Copper River Salmon (29 proposals)

Subsistence (7 proposals)

PROPOSAL 44

5 AAC 01.620. Lawful gear and gear specifications.

Allow more than the legal limit of gillnet gear to be onboard a vessel used in the subsistence salmon fishery, as follows:

- (j)
- (4) A vessel engaged in subsistence gillnet may have extra gillnet gear on board the vessel.

What is the issue you would like the board to address and why? Interpretation that any vessel legally engaged in subsistence fishing cannot have extra gear on board to promote efficiency of harvest if the legal amount of gear being used is damaged during the subsistence activity. Being able to continue harvest having a spare amount on board does not harm anyone and is acknowledged by Subsistence regulations. further codifying this will more clearly define any misunderstanding by the public and ADFG to alleviate confusion and stress for subsistence participants.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Coordination with other subsistence users.

PROPOSED BY: Shawn Gilman ********************************

(EF-F24-027)

PROPOSAL 45

5 AAC 01.625. Waters closed to subsistence fishing.

Allow subsistence fishing for salmon in the Copper River inside closure area, as follows:

We recommend opening inside closure waters to subsistence fishing by adding new subsection 5 AAC 01.648 (c):

5 AAC 01.648(c). Prince William Sound Subsistence Salmon Fisheries Management Plans

(c) Salmon may be taken for subsistence purposes in the inside closure area described in 5 AAC 24.350(1)(B) unless all other Copper River Chinook fisheries have first been restricted.

What is the issue you would like the board to address and why? The regulations set forth in 5 AAC 24.361 that restrict fishing in the regulatory closed waters specified in 5 AAC 24.350(1) (B) for the conservation of king salmon should only be applied to Commercial and Sport fisheries (5AAC 24.361 (b)-(c)). This area restriction has been applied to the subsistence fishery. Because the subsistence fishery is catch-limited (5 king salmon per household limit), an area restriction provides no conservation benefit; however, it places an unnecessary burden on subsistence users to fish farther out, especially those in river skiffs coming down rivers who are more suited to fishing more protected waters.

Did you develop your proposal in coordination with others, or with your local Fish and Game **Advisory Committee? Explain.** This proposal was developed by the Native Village of Eyak Department of the Environment and Natural Resources staff, recommended by the Native Village of Eyak's Natural Resource Advisory Council and approved unanimously by Tribal Council.

PROPOSAL 46

5 AAC 01.630. Subsistence fishing permits.

Require harvest reporting within seven days of harvest in the lower Copper River district subsistence salmon fishery, as follows:

5 AAC 01.6xx new section

Subsistence harvest from the Copper River district must be reported within 7 days of harvest.

What is the issue you would like the board to address and why? Subsistence fishing in the lower Copper River District, which occurs at the mouth of the Copper River, can provide valuable in season run strength information as it is open every Saturday and on Mondays and Thursdays when the commercial fishery is closed. However, the reporting requirements for subsistence permits do not require reporting harvest until October 31. We believe that weekly reporting will not place an undue burden on participants in this fishery as it can be easily done at the local ADF&G office in Cordova, where all subsistence trips for the lower copper are based out of, or online. Additionally weekly reporting will increase the accuracy of reports and reduce the likelihood of participants harvesting more fish than their bag limit.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. This Proposal was discussed and submitted by the Copper River/Prince William Sound AC

PROPOSAL 47

5 AAC 01.630. Subsistence fishing permits and 5 AAC 77.5XX Personal use fishing permits. Require inseason reporting in subsistence and personal use fisheries, as follows:

- (6) subsistence fishing reports must be completed on forms provided by the department, or using an online app or phone call and submitted to the department office from which the permit was issued [at a time specified by the department] within 5 days of harvest for each particular area and fishery.
- (6) personal use fishing permits must be completed on forms provided by the department, or using an online app or phone call and submitted to the department office from which the permit was issued [at a time specified by the department] within 5 days of harvest for each particular area and fishery.

What is the issue you would like the board to address and why? Require In-Season reporting of Subsistence and Personal Use Salmon within 5 days of harvest using an online app or phone call to the department.

Currently, participants in both fisheries are not required to report their harvest until well after the close of the season. Both fisheries take a substantial number of salmon, especially in low abundance runs. It is imperative that managers have real time data to use their EO authority to close fisheries when the security of the resource demands it. It is time for all users of these valuable resources to be accountable.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. This Proposal was discussed and developed by the Copper River/Prince William Sound Advisory Committee.

PROPOSED BY: Copper River/PWS Advisory Committee

(HQ-F24-034)

PROPOSAL 48

5 AAC 01.620. Lawful gear and gear specifications.

Repeal the prohibition of subsistence guide services in the Glennallen Subdistrict, as follows:

Remove prohibition on subsistence guide services in the Glennallen subdistrict. Allow for subsistence guide services in the Glenallen subdistrict notwithstanding the prohibition

5 AAC 01.620 Lawful gear and gear specifications

- [(L) SUBSISTENCE FISHING GUIDE SERVICES ARE PROHIBITED IN THE GLENNALLEN SUBDISTRICT. FOR THE PURPOSES OF THIS SUBSECTION,
- (1) "SUBSISTENCE FISHING GUIDE SERVICES" MEANS ASSISTANCE, FOR COMPENSATION OR WITH THE INTENT TO RECEIVE COMPENSATION, TO A SUBSISTENCE FISHERMAN TO TAKE OR TO ATTEMPT TO TAKE FISH FROM A VESSEL BY ACCOMPANYING OR PHYSICALLY DIRECTING THE SUBSISTENCE FISHERMAN IN SUBSISTENCE FISHING ACTIVITIES DURING ANY PART OF A SUBSISTENCE FISHING TRIP:
- (2) "COMPENSATION" MEANS DIRECT OR INDIRECT PAYMENT, REMUNERATION, AND OTHER BENEFITS RECEIVED IN RETURN FOR SERVICES, REGARDLESS OF THE SOURCE; IN THIS PARAGRAPH, "BENEFITS"

(A) INCLUDES

- (I) WAGES AND OTHER EMPLOYMENT BENEFITS GIVEN DIRECTLY OR INDIRECTLY TO AN INDIVIDUAL OR ORGANIZATION; AND
- (II) DUES, PAYMENTS, FEES, AND OTHER REMUNERATION GIVEN DIRECTLY OR INDIRECTLY TO A FISHING CLUB, BUSINESS, ORGANIZATION, OR INDIVIDUAL WHO PROVIDES SUBSISTENCE FISHING GUIDE SERVICES;
- (B) DOES NOT INCLUDE REIMBURSEMENT FOR THE ACTUAL DAILY EXPENSES FOR FUEL, FOOD, OR BAIT.]

In order to assess the significance of guide service use, consideration should also be given to updating the Glennallen Subdistrict Subsistence Permit Harvest ticket to provide a check box on the permit to indicate if commercial services were used.

What is the issue you would like the board to address and why? A prohibition against subsistence guide services in the Glennallen Subdistrict was adopted at 2021 at the Prince William Sound/Upper Copper River Board of Fisheries meeting. This new regulation has unfairly and unnecessarily reduced opportunities for Alaskans and non-rural natives to harvest salmon for food in the Glennallen Subdistrict subsistence fishery. The prohibition has decreased opportunity for Alaskan households and increased competition for the extremely limited number of shore-based fishing sites that can be accessed via the public right of way.

The most reasonable access to this fishery for many subsistence users is by boat, but without an available transport or guide service, many subsistence users may find it very dangerous or are simply unable to participate and meet their subsistence needs. Many households rely on guides and transporters because the number of safe shore-based fishing sites is very limited; they are unwilling to attempt to wade into the dangerous river; they do not own a boat or are not comfortable driving a boat on the Copper River; they do not own, or are unable to afford build, maintain or operate a fishwheel; they do not know someone with a fishwheel to use; or they do not have access to shoreline to place a fishwheel.

The prohibition was aimed at commercial services but it is subsistence users that have been harmed. Guide services merely provide a safe and cost-effective means of accessing fish for personal and family consumption. Significant use of these services in this subsistence fishery very clearly demonstrates their utility and value.

There is no sustainability issue with allowing subsistence users access to salmon resources with the assistance of a guide service. The prohibition was allocative away from the subsistence fishery.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. This proposal was developed collaboratively by a group of Glennallen subsistence fishery participants.

PROPOSAL 49

5 AAC 01.620. Lawful Gear and Gear Specifications.

Prohibit transport services in the Glennallen Subdistrict, as follows:

5 AAC 01.620(1)(1)

- (l) Subsistence fishing guide services are prohibited in the Glennallen Subdistrict. For the purposes of this subsection,
- (1) "subsistence fishing guide services" means assistance, for compensation or with the intent to receive compensation, to a subsistence fisherman to take or to attempt to take fish from a vessel

by accompanying or physically <u>transporting</u> [DIRECTING] the subsistence fisherman in subsistence fishing activities during any part of a subsistence fishing trip

What is the issue you would like the board to address and why? We want to clarify language to include the restriction of "transporting" subsistence fishermen in the Glennallen Subdistrict for subsistence fishing. Monetary compensation for transporting service should not exist in a subsistence fishery.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No

PROPOSAL 50

5 AAC 1.620. Lawful gear and gear specifications. and 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

Prohibit the use of chartplotters or fish finders in the Chitina and Glennallen Subdistricts, as follows:

5AAC 52.022 (a)(XX) <u>Electronics including chart-plotters, depth finders, fish finders, or any other device that may aid in locating fish, depth, or paths of travel while fishing may not be used to aid in the taking of fish from a boat in the Chitina and Glennallen Subdistricts.</u>

What is the issue you would like the board to address and why? "Fair chase" is an important concept that applies to hunting regulations. Many activities such as the use of drones, electronic calls, and even two-way radios are not allowed.

Electronics to aid in the taking of fish should be viewed in the same way.

We have seen increased fishing pressure when other places around the state such as the Kenai and the Yukon are closed. We are likely to see further increase as the Yukon has been closed for half a decade and the Kenai will see closures as well. Participation is only going to grow on the Copper River in years to come. The Copper River can't feed the whole State.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No.

PROPOSED BY: Kirk Wilson (HQ-F24-109)

Salmon Management Plans (5 proposals) PROPOSAL 51

5 AAC 24.360. Copper River District Salmon Management Plan.

Reduce commercial salmon fishing opportunity in the Copper River District, as follows:

To address this issue, we recommend that the *timing* of the commercial harvest be managed in a manner that avoids disproportionately high exploitation rates for early run Copper River salmon

stocks, potential adverse effects on overall population diversity of Copper River salmon, and potential adverse impacts on food security for salmon-dependent subsistence users. To be clear and *sincerely respectful of all user groups* that are reliant on Copper River salmon, the solution that we propose is about *timing* of harvest *not allocation* of harvest among user groups with legitimate needs.

Specifically, we recommend that the board revise the Copper River District Salmon Management Plan, 5 AAC 24.360 as follows, with revised text <u>underlined in bold</u>, regulatory text to be deleted fully capitalized and enclosed in brackets, and explanatory comments (if any) *in italics* and enclosed in parentheses:

- (a) The department shall manage the Copper River District commercial salmon fishery to achieve a sustainable escapement goal of 360,000 750,000 sockeye salmon into the Copper River.
- (b) The department shall manage the Copper River District commercial salmon fishery to achieve an inriver goal of salmon, as measured at the sonar counter near Miles Lake, based on the total of the following categories:

Spawning escapement

Lower end of sockeye salmon escapement goal 17,500 other salmon

Glennallen Subdistrict subsistence fishery 61,000 – 82,500 salmon

Chitina Subdistrict personal use fishery 100,000 – 150,000 salmon

Sport fishery 15,000 salmon

Hatchery brood (sockeye salmon) estimated annually

Hatchery surplus (sockeye salmon) estimated annually

TOTAL announced annually

- (c) Repealed 4/24/2009.
- (d) Repealed 3/30/2000.
- (e) The department shall manage the Copper River District commercial salmon fishery to conserve and avoid disproportionate exploitation of early-run Copper River sockeye and king salmon stocks by comparing cumulative sonar passage and management objectives by date, as follows:

(1) After two commercial drift gillnet openings, the Copper River District shall not open to commercial drift gillnet fishing when cumulative sonar passage is less than 70 percent of the cumulative management objective for the same date.

What is the issue you would like the board to address and why? The issue is that management of the Copper River District commercial fishery by the Alaska Department of Fish and Game (department) in five of the six most-recent years (2018-2023) resulted in disproportionately high harvest (exploitation) rates for early run Copper River salmon stocks. Without action by the board to mitigate this issue, persistent disproportionate exploitation of stocks with early migratory timing has the potential to diminish the overall population diversity of Copper River sockeye and king salmon while threatening food security for Copper River subsistence users, and particularly those who fish upstream of the Gakona River in the uppermost portion of the Glennallen Subdistrict. The 2023 season is most representative of this concern, when more than 387,000 salmon were harvested by the commercial fishery before cumulative salmon passage at Miles Lake had reached

50 percent of the department's objective for cumulative inriver passage. (Note that this estimate for the degree to which Miles Lake salmon passage was lagging behind cumulative commercial harvest and management objectives accounts for the fact that the sonar sensor on the south bank was not operational for a full 24-hr period until 5/31.) Disproportionately high early season harvest rates occurred to a lesser extent in 2021 and 2022, and also occurred in low-run years of 2018 and 2020 before low sonar counts triggered extended closures of the commercial fishery.

Management that results in a recurring pattern of disproportionately high exploitation rates for early run salmon stocks is inconsistent with two statewide fisheries management policies. These are the Policy for the Management of Mixed Stock Salmon Fisheries (5 AAC 39.220), which specifies in part that "... conservation of wild salmon stocks consistent with sustained yield shall be accorded the highest priority;" and the Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222), which specifies in part that "... salmon escapement should be managed in a manner to maintain genetic and phenotypic characteristics of the stock by assuring appropriate geographic and temporal distribution of spawners"

Management that has the potential to adversely affect population diversity of Copper River salmon would be contrary to the "portfolio-effect" principle, which holds that conservation of population diversity is an important means of enhancing the resilience of salmon populations and associated fisheries to changing environmental conditions (Hilborn et al. 2003, Schindler et al. 2010).

Management that results in disproportionately high harvest rates for early run stocks also may exacerbate known food-security concerns of upriver subsistence users. Because of their location in the watershed, subsistence users from headwater communities have access to the fewest spawning populations, some of which are characterized by early run timing. A preliminary National Park Service assessment of 2005-2021 harvest data found that year-to-year catch stability (one measure of food security, here estimated as interannual variability in catch-per-unit-effort) was lowest (interannual variability was highest) during this period for subsistence users who fished upstream of the Gakona River compared with downstream subsistence users who fished between the Chitina River bridge and the Gakona River. This pattern of low catch stability in the uppermost reach of the Copper River applied to participants in the state subsistence fishery and as well as the federal subsistence fishery and is consistent with findings for the Fraser River in Canada (Nesbitt and Moore 2016). Past research and Alaska Native traditional knowledge indicate that Copper River salmon stocks associated with headwater tributaries are among the earliest to enter the river. Since at least 2004 (board proposal 53 in 2005) and as recently as 2023 (RC019 submitted during the board's October 12-13, 2023 work session), subsistence users have repeatedly urged fisheries managers to allow more early run salmon to reach headwater spawning tributaries.

We considered an alternative solution to this issue, but rejected it in favor of this proposed solution after conferring with department staff from the Division of Commercial Fisheries and the Division of Sport Fisheries. The alternative solution would have required the department to (1) establish a program for post-season estimation and assessment of annual exploitation rates for distinct spawning stocks of Copper River sockeye and king salmon on the basis of genetic stock composition data and other appropriate information; (2) ensure, to the extent practicable, that exploitation does not place distinct stocks at elevated risk of extirpation; and (3) report assessment results to the board on a schedule that conforms to the board cycle. We rejected the genetics-based

solution in favor of this sonar-based solution, which is far simpler and less expensive to implement, thereby enabling immediate action during this board cycle. Nevertheless, we believe that the use of genetic data to estimate stock-specific exploitation rates ultimately may be required for ensuring the long-term conservation of diversity of Copper River sockeye and king salmon populations and the resilience of these populations and dependent fisheries, livelihoods, and cultural traditions in the context of changing environmental conditions.

We will provide further analyses and context for the issue and additional justification for the proposed regulatory change in a letter submitted to the board following issuance of the proposal book.

References

Hilborn, R., T.P. Quinn, D.E. Schindler, & D.E. Rogers. 2003. Biocomplexity and fisheries sustainability. *Proceedings of the National Academy of Sciences* 100(11):6564-6568.

Nesbitt, H.K., and J.W. Moore. 2016. Species and population diversity in Pacific salmon fisheries underpin indigenous food security. *Journal of Applied Ecology* 53:1489-1499.

Schindler, D.E., R. Hilborn, B. Chasco, C.P. Boatright, T.P. Quinn, L.A. Rogers, & M.S. Webster. 2010. Population diversity and the portfolio effect in an exploited species. *Nature* 465:609-612

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Prior to submission of this proposal, we consulted with the following groups and benefitted from the perspectives that they offered: ADF&G Division of Commercial Fisheries staff, Cordova & Anchorage, ADF&G Division of Sport Fisheries staff, Glennallen & Fairbanks, Copper Basin Fish and Game Advisory Committee, Copper River / Prince William Sound Fish and Game Advisory Committee, and Wrangell-St. Elias National Park Subsistence Resource Commission

PROPOSAL 52

5 AAC 24.360. Copper River District Salmon Management Plan.

Reduce commercial salmon fishing opportunity in the Copper River District, as follows:

5 AAC 24.360 (x) Allow two Copper River District commercial salmon fisheries 12-hour openers during the week of May 15th, then delay openers by two weeks or until a daily management objective for fish passage is met at the Miles Lake Sonar.

What is the issue you would like the board to address and why? Protecting genetic diversity of salmon in the Copper River Watershed.

Traditional Ecological Knowledge (TEK) of Tribal citizens and accounts from local residents indicate the run timing of Copper River salmon has been delayed by about two weeks in recent years. These accounts are validated and quantified by various projects in the Copper River

including radio telemetry studies, genetics and bioenergetics studies, Miles Lake Sonar passage, Tanada Creek Weir passage, and harvest data from subsistence, commercial, and sport fisheries. Local managers and biologists have stated when the Copper River has a late ice-out, and when stream temperature remains cool late into the historical return time, salmon "mill" in the sound where they are susceptible to disproportionately high catch rates. Among these cohorts are king salmon and sockeye salmon destined for the furthest reaches of the Copper River. TEK is science, and it has long documented that the earliest returning salmon are those that spawn furthest upstream. This knowledge is being reconfirmed by a multitude of studies around Alaska and in the Copper River Basin.

Uneven targeting of these specific stocks decreases the diversity of the Copper River salmon genetic portfolio. On top of this, the Gakona to Slana reach of the Glennallen Subdistrict Subsistence Area has failed to meet Amounts Necessary for Subsistence (ANS) 17 of the past 19 years. These are the early returning fish. By delaying the PWS commercial fishery by two weeks or until a daily management objective is met at the Miles Lake Sonar, we are taking a step in the right direction in protecting the diversity of Copper River salmon. If salmon returns are earlier than that of recent years (a daily management objective is typically met around June 1-4), and a daily management objective is met before this two-week period, then we would expect these upriver stocks to return in numbers and the ensuing commercial fishery will not be disproportionately impacting Chinook and upriver sockeye stocks.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Ahtna Intertribal Fish and Wildlife Committee and Ahtna Tene Nene' jointly recommended this change to address Tribal concerns of sustainability of Chinook and upper Copper River sockeye stocks. This change in management will help prevent future restrictions and closures.

PROPOSAL 53

5 AAC 24.360 Copper River District Management Plan.

Allow the Copper River District commercial salmon fishery to open for the first two periods, then close until the Copper River cumulative salmon management objective is met, as follows:

Allow commercial fisheries to open for the first two openers as a test fishery, then close until the Copper River cumulative management objective is met.

This will spread the commercial use throughout the season and allow earlier stock to go upstream.

What is the issue you would like the board to address and why? We have concerns of early run wild stocks reaching the upper Copper River tributaries.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. We spoke with Wrangell St. Elias NPS and ADF&G about our concerns regarding Salmon in the Copper River and its tributaries.

PROPOSAL 54

5 AAC 24.361. Copper River King Salmon Management Plan.

Restrict use of Copper River District inside closure area during statistical weeks 20 and 21, as follows:

(b) In the commercial fishery, during the statistical weeks 20 and 21, the commissioner may not **close** [open] more than **three** [ONE] 12-hour fishing periods within the inside closure area of the Copper River District described in 5 AAC 24.350(1)(B).

What is the issue you would like the board to address and why? The 3 mandatory inside closures have been taken way too far by management. We no longer have an inside district fishery at all until July, even on years of Chinook abundance like 2023 we were shut out of our traditional fishing areas for far too long. This proposal would maintain the 3 inside closures currently in regulation but the change would require the opening of one inside district during a potential fourth fishing period during weeks 20 and 21, but only if there is an opener.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. This idea is widely supported by the Cordova fleet.

PROPOSED BY: Kenneth B. Jones

(HQ-F24-011)

PROPOSAL 55

5 AAC 24.361. Copper River King Salmon Management Plan and

Restrict commercial guide services in the Upper Copper River District when the Copper River District commercial fishery is restricted, as follows:

If the commercial fishery is closed for king conservation measures on the inside waters during the commercial season for more than two consecutive non-mandatory inside closures then the commercial guide services in the Upper Copper River drainage will be limited to at least one conservation measure listed below for a period of no less than one week.

What is the issue you would like the board to address and why? The disconnect between conservation measures upriver and downriver. The commercial fisheries upriver and downriver should be tethered together in a way that promotes stewardship and shared conservation when necessary amongst commercial interest.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. In coordination with others in reviewing historical data.

PROPOSED BY: Shawn Gilman

(EF-F24-026)

Commercial (2 proposals)

PROPOSAL 56

5 AAC 23.XXX. New Section.

Allow permit stacking by Prince William Sound commercial salmon drift gillnet permit holders, as follows:

5.AAC.24.3XX Requirements and specifications for use of 200 Fathoms of Drift Gillnet gear in Area E.

- (a) A CFEC permit holder who holds two Area E drift gillnet permits may operate 200 Fathoms of gear.
- (b) Two Area E drift gillnet CFEC permit holders may concurrently fish from the same vessel and jointly operate up to 200 fathoms of drift gillnet gear under this section.
- (c) When two Area E drift gillnet CFEC permits are fished from the same vessel and jointly operate drift gillnet gear under this section, the vessel must display its ADF&G permanent license plate number followed by the letter "D" to identify the vessel as a dual permit vessel. The letter "D" must be removed or covered when the vessel is operating with only one drift gillnet CFEC permit on board the vessel. The identification number and letters must be displayed (1) in letters and numerals 12 inches high with lines at least one inch wide: (2) in a color that contrasts with the background; (3) on both sides of the hull; and (4) in a manner that is plainly visible at all times when the vessel is being operated.
- (d) When two permit holders jointly operate gear under this section, each permit holder is responsible for ensuring that the entire unit of gear is operated in a lawful manner.

What is the issue you would like the board to address and why? Allow stacking of Copper River Drift permits like what has been successfully done in Bristol Bay and Cook Inlet.

The Copper River Drift Fleet has evolved into a more efficient fleet with improved hull and machinery and communication. This is not the same fleet that existed when limited entry was executed. The recent downturn of poor salmon runs, and poor prices has led to this fishery being barely financially viable. The average ex-vessel gross in 1990 was \$44,000 and in 2022 was \$29,000 adjusted for 1990 inflation. The ex-vessel gross is less than it was 32 years ago. Fuel prices, nets, and equipment have gone up dramatically in price the past 34 years while the overall gross has gone down.

The national average for a gallon of gas was \$1.05 in 1990 while in 2021 it was \$3.05.

The mean permit prices were \$159,797 in 1990 meanwhile in 2023 the mean permit prices adjusted for 1990 inflation was \$38,604. This is a complete collapse of permit values and the economic viability of this fishery.

This fleet is barely keeping its head above water, permit stacking would allow two things to happen.

1.) Allowing one vessel to operate two permits would be a fleet consolidation and allow this community fishery to be financially viable once again.

This is near a full participation fishery, allowing people to stack permits would reduce the amount of overall net in the water during commercial openers. This would reduce the overall harvesting efficiency of the fleet but would allow the remaining fishery participants more opportunity.

2.) Most importantly when comparing permit stacking to a buyback like was done in southeast seining permit stacking does not increase the difficulty for new entrants into the fishery. Permit stacking instead creates another path to ownership and experience in the fishery for deckhands who can buy a permit and stack it on the boat they crew on until they can afford to buy their own operation.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. This idea has been tossed around by members of the fleet as a potential solution to allowing more financial stability in this fishery.

PROPOSED BY: Darin Gilman (HQ-F24-002)

PROPOSAL 57

5 AAC 24.XXX. New Section.

Allow dual permit operations in the Prince William sound commercial drift gillnet salmon fishery, as follows:

- 5.AAC.24.3XX Requirements and specifications for use of 200 Fathoms of Drift Gillnet gear in Area E
- (a) Two Area E CFEC Drift Gillnet permit holders may concurrently fish from the same vessel and jointly operate up to 200 fathoms of drift gillnet gear, and a person holding two Area E CFEC Drift Gillnet permits may operate up to 200 fathoms of drift gillnet gear, under this section. (b) When two Area E CFEC Drift Gillnet permit holders fish from the same vessel and jointly operate additional drift gillnet gear, and when a person holding two Area E CFEC Drift Gillnet permits operates additional drift gillnet gear, the vessel must display its ADF&G premanent license plate number followed by the letter "D" to identify the vessel as a dual permit vessel. The letter "D" must be removed or covered when the vessel is operating with only one Area E CFEC Drift Gillnet permit on board the vessel. The permanent license plate numbers and letters must be displayed in letters aInd numerals 12 inches high and at least one inch wide.

What is the issue you would like the board to address and why? Allow two Area E Drift Gillnet CFEC permit holders to concurrently fish from the same vessel and jointly operate up to 200 fathoms of drift gillnet gear, and a person holding two Area E Drift Gillnet CFEC permits may operate up to 200 fathoms of drift gillnet gear under this new section. Often referred to as Permit Stacking.

This would be a fleet funded buyback program that would eliminate gear from the water, and would reduce boats in a now overcrowded fishery. For every nine boats that would stack permits it would be over a mile of gear out of the water. This would help with the up river escapement of Chinook and Sockeye on the Copper River, and would open up more fishing oppertunity for those participating in the fishery.

This proposal would also help in reducing conflicts between sport and commercial fishers in the Sound. With the increased number of Sport and Charter operators in the Sound, there have been an increased number of gear entanglements, and navigational issues. Less boats would mean less interactions.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. I have noted and experienced the success of the Duel permit

system in other fisheries in Alaska. I have also discussed this proposal with other members of the Area E Drift fleet.

Personal Use (14 proposals) PROPOSAL 58

5 AAC 24.361. Copper River King Salmon Management Plan.

Amend the Copper River King Salmon Management Plan, as follows:

5 AAC 24.361(d) is amended to read:

. . .

- (d) In the Chitina Subdistrict personal use dipnet salmon fishery,
 - (1) the annual limit for king salmon is one fish;
- (2) if the commissioner determines that additional conservation measures are necessary to achieve the escapement goals, the commissioner may, by emergency order, close the Chitina Subdistrict personal use dipnet salmon fishery season and immediately reopen a season during which the retention of king salmon is prohibited: [.]
- (3) if the commissioner projects that the upper bound of the escapement goal will be exceeded, the commissioner may, by emergency order, close the Chitina Subdistrict personal use dipnet salmon fishery season and immediately reopen a season during which the king salmon annual limit per household permit is increased.

What is the issue you would like the board to address and why? In December 2021, the board adopted the current drainagewide sustainable escapement goal (SEG) of 21,000–31,000 king salmon. Copper River spawning escapement exceeded 31,000 king salmon in 2023. To mitigate exceeding the escapement goal, the only management actions available inriver are limited to liberalizing the sport fisheries, which have limited harvest potential and fishing is concentrated to only three tributaries. Allowing an increase in the king salmon annual household limit for the personal use fishery provides the department a management tool to attempt to stay within the SEG, if needed, across all upper Copper River and upper Chitina River stocks.

PROPOSAL 59

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

Amend the Copper River Personal Use Dip Net Salmon Fishery Management Plan, as follows:

5 AAC 77.591(e) is amended to read:

. .

- (e) The total annual limit for each personal use salmon fishing permit is as follows;
 - (1) 25 salmon for the head of household and 10 salmon for each dependent of the permit holder, except that only one king salmon may be retained per household[.];
 - (2) if the commissioner projects that the upper bound of the Copper River drainage sockeye salmon sustainable escapement goal will be exceeded, the commissioner may,

by emergency order, close the Chitina Subdistrict personal use dip net salmon fishery season and immediately reopen a season during which the annual limit for the head of household is increased by XX sockeye salmon with no increase in the king salmon annual limit established in 5 AAC 77.591(e)(1), or an increase in the king salmon annual limit by conditions specified in 5 AAC 24.361(d).

What is the issue you would like the board to address and why? Since 2003, the Copper River sockeye salmon escapement goal has been exceeded 4 years, from 2012-2015. To mitigate exceeding the escapement goal, the only management actions available inriver are limited to liberalizing the sport fisheries, which have limited harvest potential and are concentrated to only two tributaries. Allowing an increase in the sockeye salmon annual household limit for the personal use fishery provides the department a management tool to attempt to stay within the SEG as well as distributing harvest across all upper Copper River and Chitina River stocks. The department will provide options and potential harvest from several scenarios of increased limits for the board to consider.

PROPOSAL 60

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Modify the annual limit for the Chitina Subdistrict, as follows:

Section 5 AAC 77.591(e) The total annual limit for each personal use salmon fishing permit is $\underline{20}$ [25] salmon for the head of household and $\underline{5}$ [10] salmon for each dependent of the permit holder, except that only one king salmon may be retained per household.

What is the issue you would like the board to address and why? Copper River Personal Use Dip Net Salmon Allocation

The Chitina Subdistrict Personal Use Fishery has between 6,000 and 8,000 participants each year. The past three years have gone over the allocated 100,000 - 150,000 salmon limit with a three-year average of 163,989 (an underestimation, based on preliminary 2023 data). Lowering the bag limit by 5 fish per household member will ensure all Personal Use fishermen a reasonable opportunity to participate while accounting for increased interest in the Copper River fishery, and still remain below the 150,000 fish threshold. Closures around the state have brought and will bring more participants to this fishery. Ensuring the sustainability of Copper River salmon is the responsibility of all user groups including the Personal Use.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No

PROPOSAL 61

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Modify the annual limit and establish a supplemental permit for the Chitina Subdistrict, as follows:

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan (e) The total annual limit for each personal use salmon fishing permit is [25] <u>15</u> salmon for the head of household and 10 salmon for each dependent of the permit holder, except that only one king salmon may be retained per household. <u>Supplemental permits for an additional 10 salmon for head of household will be allotted by EO authority if the in-river goal has a harvestable</u>

<u>surplus.</u>

What is the issue you would like the board to address and why? The rationale to change the household limit to 25 salmon was in reflection of "like regulation" between the Upper Cook Inlet and Copper River drainages. However, the Copper River is a completely different watershed, and the historical PU bag limit was 15 for head of household compared to 25 salmon in the upper cook inlet fisheries. Currently the lower copper river subsistence fishery's bag limit is 15 salmon. The increased bag limit was a reallocation away from the Commercial fishery in (2013). The past few seasons, this increased allocation has hamstrung the lower river biologist's management due to less than stellar sockeye runs. The productivity of the Copper River differs from the Upper Cook Inlet systems; the bag limits initially reflected what the system could handle on normal run conditions.

The EO authority still allows for an increased bag limit when Copper River sockeye is in an above normal productivity cycle and there is a harvestable surplus.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Developed with other drift gillnetters in the fleet.

PROPOSED BY: Kalistrat Kuzmin (HQ-F24-076)

PROPOSAL 62

5 AAC 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

Allow inseason adjustment of the Copper River personal use maximum harvest level, as follows:

- 5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.
- (f) The maximum harvest level for the Chitina Subdistrict personal use salmon fishery is 100,000 150,000 salmon, not including any salmon in excess of the in-river goal or salmon taken after August 31.

IF THE COPPER RIVER DISTRICT COMMERCIAL SALMON FISHERY IS CLOSED FOR 13 OR MORE CONSECUTIVE DAYS, THE MAXIMUM HARVEST LEVEL IN THE CHITINA SUB DISTRICT IS REDUCED TO 50,000 SALMON

What is the issue you would like the board to address and why? The current condition of the copper river salmon stock on years of low abundance is dire. Ever growing non limited populations of upriver users are pulling out salmon at their most fragile and critical adult stage, during their late stages of migration and pre spawning. These pre spawning salmon must be protected on years of low abundance and all user groups need to share equitably in these conservation measures. In

December 2017 the board of fish adopted proposal 18 which repealed and replaced regulatory language and has put the copper river salmon runs at risk ever since. The action taken by the board of fisheries to repeal what was known as the "shared burden" regulation resulted in the copper river nearly missing escapement during the 2018, and 2021 seasons, all despite unprecedented commercial closures. In 2020 despite achieving lower bound sonar goals the stock for the first time actually missed the in river escapement levels. During that year unprecedented commercial fishery closures also occurred, the lions share of the harvest in those low abundance seasons took place upriver, putting the runs at risk. Had this regulation been in place and enforced, the salmon runs would not have missed their escapement goals. It is essential that the burden of conservation is shared among all users not just placed solely on the historical commercial user which has been the case since 2017.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Yes, other fisherman are overwhelmingly in support of this.

PROPOSAL 63

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Amend the opening date of the Chitina Subdistrict personal use fishery, as follows:

of fish passage is met at Miles Lake sonar through September 30. The commissioner shall establish a preseason schedule, including fishing times, for the period June 21 [7] through August 31 based on daily projected sonar counts at the sonar counter located near Miles Lake. This abundance-based preseason schedule will distribute the harvest throughout the season. The commissioner must [MAY] close, by an emergency order effective June 21 [7], the Chitina Subdistrict personal use salmon fishing season and shall reopen the season, by emergency order, on or before June 21 [15] depending on the run strength and timing of the sockeye salmon run. Adjustments shall be made to the preseason schedule based on actual sonar counts compared to projected counts. If the actual sonar count at Miles Lake is more than the projected sonar count, the commissioner shall close, by emergency order, the season and immediately reopen it during which additional fishing times will be allowed. If the actual sonar count at Miles Lake is less than the projected sonar count, the commissioner shall close, by emergency order, the season and immediately reopen it during which fishing times will be reduced by a corresponding amount of time.

What is the issue you would like the board to address and why? Protecting genetic diversity of salmon in the Copper River Watershed.

Currently, the Personal Use (PU) fishery in the Chitina Subdistrict (CSD) may begin as early as June 7. Traditional Ecological Knowledge (TEK) of Tribal citizens and accounts from local residents indicate the run timing of Copper River salmon has been delayed by two to three weeks in recent years, most likely due to changing environmental conditions i.e. late ice-out. Data from the Miles Lake Sonar and harvest analysis quantify and validate these accounts. The first fish to enter the river are typically Chinook and sockeye stocks that travel furthest upriver. With the PU

fishery catching approximately 9.6% of the total sockeye and 4.4% of the Chinook run (most recent 5-year average), which is equivalent to approximately 164,000 total salmon reported (3-year average), the fishery disproportionately impacts Chinook and upriver sockeye stocks in the beginning of the season. Chinook have failed to meet escapement goals four of the past 10 years, even despite lowing the escapement goal from 24,000 to a range of 21,000-31,000 in 2021. Protecting Chinook and the genetic diversity of Copper River sockeye is a proactive step to ensure robust populations.

While PU participants are only allowed one Chinook per household, there are approximately 6,000 permits issued annually. In addition to high participation, there is also undocumented en route mortality as a result of fish handling during catch and release while dipnetting.

Based on radio telemetry studies, it is understood that salmon migrating past the Miles Lake Sonar take between 7 and 14 days (based on environmental factors i.e. streamflow) to reach the CSD where the PU fisheries occurs. By delaying the fishery by two weeks, or until 2 weeks after a daily management objective for fish passage is met at the Miles Lake Sonar (which is met on average between June 1 and 4), we will protect the diversity of Copper River salmon by not disproportionately impacting early returning genetic stocks.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Ahtna Intertribal Fish and Wildlife Committee and Ahtna Tene Nene' jointly recommended this change to address Tribal concerns of the sustainability of Chinook and upper Copper River sockeye stocks. This change in management will help prevent future restrictions and closures.

PROPOSAL 64

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

Prohibit a household from possessing permits for multiple personal use salmon fisheries in the same year, as follows:

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan (a) Salmon may be taken in the Chitina Subdistrict only under the authority of a Chitina Subdistrict personal use salmon fishing permit. Only one Chitina Subdistrict personal use salmon fishing permit may be issued to a household per calendar year. A household may not be issued both a Copper River subsistence salmon fishing permit and a Chitina Subdistrict personal use salmon fishing permit. A household may not be issued a Chitina Subdistrict personal use salmon fishing permit if the household has been issued an Upper Cook Inlet personal use salmon fishing permit in the same calendar year.

What is the issue you would like the board to address and why? Personal Use bag limits reflect a user's household needs. However, the number of people participating in both Cook Inlet and Copper River PU fisheries is increasing. Four out of five PU Dip Net fisheries are operated under one permit and one bag limit in the Upper Cook Inlet PU Dip Net fisheries. We want to see a loophole closed to those taking advantage of multiple bag limits, by limiting a user to either a

Chitina Sub district PU salmon fishing permit OR an Upper Cook Inlet PU salmon fishing permit in the same calendar year.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain.

PROPOSED BY: Cordova District Fishermen United (CDFU) (EF-F24-112)

PROPOSAL 65

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Require a weekly permit and inseason reporting in the Chitina Subdistrict, as follows:

5 AAC 77.591 (x)

A participant must purchase a one-week Personal Use dipnet permit from Alaska Department of Fish & Game. Reporting is required within one week of the expiration of the permit. If harvest bag limit is not reached, additional permits may be obtained upon satisfying reporting requirements.

What is the issue you would like the board to address and why? In-season reporting for more accurate harvest assessment and for in-season decision making The Personal Use Fishery in the past three years has exceeded the allocated 100,000 - 150,000 limit with a three-year average of 163,989 (an underestimation, based on preliminary 2023 data). In-season reporting will help inform managers with responsible decision making

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No.

PROPOSAL 66

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Manage the Chitina Subdistrict personal use fishery to achieve the Gulkana Hatchery broodstock goal, as follows:

5 AAC 77.591 Add subsection (i) as written

(i) The department, in consultation with the hatchery operator, shall manage the Chitina Subdistrict Personal Use salmon fishing through restricting time and area by emergency order to achieve the Gulkana Brood Stock escapement goal.

What is the issue you would like the board to address and why? Prince William Sound Aquaculture has failed to achieve its broodstock goal for the Gulkana hatchery for the 8 most recent years, despite ample escapement passing the lower Copper River sonar. Many of the fish necessary to achieve broodstock are caught in the personal use fishery. We ask the board to require the department to manage to achieve this goal with input from PWSAC and grant them the

necessary tools to do so. Full utilization of the Gulkana Hatchery will benefit all users over the long term.

There is precedent set in other Prince William Sound fisheries in which hatchery operators and ADFG managers consult each other to restrict fishing time for broodstock escapements goals. One Example is in 5 AAC. 24.365 part (a).

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain.

PROPOSAL 67

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan.

Prohibit removing king salmon from the water if it is to be released in the Chitina Subdistrict, as follows:

Add 5 AAC 77.591 (c) (1)

- (c) Salmon may be taken only with dip nets.
- (1)King salmon intended or required to be released may not be removed from the water.

What is the issue you would like the board to address and why? Removing king salmon from the water, that are intended to be released, is not allowed in sport fisheries. This is because it severely impedes the ability for king salmon to complete their life cycle. Removing king salmon should not be allowed in personal use fisheries.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain.

PROPOSAL 68

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Prohibit dipnetting from a boat in the Chitina Subdistrict, as follows:

5 AAC 77.591 (c) Salmon may be taken only with dip nets while not in a boat.

What is the issue you would like the board to address and why? Reduce undue stress on Copper River king and sockeye salmon in the Chitina Subdistrict

Being able to target holding areas during times of high water that are not accessible from shore enhances the ability to catch king salmon. Based on ADF&G data, average king harvest per permit from 2019 to 2023 is 0.4 from boat and 0.3 from shore. About 6,000 Personal Use permits are issued each year. Only one king salmon can be retained annually per household. Fishing from a boat increases the number of kings caught and released. En route mortality of king salmon due to catch and release stress is not documented and could be contributing to decreased escapements. Copper River king salmon have failed to meet escapement goals 4 of the last 10 years.

High stream flows have become more frequent in recent years, slowing the migration time by forcing fish to find refuge in eddies and pools until conditions are favorable for continued migration. Prior to use of boats for dipnetting, the salmon could seek this refuge in inaccessible areas to fishermen during times of high water. Now these areas are targeted.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No

PROPOSAL 69

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Establish restrictions when dipnetting from a boat in the Chitina Subdistrict, as follows:

(C) Salmon may be taken only with dip nets. Salmon taken with a dipnet from a powerboat will be subject to more time and area restrictions to allow fish passage to return to a pattern that more closely resembles past practices in the fishery.

What is the issue you would like the board to address and why? The change in the nature, efficiency and scope of area not previously accessed by the Personal Use fishery in the Chitina Subsistrict. The use of power boats and especially the increase in charter power boats has allowed the take of fish holding on the bottom of the river during high water events and throughout the season in areas the were never before fished or exploited. This change in harvest method and area combined with increased commercialization is a drastic change that the Department has not fully recognized.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Coordinated with others watching the river activities.

PROPOSAL 70

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Extend the lower boundary of the Chitina Subdistrict, as follows:

The Chitina Dipnetters Assn. is requesting the BOF extend the lower boundary of the Chitina Personal Use Dipnet Fishery with new language in 5AAC 77.591(h) as defined below.

For the purpose of this section, the Chitina Subdistrict consists of all waters of the mainstream Copper River from the downstream edge of the Chitina-McCarthy Bridge downstream to a line crossing the Copper River from a point just upstream of Canyon Creek on the east (lat. 61 deg 24'36.00"N – lon. 144 deg. 28'25.34"W) angling across the Copper River to the existing lower limit sign at Haley Creek [to an east west line crossing the Copper River approximately 200 yds. Upstream of Haley Creek]

This extension would, at its longest point, increase the drift area by approximately .4 of a mile or 694 yds. and give boat dipnetters a longer continuous drift, allowing more spacing between boats and alleviate the dangerous congestion of boats that occurs now. The revised language would still give law enforcement a straight line sight of the entire boundary line as viewed from Haley Creek. This small increase in size of the Chitina Sub-district is unlikely to result in increased harvests, since the fishery is managed by emergency order to stay within the allocation contained in the management plan and because Personal Use dipnetters are held to an annual bag limit and once met they are done for the year.

A map identifying the existing and proposed lower boundaries will be submitted to the BOF prior to the December 2024 Copper River/Prince William Sound meeting.

What is the issue you would like the board to address and why? In the last 12 years, drift dipnetting from both personal and guided boats has substantially increased as a method of harvesting salmon in the Chitina Personal Use Dipnet Fishery (CPUDF). This is in large part due to the very limited number of suitable sites available for shore based dipnetting. Because much of the CPUDF lies within the deep turbulent waters of Woods Canyon on the Copper River, productive areas to dip from boats are very limited. A favorable and high use area for drift dipnetting from boats lies at the downstream end of Woods Canyon, on the east side of the Copper River, just upstream of the lower boundary of the CPUDF. This short drift area is only approximately 250 yards long, has a gravel bottom and stays relatively snag free saving the loss of \$150+ dipnets. This short drift area has become the go-to spot for boat dipnetters and often becomes very congested with up to and over 15 boats drifting the same area. This congestion of boats in this short drift area has created a very dangerous navigation hazard for these boaters within the swift waters of the Copper River and boat accidents are inevitable.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. The Chitina Dipnetters Assn. and the Fairbanks Fish & Game Advisory Committee.

PROPOSED BY: The Chitina Dippnetters Assn.	(HQ-F24-030)
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PROPOSAL 71

5 AAC 77.591. Copper River Personal Use Dip Net Salmon Fishery Management Plan. Prohibit guiding in the Chitina Subdistrict, as follows:

- 5 AAC 01.620(x) Fishing guide services are prohibited in the Copper River Chitina Subdistrict Personal Use Fishery.
- (x) "fishing guide services" means assistance, for compensation or with the intent to receive compensation, to a Personal Use Fishery participant to take or to attempt to take fish from a vessel by accompanying or physically directing the Personal Use Fishery participant in fishing activities during any part of a fishing trip

What is the issue you would like the board to address and why? Guided fishing from a boat is already not allowed in the Glennallen Subdistrict. We would like to expand this to apply to the Chitina Subdistrict Personal Use Fishery as well.

The Personal Use Fishery in the past three years has exceeded the allocated 100,000 - 150,000 limit with a three-year average of 163,989 (an underestimation, based on preliminary 2023 data).

Guided fishing from a boat provides expertise and allows targeting of holding areas especially during times of high water that are not accessible from shore and enhances ability to catch king salmon and sockeye salmon. Based on ADF&G data, average king harvest per permit from 2019 to 2023 is 0.4 from boat and 0.3 from shore. About 6,000 to 8,000 Personal Use permits are issued each year, many of which use guide services. Only one king salmon can be retained annually per household. Fishing from a boat increases the number of kings caught and released. En route mortality of king salmon due to catch and release stress is not documented and could be contributing to decreased escapements. Copper River king salmon have failed to meet escapement goals 4 of the last 10 years.

High water levels have become more frequent in recent years, slowing the migration time by forcing fish to seek refuge in eddies and pools until conditions are favorable for continued migration. Prior to use of boats for dip netting and guided fishing trips, the salmon could seek this refuge in inaccessible areas to fishermen during times of high water. Now these areas are targeted by guides.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No.

Sport (1 proposal) PROPOSAL 72

5 AAC 52.023. Special provisions for seasons, bag, possession, and size limits, and methods and means for the Upper Copper River and Upper Susitna River Area.

Close sport fishing for salmon based on water temperature in the Gulkana River, as follows:

5AAC 52.023 (9)(x) Close Gulkana River to fishing for Chinook and sockeye salmon by emergency order when water temperature at the Sourdough station exceeds 18 degrees Celsius (C) at any time during a 24-hour period for 3 consecutive days or exceeds 20 degrees C. Fishing may resume when stream temperature recedes and does not reach 18 degrees C at any time for 2 consecutive days.

What is the issue you would like the board to address and why? Protect Gulkana River salmon from excessive effects of heat stress.

It is generally understood that heat stress causes increased en route, pre-spawn mortality of salmon when stream temperatures rise above 18 degrees Celsius (C) (von Biela et al. 2020). The following is largely based on studies conducted in the neighboring Yukon River drainage, a thermal, geomorphic regime that closely resembles the precipitation driven Gulkana River system. Not only does heat stress largely affect Chinook, female Chinook are susceptible to pre-spawn mortality at a rate approximately twice that of male Chinook (Hinch et al. 2021).

In Alaska, weir operations have already restricted handling of fish when critical water temperature thresholds are met. For example, at the Andreafsky Weir (a tributary to the Yukon River), sampling activity is suspended when daily mean water temperature readings are greater than or equal to 17 degrees Celsius for three consecutive days, or if high water temperature readings exceed 20 degrees Celsius (Shink, 2020).

The Gulkana River is a non-glacial, clearwater, precipitation driven river with pools, riffles, and runs. When stream temperatures rise, en route fish seek refuge and congregate in deep pools where they are targeted by fisherman. Once ready to spawn, fish seek suitable conditions typically in shallow water tail outs of pools to build redds. At this point they are subject to jet boats and rafts routinely interrupting the process and amplifying the effects of stress. When salmon become stressed they may die before successfully spawning.

In recent years the Gulkana River has seen increased fishing pressure. With closures around the state, this river will most likely witness increased fishing in future years. With Copper River Chinook failing to reach escapement goals in four out of the past 10 years, and a large population contribution from the Gulkana stock (19-27% based on telemetry studies) (Schwanke & Piche, 2023), it is imperative we be proactive to protect populations during times of environmental stress.

The USGS already has a 10-year index of real-time stream temperature with precision to 0.1 degree Celsius at the Gulkana River Sourdough station. Implementation of this proposal will not require additional resources. Link to USGS Gulkana River Station: https://waterdata.usgs.gov/monitoring-location/15200280/#parameterCode=00010&period=P365D&showMedian=false

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. No