

U.S. Fish and Wildlife Service  
Klamath Field Office  
1312 Fairlane Road  
Yreka, California 96097

November 16, 1988

TO: Klamath Fishery Management Council  
FROM: Ron Iverson  
SUBJECT: Draft minutes Management Council meeting November 2-3,  
1988, Eureka, California

Attached for your review are minutes of the Eureka meeting of November 2-3, 1988, along with several attachments. I have followed each motion passed, assignment made, or other decision point with a line of asterisks.

Ron Iverson  
Recording Secretary

Attachments

KLAMATH FISHERY MANAGEMENT COUNCIL

PROCEEDINGS OF THE MEETING HELD 2-3 NOVEMBER 1988, EUREKA, CALIFORNIA

Chairman Fletcher convened the meeting at 9:00 A.M. on November 2, with a quorum present (see attendance roster, Attachment 1). Minutes of the last meeting and agenda for this meeting (Attachment 2) were approved, with time provided on the agenda for economist Phil Meyer to address the Council on socioeconomic assessment of harvest management alternatives.

Report on legislation. Bruce Taylor reported that S. 2723, dividing the Hoopa Reservation, was signed by the President on October 31. Features of the bill include:

- o Distribution of \$65 million to Yurok people, who can elect to join the Yurok Tribe and receive a small cash amount, or give up tribal rights, including net fishing, for a larger settlement.
- o Management by the Yuroks of their fishery on the lower Klamath. This will take some time to implement, but funds would be available under P.L. 93-638 for tribal fishery management and law enforcement. The Bureau of Indian Affairs would continue to provide oversight.
- o Renders the Puz Decision moot, restoring authority to the Hoopa Valley Business Council.
- o Does not affect the Jessie Short case, which will continue in the courts. Individuals can elect to be bought out of Yurok tribal rights, but still could have standing as Jessie Short plaintiffs.

Bruce reported that omnibus fishery bill H.R. 4030, containing amendments to the Klamath Act and provisions for Russian River fishery studies, has been approved by both houses of Congress and will probably be signed into law.

Report on the Klamath River Basin Fisheries Task force 1988-89 work plan. Nat Bingham reported that Task Force goals have been reviewed and redrafted. In the Federal part of the work plan, a revised work statement has been prepared for the long-range plan and environmental assessment. Nat estimated a contract would be let for this work next spring, with a draft plan available for review in about a year. In the interim, work planning will be done year-by-year, with plans and budgets to be developed by a Task Force subcommittee. The education/information project is advancing, with Klamath Field Office preparing to hire a staff person for the information work. Siskiyou County Office of Education is a possible local cooperater for the education work.

Bob Fletcher explained that State of California fishery programs have been impacted in fiscal year 1988-89 by a combination of shortages in tidelands oil and other revenues, and unexpected costs, including forest fire rehab and matching requirements for Trinity fishery restoration. As a result, much less State funding is available for Klamath fishery projects than was anticipated.

Phil Meyer on socioeconomic considerations in Klamath fishery management. Phil asked the Council to consider whether "user importance" variables should be included in the technical analysis of harvest allocation options, or other Klamath fishery management decisions. These would include things like subsistence needs and cash flow needs to meet basic requirements of various user groups. This type of information is developed for ocean fisheries by PFMC, and may be developed by the Yurok Tribe for their own use, but Phil said that needs of the several groups are so interrelated that it would be useful to analyze the Klamath fishery as a whole.

Bob Fletcher said the user groups need to identify as many grounds as possible for negotiating harvest allocation, and socioeconomic factors might be useful for this purpose. Bob asked the Council to consider Phil's proposal.

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Other comments offered included:

- o Socioeconomic analysis might be more useful in a fishery restoration program still in the planning phase, such as the Russian River program.
- o Fishery restoration is the most important responsibility assigned by the Klamath Act, not consideration of dollar value.

Bob Hayden then distributed copies of the final report of the Advisory Committee on Salmon and Steelhead Trout, which includes references to three papers by Phil Meyer on socioeconomic considerations in anadromous fish restoration.

Report of the Technical Advisory Team. Scott Boley and Del Robinson reported on ocean and inriver harvests of chinook salmon in 1988 fisheries through mid-October (see Attachments 3 and 4). Noteworthy facts included:

- o a California troll chinook harvest of over 1.2 million fish - a record for postwar years, with largest landings in Fort Bragg, Bodega Bay, and San Francisco, and small landings in KMZ ports.
- o 1988 troll chinook landings at Oregon ports were probably the second best on record.

- o Troll chinook landings at KMZ ports were lower than in 1987, and well below average landings for the 1970s and 1980s.
- o Ocean sport chinook landings at most ports in California and southern Oregon were well above averages of recent years.
- o Klamath River gillnet catch of chinook salmon will be very close to the quota of 51,725 adults. The commercial harvest portion of the quota was slightly exceeded. Ex-vessel value of the catch of about 26,000 fish was \$1.2 million.

Status of research projects. The partitioning of Klamath stock estimates into natural, hatchery smolt, and hatchery yearling components is being done by Alan Baracco, with State of California funding. The estimation of coded wire tagging needs for the time/area "cell" management model will be undertaken by Dave Hankin, with Federal funding. There are no apparent problems in funding of these projects.

Next meeting of the Technical Advisory Team will be December 6-7, in Arcata. Agenda items will include: straying of Klamath chinook to the Rogue; reports on results of special late ocean fisheries; and, possibly, discussion of better ways to predict Sacramento chinook stock size. The Sacramento stock is characterized by highly variable early ocean growth rate and consequent rate of jack returns, leading to low correlation between jack returns and subsequent ocean stock size of 3-year-olds of a given year class.

The Tech Team will meet again in January 1989 to analyze final information on 1988 chinook escapements. Responding to a question about information available to date on chinook returns, Mel Odemar said that returns to Trinity and Iron Gate hatcheries, and to Bogus Creek, are strong. Shasta Rack counts are down. Scott and Salmon River weir counts are running ahead of average. Jack numbers appear to be small, but age analysis is needed to confirm this.

Odemar referred to a memorandum (Attachment 5) from the Tech Team to Bob Fletcher expressing concern about interaction of hatchery and natural stocks. In response to Mel's request for guidance, the Council voted, by consensus, to request management agencies to provide information needed for analysis, by the Tech Team, of hatchery/natural stock interactions.

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Jim Martin provided the following information on estimated ocean fishing effort:

California commercial fishery

31,500 troll-days in 1986  
38,800 " " " 1987  
50,300 " " " 1988

Oregon commercial fishery

31,000 troll-days in 1986  
38,000 " " " 1987  
46,700 " " " 1988

KMZ recreational fishery

98,000 angler-days in 1986  
160,000 " " " 1987  
122,000 " " " 1988

This indicates fishing effort has increased in response to the high salmon abundance of recent years.

As a parting comment, Scott Boley asked the Council to keep Tech Team assignments technical, not of a policymaking nature.

Proposed amendments to PFMC Salmon Plan. John Coon reviewed the several elements of the draft Ninth Amendment, which will be the subject of several public hearings this week, coastwide. The element of principal concern to the Klamath Council are the four options for managing ocean harvest of Klamath stocks. These are:

- o Continue the present PFMC objective of rebuilding Klamath chinook stocks to a spawning escapement of 115,000 adults by 1998.
- o The rebuilding schedule, with a minimum natural spawning escapement of 35,000 adult fall chinook.
- o The rebuilding schedule, with a minimum natural spawning escapement of 43,000 adult fall chinook.
- o The harvest rate management option proposed to PFMC by the Klamath Council in July 1988. This is the only option that takes inriver harvest into account.

John said that comments on the amendment options should be offered to PFMC by November 11.

Bureau of Reclamation issues: Trinity Project operation and water marketing. Lisle Reed said that he has been concerned about statements in the media that the Bureau has violated Andrus Decision guidelines for releases from Lewiston Dam, and is engaging in secret negotiations to market water. Lisle received a briefing from the Bureau on these issues this summer, and felt the same information would be useful for the Klamath Council. Lisle requested Don Paff of the Bureau to address the Council

today, in the spirit of improving communication between the Bureau and fishery interests, which has been inadequate in the past. Lisle said that the Bureau's mission is shifting from water development toward conservation, but many people in fisheries have not perceived this.

Don Paff introduced himself as representing the Mid-Pacific Region of the Bureau, which operates the Central Valley Project, including Trinity and Lewiston Dams. The Klamath Project, in the Klamath Lake area, is operated by other Bureau offices.

Water marketing. Don said the Central Valley Project (CVP) yields 8 million acre-feet (8 MM a-f) of firm (reliable) yield of water, and markets 7 MM a-f. Thus, 1 MM a-f remains to be marketed, to supply requests for an additional 4 MM a-f, including "needs" of 3.4 MM a-f. Don said Bureau objectives in marketing this water will include: equity in allocation, in accordance with wishes of Congress; optimizing amounts of water available for beneficial uses; optimizing economic return; and complying with Federal and State water laws. Environmental impact statements will be prepared for water marketing for three service areas: Sacramento River, American River, and Delta. The actions to be analyzed are the marketing of 1 MM a-f of additional firm yield of water, and 0.6 MM a-f of intermittent yield, which is not available every year.

Draft EISs, amounting to a two-foot stack of paper, will be released for public review in December 1988, with hearings scheduled in February 1989, and final EISs to be filed by December 1989. This last date is tentative.

Responding to a question as to how the Bureau would consider the outcome of the D1485 process in their water marketing decisions, Paff said that water contracts will be written so that water can be recovered from contractors, if that is necessary to meet D1485 requirements. Similarly, if results of the Trinity River flow study should demonstrate a need for flows above 340,000 a-f for fishery resources, that water would be recovered from water contracts.

Don suggested that, after Klamath Council review of the draft EISs, it may be helpful to have Bureau staff attend a Council meeting to answer questions and explain issues in detail.

Responding to a question about the priority of fishery resources in water allocation, Paff said the draft EISs do not prioritize the various water uses. He pointed out that uses are not always competitive. For example, CVP water being routed down the Sacramento River to Delta pumps is available for fish use.

Bob Hayden asked how the Bureau will consider instream flow needs in their water marketing analysis. Paff said the EISs will assume current instream flow minimums or other requirements.

Turning to Trinity Project operation in the 1988 water year, Paff said that 260,000 a-f were provided for Trinity River flows. This is 40,000 a-f above the Andrus requirement for dry years. This has also been true in all other dry years since the Andrus Decision: flows provided have always exceeded the required 220,000 a-f, and flows in normal or wet years have always exceeded 340,000 a-f. "Extra" water in 1988 was provided to reduce adverse conditions for fish, in response to requests from fishery agencies.

Bill Yeates commented that delivery to farmers of 100% of contracted water in a dry year such as 1988 is still unacceptable to fishery interests, even if the Andrus Decision was complied with.

Next, Paff asked the Council about water temperature problems in Trinity River in 1988. Problems identified included: high temperature (74F) in the lower Klamath, causing salmon to hold in the estuary, and high temperature in the lower Trinity, causing mortality in spring chinook salmon. Paff and Fletcher responded that the cooling effect of stored water extends only about 40 miles below Lewiston, and probably has no effect in the lower Trinity. Similarly, volume and temperature of Lewiston releases probably have no effect on fish movement in the Klamath estuary. Fletcher said the Department of Fish and Game does not attribute any of the spring chinook mortality observed in lower Trinity River to operation of the Trinity Project.

Paff explained that Bureau water operations begin with early forecasts in February, followed by monthly updates of forecasts of flow, storage, and hydropower, each calculated at several confidence levels. For the 1989 water year, the Bureau calculates that the probability of drought conditions (flow and storage) as severe as 1977 is less than 1%. The probability of conditions as dry as 1988 is about 10%. It is likely that all water delivery demands will be met in 1989, and that storage will be increased.

Paff then summarized actions the Bureau is taking to protect fishery resources in the Sacramento River. These include:

- o Springtime releases from Shasta to move chinook smolts from Coleman downstream.
- o Releases to maintain Delta water quality.
- o Releases to dilute toxics from the Iron Mountain mine site.
- o Low-level, low temperature summer releases to provide for spawning of winter-run chinook in the upper Sacramento.
- o Fall diversion of water from the Trinity to hold upper Sacramento temperatures down for spawning of fall-run chinook.

- o Operation of Red Bluff Diversion Dam to provide for passage of winter-run chinook.
- o Fish screens at Tehama-Colusa Canal headworks, now under contract for \$15 million.
- o Funding (\$3/4 million) of spawning gravel placement in upper Sacramento.
- o Improvements in fish passage at ACID Dam.
- o Temperature curtain for Shasta reservoir, to allow more manipulation of temperature of releases. Completion is scheduled about 1990.
- o Involvement in the Central Valley Fish and Wildlife Task Force, consisting of agency heads and regional directors.

Chairman Fletcher thanked Don Paff for his time, commenting that sensitivity of the Bureau to fishery concerns has greatly improved in recent years.

Report of the Harvest Allocation Committee. Speaking for the Committee, Lyle Marshall said that the ocean users have made a good argument that a problem exists in harvest allocation, despite a record California troll catch this year. Evidence of the problem includes the three-day troll fishery in the KMZ in 1988, and low chinook landings in KMZ ports in recent years. The Committee received a proposal (Attachment 6), from Nat Bingham, speaking on behalf of the Pacific Coast Federation of Fishermen's Associations (PCFFA), to replace quota management in the KMZ with seasonal management. An additional option to be reviewed by the Committee is combination of seasonal management with a daily delivery limit on KMZ fishers.

Lyle requested Tech Team review of the seasonal management/trip limit options, to provide the committee with a comparison of estimated harvests under the existing quota management option, and under the seasonal management option.

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Discussion ensued on two issues:

- o Whether to defer discussion of harvest allocation until the Harvest Allocation Committee and Tech Team can complete their analyses, or whether to air issues now. This was decided in favor of the whole Council having a say, without trying to limit or influence the Committee.
- o Whether to consider the existing Harvest Sharing Agreement as the accepted status quo, to be changed only as shown necessary, or to consider it as no longer viable because of opposition from ocean harvesters. Consensus was not formally reached on this matter.

Nat Bingham was asked whether the PCFFA proposal is intended to change the ocean harvest rate, or to redistribute harvest between the KMZ and adjoining areas. Nat replied it would do both, and that an ocean harvest rate of .325 of mature Klamath fish is too low a target. Ocean fishermen question even post-season estimates of stock size (too low), leading them to believe ocean harvest rates for Klamath chinook have been consistently overestimated. Asked whether he is proposing seasonal management for inriver harvest as well, Nat said he understands that is being done successfully in some river net fisheries in Washington, but he would prefer to wait for Tech Team analysis of the PCFFA proposal before making claims about its utility. Nat requested the Tech Team review the PCFFA proposal.

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Nat said the PCFFA proposal is being refined, so the present version is only an interim draft.

Nat asked for consideration of the option of a spawning escapement ceiling that would be related to spawning and rearing

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capacity of Klamath Basin habitat. Responses to this point included:

- o Klamath habitat is being upgraded...so why put a cap on spawning escapement now?
- o What evidence exists that chinook spawning escapements have been excessive?
- o Cap on spawning is a bad idea because it penalizes weaker natural stocks to control overescapement of strong hatchery stocks. Overescapement to hatcheries must be accepted if natural stocks are to be restored.

Further discussion of PCFFA proposal. Discussion turned to comparison of expected fishing effort under the PCFFA proposal as compared with quota management of recent years. It was agreed the effect of 4 days/week fishing on limiting concentration of fishing effort is not known.

Jim Martin argued that the PCFFA proposal would permit a significantly higher season's fishing effort, and total harvest, than would KMZ quota management, because it does not sufficiently restrict effort in adjacent management areas. The 1988 experience with 4 on/3 off fishing at Fort Bragg indicates this fishing pattern does not dampen harvest, since it yielded an all-time record harvest. Nat responded that chinook abundance off Fort Bragg was extremely high in 1988. Trollers have motives other than harvest dampening for favoring start/stop fishing over block time closures, as long periods with low availability of troll-caught fish tend to drive the market to other fish sources. Four-day trips also yield fresher fish.

Bob Hayden asked the Tech Team to tell the Council how seasonal management could be used to meet the Harvest Sharing Agreement.

Discussion of other options. Bob Fletcher asked whether the Harvest Allocation Committee had discussed an option of sliding allocations: a higher proportion of harvest going to inriver users in years of low stock abundance, and a higher proportion to ocean users in abundant years. This option had not been discussed in detail by the Committee, but was assigned to the Tech Team for analysis.

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Bob also asked about inclusion of stocks other than fall chinook  
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in the harvest allocation. Sue Masten responded that lower Klamath gillnetters do not consider those stocks negotiable in trade for fall chinook. Arguments directed to Sue in rebuttal included:

- o Excess returns of hatchery spring chinook and coho are with us now...must be dealt with.
- o Ocean fisheries cannot easily target on hatchery stocks or other abundant stocks...but terminal fisheries can efficiently do this, and have a responsibility to do so.
- o If spring chinook and other stocks being produced in state-operated hatcheries cannot be used to help resolve harvest allocation disputes, maybe production effort should shift from those stocks to fall chinook, since that stock is negotiable.

Keith Wilkinson asked that the Tech Team consider in-season dampening, or "redlining", adjustments i.e. dampening - or liberalizing - measures triggered in-season by achievement of  
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certain catch levels, with the objective of holding overall harvest to a target rate. Bob Fletcher endorsed Keith's suggestion because it takes account of the increasing troll fishing effort in recent years.

Keith said that accessibility to fish should be considered in analyzing effects of dampening measures. Fish have been relatively accessible for the past few seasons because of good weather.

Jim Martin asked for consideration of variations of the status  
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quo, including:

- o Alternatives to the ocean harvest rate target of .325, such as: .35, .40, and .45.

o A redistribution of some ocean harvest from outside areas into the KMZ. It would be interesting to compare socioeconomic benefits and costs to ports inside and outside the KMZ.

Jim asked the Tech Team to analyze these variations in terms of expected ocean catch for past years of low, average, and high stock abundance. Jim explained that, by "status quo", he meant the use of preseason stock abundance estimates and harvest rate targets. Management toward the desired harvest rate can use quotas, or combinations of seasons and dampening measures.

Bob Hayden asked that impacts of the various management options on the ocean sport fishery be analyzed by the Tech Team, and he specifically asked for analysis of harvest impacts of an early opening of the sport fishing season - in April or May. It was pointed out that records of early harvest are available from prior years, but Bob proposed the Tech Team apply information on the highly variable contribution rate of Klamath chinook to the sport fishery to estimate impacts of an early season opening on Klamath stocks.

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Bob Hayden asked the Tech Team to analyze Scott Boley's proposal to mark all chinook produced at Klamath Basin hatcheries.

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Comments on this proposal included:

o Earliest CDFG could begin such marking would be 1990.

o Oregon considered 100% marking for hatchery coho. considerations included logistical problems such as cost, staff time, and tagging mortality, and management issues such as how to use the information generated and whether regulations can be changed to take advantage of the information, for example, by requiring harvesters to throw marked fish back. If this is infeasible, the effort to mark all fish is probably unjustified.

o The coho-only troll fishery in southeast Alaska in 1987-88 involved trollers throwing back all chinook, and this was apparently successful.

Discussion of proposed Salmon Plan amendments. Extensive discussion followed as to whether the Klamath Council should formally comment on the PFMC Draft Ninth Amendment to the Salmon Plan. Lisle Reed said that all of the management options he had heard proposed for Tech Team analysis seem to be consistent with the harvest rate management concept, so it would seem the Klamath Council can support Option 3 of the Klamath portion of the Ninth Amendment. Discussion revealed a lack of consensus in support of Option 3 - or any other option - and chairman Fletcher said he

would convey this to PFMC. Lisle Reed and Jim Martin said they would recommend endorsement of Option 3 by their agencies.

Public comment.

Bill Yeates of PCFFA said he was encouraged by participation of the Bureau of Reclamation. Yeates said the PCFFA proposal for seasonal management in the KMZ is being reworked to address Jim Martin's concerns about excessive harvest of Klamath chinook.

Bonnie Green said that ocean harvest rate for Klamath chinook has been higher than was agreed to, and should be adjusted downward if it is to be changed at all in the Harvest Sharing Agreement. She also commented that part of the river net harvest that is being counted toward the quota is in fact spring-run chinook and should be left out of the allocation accounting.

Bob Fletcher reminded the public that PFMC action on Salmon Plan amendments will not affect inriver/ocean allocation of harvest.

Next meeting. Following dates were agreed to:

Technical Advisory Team. 6-8 December, in Arcata.

Harvest Allocation Committee. 1 P.M. December 8, and all day December 9, in Eureka.

Task Force. Midday January 30 to midday January 31 (revised schedule, to be requested of Task Force), in Eureka.

Klamath Council. 9 A.M. to 4 P.M. February 1, and 8 A.M. to noon on February 2, in Eureka.

Final comments. Sue Masten said she was concerned about Dick Schwartz's comment, which she thought implied the Harvest Allocation Committee is charged with amending the Harvest Sharing Agreement. Dick said he had not meant that, only that there is obviously a desire to change the agreement on the part of some user group representatives.

Lisle Reed and Charley Fullerton commented on the need for any allocation agreement to provide for adequate spawning escapement, in order to justify \$1 million per year budgeted for restoration of Klamath anadromous fish stocks.

Keith Wilkinson thanked the Klamath Field Office staff for providing good meeting facilities.

The Council meeting adjourned at noon on November 3, 1988.

ATTACHMENT 1

KLAMATH FISHERY MANAGEMENT COUNCIL

MEETING AGENDA

November 2, 1988

9:00 A.M. Call to order

9:10 Correction and approval of minutes and agenda

9:20 Report on proposed legislation (Taylor)

H.R. 4030, proposed amendments to the Klamath River Basin Fishery Resources Restoration Act

H.R. 2513, proposed studies of Russian River fishery resources

H.R. 4469, partitioning Hoopa reservation lands

10:00 Report on the Klamath River Basin Fisheries Task Force 1988-89 work plan (Bingham)

10:30 Break

10:50 Report of the Technical Advisory Team (Boley)

Update on 1988 salmon fisheries

Status of research projects

12:00 Lunch

1:15 Report on the PFMC framework plan amendment process (Coon)

2:15 Report of the Bureau of Reclamation on 1988 water management in Trinity Basin, and on plans for future water marketing (Don Paff, USBR)

3:00 Break

3:20 Report of the harvest allocation committee

4:30 Adjourn

(PFMC hearing on framework plan amendment convenes in evening)

KLAMATH FISHERY MANAGEMENT COUNCIL

MEETING AGENDA

November 3, 1988

8:00 Convene. Harvest allocation discussion (continued)

9:30 Break

9:50 Other old business

10:15 New business

11:00 Public comment

11:45 Discussion of next meeting

12:00 Adjourn

## ATTACHMENT 2

## KLAMATH FISHERY MANAGEMENT COUNCIL

Attendance Roster, November 2-3, 1988 meeting.

MANAGEMENT COUNCIL MEMBERS

<u>Name</u>	<u>Representing</u>
Nat Bingham	California Commercial salmon fishing industry
Virginia R. Bostwick	In-river sportfishing community
Robert Fletcher	California Department of Fish and Game
E.C. Fullerton	National Marine Fisheries Services
Robert Hayden	Offshore recreational fishing industry
Lyle Marshall	Hoopla Indian Tribe
James Martin	Oregon Department of Fish and Wildlife
Susan Masten	Non-Hoopla Indians residing in Klamath Conserv
Lisle Reed	Department of Interior
Richard Schwarz	Pacific Fishery Management Council
Keith Wilkinson	Oregon commercial salmon fishing industry

OTHERS ATTENDING

<u>Name</u>	<u>Representing</u>
Jim Smith	Trinity
Jim Johmer	
Bruce Taylor	Congressman Bosco
Don Paff	Bureau of Reclamation
Phil Meyer	
Jerry Barnes	USFS
R.D. Eden	BIA
Karole Overburg	BIA
Leonard Masten	BIA
David Onu	
Mary Kay Bush	USFS
Gene Schnell	
Mike Parton	Karuk Tribe
Leaf Hillman	Karuk Tribe
John Coon	PFMC
Mike Morford	Tech Team
L.B. Boydston	CDFG
Steve Surgee	Hoopla Tribe
Bill Yeates	PCFFA
Janet Butrich	
Joe Lesh	CDFG
Phillip Baker	CDFG
Livina Bricre	Yurok
Clara Bray	Yurok
Bonnie Green	
Tracy Green	
Ronnie Pierce	Task Force

ATTACHMENT 3

KLAMATH RIVER CHINOOK GILL NET HARVEST - 1988 (PRELIMINARY)

DATE	AREA I		AREA II		AREA III		FALL CHINOOK TOTAL		SPRING CHINOOK		
	JACK	ADULT	JACK	ADULT	JACK	ADULT	JACK	ADULT	AREA I & II	AREA III	TOTAL
APRIL									40	0	40
MAY									723	465	1188
JUNE									964	1875	2839
7/1-9									220	696	916
7/10-16	0	495	0	0	0	0	0	495	0	495	
7/17-23	5	279	0	0	0	0	5	279	284	881	
7/24-30	3	878	0	0	0	0	3	878	881	6751	
7/31-8/6	0	6738	0	13	13	0	0	6751	0	6751	
8/7-13	130	11964	0	56	56	0	140	12215	12355	12355	
8/14-20	0	12580	0	292	292	0	0	12872	12872	12872	
8/21-27	0	3980	16	1168	1184	0	28	5376	5404	5404	
8/28-9/3	0	0	3	760	763	0	3	760	763	763	
9/4-10	0	0	42	2195	2237	0	47	2286	2333	2333	
9/11-17	0	0	34	3295	3329	5	76	4085	4161	4161	
9/18-24	0	0	37	1090	1127	42	37	1090	1127	1127	
9/25-10/1	0	0	16	312	328	136	152	2888	3040	3040	
10/2-8	0	0	6	221	227	28	34	753	787	787	
10/9-15	0	0	6	414	420	15	21	704	725	725	
	138	36914	160	9816	9976	248	546	51433	51978	51978	
								3232	3036	6268	

AREA I CLOSED 8/25/88  
 AREA I COMMERCIAL FISHERY CLOSED 8/21/88  
 AREA I AND AREA II JACK CUTOFF < 54CM  
 AREA III ESTIMATES PROVIDED BY HOOPA VALLEY BUSINESS COUNCIL FISHERIES DEPT.  
 SPRING CHINOOK ESTIMATES NOT BROKEN DOWN INTO JACKS AND ADULTS

KLAMATH RIVER ESTUARY FALL CHINOOK GILL NET SUBSISTENCE AND COMMERCIAL HARVEST - 1988 (PRELIMINARY)

DATE	ESTIMATED HARVEST		COMMERCIAL ADULTS ONLY	SUBSISTENCE		TOTAL
	JACK	ADULT		JACK	ADULT	
7/10-16	0	495	0	0	495	495
7/17-23	5	279	0	5	279	284
7/24-30	3	878	0	3	878	881
7/31-8/6	0	6738	5016	0	1722	1722
8/7-13	130	11964	9939	130	2025	2155
8/14-20	0	12580	10773	0	1807	1807
8/21-27	0	3980	0	0	3980	3980
	138	36914	25782	138	11186	11324

ESTUARY GILL NET FISHERY CLOSED 8/25  
 AREA 1 COMMERCIAL FISHERY CLOSED 8/21/88  
 JACK CUTOFF < 54CM  
 ADULT CUTOFF FOR ADULTS > 65CM

ATTACHMENT 4

KLAMATH RIVER ESTUARY FALL CHINOOK GILL NET AND SPORT ANGLER HARVEST - 1988 (PRELIMINARY)

DATE	GILL NET HARVEST		SPORT ANGLER HARVEST		TOTAL ADULT	TOTAL
	JACK	ADULT	JACK	ADULT		
7/10-16	0	495	0	0	0	495
7/17-23	5	279	0	0	5	279
7/24-30	3	878	0	0	3	878
7/31-8/6	0	6738	5	57	5	6795
8/7-13	130	11964	5	280	135	12244
8/14-20	0	12580	0	240	0	12820
8/21-27	0	3980	13	1291	13	5271
8/28-9/3	0	0	21	783	21	783
9/4-10	0	0	34	396	34	396
9/11-17	0	0	33	307	33	307
9/18-24	0	0	0	0	0	0
9/25-10/1	0	0	0	0	0	0
10/2-8	0	0	0	0	0	0
10/9-15	0	0	0	0	0	0
	138	36914	111	3354	249	40268
		37052		3465		40517

ESTUARY GILL NET FISHERY CLOSED 8/25  
 AREA I COMMERCIAL FISHERY CLOSED 8/21/88  
 AREA I AND AREA II JACK CUTOFF < 54CM  
 SPORT ANGLER HARVEST ESTIMATES PROVIDED BY CALIFORNIA DEPT. FISH AND GAME

DRAFT

October 8, 1988

DRAFT**Memorandum**

To: Chairman, Klamath Fishery Management Council

From: Klamath Technical Team

Subject: Hatchery Operational Practices Concerning Grade-outs and Smolt Releases

**Background:**

Current salmon management and fishery management practices in the Klamath-Trinity River system are intended to protect and optimize the production of salmon resulting from natural spawning. In view of this goal, the members of the technical team feel it is appropriate to examine whether other facets of production or management are in conflict with, or might adversely affect the production of salmon from natural spawning. Hatcheries operated for mitigation or supplementation purposes play a vital role in the Klamath-Trinity River System. With the importance of natural production however, the operation of these facilities should minimize, so far as possible, interaction with naturally produced juveniles, or competition for finite amounts of food and water.

**Recommendation:**

The Klamath Technical Team recommends that the Council forward these concerns to the appropriate agency or staff people. Two specific questions arose during discussions;

1. What are current practices and policies concerning disposal of hatchery juveniles in excess of the capacity of the hatchery? (hatchery gradeouts)
2. How are fingerling and yearling smolt releases managed to minimize interaction with naturally reared juveniles?

The team does not intend this recommendation to reflect adversely on any agency or personnel, but feels that with the priority being placed on natural production, a current review of practices and policies may be fruitful in assuring that conflicts with natural production are minimized or eliminated. Obviously, hatchery practices is just one part of a complex system of water needs, habitat needs, production needs, and management, and it is the intent that all this system will eventually be in harmony and balance.

Sincerely  
Klamath Technical Team  
(list membership)

PCFFA PROPOSAL TO MANAGE THE 1989 OCEAN FISHERY

THE FOLLOWING IS A SEASONAL MANAGEMENT STRUCTURE DESIGNED TO REDUCE IMPACTS OF KLAMATH FALL RUN SALMON TO A MINIMUM WHILE ALLOWING THE OCEAN FISHERY TO HARVEST NON-KLAMATH STOCKS AND DISTRIBUTE THE CATCH THROUGHOUT THE VARIOUS PORT AREAS

STRUCTURE

Three areas are defined in this proposal which have season restrictions for the reduction in take of Klamath-origin salmon. These are:

- FORT BRAGG- Point Arena to Horse Mountain
- KMZ - Horse Mountain to Port Orford
- COOS BAY - Fort Orford to Cape Arago

We do not believe that the areas south of Point Arena nor north of Cape Arago should have closures for the purpose of reducing Klamath take.

The seasonal management proposal is as follows:

	MAY	JUNE	JULY	AUGUST	SEPTEMBER
FORT BRAGG	open		X X X X   X	open	
KMZ	A A O O   O O X X   X	X X   X X X X   B B B B			
COOS BAY	open			X X   X X X	open

*Handwritten notes:*  
 - Above FORT BRAGG: "Horse Mt + Arena" with an arrow pointing to the start of the period.  
 - Above KMZ: "A A" and "X X" are written above the first two columns of the table.  
 - Above COOS BAY: "open" is written under the first three columns.

- X = 4 DAYS FISHING AND 3 DAYS CLOSED
- O = 7 DAYS CLOSED
- A = SIX MILE LIMIT (EUREKA SOUTH JETTY TO SISTERS)
- B = SIX MILE (GORDA-TRINIDAD & CRESCENT CITY TO SISTERS)

## RATIONALE

The seasonal restraints are designed to do several things:

1. Target fishery restraints outside the KMZ to periods when Klamath stocks are most likely to occur
2. Have proportional reductions in fishing time both north and south of the KMZ
3. Time closure periods outside the KMZ to match closure periods inside the KMZ.
4. Give equal fishing time to the KMZ and outside areas when Klamath contribution rates are likely to be similar
5. Minimize fishing mortality on sublegal chinook and coho
6. Restrict areas of relatively high Klamath contribution to a greater degree than other areas to minimize fleet movement into those areas
7. Increase access to underutilized salmon stocks (spring run)

## EFFECT ON KLAMATH RUN SIZE BY THE SEASON PROPOSAL

The effect of any seasonal or quota management scheme on Klamath run size is highly subjective. It is not possible at this time to predict run size into the Klamath river in 1989. In March, a prediction is possible, but not with any degree of certainty, with seasonal or quota management in place. The only viable method to assess this proposal is to compare it to what actually occurred in past years. Even this is highly subjective.

The simplest method to show possible impacts is to compare the amount of fishing time that actually occurred to that which is proposed. The following figures represent the season structure that occurred in 1987, 1986 and 1982 respectively. Some minor differences in area boundaries and restrictions due to coho are not reflected in these figures. The 1983 through 1985 years were not included because we would probably not recommend these regulations under the circumstances as they existed during the El Nino.

1987 SEASON STRUCTURE

	MAY	JUNE	JULY	AUGUST	SEPTEMBER
FORT BRAGG		X X			
KMZ	B O O O	X X O	O O O O	O O O O	A A A A
COOS BAY			X		

1986 SEASON STRUCTURE

	MAY	JUNE	JULY	AUGUST	SEPTEMBER
FORT BRAGG					
KMZ	B B B B	B O X X	X O	O X O	A A A A
COOS BAY					

1982 SEASON STRUCTURE

	MAY	JUNE	JULY	AUGUST	SEPTEMBER
FORT BRAGG		O O O			
KMZ		O O O			
COOS BAY		O O			

X= 4 DAYS ON AND 3 DAYS OFF  
 O= 7 DAYS CLOSED  
 A= 5 MILE LIMIT (TRINIDAD TO GORDA)  
 S= SIX MILE LIMIT (SISTERS TO CHETCO PT)

COMPARISON OF ACTUAL FISHING TIME WITH PROPOSED SEASON  
STRUCTURE POSSIBLE AFFECTS

MONTH	IN KMZ	OUTSIDE AREAS
1987 SEASON		
MAY	reduction from 14 to 8 days- area enlarged	no change
JUNE	reduction in time 19 to 8 days	6 day reduction south
JULY	increased 19 days	3 day reduction north and south
AUGUST	increased 16 days	9 day reduction north
SEPTEMBER	area enlarged	no change

Possible affects on Klamath take

MAY	less to small increase	no change
JUNE	reduced sig.	small reduction
JULY	increased significantly	reduced sig.*
AUGUST	increased significantly	reduced sig.*
SEPTEMBER	small increase	no change

1986 SEASON COMPARISON

MAY	reduced from 37 to 8 days- area enlarged	no change
JUNE	no sig. change	12 day reduction south
JULY	small increase	reduced 3 days south 6 days north
AUGUST	increased 6 days	9 day reduction north
SEPTEMBER	area enlarged	no change

Possible affects on Klamath take

MAY	less to small increase	no change
JUNE	no change	reduced sig.
JULY	small increase	small reduction
AUGUST	increased	reduced sig
SEPTEMBER	small increase	no change

\* reduced significantly by fleet transfer from outside areas to KMZ as well as by time

INSIDE KMZ

OUTSIDE AREAS

1982 SEASON

MAY	reduced 22 days—smaller area	no change
JUNE	no change	increased 8 days south 15 days north
JULY	reduced 10 days	reduced 3 days south 6 days north
AUGUST	reduced 14 days	reduced 9 days
SEPTEMBER	reduced area	no change

Possible affect on Klamath take

MAY	reduced very sig.	small increase
JUNE	no change	small increase
JULY	reduced	small reduction
AUGUST	reduced sig.	reduced
SEPTEMBER	reduced	no change

SUMMARY OF AFFECTS ON KLAMATH TAKE UNDER PROPOSED MANAGEMENT STRUCTURE

1987	Little change
1986	Some decrease
1982	Reduced significantly

## KLAMATH ESCAPEMENT GOAL

The present escapement policy is to allow escapements to vary from 35,000 natural spawners up to whatever number would be derived from the harvest rate methodology. The KRMC should now begin looking at the information available on escapement and production and see if the present course is warranted.

The spawning escapement and resulting production estimates are shown in the table and figure below. The three data points, shown as "squares" on the figure, are the broods that were subjected to El Nino. This needs to be kept in mind when comparing escapement with numbers of fish produced. From this information it appears that the relatively large escapement of 71,400 didn't result in a benefit to production. Better production occurred from both the 1983 and 1984 brood spawning escapements.

From this information, one could conclude that the proper escapement goal would be in the 40 to 50 thousand fish range. The 1986 and 1987 escapement estimates will give a good indication of what large escapement into the basin will have. The 1986 brood production indicator, 1988 jack run, does not suggest that next years age 3 year class will be impressive.

## KLAMATH NATURAL PRODUCTION

The PCFFA is concerned about the health of the natural runs in the Klamath River. We are concerned about the reduced flows the Klamath River now receives and the high temperatures that occur in late spring and summer months. The amount of growth that a juvenile salmon has gained before it enters the ocean has been shown to be the key factor that regulates a smolts chance of survival when it enters the ocean. Studies have shown that if smolts have made too little growth, their chance of survival is very poor.

Indications from within the Klamath basin suggest that juvenile chinooks rearing in the Klamath system are concentrating in cool tributaries and where these tributaries enter the relatively warm water of the main stems. This suggests that rearing limitations exist within the Klamath system. Our concern is that large releases of hatchery fingerlings, which must feed during their outmigration, are depressing the natural production by competing for space and food with the wild fish.

The reduction in the take of Klamath stock for the purpose of sustaining healthy populations of wild chinook stocks is a pill that ocean fisherman can swallow. But if increases in escapement for this purpose result in increasing number of hatchery fish competing for the same limited rearing space the overall effect will be to decrease natural production. This approach will result in an endless cycle of fishery curtailments with a continuous depression of wild stocks.

#### RECOMMENDATION

We are recommending that the KRMC alter its harvest rate approach by placing a cap on adult spawning escapement at 70,000. Although we believe, in the present condition, the basin will be producing its maximum at escapements of 40 to 50 thousand, allowing escapements up to 70,000 will be needed if we are to continue to evaluate production at higher levels of escapement. Escapements over this figure are not supportable.

KLAMATH ADULT SPAWNING ESCAPEMENT AND NUMBER OF AGE THREE RECRUITS PRODUCED

BROOD YEAR	ADULT SPAWNERS	AGE THREE RECRUITS
1978	71,400	253,000
1979	34,300	190,800
1980	28,000	154,000
1981	38,300	53,900
1982	42,400	90,300
1983	45,700	669,700
1984	22,700	354,000*
1985	44,000	N/A
1986	144,300	N/A
1987	129,300	N/A

\* preliminary

KLAMATH ADULT SPAWNERS AND NUMBER AGE THREE RECRUITS PRODUCED (X 1000), 1978 - 1984 BROODS. BROODS SUBJECTED TO EL NINO REPRESENTED BY SQUARES

