# Nushagak District king salmon management (6 commercial, 3 sport)

# PROPOSAL 61

5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.

Repeal provisions allowing commercial fishing, adopt date specific provisions for opening commercial fisheries based on king salmon inriver projected run size, and prohibit the retention of king salmon in the sport fishery, as follows:

Adopt additional restrictions to protect King escapements. These include early season limitations on opening of the commercial fisheries, provisions for no-fishing windows in the commercial fisheries and prohibition of retention in the sport fishery.

5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.

...

- (d) Notwithstanding sections (2) through (5) of this plan, [B]before 9:00 a.m. June 28, if the Nushagak king salmon inriver run size is projected to be less than 95,000 fish, the commissioner shall close, by emergency order, the sockeye salmon commercial drift gillnet fishery in the Nushagak District, and the sockeye salmon commercial set net fishery in the Nushagak Section of the Nushagak District[UNTIL].
  - [(1) THE SOCKEYE SALMON SONAR ESTIMATE IN THE NUSHAGAK RIVER IS PROJECTED TO EXCEED SIX PERCENT OF THE NUSHAGAK RIVER SOCKEYE SALMON RUN BASED ON THE NUSHAGAK RIVER SOCKEYE SALMON PRESEASON FORECAST AND INSEASON ASSESSMENT OF RUN SIZE; OR
  - (2) THE SOCKEYE SALMON COUNT PAST THE WOOD RIVER COUNTING TOWER IS PROJECTED TO EXCEED 10PERCENT OF THE WOOD RIVER SOCKEYE SALMON RUN SIZE BASED ON THE WOOD RIVER SOCKEYE SALMON PRESEASON FORECAST AND INSEASON ASSESSMENT OF RUN SIZE.]
- (e) Notwithstanding sections (2) through (5) of this plan, from 9:00 a.m. June 28 through July 4, if the Nushagak king salmon inriver run size is projected to be less than 95,000, the commissioner shall close concurrently, by emergency order, the sockeye salmon commercial drift gillnet fishery in the Nushagak District, and the sockeye salmon commercial set net fishery in the Nushagak Section of the Nushagak District for a minimum of 12-hours per day.
- (f) The department shall manage the sport fishery in the Nushagak River drainage, excluding the Wood River drainage, as follows:
  - 1) the annual limit for king salmon 20 inches or greater in length is four fish, of which only one fish may be 28 inches or greater in length;
  - 2) if the total inriver king salmon run return in the Nushagak River is projected to exceed 95,000 fish, the commissioner may, by emergency order, increase the annual limit for king salmon to four king salmon, 20 inches or greater in length, with no restrictions for fish over 28 inches in length.
  - 3) <u>retention of king salmon may be prohibited if the Nushagak king salmon inriver run size is projected to be less than 55,000 fish.</u>
  - [(f)] (g) Subsistence fisheries will be managed in accordance with the rest of this title.

What is the issue you would like the board to address and why? Numbers of Nushagak River King Salmon have continued to declined since the 2022 Stock of Concern designation and action plan adoption. Record low numbers of King Salmon were estimated at the inriver sonar in 2023 and 2024.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Not applicable

### **PROPOSAL 62**

**5 AAC 06.391.** Nushagak District King Salmon Stock of Concern Management Plan. Prohibit commercial fishing in the Nushagak District until June 28 or until the minimum escapement goal of 55,000 king salmon are counted at the Portage Creek sonar, as follows:

No Nushagak District commercial drift or set netting prior to June 28th unless chinook salmon counts at Portage Creek sonar has exceeded minimum escapement number (55,000)

What is the issue you would like the board to address and why? Commercial netting during the peak of chinook salmon migrating thru the Nushagak district has had a harmful impact on the numbers of kings allowed to return to the river, by refraining from any netting activity prior to June 28th will allow more kings in river to spawn and also provide for increased recreational and subsistance catch.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. I have possessed a Choggiung Land Use Permit (LUP) to operate a sport fishing camp since 2004. I have seen a decline in chinook salmon numbers especially since around 2010 when sockeye netting was allowed to begin June 15-18. I do not have solid evidence, just my memory. I have consulted annually with other LUP operators and we all feel the same way. The chinook need to be allowed in river to sustain the run, our limited number of sport fisherman have the least amount of impact on the chinook runs. (as cited in Table 1 of the "Nushagak River King Salmon – Stock Status and Action Plan" Nov 29, 2022)

### PROPOSAL 63

**5 AAC 06.391.** Nushagak District King Salmon Stock of Concern Management Plan. Amend the *Nushagak District King Salmon Stock of Concern Management Plan*, as follows:

- 5 AAC 06.391 (e)
  - (1) [the annual limit for king salmon 20 inches or greater in length is four fish, of which only one fish may be 28 inches or greater in length;] the daily limit for king salmon under 20 inches is five per day and five in possession, the annual limit for king salmon 20 inches or greater in length is four fish, only one of which may be 28 inches or greater in length, and the one king salmon 28 inches or greater in length may only be retained after a minimum inriver goal of 70,000 is reached, window closures will be implemented for the king salmon sport fishery consistent with a tidal schedule, daily king salmon harvest below the sonar site will be reported for inseason estimates, all required sport fishing annual harvest record cards will

# also record king salmon under 20 inches and cards will be submitted to ADF&G after the completion of fishing;

(2) if the total inriver king salmon run return in the Nushagak River is projected to exceed 95,000 fish, the commissioner may, by emergency order, increase the annual limit for king salmon to four king salmon, 20 inches or greater in length, with no restrictions for fish over 28 inches in length, with the elimination of closure windows.

What is the issue you would like the board to address and why? Add regulations to sports fisheries as part of the Nushagak District King Salmon Management Plan.

Currently, all specific regulatory language for triggers has been removed and the sport fishery is managed based on ADF&G emergency orders (EOs). The Board of Fisheries queried ADF&G during the development of the Nushagak District King Salmon Stock of Concern Management Plan about the need for specific regulatory language. At the time, ADF&G stated that EO authority would be more responsive and adaptive to inseason data. This has not been the case, and triggers or data for issuance of EO(s) is unclear, with the fishery being restricted to catch and release only in July.

Enumeration of Chinook salmon and assessing run strength is much worse in years of high Sockeye escapement. Previous removal of regulatory language was based on sonar being a poor inseason indicator of Chinook run strength (sonar was only 40-60% enumeration). The accuracy is now considered to be even less accurate on years with large Sockeye escapement. Minimum inriver escapement goals are likely reached in these years when considered for decreased enumeration compared with historical assessments. Chinook harvested below the sonar should be reported daily as their harvest can have a negative impact on inseason inriver escapement projections.

Regardless of the projected Chinook escapement, the sport fishery allows a daily harvest of 5 Chinook under 20 inches in length, an annual harvest of larger sizes (4 Chinook, only one of which can be greater than 28 inches). ADF&G has stated that anglers are encouraged to harvest smaller Chinook, as they have little impact on spawning success and the genetic health of the population, and removal is actually beneficial, as small Chinook skew the genetics of the population toward smaller Chinook, whereas large Chinook can be 10x more fecund than Chinook half their size. Additional protection for harvest of larger Chinook and windowed closures for migration through the river to their spawning grounds should be favored by sport fishermen for increased inriver conservation and genetic diversity.

A lack of regulations for a primarily commercially guided sports fishery (90% nonresident, 95% guided) and a phase-out instead of phase-in approach is inconsistent for Chinook conservation. Additionally, the required Sport Fishing Annual Harvest Record Card should be submitted to ADF&G, online or otherwise, at the end of the season to increase available data for the stock of concern.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Proposal was developed from countless conversations and correspondence with fishermen and ADF&G.

### PROPOSAL 64

# 5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.

Open the Wood River Special Harvest Area to drift and set gillnet gear until one of the king salmon stock of concern triggers is met, as follows:

While the Nushagak District is being managed by the King Salmon stock of concern management plan fishers be allowed to fish in the Wood River Special harvest area until one of the triggers is met.

What is the issue you would like the board to address and why? While the fishers are waiting for extra sockeye escapement due to the king salmon stock of concern management plan allow fishers, set net and drift net, to fish in the Wood River special harvest area.

This management plan has three triggers that if one is met the fishers can fish in the district. Triger 1) requires 10 percent of Wood River sockeye forecast to be past counting tower, Triger 2) requires 6 percent of Nushagak River sockeye forecast to be past Portage Creek sonar, Triger 3) June 28 nine am.

When the Wood River reaches its 10 percent trigger the escapement goal is almost met before the fishers are allowed to fish and assuring over escapement.

Fishing during this time in the Wood River Special Harvest area would slow down the escapement rate but still allow escapement into the Wood River and allow king salmon escapement up the Nushagak River.

When the Wood River reaches it 10 percent trigger it is almost assured to meet the trigger for allowing fishing into the Wood River Special Harvest area within a day or two with one gear type.

To reach this 10 percent escapement goal takes a lot of fish, and once they start swimming into the Wood River it is very hard or impossible to slow the escapement down especially with there being a gap between the fishing district and the Wood River, a lot of fish can be in this gap. Resulting in over escapement.

2025 Wood River forecast is 8 million fish, 10 percent is 800,000 sockeye. Wood River Special Harvest Area management states once Wood River escapement reaches 1.1 million and projected to reach 1.4 million the Wood River Special Harvest area is to open to fishing to one gear type.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. I wrote this proposal with the help of my family who are all Bristol Bay fishers.

### **PROPOSAL 65**

5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.

5 AAC 06.367, and Nushagak District Commercial Set and Drift Gillnet Sockeye Salmon Fisheries Management and Allocation Plan.

Remove Wood River Special Harvest Area from Nushagak District allocation calculations, and amend *Nushagak District King Salmon Stock of Concern Management Plan* to include set gillnet specific provisions, as follows:

A multifaceted solution is needed to remedy this set gillnet hardship.

- 1. Include specific language to current regulated allocation in 5 AAC 06.367 to specify that the Wood River Special Harvest District catch is not included within Nushagak Section allocation.
- 2. Establish a lower threshold of the three independent triggers for set gillnet fleet different than the drift gillnet fleet, such as:
  - i. Change date to June 26th at 9am for set gillnet only
  - ii. Trigger of 5% of run added to SEG for OEG for Wood River
  - iii. Trigger of 3% of run added to SEG for OEG for Nushagak River
- 3. Eliminate set gillnet window closures after 75% of historic Chinook passage from district (starting July 2<sup>nd</sup> as there is travel time from the district to sonar, ~2-2.5 day difference for salmon entering the district and passing the sonar)

# Suggested language:

### 5 AAC 06.367

# (C) Wood River Special Harvest Area does not count within the Nushagak District allocation plan.

- 5 AAC 06.391
  - (d) Before 9:00 a.m. June 28, if the Nushagak king salmon inriver run size is projected to be less than 95,000 fish, the commissioner shall close, by emergency order, the sockeye salmon commercial drift gillnet fishery in the Nushagak District, and before 9:00 a.m. June 26, if the Nushagak king salmon inriver run size is projected to be less than 95,000 fish, the commissioner shall close, by emergency order, the sockeye salmon commercial set gillnet [net] fishery in the Nushagak Section of the Nushagak District to allow for management of allocation
    - (1) the sockeye salmon sonar estimate in the Nushagak River is projected to exceed six percent of the Nushagak River sockeye salmon run based on the Nushagak River sockeye salmon preseason forecast and inseason assessment of run size for the drift gillnet fleet and three percent for the set gillnet fleet; or
- (2) the sockeye salmon count past the Wood River counting tower is projected to exceed 10 percent of the Wood River sockeye salmon run size based on the Wood River sockeye salmon preseason forecast and inseason assessment of run size for the drift gillnet fleet and five percent for the set gillnet fleet; and
  - (3) after 75% of projected Chinook passage have passed from the district, window closures shall be discontinued and Sockeye will be managed for escapement and allocation.

What is the issue you would like the board to address and why? The Nushagak District set gillnet harvesters, in the Ekuk Village set gillnet statistical area, have experienced a disproportionate economic burden as an unintended consequence of the Nushagak Chinook Conservation Management Plan. Hundreds of set gillnet harvesters, fishing over 70 sites, on Ekuk Beach in the Nushagak District have seen significant harvest share decline as a result of recent

management actions and reduced critical early season fishing time. In season loss of harvest share has declined by approximately 37% in 2023 and 2024, compared to the 10-year prior average, and this is compounded with the later start date. This puts the future of the fishermen and the processing facility at risk.

The management strategy, as implemented, has resulted in the set gillnet fleet harvesting 15% of the Nushagak Section sockeye salmon, instead of the designated 20%. ADF&G has historically managed the set gillnet fleet differently than the drift gillnet fleet, but now the gear groups are managed relatively the same, and much is based on foregone harvest emergencies. The set gillnet fleet in the Nushagak Section starts on the same day as the drift gillnet fleet and there is a much larger utilization of windowed closures for set gillnet. This results in ~75% of all drift gillnet gear emphasizing more toward a "southline" district boundary, which prevents sockeye from moving to stationary gear.

Set gillnet fishermen, need additional regulatory guidance to protect their multigenerational heritage, and the historic Ekuk Village fishery should be protected and preserved. In many ways, Ekuk represents the epitome of Alaska's Seafood Task Force's vision for the future: providing access, opportunity, economic sustainability, and helping to maximize the value of some of the highest quality salmon produced in Bristol Bay.

Additional fishing time over the drift gillnet fleet and adherence to the traditional share of harvest volume are imperative for Ekuk operations and processor to be sustainable. Small or even average historical sockeye returns in the future would be devasting.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Proposal was created with coordination with fishermen, consultants, and frequent communication for information with ADF&G.

### **PROPOSAL 66**

5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.

Modify the sport fishing gear allowed in *Nushagak District King Salmon Stock of Concern Management Plan*, as follows:

5AAC 06.391 (e) Add (3) Appropriate Sports Fishing Gear used for king salmon on the Nushagak River and Nushagak River Drainages that are open for king salmon fishing from June 1st-July 31st.

Sports fishing for king salmon may only be conducted by use of the following:

A closely attended single line attached to not more than one artificial lure with a single barless hook which includes the following:

- One plug with single barbless hook
- One spoon with single barbless hook
- One spinner with single barbless hook
- One artificial fly with single barbless hook

Bait, scent sprays, and liquid scents of any type are prohibited.

What is the issue you would like the board to address and why? From my experience of being a lodge owner and guiding on the Nushagak River daily during the King salmon sports fishing season for 8 years, I have seen the difference of catching King salmon with and without bait, and the damage that occurs using bait and scent with a barbed hook. Using a barbed hook can cause tearing of the mouth, which can be exacerbated by using bait as this increases the possibility of the king salmon getting hooked further into the mouth. This can cause the fish to bleed and increase the rate of mortality. These king salmon, traveling upriver, some more than 80 miles, can be caught multiple times on their way to their spawning grounds. From my experience, use of bait is very efficient and significantly increases the number of times these fish are caught in transit, which compounds the damage previously mentioned.

Currently we are operating within the Nushagak District King Salmon Stock of Concern Management Plan. During this time of concern methods to protect these salmon once they reach the river should be considered of high importance. Under this plan there needs to be a restriction on Methods and Means for Sports Fishing for King Salmon. To give them the best opportunity to survive we must decrease the mortality rate. By going to artificial lures and flies with a single barbless hook, we can lower the efficiency of angler's gear, reducing the number of times a fish is caught during its journey, and thus reducing the damage, without depriving anglers the opportunity of a lifetime to fish for Kings on the Nushagak River.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No, I am a Dillingham resident and previous lodge owner with 8 years of guiding experience on the Nushagak River. I have also participated in commercial drift fishing for salmon in the bay throughout most of my life. I still actively sportfish with friends and family on the Nushagak River early in the king salmon run before I start commercial fishing for the season.

#### PROPOSAL 67

5 AAC 67.022. Special provisions for seasons, bag, possession, and size limits, and methods and means in the Bristol Bay Area.

Modify the sport fishing gear, size restrictions and area open for king salmon in the Nushagak River drainage, as follows:

This proposed regulation would add language to an existing section of regulations within the Nushagak / Mulchatna King Salmon Management Plan. Should this language be adopted, we think it ought to be added into regulation 5 AAC 67.022g. In addition, we think it would need to be incorporated into the Nushagak King Salmon Stock of Concern Plan. We also think the amended regulation would offer protection to spawning Kings in the Mulchatna River and its tributaries.

Language would be added to 5 AAC 67.022 to include the closure of King Salmon fishing in parts of the Mulchatna River and its tributaries until the end of the season or the lower end of the escapement goal is met. This all is meant to happen when the Department can no longer project that the King Salmon escapement will reach the lower end of the escapement goal which is currently 55,000 King Salmon.

### Suggested regulation / action:

5 AAC 67.022g When the King Salmon escapement in the Nushigak River is projected to be less than 55,000 King Salmon the Commissioner shall [close] restrict by Emergency Order Nushagak and Lower Mulchatna river King Salmon sport fishing areas to

### PROHIBIT:

A. The retention of Kings of any size.

B. The use of bait

C. In addition, the New Stuyahok River and the Mulchatna River and its tributaries upriver from the confluence the Old Man Creek including Old Man Creek itself will close to King Salmon fishing until the end of the season, or the lower end of the escapement goal is met.

What is the issue you would like the board to address and why? Declining numbers of Chinook salmon returning to the Nushagak / Mulchatna Drainage and the amount of stress put on kings who have spent much of their energy migrating to the spawning areas.

Currently the Nushagak River is closed to the sport fishing of King Salmon above Harris Creek year around. This is to avoid the harvest of King Salmon and lower other associated stress being put on King Salmon stocks and their spawning areas. This, by anglers, who would otherwise be targeting Kings there. King Salmon spawning in the Middle and Upper Mulchatna River and its tributaries would also benefit from this type of protection.

**Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain.** We developed the proposal ourselves. Suzie is the current Nushagak AC chairman. Tom was on the Nushagak AC from 2011 to 2024 and was one of the people appointed to the Nushagak Mulchatna King salmon committee.

### **PROPOSAL 68**

5 AAC 06.361 Nushagak-Mulchatna King Salmon Management Plan, and 06.391 Nushagak District King Salmon Stock of Concern Management Plan.

Adopt an optimal escapement goal for Nushagak River king salmon, as follows:

We recommend that the Board of Fisheries adopt an Optimal Escapement Goal (OEG) for Nushagak River king salmon:

-Biological Escapement Range: 102,530 to 119,882 spawners

-Sonar-Observed Equivalent: 59,467 to 69,532 spawners

These values were derived through a multi-step process:

1.Baseline Reference:

We used the average escapement from 1994–2006 (77,923 spawners) as a realistic rebuilding target. This period represents the last consistent era of Chinook productivity prior to the significant decline that began around 2007.

### 2. Adjustment for Fecundity Loss:

Research by Ohlberger et al. (2020) and others shows that reductions in size and age have led to a 24–35% decline in egg production per female. We adjusted the baseline escapement by dividing it by (1 - fecundity loss rate), which resulted in:

- $-\sim$ 102,530 spawners needed (for 24% loss)
- -~119,882 spawners needed (for 35% loss)

### 3. Correction for Sonar Undercounting:

ADF&G reports that the sonar site in the Nushagak River may undercount king salmon by up to 65%, with an average undercounting rate of ~42%. We applied this correction to the biological OEG estimates to determine what would be needed in sonar-observed escapement:

- -~59,467 observed (low-end)
- -~69,532 observed (high-end)

This proposal does not seek to change the SEG, which is under ADF&G's jurisdiction. Instead, the OEG would serve as a biologically grounded benchmark to guide management decisions and support realistic, sustainable rebuilding of the Chinook population.

What is the issue you would like the board to address and why? The current escapement management for Nushagak River king salmon is based on outdated size and productivity assumptions from the 1990s. No formal Optimal Escapement Goal (OEG) exists for Chinook in this system, and the existing Sustainable Escapement Goal (SEG)does not account for declines in fish size, fecundity, or sonar undercounting. As a result, rebuilding efforts are hindered by benchmarks that no longer reflect biological realities.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Yes. This proposal incorporates peer-reviewed research (e.g., Ohlberger et al. 2020), ADF&G reports, and historical Nushagak Chinook data.

# PROPOSAL 69

**5 AAC 06.391.** Nushagak District King Salmon Stock of Concern Management Plan. Adopt a recovery goal for Nushagak River king salmon, as follows:

Adopt recovery goal for Nushagak River King Salmon as recommended in the Department's Status and Action Plan report.

- 5 AAC 06.391. Nushagak District King Salmon Stock of Concern Management Plan.
- The purpose of this management plan is to provide management tools and guidelines to the department for the managaement of Nushagak District salmon fisheries, while Nushagak River king salmon are listed as a stock of management concern, which will result in the sustained yield of king salmon stocks large enough to meet sustainable escapement goals, while allowing for harvest opportunity in the subsistence, sport, and commercial fisheries.
- While the Nushagak River king salmon are listed as a stock of management concern, it is the intent of the board that all Nushagak District salmon stocks are managed conservatively through June 28 to protect Nushagak River king salmon, consistent with 5 AAC 39.222 (policy for the management of sustainable salmon fisheries). The provisions of this management plan are in effect until the lower bound of the SEG (55,000):
  - <u>is met or exceeded in three consecutive years and is expected to be met in</u> future years or
  - <u>is met in four out of six consecutive years and is expected to be met in future years.</u>

What is the issue you would like the board to address and why? The 2022 Nushagak River King Salmon Stock Status and Action Plan report to the Alaska Board of Fisheries recommended a recovery goal but this goal was not formalized.

Did you develop your proposal in coordination w	vith others, or with your local Fish and Game
Advisory Committee? Explain. Not applicable	