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RESOLUTION
BOARD OF FISHERIES

WHEREAS, in December, 1997, during the course of its "in cycle" consideration of fisheries issues related to the Arctic-Yukon-Kuskokwim area, the Board was presented with information which led the Board to consider the need for a thorough and complete examination of the subsistence fishery in Norton Sound, including consideration of a possible Tier II subsistence fishery, and conservation issues, particularly in the Nome Subdistrict; and

WHEREAS, the communities of Norton Sound were advised of the Board's concerns and the need for a special meeting as set forth in the special notice by which the Board informed the public of the meeting in Nome in March, 1998; and

WHEREAS, the Board conducted a public hearing in Nome on March 3rd, 4th and 5th, 1998, which included extensive staff reports on the subsistence issue as well as public testimony from over fifty (50) members of the public and advisory committees; and

WHEREAS, as a result of this public process, the Board was made aware that there is a lack of understanding and uncertainty among the subsistence users of Nome and other communities in Norton Sound, as well as considerable uncertainty by the staff of ADF & G as to how the fishery would be managed under a Tier II system; and

WHEREAS, it is the practice of the Board of Fisheries to give the stakeholders in a fishery the widest possible opportunity to address and to solve problems in their own fisheries with the assistance of staff of the Department of Fish and Game and the Board of Fisheries; and

WHEREAS, only a short period of time has passed between the Board's concerns arising in Fairbanks in December, 1997 and the public meeting in Nome in March, 1998, which time period has not allowed a full and complete exploration and discussion of the issues surrounding the subsistence and conservation concerns of the Board by the stakeholders in the fishery;

NOW, THEREFORE, after full consideration of all of the options and possibilities before the Board and after additional presentations by the Staff of ADF&G and the Department of Law,

THE BOARD OF FISHERIES RESOLVES as follows:
1) The Board hereby authorizes its Chairman, with the assistance of local Department staff and the public in attendance at this Board meeting, and subject to the approval of the full Board, to appoint a Workgroup of interested and qualified subsistence, sport and commercial users and residents of the Nome Subdistrict to consider all of the issues and options surrounding the conservation and subsistence issues in the Nome Subdistrict; and

2) The Workgroup is directed to work with ADF&G staff and the Department of Law, both of whom have expressed their commitments to this process, to develop a local Salmon Management Plan. The Management Plan shall be localized, shall have a broad range of management tools and practices for the Nome Subdistrict and shall address the following matters:

A) Conservation issues in the Nome Subdistrict; and

B) Issues of Tier I and Tier II subsistence fisheries in the Nome Subdistrict; and

C) Establishment of a criteria to differentiate among subsistence users in the event a Tier II fishery is required in the Nome Subdistrict; and

D) Consider restoration and enhancement options and possibilities in the Nome Subdistrict; and

E) Recommendations for research and funding for the Nome Subdistrict.

3) The Workgroup is to work with ADF&G Nome/Norton Sound staff before, during and after the 1998 season. If, in the determination of the Workgroup and with the concurrence of ADF&G staff, a closure of any river(s) or other area(s) is deemed appropriate, the Workgroup shall make a recommendation to the local Advisory Committee(s) to close such river(s) or area(s). In this regard, the Board authorizes the Chairman to work with the Commissioner to insure that the Advisory Committee(s) are given the appropriate authority under AS 16.05.260 and 5 AAC 97.010. Nothing set forth herein is intended, in any manner, to limit the Department’s emergency order authority.

4) The Workgroup is directed to make an interim report at the Board of Fisheries work session in Juneau, Alaska in October, 1998. Further, the Workgroup is to complete its work and report to the full Board at its meeting in Nome, Alaska in March, 1999 at which time it will submit its localized Salmon Management Plan for the Nome Subdistrict.
5) If, for any reason, the Workgroup fails to report as required in a timely fashion, the Staff of the Department is instructed to make the report to the full Board.

6) The Workgroup has selected and the full Board approves Caleb Pungowiyi as its interim chairman. He is instructed to work with Board Chairman White. The initial members of the working group have been selected and the full Board has approved these selections. The initial working group will hold a public meeting and expand its membership as it deems appropriate thereafter.

7) The Board expects that this Workgroup will confine its efforts to the development of a localized Management Plan.

DATED at Nome, Alaska this 5th day March, 1998.

Dr. John White, Chairman
Alaska Board of Fisheries
ALASKA BOARD OF FISHERIES

YUKON RIVER DRAINAGE FALL CHUM SALMON
MANAGEMENT PLAN FINDING

The Board of Fisheries (board) held a meeting in Anchorage, Alaska, on March 10 through 19, 1996. During this meeting, the board addressed Agenda Change Request 2, the review of 5 AAC 01.249. THE 1995 YUKON RIVER DRAINAGE FALL CHUM SALMON MANAGEMENT PLAN. The board received public and advisory committee comments concerning the 1995 management plan. Public comments included proposed amendments from the Yukon River Drainage Fisheries Association (association).

The association’s plan was different from the 1995 management plan by recommending that total closure of the subsistence chum salmon directed fishery in a given year would not occur unless the drainagewide escapement level was less than or equal to 350,000 fall chum salmon. The association proposed that at a run size greater than 350,000 fish, but less than or equal to 550,000 fall chum salmon, that the drainagewide escapement level be lowered from the 1995 management plan’s 400,000 fall chum salmon level to 350,000 or 375,000 fall chum salmon, depending on the run strength. Additionally, the association proposed that during the most restrictive subsistence chum salmon directed fishing periods, that a human-food-only chum salmon directed fishery be allowed.

Similar to the 1995 management plan, the association’s management plan continued to recommend that, with run size greater than 550,000 fall chum salmon, the subsistence directed chum salmon fisheries would be managed for a 400,000 drainagewide fall chum salmon escapement level. In managing the commercial, personal use, and sport-directed chum salmon fisheries, the association’s plan would also continue to target for a 400,000 fall chum salmon drainagewide escapement level. The association argued that its management plan would provide for a modest level of fall chum salmon subsistence use during below average returns while ensuring sustained yield.

The board recognizes and appreciates the helpful role the association has had in fostering cooperative management by developing consensus among the different user groups and the Department of Fish and Game (department). The association’s recommended Toklat River Fall Chum Salmon Rebuilding Plan is an excellent example of the association’s performance in developing comprehensive recommendations for conservation and management.

The board heard from the department that five Biological Escapement Goals (BEGs) have been established for fall chum salmon throughout the drainage. The department, and in the case of two of the five goals, the United States and Canada Yukon River Joint Technical Committee, develops biological escapement goals based on the best biological information available. Most of the current BEGs are, in part, based on historical averages,
and are in the form of a minimum number of desired spawners. The current BEG minimum numbers are thought to be less than that which produces Maximum Sustainable Yield (MSY). The board also heard from the department that, since 1993, a targeted drainagewide escapement level of 400,000 fall chum salmon was used in the management of the fisheries to increase the likelihood of achieving the individual BEGs throughout the drainage.

The department reported that a total run size of 600,000 fall chum salmon was needed to meet a 400,000 fall chum salmon drainagewide escapement level and 200,000 fall chum salmon to meet 1996 anticipated subsistence and Canadian fisheries needs.

The board heard from the department that drainagewide escapement levels of 350,000 and 375,000 fall chum salmon, given normal distribution, was sustainable but would be expected to produce a lower yield than a drainagewide escapement of 400,000 fall chum salmon, given normal distribution. The board also heard from the department that, based on the current Ricker spawner-recruit model for Yukon River fall chum salmon, a drainagewide escapement of 350,000 fish, given normal distribution, would be expected to produce a return of approximately 800,000 fall chum salmon. The board also heard that the estimated drainagewide median escapement for the years 1974 to 1995 is approximately 327,000 fall chum salmon. The board also heard from the department that the current Ricker recruit curve model suggests that a drainagewide fall chum salmon escapement level of approximately 550,000 fall chum salmon may be necessary to produce MSY.

The Alaska Constitution mandates that fishery resources be managed on the sustained yield principle. A wide range of sustainable yields are possible for salmon fisheries. The board also heard from the department that, in October 1992, each of the department’s division directors signed an Escapement Goal Policy. Page 1, paragraph 4, first sentence of the policy states that:

"Unless otherwise directed by regulation, the department will manage Alaska’s salmon fisheries, to the extent possible, for maximum sustained yield."

However, the board does have the authority to direct the department to manage the fishery at a level that produces a sustained yield, but which is less than MSY, such as by establishing Optimal Escapement Goals. As defined by the escapement goal policy:

"Optimal Escapement Goal (OEG): is a specific management objective for escapement that considers biological and allocative factors. The optimal escapement goal is determined by the Alaska Board of Fisheries. The optimal escapement goal may or may not be equal to the BEG but is always sustainable."

Lowering the drainagewide escapement level to provide for a limited subsistence fishery in those years of below average returns has both allocative and biological aspects. The allocation issue is between the needs of subsistence fishermen in any given year and those
of the commercial fishermen. If adopted, in those years this provision is applied, it would likely decrease the allowable commercial harvest in future years, primarily four years later, when age-4 fish return. Additionally, in those years when this provision is applied, it would likely increase the possibility that subsistence restrictions may be necessary in the event of poor production. Again, the effects of the possible reduction in future returns would be felt primarily four years later. On the other hand, it would allow for some continuing level of subsistence use; a very important use for Yukon River subsistence users.

The biological aspects of this proposal, in those years enacted, would reduce the level of the drainagewide escapement. This could have several effects, including: decreasing the likelihood that year of meeting the individual BEGs established throughout the drainage; decreasing the likelihood that year of meeting the border passage objective to Canada; it could affect the Toklat River fall chum salmon stock rebuilding efforts for that year.

To provide the board some idea on how the association’s proposed management plan would affect management recommendations when compared to the 1995 management plan, the department applied the association’s management plan of a lower drainagewide escapement level prior to a closure of the subsistence directed chum salmon fisheries to historical run sizes estimates. The association’s management plan would alter the management recommendations contained in the 1995 management plan in years when run size estimates are greater than 350,000 fall chum salmon but less than or equal to 550,000 fall chum salmon. The median run size estimate for the years 1974 through 1995 is approximately 730,000 fall chum salmon. The association’s plan would have altered management actions, from those proposed in the 1995 management plan, in only 3 of the past 22 years.

The Department of Law also informed the board that, under the subsistence law, the board did not have the authority to establish a “human-food-only” fishery.

After further board discussion, with additional input from the department and the association, the board adopted a Yukon River Drainage Fall Chum Salmon Management Plan. The management plan reflects the intent that, in those years of a low return, the directed subsistence chum salmon fishery would be allowed at drainagewide fall chum salmon escapement levels of 350,000 or 375,000 prior to a total closure of the directed fall chum salmon subsistence fishery. The management plan was also amended to include a “sunset clause” of December 31, 1997. This clause would put the management plan up for review during the next regular scheduled A-Y-K board meeting during the winter of 1997/1998.

In adopting the Yukon River Drainage Fall Chum Salmon Management Plan regulation, it was the finding of the board that:
1. The “targeted drainagewide escapement goal” is defined as that level of drainagewide escapement for which the department manages in order to increase the likelihood of achieving individual biological escapement goals throughout the drainage.

2. The Yukon River targeted drainagewide escapement goal is 400,000 fall chum salmon.

3. Yukon River drainagewide escapement levels of 350,000 and 375,000 fall chum salmon, given normal distribution, provide for sustained yield.

4. In those years that a 350,000 or 375,000 drainagewide fall chum salmon escapement level is targeted, instead of a 400,000 drainagewide fall chum salmon escapement level, the allowable fall chum salmon harvest would be expected to be less in future years, primarily four years later, when age-4 fish return.

5. Given normal production levels and distribution, a drainagewide escapement level of 350,000 or 375,000 fall chum salmon would be expected to produce sufficient fish in the return year for commercial fall chum salmon fisheries, normal subsistence harvest levels, Canadian fisheries, and a 400,000 fall chum salmon drainagewide escapement level.

6. For the historical period 1974 through 1995, only three years exist in which total fall chum salmon run size was estimated to have ranged between 350,000 and 550,000 fish.

7. The board’s has to preserve and protect the subsistence fishery to a degree that has not occurred in the past.

Therefore, in managing the Yukon River fall chum salmon directed subsistence fishery, the board adopts an Optimal Escapement Goal of 350,000 fall chum salmon in years the Yukon River drainage fall chum salmon run is estimated to be greater than 350,000 fall chum salmon but less than or equal to 450,000 fall chum salmon. Additionally, in managing the Yukon River fall chum salmon directed subsistence fishery, the board adopts an Optimal Escapement Goal of 375,000 fall chum salmon in years the Yukon River drainage fall chum salmon run size is estimated to be greater than 450,000 fall chum salmon but less than or equal to 550,000 fall chum salmon.

At Wasilla, Alaska

Date: October 26, 1996

Approved: 7/0/0/0 (Yes/No/Absent/Abstain)

Larry Engel, Chair
Alaska Board of Fisheries
Alaska Board of Fisheries
Findings
Chum Salmon Conservation Measures For The
Arctic-Yukon-Kuskokwim and South Unimak/Shumagin Islands June
Fisheries

A. Background:

By legal notice dated February 1, 1994, the Alaska Board of Fisheries (board) announced its intention to consider chum salmon conservation measures throughout the Arctic-Yukon-Kuskokwim (AYK) and in the South Unimak/Shumagin Islands June fishery at its regularly scheduled board meeting in March 1994. The board meeting drew considerable public attendance and testimony. The board heard testimony from approximately 175 members of the public and 10 advisory committees. The board also reviewed a considerable volume of written comments submitted by the public prior to and during the meeting. The Alaska Department of Fish and Game (ADF&G, department) presented a comprehensive review of the information available for the AYK chum salmon stocks and fisheries and for the South Unimak/Shumagin Islands June fishery.

The board has examined the Alaska Peninsula June fisheries and their relationship to the AYK chum salmon stocks and fisheries numerous times. See board findings FB-1-92 and FB-06-92.

During the summer of 1993, it became apparent that AYK and other Alaska chum salmon returns were well below expectations, due primarily to the lack of four year old spawners.

Consequently, when the board met in October 1993 to review agenda change requests and petitions, the board considered requests to revisit the chum salmon cap in the South Unimak/Shumagin Islands June fishery. The board found that these requests did not meet the criteria set out in 5 AAC 39.999 for taking the matter out of cycle. Additionally, ADF&G indicated there was no new information regarding chum salmon stock identification in the South Unimak/Shumagin Islands June fishery. Nor was there any indication from ADF&G that the estimated 2.5 million missing AYK chum salmon were related to the June fishery.

Immediately after the board adjourned its October 1993 meeting, the commissioner of ADF&G called a special meeting of the board for December 1993 to consider any and all actions to address the chum salmon conservation problems in the AYK fisheries.

The special informational meeting was convened on December 1 - 4, 1993 in Anchorage so that the board could consider scheduling matters for a regulatory meeting aimed at addressing the various AYK chum salmon problems. At the December meeting, the board heard three days of public comment from 80 members of the public and 9 advisory committees, and numerous staff reports.
concerning chum salmon stocks from the Alaska Peninsula through nearly the northern extent of their range in the Kotzebue area. The meeting was not noticed for regulatory action, but the board agreed to review a number of department options addressing conservation concerns throughout the suspected range of AYK chum salmon stocks. The board eliminated a specific 300,000 fish reduction in South Unimak/Shumagin Islands chum cap, but did agree to re-examine that cap at the March 1994 meeting.

The department-generated proposals were initially published with the February 1, 1994 public notice, with revised set of proposals published in early March for public review and comment and scheduled for board consideration at the March 1994 meeting.

At the March board meeting, the board considered six proposals submitted by the department. The proposals provided generally for an AYK region wide rebuilding plan that would allow chum salmon saved in a fishery to pass through to the spawning grounds, provide the department with greater flexibility for inseason management to conserve chum salmon during fisheries for other salmon, and where possible, provided additional opportunities for subsistence fisheries while protecting chum salmon stocks. The actions taken by the board for the AYK fisheries and for the South Unimak/Shumagin Islands June fishery are generally as set out in Section B of these findings.

B. Summary of Regulatory Changes Adopted by the board:

The board took action to conserve AYK chum salmon stocks and to allocate the burden of conservation consistent with the “Policy for the Management of Mixed Stock Salmon Fisheries” [5 AAC 39.220]. With respect to the AYK fisheries, these measures are intended to minimize, if necessary, the taking of chum salmon while allowing subsistence fishing of other salmon species. These measures also provide for the commercial and sport harvests of other salmon species where escapement is met and subsistence is provided for and there is additional harvestable fish.

With respect to the South Unimak/Shumagin Islands June fishery, these measures provide the department with additional flexibility to further minimize the possibility of large chum salmon harvests by maximizing fishing opportunity during periods of high sockeye to chum salmon ratios.

Proposal No. 1: The board adopted an overall Arctic-Yukon-Kuskokwim Region Chum Salmon Rebuilding Management Plan with the guiding principle that the savings of chum salmon resulting from regulatory actions in a fishery to reduce chum salmon interceptions should be allowed to pass through subsequent fisheries to the spawning areas as needed to maintain sustained yield. This plan applies to all AYK chum salmon stocks and fisheries and to the South Unimak/Shumagin Islands June fishery.

Proposal No. 2: The board took action to make the harvestable surplus of chum salmon at the Sikusuilaq Springs Hatchery available to Kotzebue area
commercial fishers using set gillnets through emergency orders issued by the department. This action will maximize harvest on excess hatchery stocks returning to the Sikusuilaq hatchery, while intercepting wild chum salmon stocks as little as possible.

Proposal No. 3: In the Norton Sound-Port Clarence area, the board provided the department with authority to target commercial fishing on Chinook salmon by using larger mesh gillnet gear that would only minimally impact chum salmon, provided authority to allow only beach seine gear to be used for subsistence fishing, and to require that chum salmon taken with beach seine gear must be returned to the water alive. The board also provided authority to the department to close set gillnet gear separately form other gear by emergency order if necessary for the conservation of chum salmon.

Proposal No. 4: In the Yukon area, the board established a new coastal fishing district to allow flexibility in management actions if necessary to protect chum salmon during subsistence fisheries. The board also provided the department with authority to limit commercial fishing gear to large size Chinook salmon gillnet gear, to continue to provide for commercial fishing of Chinook salmon while minimizing interceptions of chum salmon. The regulations were amended to provide the department with authority to limit the size of gillnet gear for subsistence fishing to less than four inches or greater than eight inches to allow subsistence fishing while minimizing the impact on chum salmon and to require that fish wheels be equipped with live boxes and that chum salmon be returned to the water alive. The board provided authority for the department to conduct a test fishery in the Anvik River to determine the feasibility of harvesting surplus summer chum salmon without stressing Chinook stocks. The markers at the mouth of the Andreafsky River were moved to provide greater management flexibility. Additionally, the board created a time separation between commercial and subsistence fishing periods to lessen the opportunity for subsistence fish to be illegally sold, while still providing a reasonable opportunity for subsistence when there is a harvestable portion.

The Yukon River chum salmon stocks were also addressed through the Yukon River drainage Fall Chum Salmon Management Plan, which was adopted at this meeting. The purpose of this management plan is to assure adequate escapement of fall chum salmon into the tributaries of the Yukon River and to provide management guidelines to the department. The board applied the mixed stock policy (5 AAC 39.220) to the Yukon River fisheries and determined the policy has been met by the Yukon River Drainage Fall Chum Salmon Management Plan and the other management plans and regulations the board has in place in the Yukon River.

Proposal No. 5: In the Kuskokwim area, the board provided the department with authority to allow subsistence fishing for Chinook salmon with large mesh gillnet gear to minimize chum salmon interceptions, and limit the size of gillnet gear for subsistence fishing to less than four inches or greater than seven and one-half inches, and to require that fish wheels be equipped with live boxes and chum
salmon taken with a fish wheel or beach seine gear must be returned to the water alive.

Seven members participated in the vote on proposals 1-5 and the vote on each was 7-0.

Proposal no. 6: In the south Unimak/Shumagin Islands June fishery, the board amended the South Unimak/Shumagin Islands June Fishery Management Plan by deleting the fixed opening date, and eliminating the fixed sockeye quota periods. These actions give the department greater flexibility to harvest sockeye while the sockeye to chum salmon ratios are high.

Previously the management plan required the fisheries to be opened no earlier than June 13 and openings were conducted within specified periods with sockeye quotas, and closed when the sockeye quota of a certain period had been met. These amendments give the department the tools that they requested to reduce chum salmon catches in the June fishery by allowing fishing to continue when the sockeye to chum ratio is high. The Board adopted proposal six by a vote of 5-0. Two members did not participate or vote due to a determination by the Chair that they had a conflict of interest with regard to proposal six.

C. Findings--General:

1. The Board incorporates by reference its previous findings on the South Unimak/Shumagin Islands June fisheries, FB-1-92 and FB-06-92, and on Norton Sound chum salmon, 92-5-FB, and on Toklat fall chum salmon, 92-3-FB.

2. The Board incorporates by reference the public testimony, staff reports and Board discussion that occurred at the December 1 through 4 1993 informational meeting and at the March 1994 meeting.

D. Findings--AYK Management Measures:

The Board finds that stocks of chum salmon in Northern Norton Sound, the Aniak portion of the Kuskokwim drainage, and some of the Yukon River systems, particularly fall chums in the Toklat drainage, continue to fall below the catches and estimated escapements of the 1980's, and that the 1993 failure of a 4 year old spawners exacerbated existing problems in those systems.

The Board noted in amending Proposal 1, that managing for the high commercial catches in the AYK during the 1980's may or may not be a realistic goal. The Board believes that there is significant difference between managing for sustained yield and managing for high commercial catches and encourages state expenditures that will insure realistic management goals for these important systems.

From a conservation standpoint, it is difficult, if not impossible, to pin down a single regulatory solution to the chum salmon abundance problems being
experienced in some AYK systems. The extreme variability in stock conditions, unknown ocean survival, unknown effects of delayed maturity displayed by some west coast chum stocks, and imprecise harvest and escapement data for AYK chums all contribute to the difficulty of setting up effective regulatory and management regimes.

The problems occurring in some systems are even more baffling considering that other AYK chum stocks appear to be quite healthy. The Anvik River (a tributary to the Yukon River), generally considered to be the largest single chum salmon producing system in North America, continues to experience generally healthy runs and escapements. This is also the case for 75% of the chum stocks in Norton Sound, specifically those returning to the Southern Norton Sound Districts of Shaktoolik and Unalakleet. These districts continue to support healthy mixed stock chum salmon fisheries.

The Board also noted that in 1993 chum salmon abundance was far below average in all areas of Alaska north of Sitka. ADF&G staff reports during the December meeting indicated that the depressed chum returns may be linked to massive releases of chum salmon from Asian hatcheries. These releases may also be responsible for the delayed maturity of North American chums.

To further complicate the picture, the Board received informational reports from the staff and public that trawl bycatch of chum salmon during the 1993 Bering Sea pollock fishery was at an all time high. It remains unknown whether this bycatch indicates a high abundance of immature chum salmon rearing in the Bering Sea, or an elevated interception of already depressed stocks.

In taking the actions on Proposals 2-5, the Board sought ways to protect known chum salmon spawning stocks in troubled systems while providing maximum opportunities for subsistence, commercial, and sport fishing on healthy chum and other salmon populations. The Board established regulations which give the commissioner maximum flexibility to respond to inseason situations so that harvest opportunities can be maximized for all users.

E. Findings--South Unimak/Shumagin Islands June Fishery:

The board rejected an amendment to lower the South Unimak/Shumagin Island June Fishery Management Plan to lower the chum cap to 300,000 from 700,000 fish. (Two members found to have a conflict on interest on proposal six did not vote. Two members voted in favor of the amendment. Three voted in opposition.) The Board examined, in detail, the department’s revised analysis of the 1987 tagging report which assigned stock-of-origin to the 1987 catch and extrapolated that stock identification to various chum caps for any year. The Board reviewed all information in its decision, and found the department’s report to lead to the same conclusion that previous Boards came to in applying the 1987 tagging information.
In applying the department's revised analysis board members voting in opposition found that a 300,000 chum cap in the South Unimak/Shumagin Islands June fishery could be expected to provide only 4-5,000 chum salmon to Northern Norton Sound systems even assuming a zero mortality on these fish between the June fishery and Norton Sound. Only 27,000 to 43,000 chums could be delivered to the Yukon River under the department's revised analysis. These members found that these numbers of fish would be almost undetectable in areas as large as Northern Norton Sound or the Yukon River. In reaching this determinations, they noted that it had arrived at exactly the same conclusion as previous Boards had using similar analyses. They also noted that the South Unimak/Shumagin Island June fishery catch of AYK bound chum salmon was relatively minor in comparison to the totality of AYK chum salmon abundance. These members also found that the conservation problems in the AYK fisheries could not be largely accounted for by the South Unimak/Shumagin Islands June fishery, nor would even a total closure of the June fishery be expected to bring about significant restoration of troubled AYK systems.

The Board applied the Mixed Stock Policy to the South Unimak/Shumagin Islands June fishery and found that the existing regulatory framework, and the new flexible additions to the regulations meets the policy. The management plan and the restrictive regulations adopted for this fishery over the past several years constitute appropriate assignment of conservation burden required by the policy even though the prevailing member of this Board and previous Boards have not found a significant cause and effect link between the South Unimak/Shumagin Islands June fishery and AYK fisheries.

Management actions in reducing fishing time and moving sleet pressure from waters where high concentrations of chums exist have kept the chum salmon harvest relatively stable over the last eight years. Chum caps established by previous Boards since 1986 have been exceeded only once; in 1991. Chum catches seem to be dependent upon the relative abundance of both chum and sockeye salmon. In other words, in years like 1993 when sockeye abundance is high and chum salmon abundance is low, the South Unimak/Shumagin Islands fishery is able to harvest its sockeye allocation without approaching the cap. Since the 1994 forecasts for Bristol Bay sockeye is at a record high, it is reasonable to expect that if sockeye abundance is high and chum abundance is low that the 700,000 chum salmon cap will not be reached unless chum abundance is also high, in which case that need to take sever measures in the June fishery are not required.

This fact, the new flexibility the department has, the fleet's commitment to work with the department to identify inseason areas that should be closed, and the voluntary "chum pool," provide protection to traveling chum salmon stocks that is consistent with the mixed stock policy and with sustained yield management.

Department calculations using a mathematical model based on past years' fishery performances indicated that a chum cap of 300,000 would mean a potential loss of 2,269,000 sockeye salmon to Area M fishers. This model projects average conditions and does not specifically account for either low or high chum abundance.
With a record sockeye run projected for Bristol Bay in 1994, this reduction of the cap could, however, according to the model, create a significant burden on Area M fishers and their families with the actual contribution of such a reduction insignificant in the conservation of AYK chum stocks.

F. Summary:

The actions taken at this meeting go far toward developing regulations to address the conservation concerns, foster sustained yield management, and rebuild Arctic-Yukon-Kuskokwim Region chum salmon stocks. Conservation concerns for several Arctic-Yukon-Kuskokwim Region chum salmon stocks that have been depressed in recent years have been identified and action taken to ensure sustained yield for these stocks. The Board also noted that the majority of this frustration in addressing the issue of resurrecting depleted AYK chum systems has less to do enacting more regulations than it has to do with acquiring more information. The Board discussed that the status of fisheries data in most of the AYK is extremely deficient, and continuing to deliberate regulatory solutions in the absence of basic biological data on AYK systems is counterproductive and a misdirection of time and resources. In addition, the Board of Fisheries and the Department of Fish and Game will work toward reducing the bycatch of western Alaskan origin chum salmon in ocean trawl fisheries.

Larry Engle, Chair
Alaska Board of Fisheries

APPROVED: 10/21/94 @ 8:27pm
Location: Fairbanks, AK

Action on AYK Portion of Findings:

(6/0/1: Yes/No/Abstain) Abstain: Virgil Umphenour

Action on South Unimak/Shumagin Islands June Fishery Portion of Findings:

(3/1/3: Yes/No/Abstain) Abstain: Virgil Umphenour;
Trefon Angasan, Jr.; and
Dick Jacobsen
I. NOME SUBDISTRICT

A. CONSERVATION CONCERNS

Key chum salmon streams in the Nome subdistrict have experienced spawning escapements significantly below established escapement goals in recent years. This has resulted in increasingly restrictive management of commercial, sport and subsistence fisheries since the mid-1980’s. The success of fisheries management options to meet escapement goals to assure sustained yield has been to some degree dependent on factors beyond the control of the local managers. Those factors include: decreased fresh water survival due to
high water during spawning and/or freeze down during harsh winters, unanticipated harvests, and local and non-local salt water survival, i.e. various stocks competing for limited resources. In addition, in the early 1980s high commercial harvests combined with heavy subsistence use in the Nome subdistrict apparently caused the Nome chum stocks to decline.

By 1990 escapement in the subdistrict had declined to one-fourth of established goals. During the 1991 season it was necessary to close commercial and sport fisheries totally, and to maintain an extensive subsistence closure during the early part of the season. The subsistence closure was relaxed only after the majority of the chum salmon run had passed and it was clear that adequate spawning would occur. As a result of these measures escapement objectives for most Nome subdistrict streams were able to be met in 1991. This was the first year the Nome River escapement objective had been met since 1984.

In summary, the Board found that escapements in the Nome subdistrict have been chronically below escapement goals established to maintain sustained yields despite significant management actions such as complete closure of the commercial and sport fisheries and a necessary restriction of the subsistence fishery. For the 1992 fishing season the Department of Fish and Game reported that it would probably be necessary to close commercial and sport fishing in the subdistrict and restrict subsistence fishing until the pink salmon run arrives in mid-July in order to maximize escapement of chums. Even with these measures the chum salmon escapement goals may not be met.

B. HISTORY OF BOARD OF FISHERIES AND DEPARTMENT OF FISH AND GAME ACTIONS TO PROTECT NOME SUBDISTRICT CHUM SALMON

The Board also considered reports from the Department regarding the fishing since 1963 and management actions taken since the early 1980’s to conserve and rebuild depressed Nome subdistrict chum salmon stocks.

These actions for the Nome subdistrict were initiated in 1982 when management staff reduced fishing time to limit commercial harvests. During following years the length of commercial seasons was reduced, weekly fishing periods were reduced, and half the commercial district was closed to fishing.

By 1984, commercial fisheries in the Nome subdistrict had been reduced to very low levels and sport fishery harvest limits were reduced. Commercial fishing west of Cape Nome including
the Nome River area was closed at that time and has remained closed. By 1988, the commercial harvest declined dramatically due to poor runs and lack of market. Sport fisheries harvest limits were further reduced in specified rivers. In addition, subsistence catch limits for depressed stocks were established. Subsistence gear restrictions set a maximum length of 50 feet for gill nets and disallowed subsistence beach seining in the Nome River. These restrictions served to decrease the impact of the subsistence fishery on any one spawning segment of the stock.

Since 1987, the Department has attempted to meet escapement objectives and still allow subsistence harvests by reducing commercial and sport fishery harvests by emergency order. As sport and subsistence restrictions became more severe in highly accessible streams in the Nome area, fishing effort shifted to more remote rivers in the subdistrict as well as adjacent subdistricts. By 1989 the Department was required to close sport fishing and subsistence fishing in the Nome River (the commercial fishery had already been closed). In 1991, the commercial and sport fisheries in the Nome subdistrict were closed by emergency order, and the subsistence fishery was severely restricted early in the season and was opened in-season for certain areas once escapements for stocks targeted in these areas were achieved.

C. POSSIBLE BOARD ACTIONS CONSIDERED TO REBUILD DEPRESSED NOME SUBDISTRICT CHUM SALMON STOCKS.

Consistent with past Board and ADF&G management actions the Board considered the chum salmon stocks in the Nome subdistrict (from Topkok Head to Cape Douglas) as a manageable unit. It reviewed actions that might be necessary to achieve adequate escapement of the Nome subdistrict chum salmon stocks. Since past Board and Department action had closed the commercial fishery in the Nome subdistrict there were not additional restrictions the Board could impose on the commercial fishery which would enhance escapement.

The Board considered regulatory changes to the chum salmon sport fisheries in the Nome subdistrict. Department staff reported that chum salmon sport harvests in the Nome subdistrict had historically been much larger than present levels and that chum salmon was a favored sport fishery species in this subdistrict. The Department had used its E.O. authority to close the Nome subdistrict in 1991 to chum salmon sport fishing and had submitted a staff proposal to the Board to close adjacent Norton Sound marine waters and freshwaters.
draining the Nome subdistrict to chum salmon sport fishing for 1992.

Because the subsistence fishery was the only fishery that would still be open in the Nome subdistrict, the Board focused much of its attention on alternative actions it might take to conserve the chum stocks without further restricting the subsistence fishery.

The Board heard testimony from subsistence users from these areas who stressed how important the chum salmon resource was to their subsistence way of life and that given the depressed status of the chum stocks they were concerned that their subsistence needs would not be met. The Norton Sound Advisory Committee representative testified that if reductions were necessary to the subsistence opportunity in the Norton Sound area that the local subsistence users felt strongly that the Board should not implement the Tier II system because it was essential that everybody got at least some fish, rather than that fewer people had a greater opportunity to fish. The Advisory Committee representative also testified that it is possible for some local subsistence users to get enough salmon from the marine waters. The Advisory Committee representative reported that the Advisory Committee supported Proposal 291, but that the proposed limitation of gear to set nets of a maximum of 50 feet posed some difficulty because people could not afford to get new nets. Overall the Advisory Committee wanted the regulations left as they are.

The Subsistence Division provided historical information to the Board that the historic level of subsistence use in the Nome subdistrict was 124 salmon per household and that the subsistence permits were on a household basis. The Subsistence Division also provided information that Nome area as a whole consumed an historical average of 14,000 salmon for subsistence purposes. While chum salmon make up the largest single component of the catch substantial numbers of pink and coho salmon are also taken. The Subsistence Division also reported that the subsistence gear type was predominantly gill nets, and that beach seines were not in use mainly due to regulatory restrictions.

The Board considered four possible courses of action to determine what might be done with subsistence fisheries in the Nome subdistrict that would assist with conserving and rebuilding the depressed chum salmon stocks, yet cause the least restrictions on, and disruption to, the traditional subsistence fishery patterns. These included:
1. Adopt staff proposal 291 to modify subsistence fishing seasons and gear specifications to conserve chum salmon stocks in the Nome subdistrict.

2. Establish a Tier II fishery which would allow only certain qualified subsistence users to harvest chum salmon under subsistence permits.

3. Further reduce subsistence harvest limits for chum salmon where they currently exist and establish limits for stocks where there currently are none.

4. Retain the status quo by allowing the Department to use its emergency order authority to open and close the subsistence fishery to protect spawning escapements.

II. MOSES POINT SUBDISTRICT

The Board also heard reports from the Department of Fish and Game regarding the depressed nature of Moses Point chum salmon stocks. Total returns have been low for the last five years and escapement goals have not been met despite reduced commercial fishing due to management restrictions and lack of markets for the fish.

During 1991, the commercial harvest was 803 chum salmon; subsistence harvests in the subdistrict are estimated at 3,000 fish per year. Escapement for the Kwiniuk River was 18,000 compared to the goal of 25,000, while escapement for the Tubutulik River was about 7,000 fish compared to the goal of 12,000.

Sport fishing harvests in the subdistrict are very low and catches are included in the subsistence harvest estimates. Options for the Moses Point subdistrict were more limited. No proposal had been submitted by the public or the staff concerning this subdistrict. Unlike the Nome subdistrict which has had a subsistence permit system in place for many years, the staff reported to the Board that implementing a Tier II fishery in the Moses Point subdistrict would be difficult because the subsistence users there were similarly situated to each other and would very likely all receive the same score.

III. BOARD ACTIONS TO PROTECT NOME CHUM SALMON AND PROVIDE SUBSISTENCE FISHING OPPORTUNITY DURING 1992.
Given the complexity of the subsistence use patterns, and not wanting to disrupt subsistence users any more than necessary in order to conserve the Nome subdistrict chum salmon stocks, the Board amended proposal 291 to: (1) allow use of beach seines in the Nome subdistrict only during period established by Emergency Order; (2) retain the fixed weekly fishing periods; and (3) expand the area where the 50 foot length restriction for set gill nets applied to the entire Nome subdistrict. The purpose of these changes was to limit the impact of the subsistence fishery on individual segments of the spawning stock by restricting the use of gear capable of harvesting large numbers of fish from a single school. These changes will still allow subsistence fishing if there is a harvestable surplus available over the level necessary to meet spawning escapement objectives. The Board directed the Department to continue to use time and area closures as necessary to ensure spawning escapements are met.

While the Board found it necessary to continue some restriction on subsistence fishing for chum salmon in the Nome subdistrict to assure adequate spawning escapements, as a result of the Board’s action, all streams in the Nome subdistrict will continue to remain open to subsistence fishing. The subsistence users will be able to maintain their traditional fish camps and will not have to relocate to more distant streams. The Board considered that the traditional way of subsistence fishing in the Nome area is that everyone should have an opportunity to fish, rather than the limitations of Tier II which would allow only certain qualified individuals to engage in subsistence fishing. As a result of the Board’s action all subsistence users will have an opportunity to engage in subsistence openings, which would not have been possible if a Tier II system had been implemented. For those subsistence users who need more fish than allowed from the streams, the marine waters will remain open with no limit on subsistence harvest. The use of beach seine gear may still be allowed by Emergency Order if there is sufficient harvestable surplus over the spawning escapement objectives, so subsistence users will not necessarily have to shift to set net gear. The Board made no regulatory changes in the subsistence bag limits for chum salmon.

In the Moses Point subdistrict the Board directed the staff to continue to use time and area closures as necessary to ensure adequate spawning escapements and provide for subsistence.
At the Alaska Board of Fisheries scheduled meeting held in Bethel, Alaska to consider proposals for the Arctic-Yukon-Kuskokwim (A-Y-K Area) Areas at the KVNA Building from February 4 - 11, 1992, the board, among other actions, addressed conservation concerns of the Toklat Fall Chums. Actions taken at this meeting had built on the actions taken at the previous meeting where the A-Y-K Area finfish issues were addressed (1989/90) in Anchorage, AK.

I. CONSERVATION CONCERNS

The Board of Fisheries finds that there is a serious conservation problem regarding Toklat fall chums. The 1991 escapement of 13,200 was 60 percent below the goal of 33,000. Since 1986, escapement has averaged only 67 percent of the goal and has reached the goal only once.

The escapement objective of 33,000 is the minimum number of fall chums needed to maintain the stock at its historical level during the 1970’s and early 1980’s. The board considered department staff reports, including the "Fall Chum Salmon Stock Status and 1992 Return Projection," which described the conservation concerns associated with this salmon stock.

II. HISTORY OF THE BOARD OF FISHERIES AND DEPARTMENT OF FISH AND GAME ACTIONS TO PROTECT TOKLAT FALL CHUM SALMON

The board considered reports from the Alaska Department of Fish and Game regarding management actions taken since 1982 to conserve and rebuild Yukon River fall chum salmon stocks. These actions have included time/area closures and reductions in harvest rates. A summary of these actions is attached.

1. As a result of these actions, fall chum salmon returns to the Sheenjek, Delta, and mainstem upper Tanana Rivers are healthy.

2. Fall chum salmon returns to the Toklat River and the Yukon River drainage in Canada have not responded to these management actions to the extent that escapement goals can be consistently achieved. Rebuilding plans for the Canadian stocks are included in the Yukon River treaty negotiations. Rebuilding plans for the Toklat stocks must be developed and implemented within the state of Alaska.

The actions have included time and area closures and reductions in harvest rates in the commercial fisheries. The board has not restricted opportunities for subsistence in any part of the Yukon River in the past except for actions in the Kantishna River which were taken for the purpose of addressing a serious conservation concern.

III. POSSIBLE MANAGEMENT ACTIONS NEEDED TO REBUILD TOKLAT RIVER FALL CHUM

The Board of Fisheries discussed the extreme actions which may be necessary to conserve Toklat fall chum stocks. The board also discussed the difficulty of attempting to protect the Toklat River stock in fisheries in the lower and middle Yukon districts where the Toklat stock comprises only a small portion of the total harvest. Because of the impossibility of targeting of the Toklat River Fall Chum in the mixed stock fisheries, and the disruption of those fisheries that would result, the board focused its attention on those fishing districts and
subdistricts where the Toklat stock would be segregated from other fall chum stocks. The best information available to the department on stock identification does not separate the Toklat stock from other Tanana River fall chum stocks. Department staff reports indicated that the Tanana River fall chum stocks are thought to be largely segregated from other fall chum stocks in subdistricts 4C and 5A in the mainstem Yukon. In the lower Tanana River, Toklat and upper Tanana stocks are not segregated until the fish reach subdistrict 6B; the Kantishna River mouth is located near the upper end of subdistrict 6A.

The board recognized that in addition to commercial fishing restrictions, some subsistence fishermen might have to move their fishing camps to areas where stocks other than the Toklat could be harvested to provide for their subsistence requirements. In some cases this would mean that subsistence fishermen would have to shift their effort to the opposite shore and in other cases that the subsistence fishermen would need to move upriver. Possible actions for fishing districts where the Toklat stock group could be segregated from main river Yukon stocks included:

1. Kantishna subsistence fishermen would have to move to subdistrict 6B to fish Delta and mainstem upper Tanana stocks which are currently healthy.

2. In addition to commercial closures in District 6A, move lower Tanana River subdistrict 6A subsistence fisheries to subdistrict 6B where they would also fish on Delta and upper Tanana mainstem stocks which are currently healthy.

3. In addition to commercial closures in subdistricts 4C and 5A, move subdistrict 5A subsistence fishermen to subdistrict 5B and subdistrict 4C subsistence fishermen to subdistrict 4B, on the north side of the Yukon River, where they would harvest stocks bound for the Canadian mainstem, Fishing Branch River, Sheenjek River and Chandalar River spawning areas. Department tagging studies suggest that fish caught in subdistricts 4C and 5A are primarily bound for Tanana River spawning areas. Chandalar and Sheenjek stocks are considered healthy at this time. Canadian mainstem stocks are being rebuilt through cooperative efforts by Canada and Alaska as part of a twelve year stock rebuilding effort.

4. Continue Yukon River drainage fall chum stock rebuilding efforts. Districts 1, 2, and 3 and Subdistrict 4A fall chum fisheries operate on all fall chum stocks of the Yukon River drainage. In these areas the Toklat stock makes up a very small percentage of fall chum and is mixed with other stocks such that it is not manageable as a unit. The department has no ability with current information to segregate Toklat stocks from other stocks in these areas.

Department staff explained that continued use of lowered commercial fishing exploitation rates during the fall chum fishery in these lower Yukon fishing districts would continue in order to rebuild fall chum stocks throughout the drainage. These actions should benefit Toklat stock rebuilding efforts.

The Board of Fisheries was given the preliminary results of a four year stock identification study of Yukon River fall chum stocks by staff. This study indicates that the Toklat stock is indistinguishable from other Tanana River stocks with current technology. The timing of movement of Tanana River bound fish is variable from year to year in the lower river districts.
The board finds that it is not appropriate to take the above actions at this time for the following reasons:

1. Possible conservation concerns for other stocks if all subsistence fishing effort moved to remaining stocks.

2. Disruptive effect on subsistence users and uses in subdistricts 4B, 4C, 5A, 5B, 6A, and 6B due to changes in historical use patterns and areas. These actions would increase crowding and competition in areas where fishing sites are limited. Subsistence fishermen would incur the increased cost and inconvenience of having to build new fishing camps with provision for living as well as processing fish in addition to having to move gear.

3. The close relationship between subsistence and commercial fishing. The board heard testimony that the same individuals participate in both subsistence and commercial fisheries and that subsistence and commercial fishing is closely related in the Yukon River drainage. Small commercial fisheries on the Yukon River enable subsistence users to diversify their subsistence living opportunities. The small amount of cash earned in the commercial fishery allows subsistence users to buy gasoline and commercial fishing gear such as nets, boats and motors which are necessary in order to participate in subsistence fisheries. Disrupting commercial fishing activities also disrupts users ability to participate in the subsistence fishery.

4. Commercial fisheries will likely be closed during 1992 season. The board heard from the Alaska Department of Fish and Game that the fall chum returns for 1992 are expected to be poor throughout the Yukon River drainage, with the exception of the Upper Tanana. Therefore it is unlikely that commercial fisheries will open in districts 1 through 5 and 6A where fish from depleted stocks would be harvested.

IV. BOARD OF FISHERIES ACTIONS TO PROTECT TOKLAT FALL CHUM SALMON AND TO PROVIDE SUBSISTENCE FISHING OPPORTUNITY ON THE KANTISHNA RIVER DURING 1992.

1. The board continued the subsistence closure for fall chum salmon on the lower Kantishna and Toklat Rivers. This requires subsistence fishermen to move downstream to the mainstem of the Tanana River in order to harvest fall chums.

Fishermen in this area harvest largely Toklat River fall chum salmon. This closure protects a number of salmon which could only be saved in other downstream portions of the river by disrupting many users and impacting the harvest of other stocks. The board found that the small number of users in this area could move to the Tanana River and above the Kantishna River mouth to harvest fall chum salmon.

2. The board rejected a proposal which would have closed fishing for coho on the lower Kantishna and Toklat Rivers. In order to provide subsistence opportunities in the area the board allowed coho to be taken with fishwheels equipped with live boxes only, requiring that chum salmon be released alive within 24 hours.

3. The board charged the newly formed Yukon River Drainage Fisheries Association (YRDFA) to work within its membership, with Yukon River Advisory Committees and the department to develop management options
for rebuilding the depressed Toklat River fall chum stock while conserving and rebuilding other major fall chum stocks and minimizing the impact of management actions on subsistence and commercial fisheries.

The board also charged the association to assist the department to more specifically define subsistence requirements for fall chum and to provide more detailed subsistence harvest information in particular for subdistricts 4C and 5A.

In addition, the association is encouraged to reach consensus among its members with respect to modifications in their fisheries which will have as their objectives the rebuilding of depressed stocks and maintenance of healthy stocks. The long term goal of this rebuilding plan will be to provide for subsistence needs and also to rebuild stocks to a level at which the commercial fisheries may once again occur. One option might include adding subdistricts 4C and 5A to the Tanana River Management Plan.

Although the board agreed to defer any action on most allocative proposals for the Yukon River until the 1994 - 1995 board cycle in response to advisory committees and the association’s request, fishermen are encouraged to petition the board for consideration of regulatory changes which would assist the board and the department rebuild the Toklat River stock prior to the 1993 season.

The board recognizes that the department has the regulatory authority under AS 16.05.060 to adjust, restrict or close commercial and subsistence fisheries as described in Section III of this finding to conserve and rebuild the Toklat River stock without additional board action. However, the department will report to the board during its 1992 - 1993 meeting cycle concerning management actions planned for the 1993 fishing season.

Attachment

Mike Martin, Chair
Alaska Board of Fisheries

Approved in Anchorage:  (yes/no/absent/abstain) (7/0/0/0)
Date: March 2, 1992