap of the two runs (the transition period) which generally occurs during the latter part of June to early July .

12.) 1995 Chignik AMR, Regional Information Report No. 4K98-12, p. 4

The upper range of BEGs for sockeye salmon are 400,000 fish for Black Lake and 250,000 fish for Chignik Lake. Commercial fishing time for sockeye salmon is regulated on achieving interim escapement goals by specific dates for each run (Owen 1998a). Achieving these goals is complicated due to overlap of the two runs (transition period).

13.) 1998 Chignik AMR, p.5, Regional Information Report No. 4K00-41

Appendix G. Sockeye salmon escapement goal summary for Chignik early and late run.

Regulatory Area: Chignik (Area L) – Chignik Bay District, Chignik Lagoon

Stock Unit: Chignik River

Primary Management Division: Commercial Fisheries

Primary Fisheries: Commercial purse seine; Subsistence

Biological Escapement Goal:

Early Run:	350,000 to 400,000
Late Run:	200,000 to 250,000 by September 1
Total:	550,000 to 650,000

Sustainable Escapement Goal: None specified

Optimal Escapement Goal: None specified

Inriver Goal: None specified

Action Points: None specified

Escapement Enumeration Method: Weir counts

History of Goal: Current escapement goals were fashioned in the mid- to late-1960s, based upon studies conducted by the University of Washington. One set of studies looked at the potential carrying capacity of Black Lake in terms of prey resources and utilized a ratio of mean fall fry per spawner of the Black Lake (early run) return to calculate an optimum number of spawners of 467,000. For Chignik Lake, with a lower density of non-sockeye species but more varied age classes of juvenile sockeye, plus the burden of supporting Black Lake fry during their outmigration, the optimum number of spawners was calculated as 200,000.

Another set of studies by UW in the late 1960s applied Ricker spawner-recruit analysis to returns to each lake for the period 1922-1960, deriving an optimum escapement for Black Lake of 383,000 and for Chignik Lake of 340,000. Given a presumption that the early part of the Black Lake return had been overfished during WWII, the goal for Black Lake was raised by 12.5% to a total of 438,000. For Chignik Lake, the goal was set at 200,000, with the intention that it would be increased to the calculated optimum of 340,000 once the suspected species composition of Black Lake would be predominated by sockeye fry and thus fewer of the Black Lake fry would need to rely on Chignik Lake.

In 1969 the various numbers for Black Lake and Chignik Lake were adjusted to an even 400,000 and 250,000 respectively. The goals have remained essentially unchanged for the past thirty years, although an additional goal of 25,000 was established in 1998 for the period September 1-15. With the benefit of recent smolt enumeration studies, and limnology studies, along with recent spawner-recruit data, CF will be reviewing the Chignik early and late run sockeye salmon BEG in accordance with the EGP and SSFP.

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29.) 2001 Escapement Goals for Pacific Salmon in the Kodiak, Chignik, and Alaska Peninsula Aleutian Islands Areas of Alaska Regional Information Report) No. 4K01-66 (Nelson and Lloyd)

Sockeye Salmon

The Chignik River sockeye salmon early run peaks in late-June and the late run peaks in July (Figure 7). The sockeye salmon BEGs for the early run (350,000 to 400,000) and late run (200,000 to 250,000) were established in the 1960s (Nelson and Lloyd 2001). The 2002

14.) 2002 Chignik AMR, p.9

Conclusion

The Chignik system early run has always been the stocks that have contributed to producing the greatest historical annual runs into the Chignik system. Upon the decline of the early run, the late run has remained to be somewhat the same static producer. The late run has always received the needed escapement, due to past management policies allowing overharvest of early stocks and allowing the bulk of the escapement to occur during the late run.

15.) 1964 Chignik Area Annual Report, p. 43

The 1965 spawning ground surveys indicated good distribution of spawners in the Black Lake system with no abnormal egg loss due to superimposition. Areas where increased escapement is needed, such as the Alec River gravel bars, will have to gradually be built up over a period of years as competing species in the lake become more strongly dominated. At this time an escapement of 300,000 in the Black Lake system and 50,000 in the Black River system should be optimum. As the red salmon fry gradually suppress the stickleback population in Black Lake, it would appear that early escapements approaching 500,000 will be in order. This, of course, will depend on an annual assessment of the populations in Black Lake.

16.) 1965 Chignik Area Annual Report, p.39

A review of the age classes represented in the escapements during the productive period from 1920 to 1930 suggests that in certain years Chignik Lake served as a secondary rearing area for Black Lake system progeny. It is difficult to assume that the Black River system produced the large numbers of six year reds in the early portion of the run during those years. In late years it appears that Chignik Lake becomes a secondary rearing system only when the density of red salmon fry and stickleback exceed the carrying capacity of Black Lake, causing emigration. Chignik Lake functions as a secondary rearing area due to fry emigration at relatively low fry levels compared to former years, but as competing forms are depressed these levels should increase. At the present time, with competing forms at their present level, when a large early escapement occurs, late escapements into the Chignik Lake system should be depressed to 150 - 180,000 in preparation for fry emigration from the early system. Conversely, if the early escapement goals are not obtained, late escapement should be increased accord-

17.) 1965 Chignik Area Annual Report, p.39

ingly to fully utilize the Chignik Lake rearing capacity.

It will be necessary to closely monitor escapement for stock separation as the season progresses to make adjustments in goals.

The Fisheries Research Institute has been carrying on a tow netting program to establish fry indices as a measure of spawning success and rearing ground utilization. The index derived from the 1964 early reds is almost twice that of 1960 brood year index, and a substantial suppression of stickleback is evident. The 1965 tow netting index for Chignik Lake is not known at this time.

18.) 1965 Chignik Area Annual Report, p.40

5. The escapement levels into the Black Lake system must be kept yearly at an optimum level in order to suppress the Black Lake stickleback population by competing red salmon young during lake residency. Lake studies has shown that any reduction of escapement goals creates an increase of stickleback population, which have filled the biological niche of the red salmon young during the many years of under escapement into the Black Lake system. The complete suppression of the competing stickleback population should be a major step in returning the early system to the capabilities of past high production.

19.) 1965 Chignik Area Annual Report, p.43

Chignik River weir red salmon enumeration, comprehensive commercial catch analysis, limited tagging operations at points of interception of the Chignik system red salmon along the south side of the Alaska Peninsula, combined with age composition analysis of the separate segments of the run, is providing the data for the evaluation of the desired escapement levels for the two nursery areas in the Chignik River system. This combined data is currently being utilized for predicted red salmon returns to the Chignik system.

The Fisheries Research Institute is currently evaluating the impact of levels of red salmon escapement upon the carrying capacity of the two separate nursery areas to assist in the establishment of future desired escapement levels.

The former production level of the Chignik system is anticipated to be approximately 60% restored by 1969 and indicates possibilities of a commercial harvest of 800,000 to 1,000,000 annually within the years to follow.

20.) 1966 Chignik Area Annual Report, p.49

Nursery Lake Studies

Ecological studies of the nursery lakes conducted at Chignik by the Fisheries Research Institute since 1960 give corroborating evidence for a poor return in 1967. Tow net catches of juvenile sockeye salmon in the two lakes during late August are shown in Table 3.

The mean catch per tow of sockeye salmon fry (returning as age 1.3 fish in June, 1967) in Black Lake during 1963 was approximately one-half the six-year average. This is consistent with the low parent escapement to Black Lake in 1962. Further, growth of sockeye salmon fry was suppressed by abundant competitor species in Black Lake during 1963. Examination of the relationship between mean catch per tow of Black Lake fry and resultant adult returns indicates an early run of about 265,000 fish. More confidence, however, must be placed in the estimate of 189,000 based on the relationship between numbers of .2 fish one year and .3 fish the following year for two reasons: the paucity of tow net data and the fact that the tow net and adult return relationship does not contain any estimate of the variable of marine survival. The relationship between .2 and .3 fish of the same year class, however, does account for survival in two of the three years that .3 fish spend at sea.

21.) 1966 Chignik Area Annual Report, p.64

PRELIMINARY FORECAST

-Continued-

DISCUSSION OF 1970 FORECAST:

The optimum escapement for the Black Lake system has been estimated at approximately 400,000 red salmon. Assuming an actual return of 850,000 fish, this would indicate an early run commercial harvest of approximately 400,000 red salmon.

The Chignik Lake system should receive an escapement of approximately 200,000-250,000 spawners. This would leave approximately 150,000 red salmon for the late run commercial harvest.

In combination, the two systems should provide approximately 550,000 red salmon for commercial harvest in 1970.

The final forecast for the 1970 season was published as Informational Leaflet 144.

Prepared by: Paul Pedersen, Area Management Biologist
Division of Commercial Fisheries
Kodiak (Chignik)

22.) 1969 Chignik AMR

Discussion

The optimum escapement into the early system has been estimated at approximately 400,000 red salmon. With a predicted return of 1,336,000 fish, a possible commercial harvest of 936,000 can be anticipated prior to July 1.

The late system should receive an estimated 200-250,000 in escapement. With a forecast of only 370,000 fish, the possible harvest of this portion of the run would be near 150,000.

23.) 1970 Chignik Area Annual Report, p.35

8. A detailed study of the food habits, growth and interaction of juvenile sockeye, and potentially competing lake resident species was completed as a M.S. thesis. Results are summarized in the present report and two years of data are added to appropriate graphs and tables. Differences within and between lakes in summer food habits of the four species were analyzed. Black Lake fish generally contained more food and had higher growth rates than Chignik Lake fish, which was consistent with estimates of lake carrying capacity for juvenile sockeye. In Black Lake some evidence of interspecific competition for food was seen, but apparent effect on growth was seen only in the relationship between abundance of threespine stickleback and growth of ninespine stickleback, two species with similar diet. The most significant finding was that when age 0 sockeye in Black Lake were abundant, the abundance of the three non-sockeye species declined, supporting the hypothesis that higher levels of sockeye escapement and fry production in Black Lake would have the effect of reducing competitor species.

24.) 1974 *Optimum Escapement Studies of Chignik Sockeye Salmon* p.74 (the M.S Thesis was by William Parr)

Apparently, the increased abundance of juvenile sockeye salmon in the two lakes is suppressing the numbers of certain potential competitors for food and/or space which provides for greater sockeye salmon production in these resource areas. It was noted that when sockeye salmon were abundant in Black Lake, the abundance of three age classes of threespine sticklebacks (especially 0 to I) and age 0 ninespine sticklebacks was adversely affected. An effect on the abundance of all ages of pond smelt was noted, also, but the effect was not nearly as great as for the three- and ninespine sticklebacks.

25.) 1972, *Optimum Escapement Studies of Chignik Sockeye* p.9

FISHERIES RESEARCH INSTITUTE
College of Fisheries
University of Washington
Seattle, Washington 98195

OPTIMUM ESCAPEMENT STUDIES OF CHIGNIK SOCKEYE SALMON

Annual Progress Report - Anadromous Fish Project

Project No.: AFC-34
Contract No.: N-044-38-72G
Project Period: July 1, 1971-June 30, 1972

Prepared by: John W. Wells
and
Robert L. Burgner

Extensive research is conducted jointly by the Alaska Department of Fish and Game and the Fisheries Research Institute for assessment of red salmon escapements and commercial harvest destined for the Chignik River red salmon system. Annual tagging operations have been initiated by weekly color coded disc tags, which has resulted in the delineation of the system's red salmon run into two distinct segments bound for separate spawning areas. This tagging operation, combined with age analysis, has shown a distinct separation of the Chignik red salmon run into the early Black Lake and the late Chignik Lake segments. Analysis of age composition and area of spawning activity has allowed the management of the two segments in a manner for allowance of optimum escapement levels to be realized for lake nursery areas. The early segment of the red salmon run which young primarily rear in Black Lake had received extensive overharvest through the past years. This early portion of the run historically provided former high production rate for the red salmon return to the Chignik system, resulting in red salmon returns of 30 to 50 percent of former magnitude. By extensive biological sampling and timing of the two overlappings of the ascendants into the system, it has been the Department's goal to rebuild the depleted early portion of this red salmon run.



United States Department of the Interior
Office of Subsistence Management
1011 East Tudor Road MS 121
Anchorage, Alaska 99503-6199



In Reply Refer To
OSM.22115.GP

OCT 7 2022

Ms. Märít Carlson-Van Dort, Chair
Alaska Board of Fisheries
Alaska Department of Fish and Game
P.O. Box 115526
Juneau, Alaska 99811-5526

Dear Chair Carlson-Van Dort:

The Alaska Board of Fisheries will consider 20 Agenda Change Requests at its work session beginning October 25, 2022.

The Office of Subsistence Management (OSM), working with other Federal agencies, has reviewed these requests and does not believe the decision to accept any of these requests will impact Federally qualified subsistence users. If any of the Agenda Change Requests are accepted, Federal staff comments may be submitted for proposals that could impact Federally qualified subsistence users. During the meeting, OSM may wish to comment on other agenda items that may impact Federally qualified subsistence users.

We appreciate the opportunity to comment on these important regulatory matters and look forward to working with the Board of Fisheries and the Alaska Department of Fish and Game on these Agenda Change Requests should they be accepted.

Sincerely,

Sue K. Detwiler
Assistant Regional Director,
Office of Subsistence Management

Cc: Anthony Christianson, Chair, Federal Subsistence Board
Interagency Staff Committee
Benjamin Mulligan, Alaska Department of Fish and Game, Anchorage
Art Nelson, Alaska Department of Fish and Game, Juneau
Mark Burch, Alaska Department of Fish and Game, Palmer
Office of Subsistence Management, Anchorage
Administrative Record

Board of Fisheries - Work Session Comment Form

Submitted Time: October 6, 2022 1:19 PM

First Name

Ilane

Last Name

Ashby

Community of Residence

Chignik, AK

Write your comment here:

In regards to SOC Memo Area L and Area M / Area L and Area M Escapement Goal Memo

Dear Chairwoman and members of the board,

My father fished Chignik and my son and granddaughter fish Chignik now. I do not support lowering the minimum escapement for sockeye in Area L or Area M. It is absurd to think that potentially less escapement would produce the same or more salmon. It will only help interception fisheries keep fishing with no accountability. I think the Area M and Area L escapements recent slight improvements is from various restrictions in the Dolgois and Shumagins to help Chignik. Lowering escapements will produce less salmon in the ocean to catch. And even if the ADFG say they won't manage for the low end, that's exactly what they did in 2002-2012 in Chignik. Increased interception and lowered escapements will hurt Alaska's salmon runs.

Thank you for listening,

Ilane Ashby

Board of Fisheries - Work Session Comment Form

Submitted Time: October 4, 2022 2:45 PM

First Name

Russell

Last Name

Clark

Community of Residence

Kenai, Alaska

Write your comment here:

ACR 20. First I would like to state that when submitting ACR 20, implementing a new gear type, flagged nets, I submitted the ACR in last years cycle and when I submitted the ACR this year, I submitted it without changing the answer of the question that asks if it had been previously submitted.

The reason that I resubmitted this ACR is that by introducing flagged nets as a tool to be used when the East Side Setnetters are otherwise shut down due to low King returns, All East Side Setnetters have the opportunity to participate in the fishery when otherwise shut down.

Flagged nets can be fished by fishermen outside of the 600ft mark when the 600ft restriction is in place. Flagged nets can also be fished by All fishermen when the 600ft option is closed.

In the past recent years, the ESSN fishermen are the only group that is completely shut down during Low King runs and this has made restricting ESSN fishermen from harvesting Sockeye allocative to the other user groups which is against our state constitution.

By not pursuing other solutions other than a 600ft fishery, the other fishermen that fish beyond 600ft are being unjustly denied their opportunity to operate their operations. By denying these fishermen their opportunity to fish also, our fishery is being fractured. By only giving consideration and support to 600ft fishermen, we risk getting support from the fishermen outside of the 600ft when we need their support.

For fishermen that have never fished flagged nets or feel that flagged nets are unproductive, I have video of flagged net fishing that proves otherwise. True, not as many fish will be caught but I have personally caught thousands of pounds of sockeye in flagged nets over several periods when I have lost net ends.

To the BOF: There is no reason why this ACR should not be seriously considered because when fishing flagged nets, Kings are NOT caught.

Flagged nets do not fish with a bag where Kings can be entrapped and the mesh size is too small to gill them. I have NEVER caught a King in one of my flagged nets. This ACR also gives the Commissioner a tool to use when no other is available. It also keeps EVERYBODY fishing

that wants to.

Russell Clark

ACR 11 - Support

ACR 12 - Support

ACR 13 - Support

ACR 14 - Support

ACR 15 - Support

ACR 16 - Support

ACR 17 - Support

ACR 18 - Support

ACR 19 - Support

ACR 20 - Support

Board of Fisheries - Work Session Comment Form

Submitted Time: October 10, 2022 3:33 AM

First Name

Chris

Last Name

Every

Community of Residence

St, George, Utah

Write your comment here:

ACR 12

This ACR doesn't go far enough to solve the unfairness in the shared burden of conservation.

All user groups need to be restricted and closed together.

The ESSN group has given many tools to the department to give us an opportunity to share in the harvest of Cook Inlet salmon.

The final step before closure for ESSN fishery should be the 600' fishery. With a minimum of two day a week opportunity, With more days as the sockeye projection is projected to exceed it's upper end. (Yes, this means 3, 4, 5, opens a week) depending on sockeye surplus.

ACR 11

Kasilof River Special Harvest Area (KRSHA) needs to be eliminated from the management plan.

The six hundred foot fishery is to be fished abundantly according to board intent.

So if a situation occurs that the department feels the need to use the KRSHA they have not been fishing the setnet 600' enough.

ACR 12

Support With Amendments

ACR 11 - Oppose

Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 9:19 PM

First Name

Travis

Last Name

Every

Community of Residence

Kenai, Alaska

Write your comment here:

I am in full support of ACR 12. Since 2012 the ESSN have been bombarded with "paired" restrictions, shortened mesh depth, reduced nets per permit, reduced area, reduced time, continually increasing escapement goals, and total seasons of only 2 openers. All of this because of the falsehood that if the East Side Set Netters were restricted or closed, it would solve the issue of low abundance in regards to the Kenai River Late Run Chinook Salmon, it has not.

What the current management plan has done is exceed the highest recorded numbers of sockeye salmon escapement in both the Kenai and Kasilof rivers ever. The current management plan has and is economically crippling not only the oldest most traditional fishery in Cook Inlet but all of the central peninsula communities at an estimated impact of 60-80 million dollars in both 2020 and 2021, with 2022 being even worse because of the closure issued by ADFG under BOF guidance. There is absolutely no parity, or "sharing of the burden of conservation", when the ESSN, which is a sockeye targeted fishery, is closed and every other user group in Cook Inlet is not only allowed to continue fishing but are liberalized, increased openers for the drift fleet, increased bag limits for the guides, 24/7 dip netting, all targeting sockeye, all with a component of incidental chinook harvest, but the ESSN are the only user group totally closed down.

Management plans and goal are adjusted over time to sustain and/or improve future returns, not to annihilate fisheries, or user groups for no resource gain. Please support ACR12.

ACR 12 - Support

Board of Fisheries - Work Session Comment Form

Submitted Time: October 9, 2022 8:14 AM

First Name

John

Last Name

Evich

Community of Residence

Deming, WA

Write your comment here:

Dungeness Crab (2)
ACR 1. (I fully support)
Implement a pot limit for the North Peninsula commercial Dungeness Crab Fishery (5 AAC 32.425).

CITE THE REGULATION THAT WILL BE CHANGED IF THIS ACR IS HEARD.
5 AAC 32.425

WHAT IS THE PROBLEM YOU WOULD LIKE THE BOARD TO ADDRESS? STATE IN DETAIL THE NATURE OF THE CURRENT PROBLEM.

There is currently no pot limit for the North Peninsula Dungeness crab fishery Area J.

WHAT SOLUTION DO YOU PREFER?

I agree a 500 pot per boat cap is needed. I do not agree w/ a 10,000 max cap as I found that it would not stop at 20 boats at 500 ea, but divide the 10,000 amongst number of applicants. This will eventually turn the fishery into a small boat like Bristol Bay fleet and take out the opp. for say 58' fleet to make a living w/ something like 200-250 pot limits. I strongly oppose a 10,000 cap because of this.

STATE IN DETAIL HOW THIS ACR MEETS THE CRITERIA STATED ABOVE.

for a fishery conservation purpose or reason: I feel that the species is at risk of being over harvested, especially with the increase of participating vessels.

to correct an error in regulation:

to correct an effect on a fishery that was unforeseen when a regulation was adopted: For

example there are vessels in Kodiak with around 2,000 pots. With them facing pot limits, they along with others will FLOOD the north peninsula in 2023 and future seasons. Along with others.

WHAT WILL HAPPEN IF THIS PROBLEM IS NOT SOLVED PRIOR TO THE REGULAR CYCLE?

Possible over harvest of the Dungeness Crab species.

STATE WHY YOUR ACR IS NOT PREDOMINANTLY ALLOCATIVE.

Pot limit will be applied to all vessels, small/big.

IF THIS REQUEST IS ALLOCATIVE, STATE THE NEW INFORMATION THAT COMPELS THE BOARD TO CONSIDER AN ALLOCATIVE PROPOSAL OUTSIDE OF THE REGULAR CYCLE.

STATE YOUR INVOLVEMENT IN THE FISHERY THAT IS THE SUBJECT OF THIS ACR.

Commercial fisherman. Participated 2021 in this fishery. I participated previously on S.Penn dungenes and saw it crash this season.

ACR 1 - Support With Amendments

Board of Fisheries Chair Carlson-Van Dort and Board:

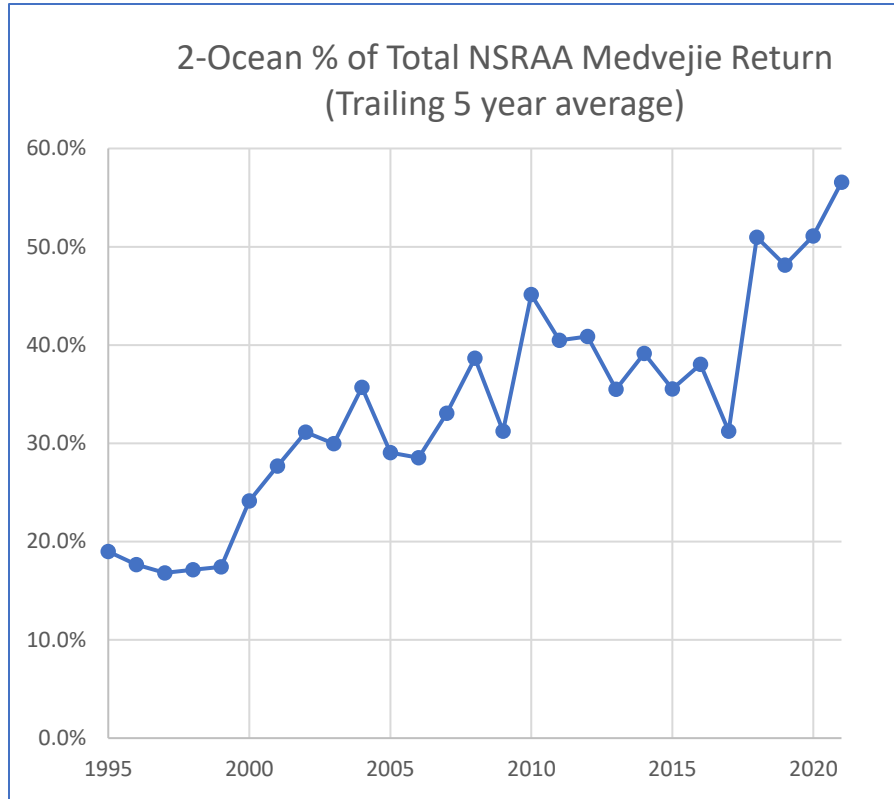
October 10, 2022

RE: ACR 3- change the 28" overall minimum length to 26-1/2" fork length in certain spring troll fisheries

My name is Tad Fujioka. I am a co-sponsor of this ACR and I have been an active participant in the Sitka area spring troll fisheries for ten seasons. To start off, this proposal offers two major benefits. Firstly, measuring to the fork of the tail of a Chinook rather than to the tips of the tail provides a more reliable measurement- one that does not depend upon how the fish is positioning its tail. A fish's overall length can vary by $\frac{3}{4}$ " or more depending upon whether the fish is pointing its tail, or flaring it. This is a measurement that we have to take quickly while the fish remains alive. In addition to making the measurement more consistent and accurate, there is a conservation benefit to replacing the overall length measurement with a fork-length. An immature king that is 28" overall has a fork-length of 26-1/2", but a mature king that is 26-1/2" to the fork of the tail is only about 27" overall. Hence this ACR will continue to require that the same immature kings be released to grow bigger, but will allow the harvest of more hatchery jacks. I will explain these and other benefits in more detail later should the BoF agree that this proposal is worthy of out-of-cycle consideration, but the rest of this letter will be concerned with the topic at hand- why this proposal meets the ACR criteria and addressing comments specifically raised by staff in RC2.

The 28" minimum overall length limit has been the standard in the spring troll fisheries since the Spring Season first began in the mid-late 1980s. At that time NSRAA king salmon were mostly older fish, returning after 3 or 4 years at sea. Only 15-20% of the adults returned after just two years as 2-ocean jacks. Kings that have spent 2 years in the ocean are typically 26"-31", so some of them are unnecessarily protected by the minimum size limit, whereas nearly all older Chinook are of legal size. As mentioned in the Staff Comments, in the 1980s and 1990s, relatively few of the 2-ocean (i.e. close-to-legal-length) kings would have been spawners, so it would have been rare that a sub-legal spawner would be caught. As Staff Comments indicate, in those days most of the sub-legal kings were immature fish that if released could be caught later when they were more valuable. So, at the time the 28" limit had little downside and served an important conservation function.

However, in recent years, more than half of the kings in NSRAA’s Medvejie return are 2-ocean fish and that proportion continues to rise. (See graph to right.) Some of these young fish are being inadvertently protected by the 28” minimum size limit. Trollers are required to release these jacks even though they are mature spawners and will not grow any bigger. This change in age-composition (which is occurring in many



runs from the Yukon to the Columbia) was not anticipated when the 28” minimum size was first implemented. Even at the time of the last call for SE proposals (early 2020), it was not clear that the 2-ocean fish would remain such a dominate portion of the Sitka-area hatchery return.

The prevalence of 2-ocean kings that are shorter than the current minimum length is a strong argument for a reduction in the legal minimum. However, as the staff comments make clear, a simple reduction of the overall minimum length without changing how the measurement is taken, would undesirably increase the harvest of smaller immature fish as well. What the staff comments fail to recognize is that *ACR 3 is a compromise that allows for the harvest of some additional hatchery jacks but continues to require the release of all of the same immature fish that are currently protected.* It does this by taking advantage of changes in the shape of the tail as a king salmon matures.

The immature king on the right has a deeply forked tail with pointed tips. The mature king salmon on the left has a “squarish” tail- the tips are less pointy and prominent fork is mostly filled in. Both of these fish are 28” from snout to tip of tail, but the immature fish on the right has a fork-length of 26-1/2” due to the deeply forked tail. It would remain just barely legal under the proposed minimum length of ACR 3. In contrast, the mature jack on the left has a fork length of 27-1/2”. Thus, it is an inch over the minimum length proposed by ACR 3. The relative scarcity of 27”-28” jack kings in the 1980’s meant that there was little incentive to consider an alternative to the overall length. However, the current prevalence of 2-ocean spawners is the reason that the board should consider and adopt this ACR.

The BoF should also be aware that the Sitka AC deliberated on this concept as an amendment to a different proposal prior to the last SE Finfish meeting. The AC had this to say about the 26-1/2” fork length idea:



By adopting a 26-1/2" fork length minimum in the Sitka area, the stock composition of immature fish remains unchanged as immature kings have deeply forked tails, so this measurement is equivalent to the existing 28" overall requirement for these fish. However, mature spawner kings have a nearly square tail, so a 26-1/2" fork length minimum size would allow the retention of more mature jacks.

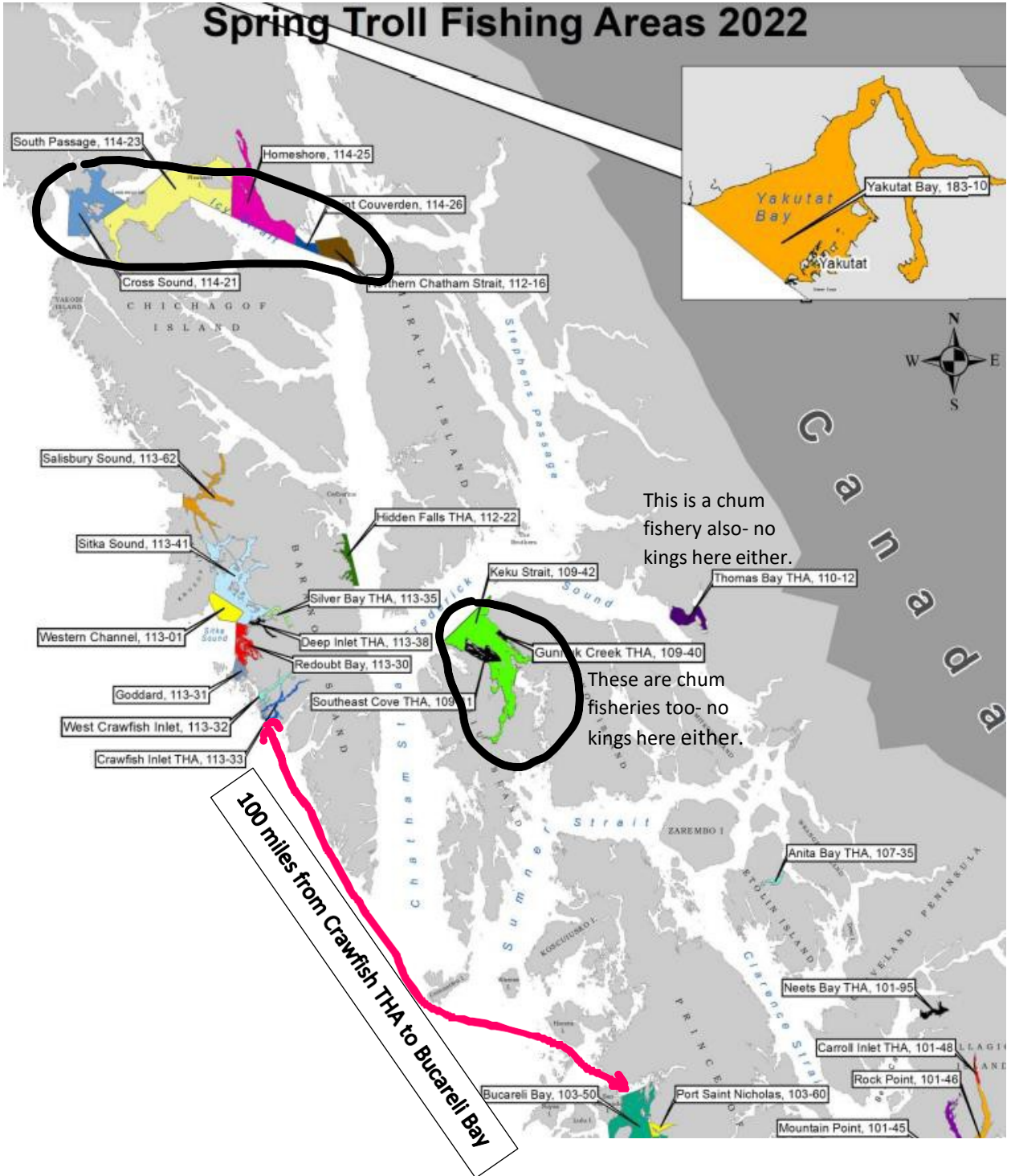
All of the spring fisheries in Sitka's district (113) are considerable distances from any wild Chinook systems, so virtually all of the mature fish that we catch are Alaska hatchery fish. Furthermore, in the exceedingly rare circumstance where a mature wild fish is caught, any mature fish that is under 28" overall will be a jack. Jacks are excess to reproductive needs and are not counted in spawning escapement, so even in the event that one wild jack was retained under this modification, it would have no effect on wild production or management decisions.

Having just addressed the unforeseen change in age-composition that warrants consideration of this ACR, I also want to specifically address a couple objections raised in Staff Comments:

- 1) *Why is this proposal limited to District 13 (Which has numerous districts and three THAs open to spring trolling) and District 12 (Hidden Falls THA is the only spring area open in district 12.) rather than regionwide?* One reason for limiting the proposal to the Sitka area is the philosophy that with out-of-cycle timing inherently limiting public input, ACRs generally should be conservative in nature. Should the BoF feel more comfortable by making this proposal apply to the entire region, (or by omitting Hidden Falls) I have no objections, but I don't feel that it is appropriate to criticize the ACR for being geographically conservative. Secondly, the Sitka AC's jurisdiction, and hence their support was limited to fisheries in the Sitka area. The AC is previously on-record supporting a 26-1/2" fork length measurement for spring troll fisheries in the Sitka area. Staff comments imply that there might be enforcement issues with the proposal since it limited to these areas, but the BoF should be aware that this is at most a theoretical concern. In practice under Stock of Concern management, the spring fisheries in Districts 12 and 13 are extremely isolated from any other spring king areas. The next nearest area where spring trolling for Chinook occurs is about 100 nautical miles away. Thus, it is impractical for a troller to fish Hidden Falls (The only area in District 12 that is open to spring king trolling) or the District 13 spring areas and fish any other spring king area without offloading in between. If enforcement felt that it was important to make this a requirement, I have no objection as it would in no way inconvenience the troll fleet. As staff comments indicate, there is already a provision in existing regulation to allow a smaller minimum size limit in THAs than in the immediately adjacent waters. If having different size limits in adjacent waters is permissible from an enforcement point of view, it is hard to see how a fishery 100 miles away with a different size limit could be a problem.

Spring Troll Fishing Areas 2022

These are chum fisheries- no king retention here.



This is a chum fishery also- no kings here either.

These are chum fisheries too- no kings here either.

100 miles from Crawfish THA to Bucarell Bay

- 2) *Could this proposal cause a reduction in the overall value of the troll catch?* No, the Staff comments indicate that the writer failed to understand that this proposal only affects mature kings, that thus the ACR does not allow any additional harvest of smaller-than-average immature Treaty Chinook. The Sitka AC on the other hand clearly understands that an immature king that measures under 28" from snout to tip of tail will also be less than 26-1/2" from snout to fork as shown in the previous picture and thus not be legal under either measurement. Furthermore, as the Sitka AC realizes, because there are no wild Chinook runs nearby, the only significant source of mature kings in the Sitka area are Alaska hatcheries (NSRAA specifically). Thus, the only result of ACR 3 would be to increase the troll catch of hatchery Chinook. These fish do not count against the treaty quota and hence they add to the value of the troll catch at no offsetting cost. This is the entire reason for the spring troll fisheries per

5 AAC 29.090(b) The Department shall manage the spring salmon troll fisheries to target Alaska hatchery-produced king salmon.

Continuing to require trollers to release Alaska hatchery kings that they have caught is entirely contrary to this objective.

- 3) *Could this proposal adversely affect SE wild Chinook runs?* No; firstly, there are no wild Chinook runs anywhere near Sitka. Secondly, as covered in the Sitka AC minutes mentioned above, even in the extremely rare instance where a mature wild king was caught, this proposal would only matter if the fish was <28" in overall length. (Since if it was larger, it would be retained under the current regulations too.) Spawning kings <28" are classified as "small" or "medium" kings (rather than "large" kings) and as such they are not considered in escapement counts or management decisions since they are surplus to spawning needs. While few if any wild kings would be affected, retaining one that was <28" overall would not have a biological or political downside.
- 4) *Is it a problem that king salmon size limits in the commercial fishery would not be the same as in the sport fishery?* No, actually king salmon size limits are unique in our SE fisheries. There are no other finfish species in SE that have the same size restrictions for both sport and commercial fisheries. The lingcod, halibut and steelhead size restrictions the sport regulations all differ from their respective restrictions in the commercial fisheries.

- 5) *How do I know that an immature king that is 28" overall has a 26-1/2" fork length measurement? Might the ACR lead to smaller immature kings being kept?* I have measured several immature 28" kings and in all cases, to as accurately as I can measure, the difference between the fork length and the overall length has been 1-1/2" as pictured. If 26-1/2" is not the true average equivalent length, it is conservative. An official ADF&G report (Fisheries Research Bulletin 89-02 by Keith Pahlke in 1989) uses a linear regression to calculate the conversion for ocean-caught Chinook:

Total Length (in mm) = $1.015 * \text{snout-fork length (in mm)} + 39.02\text{mm}$; (SE=12.53mm)

Converted to inches, this becomes:

Total Length (in inches) = $1.015 * \text{snout-fork length (in inches)} + 1.54 \text{ inches}$; (SE=0.49 inches)

Thus, per Pahlke's calculations a fork length of 26.1" (+/-0.49") is the equivalent to 28" overall for ocean-caught kings. The 26-1/2" measurements that I have observed are within the expected range of Pahlke's data and on the conservative side. It is appropriate to be conservative in an ACR, but if staff is more comfortable with the 26.1" figure, I could support that instead. At any rate, an ACR should not be criticized for being slightly conservative.

In conclusion, this ACR is justified by increased early maturity of NSRAA kings; has no effect on the harvest of immature kings, nor will it reduce local wild escapement counts or recruitment, but will allow trollers to keep more NSRAA kings.

Tad Fujioka FV Sakura

Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 9:12 PM

First Name

Lisa & Brian

Last Name

Gabriel

Community of Residence

Kenai, Alaska

Write your comment here:

We support ACR 12 to provide harvest opportunity for the Eastside Setnetters while in paired restrictions in the Late Run Kenai River King Salmon management plan.

ACR 12 - Support

Board of Fisheries - Work Session Comment Form

Submitted Time: October 10, 2022 6:07 PM

First Name

Gary

Last Name

Hollier

Community of Residence

Kenai, Ak

Write your comment here:

I am a lifelong resident of Kenai, Ak. I have fished the ESSN fishery for 51 years.

The current administration, of the State of Alaska, is on a fast track to eliminate this 100+ year old fishery.

If it is the intent of the Administration to put 400+ businesses out of business, it certainly is working.

Of the set net permit holders 80% are residents and 65+% live in the Kenai Peninsula Borough. Yes, large King Salmon are not meeting their OEG.

Is the OEG and SEG set to high? It is far higher than the 11,000 goal that was suggested by ADFG, I believe in 2017.

With not meeting an inflated OEG, excessive large sockeye escapements have been occurring in the Kenai and Kasilof Rivers. These escapements that are 2X-3X the upper end of BOF set goals. These continued back-to-back-to-back large escapements will most certainly lead to diminished returns.

The ESSN fishery is in dire straits. The ESSN fishery cannot make it on 2 days a season. There are tools that could be used to help this situation, when the LRKRKSMP is implemented.

Use of a 600 ft fishery, from MHT.

Fishing one 29 mesh net permit.

Foregoing the first week of the season in the Kenai Section, instead fish when sockeye are abundant on the beaches.

In 2022 the Kenai Section fished July 11 &14. The Large King harvest was nil, but so was the

sockeye harvest.

If the ESSN fishery could have fished July 18 & 21, there would have been really good sockeye catches and the King harvest would have been close to a wash for what was caught on July 11 & 14.

A two-day season, July 18 & 21, would have enabled most of the set net operations a chance to break even.

Give clear direction to ADF&G to implement this harvest strategy, while in the LRKRKSMF.

Fishing until the 33-50% quartile of the run, in conjunction with the LRKRKSMF.

ACR 20 fishing flagged nets, sounds illogical, yet it has merit. I purposely anchored my set nets, in 1995, and set them running with the current. I did this trying to harvest reds heading to the beach. On a calm day they were fishable, yet when it blew a 10-15+ SW wind, the wind blew the skiff down the gear. It was difficult to pick reds. The red catch was not near as productive as a typical set net, but the Large King Salmon harvest was ZERO! Fishing flagged nets is better than closure.

ADF&G needs clear direction how to prosecute a sockeye fishery based on abundance, while keeping large King Salmon harvest to a minimum.

It is criminal the Kasilof River Special Harvest Area has not been open, when the Kasilof River exceeds its 365,000 trigger.

I am in favor of any ACR's that would help with these situations.

ACR 12 - Support

ACR 20 - Support

Board of Fisheries - Work Session Comment Form

Submitted Time: October 6, 2022 10:40 AM

First Name

Kenneth

Last Name

Jones

Community of Residence

Cordova, AK

Write your comment here:

Esteemed board of fisheries members, I am writing comment today to urge the board to adopt my ACRs regarding PWS groundfish. Extending the blackcod season has been done the past few seasons by ADFG already during the pandemic, and this change would allow fisherman to plan on this longer season ahead of time and would benefit quality, marketing, and help to reduce bycatch mortality of blackcod in the currently "off season" fisheries, like directed halibut, allowing folks to buy one of these cards and fish their blackcod while harvesting their halibut.

The pcod changes are long overdue, transitioning more of this fishery to a cleaner gear type can reduce rockfish and halibut bycatch. These ACRs if adopted will allow vessels rigged for slinky pots to fish pcod effectively in PWS. That being said They do not need to be an "all or none" adoption approach, if the board feels more comfortable adopting some and not all, I would urge adoption of ACR 8 the most, as this will make longlined slinky pots a legal gear type for this fishery, and we can bring these others up in a few years at the next in cycle meeting. That being said, 60 pots is not enough to conduct a profitable fishery and the current pot allocation needs to be changed if we want meaningful bycatch reduction for this fishery. Most of the current participants of the hook and line fishery already have slinky pots and capabilities to haul them. I would also support alternate language to this ACR simply to combine the pot and hook longline allocations and keep the jig language separated as is. I believe Greg Gabriel is proposing this in his written comments.

Thank you for your consideration, unfortunately I will not be able to attend the work session in person, however if you move these ahead I would be happy to make whichever meeting agenda these proposals find their way onto to speak further about these topics in person.

- Kenneth B Jones

ACR 4 - Support

ACR 5 - Support

ACR 6 - Support

ACR 7 - Support

ACR 8 - Support

ACR 9 - Support

ACR 10 - Support

Oct. 10,20022

Dear BOF members and ADF&G and Boards Division Staff. I am commenting on why I believe 'ACR -3 meets the criteria and should be taken up out of cycle. Eric Jordan, co-sponsor ACR -3.

Salmon Troll Fishery (1)

Reduce legal length for king salmon in Districts 12 and 13 during the spring troll fishery (5 AAC 29.140).

1. CITE THE REGULATION THAT WILL BE CHANGED IF THIS ACR IS HEARD.

5 AAC 29.140 (a) Unless otherwise specified in this chapter, king salmon taken and retained must measure at least 28 inches from tip of snout to tip of tail (in its natural open position) or 23 inches from the midpoint of the clethral arch to the tip of the tail. Undersized king salmon that are taken must be returned to the water unharmed. A person may not mutilate or otherwise disfigure a king salmon in any manner that would prevent the determination of the minimum size restriction specified in this section.

In this comment, on why I believe our proposal meets your criteria for an agenda change request and should be taken up ASAP I will not reprint the whole proposal but will make a case for taking it up as an ACR this cycle.

As a former BOF member, albeit briefly, I understand as few others do the importance of limiting most proposals to the regular cycle as the workload of BOF members and staff is almost untenable even considering all the in-cycle proposals. Nevertheless Tad and I felt it was necessary to bring this forward ASAP after our personal observations and research revealed this "unforeseen" but correctable problem with our current regulation. If we could get this corrected for the coming, 2023, and 2024 spring seasons it is likely to enable trollers to keep many more of our increasing numbers of two ocean mature hatchery spawners in District 12 (Hidden Falls) and District 13 hatchery harvest areas. Thus meeting criteria 3.

But, since we proposed this new measurement and have been discussing it with ADF&G staff, hatchery staffs, and fishermen, and making our own measurements we have heard that ADF&G, hatchery staffs, and

discovered ourselves that the fork length measurement is way more consistent, quicker, and easier to administer. Thus, undoubtedly resulting in less mortality of king salmon, and lots less angst on the part of crew and fishermen over what is legal or not. On my boat, any king of measurable size within an inch over our 28.5" overall marks 'on rails and cleaning troughs must be double checked with me before killing or releasing. That adds to the handling time and resulting mortalities of 8-12 pound unhappy king salmon. So, I believe our proposal also meets the conservation purpose in criteria 1.

I think it is important to emphasize that this proposal is not "predominantly allocative" as asked in criteria 6. While it is likely that a few of the troll caught 2 ocean hatchery kings legal under this proposal might have ended up in net fisheries in Deep Inlet or Hidden Falls where the net fishermen can keep smaller kings it should be clear that this is a conservation and utilization proposal rather than "predominately" allocative. It is altogether possible that the resulting higher survival rate of those kings quickly measured and released with the more consistent fork length measurement will offset the increased troll catch anyway.

While not brought up as a criteria question it is always a concern of mine in making proposals to consider "enforceability". In conversations with staff this has been brought up. I see no problem because these hatchery harvests areas near Sitka in May and June are a long ways from other hatchery areas like the June Icy Straits chum fishery and any inside corridor areas which might be opened if wild king escapements improve on stocks of concern. Trollers are very familiar with separating kings depending on hatchery areas fished on the same trip. I and others commonly fish Deep Inlet the same day as the Sitka Sound and or Redoubt areas. We have different size limits and treaty rules for the Deep Inlet and Crawfish areas than we do for Sitka Sound and Redoubt for example. I have not heard any enforcement concerns over enforcement problems with those areas. Enforcement should be improved with this regulation because of the more consistent and easier fork length measurement proposed.

8) I am a lifelong SE commercial salmon troller who was taken trolling by my parents in March of 1950. I have been an advocate for conserving

salmon and salmon habitat since my father made me read "Return to the River" by Roderick Haig Brown about 1960. My first vote to conserve salmon was on a Juneau Fish & Game AC task force to protect Taku River king salmon circa 1974. I have served on the Sitka AC for over 40 years starting in 1976. I was on the AP to the NPFMC for 8 years starting about 1978. I have proposed banning treble hooks and going barbless in the troll fishery. I am still elected to the Sitka AC and the NSRAA Board. I am an avid subsistence and sport harvester.

In conclusion, while once word of this ACR got around I have heard from other trollers that it should be in effect region wide all season. Or for other SE hatchery areas. I think more research needs to be done before going region wide. In Sitka and the small area of Hidden Falls, I think we can use this change as a "test" to see how it works with minimal wild spawner or treaty fish impact. So, as much enthusiasm as it has generated, with little publicity, I recommend going with this ACR as proposed now and urging staff and hatchery staff to invest in research so we can expand this further in the regular cycle if it works out as expected.

Sincerely,

Eric Jordan
103 Gibson Place
Sitka, Ak 99835
907-738-2486

**2022 Board Members**

Bill Eckhardt, *Chair*
Retired President, AK USA FCU

Jim Brady, *Vice Chair*
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Ross Baxter Group, Jack White Realty

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Dick Erkeneff
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Alaska Airlines

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Juna Penney
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Mike Pawlowski
Partner, Strategy North Group

Mark Spencer
Registered Guide Outfitter/Dipnet Charter
Guide, AK Expeditions

KRSA Emeritus

Bob Penney
Founder and Chairman Emeritus

October 10, 2022

Alaska Department of Fish and Game
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

Re: Board of Fish Work Session October 25-26, 2022 –
Agenda Change Requests 11-20 (Upper Cook Inlet Salmon)

Dear Chair Carlson-Van Dort and Members of the Board:

KRSA strongly recommends that the Alaska Board of Fisheries reject all ten Agenda Change Requests (ACR's 11-20) each asking the Board to take up critical aspects of 5 AAC 21.359. Kenai River Late-Run King Salmon Management Plan. KRSA offers the following rationale for this recommendation:

KRSA strongly supports the Optimal Escapement Goal (OEG) for Kenai River Late-run king salmon as the management objective for all fisheries in the Upper Cook Inlet that harvest or otherwise result in mortality of this stock. The OEG range of 15,000 – 30,000 of king salmon longer than 75 cm in length is larger than the Sustainable Escapement Goal (SEG) of 13,500 – 27,000 fish and was adopted as a protective measure to sustain and rebuild this stock.

KRSA strongly supports the paired restrictions found in 5 AAC 21.359. These paired restrictions have been in effect for a decade and have proven to dramatically improve the probability of successfully achieving the escapement goal for Kenai River Late-run king salmon. These paired restrictions also balance the burden of conservation among the salmon fisheries of the Upper Subdistrict of Upper Cook Inlet. The current paired restrictions found in regulation are the cumulative effort of the Board of Fisheries, the public and the ADFG over four regular cycle meetings of the Board.

KRSA strongly supports the development of more selective gear for the set net fishery in the Upper Subdistrict. Gear that facilitates the selective harvest of sockeye salmon while minimizing mortality of king salmon is critical to any solution brought forward to optimize the benefits that can be accrued from the salmon fisheries of Upper Cook Inlet. As it stands today, shallower nets (29 mesh depth vs. 45 mesh depth) and restricting the set net fishery to fishing only within 600 feet of mean high tide appear to be the options with the most utility.

Regarding the Agenda Change Request Criteria, we have the following comments:

Conservation purpose-

The primary threat to conservation of a fishery resource in the context of the ten Agenda Change Requests before the BOF for the Upper Cook Inlet at this Work Session is the

threat to sustainability of Kenai River Late-run king salmon posed by continued failure to meet either the SEG or the OEG. None of the ACR's acknowledge this threat and in fact essentially ask that this threat be either ignored or minimized and for this reason alone the ten ACR's should be rejected.

Error in Regulation-

No error exists in 5 AAC 21.359. A careful review of the deliberations from the previous meetings of the BOF on this specific regulation back as far as the late 1980's makes it abundantly clear that what is now in regulation is what all previous Board's intended.

Unforeseen-

No successful case can be made that "unforeseen events" now result in the need to reject substantial elements of 5 AAC 21.359. A careful review of the deliberations from the previous meetings of the BOF on this specific regulation back as far as the late 1980's makes it abundantly clear that what is now in regulation is what all previous Board's intended.

Specific comments regarding ACR #11-20 are as followed:

ACR #11 – KRSA opposes ACR #11

ACR #11 seeks, among other things, to eliminate the paired restrictions found in 5 AAC 21.359.

ACR #12 – KRSA opposes ACR #12

ACR #12 seeks, among other things, to eliminate the OEG as the management objective for the set net fishery in the Upper Subdistrict. ACR #12 goes on to propose significantly restrictive and frankly punitive changes to the Kenai River Personal Use Fishery and to the sport fishery for coho salmon in the Kenai River during times when the sport fishery in the Kenai River and the set net fishery in the Upper Subdistrict are closed to protect king salmon.

ACR #13 – KRSA opposes ACR #13

ACR #13 seeks, among other things, to eliminate the paired restrictions found in 5 AAC 21.359.

ACR #14 – KRSA opposes ACR #14

ACR #14 seeks to eliminate the paired restrictions found in 5 AAC 21.359.

ACR #15 – KRSA opposes ACR #15

ACR #15 seeks to eliminate the OEG for Kenai River Late-run King Salmon as the management objective for both the sport fishery in the Kenai River and the set net fishery in the Upper Subdistrict. This proposal seeks to remove the burden of conservation from the set net fishery.

ACR #16 – KRSA opposes ACR #16

ACR #16 seeks to eliminate the Emergency Order authority found in 5 AAC 21.359 which empowers the ADFG to require more restrictive and selective gear in the set net fishery when the escapement goal for Kenai River Late-run King Salmon is projected not to be met. Development and implementation of gear for the commercial set net fishery that more selectively allows for the harvest of sockeye while minimizing harvest of king salmon is the key to the future of the set net fishery.

ACR #17 – KRSA opposes ACR #17

ACR #17 seeks to eliminate the provision in 5 AAC 21.359 that exempts commercial fishing periods limited under this section to fishing by the set net fishery in the Upper Subdistrict within 600 feet of the mean high tide mark from the hourly restrictions also found in this section. Development and implementation of gear for the commercial set net fishery that more selectively allows for the harvest of sockeye while minimizing harvest of king salmon is the key to the future of the set net fishery.

ACR #18 – KRSA opposes ACR #18

ACR #18 seeks an accommodation for those commercial set net fishermen in the Upper Subdistrict who fish nets shorter than the standard 35 fathoms. KRSA suggests that the BOF reject this ACR and encourage the author to submit a proposal seeking the same action for consideration during the regular BOF cycle.

ACR #19 – KRSA opposes ACR #19

ACR #19 seeks to increase fishing opportunity for the set net fishery in the Kasilof section of the Upper Subdistrict and in the Kasilof River Special Harvest Area by Commissioner authority. KRSA suggests that while a discussion around the use of the Special Harvest Area is appropriate, additional fishing effort in the Kasilof section when the management objective for Kenai River Late-run King Salmon is projected not to be met is strongly opposed due to the critical lack of knowledge regarding Kasilof River king salmon which can comprise a majority of the harvest from this area.

ACR #20 – KRSA opposes ACR #20

ACR #20 seeks to create a new gear designation (flagged nets) for the set net fishery in the Upper Subdistrict and by regulation, allow this gear to be used when the management objective for Kenai River Late-run King Salmon is projected not to be met. KRSA supports the development of more selective gear. KRSA suggests that if this gear configuration has the potential that the author claims, then the gear configuration should (since there is no prohibition now in regulation) be deployed by the fleet in an effort to “prevent” the management objective from being projected not to be met rather than be allowed only “after” the objective is projected not to be met.

KRSA appreciates the challenges seen on the Kenai over the past several years, where king salmon have failed to meet minimum escapement goals resulting in closure of opportunity across multiple user groups. KRSA strongly opposes any action taken by the Board or by ADFG that weakens protection for Kenai River Late-run king salmon.

We look forward to working with the Board, the ADFG, and the public in seeking reasonable conservation and harvest strategies in Upper Cook Inlet within the regular cycle.

Sincerely,

A handwritten signature in black ink that reads "Shannon Martin".

Shannon Martin
Executive Director

Dear BOF,

I submit the following comments to the Alaska Board of Fisheries (BOF) regarding the Agenda Change Requests to be considered at the Board's work session October 25-26, 2022, in Anchorage.

I strongly oppose any action taken by the BOF or by the Alaska Department of Fish and Game (ADFG) that weakens protection for Kenai River Late-run King Salmon.

I strongly support the Optimal Escapement Goal (OEG) for Kenai River Late-run king salmon as THE management objective for all fisheries in the Upper Cook Inlet that harvest or otherwise result in mortality this stock. The OEG range of 15,000 – 30,000 of king salmon longer than 75 cm in length is larger than the Sustainable Escapement Goal (SEG) of 13,500 – 27,000 fish and was adopted as a protective measure to sustain and rebuild this stock. Prior to 2008, the late run used to average about 50,000 large Chinook...Perhaps we should be aiming higher.

I strongly support the paired restrictions found in 5 AAC 21.359. These paired restrictions have been in effect for a decade and have proven to dramatically improve the possibility of achieving the escapement goal for Kenai River Late-run King Salmon and for balancing the burden of conservation among the salmon fisheries of the Upper Subdistrict of Upper Cook Inlet. The paired restrictions currently found in regulation are the cumulative effort of the BOF, the public and the ADFG over four regular cycle meetings of the Board.

I strongly support the development of more-selective gear for the set-net fishery in the Upper Subdistrict. Gear that facilitates the selective harvest of sockeye salmon while minimizing mortality of king salmon is a critical element of any solution brought forward to optimize the benefits that can be accrued from the salmon fisheries of Upper Cook Inlet. As it stands today shallower nets (29 mesh depth vs 45 mesh depth) and restricting the set-net fishery to fishing only withing 600 feet of mean high tide appear to be the options with the most utility. At some point in the future, the set-netters can completely eliminate king bycatch mortality will maximizing sockeye harvest and quality by employing fish traps instead of gillnets.

I strongly support that Kenai Late-run Kings be considered for the designation of a stock of Management Concern, and that any and all appropriate actions be taken to rebuild this run to historic levels.

Addressing the Agenda Change Request Criteria:

Conservation purpose: The primary threat to conservation of a fishery resource in the context of the ten Agenda Change Requests before the BOF for the Upper Cook Inlet at this Work Session is the threat to sustainability of Kenai River Late-run king salmon posed by continued failure to meet either the SEG or the OEG. None of the ACRs even acknowledge this

threat and in fact essentially ask that this threat be either ignored or minimized and for this reason alone should be rejected.

Error in regulation: Very simply stated, no error exists in 5 AAC 21.359. A careful review of the deliberations from the previous meetings of the BOF on this specific regulation back as far as the late 1980s makes it abundantly clear that what is now in regulation is what all previous Boards intended.

Unforeseen: Very simply stated, no successful case can be made that unforeseen events now result in the need to reject substantial elements of 5 AAC 21.359. A careful review of the deliberations from the previous meetings of the BOF on this specific regulation back as far as the late 1980s makes it abundantly clear that what is now in regulation is what all previous Boards intended.

Specific comments:

ACR #11 – I oppose ACR #11. ACR #11 seeks, among other things, to eliminate the paired restrictions found in 5 AAC 21.359. The burden of conservation of Kenai Late-run Chinook must be shared.

ACR #12 – I oppose ACR #12. ACR #12 seeks, among other things, to eliminate the OEG as the management objective for the set net fishery in the Upper Subdistrict. ACR #12 goes on to propose significantly restrictive and frankly punitive changes to the Kenai River Personal Use Fishery and to the sport fishery for coho salmon in the Kenai River during times when the sport fishery in the Kenai River and the set-net fishery in the Upper Subdistrict are closed to protect king salmon.

ACR #13 – I oppose ACR #13. ACR #13 seeks, among other things, to eliminate the paired restrictions found in 5 AAC 21.359.

ACR #14 – I oppose ACR #14. ACR #14 seeks to eliminate the paired restrictions found in 5 AAC 21.359. The paired restrictions are an effective tool to help achieve the Chinook OEG, and the burden of conservation should be shared.

ACR #15 – I oppose ACR #15. ACR #15 seeks to eliminate the OEG for Kenai River Late-run King Salmon as the management objective for both the sport fishery in the Kenai River and the set-net fishery in the Upper Subdistrict. This proposal seeks to remove the shared burden of conservation from the set-net fishery.

ACR #16 – I oppose ACR #16. ACR #16 seeks to eliminate the Emergency Order authority found in 5 AAC 21.359 which empowers the ADFG to require more restrictive and selective gear in the set-net fishery when the escapement goal for Kenai River Late-run King Salmon is projected not to be met. Development and implementation of gear for the commercial set-net fishery that more selectively allows for the harvest of sockeye while minimizing harvest of king salmon is the key to the future of the set-net fishery.

ACR #17 – I oppose ACR #17. ACR #17 seeks to eliminate the provision in 5 AAC 21.359 that exempts commercial fishing periods limited under this section to fishing by the set-net fishery in

the Upper Subdistrict within 600 feet of the mean high tide mark from the hourly restrictions also found in this section. Development and implementation of gear for the commercial set-net fishery that more selectively allows for the harvest of sockeye while minimizing harvest of king salmon is the key to the future of the set-net fishery.

ACR #18 – I oppose ACR #18. ACR #18 seeks an accommodation for those commercial set-net fishermen in the Upper Subdistrict who fish nets shorter than the standard 35 fathoms. I suggest that the BOF reject this ACR and encourage the author to submit a proposal seeking the same action for consideration during the regular BOF cycle.

ACR #19 – I oppose ACR #19. ACR #19 seeks to increase fishing opportunity for the set-net fishery in the Kasilof section of the Upper Subdistrict and in the Kasilof River Special Harvest Area by Commissioner authority. I suggest that while a discussion around the use of the Special Harvest Area is appropriate, additional fishing effort in the Kasilof section when the management objective for Kenai River Late-run King Salmon is projected not to be met is strongly opposed due to the critical lack of knowledge regarding Kasilof River king salmon which can comprise a majority of the harvest from this area.

ACR #20 – I oppose ACR #20. ACR #20 seeks to create a new gear designation (flagged nets) for the set-net fishery in the Upper Subdistrict and by regulation, allow this gear to be used when the management objective for Kenai River Late-run King Salmon is projected not to be met. While I support the development of more and better selective gear, I suggest that if this gear configuration has the potential that the author claims, then the gear configuration should, since there is no prohibition now in regulation, be deployed by the fleet forthwith, replacing traditional set gillnets, in an effort to prevent the management objective from being projected not to be met, rather than be allowed only after the objective is projected not to be met.

Thank you for your consideration.

George Krumm
(907) 529-6172

To: Alaska Board of Fisheries
From: Cody Larson – Bristol Bay Native Association
Date: October 11, 2022
Subject: Special Committee on review of Rod and Reel Gear

Chair Carlson-Van Dort and Board Members,

I write to request your consideration of regenerating a proposal on allowable subsistence gear, which had no action taken during the last cycle.

In 2018, at the Bristol Bay BOF Finfish meeting, Proposal 21 was introduced to allow the use of rod in reel for subsistence harvests in a section of waters downstream of Sixmile Lake.

At that meeting, the ADF&G recommended forming a committee to further investigate this proposal. The Board created a special committee tasked with issuing a finding and possibly recommend a proposal, as outlined in:

[2018-292-FB](#): Alaska Board of Fisheries Charge Statement For A Review Of Rod And Reel Gear

By the 2019 fall work session, the special committee nor ADF&G had met, and it was recommended to dissolve the committee. At that time, board members highlighted the intent to review future proposals of this nature on a case by case basis. This discussion is at [10:38 AM in the minutes](#) of the Oct. 24, 2019 meeting.

The proponent has not withdrawn their proposal, and the Board has taken no action on the proposal directly, or through special committee, since it was submitted in April of 2018.

The proponent received no feedback from the board or department navigating the next step of this process.

I request that the current Board consider re-submitting this proposal at this work session for inclusion in the upcoming Bristol Bay Finfish meeting. This will allow opportunity for public input, and for the proponent (Nondalton Tribal Council) to have their proposal be fully considered through the normal board process.

By regenerating this proposal, there will be very little, if any, additional costs to the ADF&G, AWT, or OSM staff, as they have already reviewed and submitted their comments during the 2018 Bristol Bay Finfish meeting.

If the Board were to consider alternatives, they may benefit in reviewing the unanimous support by the Lake Iliamna Advisory Committee to amend the geographic area of the proposal to:

Strike words "Six Mile Lake", add "Little Six Mile Lake" to park boundary on all state owned waters.

I'm available to address any questions Board Members may have before or at the October work session.

Thank you for your public service, and consideration on the matter,

Cody Larson

Subsistence Fisheries Scientist
Natural Resources Department
Bristol Bay Native Association
907-842-5257

Board of Fisheries - Work Session Comment Form

Submitted Time: October 10, 2022 12:19 PM

First Name

Ryelan

Last Name

Long

Community of Residence

wasilla, alaska

Write your comment here:

Speaking in opposition to proposal 5 and 6

Board of Fish members,

My name is Ryelan Long, 38yo. I am part owner full time operator of the fishing vessel Ocean Bay. Home ported in Kodiak Alaska. I've spent 20 years harvesting p.cod on 58 foot vessels. This has enabled me to work my way up from deckhand to skipper to owner/operator.

The importance of the area O state cod fishery to my operation and many other Alaskan owned fishing boats from almost all the major fishing ports in this great state can not be understated. To many the area O state cod fishery is the most valuable season of the year.

It is crucial that area O state cod quota remain on track as previously decided by the BOF in 2018. Not capped and manipulated by multimillion dollar out of state companies. AKA CDQ groups. This is clearly an attempt to transfer p.cod quota from state ran small boat fisheries to larger out of state interest.

I strongly urge the BOF to continue its duty to protect state of Alaska fisheries for the benefit of Alaskan owned working class fishing families.

As for prop 5, that's a can or worms that needs to remain closed.

ACR 5 - Oppose

ACR 6 - Oppose

Chignik Regional Aquaculture Association

2731 Meridian Street, Ste. B
Bellingham, WA 98225



October 10, 2022

Chignik Regional Aquaculture Association (CRAA) represents the interests of the salmon stakeholders of the Chignik area. CRAA's Board of Directors has designated seats for Commercial, Sport, Subsistence, Native Corporations and local government representatives.

CRAA is deeply concerned about ADF&G's proposed change that would merge the two separate and genetically distinct sockeye salmon stocks escapement goals for the Chignik River into a single watershed-scale biological escapement goal (BEG) as announced in the Areas L and M Escapement Goal Memo and seeks additional information to better understand the scientific justification for the proposed change. Although the memo states that "The team found revising the two separate Chignik River sockeye salmon escapement goals to a single BEG of 450,000 to 800,00 fish was appropriate," the vague scientific justification provided to explain why that proposed decision is appropriate is inadequate to justify a proposed change of this magnitude.

Despite habitat changes in the Chignik watershed, Chignik continues to produce two ecologically and evolutionarily distinct sockeye salmon runs that overlap in time and area which complicates management. The proposed change would certainly simplify management, but a central tenet of informed fishery management is to set fishery objectives at the appropriate spatial and biological scales. When there is evidence of distinct stock-structure within a watershed, the long-standing precedent is to manage for that structure with distinct goals. The proposed change to a single BEG of 450,000 to 800,00 ignores this precedent and is contrary to fishery management best practices. CRAA disagrees with the apparent logic of the memo suggesting that mere overlap in juvenile rearing habitat is sufficient justification for a single BEG.

CRAA is also concerned that ADF&G is not required to make available for public review technical documents attempting to support ADF&G's decision to go to a single BEG until February 3, 2023, the last day of the comment period before the Board of Fisheries' Alaska Peninsula-Aleutian Islands-Chignik finfish meeting on February 20-25, 2023. The magnitude of ADF&G's proposed change makes that an insufficient amount of time for affected stakeholders to review and comprehend a complex analytical document. This will impede stakeholder support and further erode stakeholders' trust in ADF&G's management system.

The proposed change raises multiple pressing questions that must be answered before the proposed change is put into effect, such as: What are the consequences of this change for the fishery management plan? How will this change protect or potentially fail to protect stock diversity in the watershed? What are the consequences of this change for productivity compared to the status quo option or other scenarios? What is the ultimate scientific justification for this major change? Are there other systems that are comparable to Chignik with obvious stock

structure, excellent data quality, and the ability to direct harvest to specific stocks that have only a single management goal?

CRAA has good reason to believe that the public response to this proposed change will be overwhelmingly negative and will remain so unless ADF&G provides opportunities for meaningful discussion and dialogue about the potential consequences of going to a single BEG. CRAA's members have an interest in seeing the best science used to justify appropriate escapement goals, and strongly recommends that the proposed change to a single BEG be delayed, that ADF&G's technical document be made available well in advance of February 3, 2023, and that the technical document's scientific justification for the proposed change be subject to independent outside review.

Thank you for your consideration.

A handwritten signature in blue ink that reads "Charles McCallum". The signature is written in a cursive, flowing style.

Charles "Chuck" McCallum

Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 9:02 PM

First Name

Mike

Last Name

Rutzer

Community of Residence

Westport, WA

Write your comment here:

Mike Rutzer F/V St. Zita formerly Echo Belle 40 years dungeness crabbing history.

ACR 1: I strongly agree for conservation, study, etc. that a 500 pot limit is needed in the N. Penn Dungeness crab fishery.

I strongly support ACR 1's 500 pot limit but do not support a cap on total pots if the vessel limit is not limited but would be pot limit divided by registered boats.

I've been crabbing dungeness for 40 yrs. I have 2021 & 2022 in N. Penn. seasons in the books at this point. I see a 10,000 pot max cap destroying the 58+ fleet's opp. to make a profitable/sustainable fishery for many locals, etc. I also worry about the overharvest of the resource. What will happen is that the small boat fleet, especially the Bristol Bay fleet, taking over the fishery. A 32' vessel can survive off of 250 pots while a common fishing vessel of the area such as a 58' can not. There are multiple boats from Kodiak alone w/ around and above 2,000 pots each that obviously would leave their area w/ the new 700 (500 other areas) and head to the last frontier of unlimited pots next yr. This influx of boats will overharvest in my opinion. I am NOT seeing the small (recruits) or soft that I saw previous year which concerns me of the future of the fishery & especially if a limit is not put in place.

I do support a GHLL set in the 1,000,000 lb range that could be adjusted in season by ADFG pending catch rate and actual in season reports. I volunteer to work with ADFG on sharing live catch rates/data, etc. of what I/we are seeing in order to limit the GHLL or do a abundance increase in season based on catch rates, etc.

I witnessed the Yakutat area D fishery crash and do not want to see that happen here again. We've seen the King and Opie fishery in chaos, this is our chance to try and keep that happening before it's too late.

Thank you for your consideration,
Mike

ACR 1 - Support With Amendments

~~Written~~ Comment For The Board's October 25-26, 2022 work session

To: Alaska Board of Fisheries

October 6, 2022

RE: Non Salmon spawn river fishing gear restrictions

Honorable Board members,

Thank you for the opportunity to address the Board albeit through a letter since public testimony will not be heard during the work session.

First of all, I am a 63 YOA Yupik Eskimo, a life long resident of Scammon Bay which sits along the north face of the Askinuk Mountains and at the bank of the Kun River, a lifelong subsistence fisherman for salmon of the Black River to the north and the Kun River for all the species of the white fish all which require different mesh sizes during certain times of the short summer.

Although I appreciate the Department allowing me to set net for none salmon species during the summer, the timing for the types of white fish we want to target (Broadhead and Chee) during the early part of the summer do not (excuse the pun) mesh very well. With the allowed 4" gear, we are only able to net the arctic Cisco and the Humpback white fish which in the spring and early summer are just heading up to the lakes and sloughs to "fatten up" during the summer. My parents would not harvest those species because they are very skinny and have no fat content in them. During one of the Tuesday call ins with YRDFA with people from up and down the the Yukon River and along the coast, I brought up that scenario and a caller from Tanana voiced the same sentiment on how skinny the humpbacks as they make their way up the rivers and that even they don't harvest them in the spring.

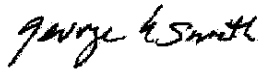
On the other hand, the Broadhead and Chee fish are swimming into the Kun River and have a very high fat content but we are not able to harvest them due to the mesh size restriction of 4" mesh. Ideally, we use up to 5 1/2" mesh for the broadhead and chee fish.

I am equally concerned about the dismal king and chum salmon returns on the Yukon River and carry my share for the conservation and abide by current restrictive gear requirements. Me and my brother in law also reports how fishing is in Scammon Bay to the Emmonak Fish and Game office so that they may have a clearer picture of run size and timing of the fish in our area.

The Department has already set a precedent on the Kuskokwim River to allow up to 7 1/2" mesh size 100' from the confluence (Kuskokwim River) in the Tuntutuliak and Johnson River and a couple other "non salmon spawn tributaries." The Kun River is not even a tributary of the Yukon River. All the tributaries up the river end in lakes to the north and become dead ends to the east just like the Johnson and Tuntutuliak Rivers in my examples of precedents. The department already allows it on the Kuskokwim tributaries and I don't see why it shouldn't be allowed in a non tributary of the Yukon in a non salmon spawn river.

Thank you for your time and the consideration to the unintentional negative impact and additional hardship caused to us of our desire to harvest white fish in the Kun River. Like you and everyone else in our region but we would like to harvest white fish in our river with the appropriate gear of up to 5 ½" nets.

Sincerely,



George Smith

Ghsmith99662@gmail.com

(907) 558-6001

To: The Alaska Board of Fisheries
 From: Fairbanks Fish & Game Advisory Committee (FAC)
 Date: October 10, 2022
 Re: Alaska Board of Fisheries Work Session, October 25-26, 2022
 Hatchery Committee Scheduling, Public Comments

The Fairbanks Fish and Game Advisory Committee (FAC) respectfully requests that the Alaska Board of Fisheries schedules a one-day Hatchery Committee meeting in March 2023.

The Alaska Board of Fisheries Hatchery Subcommittee was first organized in 1999 under AS16.10.440(b) but did not meet after 2002, leaving a period of over 16 years without Board of Fisheries oversight on the State managed hatchery program. In March of 2018, the BOF re-established the hatchery committee as a committee of the whole with the intent of holding an annual non-regulatory reporting meeting. Subsequent hatchery meetings were held in 2019 and 2020 and 2022. (2021 was canceled as a precaution during peak Covid time.) However, there is no Hatchery Committee meeting currently scheduled in 2023.

The Alaska Board of Fisheries Hatchery Committee is the *only* vehicle for annual discussion of hatchery issues. If hatchery issues are only discussed within regional cycles, there will no opportunity for annual updates on research or issues that involve multiple regions. Because hatcheries play such an enormous role in fisheries economics and biology, it is critical for the Board of Fisheries to provide an annual venue that can report on or discuss, among other things:

1. Public participation in the form of questions and comments, managed by specific criteria to allow for fair and balanced consideration with full record and archives of meetings for public access
2. Reporting on annual and cumulative hatchery harvests, going back to 1974
3. *Compilation of broodstock/ egg production by year per individual hatchery* and compared to each hatchery's annual management plan for broodstock production, including a record of requests for permit alterations
4. Percentage of hatchery return that goes to cost recovery by year and by species per individual hatchery and explanation of how each hatchery harvests cost recovery
5. Detail within each RAA (regional aquaculture association) percentages of subsistence, personal use and sports exploitation, and percentage and numbers of fish within each RAA of commercial common property harvest by gear type.
6. Hatchery practices in relation to the Alaska Sustainable Salmon Policy 5AAC 39.222
7. Progress details on straying studies and other on-going research
8. Consideration of an independent Scientific Review Committee to assess all issues related to potential hatchery impacts on wild stock, and to report, on an annual basis, their recommendations and literature search findings

While many of these findings might be available through management and research reports, the general public does not have the wherewithal to access, analyze and assess these findings. This would also provide significant information to the Board.

Thank you for your consideration,

Gale K. Vick
 Chair, Fisheries Sub-Committee, Fairbanks Advisory Committee (FAC)



KUSKOKWIM RIVER

INTER-TRIBAL FISH COMMISSION

OUR RIVER, OUR PEOPLE, OUR FISH

P.O. Box 190 Bethel, AK 99559-0190 | (907) 545-7388 | info@kritfc.org | kuskosalmon.org

October 11, 2022

Members of the Alaska Board of Fisheries
Alaska Department of Fish and Game
Boards Support Section
P.O. Box 115526
Juneau, AK 99811-5526

Subject: KRITFC Comment on AYK Stock of Concern Memo

Sent via email to dfg.bof.comments@alaska.gov on October 11, 2022.

Dear Alaska Board of Fisheries Members:

The Kuskokwim River Inter-Tribal Fish Commission (KRITFC) appreciates the opportunity to provide comment on the Alaska Department of Fish and Game's (ADF&G) Arctic-Yukon-Kuskokwim (AYK) Salmon Stock of Concern memo, released on October 7, 2022. KRITFC is a PL 93-638 inter-Tribal agency representing the 33 Federally recognized Tribes of the Kuskokwim River watershed in fisheries management, research, and monitoring. KRITFC works to protect and sustain our Kuskokwim salmon fisheries and traditional ways of life using both Indigenous Knowledge and the best available Western science.

Since 2015, KRITFC has brought a precautionary approach to the fisheries management table to ensure that our descendants can rely on an abundance of fish for their families. We are committed to keeping our fishing traditions alive for generations to come. In 2020, KRITFC created its first Chinook Salmon Management Strategy out of our precautionary management approach. In 2021, the U.S. Fish and Wildlife Service (USFWS) at the Yukon Delta National Wildlife Refuge (YDNWR) joined KRITFC in expanding and implementing a Joint Kuskokwim River Salmon Management Strategy regarding Federal subsistence management of Kuskokwim River salmon. Please find attached the 2022 Joint KRITFC and USFWS Kuskokwim River Salmon Management Strategy (Appendix 1). Please also find attached KRITFC's 2022 Situation Report (Appendix 2).

Pursuant to Alaska Board of Fisheries Policy on Government-to-Government Relations with the Federally Recognized Tribes of Alaska (BOF Policy 2002-216-FB), KRITFC, on behalf of the 33 Federally recognized Tribes of the Kuskokwim River, submits this request for formal

TELIDA | NIKOLAI | TAKOTNA | MCGRATH | LIME VILLAGE | STONY RIVER | SLEETMUTE | RED DEVIL
GEORGETOWN | CROOKED CREEK | NAPAIMUTE | CHUATHBALUK | ANIAK | UPPER KALSKAG | LOWER KALSKAG | TULUKSAK
AKIAK | AKIACHAK | KWETHLUK | BETHEL | OSCARVILLE | NAPASKIAK | NAPAKIAK | KASIGLUK | ATMAUTLUAK
NUNAPITCHUK | TUNTUTULIAK | EEK | QUINHAGAK | ~~88~~ONGIGANAK | KWIGILLINGOK | KIPNUK | CHEFORNAK

consultation regarding the status of Kuskokwim River salmon populations with particular emphasis on discussing the Kuskokwim River Salmon Management Plan (5 AAC 07.365) and its consistency, or lack thereof, with the Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222).

Of particular concern to KRITFC and its Member Tribes is the continuing lack of a stock of concern designation for Kuskokwim River Chinook salmon. Seen most recently in the 2022 AYK Stock of Concern memo. ADF&G lacks any responsive action plan to rebuild this population, despite a chronic inability to maintain expected yields above a stock's escapement needs, even with the use of specific management measures.

The drainage-wide Kuskokwim River Chinook salmon escapement goal has been achieved each year since KRITFC and USFWS began cooperatively managing the Chinook salmon fishery only because of subsistence and other users have sacrificed their yield. In 2022, for example, Kuskokwim River residents harvested only about one-third of their long-term Chinook salmon harvest needs. Amounts Necessary for Subsistence uses of Kuskokwim River Chinook salmon (67,200 – 109,800 king salmon; 5 AAC 01.286(b)(1)) have not been achieved in 12 years. Directed in-river commercial fishing for king salmon has not occurred in decades, and in recent years sportfishing for king salmon has been closed by emergency orders. Historic yields of Kuskokwim River Chinook salmon have not been and are not being achieved for any user group, which indicates that at a minimum the ADF&G should have recommended establishment of a Stock of Yield Concern designation for Kuskokwim River Chinook salmon pursuant to 5 AAC 39.222(f)(42).

KRITFC and its Member Tribes remain committed to rebuilding all Kuskokwim River salmon stocks and we seek engagement by the Alaska Board of Fisheries and the ADF&G to accomplish these goals in partnership.

Sincerely,



Kevin Whitworth
Executive Director, KRITFC

DRAFT

2022 KUSKOKWIM RIVER SALMON MANAGEMENT AND HARVEST STRATEGY



Draft of June 28, 2022

PURPOSE: This 2022 Kuskokwim River Salmon Management and Harvest Strategy (Strategy) is intended to provide guidelines for a conservation and cooperative management framework for the Kuskokwim River Inter-Tribal Fish Commission (Commission) and the U.S. Fish and Wildlife Service (USFWS) at the Yukon Delta National Wildlife Refuge (Refuge). As partners the Commission and the Refuge are committed to collaboratively utilizing this Strategy in the 2022 salmon season, and to further develop this Strategy into a longer-term salmon management plan as per the Memorandum of Understanding (MOU) signed by both entities in 2016.

Guiding Principles & Objectives

- **Avoid collective overharvest of salmon and rebuild Chinook and chum salmon populations** within the Kuskokwim River watershed through application of a precautionary approach to harvest management.
 - Prioritize meeting drainage-wide and tributary escapement targets over other objectives during the near-term Chinook salmon recovery and rebuilding phase. (Note that few escapement targets and no biological escapement goals currently exist for chum salmon in the drainage.)

- Take a conservation-based approach to management by considering sources of uncertainty and external risk factors which are out of direct management control, including the cumulative effects of multiple risk factors.
- Implement Chinook and chum salmon conservation and management actions based on a mixed stock/multi-stock management approach, that addresses the inherent differences in productivity among various stocks.
- Due to very high uncertainty associated with recent prior-year forecasts, prioritize in-season indicators of run strength, and run timing over the pre-season forecast.
- Take a holistic view of all pertinent sources of in-season information, including measures of abundance, run timing, and species composition provided by agencies as well as harvesters.
- **Sustainably manage other currently healthy salmon species within the Kuskokwim River watershed to avoid collective overharvest.**
- **Uphold fish conservation/diversity mandates within the Alaska National Interest Lands Conservation Act (ANILCA) and within YDNWR which enable legislation and management plans.**
- **Work to support and strengthen the relationship between the Commission and the Refuge established under the MOU.**
- **Integrate meaningful local and Indigenous Knowledge** into the fisheries management decision-making process.
 - Actively consider and utilize local and Indigenous Knowledge to help inform in-season fisheries management decisions.
 - Strive to consider local observations in the same context as standardized fishery abundance indices and statistical tools.
- **Strive to provide for continued customary and traditional subsistence harvest.**
 - Provide as much customary and traditional subsistence harvest of currently healthy salmon stocks by rural residents as possible, informed by sustainable salmon management practices that clearly address the mixed-stock challenge of these fisheries.
 - During the Chinook and chum salmon rebuilding phase, strive to provide maximum opportunity for customary and traditional harvest of salmon for Federally qualified subsistence users without jeopardizing drainage-wide and tributary escapements of Chinook and chum salmon essential for future salmon returns.
 - Provide equity of harvest opportunity across the entire watershed.

Salmon Declines and Unmet Subsistence Needs

Chinook Salmon Concern:

Except for one of the past 11 years (2019), the Kuskokwim River Chinook salmon run continues to experience low abundance and productivity (Figure 1).

Due to this prolonged decline and low productivity, Kuskokwim River Chinook salmon runs have not been abundant enough to meet defined subsistence needs since 2010 (Figure 2). Based on the 2021 season harvest and abundance information used in the Kuskokwim River Chinook salmon run reconstruction model, the preliminary 2021 estimate of total run for Kuskokwim River Chinook salmon is **129,005** (95% CI: 93,700–177,600) fish, with an estimated escapement of **101,203** (95% CI: 65,900–149,800) fish (Smith 2021). Note: Because Kwethluk weir project and aerial surveys were not operated in 2021 season, the 2021 estimate of escapement is highly uncertain.

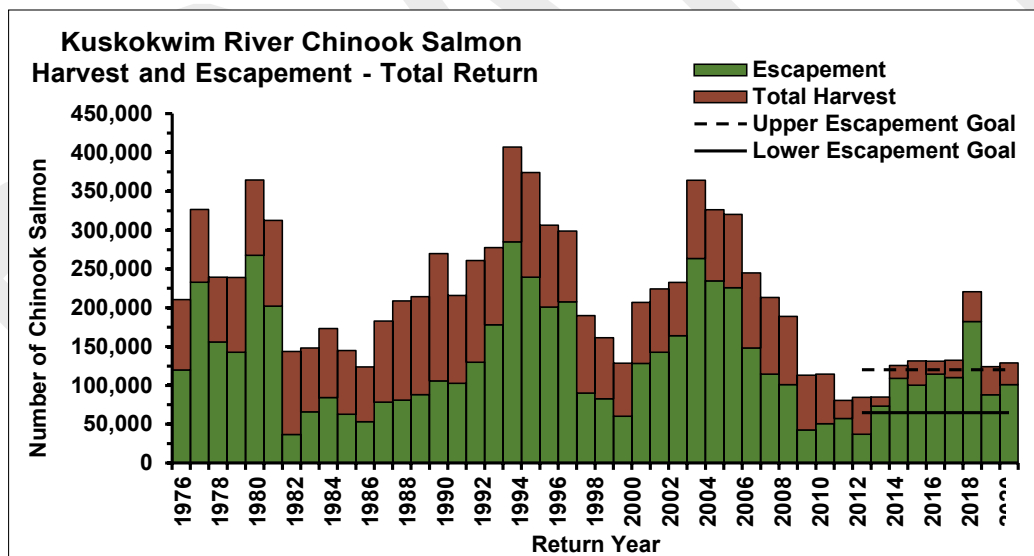


Figure 1: Kuskokwim River Chinook salmon escapement and total harvest by all user groups during 1976–2020. *Source: Kuskokwim River Salmon Management Group November 10, 2021, meeting packet, Alaska Department of Fish & Game.*

Subsistence needs here are based on analysis of the long-term average harvests in the watershed, which are also reflected in an amount necessary for subsistence¹ (ANS) determination by the Alaska Board of Fish (BOF) in 2001 and updated in 2013.

¹In the absence of a formal Federal metric used by the Federal Subsistence Management Program to evaluate whether subsistence needs are being adequately provided, we reference the only available subsistence metric for Kuskokwim River salmon stocks, which is found in Alaska BOF regulations (5 AAC 01.286(b)). The Alaska BOF established the current ANS uses of Kuskokwim River salmon in 2013, *Draft of June 28, 2022*

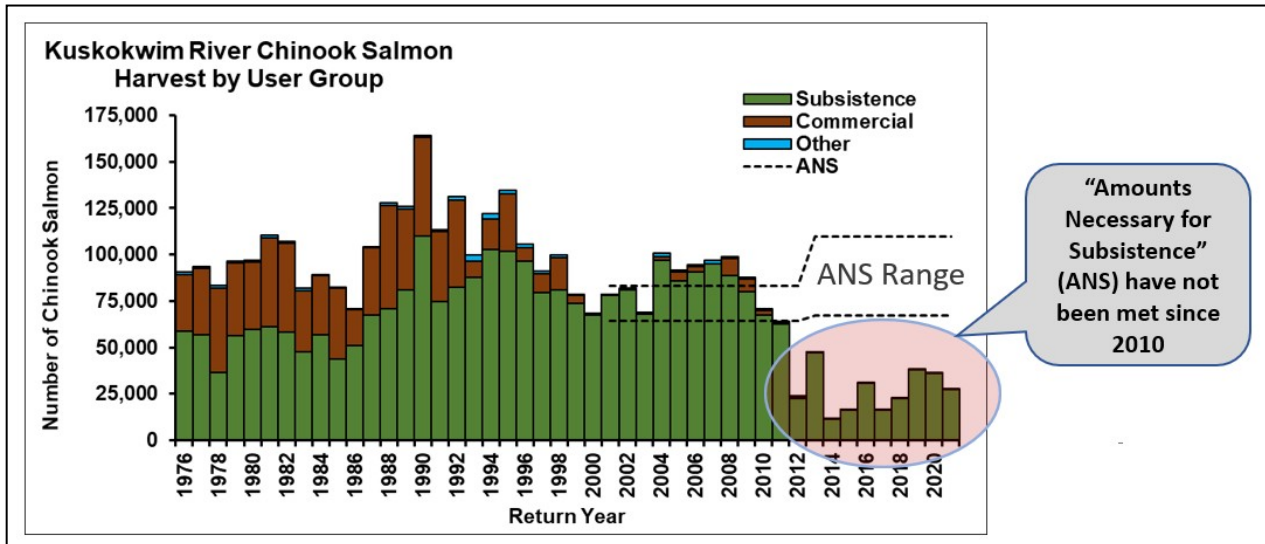


Figure 2. Kuskokwim River Chinook salmon harvest by user groups during 1976—2020, showing that long-term subsistence harvest needs in the watershed have not been met since 2010. (Subsistence harvest needs are based on Amounts Necessary for Subsistence as determined by the Board of Fish). *Source: Kuskokwim River Salmon Management Working Group November 10, 2021, meeting packet, ADF&G and Smith 2021.*

In addition to this decline in abundance and adult productivity, a recent and significant decline in the freshwater productivity of Kwethluk River salmon (surviving out-migrating juveniles produced per returning adult) of about 50% each year from 2015 to 2018 has been [documented by USFWS biologists](#). The Kwethluk River is one of the two most productive tributaries currently monitored in the entire Kuskokwim River drainage.

Chum Salmon Concerns:

In the recent decade, chum salmon have been the most abundant species in the river, as shown in Figure 8. However, available information sources align to support the conclusion that the 2021 chum salmon return was alarmingly low and among the lowest in the past two decades. (Note: no drainage wide estimates of total run or total escapement are available for Kuskokwim chum salmon.)

based upon the harvest history beginning in 1990. If the Federal Subsistence Board decides to establish a similar metric regarding Federal subsistence use amounts, it is likely to be based upon the same historical harvest data given that those data represent only the harvests by Federally qualified rural residents.

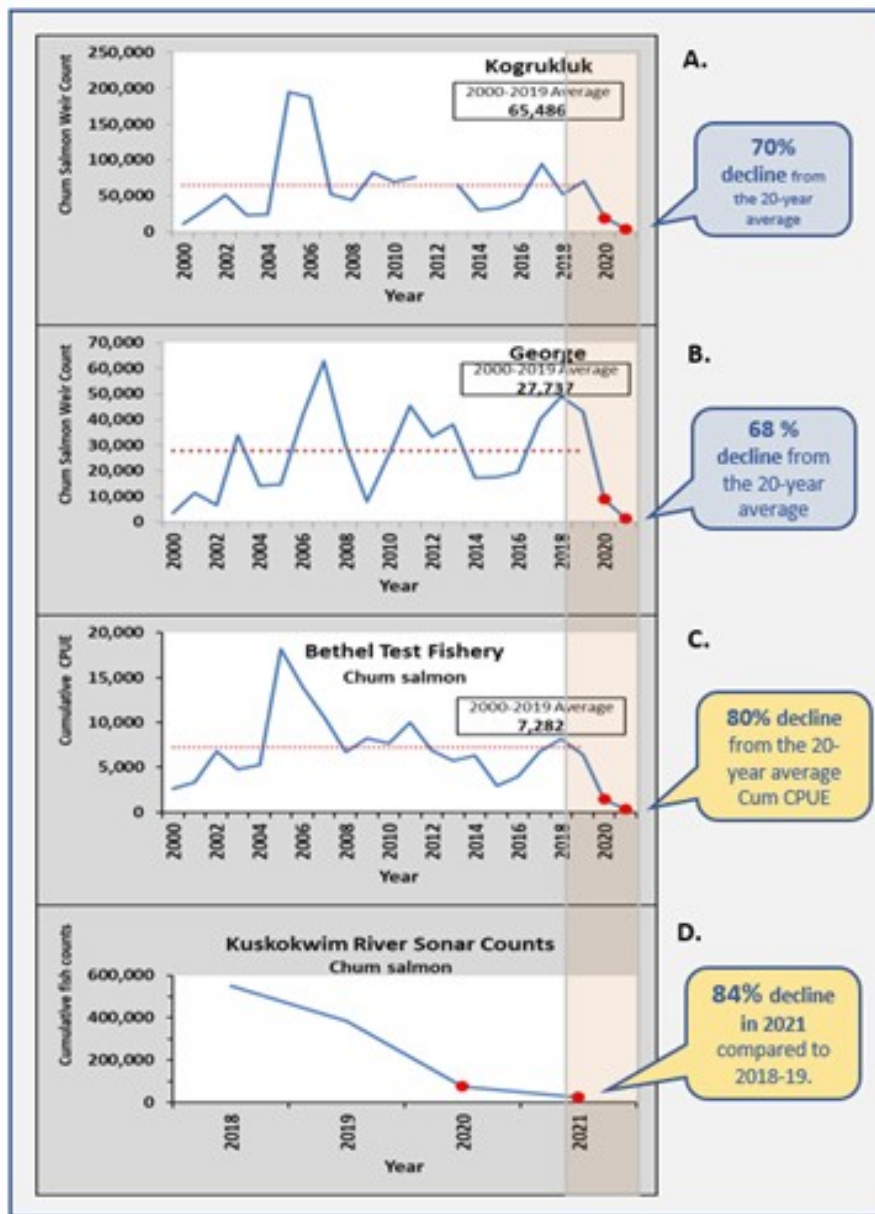


Figure 3: Evidence of continued severe decline of the Kuskokwim River chum salmon populations. Annual chum salmon weir counts, and the long-term averages, for the **A.** George River 2000–2021. **B.** Kogruluk river, 2000–2021. **C.** Cumulative end-of-season CPUE of chum salmon caught in the Bethel Test Fishery, 2000–2021. **D.** Cumulative annual counts of chum salmon from the Kuskokwim River sonar project, 2018–2021. **Sources:** Tiernan et al. (2018); ADF&G, unpublished data. Tiernan, A., C. Lipka, and N. Smith. 2018. *Kuskokwim River salmon stock status and Kuskokwim area fisheries, 2019: a report to the Alaska Board of Fisheries.* Alaska Department of Fish and Game, Special Publication No. 18-19, Anchorage. ADF&G, unpublished data. Informational packet for the November 10, 2022, meeting of the Kuskokwim River Salmon Management Working Group. ADF&G, Bethel Test Fishery, ADF&G, AYK Database Management System.

Figure 3 above shows the evidence of this decline based on two in-season indicators (Bethel Test Fish Project cumulative catch-per-unit-effort (CPUE) and Bethel sonar project) and two tributary escapement monitoring projects (Kogruluk River weir and George River weir). This disastrously low chum abundance in 2021 was also confirmed by the direct observation by fishers, as reported to the

Commission in-season managers and via the Commission’s Community Based Harvest Monitoring (CBHM) project. As an indicator of the poor 2021 chum run, Bethel sonar project recorded the passage of more Chinook salmon than chum salmon – even though the 2021 Chinook run was relatively poor.

Risk Factors & Management Challenges Facing the 2022 Run(s)

In addition to uncertainties in forecasts and in-season data that present challenges in meeting our management objectives, new research has documented several risk factors (Figure 4) most of which are not accounted for in salmon biological escapement goal or management metrics.

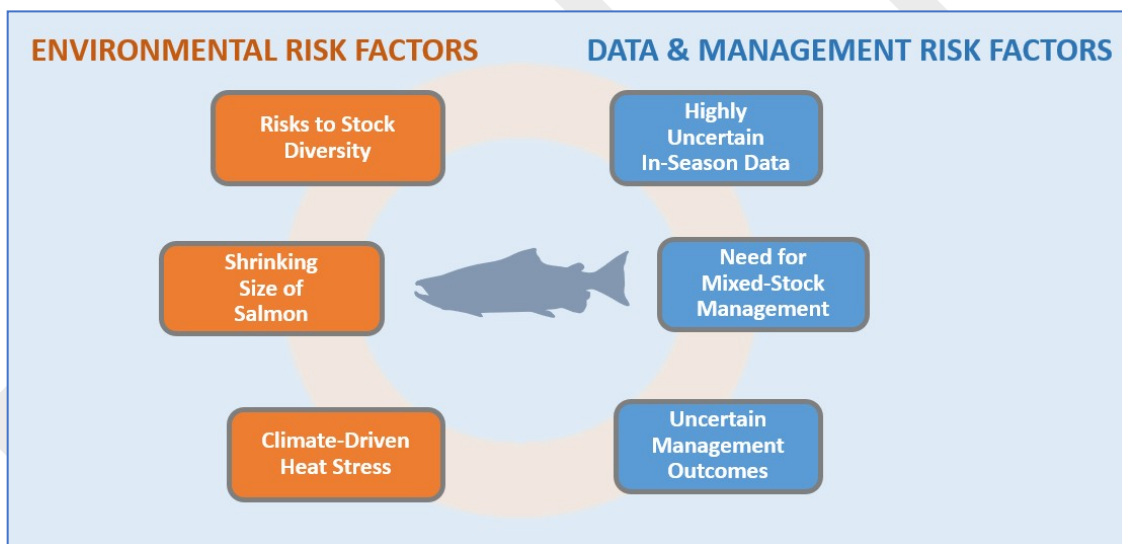


Figure 4: Overview of environmental/ecological risk factors, and data and management related risk factors.

ENVIRONMENTAL RISK FACTORS

Risks to Stock Diversity

Stock Diversity in a Mixed Stock Fishery: Protecting diversity is hard when many salmon stocks are harvested in a **mixed fishery** because not all salmon stocks are productive enough to sustain the same level of harvest as shown in (Figure 5) (*Connors et al. 2020*).

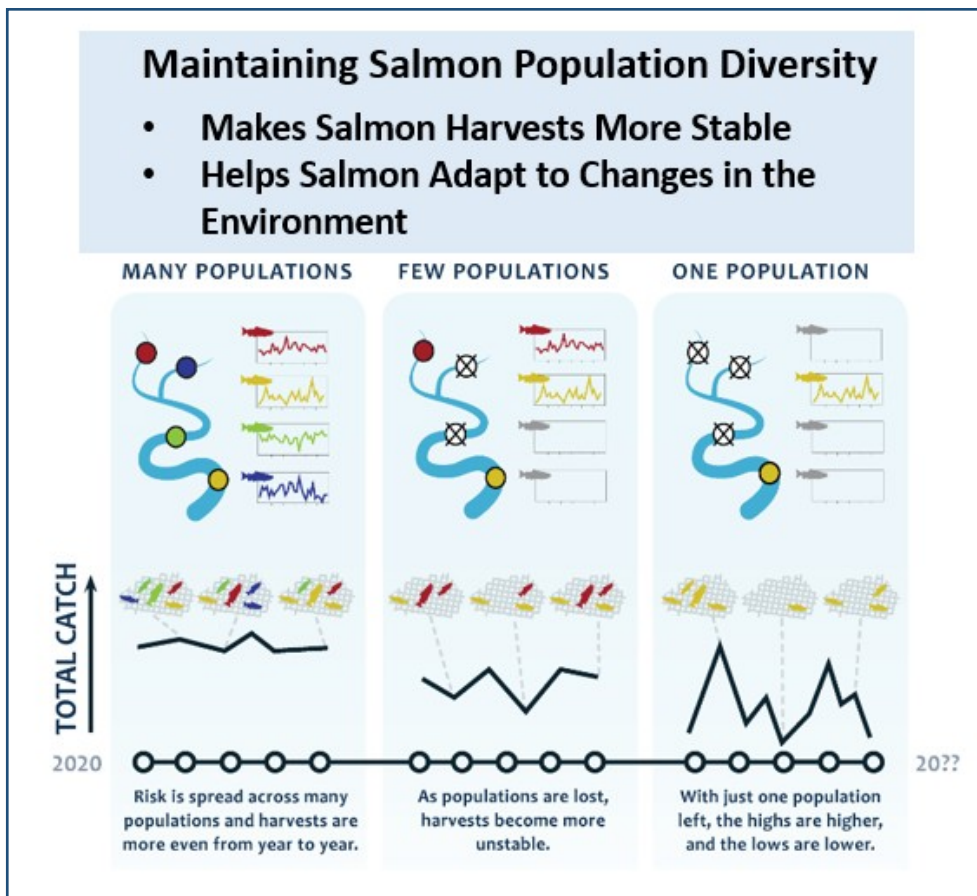


Figure 5: Overview of the benefits of maintaining salmon population diversity on the long-term stability of salmon runs.

Shrinking Size of Salmon

Significant Long-Term Decline in the Size of Returning Adult Chinook Salmon:

An independent expert panel that reviewed declines in the size and reproductive potential of Arctic-Yukon-Kuskokwim region Chinook salmon found a 40% decline in average total reproductive potential of Kuskokwim River Chinook salmon over the period 1976-2018 (*Ohlberger et al. 2019*) (Figures 6 and 7).

Decline in Caloric Value of Salmon: Due to this documented long-term decline in the size of returning adult Chinook salmon, we now know that 100 fish caught in the early 1970s provided on average the same amount of caloric energy as approximately 138 fish caught in recent years in the Kuskokwim River.

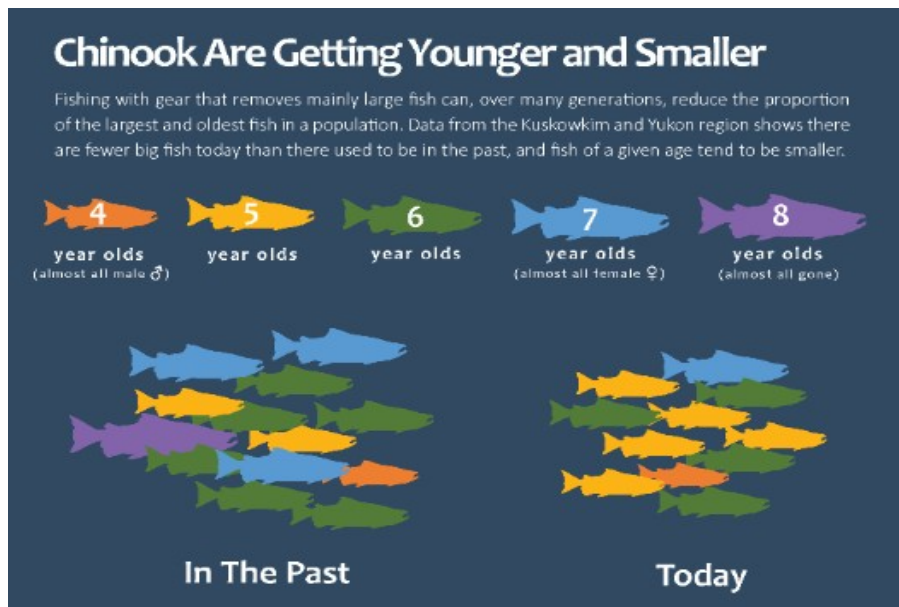


Figure 6: Data from the Kuskokwim and Yukon region shows that there are fewer big fish today than in the past, and fish of a given age class tend to be smaller (Ohlberger et al. 2019).

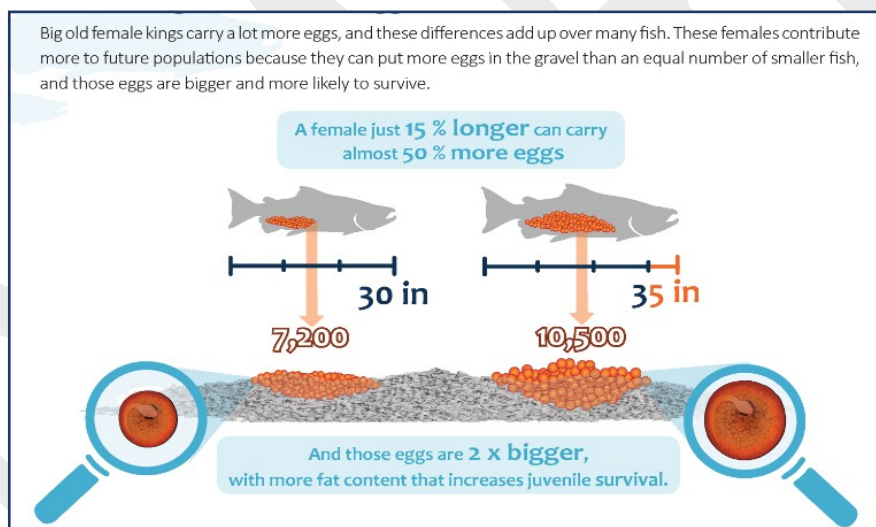


Figure 7: Adult Chinook salmon in the Yukon and Kuskokwim Rivers are increasingly younger and smaller, which means female spawners are depositing fewer and smaller eggs in the gravel. Smaller egg size can have a significant impact on the survival of the resulting juvenile salmon (Ohlberger et al. 2019).

Climate-Driven Heat Stress

Heat Stress in Migrating Spawners: Heat events that result in water temperatures above 65°F, such as the one that occurred in 2019, pose risks to migrating adult salmon (*von Biela et al. 2020*).

DATA & MANAGEMENT RISK FACTORS

Highly Uncertain In-Season Data

Sources of Uncertainty: Management decisions within Federal waters of the Kuskokwim River must be made using **limited in-season run abundance and run timing information:**

- **High Forecast Uncertainty:** The level of uncertainty associated with the prior-year forecast method currently used to produce the Kuskokwim River Chinook salmon preseason forecast is very high, making a practice of managing to the forecast risky.
- **Bethel Sonar Project,** while being a fairly new in-season indicator of run strength/run timing and remains experimental, has served as an increasingly helpful and informative additional source of run strength and run timing information in recent years.
- **Community-Based Harvest Data** from Bethel and a subset of lower river communities provides critical information about harvest during openings, including species ratios and catch per unit effort. This in turn provides immediate information about salmon abundance during a harvest opportunity. This community-based information is particularly valuable because it is provided directly by harvesters and therefore is seen as highly credible.
- **Bethel Test Fish Project** is a long-term index of run strength and run timing which serves as the main formal management tool. While it provides general categorical (high, med, low) measure of abundance based on information from the past 25 years, the Bethel Test Fish Project is a very imprecise in-season indicator of the total run size (which is only available post-season).

Even when these data sources are combined, it can be very difficult to accurately assess run timing and run strength. This uncertainty translates into risk of not meeting our management objectives. Therefore, we either need to know more, or take a precautionary approach to harvest management.

Need for Mixed-Stock Management

Importance of Multi-Stock Management for Salmon Conservation: From mid-June to mid-July the run timing of Chinook, chum, and sockeye salmon overlaps (Figure 8). That means that during most Chinook and chum salmon subsistence harvest opportunities, subsistence fishers are harvesting salmon

in a mixed-stock fishery in Federal waters of the Kuskokwim River; this results in harvests of various ratios of Chinook, chum, and sockeye salmon across the season. Because salmon in this mixed stock fishery are harvested using non-selective 6" mesh gillnet gear, it is not possible to target chum and sockeye salmon without potentially impacting Chinook and chum salmon during the length of their runs (Figure 8).

For the past seven years, YDNWR conservation actions aimed at Chinook salmon effectively required YDNWR to manage all three species in Federal waters due to their overlapping run timing during the bulk of the Chinook salmon run. For example, numerous Federal management actions during this period that closed fishing to all species of salmon between directed Chinook salmon harvest opportunities were intended to avoid overharvesting declined Chinook salmon. Due to the mixed stock nature of the fishery, these Chinook salmon conservation actions significantly limited the ability of subsistence users to harvest of chum and sockeye salmon, even during years when chum and sockeye salmon were abundant. Additionally, with our current chum conservation concerns, it is imperative to uphold a precautionary management approach in this mixed stock fishery.

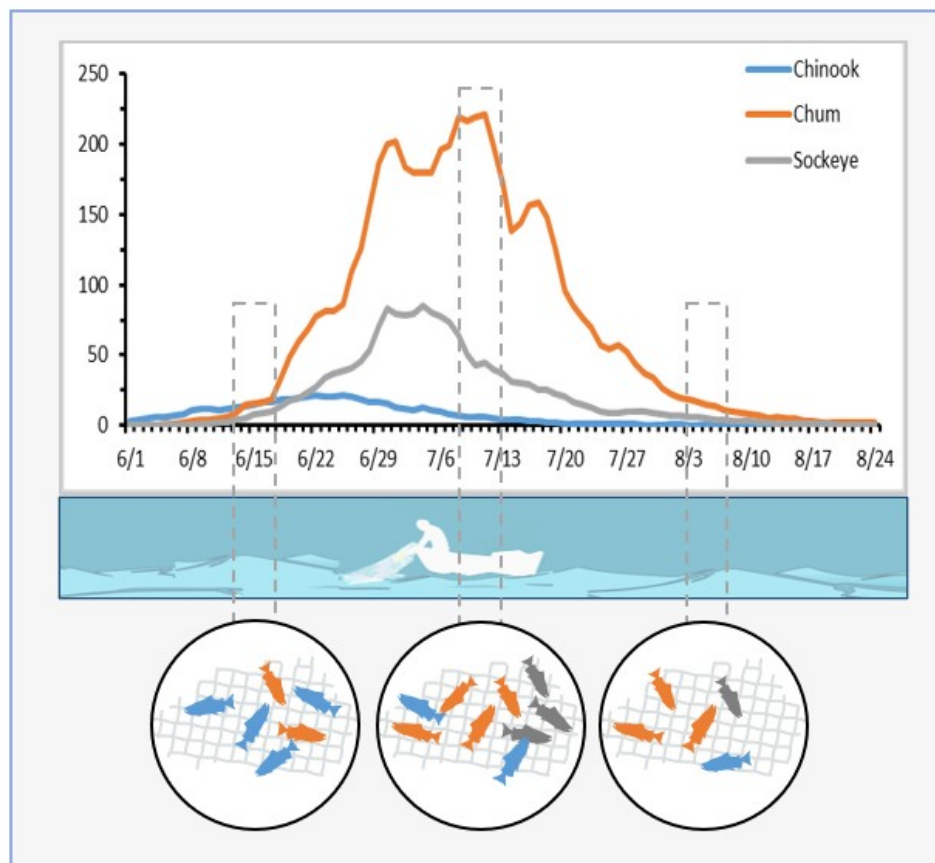


Figure 8: Average run timing from Bethel Test Fish data for the past 11 years shows the overlapping run timing of kings, chum and red salmon. Harvesting with driftnets that harvest all species requires the management of chum and sockeye in order to ensure Chinook conservation and rebuilding. (Note: Numbers on the left side of the figure are not numbers of salmon, but simply an index of abundance based on many year of information from Bethel Test Fish Fishery Project.)

Given the overlapping run timing and use of non-selective fishing gear, we anticipate that it will be necessary to continue careful mixed-stock management in 2022 because there is no practical way to conserve and rebuild Chinook salmon populations within this mixed stock gillnet fishery without also managing chum and sockeye salmon.

The 2020 and 2021 chum salmon runs were alarmingly low as indicated in Figure 3. If chum numbers remain significantly depressed in 2022, it may impact in-season salmon management in **two ways**:

- 1) Measures may be needed to ensure that chum salmon are sustainably managed and not overharvested within Federal waters, per the conservation mandates of the Refuge;
- 2) The later portion of Chinook salmon run may need additional conservation measures if the ratio of chum-reds to Chinook makes Chinook more vulnerable to harvest, compared with a similar time in the recent past when the fishery was primarily targeting chum salmon.

This interaction between Chinook and chum salmon management is an important reminder of why this 2022 Strategy must embrace a mixed-stock approach to fisheries management and why it is critical to continue to closely monitor and assess chum in-season abundance and escapement.

OVERVIEW OF 2022 PRESEASON & IN-SEASON MANAGEMENT APPROACH: Ensuring Conservation-Based Harvest Management of Chinook and chum runs

To provide harvest opportunities while also (1) addressing the environmental and management risk factors listed above and (2) meeting essential conservation objectives, ***we support the following management approach:***

- **Due to ongoing conservation concerns, for the eighth year in a row, the 2022 salmon season will begin under the authority of the Federal in-season manager** with harvest limited to federally qualified subsistence users per the provisions of Title VIII of ANILCA.
- **We will work to support and strengthen the relationship between the Commission and USFWS/the Refuge established under the Memorandum of Understanding (MOU).** The 2016 MOU between the Commission and YDNWR formalized the fishery management partnership between the parties. The MOU shall guide the relationship between the Commission and YDNWR, and both the Commission and YDNWR shall comply with its terms when collaboratively making fisheries management decisions and implementing fishery management projects.
- **We will review preseason forecast and forecast uncertainty.**
- **We will support a preseason salmon harvest closure from June 1 – June 11 to protect headwaters stocks.**
- **We will carefully evaluate in-season salmon population data and harvest assessment data between harvest opportunities.** The Commission and Refuge in-season managers will

regularly examine a variety of in-season indices when making in-season management decisions.

- **We will review risk factors and sources of uncertainty impacting harvest management** (see Figure 9 below).
- **We will use local and Indigenous Knowledge** from Commission In-Season Managers and other rural subsistence users to help inform assessment of run strength and run timing.
- **We will collect and use in-season subsistence harvest data.** The Community-Based Harvest Monitoring (CBHM) program provides valuable real-time in-season harvest and CPUE data from subsistence harvester that will be integrated into the in-season management decision-making process.
- **We will carefully monitor the chum salmon run** and anticipate the need to extend our conservation-based management approach to the 2022 chum salmon season based on the disastrously low runs of chum salmon in 2020 and 2021.
- **We will communicate to Federally qualified subsistence users the need for a conservative management approach based on assessment between openings to avoid overharvest, which includes:**
 - Communicating the possibility that taking management action to avoid overharvest, as occurred in 2013, can result in some foregone harvest/underharvest.
 - Communicating that foregone/underharvest, if it occurs, can help provide equity of harvest across the watershed, rebuild salmon populations, and protect salmon population diversity.
- **We will continue to aim for Chinook salmon escapement at 110,000 with the understanding that in-season uncertainty will require a broader target of 100,000-120,000. This escapement focuses on the upper end of the current escapement goal range of 65,000 to 120,000.**
- Due to several sources of uncertainty and the imprecision of management actions, it will never be possible to precisely achieve any specific salmon escapement number. Therefore, it is appropriate to structure our escapement target as a range. Management uncertainties and challenges include:
 1. A high degree of uncertainty about in-season abundance and salmon run timing.
 2. Uncertainty about how many salmon will be harvested in any given harvest opportunity.
 3. A 6-to-8-week time lag between the time when harvest decisions are made (May through July) and when we can estimate the effect of those decisions on meeting our escapement target (end of September).

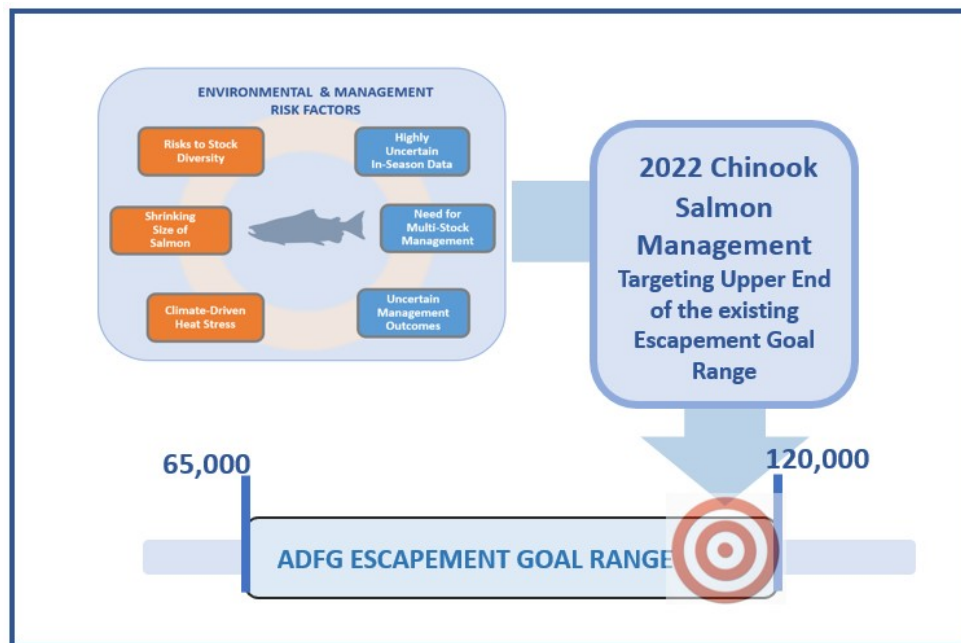


Figure 9: The 2022 precautionary escapement target aims at the upper end of the current escapement goal range (65,000-120,000 Chinook salmon) in response to cumulative effects among multiple risk factors and sources of uncertainty and the need to conserve and rebuild the population.

Our Approach to Using Information to Make Harvest Decisions:

- No single source of information about Kuskokwim salmon abundance or harvest levels provides a reliable *in-season indicator* of run abundance on its own. So, it is important to not focus on a single source of information, but to consider multiple sources of information that together point toward the same direction regarding run abundance and run timing.
- Due to very high uncertainty associated with recent prior-year forecasts, **our approach will be to prioritize in-season indicators of run strength and run timing using information from a set of fisheries projects that operate during the Chinook salmon season over using the pre-season forecast.**
- Total run abundance can be estimated with greater confidence only late in the Chinook and chum salmon runs.
- Each of the in-season information sources listed below has significant limitations, especially during the first half of the Chinook salmon run.
- Early in the season, we face the challenge of very minimal and often conflicting information from the currently available in-season data sources regarding the size and timing of the run. Therefore, we need to proceed with caution, especially during the first half of the run.

- Later in the season – sometime after June 21 – these sources of information taken together begin to paint a picture of how abundant the Chinook salmon run size is this year.
- It is important to remember that based on existing information sources it is not possible to put hard numbers on the size of run *in-season*. Rather the size of the run can only be assessed in rough categories such as: likely low abundance/poor run; likely a fair run; likely a strong run; likely a very abundant run. As the season progresses our confidence in our categorical assessment of the run abundance increases.

Key Sources of In-Season Information

We draw on four key sources of in-season information, each of which is valuable and helps inform decisions:

Indigenous Knowledge and local observations from Commission In-Season Managers and other rural subsistence users help inform assessment of run strength and run timing is combined with these three key sources of information described in more detail above:

- **Bethel Sonar Project**
- **Community-Based Harvest Data**
- **Bethel Test Fish Project**

Harvest Opportunities: Early Season June 1 – 11

BEFORE JUNE 1: Historic data from the Bethel Test Fishery and telemetry work suggests that Chinook salmon are unlikely to be present in large numbers within Refuge waters before June 1.

FEDERAL CLOSURE DATE, JUNE 1:

There are no significant changes from the 2020 Section 804 subsistence user prioritization analysis approved by the Federal Subsistence Board (FSB) that warrant revisiting the 804 analyses. Except for one of the past 11 years (2019), the Kuskokwim River Chinook salmon run continues to experience low abundance and productivity. Due to this prolonged decline and low productivity, Kuskokwim River Chinook salmon runs have not been abundant enough to meet subsistence needs since 2010. In addition, available information sources align to support the conclusion that the 2020 and 2021 chum salmon returns were alarmingly low and among the lowest in the past two decades.

The effective date chosen for the requested action are to begin June 1 and continue through the Chinook salmon season, or until rescinded by subsequent Federal Action. Federal subsistence

fisheries regulations are already in place to prevent use of 6”-or-less mesh-sized gillnets before June 1, unless superseded by Federal special action. Therefore, we feel that closure on June 1 will provide adequate protection measures at the front-end of the salmon returns.

EARLY SEASON SET NET OPPORTUNITIES DURING JUNE 1 – 11:

During early June, many local subsistence users opportunistically harvest Chinook salmon while actively fishing for whitefish species. Historic data from the Bethel Test Fishery and telemetry work suggests that Chinook salmon numbers increase about 1 percent per day, making them much more vulnerable to harvest during the June 1 through June 11 period. Telemetry projects indicate that early run Chinook salmon are disproportionately composed of headwater stocks. In an effort to conserve and rebuild these headwater stocks and to allow for a fair and equitable harvest of Chinook salmon species, the closure to the use of gillnets for the harvest of salmon in Federal public waters of the Kuskokwim River from June 1 through June 11 is important.

As has been provided in the past seven years, **in 2022 we propose three (3) 16-hour set gillnet opportunities for Federally qualified subsistence users**, which includes residents of the Kuskokwim River drainage and the villages of Chefornek, Kipnuk, Kwigillingok, and Kongiganak, to harvest Chinook salmon on Federal public water of the Kuskokwim River mainstem, except for the waters of the area referred to as the Aniak Box. The dates of the three opportunities are June 1, June 4, and June 8, with the following start time and end time for each opportunity: 6:00 a.m. to 10:00 p.m.

Harvest Opportunities: Mid-Season June 12 – 20

MANAGEMENT OF MIXED STOCK SALMON FISHERIES:

During the mid-season period (June 12 through June 20), the fishery becomes a mixed stock fishery with overlapping run timing of Chinook, chum, and sockeye salmon (see Figure 8). That means that during the majority of the Chinook salmon subsistence harvest opportunities, subsistence fishers are harvesting salmon in a mixed-stock fishery in Federal waters of the Kuskokwim River. When salmon in this mixed stock fishery are harvested using non-selective 6” mesh gillnet gear, it is not possible to target chum and sockeye salmon without potentially impacting Chinook salmon during the length of the Chinook salmon run.

Each year for the past seven years, the need for conservation actions aimed at conserving and rebuilding Chinook salmon stocks have required Federal in-season management actions impacting the harvest of all three species in Federal waters due to their overlapping run timing during the bulk of the Chinook salmon run. Numerous management actions (via emergency special action) closing fishing to all species of salmon for all users between short-duration subsistence harvest opportunities

for Federally qualified subsistence users, until such time that in-season Chinook salmon conservation measures are no longer needed.

There is no practical way to conserve and rebuild Chinook salmon populations within this mixed stock gillnet fishery without also taking management actions that restrict the harvest of chum and sockeye salmon during closed fishing periods. Given the current forecast, in 2022 we anticipate the need for fishery closures restricting the use of all gillnets during closed periods to provide for the conservation of Chinook salmon.

DRIFT AND SET NET OPPORTUNITIES, JUNE 12-20:

We propose to pre-announce a total of two (2) 12-hour drift and set gillnet opportunities for Federally qualified subsistence users to harvest Chinook salmon on Federal public water of the Kuskokwim River mainstem, except for the waters of the area referred to as the Aniak Box. Additional drift and set gillnet harvest opportunities Federally qualified subsistence users may be announced during this period depending on in-season assessment of Chinook run abundance and the need for conservation measures. These opportunities are June 12 and June 16, with the following start and end time for each opportunity: 6:00 am to 6:00 pm.

Additional details including allowable means and methods and details regarding closures of tributaries and other special areas to the harvest of salmon with gillnets will be provided in in-season Federal special actions.

When each of these 12-hour harvest opportunities expire, Federal public waters of the Kuskokwim River, will remain closed to the harvest of Chinook salmon with gillnets until opened again by Federal special actions and Federal public waters of the Kuskokwim River will remain open Federally qualified subsistence users with all other allowable means and methods.

Harvest Opportunities: Late Season June 21 – 30

We anticipate that sometime after June 21, the in-season data from the four information sources listed above will begin to converge to give us greater confidence in our assessment of how abundant the Chinook salmon run size is this year. However, it is important to use all these information sources together to get an idea of Chinook salmon total run abundance and not only after the season is over can run size estimates be produced. Additional drift and set gillnet harvest opportunities Federally qualified subsistence users may be announced during this period depending on the results in-season assessment of Chinook and chum salmon run abundance and the need for conservation measures.

In addition, we intend to continue to carefully monitor the chum salmon run and will adapt our management approach as needed in the event of low chum abundance in 2022.

End of Federal Season

The Federal in-season manager anticipates relinquishing Federal management back to the State of Alaska when there is no longer a demonstrable need for Chinook and/or chum conservation measures requiring limiting harvest of salmon to Federally qualified subsistence users.

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<https://meetings.npfmc.org/CommentReview/DownloadFile?p=73525360-d677-4355-ab79-e75fc441f969.pdf&fileName=B5%202021%20Chinook%20index%20letter%20to%20NMFS.pdf>

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Kuskokwim River Salmon Situation Report

OCTOBER 2022

Last updated October 3, 2022

Prepared by the Kuskokwim River Inter-Tribal Fish Commission

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Photo courtesy: Jonathan Samuelson.



Introduction

This situation report documents the current Chinook, chum, and coho salmon disasters on the Kuskokwim River and their impacts on the 33 subsistence-dependent communities in its watershed. The aim of the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) in this report is to communicate the magnitude of our subsistence salmon declines and articulate the critical need for a new conservation-based, ecosystem-wide management approach, particularly in the marine environment. These multi-year, multi-species salmon declines threaten food, cultural, spiritual, and economic security in the Kuskokwim drainage, and they demand attention and immediate action by all management entities.

While this report focuses on the impacts of these salmon stock collapses in the Kuskokwim drainage, we are acutely aware of other watersheds in Western and Interior Alaska experiencing the same, if not more severe, declines. Moreover, this situation report is not meant to diminish our gratitude for the fish we have been able to harvest along the Kuskokwim. Rather, it is meant to be an honest documentation of the experiences of our communities during salmon shortages so we can act effectively and equitably to maintain our fishing ways of life for future generations.

About the Kuskokwim River Inter-Tribal Fish Commission

The KRITFC represents the interests of the 33 federally recognized Tribes of the Kuskokwim River in salmon management, research, and monitoring to protect and sustain our salmon fisheries and traditional ways of life. The work of our 27 Tribally appointed Fish Commissioners, 7 Executive Council members, and 5 In-Season Managers uses both our Yupik and Athabascan Dené Indigenous Knowledge and the best available Western science, and centers our values of unity, sharing in abundance and scarcity, respect for all life, and stewardship for our ancestors and future generations.

At A Glance: The Status of Kuskokwim River Salmon Runs, Subsistence Harvests, & Causes of Decline

- 2022 is the **seventh year in a row of successful collaborative salmon management** between KRITFC and the U.S. Fish and Wildlife Service at Yukon Delta National Wildlife Refuge.
- Chinook salmon escapement goals were met in 2022 because of **continued sacrifices and conservation efforts by Kuskokwim subsistence communities**, who only met about **one-third of their long-term Chinook salmon subsistence harvest needs**.
- **Chum salmon returns remain unprecedentedly low** in the Kuskokwim River.
- The sockeye salmon run remains strong, but it is not possible to harvest them in large numbers without impacting declined Chinook and chum salmon populations.
- **2022 is the third year of an alarmingly steep decline of coho salmon.**
- With the coho salmon decline, it becomes clear that **Kuskokwim River communities now face a multi-species salmon collapse**. There appears to no longer be any highly abundant “backup” salmon species to fill unmet food security needs.
- Massive intercept catches of chum salmon occurred in the South Alaska Peninsula area (Area M) commercial salmon fisheries during June 2021 and 2022. The most recent and rigorous genetic analysis of samples from these fisheries showed that **Coastal Western Alaska stocks comprised an average of 57% of the chum salmon harvested in Area M, and nearly 1 million Coastal Western Alaska chum salmon were harvested in the two-year period of 2021 to 2022.**
- While the bycatch of Chinook salmon in the Bering Sea-Aleutian Island pollock fishery has declined, chum salmon bycatch remains high, with **no chum salmon bycatch caps** in place by federal managers.

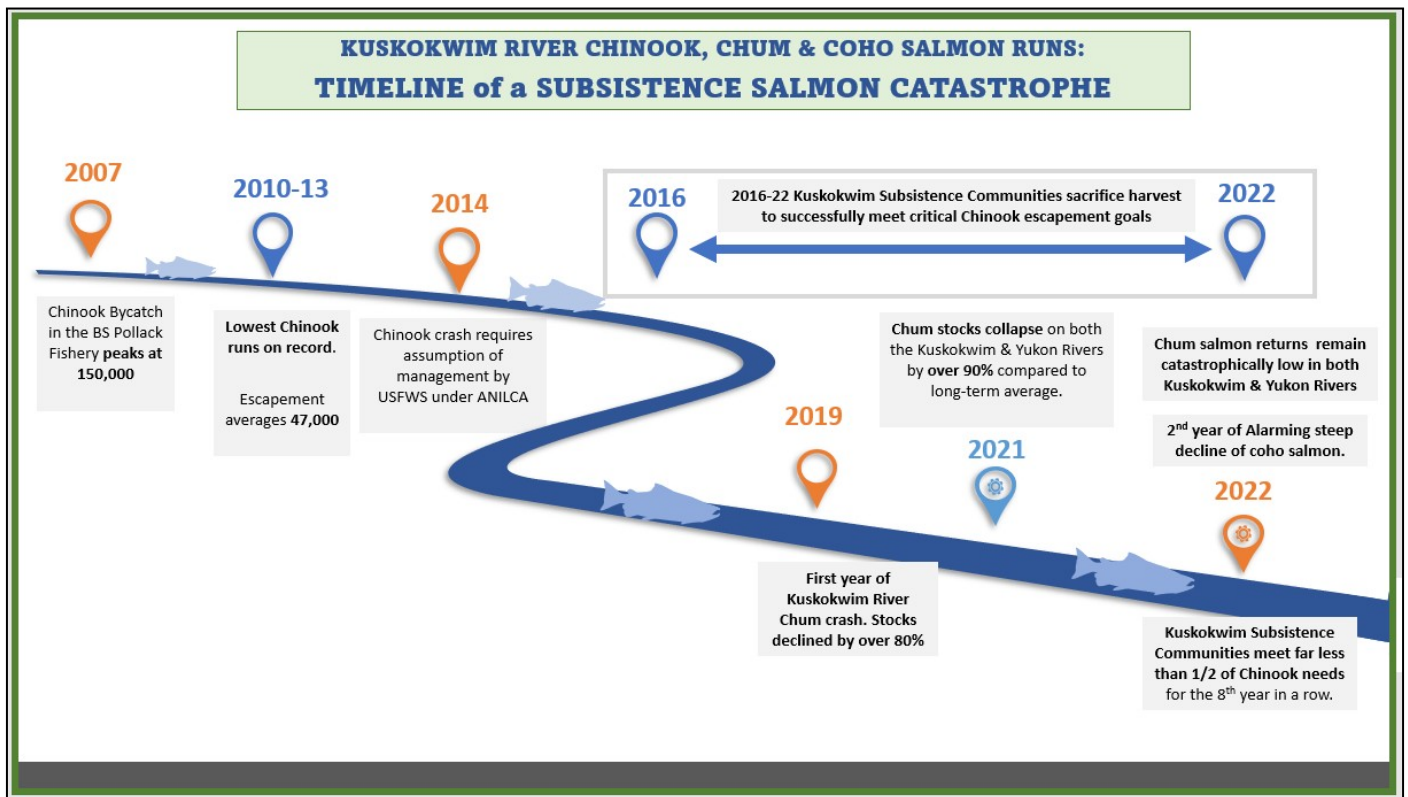


Figure 1: Timeline of a subsistence salmon catastrophe on the Kuskokwim River.

The Multi-Species Salmon Collapse Threatens Our Well-Being & Way of Life

The Kuskokwim River has historically supported the largest subsistence salmon fishery in the State of Alaska, both based on the number of residents in the 33 villages who participate in the fishery and the number of salmon harvested (Fall et al. 2011). With some of the lowest per capita monetary incomes and highest poverty rates in the state, this region is characterized by a high production of wild foods for local use (Wolfe and Walker 1987).

Over the past thirty years, village residents in the Kuskokwim region have annually harvested over 360 pounds of wild foods per person for human consumption, with fish comprising up to 85% of the total poundage of subsistence harvests, and salmon contributing up to 53% of subsistence harvests (Simon et al. 2007; Wolfe et al. 2011). Residents harvest all five species of Pacific salmon: Chinook, chum, coho, pink, and sockeye. Historically, one out of every two Chinook salmon caught for subsistence in the state was harvested by Kuskokwim River communities. In other words, salmon-dependent communities in the Kuskokwim watershed utilize half of all Chinook salmon harvested for subsistence state-wide.

The importance of salmon, particularly Chinook salmon, to residents extends well beyond nutrition and economy to include socio-cultural identities and a way of life (Ikuta et al. 2013). The Indigenous people of the Kuskokwim – from our Yupik communities at the coast to our Upper Kuskokwim Athabascan Dené Tribes of the Interior headwaters – are, have been, and will always be salmon people. Salmon are essential to our physical, economic, cultural, and spiritual wellbeing.

From the late 1970’s into the mid-1990’s, the Kuskokwim River saw large runs of Chinook, chum and coho salmon, supporting significant commercial fisheries in addition to meeting subsistence needs in much of the watershed.

For example, between 1990 and 1995, an average of over 1.5 million salmon of multiple species were harvested in the commercial fisheries alone (Figure 2).

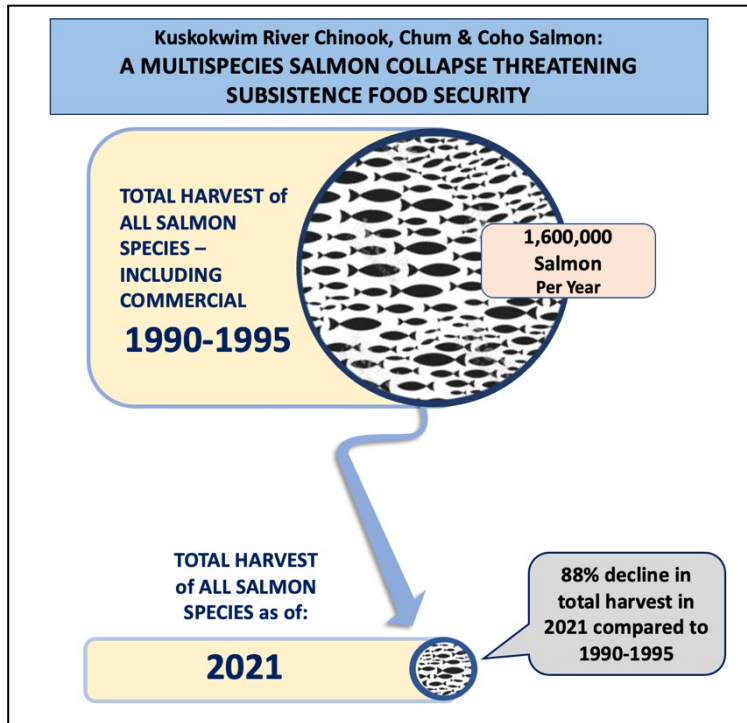


Figure 2: Total subsistence and commercial harvest of all Kuskokwim River salmon species, 1990–1995 compared to 2021.

As of 2022, the Kuskokwim River is experiencing a catastrophic multi-species salmon decline not seen in living memory, and our Elders, youth, and entire communities are suffering because of it. Since at least 2009, subsistence-dependent communities in the Kuskokwim drainage have witnessed steep declines in their salmon populations, beginning with Chinook salmon and now, within the past three years, extending to chum and coho salmon (Figures 1 & 2).

Due to the multi-species nature of the salmon collapse and the complete closure of much of the coho salmon run, the 2022 season was the most restricted subsistence fishing season ever seen on the Kuskokwim.

The State of Alaska Department of Fish and Game (ADF&G) closed all subsistence gillnet fishing in the flowing waters of the Kuskokwim River from August 17 through September 15, including fishing for non-salmon fishes. Because of prolonged conservation closures, subsistence fishing families not only faced salmon harvest restrictions, but also experienced challenges harvesting whitefish and

other non-salmon species that are critical for traditional diets and well-being.

In the recent past, the subsistence harvest of chum and coho could help make up for the absence of Chinook salmon. This was not possible in 2022 with the steep decline of coho salmon on top of the Chinook and chum crashes. And, while sockeye salmon have increased in abundance, it is not possible to target them without potentially overharvesting the declined Chinook and chum populations present in the river at the same time. Kuskokwim River communities are realizing that there is no longer any “backup” salmon species to fill unmet salmon needs, leaving us with a heavy reliance on whitefish, moose, and other subsistence resources, as well as on store-bought foods of significantly less nutritional and cultural value. These current dramatic multi-species salmon declines are thus threatening food security and overall well-being within the Kuskokwim region, as well as the health of our drainage-wide ecosystem.

Impacts of the Prolonged Chinook Salmon Crash (2009–2022)

Since at least 2009, the Chinook salmon (king salmon, *kiagtaq*, *taryaqvak*, *gas*, *Oncorhynchus tshawytscha*) populations in the Kuskokwim River have crashed and remain severely depressed through the 2022 season. Many fishing families in upriver communities, including Nikolai, McGrath, and Takotna, reported Chinook salmon declines dating back to 2000 when average household harvests decreased to approximately half of what they had been in the 1990s.

The preliminary 2022 Kuskokwim River Chinook salmon total run estimate shows a midpoint of about 143,00 fish, and an estimated escapement of about 105,000 fish (though preliminary estimates are considerably uncertain because poor weather prevented aerial surveys) (Rabung 2022). The 2022 estimate is about 41% below the long-

term total run average from 1976 to 2009 (Figure 3). During the run, subsistence-dependent communities were heavily regulated with very few limited harvest opportunities per week and net size and gear restrictions to try to meet the critical escapement goals. As a result of the sacrifices of subsistence users working to rebuild the Chinook salmon stocks, the drainage-wide Chinook salmon escapement goal (65,000–120,000 fish) has been achieved every year that KRITFC and U.S. Fish and Wildlife Service at Yukon Delta National Wildlife Refuge (YDNWR) have collaboratively managed the run, including 2022.

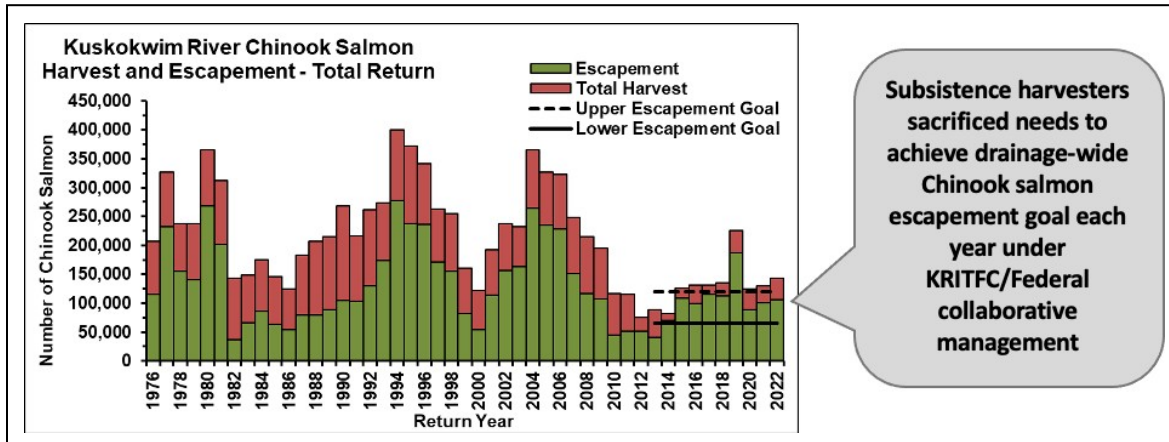


Figure 3: Kuskokwim River Chinook salmon escapement and total harvest by all user groups, 1976–2022. Note: 2022 data is preliminary. Source: Rabung 2022.

Despite Chinook salmon escapement goals being met throughout the period of KRITFC–YDNWR co-management, the Kuskokwim River Chinook salmon run remains concerning because of the inability to maintain expected historic yields, or harvestable surpluses, above the stock’s escapement needs, despite the use of specific management measures. As a result, Kuskokwim River residents have not been able to meet their long-term harvest levels – termed amounts reasonably necessary for subsistence (ANS) by the Alaska Board of Fisheries (BOF) – of 67,200–109,800 fish since 2010 (Figure 4).

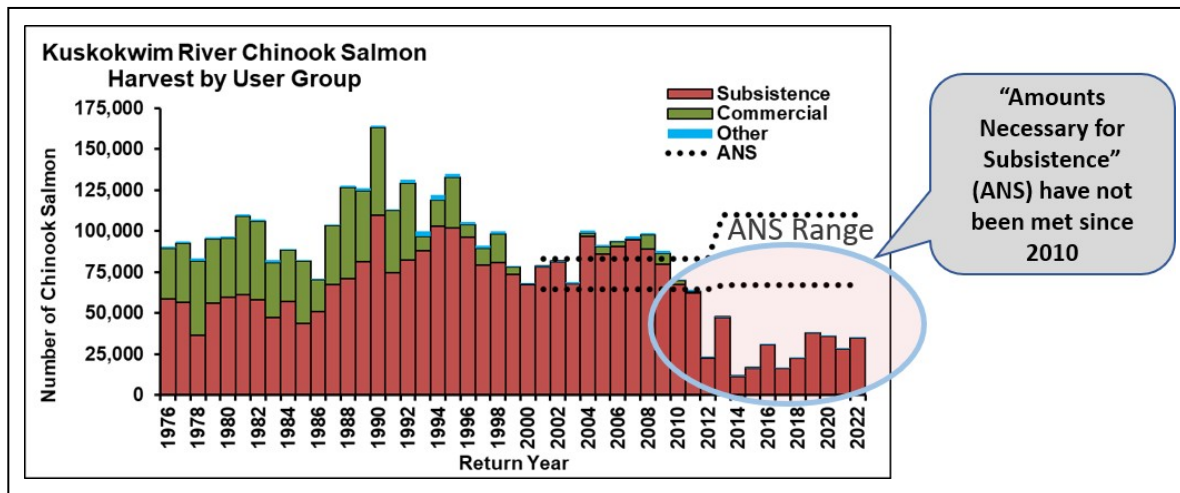


Figure 4: Kuskokwim River Chinook salmon harvest by user groups during 1976–2022, showing that long-term subsistence harvest needs (based on ANS) in the watershed have not been met since 2010. Note: 2022 data is preliminary. Source: ADF&G AYK Database Management System.

While post-season household harvest surveys have yet to be conducted to estimate total salmon harvests during the 2022 season, based upon the in-season community-based harvest monitoring program operated by KRITFC, Orutsararmiut Native Council, and YDNWR, we estimate at this time that residents of the Kuskokwim River met only about one-third of their average long-term Chinook salmon harvest needs. Moreover, as the average size of Chinook salmon returning to the Kuskokwim has decreased, subsistence fishers are not only harvesting fewer numbers of fish but fewer total pounds of fish (Ohlberger et al. 2018). This compounds the food security crisis already unfolding with declined Chinook salmon stocks and restricted harvest opportunities.

“

June 16 was not a good day. Many Kalskag fishermen started at 6:00 am or 8:00 am and fished for eight to ten hours, with a range of zero to five Chinook salmon caught. One person caught ten kings after fishing almost the whole opener. Some are waiting because they can't afford to spend the whole day out for one or two fish. It was a hard day.

Megan Leary, Aniak
(Native Village of Napaimute)

Continued Recent Chum Salmon Crash (2020–2022)

Chum salmon (dog salmon, *aluyak*, *iqalluk*, *neqepik*, *sruqhot'aye*, *O. keta*) have been especially important for food security during years of poor Chinook salmon returns. Because of their lower fat content, they also provide unique traditional foods that cannot be prepared with other salmon species. While chum salmon harvests have declined in recent decades resulting from changes in customary and traditional use patterns, including fewer dog teams in the region, they are highly sought for preparing traditional delicacies like *eggamarrluk* (half-dried, half-smoked salmon) and for Elders and other family members who cannot consume fattier salmon species.

However, in 2020, 2021, and 2022, Kuskokwim chum salmon returns crashed unexpectedly. The 2022 chum salmon run appears to be the second lowest chum salmon return on record, better only than the 2021 return (Figure 5). Chum salmon used to return to middle and headwaters tributaries in the millions, feeding more than just human subsistence users, but bears, vegetation, and other life. The lack of chum salmon in tributary valleys has the potential to significantly affect the health of the Kuskokwim ecosystem.

Moreover, because in-season data showed a weak chum salmon return, Kuskokwim subsistence-dependent communities were restricted from harvesting chum salmon through area and gear type closures. For the second year in a row – and the second year in living memory – subsistence gillnet fishing in the lower Kuskokwim River remained closed through the majority of July, preventing families from being able to efficiently harvest sockeye salmon and non-salmon fish species to store food for the winter.

As a result of this crash and harvest restrictions to meet escapement and conservation goals, subsistence harvests of chum salmon in the Kuskokwim River from 2020 through 2022 have been well below the ANS range of 41,200–116,400 fish designated by the Alaska BOF, representing some of the poorest harvests on record.

“

On June 22, I caught only five chums; most people are catching five to ten. People are calling them ‘precious.’
Mike Williams Sr., Akiak (Akiak Native Community)

When I first came to Aniak in the 1960s, there were people who made their money off fur in the winter and fish in the summer; that's how they could buy a new outboard or net. They were able to do that because the chum salmon went up the Aniak valley to die. Elders talk about the stink up there, and the first year we had a sonar on the Aniak, we had a million chums up there; but no longer. We should think of chums as the sponsor of marine-derived nutrients and make sure we don't downplay this.

LaMont Albertson, Aniak

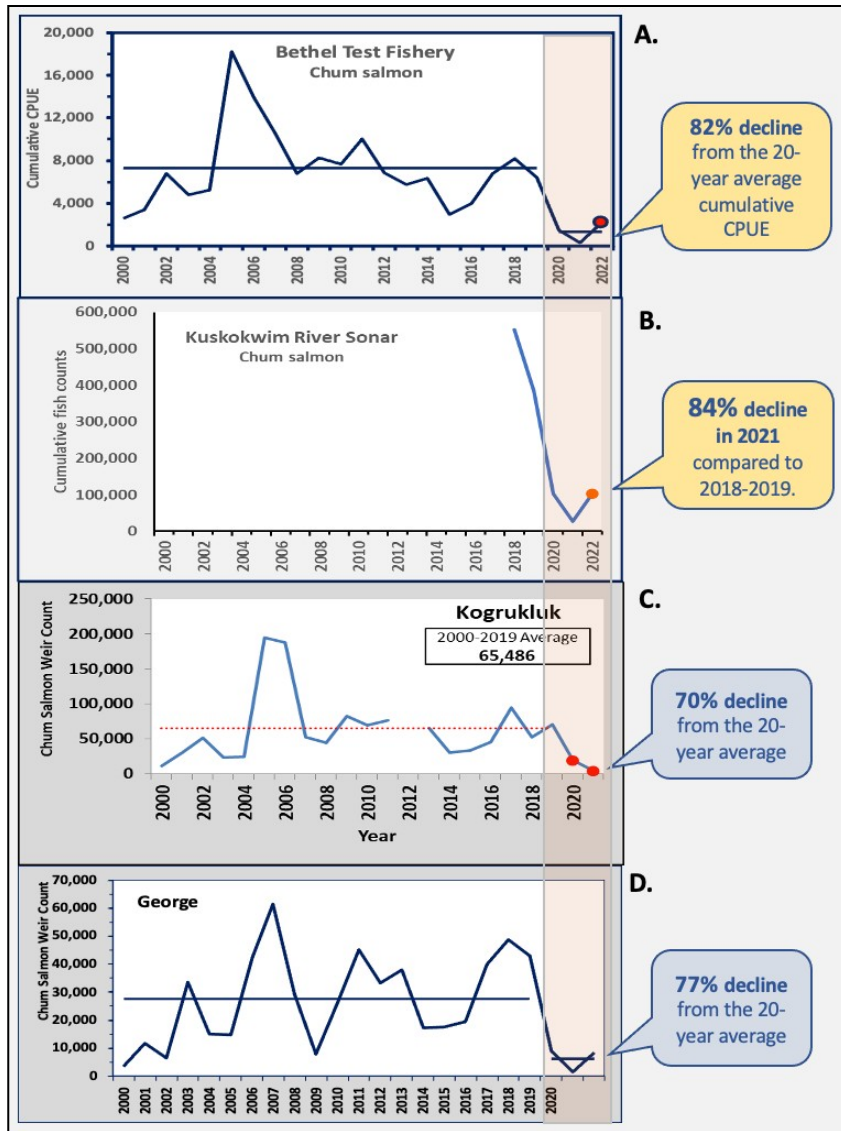


Figure 5: Evidence of low 2020 - 2022 Kuskokwim River chum salmon abundance:

- A. Cumulative end-of-season catch per unit effort (CPUE) of chum salmon caught in the Bethel Test Fishery, 2000-2022.
- B. Cumulative annual counts of chum salmon from the Kuskokwim River sonar project, 2018-2022.
- C. Kogrukluk river weir, 2000-2021.
- D. George River weir, 2000-2022.

Source: ADF&G AYK Database Management System.

Unprecedented Coho Salmon Crash (2022)

Coho salmon (silver salmon, *ciayuryaq*, *caayuryaq*, *uqurliq*, *qakiyyaq*, *nosdlaghe*, *O. kisutch*) are the last salmon species to return to the Kuskokwim each season. With the run beginning toward the end of July and continuing until ice covers the river, coho salmon provide Kuskokwim fishing communities with their final opportunities to meet their subsistence salmon needs.

In the past, Kuskokwim River coho salmon returns appeared to be highly productive, supporting both commercial and subsistence fisheries. During the 1990s, commercial harvests of coho salmon averaged around 460,000 fish per year, with a peak harvest of nearly 1 million coho salmon in 1996. However, this large commercial fishery was managed without a reliable in-season estimate of abundance or post-season run reconstruction, meaning there was no method for ADF&G managers to assess the long-term sustainability of this commercial fishery.

Unlike the commercial fishery, long-term coho salmon subsistence harvests until 2018 averaged and remained relatively stable around 35,000 fish. With ongoing Chinook and chum salmon declines, river-wide dependence on

coho salmon to meet subsistence needs is especially strong. Many families rely on coho salmon to fill their freezers, jar smoked strips, and taste the last fresh salmon of the season.

Available long-term run assessment data from the Bethel Test Fishery (BTF) show that the Kuskokwim River coho salmon run has declined significantly since 2018 (Figure 6), which corresponds with coho conservation concerns voiced by Kuskokwim residents in recent years at the State of Alaska’s advisory body, the Kuskokwim River Salmon Management Working Group. BTF cumulative coho salmon catch-per-unit-effort (CPUE) has dropped 54% in the past four years. As a result of these declines, the coho salmon ANS of 27,400–57,600 fish was not met in 2018, 2020, 2021, or 2022.

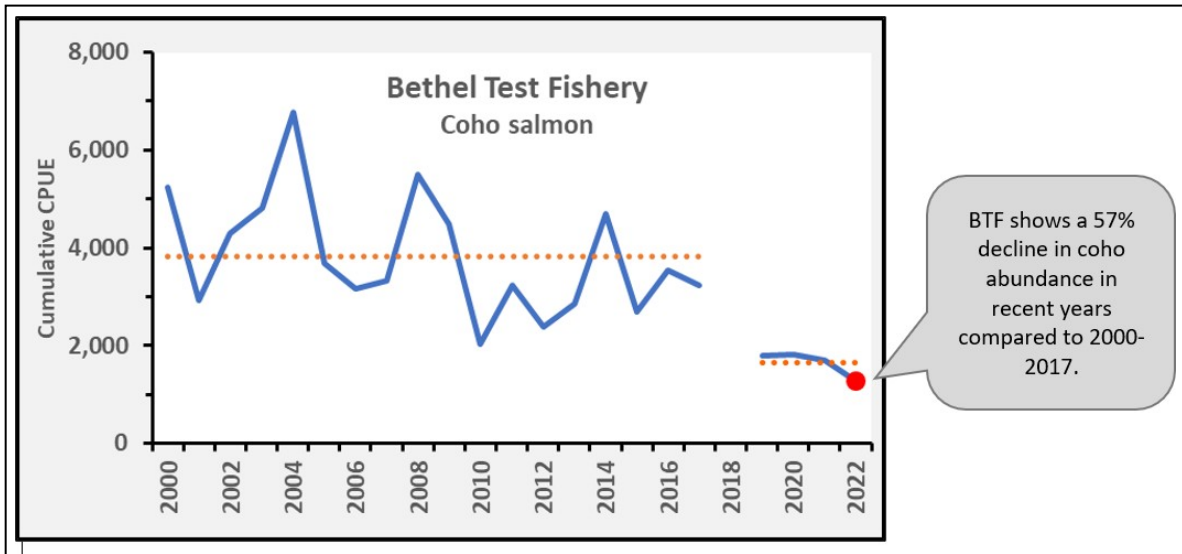


Figure 6: Cumulative end of season CPUE of coho salmon caught in the Bethel Test Fishery, 2000-2022, showing a steep decline in coho salmon runs for the past four years. The 2019–2022 average CCPUE was 57% below the 2000–2017 average. Source: ADF&G AYK Database Management System.

Despite recent years of steep coho salmon declines, ADF&G managers did not act until 2022, when they implemented a drainage-wide closure of the Kuskokwim from mid-August to mid-September to protect a record-low coho salmon return. This drainage wide closure effectively shut down all subsistence fishing, including the use of smaller-sized mesh nets targeting whitefish and the use of selective non-gillnet gear types, that resulted in severely harming subsistence communities by the lack of reasonable opportunity to harvest non-salmon species.

“

I’m really saddened and devastated for our Tribal families upriver who haven’t had a chance to catch Chinook or chum salmon, and we don’t get reds up here. Now there’s no silver fishing. The people that live a subsistence lifestyle up here are going to be hit really hard. It was open downriver, but the fish take two or more weeks to get upriver. By the time the silvers were up here this year, we were closed and couldn’t fish. It’s devastation up here.

Betty Magnuson, McGrath (McGrath Native Community)

Everybody is caught off-guard by the silvers. A lot of people upriver who were waiting for the silvers to arrive do not have any chance for that. With the closures, we also effectively have no access to the fall whitefish and any other fish that people need to put away for the winter.

Jonathan Samuelson, Georgetown (Native Village of Georgetown)

Commercial Intercept & Bycatch Impacts on Critically Declined Western Alaska Salmon Stocks

Many potential factors have cumulatively caused declines in Coastal Western Alaska (CWAK) salmon populations. Salmon bycatch and interception in marine fisheries, while not the sole driver of current poor salmon returns to the Kuskokwim, undeniably impacts salmon stocks in this region and is a driver that is directly under human control. However, unlike many drivers of declines, humans can directly and effectively influence salmon bycatch and intercept levels – a particularly crucial power during present-day collapses in subsistence salmon fisheries. Moreover, the 33 Tribes of the Kuskokwim River share Indigenous values associated with deep respect and gratitude for subsistence foods, and the excessive waste of bycaught salmon is deeply offensive to the Tribal stewardship principles practiced by the subsistence cultures in the watershed.

At A Glance: Impacts of Commercial Salmon Interception & Bycatch

- **Both the South Alaska Peninsula (Area M) salmon fishery and the Bering Sea pollock fishery** are documented contributors to the severe chum salmon crash impacting communities throughout the Coastal Western Alaska region.
- The most recent and rigorous genetic analysis of samples from these fisheries found an average of **57% of the Area M chum salmon catch in June** were of Coastal Western Alaska origin.
- **Huge numbers of chum salmon** bound for Western Alaska rivers were harvested in the Area M fishery in recent years. A combined total of **nearly 1 million Coastal Western Alaska chum salmon were harvested in the two-year period of 2021 to 2022** (Figures 7 & 9).
- **Chum bycatch** of Western Alaska stocks in the Bering Sea pollock fishery in 2021 was significant but smaller compared to the harvest in the Area M fishery. For comparison, in recent years the **Area M harvest of Coastal Western Alaska stocks has been 10 times larger** than the Bering Sea bycatch of those same stocks (Figure 7).
- **The South Alaska Peninsula fishery has profited** for more than 100 years off the sustained productivity of distant salmon stocks – especially the Yukon and Kuskokwim River chum salmon stocks, which were the most abundant stocks in the Coastal Western Alaska region prior to the current crash.
- There is **currently no limitation or cap on the number of Western Alaska chum salmon** that can be caught and sold in Area M or caught and discarded in Bering Sea pollock fishery, regardless of the impacts to spawner escapement or food security threats in the salmon’s regions of origin.
- Fundamentally, both **state Area M harvest management and federal bycatch management are disconnected from** in-river stock assessments, escapement monitoring, and other best management practices to ensure sustainability of our Western Alaska salmon stocks that are harvested in these marine fisheries.
- Both state and federal policy declare that meeting salmon escapement goals and providing for subsistence uses are to be prioritized over commercial harvests. However, in practice, the current management regimes under **both North Pacific Fisheries Management Council and Alaska Board of Fisheries effectively prioritize commercial uses** over Western Alaska escapement needs or subsistence uses. For example, in 2021, when chum salmon harvests were severely restricted on the Kuskokwim and not allowed on the Yukon, **over 740,000 Western Alaska chum were legally caught** between both the Area M fishery and the Bering Sea pollock fishery (Figure 7).

South Alaska Peninsula (Area M) Interception of Western Alaska Chum Salmon

The South Alaska Peninsula Management Area, more commonly known as a portion of Area M, neighbors the Chignik and Bristol Bay areas along the Alaska Peninsula and eastern Aleutian Islands (Figure 8). Managed by ADF&G, Area M is an intercept fishery that has operated since at least the early 1900’s targeting all salmon species as they pass through the fishery.

Arctic-Yukon-Kuskokwim (AYK) region immature chum salmon stocks travel to the Gulf of Alaska and North Pacific to rear and mature. As the salmon begin to mature in late winter and spring and migrate to their natal rivers to spawn, they must travel through the island passes at the end of the Alaska Peninsula (Figure 8). The Area M fishery is located in these island passes, which create natural bottlenecks, concentrating chum salmon stocks and making them more vulnerable to commercial fishing interception. Unlike salmon bycatch in pollock fisheries of the Bering Sea, where salmon are designated as a prohibited species that cannot be sold, harvesters in Area M can catch and sell as many salmon as possible during the ADF&G managed openings, regardless of where these salmon originate.

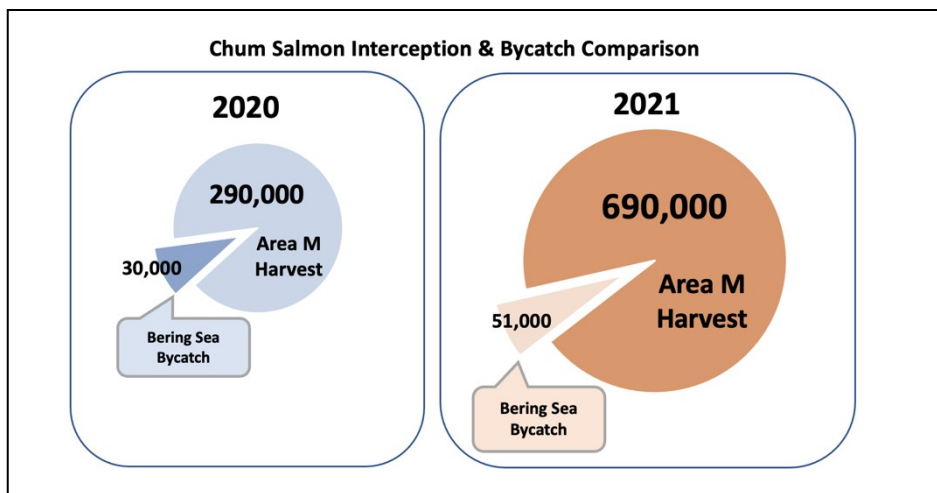


Figure 7: Catch of chum salmon from Coastal Western Alaska and the Middle- and Upper-Yukon in the BSAI pollock fishery (small pie slice) and the Area M South Alaska Peninsula salmon fisheries (remaining portion of pie) in 2020–2021. Stock composition source: Seeb and Crane (1999) and Foster and Dann (2022).

Districts in the South Alaska Peninsula – specifically the commercial fisheries in the South Unimak and Shumagin Islands – are a primary concern to Yukon and Kuskokwim subsistence harvesters. During the month of June, commercial fishing vessels in these Area M districts intercept and sell large numbers of chum salmon bound for the AYK region (Figure 8).

For decades, fishermen from the Kuskokwim and other AYK rivers have urged the Alaska BOF and ADF&G to manage the South Unimak and Shumagin Islands June fishery to avoid intercepting AYK-bound salmon. A previous study (Seeb and Crane 1999) to explore genetic composition of South Alaska Peninsula resulted in a seasonal harvest cap which expired long ago. Continued public outcry led to the creation of the Western Alaska Salmon Stock Identification Program (WASSIP) to further identify the origin of stocks that the Area M fishery depends on.

The Coastal Western Alaska (CWAK) chum salmon genetic stock grouping includes the Kuskokwim, Yukon, Norton Sound, Kotzebue, and Bristol Bay regions, which, at this time, cannot be genetically differentiated. Based on genetic analysis of samples from the commercial salmon fishery in the South Alaska Peninsula during 2007–2009, WASSIP showed that CWAK stocks comprised an average of 57% (range 52%–60%) of the chum salmon harvested (Munro et al. 2012; Foster and Dann 2022; Figure 8). This agreed well with the average of 57% observed in June 1993–1994 by Seeb and Crane (1999; range 15%–72% over periods and years).

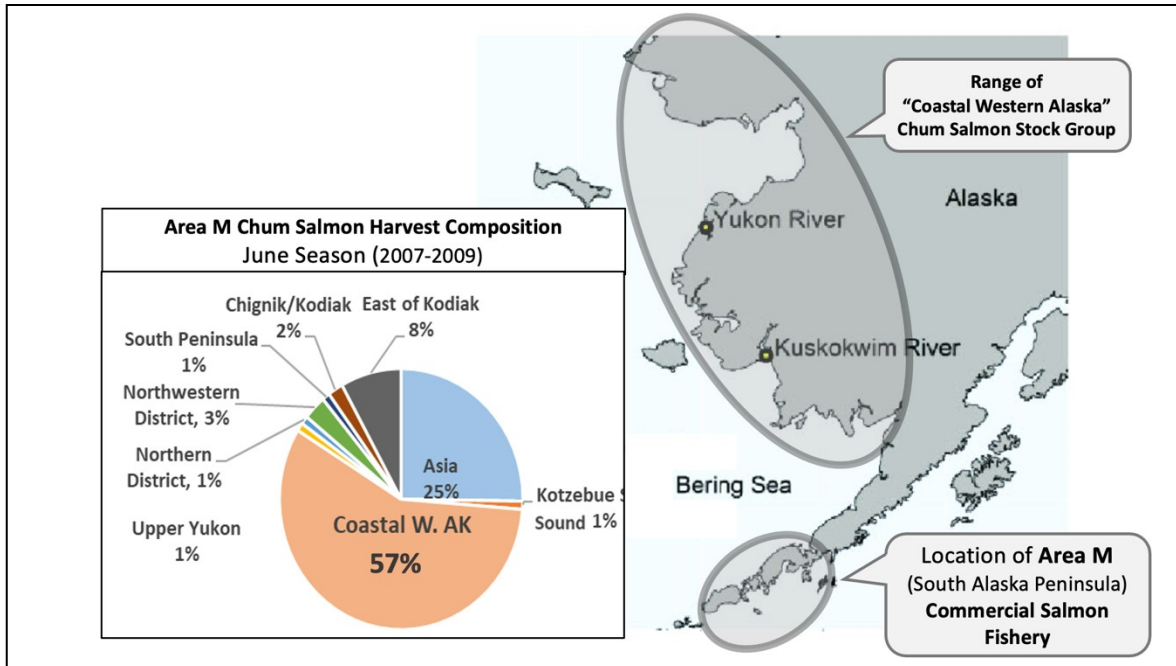


Figure 8: Map of South Alaska Peninsula intercept fishery with inset showing the average genetic composition of chum salmon caught in commercial fisheries there during June 2007–2009 as reported by WASSIP. Source: Munro et al. 2012.

These independent studies, 14 years apart suggest considerable stability in the proportion of CWAK chum in the South Alaska Peninsula commercial intercept fishery during the period 1993-2007. The rationale for assuming CWAK chum salmon currently continue to comprise the majority of the Area M June chum harvest is based on the evidence that Kuskokwim salmon stocks, which rear in the Gulf of Alaska, must pass through the Area M region, making them highly vulnerable to harvest regardless of their total abundance.

WASSIP findings at the time showed that despite the large proportion of chum in the Area M fishery 2007–2009, the harvest rate on CWAK chum salmon was fairly small compared to total returns in their rivers of origin (Munro et al. 2012). With current declines in AYK rivers, the impact is clearly more pronounced. Based on our estimate of the likely number of CWAK chum salmon harvested in the commercial salmon fisheries during the month of June from 1980–2021 (Figure 9), the harvest of Kuskokwim and other AYK region chum salmon stocks in this intercept fishery in recent years has been massive.

In 2021 alone, an estimated 690,000 chum salmon bound for Western Alaska rivers were harvested in the June South Alaska Peninsula (Figures 7, 9). Between 2021 and 2022, a combined total of nearly 1 million CWAK chum salmon were harvested in this commercial fishery. For comparison, that is larger than the total combined estimated chum salmon returns in 2021 to both the Yukon *and* Kuskokwim Rivers.

“

Again, it’s subsistence users as the ones trying to save them. Without my dog team, I don’t take many fish. Some people want to put restrictions on commercial fishing for a bit so the fish come back, but they’ll never stop commercial fishing in the ocean because it’s called ‘progress.’ They say they feed the world. I always say, look what happened to the East Coast, West Coast, and now it’s up here: There’s no more fish. History repeats itself.
Robert Lekander, Bethel (Orutsararmiut Native Council)

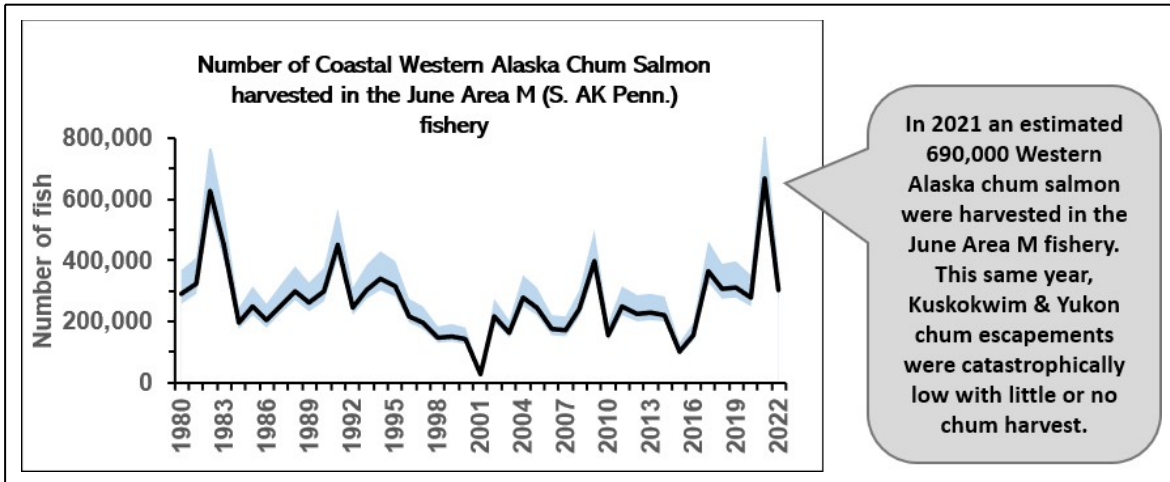


Figure 9: Estimates of the number of Coastal Western Alaska and Yukon River chum salmon harvested in the during the month of June 1980–2021. Data are derived from genetic analysis of chum salmon in the South Alaska Peninsula salmon fisheries sampled in 1993–1994 and in 2007–2009. The dotted line shows the mean estimate of (57% of all harvest), and the shaded area shows the plausible range (51%–72%). Source: Seeb and Crane 1999; Munro et al. 2012; Fox et al. 2022.

Bycatch of Western Alaska Chinook and Chum Salmon in the Bering Sea Pollock Fishery

Bycatch, or the unintended catch of one species while targeting another, also accelerates AYK region salmon declines, including on the Kuskokwim. In the Bering Sea–Aleutian Islands (BSAI) management area, the commercial pollock trawl fishery accounted for 99% and 87% of all 2021 chum and Chinook salmon bycatch, respectively (NOAA 2022). These salmon, many bound for the Yukon and Kuskokwim drainages, are not the target of the pollock fleet. Because of this, Chinook and chum salmon caught by the pollock fishery cannot be sold but must be discarded or donated.

The North Pacific Fishery Management Council (NPFMC) manages chum and Chinook salmon as prohibited species catch in Alaska, meaning they cannot be targeted or sold by federally managed commercial fisheries. In response to record-high chum and Chinook bycatch levels from 2003–2007, the NPFMC implemented Chinook salmon bycatch caps, based on prior year salmon returns to the Kuskokwim, Upper Yukon, and Unalakleet rivers, as well as salmon avoidance incentives for the commercial fleet.

The establishment and strict enforcement of bycatch caps and full observer coverage on-board vessels appear to be effective in significantly reducing Chinook bycatch in recent years. An estimated total of 126,104 Chinook salmon from CWAK rivers were caught as bycatch in the BSAI pollock trawl fishery 2011–2020 (annual average: 12,610 salmon). While there are no new genetic analyses of bycatch since 2020, as of September 29, 2022, over 7,600 Chinook salmon bound toward all genetic reporting regions have been caught as bycatch in 2022 directed BSAI commercial fisheries (NOAA 2022).

Nonetheless, CWAK Chinook stocks comprise the largest portion of Chinook salmon bycatch in the BSAI pollock fishery most years, especially during the A-season (January 20 to April). From 2011 to 2020, CWAK stocks averaged over 44% of the estimated Chinook salmon bycatch, and over 60% of bycatch in some years (Guthrie et al. 2022). From 2017 to 2020, the relative proportion of CWAK stocks caught in the pollock fishery increased from 24% to 52% of Chinook salmon bycatch (Figure 10).

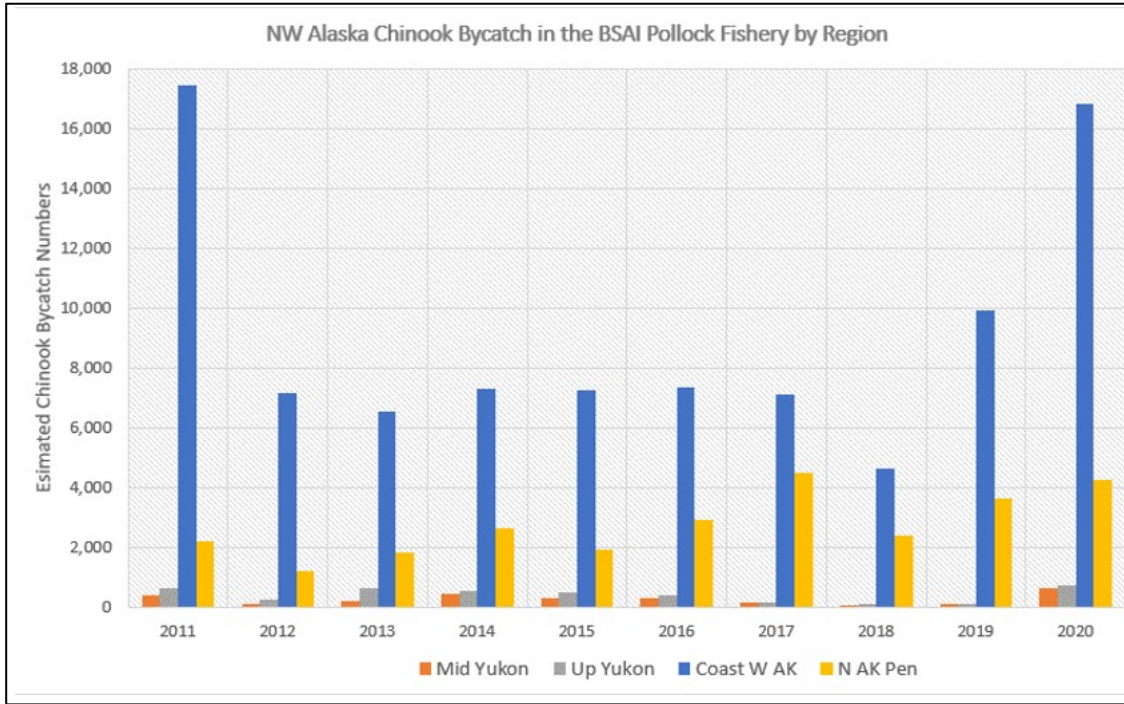


Figure 10: Estimated Chinook salmon bycatch numbers in the BSAI pollock fishery 2011–2020 by northwest Alaska region, with bars showing the origins of different regional stock groupings. Source: Guthrie et al. 2022.

Chum salmon bycatch in the Bering Sea, primarily occurring in the B-season (June 10 to November), increased dramatically after 2011 (Figure 10). The CWAK rivers accounted for approximately 9% of chum incidentally caught in the 2021 BSAI B-season pollock fishery, and an annual average of 37,423 salmon were caught as bycatch during 2011-2021 (Barry et al. 2022; P. Barry, NMFS, pers. com.).

Genetic analyses from recent years confirm that Western Alaska, Upper/Middle Yukon, and Southwest Alaska chum salmon stocks are impacted by pollock trawl bycatch annually. A very low proportion of Upper/Middle Yukon chum salmon were caught in BSAI B-season pollock fishery in 2020 and 2021, which may have been an early indicator that the Upper/Middle Yukon chum salmon are experiencing a decline in stock status. In-season data from 2022 shows over 242,000 chum salmon across all genetic reporting regions have been taken as bycatch through September 29, 2022 (NOAA 2022).

“

We need to look at both ends, from the beginning of the routes of the salmon to the headwaters spawning grounds. Are we conserving salmon for the people in the high seas fisheries and Alaska Peninsula fisheries that are intercepting our fish?

James Nicori, Kwethluk (Organized Village of Kwethluk)

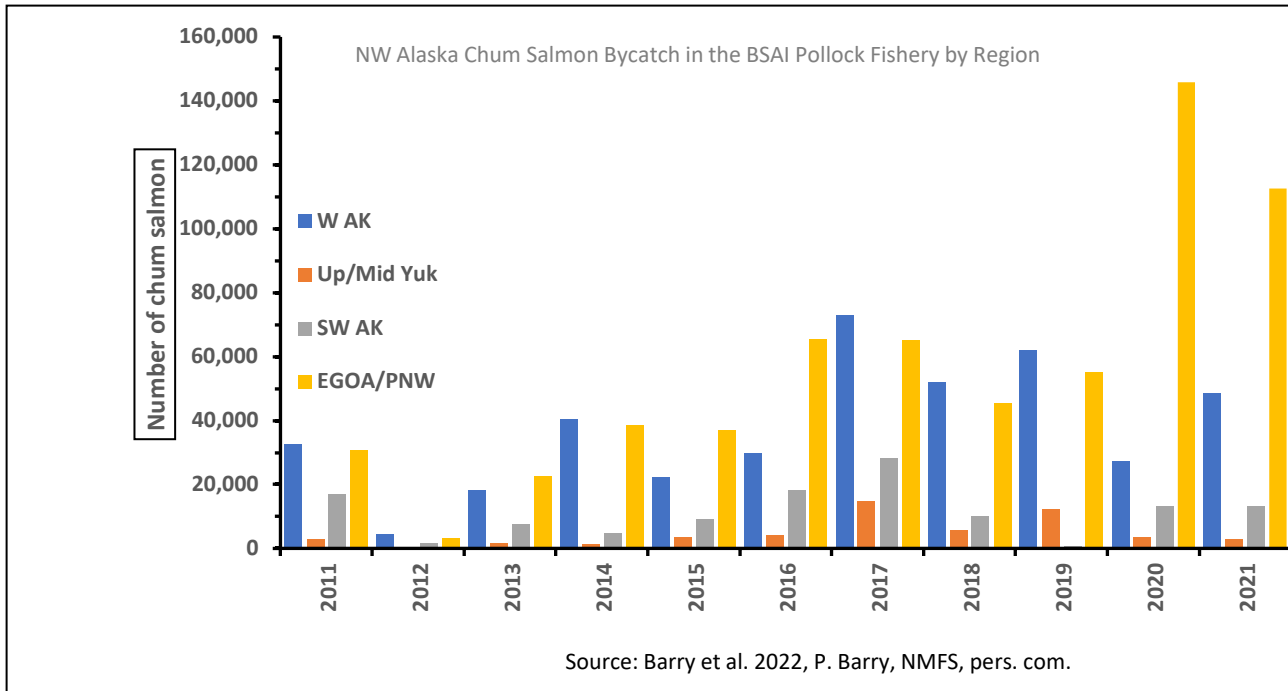


Figure 11: Estimated chum salmon bycatch in the BSAI pollock fishery, 2011–2021 showing bycatch composition by Eastern Pacific reporting group. Source: Barry et al. 2022; P. Barry, NMFS, Pers. com..)

Salmon Intercept and Bycatch Management Concerns

Given the combined impacts of the Area M intercept fishery and BSAI salmon bycatch on AYK chum salmon stocks, it is of grave concern that neither the Alaska BOF nor NPFMC have demonstrated any willingness in recent years to take action to limit the take of Western Alaska chum salmon in the fisheries they manage. Moreover, both state and federal agencies have fragmented systems and prioritize commercial fishery profit over meeting spawner escapement and subsistence harvest needs.

A root problem with NPFMC management of BSAI salmon bycatch and ADF&G management of the South Alaska Peninsula June chum salmon intercept fishery is their disconnection from Kuskokwim and Yukon rivers in-river stock assessments, escapement monitoring, and other best management practices to ensure sustainability of distant stocks that are harvested in this intercept fishery.

For example, ADF&G managers in the AYK region repeatedly claim that they have no authority nor obligation to coordinate with Area M managers to ensure that the Area M fishery is not overharvesting chum salmon stocks essential for escapement and subsistence uses within AYK rivers.

In the BSAI pollock fishery, there is currently no cap or limit on the amount of chum salmon that the pollock fleet can take as bycatch, despite sustained pressure from AYK region Tribes and subsistence users on NPFMC decisionmakers, most recently at the June 2022 NPFMC meeting.

Regulations written in the Alaska BOF policy and federal Alaska National Interest Lands Conservation Act (ANILCA) declare that meeting escapement needs and providing for subsistence uses are to be prioritized over commercial harvests in both state and federal fisheries. However, in practice, the current management regimes under both the Alaska BOF and NPFMC effectively prioritize commercial uses over Western Alaska salmon escapement needs or subsistence uses. For example, in 2021 – when Kuskokwim chum salmon harvests were

severely restricted and Yukon River communities were allowed no harvest opportunities for the entire season – over 740,000 Western Alaska chum salmon were legally caught between both the Area M fishery and the Bering Sea pollock fishery (Figures 7 & 9).

Thus, while subsistence communities on the Kuskokwim and throughout the AYK region are forced to sacrifice their local harvests to help meet escapement goals essential for sustainable salmon management and stock rebuilding, state and federal managers are prioritizing commercial yield and profit. ADF&G and the Alaska BOF solely focus on allocating and managing the commercial harvest among different subdistricts in Area M; meanwhile, escapement and subsistence needs in AYK rivers that have produced the majority of the salmon intercepted in this lucrative fishery for over 100 years are disregarded by Area M managers. BSAI pollock fishing vessels have no mandates to avoid chum salmon bycatch and the NPFMC continues to manage their fishery with a single-species, profit-driven lens.

Essentially, there is no sharing of the conservation burden as downstream harvesters in Area M and marine vessels in the BSAI are focused on maximizing harvest and profits while in-river subsistence harvesters face restrictions to meet escapement goals.

Moving Forward: The Necessity of Collective Conservation & Restoration Efforts

The Kuskokwim River watershed is facing a food security and ecological crisis, given the river-wide declines in Chinook, chum, and coho salmon. This crisis, brought on by the cumulative effects of cross-regional overharvest, unsustainable management, climate change, and other factors, threatens a total collapse of our ecosystem and Indigenous way of life.

Local subsistence users are currently the only users bearing the brunt of conservation and supporting salmon stock rebuilding efforts. Unfortunately, conservation in a mixed-stock fishery means that Alaska Native subsistence users – who rely on salmon for our physical, spiritual, cultural, and economic wellbeing – are unable to fish for healthy runs of sockeye salmon or non-salmon species like whitefish while protecting species of concern.

In-river harvest restrictions imposed upon traditional and customary harvesters of these fish should be a last resort for managers, yet they are currently the only real conservation efforts in place. Salmon originating in the Kuskokwim drainage migrate through many other jurisdictional boundaries during their lifetimes, but instead of approaching salmon conservation from a cross-boundary, ecosystem-centered perspective, agencies maintain management divisions and restrict the fishing communities who depend on salmon to thrive – and who continue to steward the spawning grounds as they have since time immemorial.

Rebuilding and carefully stewarding our salmon runs throughout their lifecycle through co-management, conservation, and community-based monitoring remains our goal. This is critical as the effects of this crisis are not isolated to the Kuskokwim Region. The sustainability, health, and productivity of Alaska’s fisheries, like Area M and the Bering Sea, depend on the careful management of populations elsewhere. It is imperative for all harvesters, managers, executives, and agencies, whether in or out of the Kuskokwim region, to contribute to Western Alaska salmon restoration efforts. Only our collective efforts can halt the decline of our subsistence fisheries that are critical to the wellbeing of this ecosystem and our way of life.

“

I’m worried about the farther-up people, those upriver, who wait around to catch their fish. They don’t meet their needs, and sometimes I think, How can we help the upper river people get fish?

*Ralph Nelson, Napakiak
(Native Village of Napakiak)*

Some people still get fish and hang them, but it seems like the subsistence way of life is dying. There used to be a lot of fish camps, but now they’re run-down, hardly anybody there. Some families sold their property. It’s sad. These people gave up their fish camps. The new generations fish less.

*Paul Cleveland, Quinhagak
(Native Village of Kwinhagak)*

We can’t give up. We’ve got to work together, remember where we came from, help each other, and help our people to work together.

*James Nicori, Kwethluk
(Organized Village of Kwethluk)*

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Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 10:08 AM

First Name

Justin

Last Name

Wilson

Community of Residence

King Cove, AK

Write your comment here:

ARC 1, I agree with the 500 pot limit, I do not agree with the 10,000 pot cap. Thanks

ACR 1

Support With Amendments

Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 5:56 PM

First Name

Corey

Last Name

Wilson

Community of Residence

King cove Alaska

Write your comment here:

ACR#1 I do not think the 10,000 pot cap is a good idea

ACR 1

Support With Amendments

Board of Fisheries - Work Session Comment Form

Submitted Time: October 11, 2022 6:31 PM

First Name

Marissa

Last Name

Wilson

Community of Residence

Homer

Write your comment here:

My name is Marissa Wilson and I fish for salmon and halibut with my partner. We aspire to remain skiff fishermen for life. Our small-scale operation is essential for our food security as well as others in our community, and the ability for our skiff to work a diversity of gear types is of great importance as fish stocks shift in abundance and location. Adaptability is the name of the game for small-scale fisheries in a changing climate, and small-scale fisheries have always been central for human life on these coastlines. The future should be no different.

I am writing in support of ACR 08 and request an amendment to it to also allow for the longlining slinky pots in the Pacific cod fishery in Kachemak Bay waters of the Cook Inlet management area.

Conventional cod pots won't work with our skiff, and while we are eager to jig cod, there are times of year when pot fishing simply makes more sense - especially when weather prevents us from traveling long distances.

Thank you for the opportunity to comment.

ACR 8

Support With Amendments

Board of Fisheries - Work Session Comment Form

Submitted Time: October 8, 2022 12:13 PM

First Name

Josh

Last Name

Wisniewski

Community of Residence

Seldovia, Alaska

Write your comment here:

My name is Josh Wisniewski. I live at 2366 Barabara Creek Road in Seldovia. I am a skiff fisherman and salmon setnetter, and fish halibut out of a 22ft cabin skiff from where I live at Barabara Point. I am writing in support of ACR 08 and request an amendment to it. I wish to see it broadened to allow for the longlining slinky pots in the Pacific cod fishery in Kachemak Bay waters of the Cook Inlet management area.

Under the current management structure and allowable gear types of the fishery, small boats like mine are logistically excluded from important access points. Longlining for Pacific cod was historically a lawful gear type, and did allow small scale Kachemak Bay fisherman such as myself an opportunity to participate in this fishery. This was an important open access fishery for small scale fishermen, with a gear type that was workable in a small vessel. That is no longer allowed.

Jig fishing Pacific cod is feasible and allowed in a small boat, and that is effective for a portion of the season. However, there are large portions of the cod season that jig fishing is not plausible cod are often more dispersed during parts of the year and are not aggregated in areas that are geographically accessible. Finding areas that cod are effectively aggregated and available for jig fishing would require me to travel a distance and to grounds that would be prohibitively unsafe and not cost effective during much of the year.

Pot gear, however, offers an effective method of harvest in accessible areas the majority of the Pacific cod season. But a small boat such as mine cannot pot fish conventional cod pots. The weight and space are not workable on my small vessel. Long lining slinky pots would be workable, but are designed to be long lined and cannot be fished as a single pot. Therefore, based on current gear restrictions, I am largely excluded from participation in the fishery based on vessel size, due to outdated gear restrictions.

With the current configuration of my boat I would be able to immediately participate in this fishery from my home as a day fishery if longlining slinky pots was allowed. I have spoken with local buyers who are specifically interested in buying fish from small scale fisherman for their local markets, and would purchase local, low-volume, small boat caught Pacific cod.

Allowing for long lining slinky pots in the Pacific cod fishery in Kachemak Bay would contribute directly to local food security, would enable a small-scale fisherman like myself the opportunity to participate in this open access fishery, and would bolster small scale markets. As a small boat operator, fishing out of a 22ft boat, it is unlikely that I would fish up to the existing limit of 60 pots. Allowing for the use of slinky pots here in Kachemak provides an opportunity for me to benefit as a small-scale fisherman by diversifying the fisheries I can participate in, and provides increased opportunity, that is currently otherwise lacking in my area. It also promotes diversification, and small scale fishing, which are the oldest and the most sustainable form of fishing

Allowing this gear type, which was not established when current regulations were developed, does not pose a conservation issue and allowing their use is supported by area management. The reasoning given by the proposer of ACR 08 for accepting this out of cycle is also directly applicable to Cook Inlet fishermen. Therefore, I support ACR 08 and request it be amended to include Kachemak Bay. This would provide an important access opportunity for small scale fishermen who live and fish in these waters to participate in the Pacific cod fishery in Cook Inlet.

Thank you for your consideration of this request.

ACR 8 - Support With Amendments

Board of Fisheries - Work Session Comment Form

Submitted Time: September 15, 2022 7:00 AM

First Name

Max

Last Name

Worhatch

Community of Residence

Petersburg, AK

Write your comment here:

ACR 2- SUPPORT. With the growth in population of sea otters throughout much of the region, we have lost virtually all of district 5, a majority of district 6 and district 9. These areas were major contributors to the catch data compiled when the current regulation was adopted. As stated by the proposer, there couldn't have been a consideration of losing the catches to the magnitude that has occurred when the regulation was adopted.

ACR 2 - Support



Cordova District Fishermen United
 PO Box 939 | 509 First Street | Cordova, AK 99574
 phone. (907) 424 3447 | fax. (907) 424 3430
 web. www.cdfu.org

October 10, 2022

Alaska Board of Fisheries
 P.O. Box 115526
 Juneau, AK 99811-5526

RE: Agenda Change Requests for Alaska Board of Fisheries Work Session October 25-26, 2022

Dear Alaska Board of Fisheries,

Cordova District Fishermen United advocates on behalf of the commercial fishermen of Area E, which includes Prince William Sound, the Copper River region, and the northern-central Gulf of Alaska.

We are in strong support of Agenda Change Requests 4-10 regarding Prince William Sound Groundfish. Preserving and transitioning this fishery is important. While these discussions would be out-of-cycle, these ACRs address very timely issues that conserve the fishery, improve opportunities for fishermen, and reduce bycatch with a cleaner gear type technology that was not widely adopted during the last in-cycle meeting's call for proposals.

ACR4 - to extend the Prince William Sound state waters sablefish season.

ACR5 - Repeal prohibition on retaining sablefish caught in the federal fishery while participating in the Prince William Sound sablefish fishery during the same trip.

ACR6 - Change gear type allocations in the Prince William Sound Pacific Cod Management Plan and repeal provisions allowing the mechanical jig, hand troll, and pot gear allocation to step-up/step-down annually for the state-waters season.

ACR7 - Increase pot limit in the Prince William Sound state waters Pacific cod fishery.

ACR8 - Allow groundfish pots to be longlined in the Prince William Sound Area.

ACR9 - Adopt gear marking requirements for longlined pot gear in the Prince William Sound Area.

ACR10 - to reduce waters closed to commercial fishing for groundfish with pot gear in Prince William Sound.

We greatly appreciate the consideration given to these groundfish issues on a timeline that best supports the fisheries and our fishermen.

Sincerely,

Ezekiel Brown
 President

Jess Rude
 Executive Director