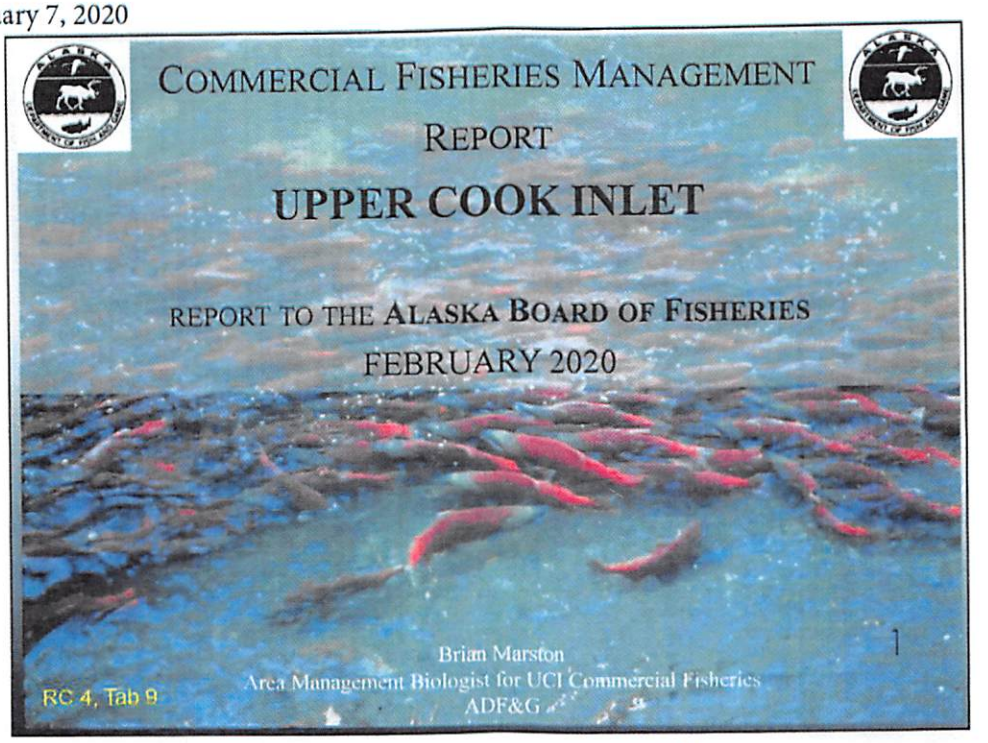
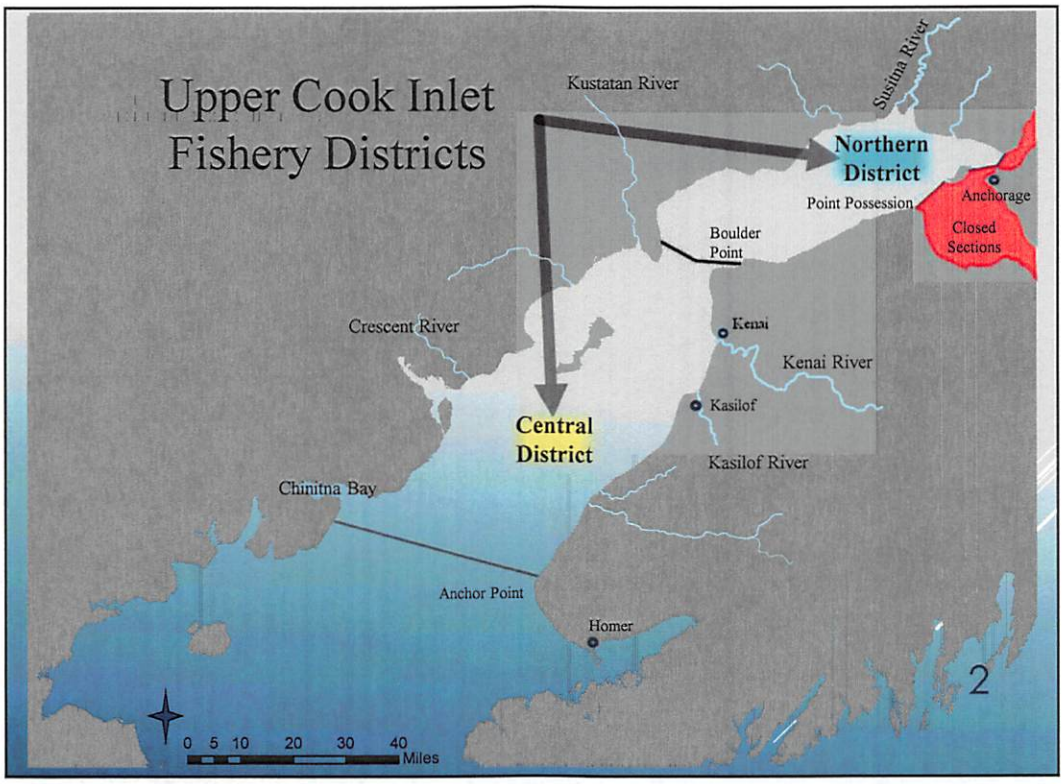
Submitted by the Alaska Department of Fish and Game at the request of Board Member Märit Carlson-Van Dort
February 7, 2020

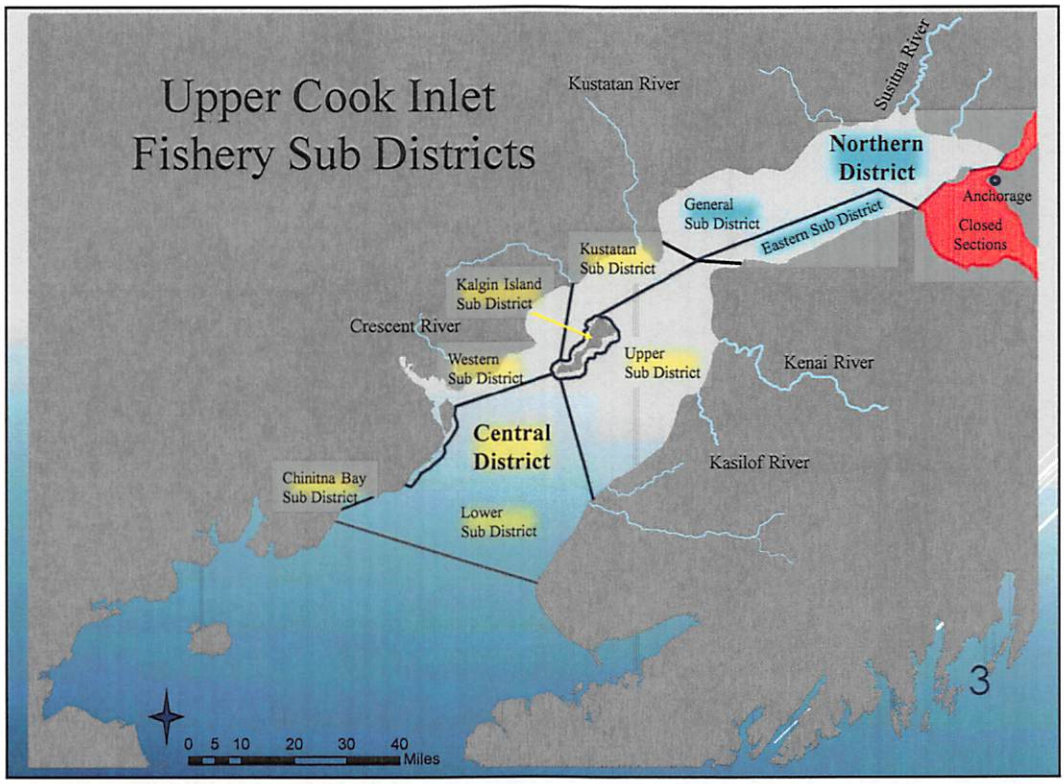


Afternoon

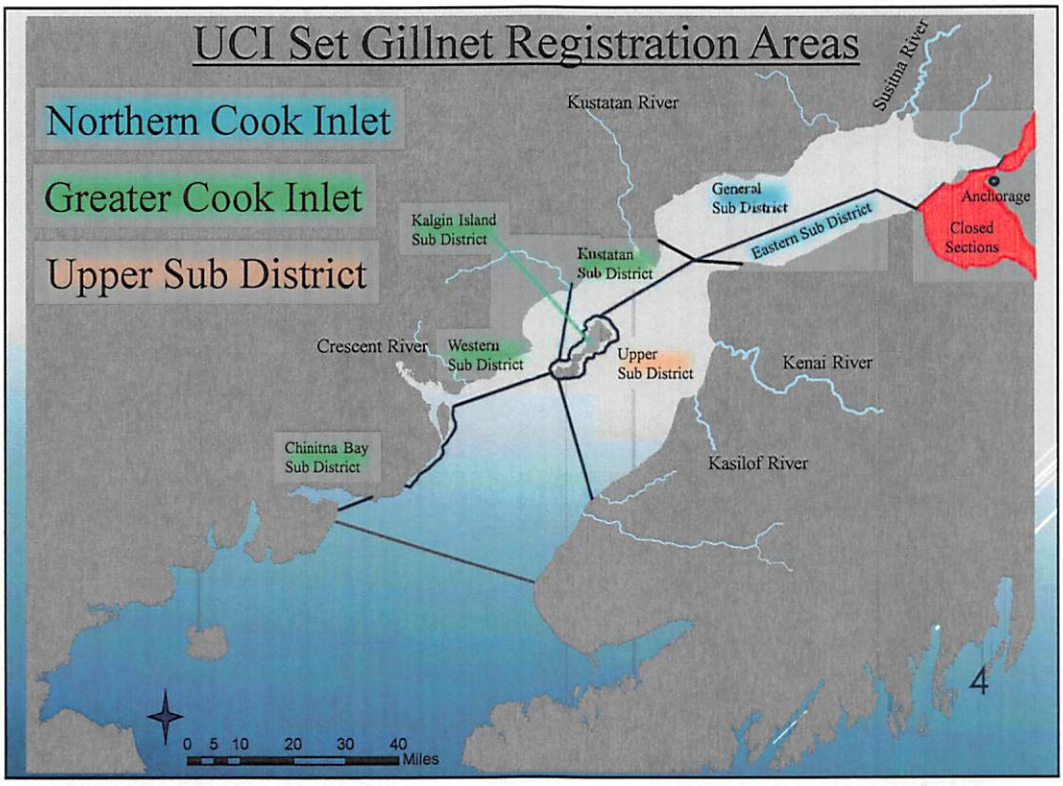
Mr. Chairman and board members, good morning. I am Brian Marston the Area Management Biologist for Upper Cook Inlet Commercial fisheries. I will be presenting the Commercial Fisheries Management Report. This report can be found in RC 4, Tab 9.



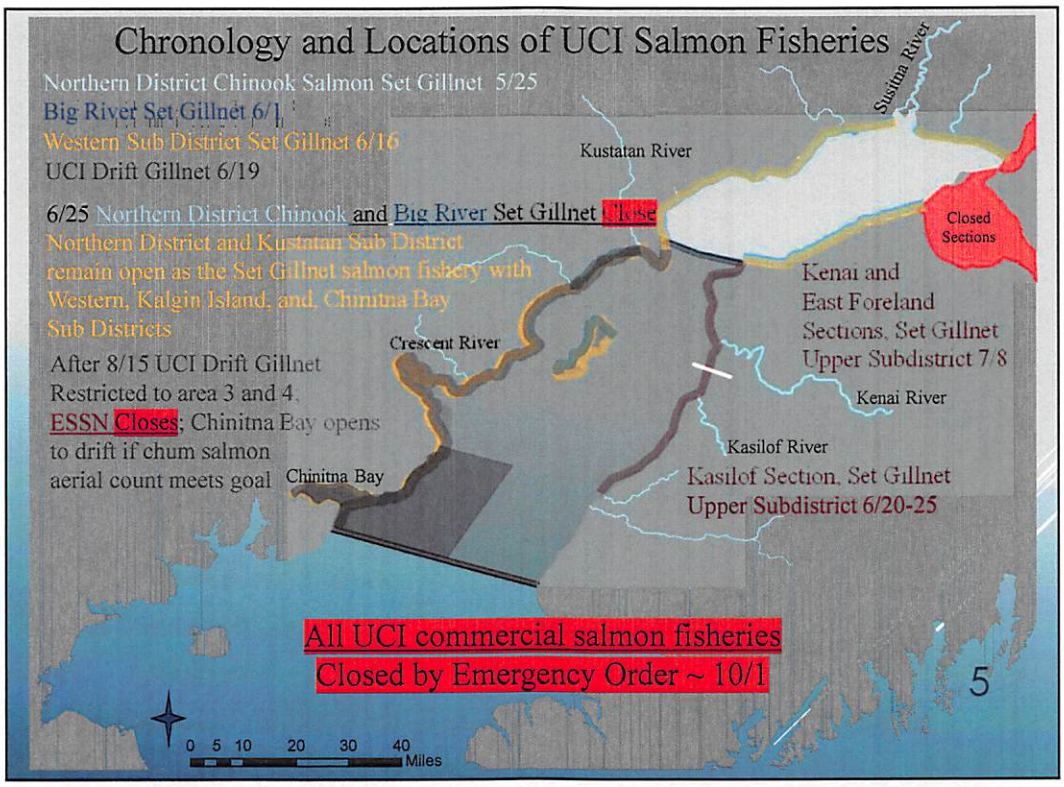
The Upper Cook Inlet Management Area consists of the waters North of the latitude of Anchor Point / and is divided into the CENTRAL and NORTHERN Districts. Drift gillnetting is allowed only in the Central District, while set gillnetting is allowed in both Districts



The two Districts are broken into Subdistricts / 2 in the northern district / and 6 in the Central District. Set gillnet fisheries of the Upper subdistrict near the mouth of the Kenai and Kasilof rivers make up the ESSN fishery.



Set gillnet permit owners must register with the department prior to fishing in UCI / and there are three registration areas. / Once registered a permit owner can not change registration areas that year.



This next selection of slides is a chorological summary of opening and closing dates and locations for UCI salmon fisheries progressing counterclockwise from the north / down the west side of UCI and back towards the east. click

The Northern District set gillnet Chinook salmon fishery begins of May 25 click

And the Big River sockeye salmon set gillnet fishery begins on June 1. click

The Western Subdistrict set gillnet fishery then begins on June 16 click

The Drift gillnet fishery begins on the third Monday in June or June 19th. click

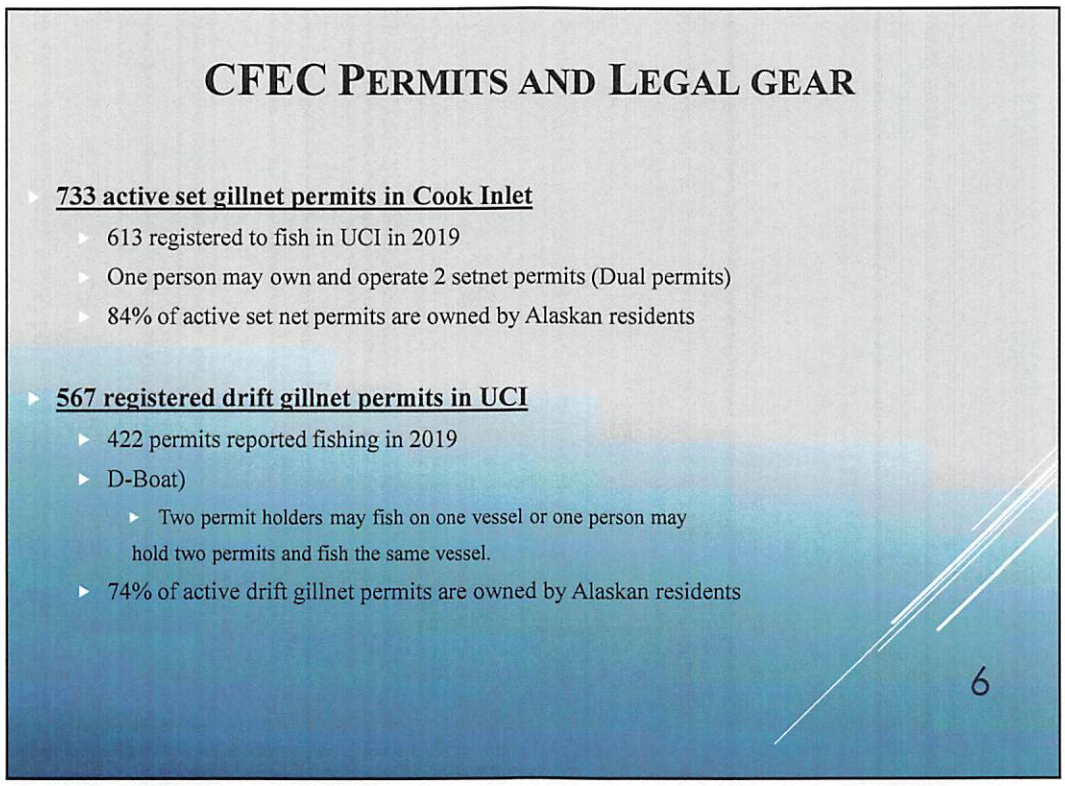
Then on June 20 the Kasilof section set gillnet fishery may open if 50,000 sockeye are estimated in the Kasilof river / otherwise it opens on June 25th click

Also on June 25th the ND Chinook salmon set gillnet fishery closes / but the ND remains open with Western, Kalgin, Kustatan and Chinitna bay sub districts for salmon. click

On July 8 the Kenai and East forelands sections set gillnet opens / this marks the first date the entirety of UCI could be open. click

After August 15th the ESSN closes / and Drift fisheries are restricted to areas 3 and 4 / Chinitna Bay may also open to drift gillnetting if chum salmon aerial counts show that a Chum salmon SEG will be met. click

All fisheries close ~ October 1st when harvest and effort cease



In UCI, there are currently 733 registered limited entry set gillnet permits/ 613 permit holders registered to fish in 2019 / and average is 608 for registrations / 84% of active set gill net permits are owned by Alaskan residents// Standard gear regulations for set gillnet permits allow nets with up to 6 in mesh, up to 45 meshes deep, and a total of 105 fathoms in length / One person may own two set gillnet permits and operate two full complements of gear in most of UCI (referred to as Dual permit holders) / However, In the ESSN fishery / dual permit holders must fish their second complement of gear with nets that are only 29 meshes or less in depth.

In the drift gillnet fishery, there currently are 567 registered permits. 422 reported fishing in 2019. 422 is average for number of drift permits reporting fishing. 74% of active drift gillnet permits are owned by Alaskan residents. Standard drift gillnet gear regulations allow nets with up to 6 inch mesh, up to 45 meshes deep, and 150 fathoms in length.

In the drift fishery, two individual permit holders may fish on one vessel, or one person may own two permits, both scenarios are referred to as D-boat fishing. D boat vessels can fish only up to up to 200 fathoms of gear in length.

Moving on to fishery management specifics....

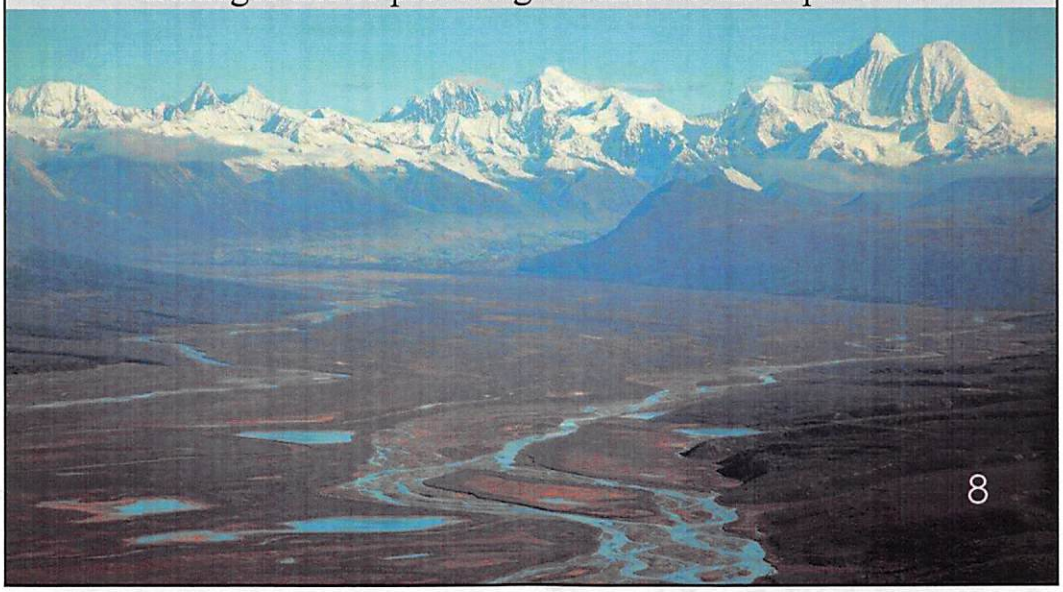
There are 12 management plans that govern commercial fishing in UCI / Of these plans 1-10 above affect commercial salmon fishing / Those plans highlighted in yellow contain restrictions where management steps distribute restrictions among commercial, PU, and sport user groups / The other 7 plans are directed at commercial fisheries.

For this meeting along with several miscellaneous proposals for specific commercial fisheries regulation, there are 55 proposals directed at the above plans / more than half of which are directed at the CDDGMP and the KRLRSSMP / Additionally, 11 proposals are directed at the KRLKSMP / and 9 proposals are directed at the two northern district management plans / Two proposals are also directed at Pink and Chum salmon each.

There are no proposals directed at herring / and one proposal directed at smelt management for this meeting.

NORTHERN DISTRICT KING SALMON MANAGEMENT PLAN

The purpose of this management plan is to ensure an adequate escapement of Chinook salmon into the Northern District drainages and to provide guidelines to the department.



I will now speak to 6 primary management plans of UCI commercial fisheries and recount some relevant harvest and fish population statistics.

The first commercial fishery to open is the Northern District directed Chinook salmon fishery / prosecuted under the Northern District King Salmon Management Plan.

Chinook Abundance

FDS 18-16

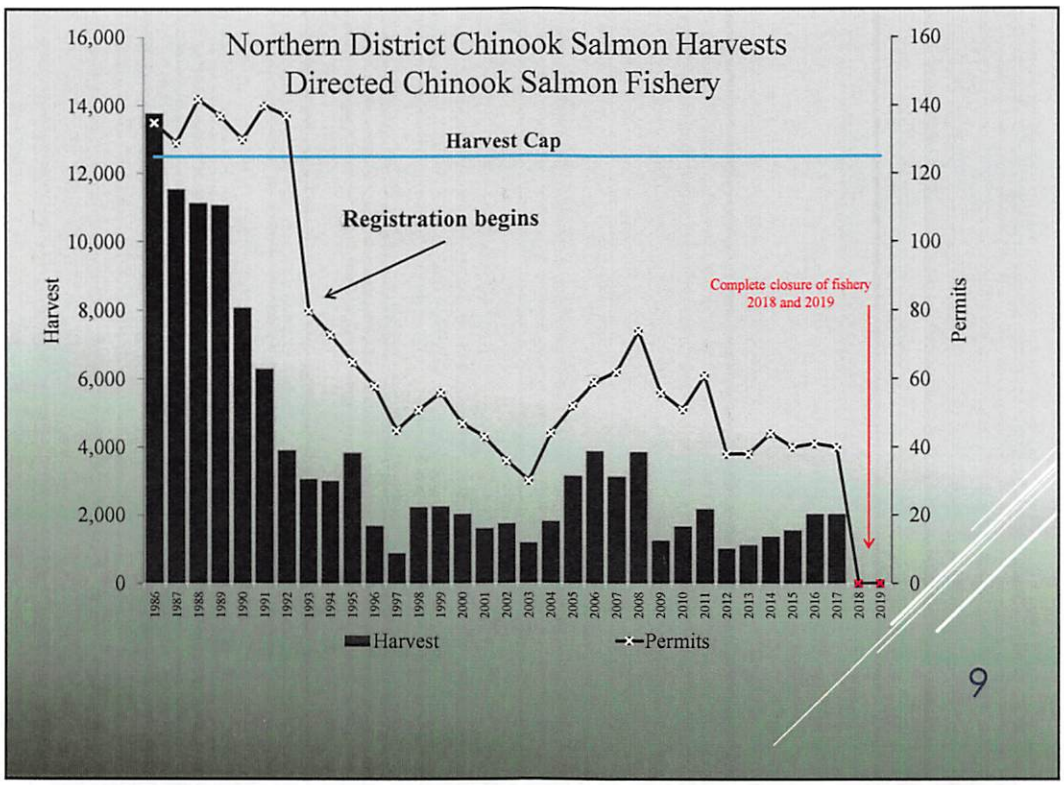
Yanez et al.

Table 5 page 15

FDS 20-04

Accovich et all

Table 5 page 27

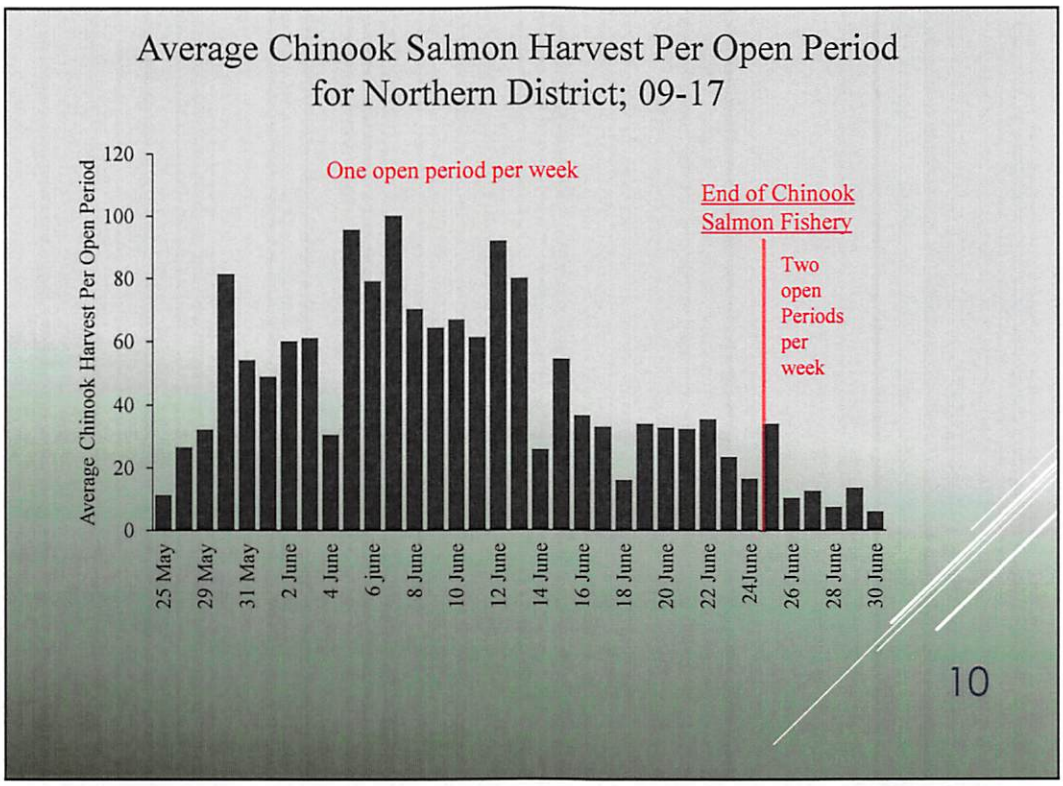


This chart shows total harvest by year in ND Chinook salmon fishery

The fishery was initially set up with a harvest cap not to exceed 12,500 (blue line in above graph of harvest) / which was believed to be approximately 10% of the Chinook salmon run into the Susitna River drainage.

Beginning in 1993 registration requirements significantly reduced the number of permit holders participating / From 1993 to 2017, on average 51 permit holders per year harvested approximately 2,150 Chinook salmon / Genetic studies showed that about half of these Chinook salmon were from Susitna River Chinook salmon stocks, or approximately 1% of the total run size.

Most recently in 2018 and 2019 the fishery has been completely closed due to low Chinook salmon abundance.



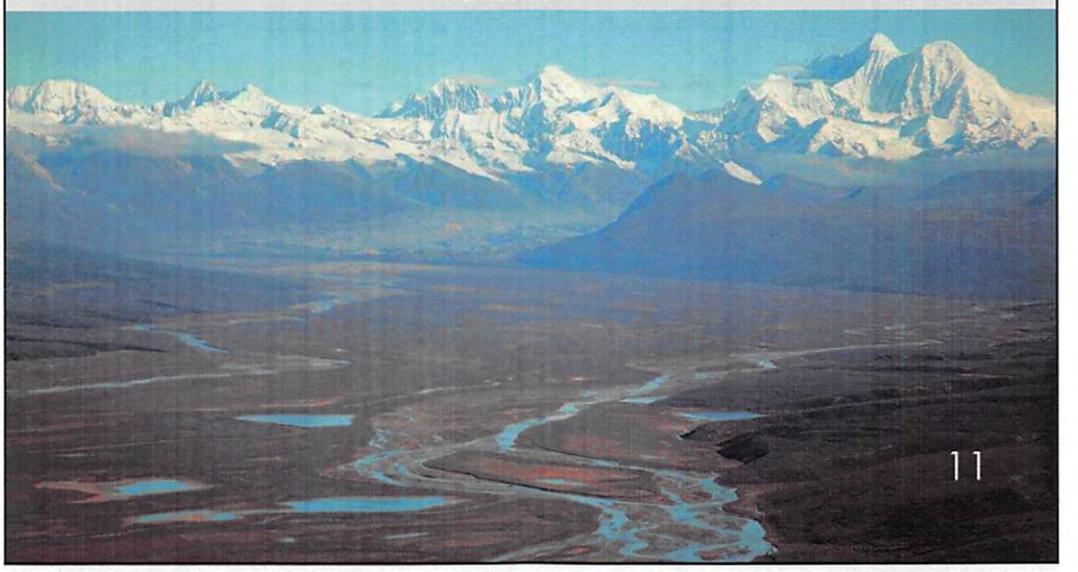
This chart shows the relative change across time of average **daily** Chinook salmon harvests by date of opening for the last ten years in the Northern District thorough June 30.

Note that prior to June 25th the NDDCS fishery is only open one day per week, and after the 25th the ND salmon fisheries are only open two days per week.

Chinook salmon harvest declines sharply after mid June / and is less than 15 fish per open period After June 24th / the regulatory end of the Directed Chinook salmon fishery / Beyond this graph after July 1 / the average harvest declines further to less than 5 fish per open period, and by July 15 it is less than 2 fish per open period.

NORTHERN DISTRICT SALMON MANAGEMENT PLAN

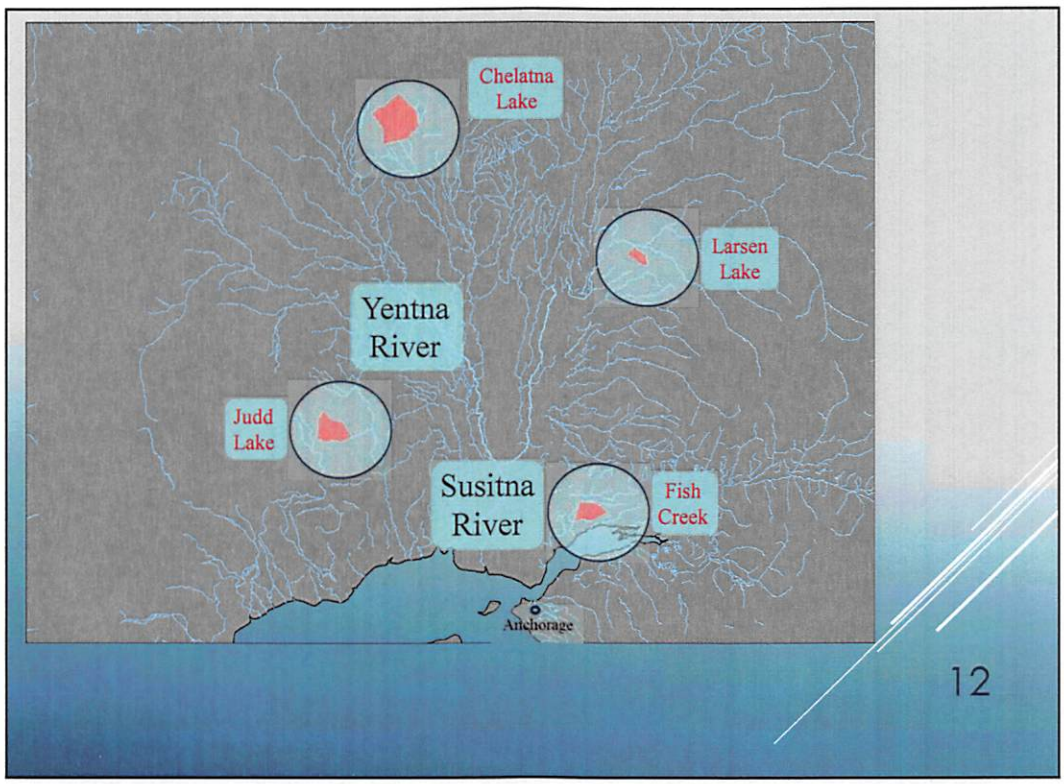
This plan directs the department to manage chum, pink, and sockeye salmon primarily for commercial uses, but also states the purpose of the plan is to minimize the harvest of coho salmon bound for the Northern District.



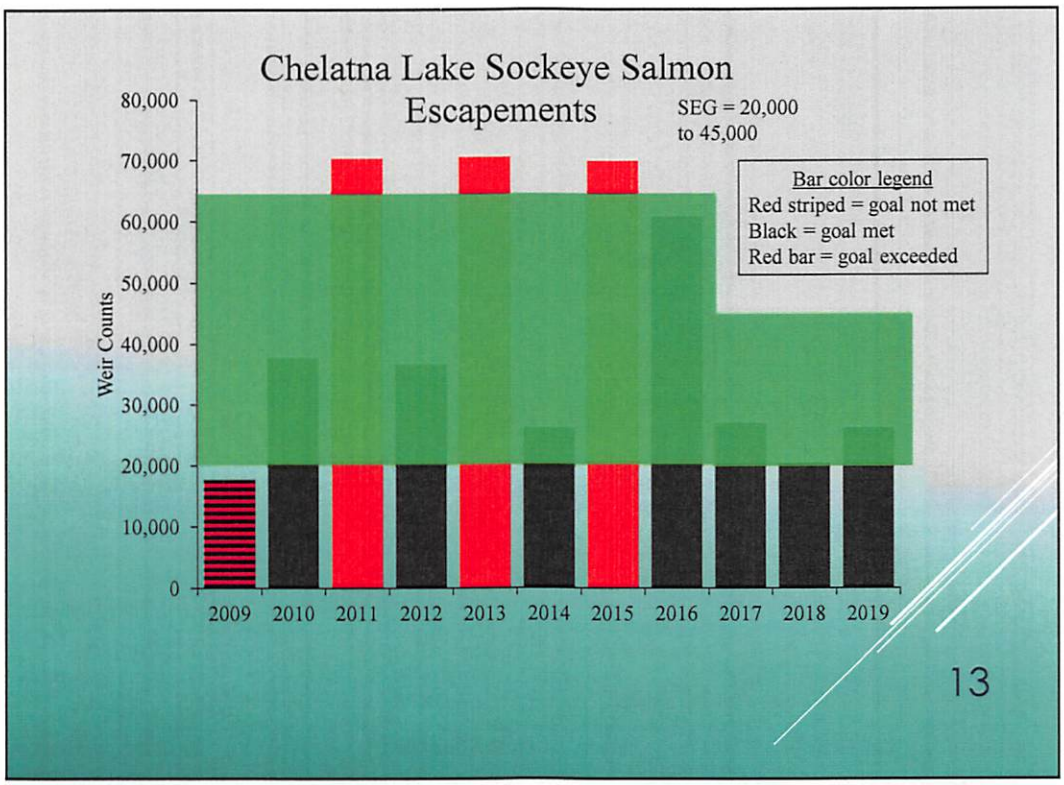
The Northern District set gillnet fishery begins June 25 / Management of this fishery follows provisions found in the Northern District Salmon Management Plan.

This plan directs the department to manage chum, pink, and sockeye salmon primarily for commercial uses / while minimizing harvest of ND coho salmon / Achievement of minimization is stipulated within the plan by not allowing extra fishing periods when coho salmon are expected to be the most abundant species harvested / and also, by not allowing any extra fishing periods other than regular Mon/Thurs periods after August 15.

Additionally, this plan contains gear reductions for the ND fishery to conserve Susitna sockeye salmon. These were developed after the Susitna sockeye became a SOYC in 2008 / Subsequently, these restrictions were codified in regulation, for use from July 20 to August 6.



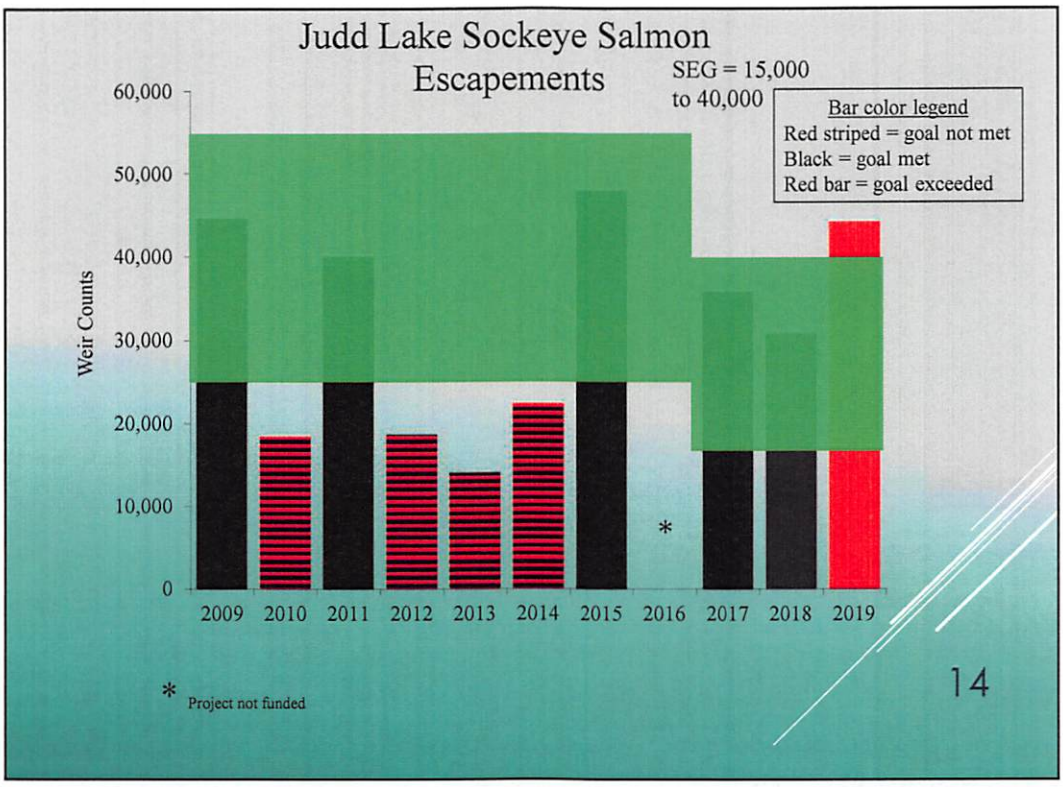
In the Northern District there are 4 sockeye salmon escapement goals monitored at weirs at Judd & Chelatna Lakes in the Yentna River drainage / Larson Lake in the Susitna River drainage / and at Fish Creek, which drains into ~~Knik Arm~~.



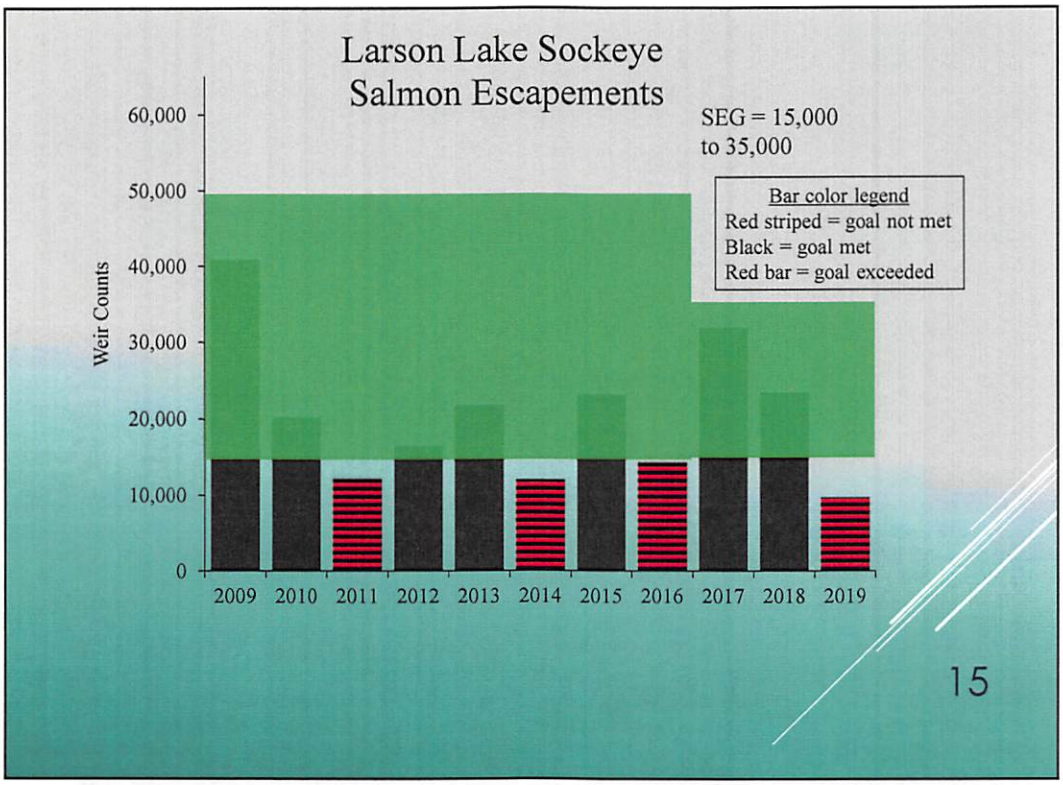
These Susitna drainage weirs have been run since 2009 with SEGs. of Sustainable Escapement Goals

Escapement goals often change across years. Note that in this graph and other escapement graphs of this presentation, the escapement goal ranges are depicted by the green block shading running horizontally across each graph. Then each year's fish count corresponds to the bar shown in relation to the goal each year. Years that fish counts were below the goal range are striped red (such as 2009), those within the goal are black (such as 2010), and those that exceed the goal are solid bright red (2011).

At Chelatna Lake the SEG was 20,000 - 65,000 sockeye salmon. And is now 20 - 45,000, Since 2009, the SEG range was not achieved 1 year, was met 7 years, and exceeded 3 years.

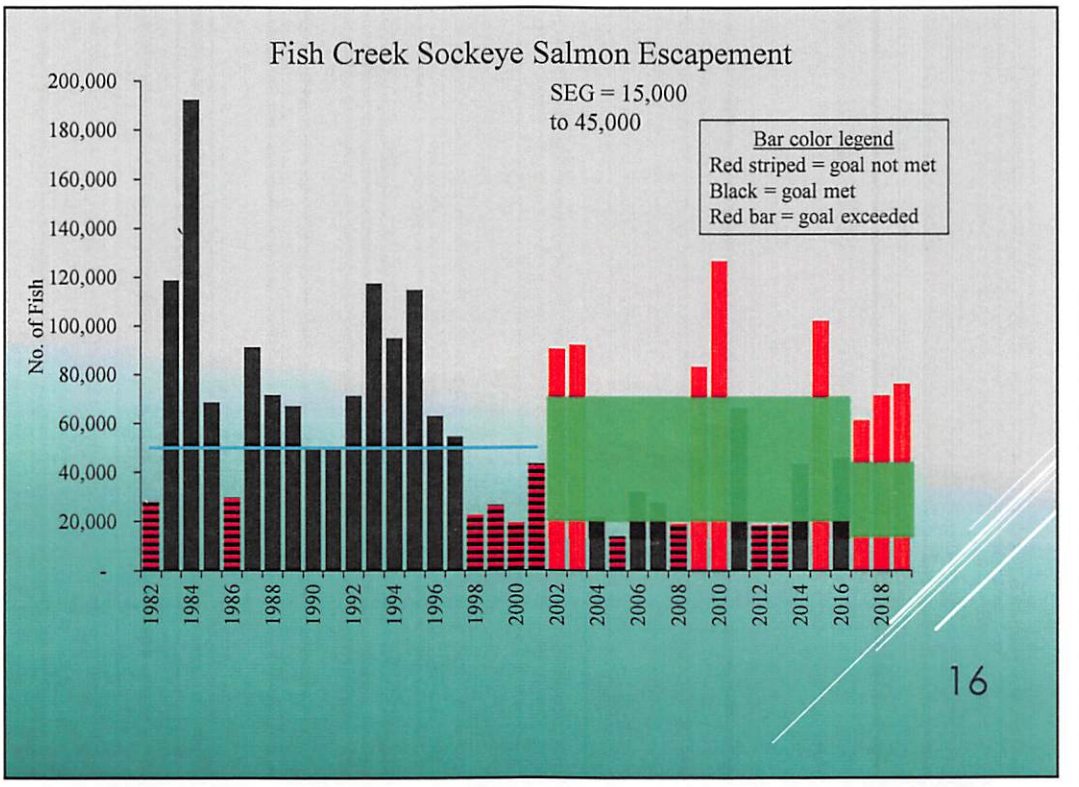


At Judd Lake the SEG was 25,000 to 55,000 sockeye salmon and is now 15-40,000. Since 2009 the SEG range was not achieved 4 years, met 5 years, and exceeded 1 year.



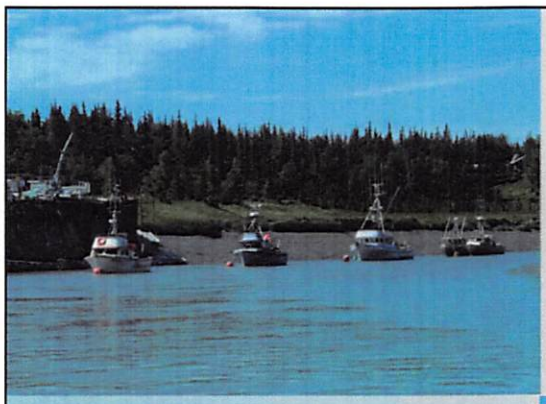
At Larson Lake the escapement goal was 15,000 to 50,000 sockeye salmon and now is 15,000 – 35,000.

Since 2009, at Larsen Lake, the SEG range was not achieved 4 years, and was achieved 7 years.



Fish Creek has a longer history of sockeye salmon assessment / The escapement goal at Fish Creek has changed from a 50,000 fish point goal (marked here in blue) then to an SEG range of 20 to 70 thousand fish (in green). From 2002 to 2016, the SEG was not achieved 4 years, was met 6 years, and exceeded 5 years.

The newest SEG since 2017 at Fish Creek is 15,000 to 45,000, which has been exceeded every year.



Kasilof River Salmon Management Plan

Provides direction to the department for management of Kasilof River sockeye salmon from June 25 through July 7.

Kenai River Late-Run Sockeye Salmon Plan

States that the department shall manage Kenai River late-run sockeye salmon stocks primarily for commercial uses based on abundance, while minimizing the harvest of Northern Dist. coho, late-run Kenai River Chinook, and Kenai River coho salmon.

Set gillnetting in the Upper Subdistrict, referred to as the ESSN Fishery, is governed directly by two management plans The Kasilof River Salmon Management Plan and the Kenai River late-run Sockeye Salmon Management Plan.

There is a BEG for the Kasilof River of 160-340 sockeye salmon

The Kasilof River Plan is utilized from June 25 through July 7. During this time, the Kasilof Section is open for reg Mon/Thu 12-hour fishing periods. Additional time is limited to 48 extra hours per week with a mandatory 36 hr no fishing window on Thursday to Friday. Use of the Kasilof River Special Harvest Area is also in this plan, as are options to reduce the area of open periods.

The plan also stipulates an OEG of 160-390,000 sockeye salmon for the Kasilof River to be used when the Kenai River sockeye salmon escapement goal is not being met.

Beginning July 8, the ESSN fishery follows the Kenai River late-run Sockeye Salmon Management Plan which stipulates restrictions in order to conserve northern bound salmon, as well as Kenai coho, and late run Chinook salmon.

Fisheries are managed to:

1. Meet an SEG of 700,000 – 1,200,000 sockeye salmon in Kenai River.
2. Achieve inriver goals based on total run size.
3. Distribute escapements of sockeye salmon evenly within the SEG range.

$Fish Gunc Found

Sockeye Plan

Tiers

2.3 X 24 hours (48)

2.3 - 4.6 X 51 (75) hours, W m t F

4.6 X 84 (108) hours W F

King Plan

No Bait 48h → W = F

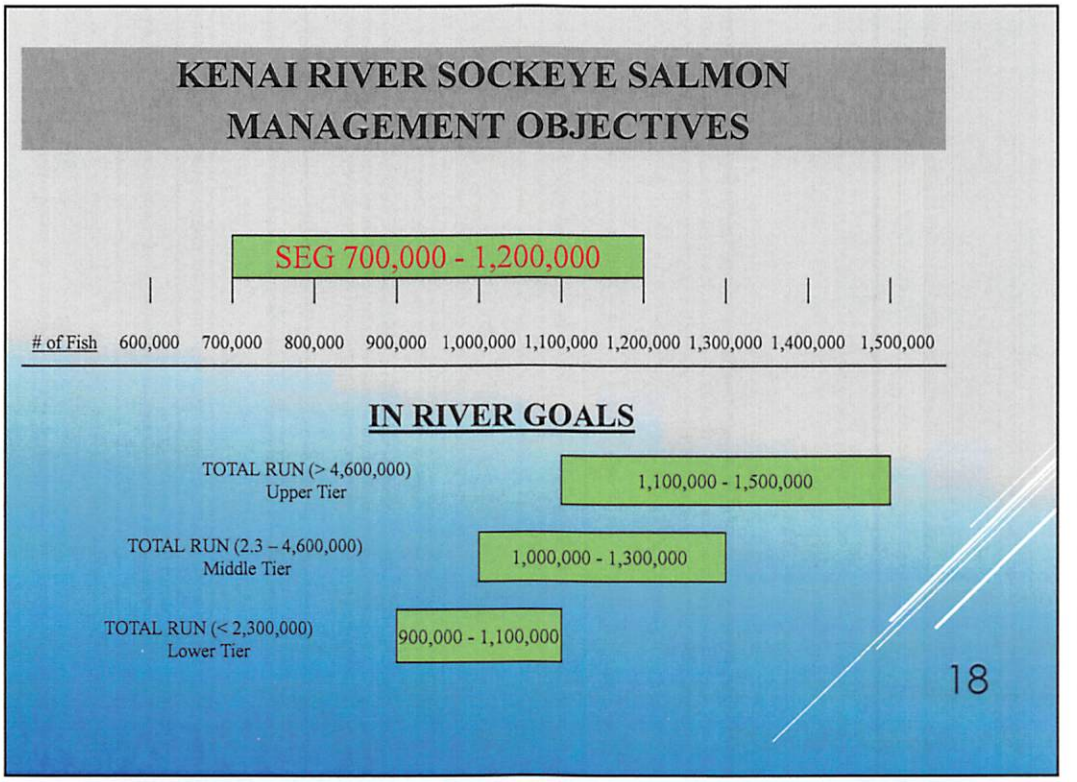
No Retention 24h → W = F

Close = close Set, Drift
1 mile of Kenai N
1.5 mile Kenai S

Gear (i) 4 at 29 depth
2 at 45 depth

(35 fathoms max 105 Total)

(ii) 2 at 29
1 at 45

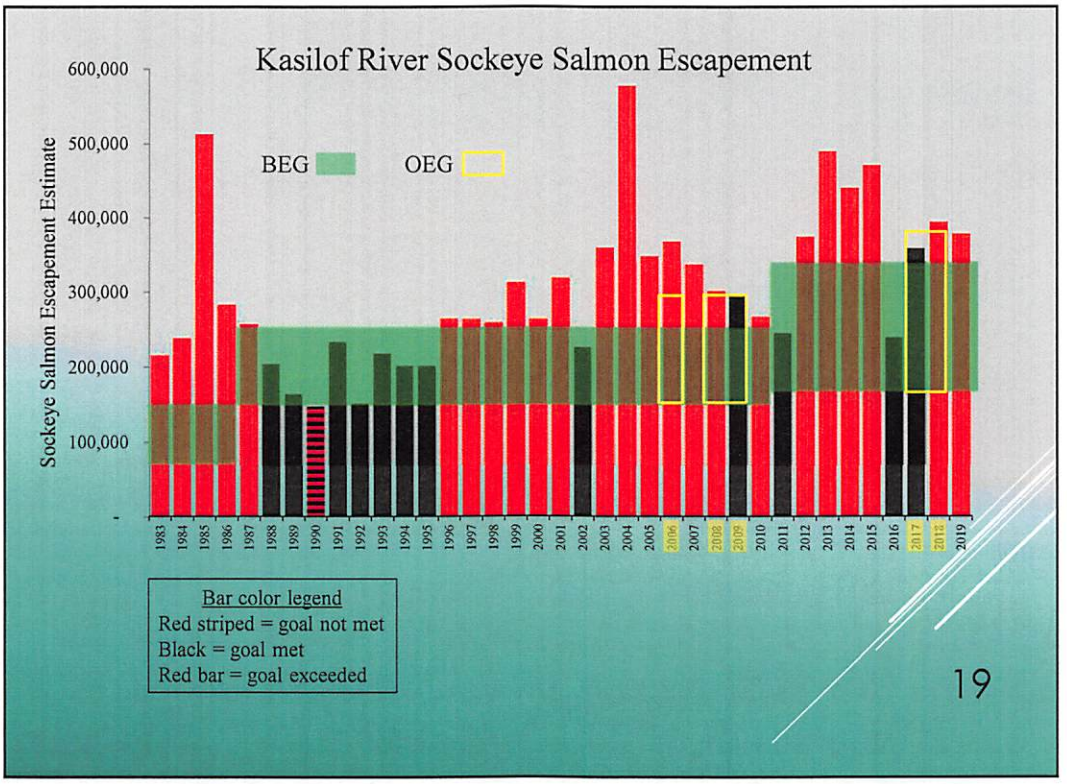


Currently as just mentioned the KRLRSSMP contains inriver goals and the department derived SEG.

The current SEG is depicted at the top of the chart with red font and the three in river goals are below.

The three IRG levels, referred to as tiers, were established to spread escapements evenly based on total run size. The inriver goals are achieved by altering commercial fishing time and area.

Each year assessments of total run size of Kenai River Sockeye dictate which in river goal or tier is used. Each tier then dictates how many hours are available to the ESSN fishery with larger in river goals allowing more hours.



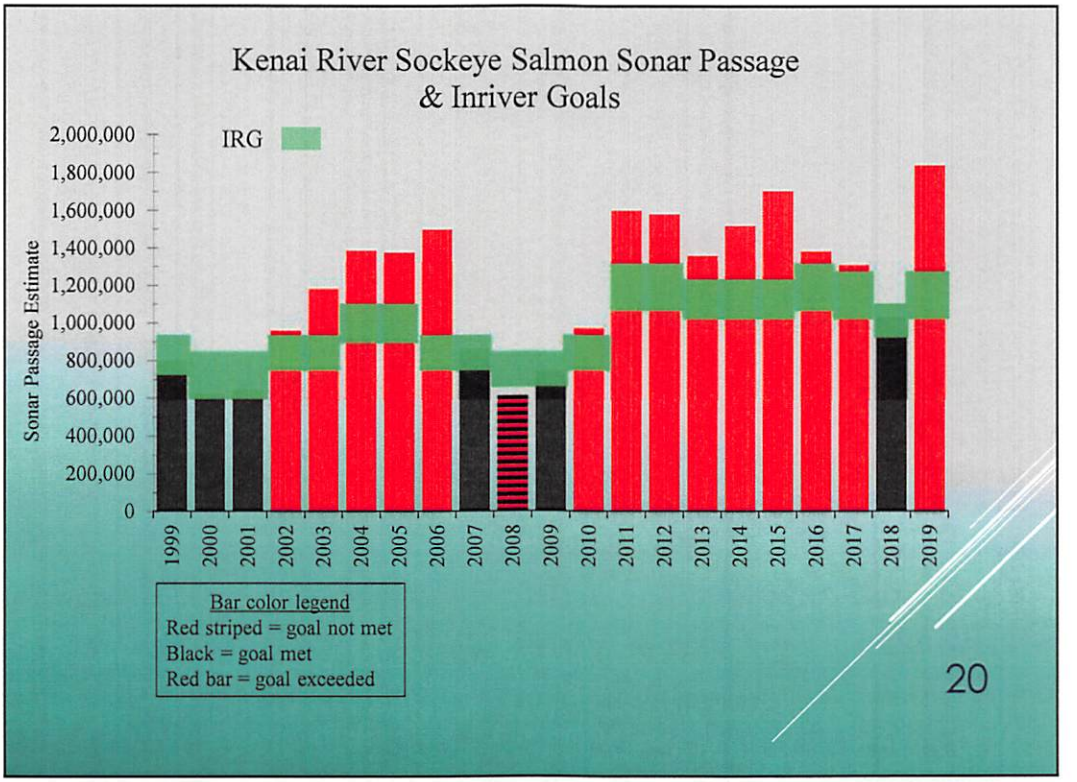
Moving on now to some fish counts

This chart shows Kasilof River sockeye salmon sonar counts as bars, BEG ranges are in green shading, and the OEG ranges when used / are in yellow bounds.

Prior to 1983 through 1986, the Kasilof River sockeye salmon BEG was 75,000 to 150,000 fish. Which was raised to 150 to 250 thousand in 1987 to 2010. In 2002, the Board also added the OEG bounds (yellow) of 150 to 300 thousand fish, with the extra 50 thousand being added for the previously mentioned provision to be used only when the lower end of the Kenai River sockeye salmon SEG is not being met. In 2011 after a change in counting methodology, a new BEG of 160,000 to 340,000 was adopted, and the OEG was correspondingly raised to 160 to 390 thousand fish.

In the 37 years represented here, escapements fell below the BEG range 1 year, were within the range 10 years, and have exceeded the range 24 years.

The OEG, which again unique to the Kasilof river, is only utilized when the Kenai River sockeye salmon escapement is not met, has rarely been used the entire year. Those years are highlighted in yellow. Since 2002, this OEG was used 5 years, was exceeded 3 years and achieved 2.



Moving to the Kenai River

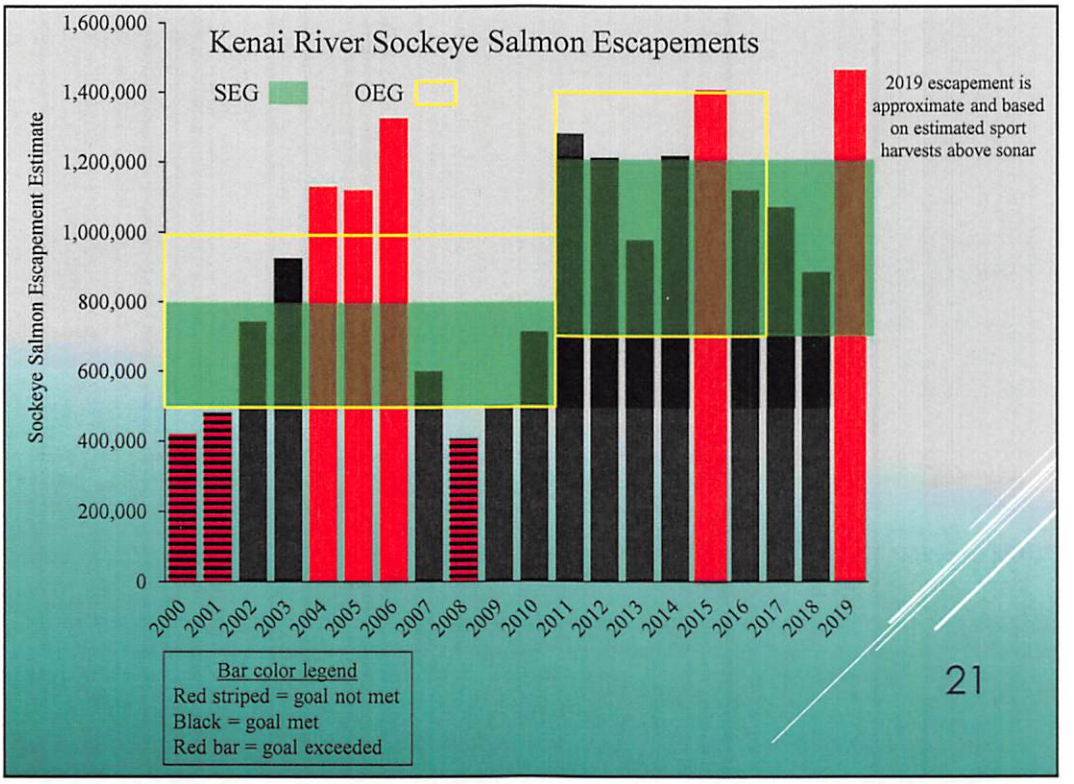
This chart shows Kenai River sonar counts and depicts the performance of achieving the Kenai River IRG. The Bars are inriver sockeye salmon sonar counts with colors as before relative to achieving the goal shaded green / as mentioned before these IR goal ranges change based on overall sockeye salmon abundance.

In the 21 years depicted here the inriver abundance has been

Below goal 1 time

Within goal 6 times

Over goal 14 times



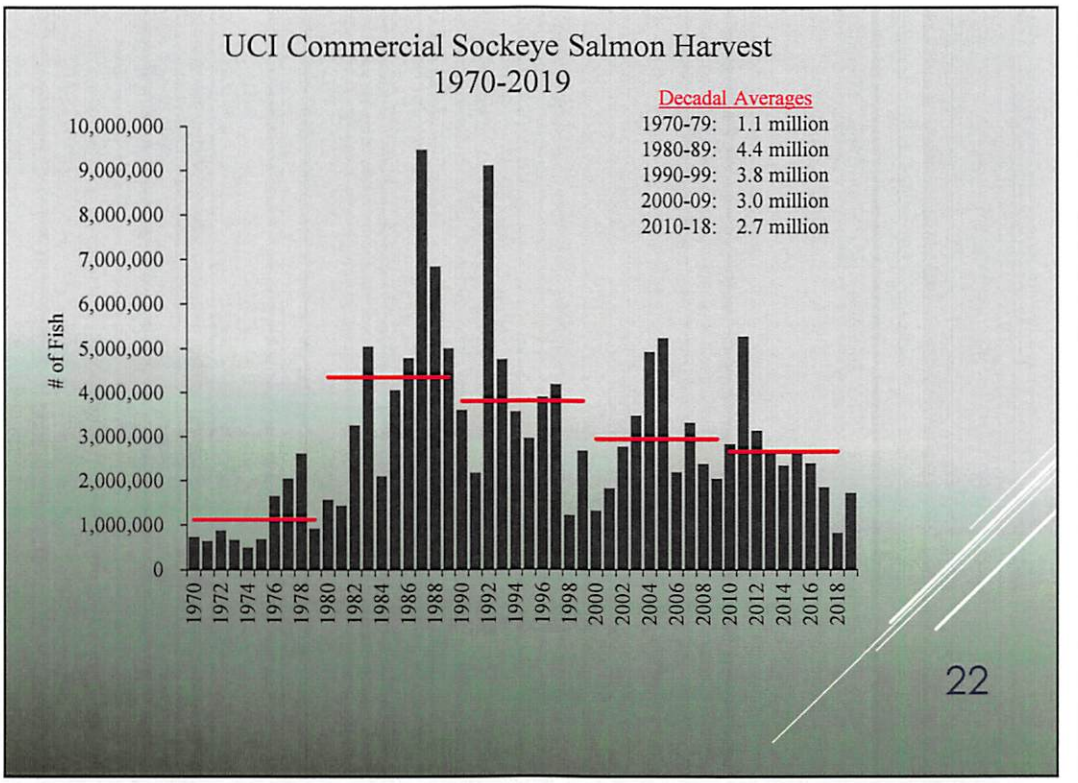
Along with those in river goals on the Kenai River / From 2000 through 2016, SEGs, and OEGs were also used. The OEG was the primary managing target.

In 2011, when the department transitioned to new assessment methods, the SEG changed to 700,000 to 1,2000,000 fish and the OEG was also modified to 700,000 to 1,400,000 fish. The OEG was then dropped in 2017.

This chart depicts run performance based on the different goals as they changed for Kenai River sockeye salmon. The OEG (yellow) or SEG (green). Bar colors are relative to achieving the appropriate goal as in previous slides.

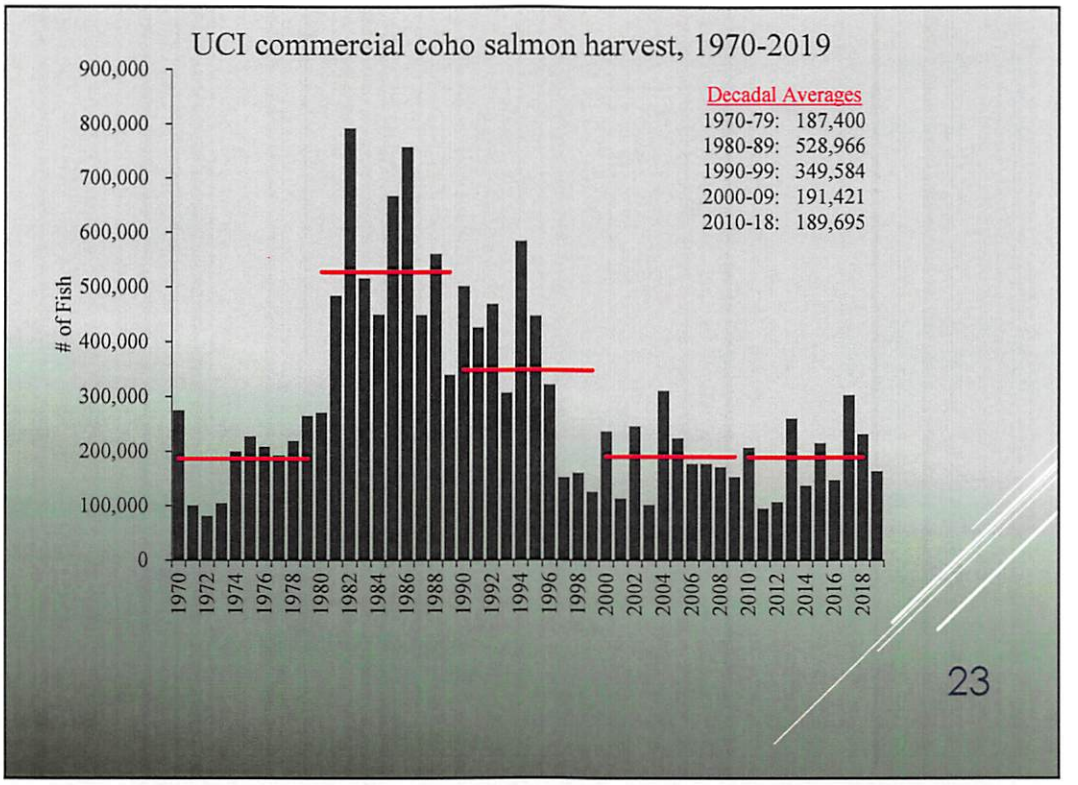
For 2000 to 2018, the OEG was not met 3 years, was achieved 10 years, and exceeded 4 years. During this time period. The SEG was not met 3 years, was achieved 8 years, and has been exceeded 8 years.

The bar for 2019 final escapement is estimated / but it is very likely the SEG was exceeded.



Moving on to some harvest information.

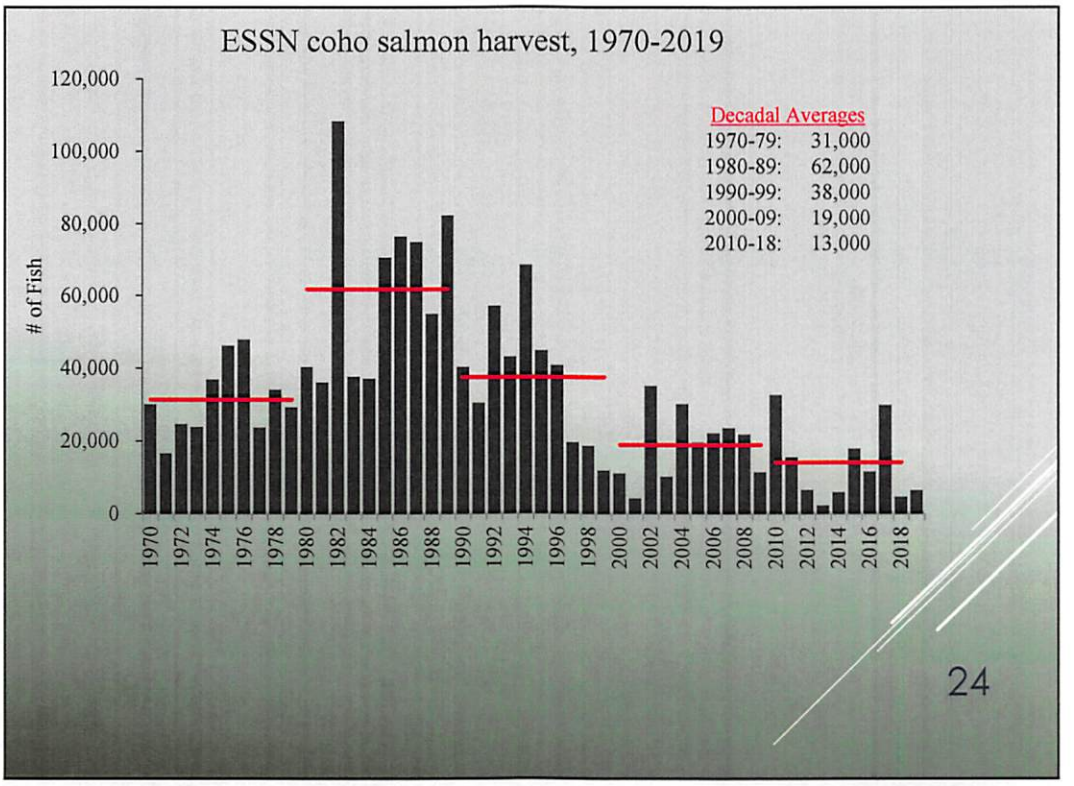
Upper Cook Inlet annual sockeye salmon commercial harvests averaged just a little more than 1 million fish a year in the 1970's. Harvests peaked in the 1980's, with an average annual harvest of 4.4 million fish per year. Since 2000, the average annual sockeye salmon harvest declined back to about 3.0 million fish. More than half of the harvests of the recent decade have been further below that average.



Coho salmon are also abundantly harvested in UCI.

Since the 1980's there have been a number of changes to management plans that have resulted in fewer coho salmon being harvested in UCI commercial fisheries, especially in ESSN and the Drift fisheries.

The average harvest of Coho salmon in all UCI has also declined since the 1980s but has remained stable in the last 20 years although yearly harvest are quite variable and often driven by abundance.



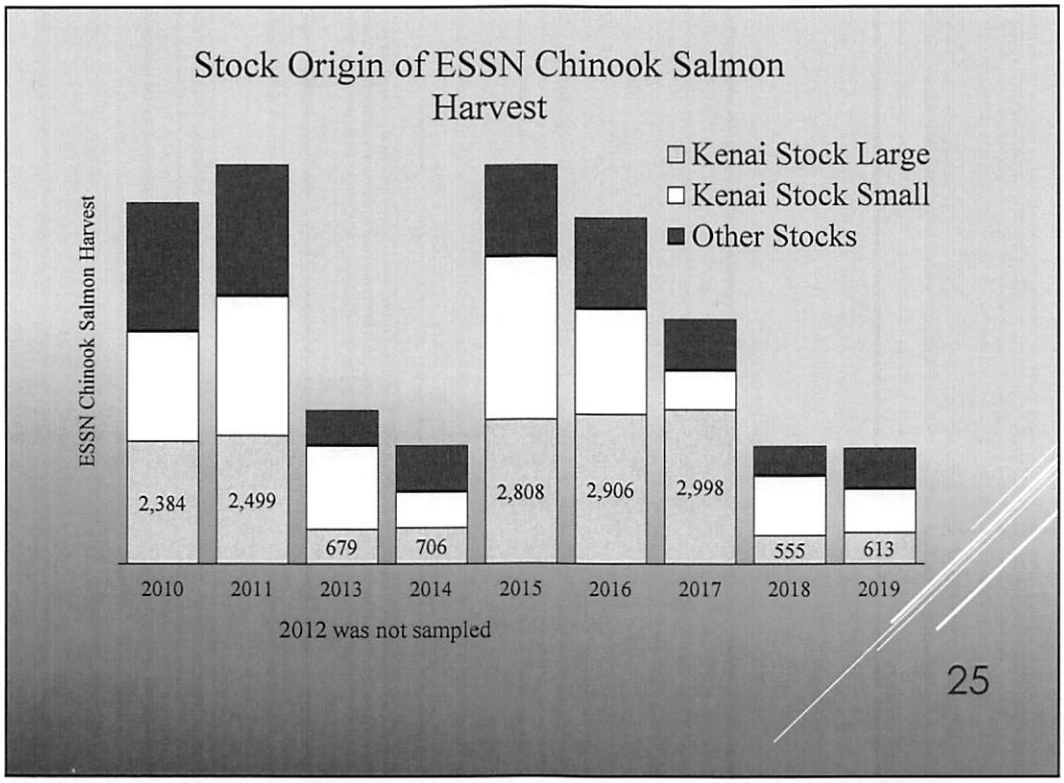
Focusing now specifically on the ESSN fishery

Since the decade of the 1980s, ESSN coho salmon harvests have steadily declined to the lowest levels in the history of the fishery. This is due largely to management plan changes governing the fishery, and more recently due to weak Chinook or sockeye salmon runs, which have resulted in much less fishing time for the ESSN fishery.

FDS Eskeline 2020

Table 10 page 26

Table 13 page 31

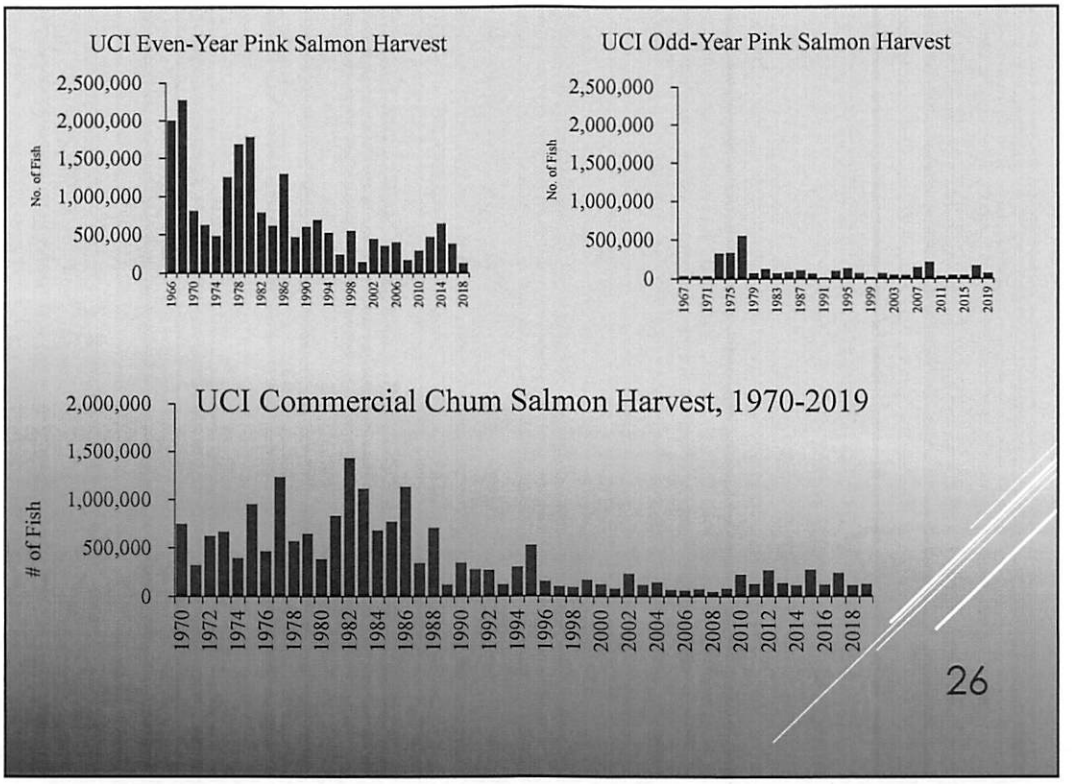


A 5th management plan that may affect the ESSN fishery is The Kenai River Late-Run King Salmon management plan implemented to conserve Kenai River Late run / or mainstem spawning / Chinook salmon. This plan contains restrictive time provisions, and gear restrictions to shallow nets for the ESSN fishery.

This stacked bar chart shows the ESSN fishery harvest of Chinook salmon broken into proportions of large and small Kenai late run Chinook, and other stocks for the last decade. The numbers shown in the gray proportions are the specific harvest numbers of large Kenai late run stock Chinook salmon per year.

Harvest of all Chinook in the ESSN fishery averaged 4,900 fish. Average harvest of Non-Kenai stock Chinook or "other Stocks' was 1,400 fish / or 29% per year. Average harvest of Kenai late run Chinook was 3,500 or 71%. Average harvest of Large Kenai late run Chinook was 1,700 fish or 35 %.

During years of maximum restrictions and low run size of 2013 and 2014, and 2018 and 2019. Harvests of Kenai River late run large Chinook declined by an average of 77 % in the ESSN fishery.



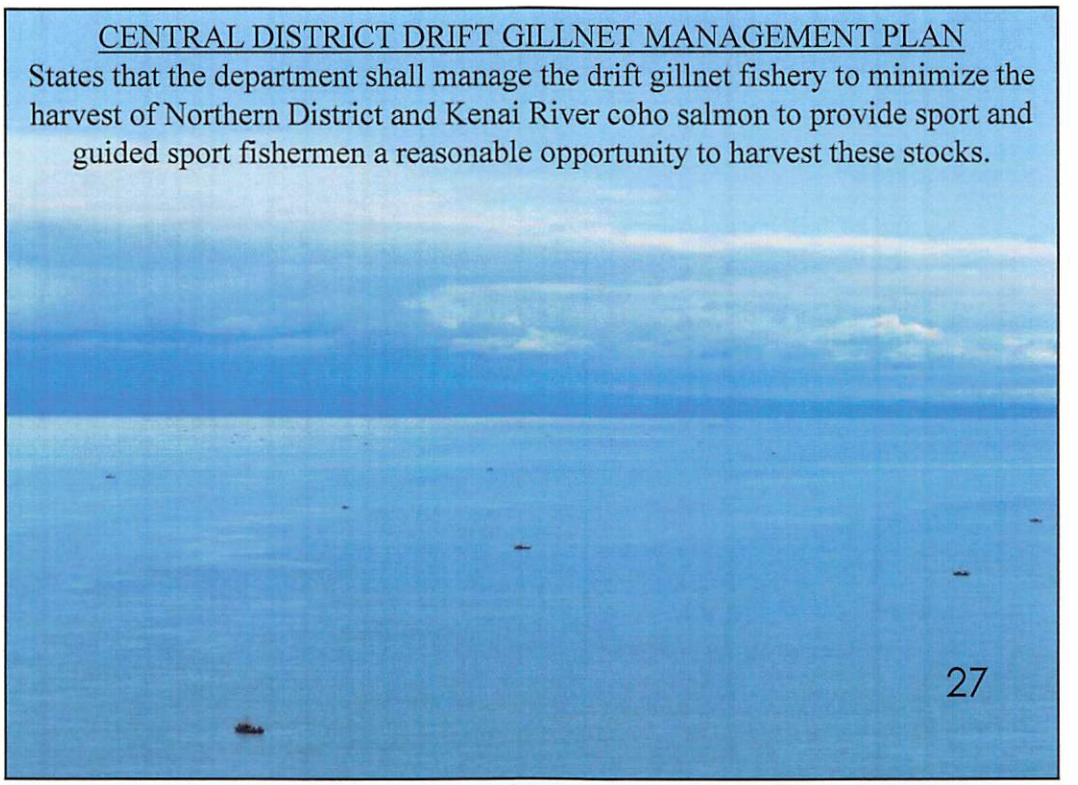
I will just quickly mention statistics of these two species

Pink Salmon in Upper Cook Inlet are even-year dominant with odd-year harvests about 1/7th that of the even-years / Past years harvests approached 2.5 million fish.

Chum salmon harvests approached 1.5 million

Harvests of both species declined after 1986.

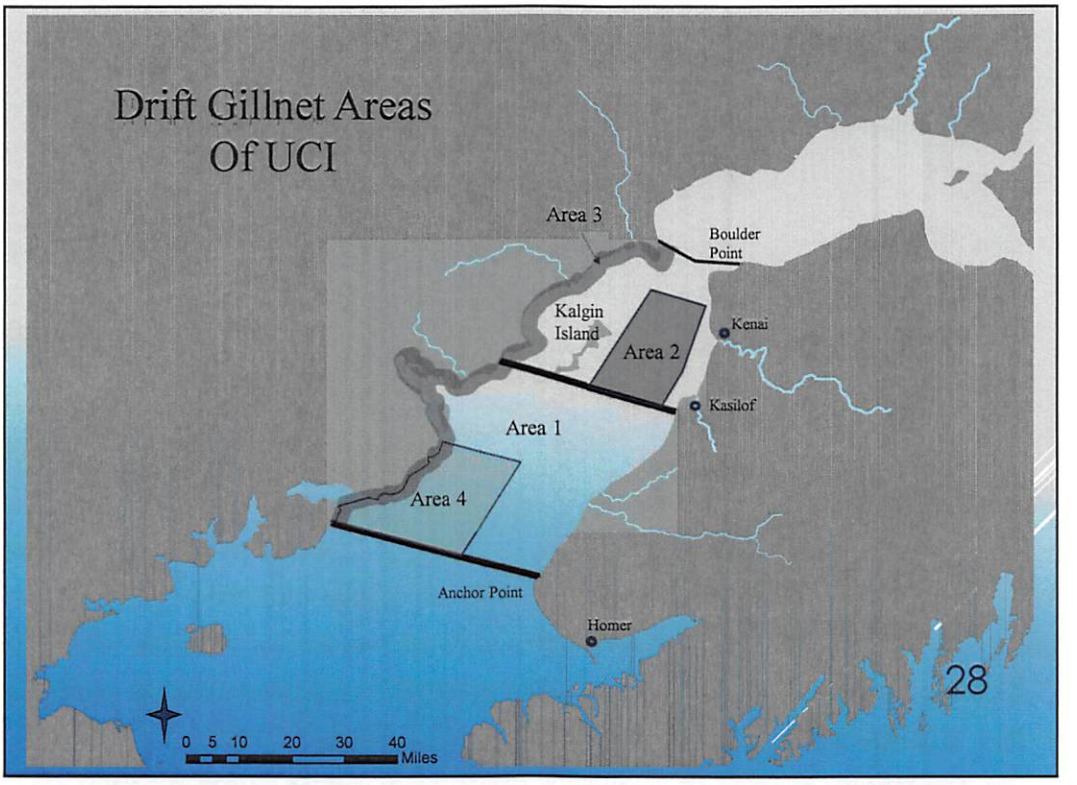
There and 2 proposals directed at each of these species for this meeting



Moving now to focus on the Drift Gillnet Fishery

Drift gillnetting is allowed only in the Central District.

Various restrictions of time and area are applied in July – September to conserve or allocate sockeye, and coho salmon bound for the ND and the Kenai River.



This map shows the larger areas potentially opened to drift gillnet fishing

The drift fishery can be opened District wide / which is all waters of the Central District between Boulder point and Anchor point,

Or

The fishery can be restricted into area 1; all waters south of Kalgin Island

Or

Area 2; the waters of the inlet directly in front of the Kenai and Kasilof rivers

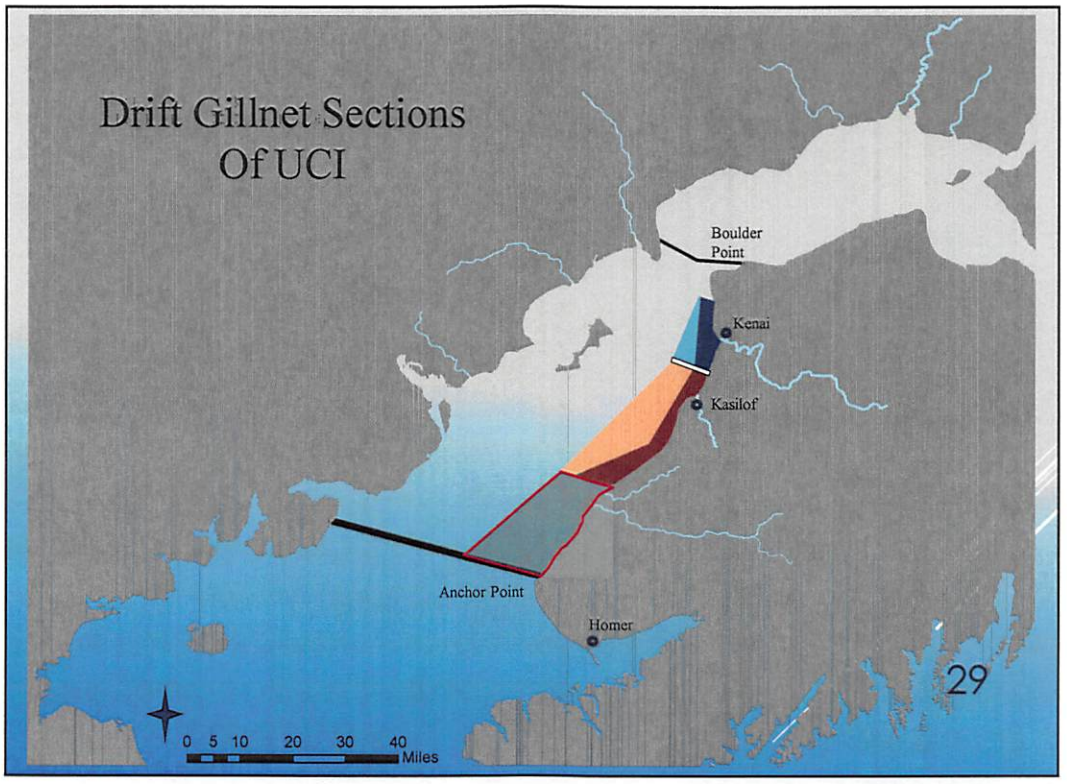
Or

Area 3; the waters within one mile of shore on the west side of the inlet

Or

Area 4; waters of the south western corner of the inlet.

In a limited amount of situations some combinations of these areas may be used.



The drift fishery can also be restricted into several smaller sections on the east side of UCI. Often referred to as corridors.

click

The white line here on this map line is referred to as the Blanchard Line that sits between the Kenai and Kasilof rivers. Click

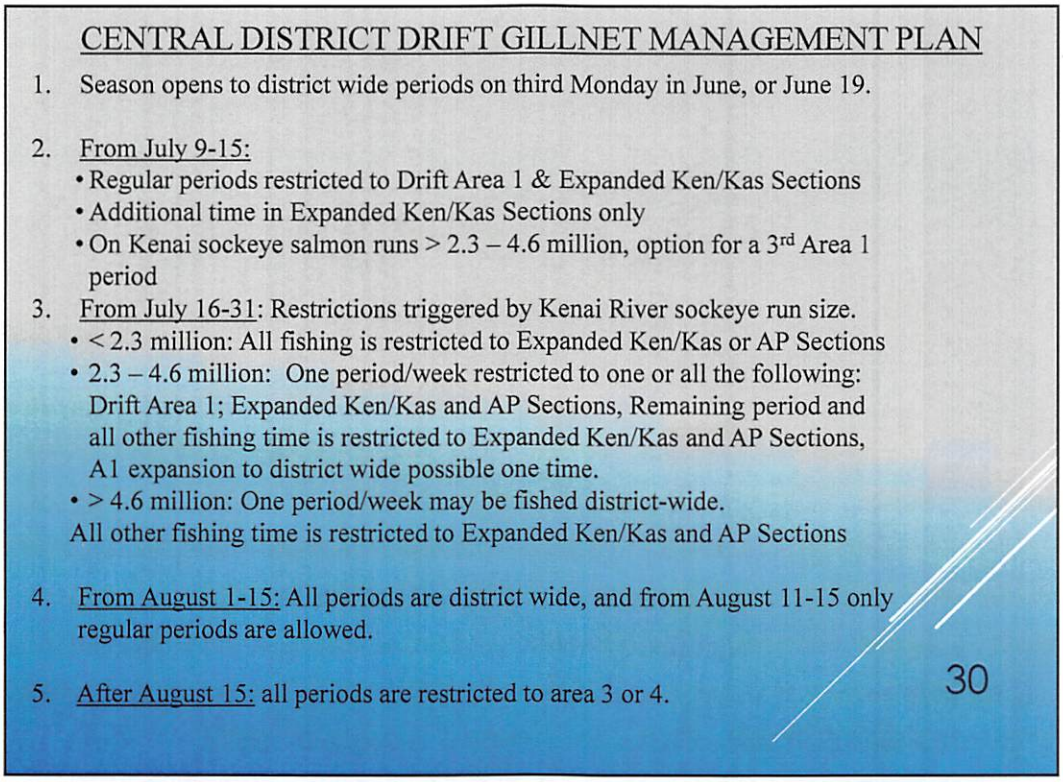
The Kenai section is all waters of the dark blue area on this map north of the Blanchard line, click while the Kenai expanded section is this area plus the area of lighter blue. click

The Kasilof section is all waters of the dark brown section south of the Blanchard line, click while the Kasilof expanded section is this area plus the area of lighter brown. click

The gray area bounded in red is the Anchor Point Section.

These Kenai and Kasilof sections are often referred to as the Kenai and Kasilof corridors or expanded corridors.

I would like to point out that there is currently no "conservation corridor" in regulation. Fishing in these sections or corridors allows focused fishing effort towards the Kenai and or the Kasilof River fish stocks.



Management of the drift fishery entails regular mon/thurs DW periods from opening day until July 8.

From July 9-15 fishing during both regular periods is restricted to Drift Area 1 and the Expanded Kenai and Kasilof Sections; Additional time may only be fished in the Expanded Ken/Kas Sections. On Kenai sockeye runs > 2.3 million fish < 4.6, there is an option of fishing a 3rd period during this time in Drift Area 1. These restrictions designed to decrease the harvest of Susitna River sockeye salmon.

Restrictions **from July 16-31** are for sockeye and coho salmon. And all are triggered by sockeye salmon run-size to the Kenai River.

On runs less than 2.3 million fish, all fishing time must be restricted to the Expanded Ken/Kas and AP sections.

On runs between 2.3 & 4.6 million, one period per week is allowed in one or all of following, Drift Area 1, the Expanded Ken/Kas and AP Sections. The remaining regular period and any extra time can only be in the Expanded Ken/Kas and AP sections.

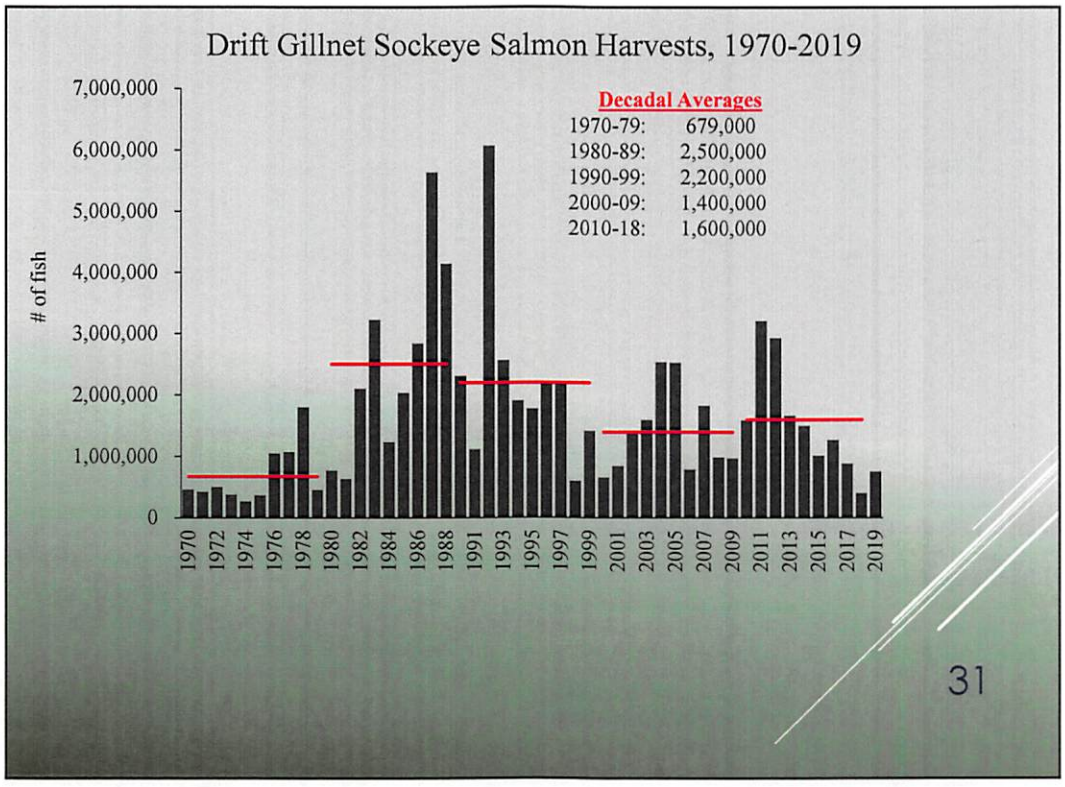
There is also an option to expand one A1 opening to be a DW period.

On runs greater than 4.6 million, one period per week may be fished district wide. All additional fishing time is restricted to the, Expanded Ken/Kas and AP Sections.

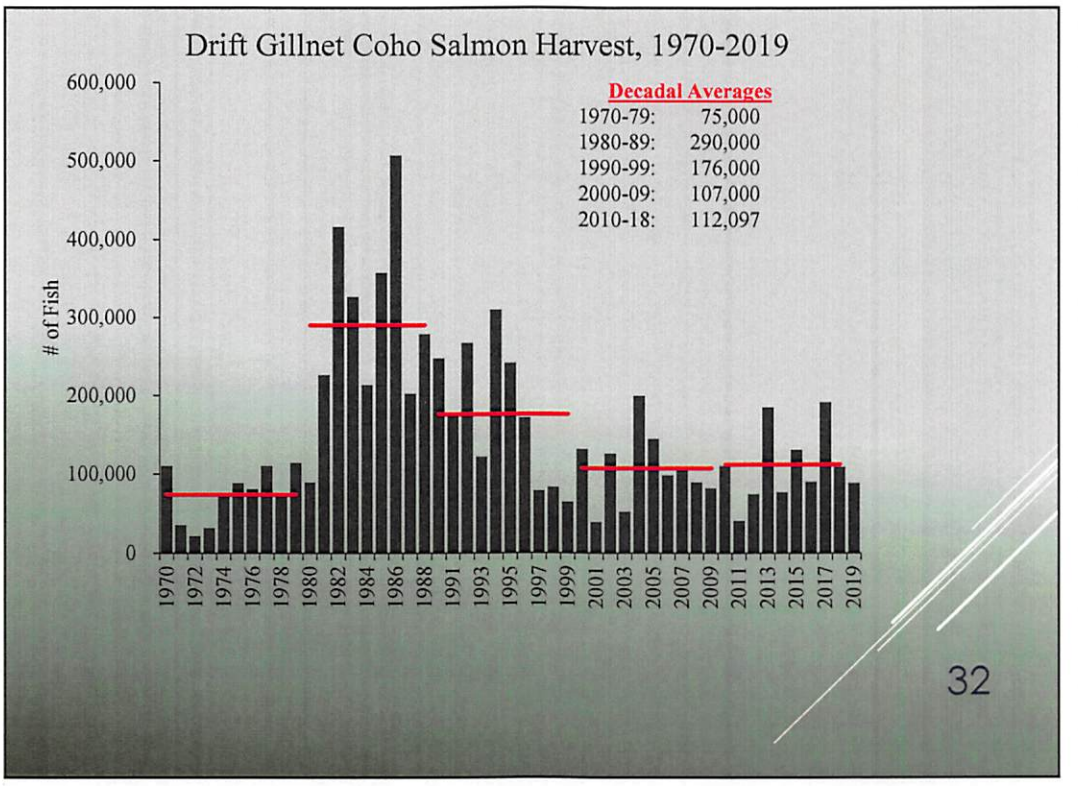
From **August 1 to 15** all regular periods may be district wide.

And then **From Aug 11-15**, only regular periods may be opened in order to to conserve NB coho salmon.

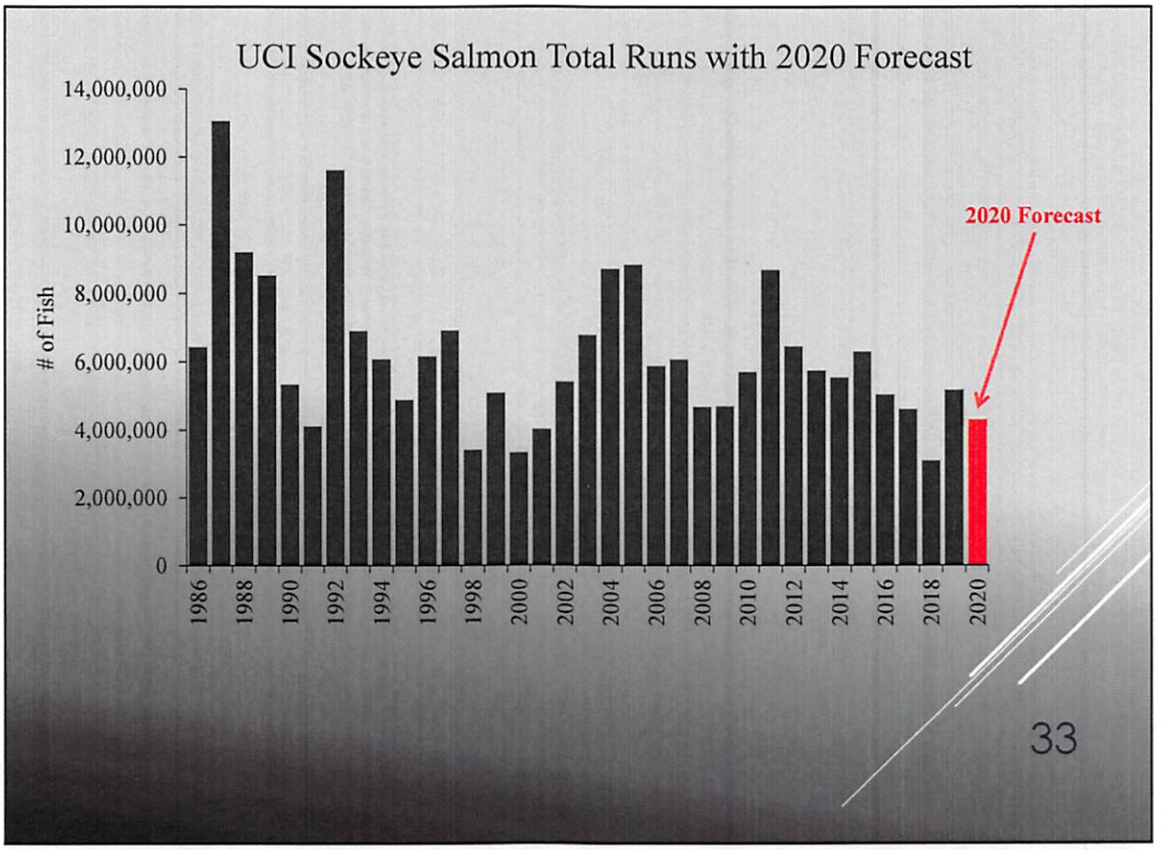
Beginning August 16 drifting is restricted to Drift Areas 3 & 4 on the west side of Cook Inlet to conserve Kenai River and northern bound coho.



The average annual harvest of sockeye salmon by the drift gillnet fishery has declined from approximately 2.5 million fish per year in the 1980's to 1.5 million fish per year since the year 2000. The last 5 consecutive years have been well below that average.



The average annual harvest of coho salmon by the drift gillnet fishery has declined from approximately 290,000 fish per year in the 1980's to just over 100,000 fish per year since the year 2000. 3 of the last 5 years have been below average and 2 were above average.

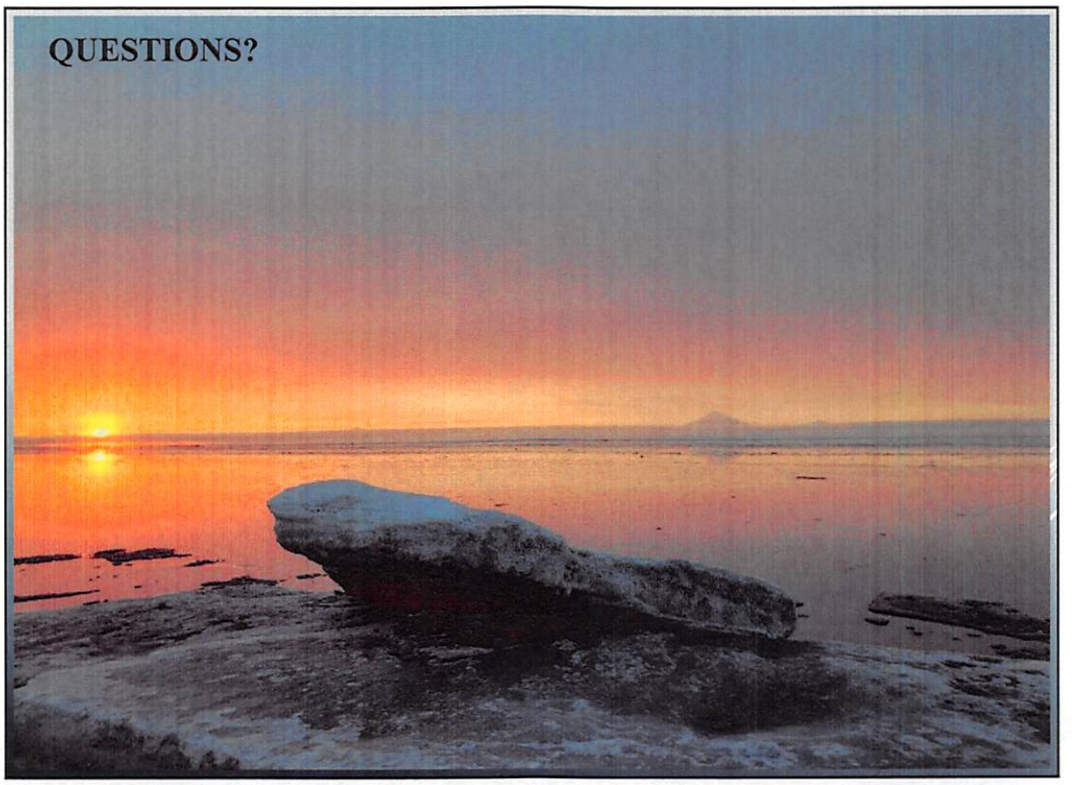


This last slide shows total run size of sockeye salmon from 1986 through 2018. The average total run of sockeye salmon over these years to UCI was 6.2 million fish.

Although total escapements depicted in previous slides in the Kenai and Kasilof river have increased over this time, total run size has declined to an average of 5.4 over the last decade, as has sockeye salmon commercial harvest ~~statistics shown in previous slides~~.

The 2020 sockeye salmon forecast projects a total run of 4.3 million fish, or 2 million fish below the long-term average and 1.1 million below the recent decadal average. (5.4 10 y, 6.2 all y)

The Kenai River component of the 2020 run is expected to be 2.2 million fish, which would align management actions and inriver goals to the lower tier / and is also below average.



This concludes my presentation. A more thorough examination of these fisheries can be obtained in the AMRs found in board materials or online.

At this time, I will take any questions you may have.

Mr. Chair.