United States Department of the Interior

FISH AND WILDLIFE SERVICE

Klamath River Fishery Resource Office
P.O. Box 1006
Yreka, CA 96097-1006

May 14, 1991

Memorandum

TO: Klamath Fishery Management Council

FROM: Ron Iverson

SUBJECT: Minutes of the Management Council meeting held April 8, 1991.

Attached for your record are minutes of the subject meeting held in Portland, Oregon. Your review comments have been incorporated and are indicated by a vertical line at the side of the changed paragraph.

Attachment

cc: Interested parties

NOTES OF THE
KLAMATH FISHERY MANAGEMENT COUNCIL
MEETING HELD APRIL 8, 1991
IN PORTLAND, OREGON

Members present: Nat Bingham, Virginia Bostwick, Charlie Fullerton, Bob Hayden, Lyle Marshall, Sue Masten, Don McIsaac, Spike Naylor, Lisle Reed, Frank Warrens, Keith Wilkinson.

The meeting was called to order by Chairman Fullerton at 1:00 pm.

Review and adoption of agenda and minutes

The agenda was adopted with some slight rearranging as requested by Bostwick. Agenda item "Council Recommendations to Harvest Managers" will be moved up so that it immediately follows public comment.

*** Consensus on adopting the agenda.

Approval of minutes is postponed to the next meeting because council members had not had time to review last meeting's minutes.

TECHNICAL INFORMATION

Report of the Bureau of Reclamation on 1991 water supply, Klamath and Trinity Basins (Paff and Rodgers).

Don Paff stated that the water supply has recently improved slightly, it has gone from catastrophic to bad. The March rains were miraculous, they brought us out of the "worst season in history", but the water supply still isn't very good. Since the first of March, the forecast of total Central Valley Project (CVP) storage went from .6 to 1.6 maf (million acre-feet). We hope to have 2.6 maf in April.

The other good news is that some water contractors are reducing their water needs and receiving 25%, or 50% of their usual amount. Some, like the City of Sacramento, are still receiving 100%. This water conservation should lead to conditions for winter chinook improving considerably. Contract supplies are still under deliberation, hopefully those decisions will be made sometime this month. The focus of deliberations on water supplies and contracts will be allowing for winter run chinook in the Sacramento. The Bureau will give priority to fisheries. Recently Don attended an environmental law seminar and found that practices are changing, water transfers between basins are becoming more of a reality.

As of this moment, 140,000 af (acre-feet) will be delivered to the Trinity River. Alternatives involved include the range of 140,000 to 500,000. The Andrus Decision calls for 140,000 af to be delivered in this "critically dry"

year [between the dates of Oct 90 and Sept 91]. This decision was made prior to the March rains. I don't expect the projected amount of water released will change now that we have had some rain.

Q: Do you anticipate having enough water for fall chinook in the Sacramento River?
A: Yes, hopefully. The real question is temperature. We hope to utilize some of the water from the Trinity for temperature regulation.

Q: How do the temperature releases from Keswick dam affect the temperature in the Sacramento River?
A: When we release water now, the water bypasses energy generation and spouts directly out of the dam. Cooler water comes out of the low elevation outlet that has a very direct affect on river water temperature. The optimum goal is to reach 56 degrees for fall run chinook. Our first objective is to meet the requirements of the winter run, then the lower flows in the fall can easily be cooled by only using a little bit of Trinity water.

Q: How have water release adjustments been changed to meet fish resource needs?
A: The Trinity is now operated on an April 1 water year, as opposed to a January 1 calendar year. This shift has allowed the Bureau to make more accurate flow projections based on spring rains.

Q: Congress has approved anchor bolts to hang temperature control devices on Shasta dam. When will these be constructed?
A: Hopefully, it will be completed early next year.

Don Paff introduced Kirk Rodgers who heads up the Klamath part of the operations.

Rodgers: Bureau of Reclamation has 3 water storage systems in the Klamath Basin, 1) Gerber, 2) Clear and 3) Upper Klamath Lake. The main issues in each of these systems are: supply, demand, carryover storage, and product consumption. Today, I'll discuss the issues for Upper Klamath Lake. (see Attachment 3).

Supply : Inflow to date 342,000 af. 788,000 af expected total [for 1991 water year? or calendar year?].

Demand: 202,000 af are currently released from Irongate (Jan 1 - Apr 15). Pre-irrigation occurred in Jan/Feb. Adjustments include 1) 121,600 af for the on-project storage releases and return flows, and 2) 168,000 af for tributary inflow between Link River Dam and Iron Gate Jan 1 - Oct 15. The demand totals 618,200 af.

Carryover storage: The projected active storage is for 170,000 af.

Project consumption: Upper Klamath Lake consumptive use by the Klamath Project is 318,200 af.

To address concerns from fish interests, the agricultural community will also be taking cuts in the amount of water used. The Klamath project is quite efficient by design, there are lots of instances of water re-use. It is interesting to note that of the projected diversions, 21% go to wildlife refuges. All the recommendations from the Fish and Wildlife Service and the Klamath tribe have been incorporated: Klamath mainstream flow, and Klamath Lake levels for suckers. Out of a total of 205,000 acres, 8,500 acres will take a 45% reduction, others will consider a voluntary reduction (conservation).

A group of water users [who?] has looked at the Klamath project critically. We are not the only diverters from the Klamath River...there are many state water rights holders too. We take whatever water is left over. When considering having us make reductions it is only fair to recognize that we are not the only users.

Comments on Bureau of Reclamation's presentation

Masten: I commend Kirk for his effort. I want the informal group of water users made into a formal body that meets annually.

Q: How can we address temperature problems below Irongate? How are return flows affecting nutrient load?
A: (Rodgers) Well, I'm not sure what we can do on the temperature side, Klamath Lake is big and shallow. Research is being done to compare the undisturbed marsh lands against the disturbed land, this should be funded through 1995. USGS is putting together a plan for limnological studies on Upper Klamath Lake.

Charlie asked Don Paff to give us all the water he can on the Klamath, i.e., when Don turns the faucet, be sure to give us a fair turn.

Report of the Technical Advisory Team (Barnes).

The Technical Team was thanked for doing these analyses.

- **Team comments on PFMC options for 1991 ocean fisheries.**

Jerry Barnes referred to his handout (Attachment 4a). There were no questions on the first part of the handout -- the Analysis of Proposed 1991 Ocean Harvest Regulations.

- **Estimate of the 1991 spring chinook run.**

Attachment 4b on the spring chinook forecast contains information from the model that the technical team uses. This model assumes average survival, it will not accurately predict every year.

This was a last minute assignment for the technical team (Polos). We followed methodology used last year.

Table 2: 78% return of the 1991 return to the Trinity hatchery will be 3 yr olds. There are some problems with this. We really don't know how the discrepancy occurred. There is a hypothesis that ocean survival is much lower than assumed by the model. There are some concerns, see page 2 of this handout, that the natural runs of spring chinook are lower than ever before. The USFS is responding to the low numbers of fish on the Salmon and Trinity Rivers by giving special consideration to the species that are in danger of being threatened. Spring fish enter the river in April. There is probably a small overlap of fish runs.

Table 5: compares the preseason projection with the postseason actuality.

Q: (Masten) How many spring chinook were caught in the ocean last year?
A: (Polos) So far the CWT info has not been compiled. It could be done, but so far it has not been assigned to the technical team.

The only changes between this year's forecast and last year's forecast - is the way that predictions were made. This year the harvest ratios of the Indian river fisheries in comparison with the number of fish caught at the weir were used. Last year, the assumption was made that 90% of the fish made it above weir.

Fish are holding from May or June until September. I assume that there will be low flows April to June. There is a possibility that low flows in the lower Klamath may result in a higher catch (netting efficiency increases).

Fullerton: Since the Indian net fishery does not stop at a certain time, it will not be an advantage to go to a smaller mesh. Nets that catch the 3 yr olds, catch the 4 yr olds.

- **Review of the scale analysis proposal to be submitted for Klamath Restoration Program funding.**

Joe Polos put this review of the scale analysis together (Attachment 5). Joe's estimate is for $11,000 -- the Trinity and Klamath programs may work together ($5,500 each) to fund this proposal.

Fullerton asked the Council to endorse this idea now because they won't be meeting again before the Task Force needs to decide on funding.

McIsaac asked for the sampling scheme to be similar to the one used on the Columbia River.

Iverson added that the funding for the Klamath Restoration Program is in the President's budget for FY1992.

Joe Polos will take responsibility for making sure the Task Force gets this proposal.

*** Consensus on sending this proposal for scale analysis to the Task Force.

Bingham: there is a great deal that hinges on salmon abundance. A lot of decisions for the rest of the ocean depend on the Klamath stocks. Can Mike Maahs be added to the agenda to report on a potential proposal?

Mike Maahs reports on the proposed CPUE test fishery (Attachment 6).

Mike Maahs: I have new ideas after receiving CDFG's test fishery information. The test fishery proposal is "shakey". It may be more useful to use the normal South Coast fishery as a base. I want to request the Technical Team to evaluate CPUE based on the South Coast fishery. We need to get this process started in order to collect the data by July. We also need to give CDFG direction on collecting information on the South Coast CPUE now, so that if the ocean abundance, indicated by CPUE, is 25% more than the estimate based on the PFMC stock predictor, then changes can be made in 1991 ocean regulations.

Q: If either case (South Coast or Fort Bragg) will give the same ocean abundance estimate data, then why are you going to the South Coast?

A: Sacramento and Ft. Bragg fisheries both measure ocean abundance so either one would work, but the real fishery data from the South Coast is better than the test fishery data that we could get from Ft. Bragg.

Discussion

Warrens: We need to use this test fishery before July. I want to see it happen if it has good rationale and solid backing. I don't want false expectations.

Bingham: No problem. We feel like this might give us a better checkpoint so that the council has the information in July.

McIsaac: Why are May & June combined in the table?

Maahs: That is always the way the data is shown.

Maahs: The PFMC needs to hear that the KFMC's Technical Team has analyzed the South Coast CPUE and given an update on the South Coast catch to keep this idea alive. This data would be used in conjunction with data from past years.

Fullerton: Should the council change its procedure?

Reed: If the catch is high, then perhaps we should change the basis for our technical recommendation. This model will not be used exclusively for the first few years, it will be used in conjunction with the existing method.

Masten: I am concerned about implementing this test fishery this year. It sounds like a good idea, but I do not support full adoption and implementation until the KTT fully recommends this procedure.

Fullerton: I will not endorse this test fishery for this year, primarily because the KTT has not supported it yet.

** Motion: I move that this proposal be forwarded to the STT for consideration of analysis of its use (Bingham).

Discussion

The standard process for a change in technical methodology normally takes a year (forwarded to Salmon subcommittee and Salmon Technical Team). If emergency conditions exist, a change in technology methodology may have validity to be considered faster than that. The chance for this proposal to be implemented this year is probably less than 50/50.

Hayden: This proposed methodology could show that there has been an over prediction of fish. It could be bad or good. It may show that the predictor is too high or too low.

McIsaac: I support the idea of seeking a test fishery, but I want to include a time frame. If the CPUE's are over 30, let's reconsider.

Fullerton: What is the process if the decision isn't made by July?

Warrens: The motion needs to include "an initial analysis will be included by July".

Fullerton: This could change the regulations mid-season, would this happen?

Warrens: It would take a preponderance of evidence to get the PFMC to make a midseason change. Evidence would need to show that abundance is significantly different than the preseason projection.

Hayden: I agree with Frank. This is not going to be black and white. We need to clear up whether or not we will use this information.

Warrens: This is a major departure from the usual procedure. I don't believe that the PFMC looks at this type of information mid season. We need to make sure that the Salmon Subcommittee and the Salmon Technical Team give this high priority and give us an objective analysis of this proposal.

Bingham: CDFG needs to be requested to keep up a good level of sampling in the ports.

Fullerton: Let's request the Salmon Subcommittee to consider the CPUE test fishery as one of the options.

PUBLIC COMMENT ON THE CPUE TEST FISHERY

Paula Yoon: I support the proposal from Mike Maahs.

John Wilson: I feel that this is a good proposal.

Jim Johnson: Anything is better than jack indicators.

Mike Morford: I would like to recommend that we proceed with caution, this is a generalized tool.

Tom Robinson: I support techniques for better information gathering.

Dave Bitts: I would have liked to see this technique used during good years.

** Motion (reworded): This proposal should be forwarded to the Salmon Subcommittee and the Salmon Technical Team to consider this and report back in July with a preliminary analysis of the CPUE on the South Coast (south of Arena).

Discussion

This motion is a modification of the motion passed in March, this may be more statistically valid. If this proposal works out, it could raise the allocation for in-river harvest.

*** Consensus: the KFMC will submit a proposal for a CPUE test fishery to be conducted on the South Coast to the PFMC.

Reed: Tools, such as this proposal on a CPUE test fishery, should be developed even if they are never used, because it is good to see what options are out there. Eventually it would be advantageous to immediately identify Klamath fish as they are brought into the harbor.

NOTE: At the PFMC meeting (April 12) Frank Warrens made a motion to institute a CPUE stock abundance estimation methodology for Klamath River fall chinook in the south of Pt Arena area in 1991 for objective analysis by the scientific and statistical committee (SST) and salmon technical team (STT); and that a preliminary analysis of this methodology be reported to the PFMC at its July 1991 meeting. If the validity of this methodology appears to be a more reliable indicator of abundance than pre season estimate, the PFMC consider it as a management tool after subjecting this methodology to the PFMC stock estimation methodology review as set forth in the current council operating procedure. This motion passed unanimously. Dr. Gary Stauffer (SSC) commented that they would not be meeting in time to have a preliminary analysis in July, but they would try to meet in September for an analysis.

COUNCIL RECOMMENDATIONS TO HARVEST MANAGERS

Council recommendation to PFMC on 1991 ocean salmon regulations.

Public Comment

Jim Johnson, Oregon Salmon Commission:
When this first came about, trollers were told to take a 50% reduction from last year. For the ocean, this should be .375/2 that comes to a .1875 harvest rate.

Paula Yoon, Humboldt Fishermen's Marketing Association:
Everyone is really hurting this year. If there is a way to share the pain then that is what we need to do. I'm really upset that harvest of spring chinook by Indians is not considered an allocation. There's been a trade-off here, we (commercial fishermen) used to be able to fish these spring fish too.

Cliff Whipp, Coos Bay Association:
We think that the predictors currently being used to predict stock size aren't working.

Jack Williams, Ft. Bragg:
I support a .20 harvest rate and an August to September fishery.

Bill Duncan, Shelter Cove Fishermans Association:
Without something in the neighborhood of a .20 harvest rate we (none of us) will make it to fish.

Mike Morford, Mendocino Co:
I'm concerned about closures at Ft. Bragg.

Harriet Engblum, Consumer Advocate for salmon:
Fish need to be caught, because people like to eat them.

Dave Bitts:
The best options are below everyone's needs.

Mudgie Mc Covey:
I still consider .13 as the only option.

Discussion

McIsaac: Does the Bureau of Indian Affairs have authority to set a season that conflicts with other jurisdictions?

Fullerton: Indians do have a right. How large or small that right is yet to be determined.

Reed: Has the technical team evaluated the three harvest rates (.12, .16 and .20) in terms of fishing effort? Last year the target harvest rate was .37 and the actual rate, estimated post-season was .57. What is being done this year to make the target harvest more realistic?

Barraco: The first part of that question is "yes". There are no new management measures that are different than last year. We are still regulating based on time and area in order to meet the target.

Reed: Then will commercial boats be spending 1/3 as much time as on the water?

Barraco: No. The impact rate projected by the model refers to 2 things: the effort expended during the base period and the stock mixes in the current year.

McIsaac: What kind of security measures will prevent events like last year's .37 /.57 from happening again? Will PFMC's option prevent this?

Reed: The KFMC and KRTAT should forward information we develop to the PFMC.

Warrens: It is not my intent to debate with Department of the Interior at this time. I recommend that the 5-year agreement process be followed. Perhaps this council should revisit the 5-year agreement.

Masten: Lisle Reed asked that the council make a recommendation.

Warrens: It is not my desire to revisit the inequities of the past. The process used this year at this time is the one at hand. The KFMC needs to either decide to follow or decide not to follow the 5 yr agreement.

Marshall: You're saying that it needs to be adjudicated... yes, perhaps it does.

Bingham: The 5 yr agreement was entered into with the hopes that it could be changed as needed.

Marshall : I support .10 or .12

Wilkinson: Our goal should be to have some kind of reasonable ocean season. For any one ocean season, there should be a range of options for the in-river season.

McIsaac: What is the basis for the 12,000 fish?

Marshall: This amount was clearly stated in the negotiations that preceded the KFMC being formed. Originally it had been 18,500. In the spirit of the agreement, we offered to negotiate. I haven't heard any offers to negotiate from other users.

McIsaac: How will we deal with competing decisions between Departments of Commerce, Interior, and Justice? Is there a report being written on this?

Fullerton: There has never been a quantity set aside for ceremonial and subsistence, the tribes would be the best to do this. If there is a disagreement between the tribes and the secretary then it will go to court.

Reed: I do not hope to put the secretaries in that position.

McIsaac: I really need to hear about any legal opinions that have been prepared on this subject.

Odemar: The 12,000 fish in the agreement is not an entitlement. The agreement does spell out that discussions will occur if emergencies arise. I don't think that it was in anyone's mind to close down the ocean fishery.

Bingham: I was in on the discussion to formulate that number (12,000). It was a chalkboard estimate, not many people felt totally comfortable with it. Now we are finding out that different people felt this meant different things. This year we are talking about a total ocean shut-down. The consequences will be international.

Warrens: In response to Don's questions about legal opinion. This council will strive to reach agreement and meet minimum needs, I'll try to help the council make this decision. We need to find a way to negotiate, meet needs and make a recommendation.

Masten: In our opinion, the 12,000 was an extreme emergency situation and it can't be negotiated lower. There is a court case that addresses this. 12,000 is an extreme burden, we cannot survive on 12,000. Our families have no way of support. I hope that we have methodology to share. I was trying to be fair.

Warrens: Is it within the realm of reality to consider that fish from another source might help to meet this need? Would you be open to discussions that would consider fish from another source?

Masten: Yes, if its over 12,000.

Marshall: No.

Masten: This is hard for you to understand because you are not an Indian.

Warrens: I'm trying to understand. I just want to see if you are open to supplementing the fish that you catch with fish from another source.

Fullerton: Both sides need to consider negotiations, especially in an emergency year.

Wilkinson: I want to remind the council that the Oregon delegation laid a proposal on the table that might have alleviated these problems. Artificial enhancement may be the answer to prevent something like this from happening again.

Bingham: I am trying to understand where you are coming from. It is our way of life too. For the last 6 years, we have seen it disappearing. If there is any way that we can get close to minimum need, I think we should try. Yes, it is wrong that your people were not allowed to commercial fish for 50 years, and it is really horrible that genocide was committed against your people. But this doesn't mean that right now, we can't try again. It's much harder the second time around, its not easy, let's not ruin the relationship that we've developed at this table.

Warrens: Are there any other indigenous stocks that could be transferred here?

Odemar: No, we have a policy against interbasin transfer of stocks.

Barnes: The mitigation goal is 17,500 total for Irongate and Trinity.

Mitigation goals have been agreed upon by people other than us, it would be hard (but not impossible) for us to change those goals.

Discussion

Masten: I have great concerns over harvest levels, the predictor seems to point out that the fisheries resource could be in big trouble. I'm concerned that if we don't have a control mechanism, we could be out of range again. I don't want to get into how its managed, but I'm concerned. What will we do this year?

Technical team: In order to keep harvesters closer to the actual target harvest rate we need to improve the predictor for adjusting catch. This is a long-term solution. Low numbers are frustrating because they are harder to manage. The red light/green light proposal seems to offer the best, most reasonable options.

Bingham: At best, even at .20 there will be many that don't fish because it is not economically feasible. There will be less effort this year.

Fullerton: The BIA had the right to set the minimum, but it could be changed at any time.

Reed: Will the users have the ability and the will to deliver fish to the Indian fishers and will you be willing to sign a statement saying that the Indian subsistence rights are superior?

Bingham: Yes to the first part of your question, no to the second part.

Reed: Subsistence is the issue, not quantity. Morally and legally this is the way it should be.

Fullerton: Does the council want to take any action on this?

No.

*** Fullerton will report to the PFMC that the KFMC did not make a recommendation on 1991 ocean salmon regulations.

LONG RANGE PLANNING

Long range plan for the Klamath Fishery Restoration Program -- status report (Wilkinson).

The long range plan for restoration was approved at the March Task Force meeting. 1000 copies will be printed. Keith is confident that we will be getting a restoration plan out to the public, agencies and tribes soon.

Long term plan for Klamath harvest management.

o Status of the public review process (Whitehouse).

The plan was mailed to the list of Management Council interested parties (215 addresses), the PCFFA, tribal offices, Sportfishing Clubs, local libraries and involved agencies.

The draft harvest management plan was announced as being available for public review with press releases, notices posted in Post Offices, and a Federal Register notice.

Meetings were scheduled and held at five locations in the Klamath River area -- Weaverville, Yreka, Coos Bay, Eureka and Ft. Bragg. Approximately 20 people attended each of the meetings. A total of 21 verbal comments were received on the draft plan. Several written comments have also been received.

Media coverage both before and after the meetings was good. Press releases from our office generated interest from newspapers, and radio and television stations. Local newspapers contained articles announcing the meetings and follow up articles after the meetings. Televised coverage was also provided.

The comment period closes April 15, 1991.

Discussion

Nat commented that he'd like to extend the comment period on the MC plan to April 30, 1991. He didn't think that the public understood the plan very well.

Bob said that he felt the plan wasn't well understood by the public.

Keith: if the comment period is extended, how will that affect the rest of the process?

A: Everything else would be pushed back 2 weeks as well.

** Consensus: **The comment period is extended to April 30, 1991.**

o **Proposed process for incorporating public/agency comments and producing a final plan (Iverson).**

I suggest that a small group of 2-3 council members, and 1-2 technical team members meet to look at the comments received on the long-range plan, then bring their results back to the full council. Dave Mackett has told me that any changes in the options field should undergo the same process that was used to originally develop the plan.

- o Appointment of subcommittee to incorporate comments.

Volunteers for this ad hoc group include: Lyle Marshall, Nat Bingham, Keith Wilkinson and Jerry Barnes.

COUNCIL RECOMMENDATIONS TO HARVEST MANAGERS (continued)

Council recommendation to CDFG, BIA, and Hoopa Tribe on 1991 in-river spring chinook fisheries.

Fullerton: What are the wishes of the council?

Masten: We have had some discussions on a commercial season, but we've been waiting to see what the numbers look like. Based on what the numbers look like, it doesn't appear that there will be a commercial season, but subsistence fishing will continue as normal under 25 CFR. Spring fishing is different. I would like to see the ocean numbers included on the tables that are developed by the technical team. I want the technical team to include those levels.

Any problem with the technical team providing this information for future reports?

Joe Polos: Sure. Sometimes it takes a bit longer, but we'll put it in.

Odemar: Will the Hoopa's be considering a commercial fishery on spring chinook this year?

Marshall: I don't know yet.

Reed: We should base our actions on those identified in the restoration long-range plan.

Odemar: This year the Task Force did identify spring chinook as a priority stock. CDFG is also spending more time and effort on spring chinook.

Iverson: Referred to handout in mail package re: Moyle's proposed listing of spring chinook.

NEXT MEETING

Next meeting scheduled to meet in Eureka, CA on June 27-28, 1991.

NEW BUSINESS

None.

*** Consensus on adjourning the meeting.

Note: Charlie Fullerton announced that this is Spike Naylor's last meeting - he will be retiring.

Attachments:

#1 - Attendance Roster.

#2 - Agenda for April 8, 1991 meeting.

#3 - Klamath Project Drought Operation Plan (B of Reclamation).

#4a - Handout from Jerry Barnes on Technical Advisory Team items.

#4b - Handout from Jerry Barnes on Klamath spring chinook run size forecast for 1991.

#5 - Scale Analysis Proposal from the Technical Team.

#6 - Handout on CPUE test fishery from Michael Maahs.

#7 - Suggested process for incorporating comments on the Draft KFMC Plan (Iverson).

ATTACHMENT 1

KLAMATH FISHERY MANAGEMENT COUNCIL
Attendance Roster
April 8, 1991
Portland, Oregon

Management Council Members

Nat Bingham	California Commercial Salmon Fishing Industry
Virginia Bostwick	Klamath In-River Sport Fishery
E. C. Fullerton (Chair)	National Marine Fisheries Service
Robert Hayden	California Ocean Sport Fishery
C.Lyle Marshall	Hoopa Valley Tribal Council
Susan Masten	Non-Hoopa Indians Residing in Klamath Area
Donald McIsaac	Oregon Department of Fish & Wildlife
A.E. Naylor	California Department of Fish & Game
Lisle Reed	U.S. Department of the Interior
Frank Warrens	Pacific Fishery Management Council
Keith Wilkinson	Oregon Commercial Salmon Fishing Industry

Others Attending

Jerry Barnes
Dave Bitts
Brian Cates
W. L. Duncan
Harriet Engblum
Sam L. Gensaw, Jr.
Bruce Halstead
Dave Hankin
Mike Maahs
Mudgie McCovey
Richard McCovey
Mel Odemar
Mike Orcutt
Don Paff
Ronnie Pierce
Joe Polos
Tom Robinson
Kirk Rodgers
Mollie Ruud
Craig Tuss
Jim Walters
Clint Webb
Cliff Whipp
Tricia Whitehouse
Jared Williams
John Wilson
Paula Yoon

AGENDA, KFMC MEETING OF 8 APRIL 1991, PORTLAND, OR

CALL TO ORDER -- 1:00 P.M., April 8, 1991.

- o Review and adoption of agenda and minutes.

TECHNICAL INFORMATION

- o Report of the Bureau of Reclamation on 1991 water supply, Klamath and Trinity Basins (Paff).
- o Report of the Technical Advisory Team (Barnes).
  - oo Team comments on PFMC options for 1991 ocean fisheries.
  - oo Estimate of the 1991 spring chinook run.
  - oo Review of scale analysis proposal -- to be submitted for Klamath Restoration Program funding.
  - oo Status of the CPUE analysis recommendation.

LONG RANGE PLANNING

- o Long range plan for the Klamath Fishery Restoration Program -- status report (Wilkinson).
- o Long term plan for Klamath harvest management.
  - oo Status of the public review process (Whitehouse).
  - oo Proposed process for incorporating public/agency comments and producing a final plan (Iverson).

PUBLIC COMMENT -- 3:00 P.M.

COUNCIL DECISIONS ON PLANNING

- o Decision on process for incorporating comments in the long term plan.
- o Appointment of subcommittee to incorporate comments.

COUNCIL DECISIONS ON TECHNICAL ISSUES

- o Endorsement of scale analysis proposal.

COUNCIL RECOMMENDATIONS TO HARVEST MANAGERS

- o Council recommendation to PFMC on 1991 ocean salmon regulations.
- o Council recommendations to CDFG, BIA, and Hoopa Tribe on 1991 in-river spring chinook fisheries.

NEW BUSINESS

NEXT MEETING

KLAMATH PROJECT
DROUGHT OPERATION PLAN

UPPER KLAMATH LAKE
1991

	Acre-Feet	
SUPPLY		
Upper Klamath Lake Storage - - Jan 01, 1991	179,000	
Net Inflow to Lake - - - - - - - Jan 01-Apr 15	342,000	
Projected Inflow - - - - - - - - Apr 15-Oct 15	267,200	
TOTAL SUPPLY		788,200
DEMAND		
Iron Gate Releases - - - - - - - Jan 01-Apr 15	202,200	
Projected Iron Gate Releases - Apr 15-Oct 15	266,100	
Project Diversion- - - - - - - - Jan 01-Apr 15	50,600	
Projected Project Diversion- - Apr 15-Oct 15	389,200	
Adjustments		
On-Project Storage Releases & Return Flows	<121,600>	
Tributary Inflow Between Link River Dam and Iron Gate Jan 01-Oct 15	<168,300>	
TOTAL DEMAND		618,200
CARRYOVER STORAGE		
Projected Active Storage - Oct 15, 1991 (El. 4138.66)		170,000
Projected Active Storage Without FERC Flow Reduction - Oct 15, 1991 (200,200 a.f. conserved)		<30,200>
PROJECT CONSUMPTION		
Upper Klamath Lake Consumptive Use by Klamath Project - 1991		318,200

RECOVERY

Hold 900 ft^3/s at Iron Gate from Oct 15 until Upper Klamath Lake is back in Operating Envelope

PARAMETERS

Irrigation Reduction of 45% on 8503 acres (11,500 a.f. cutback)
*Total/Minimum Releases at Iron Gate - 1991 604,000 a.f.
Minimum Upper Klamath Lake Level Oct 15, 1991 - 4138.5
Minimum Active Storage - Oct 15, 1991 - 160,000 a.f.
Minimum Flow at Keno Dam - 250 ft^3/s
SCS Inflow Projection of 54% for Apr - Sep
No Upper Watershed Diversion Reduction (State Water)

*Meets Resource Agency Requests

ATTACHMENT 4a

MEMORANDUM

TO: Klamath Fishery Management Council

FROM: Klamath technical team

SUBJECT: Items for KFMC meeting of April 8, 1991.

Analysis of proposed 1991 ocean harvest regulations

The proposed regulations are designed to reflect 3 alternative levels of ocean harvest for Klamath River 4-year-old fall chinook (Table 1). The salmon Technical Team (STT) has developed exploitation factors appropriate to each harvest level, for analysis by the Klamath Ocean Harvest Model (KOHM). The KRTAT has reviewed the exploitation factors used by the STT.

Table 1. Harvest estimates of adult Klamath fall chinook based on 4-year-old ocean harvest rates of 0.2, 0.16, and 0.1.

Harvest rates	Ocean Harvest	In-river		Natural+Hatchery
		Indian	Sport	
0.20/.24	23,200	8,500	2,100	47,200
0.16/.28	18,200	10,320	2,580	47,200
0.10/.33	10,900	12,880	3,220	47,300

The exploitation rate for the Coos Bay cell of the KOHM has been modified to reflect the greater abundance of Klamath fish in the fishery south of Cape Arago. This modification is based upon data from the partial closures in 1989 and 1990, indicating that about 70% of the Klamath impact occurred to the south. This conclusion could only really be tested by a season-long closure south of Arago and even then, there may be increased abundance (and effort) immediately to the north,because of the "edge effect" observed adjacent to the KMZ.

Spring chinook

The spring chinook in-river run is predicted to be 23,200 in 1991. The complete report is attached.

Scale analysis proposal

A detailed proposal for collection and analysis of the scales of adult fall chinook from the Klamath River basin is attached. The project appears feasible for implementation in 1991. The California DFG has agreed informally to collect scale samples from weir and hatchery sites at no cost. Preliminary inquiries with the Klamath and Trinity program coordinators indicate that funds would be available for FY 92, beginning October 1, 1991. The final proposal will be submitted to the Klamath and Trinity field offices by April 24.

Catch-per-unit-of-effort method

The potential for use of CPUE at Ft. Bragg will be evaluated by the STT and SSC of the PFMC as per request of member Frank Warrens, for possible implementation in 1992. At the request of the PFMC, CDFG has prepared an analysis of a proposed test fishery at Ft. Bragg in 1991, to be submitted to the STT. The Klamath tech team is reviewing the proposal and will provide input to the STT.

3/31/91

TO: Klamath River Fishery Management Council

FROM: Klamath River Technical Advisory Team

SUBJECT: Klamath River Basin Spring Chinook Salmon Run Size Forecast - 1991

1991 Spring Chinook Run Size Forecast

The estimated return of adult spring chinook to the Klamath River in 1991 is 23,200 (Table 1). **Projected harvest levels presented in this table are not intended to indicate harvest shares. They are based on the average harvest proportions observed from 1984-1990.** It is projected that the adult return of spring chinook in 1991 will be composed of predominately (78%) 3-year-olds (Table 2). This estimate is based on the methodology developed by the U.S. Fish and Wildlife Service (USFWS 1990) with some modifications detailed below. This methodology relies on releases of fingerling and yearling spring chinook from Trinity River Hatchery (TRH) and estimates of hatchery returns, natural spawning escapement, and harvest combined with assumptions to account for data that is not available. At this time, the only information that has been updated from the 1990 season is the inriver harvest, run size above Junction City weir (JCW) and returns to TRH (Table 3 and Table 4). Updated coded wire tag (CWT) recovery data for the returns of brood year 1985 and 1986 releases is not currently available for all inriver recovery sites. Therefore, the return per brood pound released has not been updated to include these data.

1990 Performance of the Model

The 1990 preseason estimate of returns to Trinity River Hatchery (TRH) was 44% greater than the actual return, and the preseason estimate of the run size above (JCW) was 119% greater than the postseason estimate (Table 5). The reasons for this discrepancy are unknown. Preseason estimates for most salmon stocks along the west coast were higher than postseason estimates. It has been hypothesized that ocean survival of salmonids during the 1989-1990 winter was much lower than average and this would at least partially account for the discrepancy in pre- and postseason abundance estimates.

Modifications to the Model

A major change in the 1991 forecast methodology from the 1990 forecast was to derive the Yurok and Hoopa harvest ratios in relation to the run size estimate above JCW (Table 4). It was

felt that this would be more reliable than basing the harvest ratios on assumed run sizes at the mouths of the Klamath and Trinity Rivers.

The Tech Team wishes to alert the Klamath Council to some concerns involving the spring chinook of the Klamath River basin.

1. Little information on natural spring chinook populations is available and the low population levels which currently exist warrant concern. Spring chinook counts in the Salmon River and its major tributaries indicated that 1990 was one of the lowest observed escapements since counts have been conducted.

2. The previous prediction (1990) was higher than what actually occurred. There are several reasons for believing that the model may be over predicting the 1991 spring chinook run. These reasons are:

   A) Only 250 jacks returned to TRH in 1990 and this is the lowest jack return since 113 returned in 1979. The low jack return in 1990 may indicate poor survival of the 1988 brood which is predicted to make up the bulk of the 1991 adult run. The number of 3-year-olds that the model predicts is based on hatchery releases and assumes average survival which may not be the case for the 1988 brood.

   B) Adult returns to the Klamath River, following years of low jack returns, have generally been poor (1979, 1980, 1982, 1985).

   C) The ocean fisheries have been the primary harvester of Klamath River spring chinook and the effect of the 1991 ocean regulations (designed to protect Klamath River fall chinook) will have on the inriver run are unknown.

   D) Prespawning mortality has ranged from as high as 63.5% (1988) to as low as 6% (1990) and can have a dramatic impact on the spawning escapement.

3. The potential for very low flows during the migratory period for spring chinook (April-June) exists and would subject them to increased harvest rates.

4. The majority of the 1991 return is projected to be 3-year-old chinook. A directed gill net fishery targeting on spring chinook would not be able to take advantage of the large 3-year-old component of the run unless mesh size regulations were implemented. An intensified gill net fishery without mesh size regulations would cause a disproportionate impact on the 4- and 5-year-old components of the run as has been seen with the fall chinook fishery.

5. Spring chinook spawning escapement goals for the Klamath and Trinity basin are not clearly defined, and thus there is some doubt if the availability of a spawning surplus will exist in the 1991 season.

6. Some components of the inriver run remain unknown, such as the lower Trinity and the Klamath sport fishery harvests and upper Klamath dip net fisheries.

Table 1. 1991 Adult Spring Chinook Run Forecast.

Yurok Subsistence fishery averages 8.5% of the sum of Yurok & Hoopa harvest and estimated run above Junction City
Hoopa Subsistence fishery averages 8.3% of the sum of Yurok & Hoopa harvest and estimated run above Junction City
Recreational fishery above Junction City takes 13% of estimated Spring Chinook run above Junction City weir
Klamath escapement is assumed to be 2 per cent of run size at Weitchpec
Lower Trinity Escapement is assumed to be 3 per cent of run size entering Trinity River
Recreational fishery harvest levels in the Klamath and lower Trinity Rivers are not available
Commercial fishery harvests are not presented.

1991 Forecast of Adult Spring Chinook return to Trinity River Hatchery (TRH)
(86-88 finger and year rel pds * average fing, yearling return/release type) = 5054

1991 Forecast of Adult Spring Chinook run Above Junction City weir
(91 Forecast TRH returns)/(78-90 hatchery run size component) = 18414

Trinity River Hatchery escapement goal is 3000 adults.

Summary of 1991 Harvest and Escapement forecast for Adult Spring Chinook in Klamath Basin

Run size	
Klamath Mouth	23163
Trinity Mouth	20865
above J.C.	18414

Escapement	
Klamath	426
Lower Trinity	626
Upper Trinity	10966
TRH	5054

Harvest		
Yurok	Subsistence	1872
	Commercial	-
Hoopa	Subsistence	1825
	Commercial	-
Karuk	Dip Net	?
Sport	Above J.C.	2394
	Lower Trinity	?
	Klamath	?

Harvest rate
sport and net

0.26

Escapement rate
natural and hatchery

0.74

Table 2. Calculations for estimated 1991 Adult Spring Chinook return to TRH.

Yearlings

Brood Year	Pounds Released	Average Return/#		Number Returning	Proportion Recovered		Estimated * Return
1986	29247	0.0006	=	17.55	0.572	=	10
1987	0	0.0593	=	0.00	0.504	=	0
1988	45758	0.1174	=	5371.99	0.472	=	2536
						Total =	2546

Fingerlings

Brood Year	Pounds Released	Average Return/#		Number Returning	Proportion Recovered		Estimated * Return
1986	27536	0.0006	=	16.52	0.750	=	12
1987	30629	0.0732	=	2242.04	0.484	=	1085
1988	23668	0.2055	=	4863.77	0.290	=	1410
						Total =	2508

Yearlings + Fingerlings = Estimated Return to TRH = 5054

* Pounds released at TRH x average return/pound x average proportion returning to TRH = Estimated Return

Table 3. Trinity River Spring Chinook Salmon Run Size, Angler Harvest, and Spawning Escapement Above Junction City, 1977-1990.

	Run Size Estimate Above Junction City					Angler	Harvest	Spawner	% of	Hatchery	% of	H/N spn
				Jack	Adult	Harvest	Rate	Escpmt	Run	Returns	Run	Ratio
Year	Jacks	Adults	Total	Rate	Rate	(Adult)	(Adult)	(Adult)	(Adult)	(Adult)	(Adult)	(Adult)
1977	no estimate									1124		
1978	190	18816	19006	0.01	0.99	752	0.04	14384	76.4	3680	19.6	0.26
1979	113	7964	8077	0.01	0.99	1298	0.16	5008	62.9	1658	20.8	0.33
1980	1949	2301	4250	0.46	0.54	140	0.06	1614	70.1	547	23.8	0.34
1981	347	7913	8260	0.04	0.96	2146	0.27	3362	42.5	2405	30.4	0.72
1982	656	5731	6387	0.10	0.90	637	0.11	3868	67.5	1226	21.4	0.32
1983	no estimate									930		
1984	255	2465	2720	0.09	0.91	375	0.15	1354	54.9	736	29.9	0.54
1985	1434	8278	9712	0.15	0.85	736	0.09	4897	59.2	2645	32.0	0.54
1986	7081	23403	30484	0.23	0.77	2949	0.13	13371	57.1	7083	30.3	0.53
1987	4858	46016	50874	0.10	0.90	8467	0.18	29083	63.2	8466	18.4	0.29
1988	720	61972	62692	0.01	0.99	8738	0.14	39329	63.5	13905	22.4	0.35
1989	2021	27239	29260	0.07	0.93	2152	0.08	19581	71.9	5506	20.2	0.28
1990*	250	6182	6432	0.04	0.96	796	0.13	2975	48.1	2411	39.0	0.81
Average												
78-90#	1656	18190	19846	0.11	0.89	2432	0.13	11569	61.4	4189	25.7	0.44
84-90	2374	25079	27453	0.10	0.90	3459	0.13	15799	59.7	5822	27.4	0.48

* Preliminary data.
# Excludes 1977 and 1983 data.

Table 4. Yurok and Hoopa Adult Spring Chinook Net Harvest, 1981-1990.

	Yurok					Hoopa	
Year	Estuary Comm	Estuary Subs	Klamath Subs	Total	Harvest Ratio *	Total	Harvest Ratio *
1981	**	1320	397	1717	0.160	1090	0.102
1982	**	172	2268	2440	0.275	715	0.080
1983	**	60	450	510	***	75	***
1984	**	52	195	247	0.080	380	0.123
1985	**	580	494	1074	0.104	1000	0.097
1986	**	41	651	692	0.026	2022	0.077
1987	**	786	860	1646	0.032	4146	0.080
1988	**	1677	1249	2926	0.043	2727	0.040
1989	206	644	3925	4775	0.140	1978	0.058
1990	51	231	1131	1413	0.167	865	0.102
Average							
1981-1990		556	1162	1744	0.114	1500	0.084
1984-1990		573	1215	1825	0.085	1874	0.083

* Harvest ratio based on sum of estimated run size above Junction City weir, Yurok harvest, and Hoopa harvest.
** No commercial harvest.
*** No spring chinook estimate made by CDFG.

Table 5. Summary of preseason forecast and postseason analysis of 1990 Klamath River Adult Spring Chinook Run.

	Preseason	Postseason
Trinity River Hatchery	3462	2411 *
Upper Trinity Natural Escapement	8340	2975 *
Angler Harvest	1764	796 *
Junction City Weir	13566	6182 *
Hoopa Harvest	1265	865 *
Lower Trinity Natural Escapement	459	218
Run at mouth of Trinity	15289	7265
Upper Klamath Natural Escapement	312	148
Run at Weitchpec	15602	7413
Yurok Harvest	1132	1413 *
Run at mouth of Klamath	16734	8826

* Postseason estimates provided by various agency personnel working in the field. All other numbers are based on assumptions of the model and observed harvest and runsize estimates.

April 5, 1991

TO: Klamath River Fishery Management Council

FROM: Klamath River Technical Advisory Team

SUBJECT: Scale Analysis Proposal

An integral part of the database that is used to manage the Klamath River fall chinook is the age composition of the inriver run (ocean escapement). This information, in conjunction with inriver harvest and escapement is used to predict the ocean stock size. It is also used to reconstruct the contribution of a cohort to harvest and escapement. All of this information is needed to evaluate the success of fishery management regulations in achieving harvest and escapement goals. The age composition of the inriver run was derived from scale sample data collected by the U.S. Fish and Wildlife Service's (Service) beach seine operation conducted at the mouth of the Klamath River. Due to concerns over the apparent bias in the beach seine age composition data, the cohort analysis was redone using coded wire tag (CWT) data to reconstruct cohorts. Due to the absence of age composition data on natural stocks, age composition data derived from fingerling CWT releases were used as its surrogate.

The Klamath River Technical Advisory Team (KRTAT) has identified the need for comprehensive age composition data. Sixteen potential sampling locations have been identified from which up to 400 scale samples would be collected at each location (Table 1). Age composition data would be collected from each location and weighted by sampling rates to derive an overall age composition of the inriver run.

Agency personnel involved in monitoring harvest and spawning escapement (CDFG, HVBC Fisheries Department, USFWS) have agreed to collect scale samples without incurring additional costs. The Service office in Arcata, California will mount and read the scales. The estimated cost for mounting and reading the scales is $11,000. The project leader of the Trinity River Fishery Resource Office that administers the Trinity River Restoration Program has agreed to fund half the cost ($5,500) of this project.

Table 1. Scale sampling locations within the Klamath River Basin.

Hatchery -		Iron Gate Hatchery
		Trinity River Hatchery
Upper Klamath -		Salmon River Weir
		Scott River Weir
		Shasta River Weir
		Bogus Creek Weir
Trinity River -		Upper Trinity Spawning Ground Survey
		Junction City Weir
		Willow Creek Weir
Harvest -	Indian -	Estuary
		101 Bridge to Surpur Creek
		Surpur Creek to Weitchpec
		Trinity River
	Sport -	Estuary
		101 Bridge to Johnson's Bar
		Upper Klamath
		Trinity

MEMO .....

TO: Klamath Fishery Management Council April 5, 91

FROM: Michael Maahs, member KTAT

RE: CPUE Test Fishery

There has been much discussion over the use of a Catch Per Unit Effort (CPUE) analysis for estimating (inseason) the abundance of Klamath fish. At the last KTAT meeting, the scope of closures proposed this season were not considered; at least no discussion over possibility of having an insufficient fishery to develop a CPUE estimate occurred. Since that time the PFMC has begun the process of having the CPUE method considered. Along those lines CDF&G has developed draft CPUE paper. It is such that I have received this paper Friday evening, April 5th, too late to respond, and since no meeting of the KTAT was set prior to this meeting that I have written my recommendations directly to the Klamath Council. The CDF&F paper does not address the use of the south coast CPUE as an indication of Klamath abundance which in fact measures the same relationship as the Fort Bragg CPUE. This I had testified to at the PFMC hearing in San Fransisco but has not been given further consideration. I ask the KFMC to give this consideration and elevate this proposal to proper consideration by the PFMC.

In CDF&G's draft analysis it is stated that it is unclear why the CPUE analysis works as the age three Klamath component is only a small percentage of the landings at Fort Bragg in May and June. There can be little doubt that relationship works because Sacramento stocks are varing in abundance similar to the Klamath stocks.

Looking at the attached figure showing the relationship between Klamath ocean three's and the CVI it is evident that the abundance of both Klamath and Sacramento stocks are related.[1] This indicates that the dominant factors affecting survival affect both stocks similarly. This could result from several different factors: one- ocean survival, two- rainfall and stream flow, three- escapement levels, and four- some combination of factors.

In any event, the relationship of May-June CPUE at Fort Bragg is in reality a measure year class strenght; not just

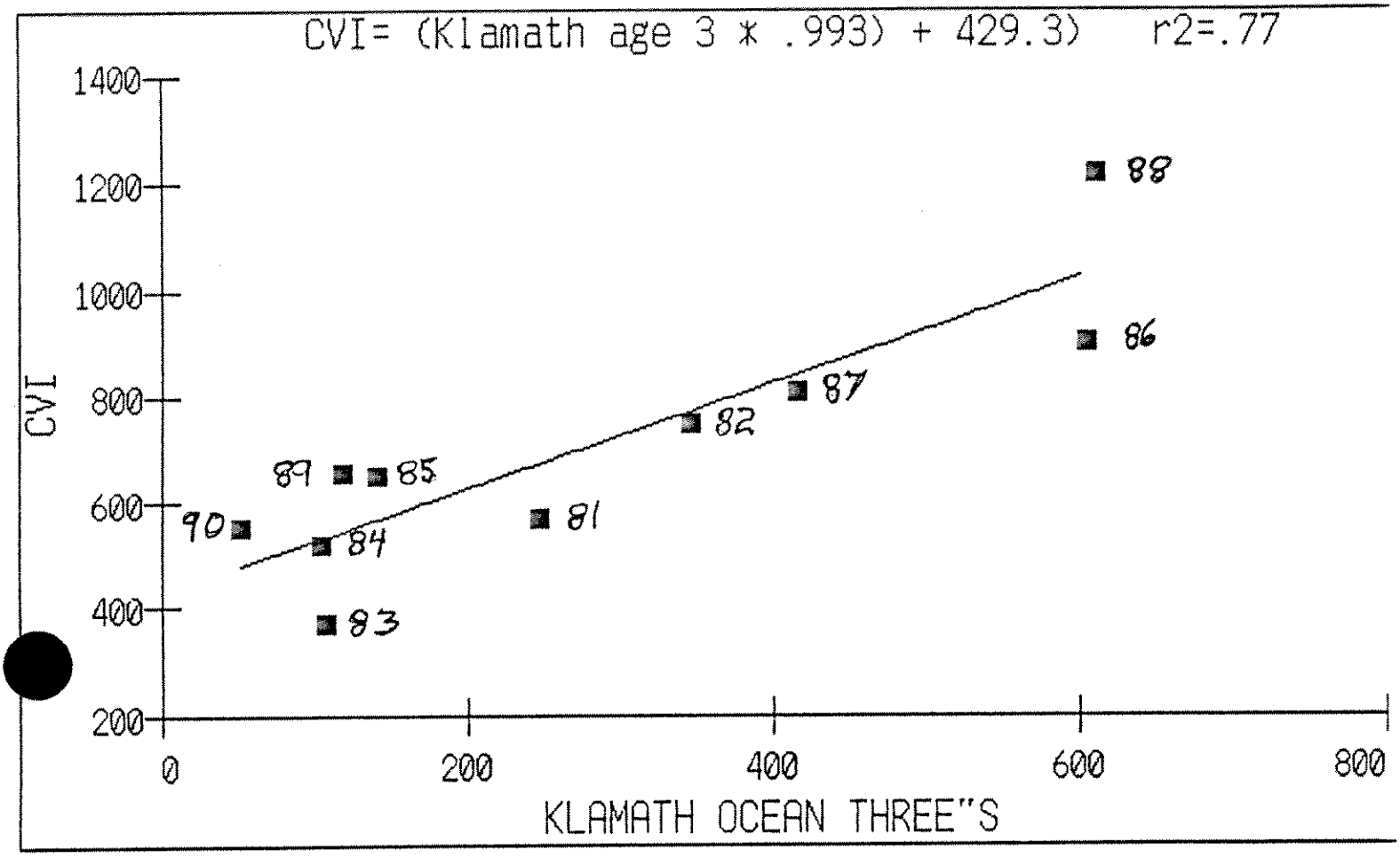
1. It should be noted that some auto-correlation exists within this relationship since the abundance of Klamath [illegible]

for Klamath age three but both Klamath and Sacramento. Because of the similar behavior of both stocks and the uncertainty of an experimental fishery to accurately reflect a normal fishery (let alone a normal fishery CPUE to relect actual abundance) consideration should be given the harvest of stocks in the south coast area as an indicator of abundance of both stocks.

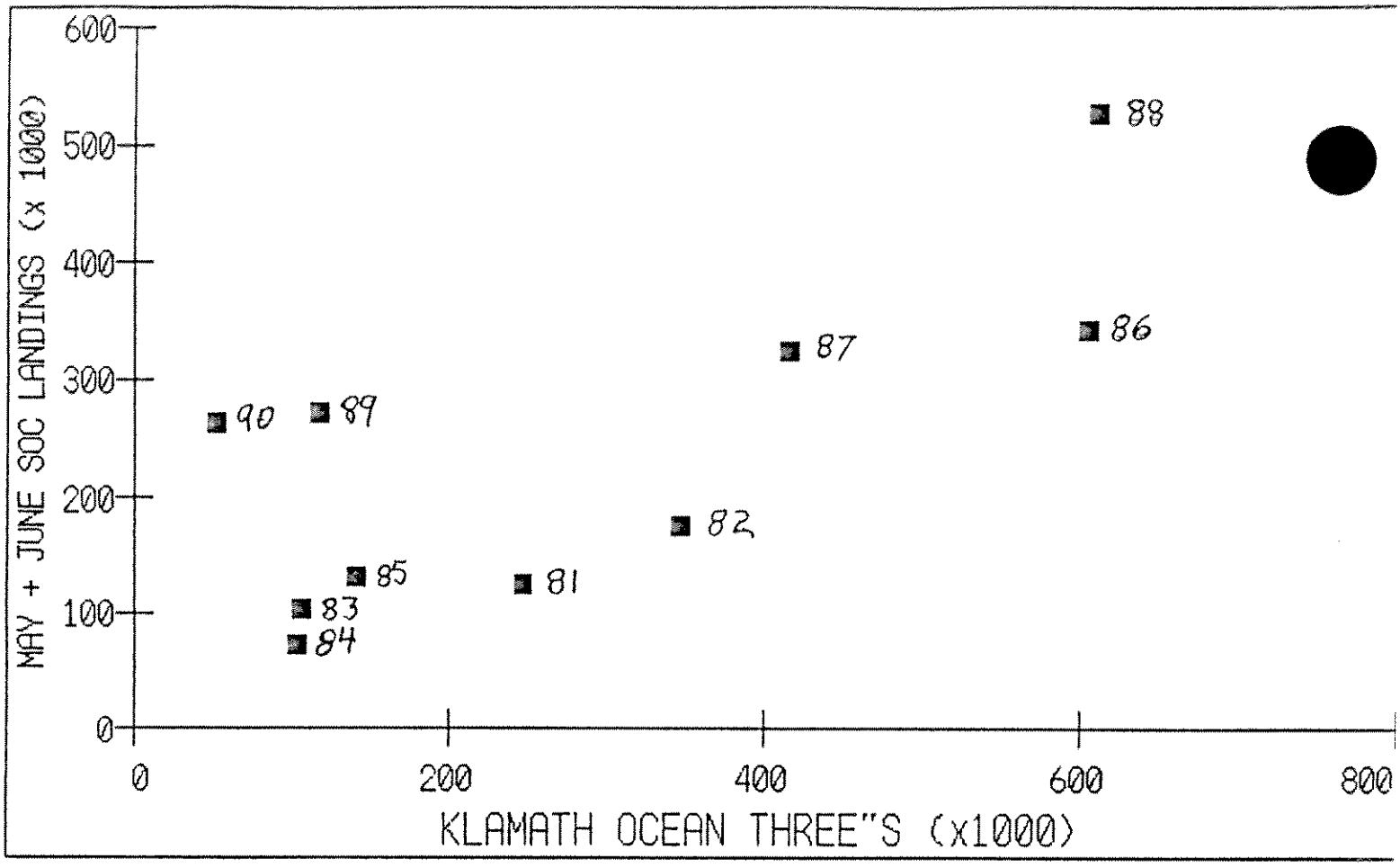
The figures on the last page demonstrate how either the landings or CPUE for the May-June south coast fishery would suffice for an indicator for Klamath abundance. It is disturbing that what was a fairly good relationship changed for 1989 and 1990. The rational for this is not totally clear at this time. It can't be blammed on an effort for fleet shifts. It can be either an unusal vulnerability of fish in the SOC area or a change in the relative abundance of Klamath to Sacramento stocks. The second alternative seems most plausible. It should be noted here that the data for Klamath ocean age three for 1990 is very preliminary at this time and should not be given much weight in this analysis.

It is with these considerations that I propose that an evaluation of south coast CPUE be done for use in 1991. I would utilize all data points excluding the 1990 preliminary data point to develop the regression. The question remains as to what level of CPUE would trigger changes in harvest rates allowed on Klamath age four fish.

I would recommend that, for lack of anything else, that if the CPUE inseason estimate exceeds the Jack estimator by 25 percent that the results of both methods be averaged and new harvest rates be developed. It is important to average results of both methods to avoid any extreme error that a single estimate could have.



Linear regression of Klamath ocean three's on CVI for return years 1981- 1990


600
500
400
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100
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MAY + JUNE SOC LANDINGS (x 1000)
88
86
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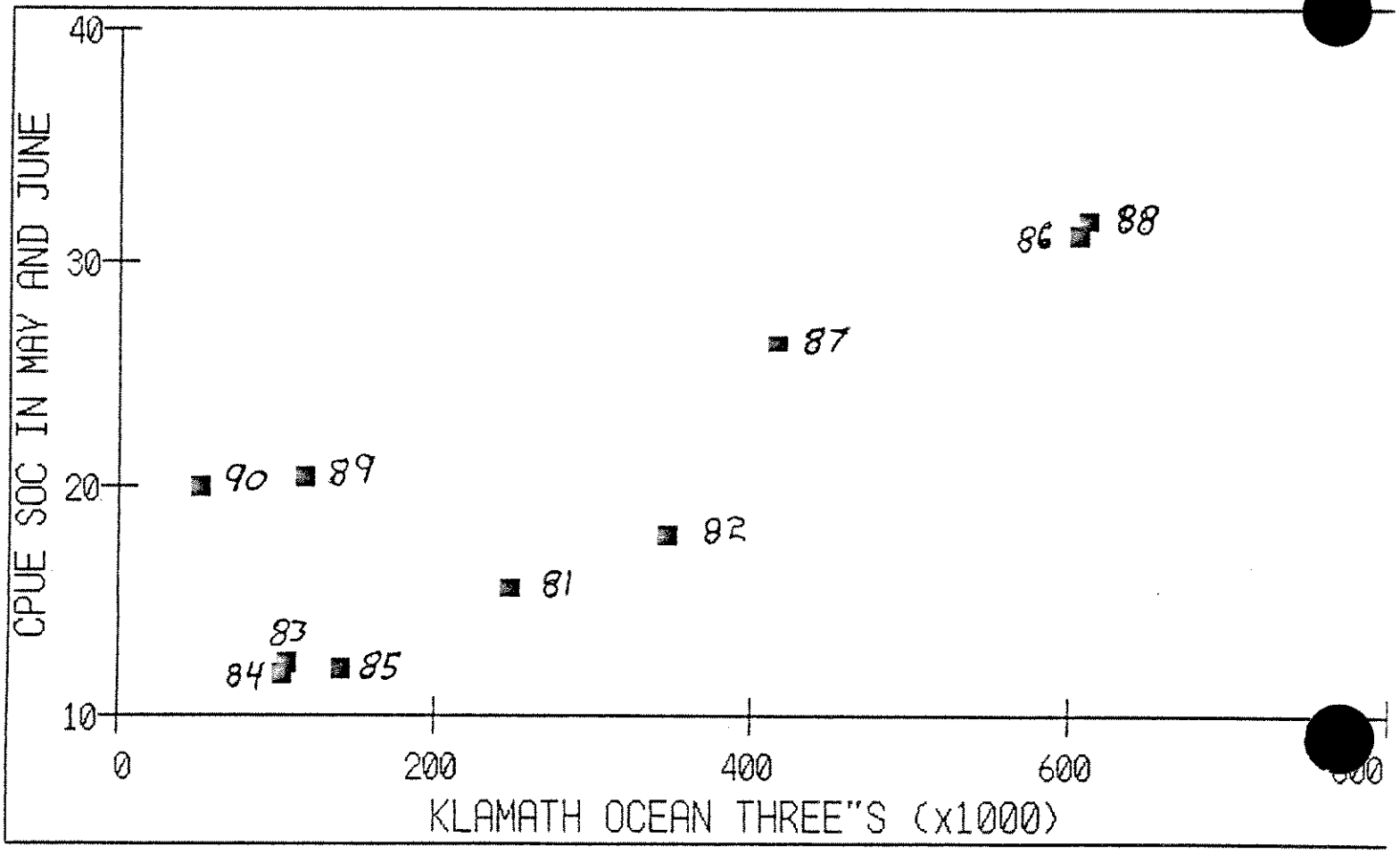
800
KLAMATH OCEAN THREE"S (x1000)


40
30
20
10
CPUE SOC IN MAY AND JUNE
86
88
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600
KLAMATH OCEAN THREE"S (x1000)

ATTACHMENT 7

drafted 3/20/91

SUGGESTED PROCESS FOR INCORPORATING COMMENTS ON THE DRAFT KFMC PLAN

15 April	Final date for written comments to FWS-Yreka
15-26 April	FWS staff organizes written comments by chapter, to the extent possible, Council chairman appoints an ad hoc committee to incorporate comments in the draft plan. Suggested membership: 2-3 Council members, 1-2 Tech Team members.
30 April	FWS distributes comments to Council and Tech Team.
15-16 May	Ad hoc committee meets to incorporate comments.
20-31 May	FWS prepares a marked-up draft, indicating how comments would be incorporated.
31 May	Marked-up draft distributed to Council and Tech Team.
20-21 June	Council meets to consider recommendations of the ad hoc committee, and to complete the incorporation of comments.
24 June- 12 July	FWS incorporates changes requested by Council
15 July	Final draft plan distributed for Council review
31 July	Council comments due by phone or mail. (Alternative): Council meets to approve final plan.
1-9 August	Copying, assembling of final plan...500-1000 copies.
12 August	Mailing of final plan.