



# United States Department of the Interior



FISH AND WILDLIFE SERVICE

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February 23, 1993

Dear Interested party:

Enclosed, please find a copy of the summarized minutes of the Klamath River Basin Fisheries Task Force meeting, held February 3-4, 1993, in Brookings, Oregon. If you desire more detailed information or would like to have a full set of the minutes, including attachments, please contact this office at the above telephone number.

Sincerely,

Ronald A. Iverson  
Project Leader

Enclosure

cc Jerry Grover  
Task Force members  
Technical Work Group members  
Klamath River Fishery Management Council members

Summary Minutes of the Meeting of the  
Klamath River Basin Fisheries Task Force  
Brookings, Oregon, February 3-4, 1993

February 3, 1993.

Members present: Mike Bryan (for George Thackeray), Kent Bulfinch, Don DeVol, Mitch Farro, Bob Rohde (for Leaf Hillman), Jack West (for Barbara Holder), Ron Iverson (for Bill Shake), Nat Bingham, Walt Lara Jr., Mike Orcutt, Forrest Reynolds, Keith Wilkinson. Absent: Tom Stokely, George Thackeray, Barbara Holder, Bill Shake.

Nat Bingham, acting-chair, announced that Tom Stokely is now the Trinity County representative on the Task Force. All Task Force members introduced themselves.

Agenda item 1: Discussion/adoption of agenda.

Changes to agenda (Attachment 1): 1) agenda item 7 (report from ad hoc committee) will be presented on 2/4/93, 2) agenda items 27 and 31 (upper basin amendment and public workshop report) to be discussed together on 2/4/93, 3) Rod McInnis volunteered to provide a report on high seas driftnet fishery legislation, 4) ensure that agenda item 34 is discussed.

Rohde asked that KRFRRO prepare an evaluation report on all restoration projects funded to date and presented at the March 30-31, 1992, meeting.

\*\*\* Action \*\*\*

Evaluation report on past projects will be placed on the agenda for the March 30-31, 1993 meeting.

Agenda approved with noted changes.

Agenda item 4: Greetings from Congressman Hamburg.

(Cinda Caine-Cornell): We will soon have an office in Crescent City. I've discussed the restoration program with various Task Force members. I'm here to tell you that Congressman Hamburg is interested and committed to be actively involved. As soon as we have a phone and office, I'll contact you. I intend to keep Mr. Hamburg informed on this program.

Greetings from Congressman DeFazio:

(Jana Doerr): I've been working for the congressman for 5 years. I went to the Salmon Conference in Newport, Oregon, and will play a key role in keeping the Oregon delegation informed on these issues. We now have Elizabeth Furse from the first Congressional district on Merchant Marine Committee. There is also representation on that committee from Washington State. With this new representation, I think that we will now get some recognition on the Federal level. The congressman is very interested in the upper basin issues, and

participating in ongoing dialogue. I would like to be briefed on the upper basin issues by a member of the Task Force. (Wilkinson volunteered.)

Agenda item 2: Approval of minutes from June 15-17, 1992 meeting.

Adoption of June minutes were tabled at the November, 1992, meeting to allow Mitch Farro to provide a re-write of his motion to form a committee to assess hatchery/wild stock interaction. Agenda item tabled until 2/4/93 to allow Faro to rewrite the motion and provide to the note keeper.

Agenda item 3: Approval of minutes from November 4-5, 1992 meeting.

Motion carried to approve minutes as amended by Rod McInnis.

Agenda item 5: Update on Clinton administration appointments.

Iverson indicated that Mr. Babbit is the new Secretary of Interior. Many Interior officials remain in place on 60 day appointments, including Assistant Secretary for Indian Affairs Eddie Brown, Director of the Fish and Wildlife Service John Turner, and the commissioner of the Bureau of Reclamation.

Jack West indicated that the new Secretary of Agriculture, Congressman Espie (Mississippi), will focus on programs that promote rural economic development.

Rod McInnis said that Ronald Brown is now the Secretary of Commerce. Brown's background is as chair of the democratic party and is trained as an attorney.

(Doerr): You may see consolidation of resource management agencies in many states and the Federal Government because of changing mandates for managing resources.

Agenda item 6: Report on HR429, CVP Reform Act.

Bingham stated that the Central Valley Project (CVP) reform bill passed and is now referred to as PL 102-575, Title 34. The Governor of California opposed this legislation. The bill makes sweeping changes in the management of the CVP to protect fish and wildlife of the central valley. The primary impact on the Klamath/Trinity basin is that the bill requires a minimum release of 340,000 acre-feet per year into the Trinity River from Trinity Reservoir.

Agenda item 7: Tabled until 2/4/93.

Agenda item (new): Report on the High Seas Driftnet legislation.

Rod McInnis said that PL 102-582 known as the Driftnet Fisheries Enforcement Act implements the UN Resolutions imposing a moratorium on large-scale high seas driftnets after 12/31/92. The Act allows the President to embargo any import from a nation which violates this law. Individual vessels that violate the Act will be denied port privileges in the U.S. Major driftnet nations have already banned this activity.

Agenda item 8: Report from the Stock Identification Committee Chair.

Dr. Barnhart reported the draft findings on the committee's investigations on Klamath River salmonid stocks. He indicated that the committee determined to apply the terms "breeding population" and "metapopulation" rather than "stock." Dr. Barnhart displayed a map of rivers in the Klamath Basin and explained the metapopulations identified within the Basin. He emphasized that any one breeding population is very important and may contain unique genetic characteristics. Dr. Barnhart displayed charts depicting various run timing for proposed metapopulations. He also displayed a genetic dendogram by Gall, 1989. Dr. Barnhart then described the metapopulations identified for the basin. Discussion ensued whether the Shasta River fall chinook should be included in a metapopulation with Iron Gate Hatchery Stocks. Some Task Force opposition was expressed because of unique behavioral traits of Shasta River fall chinook and also because Iron Gate Hatchery stocks are artificially propagated and are not a self-sustaining population. Other concerns were expressed about including all lower Klamath River tributary fall chinook populations into one metapopulation. Blue Creek stocks were noted as being unique. One Task Force member recommended further work on steelhead.

**\*\*\* Motion \*\*\***

(Reynolds): I advocate continued refinement on this document by the committee. I move that we thank the committee for their effort without necessarily endorsing the findings.

Motion carried.

**\*\*\* Action \*\*\***

KRFRO staff will prepare a letter thanking Dr. Barnhart for his efforts. The Task Force will keep in mind that the objective was to possibly amend the list of stocks contained in the long range plan in order to further the restoration program.

Agenda item 2: Approval of minutes from June 15-17, 1992, meeting.

(Farro): In the summarized version of the minutes my motion specified that we were to look at hatchery operations. In fact, the long version of the minutes indicated that we were to look at hatchery fish/wild fish interactions. The motion was not intended to have the committee review hatchery operations.

Motion carried to accept the June, 1992, minutes.

Agenda item 10: Public comment period.

Tom Davis, Mayor of Brookings, (accompanied by Terry Hanson).. We would like to present a cake to the Task Force and invite you to come back.

Joe Christian: I've lived in Brookings 11 years and have been a commercial fisherman for 10 years. The Pacific Fisheries Management Council's (PFMC)

activities have destroyed fishing for our communities. The PFMC said they were working to restore stocks but that hasn't occurred yet. The PFMC wanted our comments and we said we wanted to fish. The PFMC said no there were no fish to be had but fish were there in record numbers in the mid-80's. The Chetco River was brought back. You should get fish back in the other systems too. Our communities have been impacted severely.

Agenda item 9: Report from Technical Work Group Chair on development of FY1994 Request For Proposals.

Jack West explained that the draft RFP was developed by Technical Work Group (TWG) committee. He described the differences from the FY1993 RFP which were: 1) the flow chart contained in last year's RFP is omitted, 2) inclusion of a table (page T-1) of priority objectives by subbasin, 3) inclusion of Appendix 2, (page A2-1) ranking criteria that will be used by the TWG to evaluate and rank proposals, 4) inclusion of project summary and budget work sheets as used by CDFG, and 5) inclusion of some language of the Klamath Act as Appendix 6.

Task Force discussion ensued about how NEPA and CEQA was being met by the Klamath River Restoration Program. Doug Alcorn explained that the USFWS has a 5-year programmatic permit for instream work, issued by the US Army Corps of Engineers. The USFWS also has a general permit for similar work, issued by the California State Lands Commission. Both of these permitting processes involved public notice, comment review, and development of environmental assessments thereby fulfilling the NEPA and CEQA requirements on this issue. A clause contained in each permit is that the USFWS notify the interested agencies each year of the federal annual work plan prior to initiation of any instream work. Chip Bruss pointed out that the Bureau of Reclamation has a programmatic EIS for the Trinity River program and is doing pilot programs under categorical exclusion. Jack West recommended that an environmental document be prepared for fish rearing projects funded by the restoration program.

Ron Iverson pointed out inconsistencies in naming three sets of goals and objectives, specifically those contained in the long range plan; those of the CH2MHILL report, as summarized in the Klamath Act; and those in the matrix of objectives by the TWG in Table 1. Iverson pointed out that this problem is not an RFP problem but a need for the Task Force to identify its objectives. He also pointed out that of the three sets of objectives only the long range plan has gone out for public comment.

The Task Force deferred action until 2/4/93.

Agenda item 11: Discussion of KRFRRO's role in preparing proposals for additional funding.

Ron Iverson explained that KRFRRO staff had developed funding proposals in the past that were intended to achieve long range policies not being addressed regularly by the proposers. As an example, the educational workshops for FY1993 were to fill a gap where no proposer had responded to the needs identified in the plan. Iverson also said that proposals were developed by

staff for additional funding in response to Task Force directives for additional work. Discussion ensued about the way the annual RFP failed to identify critical needs on the river and that there should be a way to contract work out to target groups.

Agenda item 12: Tabled until 2/4/93.

Agenda item 13: Task Force decision on the adequacy of the FY1994 Request For Proposals.

\*\*\* Motion \*\*\*

(Iverson): I move to accept the FY1994 RFP as developed, with the understanding that a strawman proposal using the enclosed format will be provided to KRFR0 and provided to proposers as an attachment.

Motion carried.

\*\*\* Action \*\*\*

CDFG or the TWG-RFP committee will provide a strawman proposal for inclusion in the RFP for FY1994.

\*\*\* Motion \*\*\*

(Lara): I move that we look into changing this present cyclical RFP system.

(Reynolds): I suggest that this issue be put on the agenda for next meeting.

Motion carried.

\*\*\* Action \*\*\*

Place review/discussion of the RFP on March 30-31, 1993 meeting.

Agenda item 14: Task Force policy for KRFR0 staff role in proposal preparation and submittal.

Bob Rohde stated that it would be appropriate for staff to come to the Task Force and identify critical needs, state that they don't see any other way to accomplish specific objectives or directives and get permission from the Task Force to submit proposals. Discussion ensued about the education workshops to be funded out of KRFR0's FY1993 budget, and the point was made clear that the workshops were to be funded based on the recommendation by the budget subcommittee. The committee also suggested that KRFR0 be allowed to continue developing proposals but with the understanding that work would be contracted out.

\*\*\* Motion \*\*\*

(Orcutt): Based on the recommendation from the subcommittee, I move to allow KRFRO to develop proposals for work but for others to do the work under contract.

Motion carried.

Agenda item 15: Discussion of newsletter objectives -- to report the status of the restoration program or to sway public opinion.

Iverson pointed out that the USFWS cannot advocate special interest positions in the newsletter. All Task Force members agreed that the newsletter should be to report factual information and not attempt to sway public opinion. Iverson also stated that the two Department of Interior representatives, Bill Shake and Lisle Reed, agreed that the newsletter could have opposing viewpoints expressed side-by-side. He also pointed out that Bob Rohde's article is the only one received at KRFRO to date.

Agenda item 16: Report from KRFRO on investigation of financial compensation for services provided by TWG members.

Ron Iverson reported that Federal rules (CFR) for implementing the Federal Advisory Committee Act (FACA) contain provisions for financially compensating advisory committee members for services. Iverson said that the mechanism for this is to write a blanket purchase order with a funding ceiling. He also pointed out that the Department of Interior takes the position that their advisory committee members should not be compensated. Interior's stance is that it is an honor to serve on these committees. Someone recommended funding these services through the State, and considering this expense as part of the non-Federal match required in the Klamath Act.

Agenda item 17: Discussion of local Fish and Game Commissions -- their role in the restoration program.

Gary De Salvatore presented the idea of working jointly with County Fish and Game Commissions to further the Klamath River Fishery Restoration Program. De Salvatore indicated that these commissions could, in some cases, provide funding for restoration and education projects. De Salvatore recommended that County Fish and Game Commissions collaborate with local advisory groups such as Resource Conservation Districts and Coordinated Resource Management Planning groups to assist the Task Force in implementing this restoration program. KRFRO staff was asked to provide information on CRMPs to the commissions inside the basin.

**\*\*\* Action \*\*\***

KRFRO will provide information to County Fish and Game Commissions on the established subbasin planning groups.

Agenda item 18: Public comment period.

Jim Welter, KMZ fishery coalition: See Attachment 2.

Lyle Timm: Ocean fisherman. Thank you for coming, we're going to put into practice what Jim Welter recommends.

Ann Ramp: We're concerned about fish up and down this coast. Every town is suffering terribly from lack of fish and fishing. We are all aware that your job is a 20 year job and you get only \$1 million per year. You are the problem solvers. Without you solving problems they won't be solved. 20 years is a long time, too long. If you can educate the public in a shorter time you would help us all.

Agenda item 19: Task Force recommendation on the role of the quarterly newsletter.

\*\*\* Motion \*\*\*

(Lara): I move to add an editorial guest column to the newsletter.

(Bingham): With the proviso that opposing viewpoints be provided.

Motion carried.

\*\*\* Action \*\*\*

KRFRO will include guest columns with opposing viewpoints into the newsletter.

Agenda item 20: Task Force recommendation on financial compensation for TWG or committee members.

Mitch Farro volunteered to pursue getting compensation for folks contributing their time. Bingham suggested that KRFRO staff explore whether the Department of Interior would view more favorably compensating a technical support workgroup for services rendered.

\*\*\* Action \*\*\*

KRFRO to investigate whether financial compensation for TWG services would be acceptable by Department of Interior. Report will be given at next Task Force meeting.

Agenda item 21: Task Force recommendation on involving County Fish and Game Commissions.

Keith Wilkinson suggested that the Siskiyou County Task Force representative participate in Fish and Game Commission meetings and report back regularly to the Task Force. Mike Orcutt suggested drafting a letter back to the Siskiyou County Fish and Game Commission acknowledging their efforts to contact the Task Force. Ron Iverson suggested identifying the Siskiyou and Humboldt County Fish and Game Commissions as potential funding sources for restoration work. Kent Bulfinch volunteered to participate in commission and CRMP meetings as a Task Force representative.

Jack West's motion carried, to have KRFRO staff annually send the ranked list of proposals to respective County Fish and Game Commissions for funding consideration.

Agenda item 22: Task Force discussion and appointment of a representative to the Shasta Valley Coordinated Resource Management Planning board.

Nat Bingham, acting as chair, appointed Kent Bulfinch to be a representative on the Shasta Valley CRMP.

Meeting adjourned for the day.

February 4, 1993

Agenda item 7 (tabled from Feb. 3): Report from ad hoc committee to develop recommendations for target employment group incentive points.

Jack West reported that the ad hoc committee working on this issue decided to include as a proposal ranking criterion, "employment of target groups." Ronnie Pierce suggested the following changes in the FY1994 RFP: 1) on page A2-1, on the line "Contribution to Restoration Program goals and policies" -- change the weighted points from 25 down to 20, 2) on line "Scientific validity, technical quality, development of new concepts of information" -- change weighted points from 25 down to 20, 3) add new line item "Employment of Target Groups" -- with weighted points at 10, 4) on page A1-2, under item 11 - delete first paragraph and replace it with "The Klamath Restoration Act states 'To the extent practicable, any restoration work performed under paragraph (2)(B) shall be performed by unemployed - Commercial Fishermen, Indians, and other persons whose livelihood depends upon Area fishery resources.' In the Ranking process, if a proposer can demonstrate they have complied with this section of the Act, the proposal will receive 10 points (see page A2-1). If you will be employing targeted groups, please explain how you will guarantee their employment during implementation of your project."

\*\*\* Motion \*\*\*

(Lara): I move to make the changes in the FY1994 RFP, as suggested by Ronnie.

Discussion ensued on the point of whether a proposer would get the full complement of points (10) for this criterion, or get varying scores. Walt Lara agreed, after much discussion, to allow a change to the recommended language to include the phrase "will receive up to 10 points" rather than "will receive 10 points." Bob Franklin stated that he couldn't support the motion as modified until consulting with Mike Orcutt, who had left the meeting earlier because of other commitments. The Task Force agreed to table the motion until Bob Franklin could consult with Mike Orcutt.

Agenda item 23: Comment by Klamath Forest Alliance on new State Board of Forestry forest practice rules.

Felice Pace told the Task Force that the new State Board of Forestry timber harvest rules give the appearance of reform but that they were made less

protective in the process of development. Specifically, the sensitive watershed rule has made identifying and designating watersheds as "sensitive" a long and cumbersome process, leaving the burden of proof on the proposer. The stream zone protection rule is also thought to be inadequate to protect these areas from timber harvest impacts. Pace suggested that the Task Force, in developing a recommendation to protect valuable streamside zones, should consider some of the past research that indicates these areas do not heal rapidly and that these areas must be protected. Pace also recommended that the Task Force consider establishing refugia. Pace's final recommendation was that the Task Force should review the existing State Board of Forestry rules and determine if they are adequate to allow the Task Force to achieve its goal of fish restoration.

Agenda item 24: Report from TWG chair on development of recommended streamside protection measures for timber harvesting activities.

Jack West provided a summary of comments provided to him by other Technical Work Group members. West said he tried to compare how well existing administrative rules by various timber management agencies address common attributes of stream protection. Others contributing to this report were Bob Rohde, Curt Ihle, Bob Franklin, and Jud Ellinwood. West said the TWG believes there needs to be consistency in these rules, cumulative effects analysis must be applied consistently across ownerships, and existing conditions must be determined and followed by quantifiable surveillance to determine change. West stated that these recommendations could be far reaching and that there is a danger in blanket application of standard protection measures such as a same size riparian buffer zone for all areas. He said there is a real need for on-the-ground involvement by biologists, hydrologists, etc. to determine specific needs. He warned that meeting standard protection requirements wouldn't guarantee streamside protection. West recommended that the Scott River Watershed CRMP be asked to develop a recommendation for desired future conditions for riparian areas in that subbasin. He also recommended that the CRMP be asked to demonstrate sustainability of resource use in that basin and to propose alternatives for ways to adequately involve the public and professional disciplines in watershed management planning. West emphasized that blanket regulations would be opposed by resource users and that CRMP groups could foster ownership of their own recommended strategies to protect the streams. He stressed that cooperation would yield the greatest benefit.

Agenda item 25: Public comment period.

(Jerry LaRue, former employee of U.S. Geological Survey): I have concerns regarding your discussion on the previous agenda item. In the THP process the preharvest inspection is done by committee. There are many professionals involved and they all have the opportunity for on the ground inspections. This group will inspect an area make recommendations if necessary. What I have found at the end of a timber harvest project is that the only person who makes the final inspection is the registered professional forester (RPF). The final inspection is sometimes arbitrary. Sediment may be being increased by some protection measures. Road obliteration is not cost effective and contributes to increased sediment in some cases. Blanket regulations are not the answer. These RPFs are well educated and can determine when these things

are not right. Better understanding of hydrology is needed to develop protection measures. Agriculture, in my opinion, contributes much more sediment than private forestry. Bureaucracy must work quicker to protect streams.

(Jim Ostrowsky, RPF for Sierra Pacific Industries): I'm also on the Board of Directors for the California Licensed Foresters Association. Concerning this morning's presentation, first of all the State Board of Forestry's forest practice rules are an evolving process. Stream protection has always been a major component of the rules. People's views of these issues have changed over time. One of Jack West's recommendations was not to have blanket standards but to have minimum standards allowing an RPF to make protection recommendations. I recommend, Jack, that you get a copy of the forest practice rules for review. The RPF is the person that develops the harvest plan and works with other agencies to develop additional mitigation measures. The final inspector is a representative of the State Board of Forestry who is an RPF. Final inspection is not performed by an industry representative. CDFG is also notified when a timber harvest is complete and they are allowed to inspect the sale area. I encourage you to look into this process and make recommendations. We would be willing to work with you in reviewing these rules. Many things were said here today but I hope you realize that RPFs are concerned about fisheries and protecting the forest. It's not a case where we go out and do whatever we want.

(Rich Dragseth, Fruit Growers Supply Co.): RPF's are accountable for what they do. Under the licensing act every forester is held accountable. Anyone can file a complaint against an RPF. Charges can be pressed for violation of forest practice rules. Industry is not represented on the Task Force but I'm encouraged by the comments supporting cooperation rather than regulation. Presently, preharvest inspection is allowed but would be expensive for each THP. CDFG contributed to the streamside protection rules that the State Board of Forestry adopted. I would be willing to get together with Jim Ostrowsky and Jack West to develop a protocol for interaction between industry and the Task Force. Regarding minimum canopy closure, this is a minimum requirement and in many cases we allow more than 50%. The other thing you must be aware of is that we have cumulative effects that we must consider. Regarding road closures, we cannot clearcut a large area then close the road and stay out of a watershed. We therefore must keep the roads open continually. Larger clearcuts would allow putting roads to bed for a longer period of time.

(Felice Pace): I wish to make specific comments on Jack's report. On the first page of Jack's report under desired future condition and management standards I see the word "maintained" about 5 times. I suggest using the phrase "maintain or restore." In terms of streamflows, I think the TWG should consider summer flows as a critical issue, clarification on Number 3 may be needed. I also acknowledge Jack's comments on the identification of refugia on KNF. I agree that a committee of RPFs with the TWG might be beneficial. The impression from this report is the USFS is stating "we have arrived" but I don't agree. Specifically the report from the gang of four suggests leaving roadless areas alone. They are roadless because they are geologically unstable. The Hoopa Valley Tribe protection measures appear to be aware of upslope processes. I encourage the Task Force to continue this work. You

have suggested blanket standards across ownerships. I don't think it's appropriate because some landowners cannot do the entire job such as establishing refugia.

(Andy Colona, Energy Resource Advocates): Regarding cumulative impacts, I'm sure that most of you already know that habitat is not only the place where animals live but it is also where we live. We've lost that relationship. Native people knew that. (Showed large photo of pre- and post-timber impacts in lower Klamath River Basin.) There is a geometric effect from each large disturbance in regard to cumulative effects. In 1982 the EPA and State Board of Forestry got together to develop standards but they were not adopted because they would impede logging practices. Many studies of timber harvest impacts on stream ecosystems are now being initiated. We don't need to study the same thing over again. The time and opportunity is upon us to act now. The Klamath River watershed is a mess and can only get worse. This Task Force cannot wait for other bureaucracies to act. I came to plead with you to do something. Fish stocks are being lost warm water species are becoming dominant. (Mr. Colona read Section 4516.5 from California Forest Practice Act.)

Agenda item 26: Task Force recommendation on streamside protection measures developed by the TWG.

Bob Franklin moved to assign the TWG to review materials (forest management plans and other appropriate documents) to establish a list of areas believed to contain the last refuges for "critical fish populations." This list is to be returned to the Task Force with a recommendation on what attributes should be considered in monitoring change or performance for protection. Jack West said that the interpretation of "critical fish populations" would have to be more specific for the TWG to know what to do. Bob Rohde suggested that the TWG members present meet over lunch to develop a more clear motion. The Task Force agreed to table the motion until later that day.

Agenda item 29: Report on the Trinity River mainstem fish habitat improvement plan.

Chuck Lane described the three major issues facing the Trinity River Restoration Program. Lane said that these issues are: 1) flow, 2) sediment reduction, 3) and channel reconfiguration. Lane said that the flows were to be improved via passage of HR-429. He stated that the sedimentation issue is also being resolved partially in the Grass Valley Creek (GVC) watershed by acquisition of 17,000 acres of land. He said there is an extensive on-the-ground effort to survey and reduce erosion in that watershed. Lane also said they were preparing to excavate side channels and initiate bank feathering projects to increase fish rearing habitat. Lane announced that an Environmental Impact Statement on this restoration project was out for public comment at that time.

Continuation of agenda item 7: Report from ad hoc committee to develop recommendations for target employment group incentive points.

Bob Franklin stated that, after consulting with Mike Orcutt, the motion as worded "will receive up to 10 points" was unacceptable to the Hoopa Valley Tribe. The motion failed. Ronnie Pierce made an alternative motion for the language of the RFP to read "employment of target groups will receive 10 points." Discussion ensued about inconsistencies in the text of the RFP and a table listing the ranking criteria and the weighted points. The motion failed. The Task Force agreed to table discussion on the agenda item until later that day.

Agenda item 26 (continued): Task Force recommendation on streamside protection measures developed by the TWG

Jack West reported that the TWG members who met earlier that day agreed to the following motion: "The TWG will identify remaining high quality watersheds which provide critical habitat for native anadromous fish stocks identified in the plan. KRFRO staff, with TWG assistance, will prepare Task Force correspondence to major landowners and land management agencies which states the pertinent goals (specific to watershed management) of the long range plan and requests cooperation in meeting those goals. Correspondence will also request a 6 month schedule of planned activities in critical watersheds. The motion carried.

**\*\*\* Action \*\*\***

The TWG will meet to discuss this assignment, develop a workplan schedule, and report back on how/when this is going to be accomplished, at the March, 1993, Task Force meeting.

Agenda item 28: discussion of revised draft annual status report for Fiscal Year 1992.

Doug Alcorn restated the instructions given at the November Task Force meeting for revising the annual accomplishments report. The instructions were to: 1) included a discussion of harvest management efforts by the KFMC, NMFS, and the PFMC, 2) include as a critical need "better coordination between the KFMC and the Task Force to ensure adequate levels of escapement each year, and 3) to ensure that critical needs identified in the report were consistent with the list of high priority objectives developed by the TWG. Alcorn said that KRFRO proposes to draft a description of harvest management activities and allow the KFMC to review it for accuracy. The new information would be included in the report as an addendum. Alcorn said the second item for revision was written into discussion as a critical need on page 9, paragraph 4.7. The third revision, after checking with the list of high priority objectives developed by the TWG, involved removal of a critical need that identified "studying the feasibility of opening access to lower tributaries of the Klamath River." Alcorn said that this critical need was removed because it was not emphasized as a critical need by the TWG. He pointed out that the TWG emphasized the need for correcting fish passage problems on the lower Klamath River subbasin, but that this was different than studying the feasibility as recommended in the long range plan.

Agenda item 27: Status of the upper basin amendment document.

Doug Alcorn reported that the upper basin amendment document, as revised and sent to the Task Force for review in August, 1992, was to be sent out for public review by February 15, 1993. Alcorn said that this report was to announce the availability of the document for comment and to let everyone know that this is also being announced in the Federal Register and local papers. He said the review period was to open February 15 and close April 16, 1993.

Agenda item 31: Report on the public meeting held on January 25, 1993, in Klamath Falls, to discuss the Klamath Fishery Restoration Program and the upper basin plan amendment.

Nat Bingham said that the meeting focused on the long range plan and the upper basin amendment. He said that the Task Force representatives kept comments focused on the process of upper basin plan development. They also used this meeting to announce that there would be a meeting in Klamath Falls in March to receive comment on the upper basin document. Bingham said that most comments dealt with up-river representation on the Task Force and also about the issue of when this representation would be allowed. Keith Wilkinson suggested that each Task Force member become familiar with the recovery plan given to them by the Upper Klamath River Basin Water Users Protection Association.

(Elwood Miller, Klamath Tribe): I would like to say the Klamath Tribe appreciates your coming up there. We will provide input to that new document. The plan that you received comes from irrigators and may differ from what we've proposed.

Agenda item 32: Report on Salmon River spring chinook broodstock capture and rearing project, followed by Task Force discussion of the FY1993 Hammel Creek chinook rearing project.

Jack West described the series of events that lead to the situation in which a chinook rearing project approved for funding in FY1993 would probably not be able to get broodstock. He pointed out that there was some effort to get a permit to trap Salmon River spring chinook for this project, but this was met with opposition from various entities. After an exhaustive description of these events, West moved to withdraw funding from this rearing project because of the opposition expressed, and to utilize the FY1993 funding for projects lower on the list. Felice Pace pointed out that the Klamath Forest Alliance was not completely opposed to the rearing projects but was suggesting that fish rearing projects in the Klamath Basin be assessed in an environmental document pursuant to NEPA and CEQA. Bob Rohde stated that the spring chinook was the primary subsistence fishery by indigenous people, and that these tribes were left out of the decision making process when all of this was being discussed. Ron Iverson said that he recalled a letter from CDFG Director Gibbons which stated that the committee to review hatchery operations would also look at supplementation in the Klamath Basin. Forrest Reynolds said the committee would look at this issue now that Mitch Farro's motion had been clarified. The motion carried.

\*\*\* Action \*\*\*

KRFRO will notify the operator of the Hammel Creek fish rearing facility that funds will not be obligated for the project in FY1993. Funds will be reprogrammed for other projects.

Agenda item 30: Report on 1992 Klamath River fall chinook escapement.

Forrest Reynolds said that the Klamath Basin fall chinook escapement goal of 35,000 natural spawners was not met for a third year in a row. He pointed out that the only encouraging thing was that on the Klamath River side there were a lot of grilse. Ronnie Pierce said that the Yurok Tribe believed the cover letter describing the megatable misrepresented the Indian harvest projection. She said that it was really 4,900 fish, so the actual harvest over the original estimate only totaled 600 fish.

Agenda item 36: Public comment.

(John Crawford, Klamath Basin Water Users Protective Association (KBWUPA): I'd like to comment on the process involving the upper basin amendment, on the ecosystem recovery plan, and on the media articles handed out here today. Regarding the articles, the notion that either farmers or fish go thirsty is not legitimate. Both will go thirsty if the drought continues neither will go thirsty if normal inflow occurs. I will provide a brief chronology of 1992 irrigation events: When we began realizing the magnitude of the drought we went to meet with George Thackeray and Doug Alcorn to discuss lower river flows. It was the first time we heard any numbers on the flow needs for fish. The fruits of those discussions were a 15,000 acre foot release. To put that in perspective, that equated to drying of 10,000 acres of Class B lands. I understand that the local fishing industry is in jeopardy. As a farmer in the basin, I can't talk to you about restoration until critical habitat has been established. During discussions last spring, the Oregon Natural Resources Council (ONRC) filed suit against the USFWS to require designation of critical habitat and development of a recovery plan. The KBWUPA intervened on behalf of the BOR. A little while after that, Bob Rohde came to a meeting to discuss flows in the mainstem Klamath. He stated that no one had contacted the farmers to discuss the needs of downstream fish. In september of 1992 many irrigation deliveries were stopped. 47,000 acre feet of water was also allowed into the wildlife refuges. Lands were allowed to dry up, in normal years they would be irrigated through November 15. We have questions as to the results of the spring and fall releases. What was the reaction by the salmon populations? Had we adhered to FERC minimums the lake at Link River would have gone dry sometime in August. If water is needed, when is the most prudent time to release water? We would appreciate scientific answers. Regarding the ecosystem recovery plan -- it is not a habitat conservation plan, but could be. It has the ability to replace and negate the need for the upper basin amendment, however it doesn't address reintroduction of anadromous fish in the upper basin. Each and every inference in the upper basin amendment to water quality and quantity is included in the ecosystem recovery plan. The question becomes how much time, effort, and money are we willing to spend to reach the same mutual goal. If projects to restore ecosystems are underway then it may preclude federal listing on the Endangered Species list. Task Force membership is another issue that must be mentioned. It seems more practicable to unite in the ecosystem restoration plan to address the restoration needs. Regarding temperature objectives for the mainstem Klamath this is a problem that none of us can fix. Off site storage would provide colder water. Marsh habitat restoration is recommended by the USFWS recovery plan. The cost of acquisition and restoration would be astronomical. The

USFWS recovery plan is a wish list that would cost hundreds of millions of dollars. Our plan recommends studies and pilot projects to prove if marsh restoration will work. I'm hopeful that the Task Force will study the plan, and when they come to Klamath Falls next month they'll be aware of this plan.

(Elwood Miller, Klamath Tribe): Since I was a young boy, we've talked about getting the salmon back. Today, it is my charge to restore salmon to the upper basin. We realize that the system up there is in poor condition, contrary to some of the comment you received at your public workshop last week. The Oregon Department of Environmental Quality (ODEQ) classified the Sprague River as a dead river in 1983 and according to a 1986 report by ODEQ, it has degraded since then. Ish Tishwek means place of the great fish. They've taken out some of the natural flow conditions. The system survived many thousands of years, and for people to say that things can't be put back in place the way they were, bothers me. The Klamath Tribe wants to be involved on the Task Force to get the fish back. The fish aren't gone to us, they're being blocked by dams. We realize that cleaning up the systems will take a long time. We realize that the Compact contains a clause for protecting tribal interests but the commission has never discussed that with the Klamath Tribe. We must all work together and understand one another. The Klamath Tribe is a strong advocate for restoration of the whole system. We don't put values on things the way non-indian people place value. In our sense the wood worm has cultural value which is equal in value with the salmon. I think this Task Force would behoove itself to set up a cultural awareness workshop and see what the cultural differences are. We will continue to participate with this Task Force.

Agenda item 7: (Continued).

Mitch Farro said that the committee was not entirely settled on the 0-10 point allowance or whether to give a weighting of points. Farro moved to adopt the RFP as corrected earlier that day, including: 1) reduction of the two specified criteria by 5 points each, 2) inclusion of a target group criterion, 3) the changed wording in item 11 of page A1-2, of how the points will be assigned, and 3) inclusion of the language of the Act. Bob Franklin asked if the motion include striking the word "weighted" and using the phrase "Maximum Points" on the column heading which described points for each criterion. Farro replied that his motion did include that change but did not include either phrase "will receive 10 points" or "will receive up to 10 points" in the narrative description. The motion carried.

\*\*\* Action \*\*\*

The FY1994 RFP, with changes indicated, will be forwarded to the USFWS-Portland fisheries and contracting offices for review.

Agenda item 33: Presentation on obtaining corporate funding for the Klamath Basin Fishery Restoration Program.

The Task Force agreed to defer this report until the next meeting.

Agenda item 34: Proposed Klamath River Instream Flow Study.

Ron Iverson said that the long range plan recognizes the need for better information on instream flow needs of the Shasta, Scott, and Klamath Rivers. He pointed out that the Secretary of Interior replied to a Task Force request for more flow at Iron Gate Dam by committing to get an instream flow study implemented. Iverson said that Bill Shake asked him to put together a proposal for an instream flow study. Iverson also said that the USFWS instream flow group drafted a proposal which was reviewed by BOR and Bob Rohde, and was forwarded to the regional office with the recommendation that it be conveyed to the BOR and that funding be set aside to carry it out. Iverson said the work called for in the current fiscal year involves a scoping task with preliminary design and field reconnaissance. Reynolds stated that other alternative instream flow techniques should be considered versus the IFIM, and that Dr. Bill Trush should be included in the scoping efforts. Leaf Hillman expressed his concern for how this study had been initiated and who was involved and who had been excluded from the initial conceptualizing phase. Nat Bingham asked KRFRO staff to convey the concerns expressed by Task Force members to Mr. Shake. Ron Iverson pointed out that this was still in concept only and that no money had been obligated for this work.

**\*\*\* Action \*\*\***

KRFRO staff will convey concerns expressed at this meeting to chairman Shake. Agenda item for March meeting -- a discussion of the scoping of issues for the proposed instream flow study by Interior. Specifically, who should be involved.

Agenda item 35: Report on Oregon Governor's Coastal Salmonids Restoration Initiative.

Keith Wilkinson reported that the thrust of the conference was to point out that problems were generally in the fresh water habitats. Wilkinson read from the Governor's invitation to the conference which included "we hope to receive the best thinking from diverse perspectives on how to protect and restore Oregon coastal salmon steelhead and cutthroat trout. Arriving at workable strategies is critical both to avoid listing under the Federal Endangered Species Act and to achieve sustainable fish populations. The conference perspective will be broad focusing on economic and social impacts on coastal communities as well as on salmonid restoration." Wilkinson said that information is still being collected and had not been disseminated by the Governor's staff.

Agenda item 37: Review of assignments, action items.

No discussion.

Agenda item 39: Set date for summer 1993 meeting.

Meeting date set for June 15-16, 1993. Meeting location tentatively set for the Eureka area (may depend on the outcome of the Klamath Falls meeting). Meeting adjourned.

List of attendees.

Name:

Representing:

R. L. Allen	Self
Roger A. Barnhart	USFWS-HSU Cooperative Education Extension
A. Behary	Self-Oregon troller
Judith R. Behary	Self-Oregon troller
Chip Bruss	U.S. Bureau of Reclamation
Bob Byrne	Self
Cinda Caine-Cornell	Congressman Hamburg
Joe Christian	Self
Russ Crabtree	Self
John Crawford	Klamath Basin Endangered Species Recovery Comm
Carol Davis	Oregon salmon fisherman
Gary De Salvatore	Siskiyou County Fish and Game Commission
Jana Doerr	Congressman DeFazio
Richard Dragseth	Fruit Growers Supply Company
Dan Ferreira	CCC
Rober Franklin	Hoopa Valley Tribe
Lucie Giampauli	LWVCC
Guy Haas	Curry Coastal Pilot
John Hayes	California Department of Fish and Game
Jean Kasser	Port of Brookings/Harbor Committee
Chuck Lane	USFWS-Trinity River FRO
Joy Lara	Self
Gerald LaRue	League of Voters
Gary Lewis	Port of Brookings Fisheries Committee
Walt Leattuse	Self
Irel D. Lowe	OSCF
Rocky McVay	Self
Elwood H. Miller	Klamath Tribe
Jim Ostrowski	Calif. Licensed Forester's Association
Felice Pace	Klamath Forest Alliance
David Peltier	Self
Cersee Ramp	Oregon South Coast Fishermen
Dick Schilz	Self
Fred Schutt	Port of Brookings/Harbor
Lyle T. Timm	Oregon South Coast Fishermen
Jim Waldvogel	Sea Grant Advisor
Jim Welter	Klamath Management Zone Coalition
Desma Williams	USBIA
Ron Wimberley	Self

FINAL AGENDA FOR THE MEETING OF THE  
KLAMATH RIVER BASIN FISHERIES TASK FORCE  
FEBRUARY 3-4, 1993, BROOKINGS, OREGON

February 3, 1993:

9:00 am Convene public meeting

1. Discussion/adoption of agenda.
2. Approval of minutes from June 15-17, 1992, meeting.
3. Approval of minutes from November 4-5, 1992, meeting.

9:15 Political/legislative update:

4. Greetings from Congressman Hamburg.
5. Update on Clinton administration appointments. (Shake, Holder, McInnis)
6. HR 427, CVP Reform Act. (Bingham)

10:00 7. Report from ad hoc committee to develop recommendations for target employment group incentive points. (Bingham)

10:45 Break

11:00 8. Report from the Stock Identification Committee Chair. (Barnhart)

11:30 9. Report from Technical Work Group Chair on development of FY1994 Request For Proposals. (West)

12:00 Lunch

1:00 10. Public comment period.

1:30 11. Discussion of KRFR's role in preparing proposals for additional funding.

2:00 12. Action: Task Force policy for target employment group incentive points.

13. Action: Task Force decision on the adequacy of the FY1994 Request For Proposals.

14. Action: Task Force policy for KRFR staff role in proposal preparation and submittal.

2:30 Break

2:45 15. Discussion of Newsletter objectives -- to report the status of the restoration program or to sway public opinion.

- 3:15 16. Report from Klamath River Fishery Resource Office (KRFRO) on investigation of financial compensation for services provided by Technical Work Group (TWG) members. (Iverson)
- 3:30 17. Discussion of local Fish and Game Commissions -- their role in the restoration program. (De Salvatore)
- 3:50 18. Public comment period.
- 4:20 19. Action: Task Force recommendation on the role of the quarterly newsletter.
20. Action: Task Force recommendation on financial compensation for Technical Work Group or committee members.
21. Action: Task Force recommendation on involving county fish and game commissions.
22. Action: Task Force discussion and appointment of a representative to the Shasta Valley Coordinated Resource Management Planning board.
- 5:00 Adjourn meeting for the day.

February 4, 1993

- 8:00 Reconvene meeting. Complete unfinished business from previous day, if necessary.
- 8:15 23. Comment by Klamath Forest Alliance on new State Board of Forestry forest practice rules, with special reference to rules for "Sensitive Watersheds" and "Water and Lake Protection Zones." (Pace)
- 8:45 24. Report from Technical Work Group Chair on development of recommended streamside protection measures for timber harvesting activities. (West)
- 9:30 Break.
- 9:45 25. Public comment on preceding agenda items.
- 10:00 26. Action: Task Force recommendation on streamside protection measures developed by the Technical Work Group.
- 10:15 27. Status of the upper basin amendment document. (Alcorn)
- 10:20 28. Discussion of revised draft annual status report for Fiscal Year 1992. (Alcorn)
- 10:30 29. Report on the Trinity River mainstem fish habitat improvement plan. (Stokely)

- 11:00 30. Report on 1992 Klamath River fall chinook escapement. (Reynolds)
- 11:20 31. Report on the public meeting held on January 25, 1993, in Klamath Falls, to discuss the Klamath Fishery Restoration Program and the upper basin plan amendment. (Shake)
- 12:00 Lunch
- 1:00 32. Report on Salmon River spring chinook broodstock capture and rearing project, followed by Task Force discussion of the FY1993 Hammel Creek chinook rearing project. (West)
- 1:50 33. Presentation on obtaining corporate funding for the Klamath Basin Fishery Restoration Program. (Iverson)
- 2:00 Break
- 2:15 New Business:
34. Proposed Klamath River Instream Flow Study. (Iverson)
35. Report on Oregon Governor's Coastal Salmonids Restoration Initiative. (Wilkinson)
- 3:15 36. Public comment period.
- 3:45 37. Review of assignments, action items.
38. Identification of future agenda items.
39. Set date for summer 1993 meeting.
- 4:15 Adjourn meeting.

# KMZ Fishery Coalition

ATTACHMENT # 2 letter

## KLAMATH BASIN RESTORATION TASK FORCE

YOUR RESTORATION PLAN POINTS OUT THE LACK OF SPANNING AND REARING HABITAT AVAILABLE FOR NATURAL WILD! PRODUCTION IN THE KLAMATH AND TRINITY BASIN.

I CERTIANLEY ACREE WITH DESPERATE NEED FOR RESTORING THE CANOPY AND RIPARIAN ,AS WELL AS DEEP POOL AND RIFFLE RATIO TO STREAM

THIS WILL BE THE KEY TO A SUCCESSFUL PROGRAM. THANKS TO THE HOOPA TRIBE FOR GETTING SOME WATER BACK. THE MAJOR INGREDIENT TO IT ALL.

HOWEVER HATCHERY PRODUCTION HAS BEEN THE MAIN TOOL USED TO INCREASE ABUNDANCE OF FISH,AS WITH EVERY HATCHERY PROGRAM,WHEN IT'S STOCK STARTS TO RECYCLE IT LOOSES AT'S PRODUCTIVE CAPABILITY.

I BELIEVE THIS NOW IS ONE OF THE MAJOR PROBLEMS, THE BIG RETURN FROM LOW SPANNER ESCAPEMENTS LOWHATCHERY PRODUCTION AND EXCELLENT WATER FLOW OF 82 THRU 84 . THAT RETURNED FROM 85 TO 88 WAS BEYOND A DOUBT HATCHERY DOMINATED.

RESULTING IN MORE DILUTEDON OF NATURAL STOCKS, AS WELL AS DIRECT COMPETITION FOR HABITAT. REMEMBER THE HABITAT HAD NOT HEALED FOR THIS TO HAPPEN !

THE SMALL RELEASE SIZE OF HATCHERY STOCKS, MAKES IT DIFFICULT TO SEPERATE THEM FROM NATURAL STOCK THRU SCALE ANATYSIS, YOU ARE NOW DOING.

WAS THIS A PART OF THE PROGRAM??

PLEASELOOK AT THE BALANCE THAT OCCURED IN SPANNER ESCAPEMENT, WATER FLOW, AND HATCHERY PRODUCTION, THAT CREATED THOSE GOOD RETURN YEARS --NOW COMPARE IT TO THE 1986 THRU 1989. WAS THAT A GOOD BALANCE ? SOME ONE MUST HAVE THOUGHT SO.

THESE ARE FACTORS THAT MAN HAS SOME CONTROL OVER, AND WHEN THEY ARE BALANCED EVEN DURING EXTREMELY DRY PERICDS, YOU CAN HAVE GOOD RESULTS ( 1992 RETURNS AND JACK COUNTS.

UNTILYOU CAN CONSISTANTLY PRODUCE QUALITY SMOLT,WITH A MINIMUM IMPACT ON NATURAL PRODUCTION, AND STILL GET TO SEA. DON'T BLAME OCEAN CONDITIONS

THIS APPLIES TO ALL OF THE LONGERS SYSTEMS SUFFERING FROM 6 TO 7 YEARS OF DROUGHT AND OVER PRODUCTION OF HATCHERY STOCK

I WOULD ALSO LIKE TO REMIND ALL OF YOU FISHERY MANAGERS THAT EVERY THING IN NATURE HAS A BALANCE AND LIMIT.. IS PUSHING THESE SYSTEMS TO THEIR LIMITS WISDOM?

I DON'T THINK SO



# United States Department of the Interior



FISH AND WILDLIFE SERVICE

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

February 18, 1993

Memorandum

TO: Task Force and Technical Work Group Members

FROM: Project Leader, Klamath River FRO  
Yreka, California

SUBJECT: Minutes from the February 3-4, 1993 Task Force meeting in  
Brookings

Attached, please find the minutes from the most recent Task Force meeting. We will prepare a summary of these minutes for distribution to our Interested Party mailing list. The summary version will not contain the attachments as provided in this package. A comprehensive minutes package will be provided to anyone upon request.

Ronald A. Iverson

Attachment

cc Jerry Grover

Minutes of the Meeting of the  
Klamath River Basin Fisheries Task Force  
Brookings, Oregon, February 3-4, 1993

February 3, 1993.

Members present: Mike Bryan (for George Thackeray), Kent Bulfinch, Don DeVol, Mitch Farro, Bob Rohde (for Leaf Hillman), Jack West (for Barbara Holder), Ron Iverson (for Bill Shake), Nat Bingham, Walt Lara Jr., Mike Orcutt, Forrest Reynolds, Keith Wilkinson. Absent: Tom Stokely, George Thackeray, Barbara Holder, Bill Shake.

Nat Bingham, acting-chair, announced that Tom Stokely is now the Trinity County representative on the Task Force. All Task Force members introduced themselves.

Agenda item 1: Discussion/adoption of agenda.

Changes to agenda (Attachment 1): 1) agenda item 7 (report from ad hoc committee) will be presented on 2/4/93, 2) agenda items 27 and 31 (upper basin amendment and public workshop report) to be discussed together on 2/4/93, 3) Rod McInnis volunteered to provide a report on high seas driftnet fishery legislation, 4) ensure that agenda item 34 is discussed.

(Rohde): I propose that the next meeting agenda have an appraisal of all projects that have been funded. I'd like to be able to see how well they've done, to give us some idea how to rate future project proposals.

(Bingham): OK, we do have KRFRRO's report which was available to the Task Force, but an evaluation report on the projects funded to date can be put on the agenda for the next meeting.

\*\*\* Action \*\*\*

Evaluation report on past projects will be placed on the agenda for the March 30-31, 1993 meeting.

(Bingham): I'll remind folks that KRFRRO can include agenda items with 30 day notice.

Agenda approved with noted changes.

(Bingham): I'd like to skip over the agenda item for adoption of previous meeting's minutes to allow Cinda Caine-Cornell, representing Congressman Dan Hamburg, to speak to us.

Agenda item 4: Greetings from Congressman Hamburg.

(Caine-Cornell): We will soon have an office in Crescent City. I've discussed the restoration program with various Task Force members. I'm here to tell you that Congressman Hamburg is interested and committed to be actively involved.

As soon as we have a phone and office, I'll contact you. I intend to keep Mr. Hamburg informed on this program.

(Orcutt): Is Mr. Hamburg on the Merchant Marine Committee?

a: Yes, and he is also very interested in the Klamath Restoration Program.

(Bingham): Will Hamburg open an office in Eureka?

a: Yes, on 5th and E, I think.

(Bingham): We hope that you'll be able to participate as much as possible.

(Caine-Cornell): I'll make every effort to attend meetings. Thank you.

(Bingham): I'd also like to welcome Janna Doer from Congressman DeFazio's office.

(Doerr): I've been working for the congressman for 5 years. I went to the Salmon Conference in Newport, Oregon, and will play a key role in keeping the Oregon delegation informed on these issues. We now have Elizabeth Furse from the first Congressional district on Merchant Marine Committee. There is also representation on that committee from Washington State. With this new representation, I think that we will now get some recognition on the Federal level. The congressman is very interested in the upper basin issues, and participating in ongoing dialogue. I would like to be briefed on the upper basin issues by a member of the Task Force. (Wilkinson volunteered.)

Agenda item 2: Approval of minutes from June 15-17, 1992 meeting.

Adoption of June minutes were tabled at the November, 1992, meeting to allow Mitch Farro to provide a re-write of his motion to form a committee to assess hatchery/wild stock interaction.

(Farro): My motion was to put together a group that would look at all available biological information to assess the interaction between hatchery and wild fish. It wasn't intended for the Task Force to take over the responsibility of managing mitigation hatcheries. I'll get with Doug Alcorn to get the motion wording right, and provide a re-written motion for the record.

**\*\*\* Action \*\*\***

Table approval of minutes to tomorrow. Mitch Farro will get with staff to modify the motion.

Agenda item 3: Approval of minutes from November 4-5, 1992 meeting.

(McInnis): I sent a note to KRFRO on the November minutes. The purpose of my note was to clear up inaccuracies in my definition of overfishing. I recommend that the minutes be amended as noted.

(Orcutt): Are we talking about the long version?

(McInnis): The language I'm referring to appears on page 14 of the long version. In addition to the overfishing definition, I made reference to the PFMC rather than the KFMC as written in the minutes.

(Orcutt): I was at the meeting, but not on the list of attendees. I would like the record to show that I was there.

Motion to approve minutes as amended carried.

Agenda item 5: Update on Clinton administration appointments.

(Iverson): Mr. Babbit is the new Secretary of Interior. I am not aware of appointments in Interior below that level. Mr. Babbit's philosophy toward resource management will probably be very different from his three predecessors. There are several Interior officials who remain in place on 60 day appointments, including Assistant Secretary for Indian Affairs Eddie Brown, Director of the Fish and Wildlife Service John Turner, and the commissioner of the Bureau of Reclamation.

(Bingham): Jack, anything on Department of Agriculture?

(West): The environment and natural resources will probably be low priority for the incoming administration of the Department of Agriculture. The new Secretary of Agriculture Congressman Espie (Mississippi) will focus on programs that promote rural economic development. President Clinton alluded to putting together a forestry summit to deal with the spotted owl issue. Vice President Gore may head it up. There is opposition from forest products industry for Gore to head it.

(Bingham): Members of our organization have requested representation from our industry on that summit issue.

(McInnis): Ronald Brown is now the Secretary of Commerce. His background is as chair of the democratic party and is trained as an attorney. There has been some changing of jobs in National Marine Fisheries Service (NMFS). Director Dr. Bill Fox has accepted a career job (from a political appointment). He will step down from the position of director to deputy director. His former deputy has moved to LaJolla. I still don't have a regional director in our region.

Q: With the reorganization of the new administration, there is a rumor that the U.S. Forest Service (USFS) and NMFS may be moved into interior. Any information on that rumor?

(West): This is viewed as a waste of time from USFS perspective.

(Doerr): I think this is what you're seeing in many states -- consolidation of resource management agencies, because of changing mandates for managing resources. I think the Federal Government is looking at this as well, but it would take legislation to do it.

Agenda item 6: Report on HR429, CVP Reform Act.

(Bingham): This legislation for Central Valley Project (CVP) reform passed, even though the Governor of California tried to stop it. Urban water users supported it. This legislation is now referred to as Public Law 102-575, Title 34, and was passed Oct 30, 1992. The major areas of change in the bill: 1) 800,000 acre feet of water will now be dedicated to fish and wildlife annually, 2) tiered water pricing will be applicable to new and renewed water contracts, 3) water transfer provisions which includes water sales to areas outside the CVP service area (this was a critical issue, allowing urban users to get on board and support the bill), 4) special efforts to restore anadromous fish populations by 2002, 5) restoration fund financed by water and power users for habitat improvement and land acquisition, 6) no new contracts until fish and wildlife restoration goals are achieved, 7) no contract renewals until completion of an environmental impact statement, 8) terms of contracts reduced from 40 to 25 years, with the renewal at the discretion of the Secretary of Interior, 9) installation of a temperature control device at Shasta Dam, 10) implementation of fish passage measures at Red Bluff diversion dam, 11) firm water supplies for central valley wildlife refuges, 12) development of a plan to increase the CVP yield, and 13) guarantee of minimum flows in the Trinity River. We're in the early stages of implementation, and an environmental assessment is in progress. Some elements of this bill may end up in court. This is a significant step forward for fish and wildlife.

(Franklin): In addition of allowing minimum flows, we have authorization for gravel placement in the Trinity River and there is language requiring minimum carryover storage in various CVP reservoirs.

(Orcutt): The State Water Board has taken a position on D-1630 which would give the State authority to prioritize use of the 800,000 acre feet in the Sacramento River system. Regarding transfer of CVP to the State, Roger Patterson said he'd be surprised if it occurred.

(Bingham): I'm a representative on the Governor's CVP transfer committee. There is a non-binding process for the transfer which was signed by the Secretary of Interior Lujan. It is not binding and a full environmental impact statement will have to be prepared prior to this occurring. California can't simply take it over. Passage of Congressional legislation would be necessary.

(Franklin): D-1630 involves the delta flows and water quality for fish and wildlife. There is language that allows for pulse flows.

(Reynolds): D-1630 is a draft. I think the Department of Fish and Game (CDFG) has real problems with it. On the face it looks good. We're talking about \$10-60 million per year for restoration/protection. Water can be sold on an annual basis with a fee schedule. However, it allows reverse flows in the delta which the Inland Fisheries division believes will create a significant problem for anadromous fish. EPA doesn't have much use for the draft either, and they will impose EPA standards under the Porter Cologne Act. If the State system doesn't work to protect water quality then EPA will intervene. On HR-429, CDFG has formed an interim committee to address our commitments for

restoration. The bill also contains many rules that will impact fish and wildlife which the department must remain aware of. This is a landmark bill but it doesn't mean restoration will happen. It will take a continuing effort by all involved.

(Bruss): HR-429 is open to interpretation in many areas. The U.S. Bureau of Reclamation's position is that we're working toward implementation even though interpretation of the bill hasn't been provided. Lead agencies haven't really been identified. We're breaking tasks down as to which agency will take the lead. One of the purposes of Title 34 is to protect, restore, and enhance fish and wildlife habitat (Attachment 2). The Bureau has the authority now to implement these things.

Agenda item 7: Tabled until 2/4/93.

Agenda item (new): Report on the High Seas Driftnet legislation.

(McInnis): On November 2, 1992, the President signed Public Law 102-582 known as the Driftnet Fisheries Enforcement Act. This Act implements the UN Resolutions imposing a moratorium on large-scale high seas driftnets after 12/31/92. Sanctions against nations fishing after that date will result in prohibition of importation of fish and fish products and sport fishing equipment from that nation. In addition, if that nation hasn't fixed the problem the Secretary of Commerce can certify that the nation is in violation of the Fisherman's Protective Act. It will allow the President to embargo any import from that nation. Individual vessels that violate the Act will be denied port privileges in the U.S. Major driftnet nations have already banned this activity.

Q: Many commercial vessels are registered in Liberia. Is there a way for some of these vessels being registered under a different flag to continue fishing?

(McInnis): There is a move afoot among the major fishing nations to limit the transfer of these vessels from one flag to another, for the purpose of avoiding these constraints.

(Orcutt): There was a legal net fishery for squid. How will they catch those now? And what about impacts of private fishing vessels?

(McInnis): The main fisheries affected by this were drift gillnet fisheries for squid in the North Pacific and the albacore fishery in the South Pacific. Squid fisheries were constrained by longitude and latitude to avoid impacting anadromous fish. This was relatively successful however there were some anadromous fish caught. This will make it more difficult for private vessels to exist. The U.S. Coast Guard identified 22 illegal Japanese vessels. These vessels have been restricted to port and the captains have been imprisoned.

Q: Do we have a legal squid fishery in the North Pacific now?

(McInnis): There is no legal large scale (over 1.5 mile net) squid fishery on the high seas of the North Pacific. These nations can still fish in their own zones.

Q: So we have small scale?

(McInnis): We have a small scale fishery in our own economic fishing zone. To answer the question regarding alternative harvest techniques for the squid fishery; a jig fishery may replace the net fishery.

Q: Is there a directed gillnet fishery on Albacore?

(McInnis): Not that I'm aware of.

(Rohde): There was an effort to put beacons on boats to track them by satellite.

(McInnis): I don't recall that these vessels were tracked as a blanket. We have a long-line fishery tracking program which may be imposed on U.S. vessels around the Hawaiian Islands.

Agenda item 8: Report from the Stock Identification Committee Chair.  
(Attachment 3.)

(Barnhart): Our committee was asked to look at the list of fish stocks contained in the Klamath River Task Force's long range plan. We were asked to study the rationale used for selecting those stocks and to update any information on those stocks. We had a problem of defining the term "stock." We therefore applied the terms "breeding population" and "metapopulation." (See Attachment 3 for more detail on this report.) (Dr. Barnhart displayed a map of rivers in the Klamath Basin and explained the metapopulations identified within the Basin.) I want to emphasize that any one breeding population is very important and may contain unique genetic characteristics. [Dr. Barnhart displayed charts depicting various run timing for proposed metapopulations. He also displayed a genetic dendogram by Gall, 1989. Dr. Barnhart then described the metapopulations identified in Attachment 3.] We've discussed whether the Shasta River fall chinook is a separate metapopulation but then this metapopulation would only include one breeding population. [By definition, a metapopulation consists of a group of subpopulations.] We're working with the best available information and this report is not cast in stone. We recommend that this Task Force and the Klamath Fishery Management Council (KFMC) consider the importance of breeding populations.

Q: How do you classify Blue Creek stocks of fall chinook?

(Barnhart): That population is sort of an anomaly. It's genetically distinct but we're not sure we can identify it as a metapopulation.

(Lara): I'd like to see more information included in the report on populations from Blue Creek, downstream. Your determination of a single metapopulation for the lower tributaries may need refinement. You might want to talk with the California Conservation Corps and USFWS about some information on these stocks. This information seems to have been looked over.

(Bulfinch): Regarding the Shasta River fall chinook; lumping the Iron Gate Hatchery (IGH) stock with the wild stock of the Shasta River seems to be inclusive. You also suggested that a Shasta River metapopulation would contain only one breeding population. That's not true because there seem to be type I and type II breeding stocks which are separated geographically in the upper and lower portions of the river. The Little Shasta River and Yreka Creek also have periodic spawning activity. In the early 1980's Shasta River stocks were used for brood stock at IGH which would allow for the genetic similarities between these two stocks.

(Barnhart): The geographic proximity of these populations was considered however many of the IGH stocks probably were not geographically proximate prior to construction of Iron Gate Dam. Historically they weren't that close but some straying of IGH stocks into the Shasta River does occur.

Q: How extensive is the information on straying of Klamath River fish? Is the State's database inclusive for other river systems?

(Reynolds): We get CWT returns from various locations and all of this return information goes into the database.

Q: Did the committee consider that IGH stocks were used in the mid-Klamath River tributary fish rearing programs?

(Barnhart): Yes. Some folks say that the entire drainage should be considered one metapopulation for reasons such as this.

(West): To put this in perspective, there are lumpers and splitters. Gall is a lumper. He would probably put the entire Klamath River and Trinity River system into one metapopulation or maybe into one breeding population. Straying is not necessarily bad, it is an adaptive mechanism for selecting proper genetic makeup. It's important to keep this in proper context geographically and temporally. We're talking about maintaining genetic integrity and populations over long term.

Q: What did the committee use to separate the two populations of spring chinook?

(Barnhart): Primarily geographic location; one metapopulation in the Klamath River and other in the Trinity River.

Q: Is this your final report or do you intend to continue deliberations?

(Barnhart): This is our final report unless told otherwise.

(Orcutt): I generally agree with these findings on chinook stocks but the information on steelhead appears to be incomplete. It's weighted heavily toward spring run steelhead and contains little information on fall or winter run fish. A general assessment of the steelhead population in the Trinity River is needed.

(Barnhart): The committee did spend a lot of time on the chinook stocks and you are right, more data is needed on these other populations.

(Iverson): I suggest that the committee prepare this paper for publication for use in making decisions regarding listing of anadromous stocks identified by the Nehlson/Lichatowich paper.

(Barnhart): The Humboldt chapter of the American Fisheries Society (AFS) is going to publish a paper which identifies various stocks.

(Farro): I commend the committee for a job well done. I view this as a snapshot of where we are now. Over time I think fine tuning will improve it but it's a good piece of work and will provide a road map for us. I too would like to see it disseminated. Is a motion in order to have staff send this out?

(Iverson): We can do it but would defer to the committee. My thought is that a paper should be given at an AFS meeting.

(Barnhart): The Cal-Neva AFS meets in July, and the National AFS meets later this year. A formal paper could be developed for those meetings.

(Bulfinch): One precedent established in this paper is that the IGH stock is considered a breeding stock when, in fact, it is not because it is an artificially propagated stock. I think the hatchery stock should be removed from this list as a breeding stock.

Q: Roger, when would the committee need to have feedback from the Task Force on giving the paper to the AFS?

(Barnhart): I'll have to contact the program chairman right away to see if space on the agenda is available.

(Orcutt): I would like to note that there are other non-salmonid anadromous stocks such as green sturgeon that need work too. I recommend that the committee try to include information on that species.

(Bingham): I remind the Task Force that the original purpose was for the committee to validate the list contained in the long range plan.

(Franklin): An implication of using metapopulations as identified in this paper is that individual breeding populations are expendable. Many decisions may be made on these identified groups. There must be a folding-in of views of the various scientific groups and the various lists developed. I recommend that an ad hoc committee be formed to look at these overlaying issues.

(Bingham): I think it's appropriate to have this type of review. The question before us is the identification of stocks for management purposes. We anticipated that the KFMC would access this information. I will entertain a motion to permit peer review.

(Wilkinson): This committee was formed at the direction of the chair. Further activities would be at the direction of the chair and not necessarily determined by motion.

(Rohde): I haven't read this document and think it's premature to entertain a motion for peer review.

(Bingham): I agree that our review is needed but the timing of this peer review may be critical. Our preview may cause undue delay in getting this accomplished.

(Farro): I'll move, if necessary, to have staff disseminate the report. It is significantly different from the list contained in the plan and we may have to consider amending the plan at a later time. I have reservations about revision at this point.

(Reynolds): I have reservations about the approach. I feel the use of the metapopulation concept for fish species is a rough fit. I can't support the findings in this report's present form. I think further review is needed.

(Bingham): I'm hearing considerable differences of opinion from Task Force members. I support the Task Force wanting to have time to review it. What about sending the report out for peer review?

(West): I would suggest that it's Dr. Barnhart's prerogative for sending this out. It should be drafted into technical format before peer review.

(Bingham): Does the Task Force agree to allow staff to circulate in present form, and take comments on it?

(Farro): I would ask staff if this is something that can be done?

(Iverson): Sure, we can disseminate the paper as it is now but Roger and Jack have stated that it's not in a technical form for review.

(Barnhart): I think it can be disseminated as is with a cover letter from the Task Force explaining the process of how it was developed and what it is. When talking about going out for peer review the committee would have to revise it to include all literature citations. I don't know if that's necessary right now.

\*\*\* Motion \*\*\*

(Reynolds): Our objective is to review the stock definitions as they exist in the plan and determine whether they should be changed to something else. The bottom line after review is that we will have a list of stocks and this Task Force will decide to endorse or reject the newly developed list. Sending the report out for peer review doesn't necessarily get at what our original objective was. I advocate continued refinement on this document by the committee. I move that we thank the committee for their effort without necessarily endorsing the findings.

Motion seconded.

(Bingham): We have a motion to thank Dr. Barnhart for the committee's work and to continue with the ad hoc committee work, keeping in mind that the objective was to verify or amend the list contained in the long range plan.

Motion carried.

\*\*\* Action \*\*\*

KRFRO staff will prepare a letter thanking Dr. Barnhart for his efforts. The Task Force will keep in mind that the objective was to possibly amend the list of stocks contained in the long range plan in order to further the restoration program.

Q: Roger, what would you prefer that the committee do to continue this work?

(Barnhart): There are people itching to comment on this paper. I think it needs to be reviewed by people like that. The objective of this paper is to protect fish of the Klamath River Basin.

(Bingham): We'll leave it there, understanding that the process continues.

Agenda item 2: Approval of minutes from June 15-17, 1992, meeting.

(Farro): In the summarized version of the minutes my motion specified that we were to look at hatchery operations. In fact, the long version of the minutes indicated that we were to look at hatchery fish/wild fish interactions. The motion was not intended to have the committee review hatchery operations.

\*\*\* Motion \*\*\*

(Wilkinson): Move to approve the minutes of the June meeting, as revised.

Motion seconded.

Motion carried to accept the June, 1992, minutes.

Agenda item 10: Public comment period.

Tom Davis, Mayor of Brookings, (accompanied by Terry Hanson). We would like to present a cake to the Task Force and invite you to come back.

(Bingham): We thank you.

Joe Christian: I've lived in Brookings 11 years and have been a commercial fisherman for 10 years. The Pacific Fisheries Management Council's (PFMC) activities have destroyed fishing for our communities. The PFMC said they were working to restore stocks but that hasn't occurred yet. The PFMC wanted our comments and we said we wanted to fish. The PFMC said no there were no fish to be had but fish were there in record numbers in the mid-80's. The

Chetco River was brought back. You should get fish back in the other systems too. Our communities have been impacted severely.

Agenda Item 9: Report from Technical Work Group Chair on development of FY1994 Request For Proposals. (Attachment 4.)

(West): In may, 1992, the Technical Work Group (TWG) developed a list of priority objectives for each subbasin. The TWG also met in December, 1992, to draft this FY1994 RFP. This is a product of those meetings. Everything in this package was thoroughly examined by the TWG. The TWG agrees on the content of this package but not necessarily with the way it's organized. The important thing is the content. Organization might be dealt with later. The significant changes from last year's RFP: 1) the flow chart contained in last year's RFP is omitted, 2) inclusion of a table (page T-1) of priority objectives by subbasin, 3) inclusion of Appendix 2, (page A2-1) ranking criteria that will be used by the TWG to evaluate and rank proposals, 4) inclusion of project summary and budget work sheets as used by CDFG, and 5) inclusion of some language of the Klamath Act as Appendix 6.

(Reynolds): Historically CDFG has determined that habitat restoration or cooperative fish rearing projects were beneficial to the environment and therefore not subject to the California Environmental Quality Act (CEQA). This year CDFG felt that projects of this nature would be subject to CEQA. We had a strong objection internally to some of this work and now we're doing environmental documents on these kinds of projects. If there is a substantial objection raised for a particular project the questionable project won't proceed. So, some of the grants we proposed to make last year may not be funded. In this year's RFP we made it clear to proponents that they may be subject to the National Environmental Policy Act (NEPA) or CEQA depending on the funding source. How do we address this issue under the Task Force grant process?

(Iverson): We have a programmatic instream work permit issued by the U.S. Army Corps of Engineers (USACE) which was subject to public review.

(Reynolds): Does the Task Force have a programmatic Environmental Impact Statement (EIS) for work?

(Alcorn): As Ron said, we have a 5-year programmatic permit for instream work, issued by the USACE. We also have a general permit for similar work, issued by the California State Lands Commission. Both of these permitting processes involved public notice, comment review, and development of environmental assessments thereby fulfilling the NEPA and CEQA requirements on this issue. A clause contained in each permit is that we notify the interested agencies each year of our annual work plan prior to initiation of any instream work.

(Reynolds): This may impact how we include language in our RFP to cover these objections. From the "funding" perspective the lead agency is the USFWS.

(Bingham): PCFFA has addressed this with proposed legislation to allow rearing pond programs to be exempt from CEQA requirements.

Q: Can objections be made by an individual?

(West): Yes, under NEPA.

(Farro): We might include language in the RFP requiring compliance with the CEQA.

Q: When is the public comment period?

(Reynolds): When we have complaints.

(Bruss): We have a programmatic EIS for the Trinity River program and are doing pilot programs under categorical exclusion (Attachment 5). We have a checklist and if any answers are yes then we have to do an environmental document. You might find this handout useful.

(Lane): If you stick with your traditional habitat improvement projects you're probably safe.

(West): Since artificial propagation proposals are probably going to be scrutinized by environmental groups I suggest that a NEPA document be prepared for those activities.

Q: How are proposers supposed to use Table 1 of the FY1994 RFP?

(West): Table 1 identifies objectives for each subbasin. It's our hope that proposers will use this information to determine what types of proposals are most needed for subbasins. The table is also referred to in the cover letter.

Q: If there isn't an X in the box and a proposal comes in that doesn't fit into the matrix, does that mean it won't be considered?

(West): We haven't discussed how that would change their rating. There is a criterion of how well a proposed project contributes to Program goals and policies.

(Bryan): The TWG won't turn down any proposal.

Q: Could you elaborate on objective L, in the glossary for Table 1?

(West): That came over concerns of timber harvest practices on the lower river and what was considered lack of enforcement capability of the agencies involved. Primarily on private timber lands. Extra law enforcement for protection of stocks at risk could be a project objective as presented by a proposer.

(Orcutt): KFMC should handle enforcement of fishing for endangered stocks. If Task Force funded law enforcement efforts occurred on the reservation my bosses wouldn't take it well. We have our own enforcement.

(West): I recall proposals to increase patrol capabilities to curtail poaching efforts on the Salmon River. Agencies could propose temporary warden assignments in problem areas.

(Reynolds): This appears to invite proposers to determine flow needs under objective M with a double X on the Scott River and a single X on the Shasta River. A mix of priorities doesn't sit well with me. Are we inviting proponents to propose an IFIM or other type study?

(West): These priorities were voted on by TWG members with a fixed number of votes. The objectives not having X's are not less important.

Q: Is the mainstem a subbasin?

(West): Yes.

(Reynolds): Then by inference the mainstem flow need is not a high priority?

(West): We made a supposition that flow was already not adequate. Item K. indicates flow adequacy for mainstem is a most critical objective. Realistically these proposals are economically infeasible. So, we're not soliciting proposals for that type of work.

(Iverson): The draft RFP as presented here is going to meet the objective of bringing in good proposals. However, I'm going to raise an issue on the cover letter specifically the 3rd paragraph. I see three different sets of goals and objectives identified: those contained in the long range plan; those of the CH2MHILL report, as summarized in the Klamath Act; and those in the matrix of objectives by the TWG in Table 1. In listening to Task Force deliberations on objectives in the past, it has struck me that even though the long range plan was adopted there is still an element of disagreement as to what the Restoration Program objectives are. This paragraph brings that into focus. There are real fundamental differences between the long range plan and the CH2MHILL/Klamath Act. It is schizophrenic to try to meet objectives of those two plans. The objectives in the matrix sort of lie between the two. This problem is not an RFP problem but a need for the Task Force to identify its objectives. If someone has a good proposal they'll still send it in. I would also point out that of the three sets of objectives only the long range plan has gone out for public comment.

(West): We did not develop objectives that were inconsistent with goals and objectives of the restoration program.

(Bingham): I suggest that we defer action until we discuss the next agenda item.

Agenda item 11: Discussion of KRFRO's role in preparing proposals for additional funding.

(Iverson): The issue is whether or not KRFRO staff ought to develop proposals for funding consideration. We have prepared proposals in the past where our staff has identified a critical need based on the long range plan objectives

for which no one has submitted a proposal. As an example, the educational workshops for FY1993 were to fill a gap where no proposer has responded to the needs identified in the plan. We also submit proposals for work activities that the Task Force directs us to do but will cost money to implement. An example, the FY1993 workplan contains technical support by the TWG in developing subbasin restoration plans. KRFRO realized this additional planning effort would cost money. So a proposal was developed for this process.

(Lara): It gets back to the FY1994 RFP. In my opinion this is not quite what we should be doing. Staff could identify the things that need to be done and call for bids to get projects implemented. Rather than spending time discussing what the RFP should look like each year the Task Force could better utilize its time by developing prescriptive recommendations.

(Rohde): Congress didn't appropriate money for USFWS activities. So, it's a problem to justify funding additional USFWS work. Regarding the first reason for KRFRO submitting proposals, a CRMP might be a better way of identifying critical needs thereby keeping in touch with our constituency. There was a seminar held in Yreka this fall that was funded without KRFRO money. There are other avenues to fund these kinds of projects. I also wrestle with Ron's second reason for developing proposals. We still don't know how the existing funds are being used.

(Bingham): A number of those recommendations were responded to by the budget committee, and the budget information you refer to will be provided.

(Orcutt): Could Walt's concern be addressed? We always get around the language of the Act which identifies target groups. Could they allow latitude for target groups to implement some of the projects once they've been approved?

(Iverson): I suppose there's a way to do that. Regarding the proposals we've submitted in the past. We've always proposed to contract these jobs out. For example, we expect to contract out at least one of these educational workshops to NCIDC.

(Lara): Why do you develop proposals for education workshops but not proposals for work that desperately needs to be done on the river? Maybe we should develop a long range list of prescriptions of what needs to be done.

(Reynolds): We must be more specific in this RFP in order to restore fish populations.

(Franklin): This RFP is good in the context of what it could be at this point in time. Subbasin planning groups will eventually provide the specific information needed to refine the RFP.

Agenda item 12: Tabled until 2/4/93.

Agenda item 13: Task Force decision on the adequacy of the FY1994 Request For Proposals.

(Bingham): I hear opposing views on the FY1994 RFP and on KRFR0's role in developing proposals. We'll need a motion to get these issues on the table. We need to decide if the RFP is adequate, and if so, proceed with it.

(Farro): Maybe we could get a straw man proposal providing more information on what is needed. CDFG did a good job, maybe they can help.

(Reynolds): We can assist but the TWG is capable of doing this.

\*\*\* Motion \*\*\*

(Iverson): I move to accept the FY1994 RFP as developed, with the understanding that a strawman proposal using the enclosed format will be provided to KRFR0 and provided to proposers as an attachment.

Motion seconded.

(Rohde): I think it's appropriate that the TWG-RFP development committee group review it prior to inclusion in the RFP.

(Bingham): Are you willing to add this clause to your motion Ron?

(Iverson): My motion was that the strawman proposal would be provided. Provided by whom is left open. The committee could provide it.

(Lara): The intent of this motion is to save time and continue as we always have. We'll be in the same situation next year if we don't change.

(West): The TWG could have put together specific project criteria. The direction the Task Force has taken is to allow local groups having knowledge of subbasins to put those proposals together. If the TWG comes up with the prescriptions for each subbasin you assume we have the best knowledge of what is needed. We're a diverse group and don't have intimate knowledge of each need.

(Rohde): It's appropriate for the Task Force to consider what Walt is saying and consider this identification of needs for next year. For now we've taken our best shot and need to formulate what we'll request for next year.

(Bingham): We have a motion to approve the RFP with a modification to include a strawman proposal. Is there an objection?

Motion carried.

\*\*\* Action \*\*\*

CDFG or the TWG-RFP committee will provide a strawman proposal for inclusion in the RFP for FY1994.

\*\*\* Motion \*\*\*

(Lara): I move that we look into changing this present cyclical RFP system.

(Reynolds): I suggest that this issue be put on the agenda for next meeting.

Motion carried.

\*\*\* Action \*\*\*

Place review/discussion of the RFP on March 30-31, 1993 meeting.

(Farro): Is the Task Force going to discuss this issue or are we going to let the TWG consider it and provide us with a recommendation?

(Bingham): The Task Force will discuss this issue at our next meeting.

Agenda item 14: Task Force policy for KRFRO staff role in proposal preparation and submittal.

Q: Did the Task Force budget subcommittee make a recommendation on this issue at the meeting in November, 1992?

(Bingham): Yes we recommended that this item be deferred for discussion at today's meeting. So, I'm waiting to hear a motion from the Task Force on this issue.

(Rohde): It would be appropriate for staff to come to the Task Force and identify critical needs, state that they don't see any other way to accomplish this and get permission from the Task Force to submit a proposal.

(Reynolds): The committee suggested that the office not prepare proposals for themselves but to prepare and submit proposals under a cooperator's name.

Q: Is this discussion for consideration of the FY1993 workshops?

(Iverson): I understand that those are to be funded out of our KRFRO budget for FY1993. I assume the intent of agenda item 14 is to recommend a long term policy.

\*\*\* Motion \*\*\*

(Orcutt): Based on the recommendation from the subcommittee, I move to allow KRFRO to develop proposals for work but for others to do the work under contract.

(Rohde): I'm aware of situations where KRFRO has identified work needing to be done and gone to individuals trying to get them to submit proposals. I can see difficulties in that approach.

Motion seconded.

(Bingham): If I understand the motion it is that "KRFRO can prepare proposals for work to be performed by somebody else. If approved the project would be put out for bid." Is this correct?

(Orcutt): Yes, it's adopting the recommendation from the subcommittee.

(Wilkinson): I objected to excluding KRFRO from developing proposals. I'm concerned about not having flexibility to seize on an opportunity that might benefit this program. This motion allows no discretionary funds. I believe that we need the flexibility to identify needs and attempt to get them done.

(Farro): The motion leaves me wondering if KRFRO will generate proposals that they won't be able to implement. What is the process of getting bids? Is it well defined?

(Iverson): Yes. There are processes to go out and get a concept implemented.

(Rohde): With the motion as stated, would KRFRO receive administrative funds?

(Bingham): The motion is silent on that issue.

(Reynolds): The KRFRO has an annual budget which is reviewed. The concern was that their operating budget was being augmented by these proposals. The committee wanted to draw a line on KRFRO getting additional funds.

Motion carried.

Agenda item 15: Discussion of newsletter objectives -- to report the status of the restoration program or to sway public opinion.

(Orcutt): I don't think it should be to sway public opinion. It should be to present the facts. My complaint is that it focuses on up-river issues. I've talked to Tricia Parker about getting more focus on down-river restoration effort.

(Rohde): It's difficult to say we should advocate trying to sway public opinion. It wouldn't be appropriate to have the USFWS sway public opinion but the newsletter should keep people abreast of current issues. It might also inform the public on who the primary contacts are to address correspondence.

(Bingham): The USFWS cannot state positions or viewpoints on some of these issues.

(Iverson): We cannot advocate positions in the newsletter. For example, we cannot say "if you don't like this you can write to Secretary of Interior." If we take that approach the newsletter won't last long. The purpose of the draft newsletter circulation is to stimulate comment from the Task Force.

(Bulfinch): The newsletter is to report the status of the restoration program and report activities of local organizations. The purpose is to report the facts not to persuade public opinion.

Q: Could the public information officer then relay opinion articles such as the one written by Bob Rohde to the local media?

(Iverson): The media has extensively presented the issue and status of flows in the Klamath River to the public.

(Bingham): The newsletter has been moving in the right direction and is getting better. I hear everyone saying that it should be informational only.

Q: Would it be legal to have a guest editorial section, allowing personal opinion from guest writers?

(Iverson): We've discussed this with our Interior representatives, Bill Shake and Lisle Reed, and they said we could have opposing viewpoints expressed side-by-side. So far Bob Rohde's article is the only one we've received. Your recommendation is a good one.

Agenda item 16: Report from KRFRO on investigation of financial compensation for services provided by TWG members.

(Iverson): The Task Force requested staff to find out if advisory committee members could be compensated for time. I sought advice from our contracting office in Portland. The answer is yes, advisory committee members can be compensated for time spent on advisory committee work. The ground rules for that are in the Federal rules (CFR) for implementing the Federal Advisory Committee Act (FACA) which lays out the regulations for compensation. So, it is possible to compensate the TWG and for that matter members of this body. There is a mechanism for this which is to draft a blanket purchase order with a funding ceiling. That's the good news. The bad news is that the Department of Interior takes the position that their advisory committee members should not be compensated. Interior has about 2,000 committee members on about 200 committees and there is only one case where there is financial compensation. So, the guidance from Interior is that they won't go along with compensating advisory committee members. It doesn't mean this can't be appealed. Interior's stance is that it is an honor to serve on these committees.

Q: Is it possible to contract those services through the State of California?

(Reynolds): It might be possible. I don't know where we would find the money. Would it be considered part of the match?

(Iverson): I think it is a way of trying to get around that Interior policy and I wouldn't recommend doing that.

Agenda item 17: Discussion of local Fish and Game Commissions -- their role in the restoration program.

(De Salvatore): Each county has the option of establishing a Fish and Game Commission to act as an advisory committee to the County Board of Supervisors. Our funding comes from CDFG fine monies and can be spent by funding grants to organizations. As an example of what can be funded: public education on fish and wildlife conservation, purchasing equipment for law enforcement activities, habitat restoration activities, and most recently to purchase a diversion ditch screen on the Shasta River. Last April I wrote a letter to Bill Shake and his reply was that we might be most helpful in working through

groups such as CRMPs. I've talked to other counties (Trinity, Del Norte, Humboldt) and have gotten positive responses from some. We might be able to help you in public education activities.

(Wilkinson): Has the Siskiyou County Fish and Game Commission taken a position on the upper basin amendment?

a: No.

(Reynolds): CDFG has a letter from Trinity County asking if it would be appropriate for a County Fish and Game Commission to fund the County representative on the Task Force. I don't know what our legal advisor will say but if this is possible it would develop a strong tie between the Task Forces and Fish and Game Commissions.

(Iverson): Gary, do you have any constraints on what you can or cannot do other than benefitting fish and wildlife?

(De Salvatore): The Commission is advisory only and we operate in a political arena. Our views don't always coincide with the County Board of Supervisors.

Q: Does the Siskiyou County Fish and Game Commission make recommendations to the State Fish and Game Commission?

(DeSalvatore): Technically we make our recommendations through the County Board of Supervisors.

(Reynolds): One of the most common functions of the County Fish and Game Commissions is to advise on expenditure of the County Fish and Game Fund.

(De Salvatore): We don't have a lot of money, about \$24,000 per year with about \$11,000 going to grants each year. One problem is that we underspend our grant monies each year because we don't have enough proposals to review. Recent legislation has imposed some constraints on how monies are spent.

(Orcutt): What would you recommend Gary?

(DeSalvatore): We can become active by working with local steering committees as suggested by Bill Shake. The Siskiyou County Fish and Game Commission can provide funding to implement some restoration and public education work. Being members of each county we might benefit the Task Force by having local representation. I'm an outgoing member, officially replaced last week.

(Farro): Maybe some explanation of subbasin planning groups would be helpful for County Fish and Game Commissions.

(Bingham): Perhaps we could ask staff to provide that information.

\*\*\* Action \*\*\*

KRFRO will provide information to County Fish and Game Commissions on the established subbasin planning groups.

Agenda item 18: Public comment period.

Jim Welter, KMZ fishery coalition: See Attachment 6.

Lyle Timm: Ocean fisherman. Thank you for coming, we're going to put into practice what Jim Welter recommends.

Ann Ramp: We're concerned about fish up and down this coast. Every town is suffering terribly from lack of fish and fishing. We are all aware that your job is a 20 year job and you get only \$1 million per year. You are the problem solvers. Without you solving problems they won't be solved. 20 years is a long time, too long. If you can educate the public in a shorter time you would help us all.

Agenda item 19: Task Force recommendation on the role of the quarterly newsletter.

\*\*\* Motion \*\*\*

(Lara): I move to add an editorial guest column to the newsletter.

(Bingham): With the proviso that opposing viewpoints be provided.

Motion seconded.

Q: Ron, would this format change require Interior approval?

(Iverson): I don't know. We just sent in our request for continued approval, which is good for two years. I don't think format is too great a concern in Interior. My feeling is that people deciding these things would be willing to go ahead with this idea without going back to D.C. for approval.

(Bulfinch): One comment about editorials with pro and con viewpoints, there should be no reluctance to print both views. However, you may have problems getting both viewpoints. I recommend that the motion should say "when possible, opposing views will be presented."

motion carried.

\*\*\* Action \*\*\*

KRFRO will include guest columns with opposing viewpoints into the newsletter.

Agenda item 20: Task Force recommendation on financial compensation for TWG or committee members.

(Farro): I would like to pursue getting compensation for folks contributing their time. I won't offer a motion, but will commit to pursuing this. We're asking people to spend 15-20 days per year.

(Bryan): Perhaps compensation through the Counties would be an avenue.

(Bingham): We also might ask Ron to explore whether a technical support workgroup might be viewed in a different light, which might be more in the nature of providing contracted services. I'm hearing the Task Force say they would like staff to explore further, reporting back at next Task Force meeting.

**\*\*\* Action \*\*\***

KRFRO to investigate whether financial compensation for TWG services would be acceptable by Department of Interior. Report will be given at next Task Force meeting.

Agenda item 21: Task Force recommendation on involving County Fish and Game Commissions.

(Wilkinson): I believe we should interact as much as we can. I suggest for agenda items 21 and 22 that involvement be delegated to the Siskiyou County Task Force representative. This is a recommendation. I think the Chair can ask who is willing to do this.

(Orcutt): I think we should draft a letter back to them acknowledging their efforts to contact us.

(Iverson): One of the assignments in KRFRO which I see us doing this coming June would be to identify alternate funding sources to proposers. We could include the Humboldt and Siskiyou County Fish and Game Commissions as potential funding sources.

(De Salvatore): One of the advantages of funding through these commissions is that we can act rapidly to approve and fund projects. My expectation was that there would be a more formal process of communication between the Task Force and the County Fish and Game Commissions.

(Bingham): I would request staff to initiate a recommendation bring it back to Task Force for adoption of how we'll become involved.

(Wilkinson): I submit that the Siskiyou County representative should attend the Fish and Game Committee meetings and report back to the Task Force at regular scheduled meetings.

(Bingham): Kent are you interested in doing this? It also ties in with the next agenda item.

(Bulfinch): I already attend the CRMP meetings as an interested citizen so these requests are not out of the question.

(West): I don't know what is to be done. I hear that Kent will attend the Siskiyou County Fish and Game Commission meetings and report back to the Task Force and that staff would develop a line of communication.

(Bingham): I'm suggesting staff keep us informed of meetings.

\*\*\* Motion \*\*\*

(West): I move that KRFRO staff annually send the ranked list of proposals to respective County Fish and Game Commissions for funding consideration.

Motion seconded.

Motion carried.

\*\*\* Action \*\*\*

KRFRO will annually send the list of ranked proposals to the County Fish and Game Commissions for funding consideration.

Agenda item 22; Task Force discussion and appointment of a representative to the Shasta Valley Coordinated Resource Management Planning board.

(Bingham): Acting as the chair of the Task Force, I'll appoint Kent Bulfinch to be a representative on the Shasta Valley CRMP. No motion necessary.

Meeting adjourned for the day.

February 4, 1993

Agenda item 7 (tabled from Feb. 3): Report from ad hoc committee to develop recommendations for target employment group incentive points.

(Bingham): The committee met last night and came up with resolution. Jack would you state what the resolution was?

(West): As I recollect, the Klamath Act contains specific language by parties affected by the decline of Klamath Basin fisheries. In the past, we've handled this in different ways including having this as a rating criterion. It was difficult and unclear how proposers would demonstrate that they would employ these target groups. Last night we decided to put it back in as rating criterion. We will make it specific and very clear that they must provide information that demonstrates who will be employed. That will make it more up-front in making this judgement call.

(Farro): We felt that this is something that is in the Act but rather nebulous. We have gone to stating in the RFP specific language in the Act and that points will be given for those that demonstrate employment of target groups. If the proposers can document that they tried to employ target groups they will also receive 10 additional points.

(Pierce): I suggest the following changes in the FY1994 RFP: 1) on page A2-1, on the line "Contribution to Restoration Program goals and policies" -- change the weighted points from 25 down to 20, 2) on line "Scientific validity, technical quality, development of new concepts of information" -- change weighted points from 25 down to 20, 3) add new line item "Employment of Target Groups" -- with weighted points at 10, 4) on page A1-2, under item 11 --

delete first paragraph and replace it with "The Klamath Restoration Act states 'To the extent practicable, any restoration work performed under paragraph (2)(B) shall be performed by unemployed - Commercial Fishermen, Indians, and other persons whose livelihood depends upon Area fishery resources.' In the Ranking process, if a proposer can demonstrate they have complied with this section of the Act, the proposal will receive 10 points (see page A2-1). If you will be employing targeted groups, please explain how you will guarantee their employment during implementation of your project."

\*\*\* Motion \*\*\*

(Lara): I move to make the changes in the FY1994 RFP, as suggested by Ronnie.

Motion seconded.

(Franklin): In the past the TWG has given as many as 10 points but has, at their discretion, awarded fewer than 10 points depending on if the proposer has done what they said they would do (hire target group employees). Does this motion allow for that flexibility?

(Bingham): Yes. I think it was clear that the TWG would make the call using their best judgement, allowing as many as 10 points.

(Farro): I'm willing to leave that up to the TWG.

(Reynolds): How will it be clarified so that proposers know that it's not an automatic 10 points. Example, if they have a token employee they may want 10 points. How will this be implemented rather than just be in the minutes?

(Bingham): The discussion we've just had clarifies that to some extent. The way the motion reads it sounds like it is an either/or proposition. Perhaps a little explanation is needed in the RFP. You can't go into great detail in explaining how these points are assigned.

(Franklin): The way the motion reads now it says a proposer "will" receive 10 points.

(Bingham): How about changing the wording to "may" or "up to" rather than "will."

(Franklin): What is the status quo right now?

(Bingham): The technical rankings have not addressed target employment. The TWG finished its ranking and passed the list to the budget committee which added points. It is a duplication in process. This highlighted the target point issue making it more political. This motion incorporates that issue into the ranking process.

(Franklin): Since ambiguity exists from the way the motion has been provided and how changes are now suggested, I would like to delay the decision until I can talk with Mike Orcutt.

(Bingham): I have no problem tabling the motion until after lunch.

(Rohde): Is the language to read "will receive up to" rather than just "will receive"?

(Bingham): Yes, the author of the motion agrees to this change.

\*\*\* Action \*\*\*

Table discussion on the motion to amend the draft RFP to later time on 2/4/93.

Agenda item 23: Comment by Klamath Forest Alliance on new State Board of Forestry forest practice rules. (Attachments 7 and 8.)

Felice Pace: At your last meeting, Mr. Dragseth of Fruit Growers Supply Company made a presentation on the new State Board of Forestry timber harvest rules. There was not much opportunity to present opposing views at that meeting and I asked to provide comments. In my opinion you didn't get an objective report. The package gives the appearance of reform but what has happened from when these were first proposed to what is presented now is that the content of the rules have been gutted. As an example, regarding sensitive watersheds -- the rule does not designate sensitive watersheds but sets up a long process for identification of watersheds. The burden of proof lies on the proposer to nominate these watersheds and to collect data. This is a long process and may not result in getting one designated. We were involved in the meetings when these were negotiated by the State Board. We recommended that State Board designate an independent committee to draft rules but this recommendation was not agreed to. Regarding watershed rules -- your TWG has looked at it. The State Board has said they would not consider changing this rule because they didn't have enough time to see if it worked (watershed and streamside protection zones). Basically the rule states that 50% of riparian overstory must be retained. This requirement is not always met, and we routinely see logs dragged across streams which further degrades the streamside zones. The rule says 50% of total canopy must remain which means the understory or smaller stuff is left and the overstory (merchantable timber) is taken out. The draft rules for state forest lands are similar in that they are inadequate to protect smaller watersheds. In light of your next agenda item you should consider some of the studies done in the past. In Northern California Don Erman and his students of U.C. Berkley studied macroinvertebrate population diversity in paired watersheds. They concluded that streams were impacted (in terms of macroinvertebrate diversity) when there were no buffers or inadequately sized buffers. They recommended a 100 meter buffer zone along the slope. The researchers went back every five years for 25 years and found that streams took 20 years to recover. The State Board of Forestry stated that they didn't have enough information to determine if rules were effective. I believe that there is enough conclusive evidence to make proper decisions on these issues. These rules have not been certified by the EPA as BMPs for protecting the resources. As you consider your next agenda item you should consider that many folks are saying the only way to hold on to stocks at risk is to maintain habitat refugia. The Klamath

National Forest management plan identifies only one refugium, Wooley Creek which is already protected. I recommend you consider establishing refugia. (Mr. Pace handed out attachments 7 and 8.)

Q: Are county governments the only ones that can recommend sensitive watersheds?

(Pace): No, anyone can.

Q: Can you summarize the nature of resistance EPA has had for certifying BMPs?

(Pace): It's been a long process but to summarize, the first issue was "how were we going to assess whether past BMPs had been effective." One hundred THPs were reviewed and deficiencies were identified. It was a quantitative rather than a qualitative assessment. The EPA now monitors BMPs. The USFS rules are certified as BMPs. The final hurdle is an assessment process which is being developed by a consultant. When completed, EPA may certify the rules.

(West): You mentioned the USFS only recommended one refugium. That's not true. Others were recommended.

Q: Does the KFA have a specific recommendation for the Task Force on the newly adopted State Board of Forestry rules?

(Pace): We don't have a detailed recommendation for you but we suggest that you consider making a comment on the rules package that they have adopted. Do not take my, or anyone else's, opinion without looking at these rules first. If this Task Force doesn't think those rules will assist you in getting your job of fish restoration done then I suggest you make that comment. I suggest you have staff look at the rules then develop a statement.

Q: Are you suggesting that the U.S. Forest Service rules are the model to strive for?

(Pace): No. This Task Force has asked your TWG to develop a recommendation for the State Board. The USFS forest management plan has two areas we've identified that will affect their ability to protect habitat. These are road building and refugia.

Agenda item 24: Report from TWG chair on development of recommended streamside protection measures for timber harvesting activities. (Attachment 9.)

(West): The Task Force asked us to identify "what is the minimum necessary to protect a stream." I asked each TWG member to provide me their recommendations on this matter. I've summarized those comments and provided you our findings (Attachment 9). I tried to compare how well existing administrative rules by various timber management agencies address common attributes of stream protection. I did this summary from my perspective and knowledge of these issues, and took help from Bob Rohde, Curt Ihle, Bob Franklin, and Jud Ellinwood. The TWG believes there needs to be consistency in these rules. The group also believes cumulative effects analysis must be

applied consistently across ownerships and existing conditions must be determined and followed by quantifiable surveillance to determine change. This recommendation is broad reaching. There is a danger in blanket application of standard protection measures such as a same size riparian buffer zone for all areas. There is a real need for on-the-ground involvement by biologists, hydrologists, etc. to determine specific needs. The tendency is that when you have prescribed protection measures, and these measures are met, it guarantees protection. It does not. As far as where to go from here, I don't have a specific recommendation. If the Task Force asks us to we can work further on this.

(Wilkinson): Jack, regarding site specific preview and prescription by a group of professionals, how would you envision this would be done?

(West): There are a number of possible routes: Industry could provide the review. CRMP process could be employed. I suggest that a group of people get together to work on this more.

(Franklin): The Hoopa Tribe has now taken the approach of protecting refugia. On the issue of site specific recommendations rather than blanket rules -- it makes a lot of sense but transition from a THP to actual harvest allows for many things such as protective recommendations to be lost. We try to simplify this by having boundaries where no trees can be taken out.

(Reynolds): Bob is right. We must have very clear instructions for timber harvest. CDFG prefers to have clearly defined protection guidelines. The Task Force may want to ask CDFG harvest investigators to make a presentation here to let them explain what they do to protect streams.

(Wilkinson): I agree and would also suggest that we get information from a hydrologist to speak to cumulative effects studies.

(Bingham): I agree that this presentation would be valuable.

(Rohde): About 150 years ago indigenous people living in this area lived in relationship with the land. About the turn of the century things changed. It is no coincidence that as the last remaining old growth timber is being cut down we see the dwindling of the anadromous fish populations. Scientists are telling us that where we see relatively stable and viable fish populations they exist on undisturbed watersheds. Most of the Klamath Basin has had significant changes in the land use and fish problems are widespread. Our plan policies suggest that we will work to protect fish through a watershed protection approach. Laced within the plan we have policy that reflects this position. It would be helpful for agencies to recognize that these guidelines are in the plan. We have an established method of how we feel things ought to occur. Now we have the opinion by the TWG of how riparian zones ought to be maintained. There is certainly need for more work but we should foster this and work with CRMPs.

(Farro): I suggest that we keep in mind of where we want to go with this task given to the TWG, in regard to stream conditions. It's important not to lose fish and habitat quality that exists now. It's a large issue to become

involved in review of all THPs and will be difficult to do. I think we need to keep focused on what we want which is stable and improved habitat.

(Bulfinch): It will be difficult to get the Task Force involved in developing protective recommendations for each stream. I think the Task Force should define what our objective is which is to protect fish populations. We then need to decide how to work with industry expertise to achieve the objectives. We should let them perform their work to develop protection measures. We should establish x temperature, x flow, and allow other professionals to bring about the habitat requirements.

(Bingham): I would remind us that the long range plan contains much of the objectives you've described.

(West): I would challenge the Scott River Watershed CRMP to develop a recommendation for desired future conditions for riparian areas in that subbasin. I also challenge them to demonstrate sustainability of resource use in that basin and to propose alternatives for ways to adequately involve the public and professional disciplines in watershed management planning. We can discuss the topic of standards and guidelines for days but we can use this opportunity to ask the CRMPs to develop their own recommendations. If we ask for blanket protection landowners won't accept them. We must ask the CRMPs to work on these issues. We also have a bioregional team that will recommend a landscape to demonstrate biological sustainability. There are a lot of cooperative groups in the Scott River Watershed CRMP that should be involved so ownership of this concept is developed..

(Bryan): I agree with Jack's suggestion that the CRMPs develop these recommendations. I like the approach that we can do this and come back with something to the Task Force.

Agenda item 25: Public comment period.

(Jerry LaRue, former employee of U.S. Geological Survey): I have concerns regarding your discussion on the previous agenda item. In the THP process the preharvest inspection is done by committee. There are many professionals involved and they all have the opportunity for on the ground inspections. This group will inspect an area make recommendations if necessary. What I have found at the end of a timber harvest project is that the only person who makes the final inspection is the registered professional forester (RPF). The final inspection is sometimes arbitrary. Sediment may be being increased by some protection measures. Road obliteration is not cost effective and contributes to increased sediment in some cases. Blanket regulations are not the answer. These RPFs are well educated and can determine when these things are not right. Better understanding of hydrology is needed to develop protection measures. Agriculture, in my opinion, contributes much more sediment than private forestry. Bureaucracy must work quicker to protect streams.

Q: Regarding the stream crossings you don't want to see taken out, how do you see getting at the problem of undersized or poorly designed crossings?

(LaRue): Most of these crossings are class III ephemeral streams. I don't recommend leaving class II perennial stream crossings. I don't think it's necessary to dig a trench to accommodate a small ephemeral drainage of an acre or so.

(Jim Ostrowsky, RPF for Sierra Pacific Industries): I'm also on the Board of Directors for the California Licensed Foresters Association. Concerning this morning's presentation, first of all the State Board of Forestry's forest practice rules are an evolving process. Stream protection has always been a major component of the rules. People's views of these issues have changed over time. One of Jack West's recommendations was not to have blanket standards but to have minimum standards allowing an RPF to make protection recommendations. I recommend, Jack, that you get a copy of the forest practice rules for review. The RPF is the person that develops the harvest plan and works with other agencies to develop additional mitigation measures. The final inspector is a representative of the State Board of Forestry who is an RPF. Final inspection is not performed by an industry representative. CDFG is also notified when a timber harvest is complete and they are allowed to inspect the sale area. I encourage you to look into this process and make recommendations. We would be willing to work with you in reviewing these rules. Many things were said here today but I hope you realize that RPFs are concerned about fisheries and protecting the forest. It's not a case where we go out and do whatever we want.

Q: Does your association have a fisheries committee that addresses stream protection?

(Ostrowsky): We have a committee that looks at these issues.

(Bingham): I think it would be good to coordinate with your group on these issues.

(Rich Dragseth, Fruit Growers Supply Co.): RPF's are accountable for what they do. Under the licensing act every forester is held accountable. Anyone can file a complaint against an RPF. Charges can be pressed for violation of forest practice rules. Industry is not represented on the Task Force but I'm encouraged by the comments supporting cooperation rather than regulation. Presently, preharvest inspection is allowed but would be expensive for each THP. CDFG contributed to the streamside protection rules that the State Board of Forestry adopted. I would be willing to get together with Jim Ostrowsky and Jack West to develop a protocol for interaction between industry and the Task Force. Regarding minimum canopy closure, this is a minimum requirement and in many cases we allow more than 50%. The other thing you must be aware of is that we have cumulative effects that we must consider. Regarding road closures, we cannot clearcut a large area then close the road and stay out of a watershed. We therefore must keep the roads open continually. Larger clearcuts would allow putting roads to bed for a longer period of time.

(Rohde): The USFS has postponed timber harvest in the Beaver Creek drainage for the next 10 years because of excessive erosion. How is the agreement going between Fruit Growers Supply Company and the USFS?

(Dragseth): It's going well. We're cooperating on road management, and working on watershed erosion sites identified in a WIN inventory. The company is a farmer's cooperative. We do not make a profit so the primary way we can come up with funds to operate is to have timber sales.

(Felice Pace): I wish to make specific comments on Jack's report. On the first page of Jack's report (Attachment 9) under desired future condition and management standards I see the word "maintained" about 5 times. I suggest using the phrase "maintain or restore." In terms of streamflows, I think the TWG should consider summer flows as a critical issue, clarification on Number 3 may be needed. I also acknowledge Jack's comments on the identification of refugia on KNF. I agree that a committee of RPFs with the TWG might be beneficial. The impression from this report is the USFS is stating "we have arrived" but I don't agree. Specifically the report from the gang of four suggests leaving roadless areas alone. They are roadless because they are geologically unstable. The Hoopa Valley Tribe protection measures appear to be aware of upslope processes. I encourage the Task Force to continue this work. You have suggested blanket standards across ownerships. I don't think it's appropriate because some landowners cannot do the entire job such as establishing refugia.

(Andy Colona, Energy Resource Advocates): Regarding cumulative impacts, I'm sure that most of you already know that habitat is not only the place where animals live but it is also where we live. We've lost that relationship. Native people knew that. (Showed large photo of pre- and post-timber impacts in lower Klamath River Basin.) There is a geometric effect from each large disturbance in regard to cumulative effects. In 1982 the EPA and State Board of Forestry got together to develop standards but they were not adopted because they would impede logging practices. Many studies of timber harvest impacts on stream ecosystems are now being initiated. We don't need to study the same thing over again. The time and opportunity is upon us to act now. The Klamath River watershed is a mess and can only get worse. This Task Force cannot wait for other bureaucracies to act. I came to plead with you to do something. Fish stocks are being lost warm water species are becoming dominant. (Mr. Colona read Section 4516.5 from California Forest Practice Act.)

Agenda item 26: Task Force recommendation on streamside protection measures developed by the TWG.

(Franklin): I feel that we must protect the precious few areas that remain. We must spotlight those systems and let the appropriate organizations know that these are critical areas in need of protection. The TWG could be assigned the task of identifying these places. CRMPs could be helpful. I don't think it would take too long.

(Iverson): One way to make use of the information Bob Franklin is calling for is to have the TWG review forest management plans for public lands.

(Rohde): As an incremental step, there are parts of our long range plan that identify what we feel needs to take place. I think the TWG or staff could

draw from the plan to identify pertinent policies regarding stream quality and timber management.

(Bingham): Bob Franklin has suggested that we identify areas that must be saved, and based on that, we would try to use the existing forest management system to protect those areas. I believe the Task Force could make the request to protect those systems.

\*\*\* Motion \*\*\*

(Franklin): I move that the TWG be assigned to review materials (forest management plans and other appropriate documents) to come up with a list of areas we believe to contain the last refuges for fish and return this list to the Task Force with a prescription from the TWG on what attributes should be considered in monitoring change or performance for protection.

(Wilkinson): Before I second, I would like for Bob Franklin to consider item 8 of Jacks report (Attachment 9).

(Rohde): (Read item 8). I have one concern with the definition of the phrase "at risk of extinction."

(Wilkinson): It appears that you could use that recommendation in forming your motion. To keep it more brief.

(Franklin): Looking at item 8 -- I move that the TWG identify special management areas addressing critical fish populations. Does that make it better?

(Wilkinson): In light of the abbreviated motion, I'll second.

(West): We'll have to be more specific. What stocks are we working with?

(Franklin): "Critical populations" leaves room for loose interpretation.

(West): This loose interpretation will open the door for much debate. I prefer to have more specific identification on what stocks are "critical populations."

(Franklin): I do not wish to reference a particular list of stocks, as identified in papers such as Nehlson, et. al, or the stocks at risk paper by Humboldt AFS.

(Reynolds): Do I understand the motion to be a Task Force action to address the issue of perceived problems caused by logging in the basin?

(Wilkinson): I didn't interpret the motion to be necessarily related to logging. It could be all environmental situations that might be deleterious to fish.

(Reynolds): Then, getting back to our overall charge, we're to restore fish populations. I agree with Jack that the TWG needs more clear direction. To

me, fall run chinook in the Klamath River system is critical. We haven't made adult escapement levels in the past three years. From the standpoint of our mandate fall run chinook is our most critical stock.

(Bingham): I agree, we have fishing fleets tied to the docks on the coast because of that population decline.

(Rohde): I suggest that my TWG colleagues meet over lunch to develop a more clear motion.

(Franklin): To try to resolve this I will offer this language to be inserted in the appropriate place in the motion "native stocks identified in the Klamath basin plan."

(Farro): I hope we're not just focusing on stocks that are critical, but also looking at areas of habitat where we have healthy stocks.

(Franklin): It is my intent to focus specifically on areas that are in good or better condition. My motion addresses identification of areas in order to save those areas.

(Bingham): Jack are you comfortable?

(West): I think we need to craft something that is more specific, and also talk about the problems that Ronnie brought up. I'd like to meet with TWG members over lunch.

(Bingham): OK, we'll table this motion until after lunch.

Agenda item 29: Report on the Trinity River mainstem fish habitat improvement plan.

(Lane): I'll focus today on the mainstem Trinity River restoration project. There are three major issues facing us in this restoration program. They are: 1) flow, 2) sediment reduction, 3) and channel reconfiguration. The flow issue has already been discussed in your previous report on HR-429. The sedimentation issue is also being resolved partially in the Grass Valley Creek (GVC) watershed. Last year we acquired 17,000 acres of land in the GVC to reduce impacts. There is an extensive on-the-ground effort to survey and reduce erosion in that watershed. We're experimenting with side channel construction. The public law precluded the program from doing much work below GVC. We did, however, look at a pilot program. Side channel construction and bank feathering have been tried, and we're ready to go into these in greater scale. (Mr. Lane showed slides depicting side channel and bank feathering projects.) We have an environmental assessment and EIS document which is out for public review right now. There's been some concerns expressed by the public about the bank feathering and side channel construction activities. Riparian wildlife were also discussed as being potentially impacted. Aesthetic concerns have been expressed. We've had concerns expressed about all of the other woes of Trinity River fish habitat as well and have tried to address these concerns in the EIS.

Q: Do you have a feel for what percentage of the side channels are inactive naturally occurring side channels?

(Lane): Most of these are not natural side channels.

(Franklin): It is the full intention of the tribe that a hydrological self maintaining system will be developed.

Q: What kind of evaluation, over time, are you planning to do or have done?

(Lane): We haven't had a lot of time to evaluate this.

Q: Who's the responsible official on the NEPA?

(Lane): Trinity County and the USFWS are co-lead agencies.

(Reynolds): CDFG did some side channel work on the mainstem Klamath and also on the Shasta River but they don't maintain themselves very well. They tend to act as silt traps. Are you seeing any indication that side channels can maintain themselves over, say, 25 years?

(Lane): Some have failed and plugged with sediment and others have not plugged yet. One problem is that we don't know what the flow regime will be from year to year. It's difficult to design, construct, and evaluate at the same time.

Continuation of agenda item 7: Report from ad hoc committee to develop recommendations for target employment group incentive points.

(Bingham): Earlier today, we tabled a motion on the language to be included in the FY1994 RFP involving employment of target groups. Bob Franklin was to discuss this with Mike Orcutt.

(Franklin): The motion as reframed is not acceptable. I can't support the reframed motion which has the phrase "will receive up to 10 points."

(Bingham): Would the 10 point criteria apply to all target groups?

(Franklin): Yes, I assume so.

(Pierce): To reiterate the motion, the language will read that those target groups "will receive 10 points."

(Bingham): So, as soon as the determination is made that a proposal qualifies they will get 10 points.

(Reynolds): What constitutes a target group? I want to know who gets benefitted. There are varying degrees of impact.

(Bingham): We are going to publish the language in the Act and the TWG will make the determination if they qualify, using that language. It's up to the proposer to document how they qualify.

(Rohde): In the case of a fishing guide losing his ability to guide, he would have to document this fact using, say, past tax receipts.

(Farro): The words of the Act are included because we can go back to the Act and determine if a group qualifies. There also must be documentation. The issue that Forrest brings up will depend on the level of documentation and will be up to the TWG.

(Iverson): A question to the subcommittee -- at the Yreka meeting a representative of the Farm Bureau said that her clients were also an impacted group. How would the TWG use that logic?

(West): The way each of the TWG members assigns points for each criterion is private. The totals are averaged and that then becomes the score.

(McInnis): It's possible then that one member could rate a proposal as employing target groups, thereby adding 10 points, and another TWG member could also give it a 0 score resulting in an average of 5 points.

(West): It's possible.

(Bingham): It is a silent and private ranking process.

(Pierce): Each TWG member can rate each proposal up to the maximum for each criterion.

(McInnis): So, this rating criterion will either be 10 or 0? All other categories allow varying scores.

(Farro): I think we need to call the question on the original motion. As we left it the assignment of points depends on the documentation provided by the proposer. Has this changed?

(Bingham): Walt's motion was made with dialogue with Ronnie. It is a restated motion. The original motion included the phrase "will receive 10 points", the modified motion included the phrase "up to."

(Pierce): Walt's position is that the Yurok Tribe is pleased to have the employment of target groups in as a criterion. It may be easier for TWG for them not to have to make a variable scale.

(Bingham): In view of the Hoopa Valley Tribe's comment the motion stands as modified to include the phrase "up to." We'll call the question with the motion containing "up to."

Motion failed.

(Bingham): Now were ready for a new motion.

\*\*\* Motion \*\*\*

(Pierce): I move that the language will include "employment of target groups will receive 10 points."

(Bingham): Noting the other portions of the original motion remain unchanged in the second motion.

(Reynolds): If this fails, there will be no points added for target group employment?

(Bingham): No, we'll be back to last year's process.

Motion seconded.

(Franklin): I understand that the motion now is to consider what we heard this morning, including two things, the changed text (page A1-2) and a changed table (page A2-1). The text says 10 points, and the table implies "up to" 10 points, which is how weighted points work.

Motion failed.

(Bingham): We'll table discussion on this until after the break.

Agenda item 26 (continued): Task Force recommendation on streamside protection measures developed by the TWG

\*\*\* Motion \*\*\*

(West): I move that "The TWG will identify remaining high quality watersheds which provide critical habitat for native anadromous fish stocks identified in the plan. KRFRO staff, with TWG assistance, will prepare Task Force correspondence to major landowners and land management agencies which states the pertinent goals (specific to watershed management) of the long range plan and requests cooperation in meeting those goals. Correspondence will also request a 6 month schedule of planned activities in critical watersheds.

Motion seconded.

Motion carried.

(Bingham): We'll direct them to implement the motion, and report back to us. The only thing unclear will be when they report back. This might be ready by the June meeting.

\*\*\* Action \*\*\*

The TWG will identify high quality watersheds in the Klamath Basin which will be recommended for special protection and will, with assistance from KRFRO staff, develop correspondence to major landowners and land management agencies which contains this list and states the pertinent goals of the long range plan. The TWG will meet to discuss this assignment, develop a workplan schedule, and report back on how/when this is going to be accomplished, at the March, 1993, Task Force meeting.

Agenda item 28: discussion of revised draft annual status report for Fiscal Year 1992. (Attachment 10.)

(Alcorn): At the November meeting we were asked to make three primary revisions to the draft annual accomplishments report. The revisions were to: 1) included a discussion of harvest management efforts by the KFMC, NMFS, and the PFMC, 2) include as a critical need "better coordination between the KFMC and the Task Force to ensure adequate levels of escapement each year, and 3) to ensure that critical needs identified in the report were consistent with the list of high priority objectives developed by the TWG. We propose to accomplish the first revision by drafting a description of harvest management activities and allowing the KFMC to review it for accuracy. This information would be included in the report as an addendum. The second item for revision has been written into discussion as a critical need on page 9, paragraph 4.7. The third revision, after checking with the list of high priority objectives developed by the TWG, involved removal of a critical need that identified "studying the feasibility of opening access to lower tributaries of the Klamath River." We wrote this into our original report because it reflects policy 3-10.b, but "study" of this problem is not emphasized as a critical need by the TWG. Correcting fish passage problems on the lower Klamath River subbasin is a XX priority objective. Other changes made in the report are underlined. I also included the newly developed matrix of objectives developed by the TWG in December, 1992.

Q: When will the draft addendum be available for review?

(Alcorn): It may be provided to the KFMC at its next meeting in March. If they review it and find it acceptable then this addendum could come to the Task Force as early as the March meeting for approval.

(Iverson): That is as early as it can happen but it's not definite.

(Reynolds): I'm not sure that policy 3-10.b should be left in the plan because studying the feasibility is not necessary each year. So, I think you're correct by removing this as a critical need.

(Pierce): You chose to take out a section on clearing stream mouths?

(Alcorn): The matrix identifies opening fish passage in the lower basin the long range plan policy suggests studying the feasibility. These two approaches are different and that's why we chose to remove it as a critical need.

(Reynolds): I think we all agree that providing fish passage is a high priority. Studying feasibility is not a critical need each year.

Agenda item 27: Status of the upper basin amendment document.

(Alcorn): The upper basin amendment document, as revised and sent to the Task Force for review in August, 1992, will be sent out for public review by February 15, 1993. This report is to announce the availability of the document for comment and to let everyone know that this is also being

announced in the Federal Register and local papers. The review period opens February 15 and closes April 16, 1993.

Agenda item 31: Report on the public meeting held on January 25, 1993, in Klamath Falls, to discuss the Klamath Fishery Restoration Program and the upper basin plan amendment.

(Bingham): The meeting focused on the long range plan and the upper basin amendment. We kept comments focused on the process and announced that there would be a meeting in Klamath Falls in March to hear public comment. Most comments dealt with up-river representation on the Task Force and also about the issue of when this representation would be allowed.

(Wilkinson): We were given a resource recovery plan developed by these upper basin folks. I suggest that the Task Force get informed on these issues prior to the March 30-31 meeting. It is absolutely critical that we be proactive on this. There is a lot of mutual benefit on what we might all accomplish for the resource. We did not do a good job of outreach on the first draft of the upper basin amendment.

(Elwood Miller, Klamath Tribe): I would like to say the Klamath Tribe appreciates your coming up there. We will provide input to that new document. The plan that you received comes from irrigators and may differ from what we've proposed.

Q: Apparently this is a newly published recovery plan. How does it relate to the other recovery plans developed?

(John Crawford, Klamath Basin Water Users Protective Association): I will address that question in public comment period.

(Pace): The public comment period is through April 16, 1993. Does that mean you will not consider adoption of the upper basin amendment in your March 31 meeting? When will the Task Force consider this amendment for adoption?

(Iverson): That will depend on the extent of comments received. There were many committee meetings to determine how to consider all comments received on the long range plan. Just as a point of consideration this task may be considerable and may require more money.

Agenda item 32: Report on Salmon River spring chinook broodstock capture and rearing project, followed by Task Force discussion of the FY1993 Hammel Creek chinook rearing project. (Attachment 11.)

(West): This report is to summarize the events that have led to the present situation that we have on Hammel Creek. This was considered to assist restoration of the spring chinook on the Salmon River. After much discussion and public input alternatives were considered such as hatch box use for the Salmon River recovery strategy. The Hammel Creek facility was to depend on fall chinook broodstock from the Oak Bottom weir. The CDFG decided not to operate the weir. We made a proposal to prototype two alternatives in the Environmental Assessment, specifically to use advanced rearing and hatchbox

incubation. I proposed to trap spring chinook to provide as broodstock for this rearing facility. In a nutshell, we now have the Hammel Creek Hatchery on a tributary of the Salmon River with no source of broodstock. One thing we need to do is look closely at artificial propagation proposals in the future. I view this as a tool to use if any stock is listed.

(Pace): I'd like to clarify the Klamath Forest Alliance position. Number one, a bear killed some brood fish during the first year of operation and the operators had to go back to the weir for more fish. Number two, these fish were taken from the weir which is located downstream from Wooley Creek. This could lead to a mixing of locally adapted genes. Number three, the Little North Fork facility was to fin clip all of its fish but some problems occurred in that process which complicated the clipping operation. Some of the non-marked fish were mixed with marked fish. They're not sure all fish were marked. We're very concerned but not entirely in opposition to artificial propagation. We simply stated that an environmental analysis was required by CDFG or USFWS for this activity.

(Bingham): The commercial troll industry feels that artificial propagation can be used to get us out of this situation.

(Farro): The Horse Linto Creek project has shown good success, at the same time with habitat restoration, resulting in over 100 redds this past fall. If this Task Force can't deal with this issue then we might as well not be sitting here.

(Reynolds): The salmon trollers did not approve a spring chinook rearing project and we can't modify projects without full review of the committees.

(Rohde): The spring chinook was the mainstay of indigenous people on the river, following winter. It is as much the Indians fish as anyone's and they were left out of the loop. The Task Force had agreed to pay for a fish rearing project for fall run chinook. The project was later changed to something we had not all agreed to.

(Bingham): The business left before us is to decide what to do with the money.

(Iverson): Jack raised the notion of a basinwide overall look at supplementation. I recall a letter from CDFG Director Gibbons which stated that the committee to review hatchery operations would also look at supplementation.

(Reynolds): Mitch's motion included that and now that it's been clarified the committee can work on it.

(Farro): That's what my motion addressed, I assumed CDFG would take the lead on investigating the interaction.

\*\*\* Motion \*\*\*

(West): I move to withdraw funding from the Hammel Creek project in order to utilize the funds for other projects lower down on the FY1993 work plan list.

Motion carried.

Agenda item 30: Report on 1992 Klamath River fall chinook escapement.  
(Attachment 12.)

(Reynolds): Early in the year our ocean biologists advised us that with no fishery in the ocean we wouldn't meet the escapement floor. CDFG made recommendations for in-river harvests knowing we wouldn't meet the escapement base. It turned out worse than what we thought it would turn out. The bottom line is that we didn't meet the fall escapement goal. The only bright part was that on the Klamath River side there were a lot of grilse. I believe that this gives hope for a better run in future years.

(Franklin): We experienced fairly high returns of grilse, within context of horrifying runs in past few years, however things still do not look good. According to early projections, with no fisheries, natural escapement in 1993 would be about 60,000 fish according to the early projections.

(Wilkinson): In the local Chetco fishery, there were 705 fish harvested, 24 CWT recovered were Chetco River origin and one of Winchuck River origin. In the Elk River fishery 400 fish were harvested with 25 CWT Elk River fish recovered. Some of the projections will not be available to us until after march.

(Reynolds): Fishermen are hopeful that they will be able to fish.

(Bingham): We saw a lot of undersized fish last year, and hope that the managers will take that into account.

(Pierce): On the narrative sheet for the megatable, the Yurok Tribe feels that the cover letter misrepresents the indian harvest projection. It was really 4,900 fish, so the actual harvest over the original estimate totaled only 600 fish. During the PFMC process, the tribes requested that there be no fishing at all. If PFMC decided fishing would be allowed, the Yuroks determined we'd share fish for fish with other harvesters.

Agenda item 36: Public comment.

(John Crawford, Klamath Basin Water Users Protective Association (KBWUPA): I'd like to comment on the process involving the upper basin amendment, on the ecosystem recovery plan, and on the media articles handed out here today. Regarding the articles, the notion that either farmers or fish go thirsty is not legitimate. Both will go thirsty if the drought continues neither will go thirsty if normal inflow occurs. I will provide a brief chronology of 1992 irrigation events: When we began realizing the magnitude of the drought we went to meet with George Thackeray and Doug Alcorn to discuss lower river flows. It was the first time we heard any numbers on the flow needs for fish. The fruits of those discussions were a 15,000 acre foot release. To put that in perspective, that equated to drying of 10,000 acres of Class B lands. I understand that the local fishing industry is in jeopardy. As a farmer in the basin, I can't talk to you about restoration until critical habitat has been established. During discussions last spring, the Oregon Natural Resources

Council (ONRC) filed suit against the USFWS to require designation of critical habitat and development of a recovery plan. The KBWUPA intervened on behalf of the BOR. A little while after that, Bob Rohde came to a meeting to discuss flows in the mainstem Klamath. He stated that no one had contacted the farmers to discuss the needs of downstream fish. In september of 1992 many irrigation deliveries were stopped. 47,000 acre feet of water was also allowed into the wildlife refuges. Lands were allowed to dry up, in normal years they would be irrigated through November 15. We have questions as to the results of the spring and fall releases. What was the reaction by the salmon populations? Had we adhered to FERC minimums the lake at Link River would have gone dry sometime in August. If water is needed, when is the most prudent time to release water? We would appreciate scientific answers. Regarding the ecosystem recovery plan -- it is not a habitat conservation plan, but could be. It has the ability to replace and negate the need for the upper basin amendment, however it doesn't address reintroduction of anadromous fish in the upper basin. Each and every inference in the upper basin amendment to water quality and quantity is included in the ecosystem recovery plan. The question becomes how much time, effort, and money are we willing to spend to reach the same mutual goal. If projects to restore ecosystems are underway then it may preclude federal listing on the Endangered Species list. Task Force membership is another issue that must be mentioned. It seems more practicable to unite in the ecosystem restoration plan to address the restoration needs. Regarding temperature objectives for the mainstem Klamath this is a problem that none of us can fix. Off site storage would provide colder water. Marsh habitat restoration is recommended by the USFWS recovery plan. The cost of acquisition and restoration would be astronomical. The USFWS recovery plan is a wish list that would cost hundreds of millions of dollars. Our plan recommends studies and pilot projects to prove if marsh restoration will work. I'm hopeful that the Task Force will study the plan, and when they come to Klamath Falls next month they'll be aware of this plan.

(Iverson): When we were at Klamath Falls, we were told of a plan entitled 2002, could you comment on that plan?

(Crawford): Not familiar enough on that plan to comment.

(Rohde): Can you tell us who your planners were?

(Crawford): Dr. Vogel assisted us, however many community members helped.

(Elwood Miller, Klamath Tribe): Since I was a young boy, we've talked about getting the salmon back. Today, it is my charge to restore salmon to the upper basin. We realize that the system up there is in poor condition, contrary to some of the comment you received at your public workshop last week. The Oregon Department of Environmental Quality (ODEQ) classified the Sprague River as a dead river in 1983 and according to a 1986 report by ODEQ, it has degraded since then. Ish Tishwek means place of the great fish. They've taken out some of the natural flow conditions. The system survived many thousands of years, and for people to say that things can't be put back in place the way they were, bothers me. The Klamath Tribe wants to be involved on the Task Force to get the fish back. The fish aren't gone to us, they're being blocked by dams. We realize that cleaning up the systems will

take a long time. We realize that the Compact contains a clause for protecting tribal interests but the commission has never discussed that with the Klamath Tribe. We must all work together and understand one another. The Klamath Tribe is a strong advocate for restoration of the whole system. We don't put values on things the way non-indian people place value. In our sense the wood worm has cultural value which is equal in value with the salmon. I think this Task Force would behoove itself to set up a cultural awareness workshop and see what the cultural differences are. We will continue to participate with this Task Force.

Agenda item 7; (Continued).

(Farro): We're still slightly stuck on the 0-10 point allowance or whether we give a weighting of points. In order to give us time to work on that we might want to take page A2-1 out, or at least take out the weighting. We have these options.

(Reynolds): I don't feel comfortable with these options. I have to know if it's acceptable with CDFG contracting law. You'll get complaints about the RFP no matter how you write it. But you need to tell proponents how these criteria will be weighted.

(Bingham): We realize that we need to forward this issue until the March meeting. We hope to manipulate the RFP so it's not a full display of the issue, so proponents know what the ranking criteria will be.

(Farro): On page A2-1, we propose to strike out "weighted" in all occurrences, and retain the numerical formula indicating what criteria will be used.

(Reynolds): As long as you say these are the maximum points available for these criteria.

**\*\*\* Motion \*\*\***

(Farro): I move that we adopt the RFP as corrected this morning including: 1) reduction of the two specified criteria by 5 points each, 2) inclusion of a target group criterion, 3) the changed wording in item 11 of page A1-2, of how the points will be assigned, and 3) inclusion of the language of the Act.

(Franklin): Does your motion include striking "weighted" and now using the phrase "Maximum Points" on the column heading?

(Farro): Yes and on page A1-2, Item 11, this description will reference the language of the Act as discussed this morning, but not include language like "will receive 10 points", or "will receive up to 10 points."

Motion carried.

Agenda item 33: Presentation on obtaining corporate funding for the Klamath Basin Fishery Restoration Program.

(Iverson): I would ask that this be deferred until next meeting. (Approved.)

Agenda item 34: Proposed Klamath River Instream Flow Study.

(Iverson): The long range plan recognizes the need for better information on instream flow needs of the Shasta, Scott, and Klamath Rivers. The Task Force wrote to Secretary Lujan in June, 1992, requesting an increase in flows to FERC minimum flow requirements in the Klamath River at Iron Gate. The Secretary's reply stated that there was a need for better information on instream flows. He also stated that he would direct the USFWS and the BOR to pursue getting that information. I was assigned by Bill Shake to put together a proposal for an instream flow study. Our instream flow group drafted a proposal which was reviewed by BOR and Bob Rohde, and a few weeks ago was forwarded to our regional office with the recommendation that it be conveyed to the BOR and that funding be set aside to carry it out. The work called for in the current fiscal year involves a scoping task with preliminary design and field reconnaissance. The scoping will be carried out by our flow group in Sacramento. I provided them a list of names of who should be included in the scoping effort. I recently sent a memo with this list including the TWG membership, and staff from PP&L, the North Coast Regional Water Quality Control Board, and others. I'm not sure of the funding status. I'm hoping that several people here will soon have an invitation to a scoping meeting.

Q: In the scoping, are they going to determine what type of study is necessary?

(Iverson): I believe that options for types of studies would be considered.

(Reynolds): I'd like to recommend another person to be involved, Dr. Bill Trush, a teacher at HSU.

(Iverson): I will contact him.

Q: Is there an estimate of how long it will take to complete the study?

(Franklin): You might anticipate this running for 3-5 years.

(Iverson): The decision makers on this are Bill Shake of the US Fish and Wildlife Service and Dan Fults of BOR. Their interpretation of this guidance from Lujan was that the instream flow study would focus on the reach of the river impacted by the Klamath Project. In the preliminary judgement of the instream flow guys that area would be from Iron Gate Dam to the confluence with the Scott River.

Q: Has there been any coordination with CDFG instream flow guys? Have the agencies thought about the upcoming relicensing of Iron Gate Dam and how that might result in an instream flow study.

(Iverson): I don't know who Mike Aceituno talked with but I gave him two names of the CDFG guys on the TWG.

(Hayes): They're not experts on instream flows.

Q: Would the scoping be limited to scoping the impacted areas by the Klamath Project or would they scope other areas.

(Franklin): The Hoopa Tribe will be insistent that the scoping be opened up to include these other areas.

(Crawford): Would it be appropriate to include Dave Vogel?

(Iverson): I will convey his name.

(Hillman): This issue causes me some concern. It is not new to this Task Force. You're all familiar with the letter from the Task Force requesting instream flows. The folks developing this flow study are the same folks that couldn't sign the letter because of a conflict of interest. Secondly, I'm concerned about Mr. Shake and Dan Fults' eagerness to proceed with this initiative. We all recognize it needs to take place. These two gentlemen may have been premature by proceeding with this project without consulting with other interests, particularly the Task Force and Tribes. There are other things already in motion that they may not have considered. Regarding scoping, these sessions are not always valuable if they don't really want input. I want everyone to be aware that we're not particularly thrilled at the way this initiative is going. I hope that this issue proceeds in a little more clear and open manner than in the way it has been initiated.

(Reynolds): I'm not too thrilled about this either. I've been aware of discussions on an instream flow for about a month. It seems that we should have been informed. CDFG instream flow professionals don't like IFIM and prefer to use a different method. I hope that we're not locked into that particular study technique.

(Bingham): I'd ask staff to convey the concerns expressed here by Task Force members to Mr. Shake.

(Iverson): This is still in concept form, no money has been obligated for this study.

(Bingham): This should be an agenda item for next meeting, allowing all parties to be involved in scoping.

\*\*\* Action \*\*\*

KRFRO staff will convey concerns expressed at this meeting to chairman Shake. Agenda item for March meeting -- a discussion of the scoping of issues for the proposed instream flow study by Interior. Specifically, who should be involved.

Agenda item 35: Report on Oregon Governor's Coastal Salmonids Restoration Initiative.

(Wilkinson): The Governor of Oregon held a conference November 15-17 in Newport, Oregon. The thrust of the conference was to point out that problems

were generally in the fresh water habitats. There were many timber folks there. As identified in the Governor's invitation to the conference, it was a coastal issue. The invitation stated "we hope to receive the best thinking from diverse perspectives on how to protect and restore Oregon coastal salmon steelhead and cutthroat trout. Arriving at workable strategies is critical both to avoid listing under the Federal Endangered Species Act and to achieve sustainable fish populations. The conference perspective will be broad focusing on economic and social impacts on coastal communities as well as on salmonid restoration." Information is still being collected and has not been disseminated by the Governor's staff. To characterize the results of the meeting would be premature. I think that this type of conference will be an ongoing thing. It was informative and a good clearinghouse for identifying problems.

Agenda item 37: Review of assignments, action items.

No discussion.

Agenda item 38: Identification of future agenda items:

- 1) Forrest Reynolds to provide a progress report from the committee on hatchery/wild stock interaction.
- 2) Mr. Crawford from the Klamath Basin Water Users Protective Association will be asked to brief the Task Force on the upper basin issues.
- 3) The Klamath Tribe will be asked to provide a briefing on upper basin issues.
- 4) USFWS will provide an update on the instream flow study proposal by Interior. Task Force discussion of scoping involvement will be included.
- 5) U.S. Forest Service will provide a briefing on the Klamath and Six Rivers land management plans, if available.
- 6) All Task Force entities will provide a report on proposed 1994 activities working toward achieving objectives of the long range plan.
- 7) A report from BOR-Klamath Project on their operating plan for 1993.
- 8) A report on Green Sturgeon activities by Hoopa Valley Tribe.
- 9) An evaluation report on all projects funded by the Task Force to date.
- 10) Task Force discussion of changing present cyclical RFP system. Specifically, discussion of what needs to be done and how the Service should go about soliciting bids for work identified.
- 11) Task Force review/discussion of the FY1994 RFP.
- 12) Ron Iverson will give a report on whether financial compensation for TWG services would be acceptable by Department of Interior.

13) Andy Colona will present the final report from Energy Resource Advocates.

14) Ron Iverson will make a presentation on obtaining corporate funding for the program.

(Iverson): Bill Shake wants to keep the number of agenda items low for the March and June meetings. He suggests starting the March 30 meeting at mid-day, allowing for an evening session and then continuing discussion the next day.

(Bingham): Keep in mind, we can notify staff that other items should be included up to about a month ahead of the meeting date.

Agenda item 39: Set date for summer 1993 meeting.

Meeting date set for June 15-16, 1993. Meeting location tentatively set for the Eureka area (may depend on the outcome of the Klamath Falls meeting).

Meeting adjourned.

List of attendees.

Name:

Representing:

R. L. Allen	Self
Roger A. Barnhart	USFWS-HSU Cooperative Education Extension
A. Behary	Self-Oregon troller
Judith R. Behary	Self-Oregon troller
Chip Bruss	U.S. Bureau of Reclamation
Bob Byrne	Self
Cinda Caine-Cornell	Congressman Hamburg
Joe Christian	Self
Russ Crabtree	Self
John Crawford	Klamath Basin Endangered Species Recovery Comm
Carol Davis	Oregon salmon fisherman
Gary De Salvatore	Siskiyou County Fish and Game Commission
Jana Doerr	Congressman DeFazio
Richard Dragseth	Fruit Growers Supply Company
Dan Ferreira	CCC
Rober Franklin	Hoop Valley Tribe
Lucie Giampauli	LWVCC
Guy Haas	Curry Coastal Pilot
John Hayes	California Department of Fish and Game
Jean Kasser	Port of Brookings/Harbor Committee
Chuck Lane	USFWS-Trinity River FRO
Joy Lara	Self
Gerald LaRue	League of Voters
Gary Lewis	Port of Brookings Fisheries Committee
Walt Leattuse	Self
Irel D. Lowe	OSCF
Rocky McVay	Self
Elwood H. Miller	Klamath Tribe
Jim Ostrowski	Calif. Licensed Forester's Association
Felice Pace	Klamath Forest Alliance
David Peltier	Self
Cersee Ramp	Oregon South Coast Fishermen
Dick Schilz	Self
Fred Schutt	Port of Brookings/Harbor
Lyle T. Timm	Oregon South Coast Fishermen
Jim Waldvogel	Sea Grant Advisor
Jim Welter	Klamath Management Zone Coalition
Desma Williams	USBIA
Ron Wimberley	Self

**FINAL AGENDA FOR THE MEETING OF THE  
KLAMATH RIVER BASIN FISHERIES TASK FORCE  
FEBRUARY 3-4, 1993, BROOKINGS, OREGON**

**February 3, 1993:**

**9:00 am** Convene public meeting

1. Discussion/adoption of agenda.
2. Approval of minutes from June 15-17, 1992, meeting.
3. Approval of minutes from November 4-5, 1992, meeting.

**9:15** Political/legislative update:

4. Greetings from Congressman Hamburg.
5. Update on Clinton administration appointments. (Shake, Holder, McInnis)
6. HR 427, CVP Reform Act. (Bingham)

**10:00** 7. Report from ad hoc committee to develop recommendations for target employment group incentive points. (Bingham)

**10:45** Break

**11:00** 8. Report from the Stock Identification Committee Chair. (Barnhart)

**11:30** 9. Report from Technical Work Group Chair on development of FY1994 Request For Proposals. (West)

**12:00** Lunch

**1:00** 10. Public comment period.

**1:30** 11. Discussion of KRFR's role in preparing proposals for additional funding.

**2:00** 12. Action: Task Force policy for target employment group incentive points.

13. Action: Task Force decision on the adequacy of the FY1994 Request For Proposals.

14. Action: Task Force policy for KRFR staff role in proposal preparation and submittal.

**2:30** Break

**2:45** 15. Discussion of Newsletter objectives -- to report the status of the restoration program or to sway public opinion.

- 3:15 16. Report from Klamath River Fishery Resource Office (KRFRO) on investigation of financial compensation for services provided by Technical Work Group (TWG) members. (Iverson)
- 3:30 17. Discussion of local Fish and Game Commissions -- their role in the restoration program. (De Salvatore)
- 3:50 18. Public comment period.
- 4:20 19. Action: Task Force recommendation on the role of the quarterly newsletter.
20. Action: Task Force recommendation on financial compensation for Technical Work Group or committee members.
21. Action: Task Force recommendation on involving county fish and game commissions.
22. Action: Task Force discussion and appointment of a representative to the Shasta Valley Coordinated Resource Management Planning board.
- 5:00 Adjourn meeting for the day.

February 4, 1993

- 8:00 Reconvene meeting. Complete unfinished business from previous day, if necessary.
- 8:15 23. Comment by Klamath Forest Alliance on new State Board of Forestry forest practice rules, with special reference to rules for "Sensitive Watersheds" and "Water and Lake Protection Zones." (Pace)
- 8:45 24. Report from Technical Work Group Chair on development of recommended streamside protection measures for timber harvesting activities. (West)
- 9:30 Break.
- 9:45 25. Public comment on preceding agenda items.
- 10:00 26. Action: Task Force recommendation on streamside protection measures developed by the Technical Work Group.
- 10:15 27. Status of the upper basin amendment document. (Alcorn)
- 10:20 28. Discussion of revised draft annual status report for Fiscal Year 1992. (Alcorn)
- 10:30 29. Report on the Trinity River mainstem fish habitat improvement plan. (Stokely)

- 11:00 30. Report on 1992 Klamath River fall chinook escapement. (Reynolds)
- 11:20 31. Report on the public meeting held on January 25, 1993, in Klamath Falls, to discuss the Klamath Fishery Restoration Program and the upper basin plan amendment. (Shake)
- 12:00 Lunch
- 1:00 32. Report on Salmon River spring chinook broodstock capture and rearing project, followed by Task Force discussion of the FY1993 Hammel Creek chinook rearing project. (West)
- 1:50 33. Presentation on obtaining corporate funding for the Klamath Basin Fishery Restoration Program. (Iverson)
- 2:00 Break
- 2:15 New Business:
34. Proposed Klamath River Instream Flow Study. (Iverson)
35. Report on Oregon Governor's Coastal Salmonids Restoration Initiative. (Wilkinson)
- 3:15 36. Public comment period.
- 3:45 37. Review of assignments, action items.
38. Identification of future agenda items.
39. Set date for summer 1993 meeting.
- 4:15 Adjourn meeting.

**CENTRAL VALLEY PROJECT IMPROVEMENT ACT****Public Law 102-575, Title 34***The Story Behind the Law*

In one of its last actions of the session, the 102nd Congress passed multipurpose water legislation which was signed into law October 30, 1992. Previously referred to as H.R. 429, Public Law 102-575 contains 40 separate titles providing for water resource projects throughout the West. Title 34, the Central Valley Project Improvement Act, mandates changes in management of the Central Valley Project (CVP), particularly for the protection, restoration, and enhancement of fish and wildlife.

*Ten Major Areas of Change*

- ✓ 800,000 acre-feet of water dedicated to fish and wildlife annually;
- ✓ Tiered water pricing applicable to new and renewed contracts;
- ✓ Water transfers provisions, including sale of water to users outside the CVP service area;
- ✓ Special efforts to restore anadromous fish population by 2002;
- ✓ Restoration Fund financed by water and power users for habitat restoration and improvement and water and land acquisitions;
- ✓ No new water contracts until fish and wildlife goals achieved; no contract renewals until completion of an Environmental Impact Statement; terms reduced from 40 to 25 years with renewal at the discretion of the Secretary of Interior;
- ✓ Installation of the temperature control device at Shasta Dam;
- ✓ Implementation of fish passage measures at Red Bluff Diversion Dam;
- ✓ Firm water supplies for Central Valley wildlife refuges; and
- ✓ Development of plan to increase CVP yield.

### *What Happens First*

The Bureau of Reclamation is developing interim guidelines for initial efforts to implement Title 34. Many provisions of the Act must be preceded by completion of a comprehensive EIS evaluating the impacts of Title 34 and the impacts of contract renewals.

### *Act to Address a Wide Range of Goals*

Key legislated purposes of Title 34 are:

- ✓ To protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California;
- ✓ To address impacts of the CVP on fish, wildlife, and associated habitats;
- ✓ To improve the operational flexibility of the CVP;
- ✓ To increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation;
- ✓ To contribute to the State of California's interim and long-term efforts to protect the San Francisco Bay/Sacramento-San Joaquin Delta Estuary;
- ✓ To achieve a reasonable balance among competing demands for use of CVP water, including the requirements of fish and wildlife, agricultural, municipal and industrial, and power contractors.

### *For More Information*

Reclamation welcomes your participation in the implementation process. For current information on Title 34, please call the "Grapevine" at 800-742-9474 and enter 208. Leave your name and address, and we will place you on our mailing list for public involvement activities. Copies of P.E. 102-575 can be obtained by calling the Public Affairs Office at (916) 978-4919.

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Item 8

SALMON AND STEELHEAD POPULATIONS OF THE  
KLAMATH-TRINITY BASIN

Stock Identification Committee Report to  
Klamath River Task Force  
February 1993

In June 1991 the Klamath River Stock Identification Committee was formed by the Klamath River Task Force with the assignment to examine the list of salmon and steelhead stocks presented in the 1991 Klamath River Long Range Plan for Fishery Restoration, to evaluate the rationale for identifying these as discrete stocks, to review and update information on these stocks, and to identify information needs regarding these stocks.

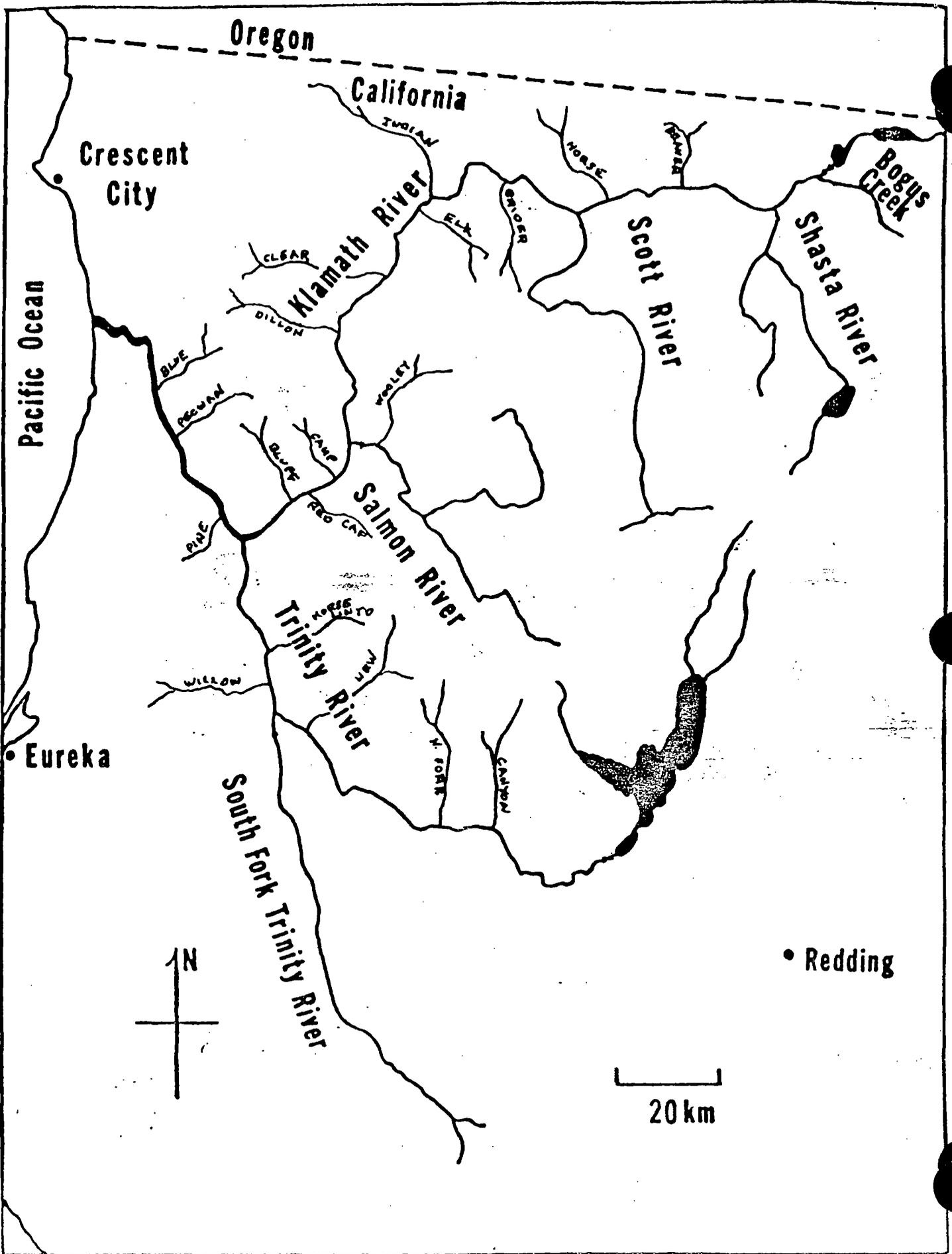
The term "stock" has been used in many ways to define groups of fish - broadly to define a species, less broadly to define units within a species (usually called races), and then often smaller units or populations and even sub-populations. Ricker (1972) explained that fish stocks probably have genetic individuality. The use of genetically identifiable characters when referring to a group of fish as a stock should be useful for managers because much vagueness in selection criteria is eliminated (Booke 1981). The Committee could not arrive at a consensus for a working definition of "stock" for its assignment and opted instead to use the metapopulation/breeding population concept. This concept originated in terrestrial conservation biology and is a useful concept because it takes into account the spatial distribution of animals and their reproductive behavior which results in varying degrees of genetic interchange among groups. This concept can be applied to anadromous salmonid populations with success when there is adequate information available on genetic character, degree of isolation or conversely amount of straying, time and location of spawning, and type and location of habitat used for spawning, rearing, and holding.

A metapopulation consists of a group of sub-populations which are geographically located such that there is likely to be, over time, genetic exchange between sub-populations. The metapopulation, made up of several sub-populations which are genetically similar is a gene conservation group. The metapopulation is the unit which can be identified as having persisted through time. The sub-populations within the metapopulation individually may persist for shorter lengths of time. However, long term potential and persistence of the metapopulation depends on the continued existence of sufficient sub-populations. As such there is an advantage to having many sub-populations (breeding populations) to aid in long term survival of the metapopulation - say over 500 years. For salmon and steelhead, strong homing to discrete spawning grounds identifies breeding populations. Natural straying insures a flow of genes between breeding populations which is valuable for maintaining genetic diversity, insuring long term survival of very small breeding populations, and for recolonizing certain areas. For various reasons, a breeding population of salmon located on one tributary may go extinct, but neighboring breeding populations can recolonize the tributary over time, through straying. The metapopulation, then, is composed of an interacting system of local breeding populations that over time suffer extinction and are recolonized from within the geographic region covered by the metapopulation.

If only few breeding populations remain, probably the dynamic balance between extinction rate and recolonization rate has been lost, and the entire metapopulation is then in danger of extinction.

The natural genetic material in a metapopulation is valuable to an unknown degree. We do not know what adaptive characteristics will be needed in the next 500 years. Each breeding population is a significant element of the metapopulation and impacts which would hasten the loss of a breeding population should be avoided. A primary objective of restoration should be to reestablish or maintain the metapopulation demography: the maintenance of natural genetic diversity, the allowance of gene flow among sub-populations, and the continuance of natural evolutionary processes. Restoration practices involving interim artificial propagation of anadromous salmonids should be carefully scrutinized in this regard. One danger to be aware of is the possible genetic swamping of unique breeding populations of fish by continuous large releases of hatchery fish. Conversely, viable populations of fish returning to the hatchery each year do have value because they probably have genetic material valuable to the long term survival of certain metapopulations.

Based on the information available to the Committee, a list of breeding populations and metapopulations for spring and fall chinook salmon, coho salmon, and steelhead was compiled for the Klamath-Trinity basin. Attributes or criteria considered were geographic location, timing of upriver migration of adults, time of spawning, timing of outmigration juveniles, amount of straying, hatchery stocking history, and reported genetic similarities or differences. Some differences as to population groups remain among the members of the committee. There was a consensus that for several groups more information is required to make good judgment decisions. We believe that in light of the depressed status of Klamath River stocks it is best to err on the conservative side in management decisions. The list represents a compromise, is not unalterable, and changes will likely be incorporated as more data become available.



Because of the amount of information on chinook salmon in the Klamath basin the committee was able to designate breeding populations and metapopulations for both fall run chinook and spring run chinook salmon. Selections of these populations tend to be conservative so that fish groups will be protected.

Fall Chinook

Breeding Populations - Klamath River

1. Irongate Hatchery and Bogus Creek
2. Upper Main Stem Klamath River (Irongate Hatchery to Scott River)
3. Shasta River
4. Scott River
5. Salmon River
6. Upper Middle Klamath Tributaries  
(Clear, Beaver, Elk, Indian, Horse, Grider creeks and lesser tributaries)
7. Lower Middle Klamath River tributaries  
(Red Cap, Camp creeks and lesser tributaries)
8. Lower Klamath River tributaries  
(Pine Creek, Pecwan Creek, Blue Creek and lesser tributaries)

Breeding Populations - Trinity River

9. Upper mainstem Trinity River to Canyon Creek including Trinity River hatchery and tributaries in that reach.
10. Mainstem Trinity River from confluence with Canyon Creek to South Fork Trinity River - reach includes Canyon Creek, North Fork Trinity River, and New River.
11. South Fork Trinity River.
12. Mainstem Trinity River from South Fork to confluence with Klamath River - including tributaries in that reach (Willow Creek, Horse Linto Creek, Hoopa Valley Reservation tribs.).

Metapopulations - Klamath/Trinity Rivers

- A. Irongate hatchery, Bogus Creek, Shasta River and the upper main stem Klamath River from Irongate to mouth of Scott River. (Breeding populations 1,2,3)
- B. Scott River, Salmon River, the mainstem Klamath River from Scott River to mouth of Trinity River including all tributaries listed above in that reach. (Breeding populations 4,5,6,7)
- C. Mainstem Klamath River from mouth of Trinity River to mouth of Klamath River including tributaries Pine, Pecwan, and Blue creeks; the lower Trinity River from mouth up to confluence with South Fork Trinity including tributaries; South Fork Trinity River. (Breeding populations 8,12)

- D. Mainstem Trinity River, from Trinity River hatchery down to confluence of South Fork and tributaries in that reach named above. (Breeding populations 9,10,11)

NOTE: Two designated metapopulations were assigned without consensus of the entire committee:

1. Metapopulation A - Shasta River fall chinook salmon as a breeding population or a separate metapopulation. Based on similar run timing, outmigration patterns and genetic characteristics the Shasta River fall chinook is shown here as one breeding population in the larger upper Klamath River metapopulation.
2. Metapopulation C - Based on late run-timing of adult chinook into tributaries of the lower Trinity River, the lower Trinity River is combined with the lower mainstem Klamath below the confluence of the Trinity River. Tributaries of the lower Klamath River are also late run streams. Blue Creek is an anomaly because of its genetic dissimilarity to other Klamath populations. The South Fork Trinity River was included in this metapopulation until further information is available on this major Trinity River tributary.

Spring ChinookBreeding Populations - Klamath River

1. Salmon River
2. Wooley Creek

Breeding Populations - Trinity River

3. Upper mainstem Trinity River and Trinity River hatchery
4. North Fork Trinity River
5. Canyon Creek
6. New River
7. South Fork Trinity River

Metapopulations

- A. Klamath River (Breeding populations 1,2)
- B. Trinity River (Breeding populations 3,4,5,6,7)

NOTE: Genetic studies on Trinity River hatchery, New River, South Fork Trinity River, and Salmon River spring chinook stocks are underway and should provide information helpful to delineation of populations.

COHO SALMON

Very little information is available on coho salmon in the Klamath River system. Based on the history of introductions and intrabasin transfers the committee categorized coho as being one metapopulation for the entire system. Small numbers of juvenile coho have been reported in many tributaries throughout the basin, but particularly from tributaries in the lower Klamath such as Hunter and Terwer creeks.

Information gaps identified by the committee are:

1. The existence of a remnant native Klamath River coho - probably will require DNA analysis.
2. Current straying rate of hatchery originated coho salmon into system tributaries.

## STEELHEAD

Based on their time of entry into the Klamath system and to some extent where they hold after entry, there are at present three major groups or races of maturing adult steelhead; the division is not based on spawning time or location because there may be considerable overlap for the groups.

1. Spring run steelhead: these fish enter the Klamath system from May-July (often termed summer steelhead). They tend to migrate to the upper reaches of cool water tributaries where they hold until spawning season which probably occurs from December-February.
2. Fall run steelhead: these fish enter the Klamath system from August-October and probably disburse widely throughout the system, spawning from February-April in many different tributaries. Spawning time can overlap with spring run steelhead early and winter-run steelhead late.
3. Winter run steelhead: these fish probably enter the Klamath system from November-February and spawn relatively soon after entry. Lower river tributaries are probably used for spawning only by winter run steelhead because these tributaries are not accessible earlier due to low flows and sediment accumulation at their mouths (exception is Blue Creek). However, winter run steelhead could easily migrate to upriver areas and spawn in widely distributed areas. Spawning period probably extends from January-April.

The stock identification committee feels that peak runs of steelhead now occurring in the Klamath system may well be remnants of a much larger more protracted run of fish which dominated the system before man's activities interfered sufficiently to reduce the population size and extirpate portions of the run. Research on Rogue River steelhead (Everest, Oregon Dept. Fish and Wildl.) has revealed that spring run and fall run steelhead are related in that both groups show a half-pounder life history (96-97% of all adults). Winter run steelhead may be genetically different but more information is needed.

Because considerable information on spring run steelhead was available coupled with their unique characteristic of summering over in upper tributary reaches, the committee did designate breeding populations and metapopulations for this race.

### I. Spring run steelhead ("summer steelhead") - Breeding Populations

#### A. Klamath River System

1. Indian Creek
2. Elk Creek
3. Clear Creek
4. Dillon Creek
5. Salmon River
6. Wooley Creek
7. Red Cap Creek
8. Bluff Creek

**B. Trinity River System**

- 9. Canyon Creek
- 10. North Fork Trinity River
- 11. New River
- 12. South Fork Trinity River

**II. Summer Steelhead - Metapopulations**

- A. Klamath River Metapopulation (Breeding populations 1,2,3,4,5,7,8)
- B. Trinity River Metapopulation (Breeding populations 9,10,11,12)

Because of a lack of information on fall run and winter run steelhead the committee could not identify discrete breeding populations and as a result was hesitant to distinguish metapopulations. The Klamath-Trinity River winter steelhead may be a separate metapopulation.

**Information Gaps - Steelhead:**

1. Spawning location and spawn timing for different river entry groups.
  - a. Do spring run steelhead tend to spawn only with spring run steelhead in the tributaries where they have resided over summer?
  - b. Do winter run steelhead spawn with fall run fish to a considerable degree?
2. What is the status of winter run steelhead?  
Population size, spawn location and timing, meristic characters.
3. Assessment of genetic differences between three steelhead groups - may require DNA analysis.

**Stock Identification Committee:**

Roger A. Barnhart, Chairman  
 Jerry Barnes  
 Graham Gall  
 David Hankin  
 Paul Hubbell  
 Matt Longenbaugh  
 Eric Loudenslager  
 Mike Maahs  
 Don McIsaac  
 Barry McPherson  
 Mike Orcutt  
 Jack West

## Related Literature

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AMERICA

## United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

January 22, 1993

## Memorandum

TO: Technical Work Group members

FROM: Assistant Project Leader, Klamath River FRO  
Yreka, California

SUBJECT: Draft Fiscal Year 1994 Request For Proposals

Attached, please find the 2nd draft of the FY1994 RFP. Jack West will present this to the Task Force at their February 3-4 meeting in Brookings, Oregon. You will note some significant changes from the first draft. If you have further comment, write or telephone this office.



Doug Alcorn

Attachments

Eastside Federal Complex  
911 N.E. 11th Avenue  
Portland, OR 97232-4181

January 22, 1993

To: All parties interested in fishery restoration work for the Klamath Restoration Program:

The U.S. Fish and Wildlife Service invites proposals for actions to restore anadromous fish stocks of the Klamath River Basin, California. Within certain limitations, the U.S. Fish and Wildlife Service may provide funds for this work to public agencies, nonprofit organizations, Indian tribes, and individuals.

Fishery restoration work will be a part of the Klamath River Basin Conservation Area Fishery Restoration Program, a twenty-year program authorized by Congress in 1986. The Klamath Restoration Program is administered by the U.S. Fish and Wildlife Service, with guidance provided by the Klamath River Basin Fisheries Task Force (Task Force), and a Technical Work Group which are composed of representatives from resource agencies, tribes, and interest groups.

A long-range plan has been approved for the Klamath Fishery Restoration Program. In addition, the Klamath River Basin Fisheries Task Force and Technical Work Group have begun a process of Klamath River subbasin planning. Priority objectives have been identified for each subbasin and are provided in Table 1. Proposals are invited for work directed toward achieving these priority objectives, and for other related work that meets the goals and policies of the Klamath Fishery Restoration Plan (Appendix 5), or for work that implements program activities (Appendix 6) as outlined in the Klamath Act. Proposals must be prepared in the format outlined in the enclosed "Format For Project Proposals" (Appendix 1).

The "Klamath River Basin" is defined here to mean the anadromous fish habitats of the basin, excluding the Trinity River. The Trinity River is excluded here because fish restoration in that subbasin is funded through a separate restoration program administered by the Bureau of Reclamation.

The California Department of Fish and Game (CDFG) also has authority to fund fishery restoration work in the Klamath River Basin. Their request for proposals was released to the public on XXXXXXXX, 1993. Parties who are applying for California Department of Fish and Game funds need not apply under this request for proposals to be considered for both fishery restoration funding sources.

Parties interested in submitting proposals to accomplish work under this program should submit them to the following address no later than April 14, 1993:

U.S. Fish and Wildlife Service  
Klamath River Fisheries Resource Office  
P.O. Box 1006  
Yreka, CA 96097-1006

After proposals are received they will be reviewed and ranked by the Technical Work Group (please see ranking criteria, Appendix 2), then selected by the Task Force for funding in Fiscal Year 1994.

Sincerely,

Michael M. Bowen  
Senior Contract Specialist

Enclosures

Table 1: Fiscal Year 1994 priority objectives for Klamath River project proposals by Subbasin (X denotes high priority objective, XX denotes most critical objective).

Objective	Basinwide	Mainstem	Lower Klamath	Mid. Klamath	Upper Klamath	Salmon	Scott	Shasta
A. Hatchery Practices	XX	XX	XX	XX	XX	XX	XX	XX
B. Foster CRMP	XX	XX	XX	XX	XX	XX	XX	XX
C. Water Quality		XX	X	X	XX	X	X	XX
D. Public ed/involve			X	X	X	XX	XX	XX
E. Restore Fish Stocks	XX	XX	XX	XX		XX	XX	XX
F. Restore Riparian			XX	X		XX	X	XX
G. Protect Habitat			XX	XX	X	X	X	X
H. Fish Passage		X	XX	X	X		X	X
I. Restore Habitat			XX	X	X	X	X	X
J. Control Erosion			XX	XX			XX	
K. Flow Adequacy		XX			XX			
L. Enforce Law/Regs.			XX	XX				
M. Determine Flow Needs							XX	X
N. Restore Estuary		XX						
O. Restore Watersheds						XX		
P. Conserve Water					XX			
Q. Develop Cooperation			X					
R. Protect Sturgeon		X						

Definitions of subbasin planning units and a glossary of objectives are on the following page.

### Definition of Subbasin Planning Units

Mainstem	The estuary and the main river all the way to Klamath Lake.
Lower Klamath	All tributaries/watersheds from the mouth to the confluence with the Trinity River.
Mid Klamath	All tributaries/watersheds from the Trinity River to Iron Gate Dam.
Upper Klamath	All tributaries/watersheds from Iron Gate Dam to Link River Dam.
Salmon	The Salmon River watershed.
Scott	The Scott River watershed.
Shasta	The Shasta River watershed.
Basinwide	The Klamath River watershed, or activities that encompass more than one subbasin.

### Glossary of Objectives

- A. Hatchery Practices - Investigate the effectiveness of artificial propagation methods and the impacts of artificial propagation on native fish stocks.
- B. Foster CRMP - Foster Coordinated Resource Management Plan development.
- C. Water Quality - Protect/Restore high water quality.
- D. Public ed/involve - Provide landowner and/or public education and workshops, encourage involvement.
- E. Restore Fish Stocks - Protect/restore depleted native fish stocks through artificial propagation.
- F. Restore Riparian - Riparian and/or wetland protection or restoration.
- G. Protect Habitat - Protect high quality habitat.
- H. Fish Passage - Correct fish passage problems.
- I. Restore Habitat - Restore damaged habitats.
- J. Control Erosion - Erosion prevention/control measures.
- K. Flow Adequacy - Promote adequate water flow for all anadromous species and life stages.
- L. Enforce Law/Regs. - Improve compliance with existing environmental laws/regulations.
- M. Determine Flow Need- Determine instream flow needs/optimize flows.
- N. Restore Estuary - Investigate and restore estuary habitat.
- O. Restore Watersheds - Protect/restore watershed condition.
- P. Conserve Water - Initiate water conservation measures.
- Q. Develop Cooperation - Encourage cooperation of affected interests.
- R. Protect Sturgeon - Protect/restore green sturgeon.

## FORMAT FOR PROJECT PROPOSALS

1. Project Title.

2. Proposer.

Identify who is submitting this proposal (agency, tribe, etc.) and be sure to identify the contact person.

3. Program Information.

Summarize information about the problem or opportunity addressed by your proposal.

4. Background.

Provide enough background information to bring reviewers up-to-date on the need for this proposal. This will assist the technical review panel in ranking your proposal.

5. Project Objective(s).

State the objectives of your proposal in complete sentences. It is important that your project addresses the objectives, goals, and tasks as listed in Table 1, Appendix 5, and Appendix 6. (Remember: "goals" are general statements, "objectives" are measurable tasks that can be quantified.)

6. Tasks.

State the specific actions which must be taken to achieve the project objectives.

7. Methods.

If your proposed methods utilize specific techniques, equipment or procedures, then these methods should be identified and described.

8. Specific Work Products.

Identify specific deliverable results of the project. Normally, project managers will be required to submit quarterly, annual, and final project reports.

**9. Project Duration and Schedules.**

- a. Identify project duration from the beginning of project through submittal of a final report. Note that duration of a project funded from the Fiscal Year 1994 appropriation may extend beyond the end of that fiscal year.
- b. Identify points at which decisions could logically be made to modify or terminate the project.
- c. Provide a detailed project schedule to include:
  - Initiation of project.
  - Completion date for each milestone or major task.
  - Submittal dates for reports. (Usually 15 days after end of quarter and 90 days after completion of project.)

**10. Permits.**

You will be responsible for securing all applicable permits for your project. Permits may include, but not be limited to, a streambed alteration agreement from California Department of Fish and Game, and a landowner access permit.

Necessary permits and landowner permission will be required prior to finalization of an agreement. Evidence of permits and landowner permission must be provided to the U.S. Fish and Wildlife Service, Klamath River Fishery Resource Office no later than November 30, 1993.

**11. Employment of Targeted Groups.**

The Federal law authorizing the Klamath Fishery Restoration Program encourages the employment of unemployed members of certain groups affected by the decline of anadromous fisheries. These groups are:

- Commercial fishermen.
- Indians
- Other persons whose livelihood depends upon Area fishery resources.

*comply w/ this section of the Act*  
If you will be employing targeted groups, please explain how you will guarantee their employment during implementation of your project.

**12. Volunteer Contributions.**

The Klamath Act recognizes in-kind contributions by volunteers as contributions to the Klamath Restoration Program. Describe how your proposal would make use of volunteers.

**13. Matching Funds.**

The Task Force realizes that we can make our restoration dollars go a lot farther if other sources are found to match our investments. Seek matching funds and show these in your proposal.

**14. Budget.**

Provide a detailed budget for the project for Fiscal Year 1994. Detail how matching or in-kind contributions are determined. In-kind contributions may include donated labor, materials, or equipment. Matching funds are contributed to the project from other funding sources. Successful proposals will be funded from Fiscal Year 1994 appropriations only, and funding in future fiscal years is expected to be subject to annual competition. The detailed budget should include line entries as described in the attached Budget Estimation Worksheet (Appendix 4).

The budget portion of your proposal will be carefully reviewed. Be sure that all costs are presented as described above.

**PROPOSAL FORMAT:**

Complete the attached summary sheet (Appendix 3) and include it as a cover for your proposal. If you have letterhead stationery, please use it only on the transmittal letter for the package. You must follow the format outlined in the following section titled Format For Project Proposals, or your project may be rejected. Use separate pages for the cover and budget sections of the proposal and for supporting material such as maps, pictures, and drawings. A map of the project site and surrounding area should be provided in the supporting material.

Proposals and supporting material must be printed on 8.5x11 inch white paper.

Be brief. Keep it short and to the point.

**ADDRESS YOUR AUDIENCE:**

Many people will be reviewing this proposal, their levels of expertise about your particular project will vary. Try to anticipate and answer their questions.

## TECHNICAL WORK GROUP RANKING CRITERIA

The Technical Work Group will use these weighted criteria to rank proposals:

<u>Criterion:</u>	<u>Weighted points</u>
Contribution to Restoration Program goals and policies	25
Benefits to priority fish species and stocks	10
Ability of the proposer to successfully implement the proposed project	10
Scientific validity, technical quality, development of new concepts or information	25
Compatibility with other elements of the Restoration Program	10
Cost-effectiveness, including: pricing, resource benefits/cost, and leveraging of funds -- willingness of the proposer to contribute funds or in-kind goods/services	20

**KLAMATH RIVER FISHERY RESTORATION PROGRAM  
FISCAL YEAR 1994  
PROJECT SUMMARY SHEET**

USFWS PROJECT NO. \_\_\_\_\_

CDFG PROJECT NO. \_\_\_\_\_

1. PROPOSER/ORGANIZATION:

2. ADDRESS:

3. CITY:

4. STATE:

5. ZIP CODE:

6. CONTACT PERSON:

7. TELEPHONE NUMBER: Office -

Home -

8. PROJECT TITLE:

9. FUNDING REQUESTED:

10. OBJECTIVE:

11. SPECIES BENEFITTED:

12. PAST COOPERATOR: YES / NO

**ESTIMATED BUDGET WORKSHEET  
PROPOSAL NAME  
FISCAL YEAR**

**PERSONNEL COSTS**

<u>Level of Staff</u>	<u>Number of Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
-----------------------	----------------------------	------------------------	--------------

Staff Benefits at \_\_\_%

**TOTAL PERSONNEL COSTS** \_\_\_\_\_

**MATERIALS AND SUPPLIES\***

- Construction materials
  - Construction supplies
  - Tools and Instruments
  - Fish tagging/marketing materials
  - Fish cultural supplies
  - Fish food
  - Seed, plants and fertilizer
  - Safety items and clothing
  - Other (list below)
- 

**TOTAL MATERIALS AND SUPPLIES** \_\_\_\_\_

**OPERATING EXPENSES\***

- Equipment lease/rental
  - Transportation costs
  - Subcontractor costs\*\*
  - Building/storage rental
  - Fuel costs
  - Camp expenses
  - Photographic supplies
  - Printing and duplicating
  - Other (List below)
- 

**TOTAL OPERATING EXPENSES** \_\_\_\_\_

Administrative overhead at \_\_\_%

**MATCHING OR IN-KIND CONTRIBUTIONS**

< \_\_\_\_\_ >

**TOTAL ESTIMATED BUDGET**

\_\_\_\_\_

**TOTAL FUNDING REQUEST**

\_\_\_\_\_

\* Detail is to be provided wherever possible.  
 \*\* Detail must be provided. Subcontractors estimates can be attached.

## Instructions for Estimated Budget

### PERSONNEL COSTS

Please include each level of staffing necessary to complete the proposed project, the number of hours for each level, the hourly rate and an extended total. For example:

<u>Level of Staff</u>	<u>Number of Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
Administrator	32	15.00	480.00
Laborer	336	6.50	<u>2,184.00</u>
Total			2,664.00
Staff Benefits at <u>26</u> %			<u>693.00</u>
<b>TOTAL PERSONNEL COSTS</b>			<b><u>3,357.00</u></b>

### MATERIALS AND SUPPLIES

Provide as much detail as possible. For example:

Construction materials:

Boardfeet of lumber at cost per

Cubic yards of gravel at cost per

Fish food:

Number of pounds at cost per

### OPERATING EXPENSES

Operating expenses are to be done in the same manner. For example:

Equipment lease/rental:

Dump truck -- two days at cost per day

Apply administrative overhead on a percentage basis which covers the costs incurred administering the project.

It is important that this format be utilized. Projects receiving funds will be required to present for billing the Department for reimbursement.

# **GOALS AND POLICIES OF THE KLAMATH FISHERY RESTORATION PROGRAM**

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## **GOALS:**

The following goals are to provide the Task Force its long-range direction in accomplishing the restoration of the Klamath River Basin anadromous fish populations.

- I. Restore, by the year 2006, the biological productivity of the Klamath River Basin in order to provide for viable commercial and recreational ocean fisheries and in-river tribal (subsistence, ceremonial and commercial) and recreational fisheries.
  - II. Ensure that the Klamath Fishery Management Council devises harvest regulation recommendations that will provide for viable commercial, recreational and tribal fisheries.
  - III. Recommend to the Congress, state legislatures and local governments the actions each must take to protect the fish and fish habitats of the Klamath River Basin.
  - IV. Inform the public about the value of anadromous fish to the Klamath River region and gain their support for the Restoration Program.
  - V. Promote cooperation relationships between the lawful users of the Basin's land and water resources and those who are primarily concerned with the implementation of the Restoration Plan and Program.
-

## **POLICIES:**

Proposals should be directed to implementing these policies. The six categories of policies are: Habitat Protection, Habitat Restoration, Fish Protection, Fish Restoration, Education/Communication, and Program Coordination and Planning.

### **HABITAT PROTECTION**

#### **Policies for Timber Harvesting**

**Objective:** Protect stream and riparian habitat from potential damages caused by timber harvesting and related activities.

- o Instigate local workshops on erosion control and stream and riparian protection methods for timber operators and foresters.
- o Develop salmonid habitat protection and management standards and guidelines.
- o Develop educational materials addressing stream protection measures for use by foresters and timber operators.
- o Promote communication between timberland managers and salmon and steelhead users.
- o Foster Coordinated Resource Management and Planning in mixed ownership watersheds with important fish habitat (e.g., Blue Creek, Beaver Creek, French Creek and others).
- o Incorporate fish habitat and population data into clean water assessments.
- o Evaluate watershed and riparian conditions in logged areas and monitor recovery.

#### **Policies for Mining Activities**

**Objective:** Ensure that mining activities do not cause habitat damage.

- o Suction Dredge Mining
  - oo Communicate with miners about fish habitat needs.
  - oo Evaluate the impact of concentrated dredging activity on fish.
  - oo Evaluate effects of the larger suction dredges (6 to 10 inch) on salmonid habitat.
- o Other Mining practices (gravel, lode, placer)
  - oo Promote education of miners.

- oo Abate water quality and habitat problems associated with abandoned mining operations.
- oo Promote communication between miners and salmon and steelhead users.

### **Policies for Agriculture**

**Objective: Protect and improve the water quality of stream habitat from adverse agricultural practices.**

- o Seek opportunities for farmers and ranchers to reduce their impact on stream water quality:
  - oo Instigate local workshops and seminars with local Resource Conservation Districts, County Farm Advisor, and others.
  - oo Encourage "best management practices" to reduce the amounts of animal waste and fertilizers entering watercourses.
  - oo Promote the fencing of riparian areas in vulnerable sites.
  - oo Explore conservation easements to protect riparian zones.
  - oo Promote communication between the farmers and ranchers and the salmon and steelhead users.
- o Monitor and assess stream quality to evaluate problems related to agricultural practices, particularly in the Shasta River.

### **Policies for Stream Diversion**

**Objective: Protect the instream flow needs of salmon and steelhead in streams affected by water diversions.**

- o Involve landowners in the Scott and Shasta Valleys in developing solutions to the instream flow and water quality problems of the Scott and Shasta Rivers and tributaries.
- o Develop an inventory of water conservation practices for agricultural users in the basin, and seek their implementation (e.g., through workshops, seminars, County Fair displays).
- o Promote more efficient water delivery practices.
- o Support effective screening of all diversions.
- o Promote communication between water users and salmon and steelhead users.

### **HABITAT RESTORATION**

## Policies for Habitat Restoration

- o Hold training sessions to teach about restoration techniques and opportunities.
- o Scott River Restoration:
  - oo Improve stream flows and restore riparian zones.
  - oo Prioritize actions to control erosion of decomposed granite sands.
  - oo Control erosion from road construction and maintenance.
- o Salmon River Restoration:
  - oo Assess erosion problems.
  - oo Implement measures to stabilize sub-basins.
- o Lower Klamath Restoration:
  - oo Take measures to avoid soil loss.
  - oo Evaluate erosion factors.
  - oo Make Pine Creek a model watershed through implementing erosion control and other fisheries restoration measures.
- o Middle Klamath Restoration:
  - oo Expand cooperative efforts in mixed ownership drainages having decomposed granite soils, such as Beaver Creek and Cottonwood Creek to control erosion.
  - oo Study feasibility of removing fish migration barriers at the mouths of middle Klamath tributaries such as Humbug Creek.
  - oo Provide fish passage over the diversion structure on Horse Creek.
  - oo Secure adequate flows for fish in drainages such as Seiad and Cottonwood Creeks.
- o Install and Maintain Fish Screens:
  - oo Evaluate fish rescue.
  - oo Evaluate proposed projects to structurally increase fisheries habitat.
- o Other:
  - oo Complete habitat typing and other quantitative habitat assessment of all basin streams.

oo Monitor stream water quality conditions.

## FISH PROTECTION

### Policies for Fish Population Protection

- o Monitor fall chinook salmon escapement on the Shasta, Scott, and Salmon rivers, Blue Creek, and a Middle Klamath tributary.
- o Monitor native spring chinook populations in the Salmon River and in the lower river net harvest.
- o Monitor summer steelhead.
- o Study feasibility of weir operation later in the season to get more information on coho and steelhead.
- o Provide training and supervision for community volunteers interested in conducting spawner surveys to help gather information about native salmon stocks, including coho.
- o Analyze the angler success data currently collected from guides to provide a steelhead catch-per-effort baseline.
- o Collect information on green sturgeon harvest.
- o Collect information to better identify stock groups, beginning with chinook salmon.
- o Promote voluntary selective harvest of hatchery steelhead.
- o Investigate steelhead residualism.
- o Determine the contributions of hatchery and native steelhead to returns.
- o Mark a consistent fraction of all hatchery chinook salmon.
- o Investigate the practicality of closing anadromous fish-producing streams to "trout" fishing.
- o Form local citizen "watch groups" to help protect and monitor remnant fish populations.
- o Determine a carrying capacity-based escapement goal for each species and run in each sub-basin.

## FISH RESTORATION

### Policies for Fish Population Restoration

- o Operation of Iron Gate Hatchery and Trinity River Hatchery

- oo Determine optimal levels and composition of hatchery releases.
- oo Enhance production and supplement harvest using surplus hatchery eggs, while assuring no adverse impacts to native stocks.
- oo Maintain the fitness of hatchery broodstock and decrease impacts of straying on native fish.
- oo Determine the resistance of Iron Gate Hatchery steelhead broodstock to Ceratomyxa shasta.
- oo Secure a water supply filter for Iron Gate Hatchery.
- o Small-scale rearing programs
  - oo Formulate guidelines for small-scale rearing, which will avoid negative effects on native stocks.
  - oo Small-scale fish rearing project operators are encouraged to help determine appropriate stocking levels, appropriate time for release, and levels of spawning escapement that represent "full seeding".
  - oo Improve cost-effectiveness of small-scale rearing programs now targeting late-run fall chinook by capturing other species.
  - oo Explore green sturgeon restoration measures.
  - oo Continue fish rescue in the Middle Klamath Basin and the Scott and Shasta rivers.

### PRIORITY FISH STOCKS

Fish stocks in order of priority for protection/restoration:

- o Fall run chinook
- o Steelhead
- o Spring run chinook
- o Coho
- o Other anadromous fish stocks

### EDUCATION/COMMUNICATION

Policies for Education and Communication

- o Support for public school programs:
  - oo Develop curriculum and field activities.

- oo Conduct teacher workshops and conferences on salmonid conservation.
- o Support public communications programs:
  - oo Support 4-H youth education projects involving riparian restoration.
  - oo Develop interpretative programs.
  - oo Assemble a display for county fairs.
  - oo Promote angler awareness of the Restoration Program.
  - oo Conduct workshops and seminars on water conservation.
  - oo Conduct workshops for road maintenance personnel concerning stream protection needs.
  - oo Set up meetings between fisheries biologists and miners.
  - oo Sponsor a conference about Indian fisheries.
  - oo Sponsor workshops with timber operators concerning watershed protection needs.

## PROGRAM COORDINATION AND PLANNING

### Policies for Program Coordination and Planning

- o Arrange a training session for the Task Force in the consensus decision-making process.
- o Develop a catalogued Technical Library.
- o Evaluate and recommend software option(s) for data storage and retrieval obtained through Restoration Program projects.
- o Investigate the use of the EPA/SWRCB water body data system for Klamath fish and fish habitat information.
- o Support publication of the results of Restoration Program projects in the scientific literature, periodicals for the general public, and a Technical Report Series.
- o Disseminate Program information through conferences, workshops or similar means.
- o Promote local workshops and conferences on topics related to the Restoration Program.
- o Monitor non-Program restoration and research work in the Basin.
- o Promote the use of Coordinated Resource Management Plans.

PROGRAM ACTIVITIES, AS SPECIFIED IN THE KLAMATH ACT (16 USC ss 460ss)

Section 1(b)(2)(B) Program Activities

Take such actions as are necessary to--

- (i) improve and restore Area habitats, and to promote access to blocked Area habitats, to support increased run sizes;
- (ii) rehabilitate problem watersheds in the Area to reduce negative impacts on fish and fish habitats;
- (iii) improve existing Area hatcheries and rearing ponds to assist in rebuilding the natural populations;
- (iv) implement an intensive, short-term stocking program to rebuild run sizes while maintaining the genetic integrity and diversity of Area subbasin stocks; and
- (v) improve upstream and downstream migration by removal of obstacles to fish passage and the provision of facilities for avoiding obstacles.

- o Develop a complete Project Application Manual describing the project selection process and selection criteria to assist project proponents.
- o Prepare an executive summary of the long-range plan for the Restoration Program.

## CATEGORICAL EXCLUSION CHECKLIST

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Nature of Action:

Exclusion category:

### Evaluation of criteria for Categorical Exclusion:

- |   |                           |
|---|---------------------------|
| 1. This action or group of actions would have a significant effect on the quality of human environment.                   | No __ Uncertain __ Yes __ |
| 2. This action or group of actions would involve unresolved conflicts concerning alternative uses of available resources. | No __ Uncertain __ Yes __ |

### Evaluation of exceptions to actions within Categorical Exclusion:

- |   |                           |
|---|---------------------------|
| 1. This action would have significant adverse effects on public health or safety.   | No __ Uncertain __ Yes __ |
| 2. This action would have an adverse effect on unique geographical features such as wetlands, wild or scenic rivers, or scenic rivers, refuges, floodplains, rivers placed on the nationwide river inventory, or prime or unique farmlands. (Same as appendix 516-DM-2, appendix 2, part 2.2) | No __ Uncertain __ Yes __ |
| 3. The action will have highly controversial environmental effects.   | No __ Uncertain __ Yes __ |
| 4. The action will have highly uncertain environmental effects or involve unique or unknown environmental risk.   | No __ Uncertain __ Yes __ |
| 5. This action will establish a precedent for future actions.   | No __ Uncertain __ Yes __ |
| 6. This action is related to other actions with individually insignificant but cumulatively significant environmental effects.  | No __ Uncertain __ Yes __ |

Figure 2.4. — Example of a Categorical Exclusion Checklist Sheet.

7. This action will affect properties listed or eligible for listing in the National Register of Historic Places.	No ___ Uncertain ___ Yes ___
8. This action will affect a species listed or proposed to be listed as endangered or threatened.	No ___ Uncertain ___ Yes ___
9. This action threatens to violate Federal, state, local, or tribal law or requirements imposed for protection of the environment.	No ___ Uncertain ___ Yes ___

NEPA Action— CE \_\_\_\_\_ EA \_\_\_\_\_ EIS \_\_\_\_\_

Environmental commitments, explanation, and/or remarks:

Preparer's Name and Title: \_\_\_\_\_

Regional Archeologist concurrence with item 7 \_\_\_\_\_

Concur: \_\_\_\_\_ Date: \_\_\_\_\_  
                    Division/Office Chief

Concur: \_\_\_\_\_ Date: \_\_\_\_\_  
                    Regional Environmental Officer

Figure 2.4. — Example of a Categorical Exclusion Checklist Sheet, continued.

# KMZ Fishery Coalition

## KLAMATH BASIN RESTORATION TASK FORCE

YOUR RESTORATION PLAN POINTS OUT THE LACK OF SPANNING AND REARING HABITAT AVAILABLE FOR NATURAL WILD! PRODUCTION IN THE KLAMATH AND TRINITY BASIN.

I CERTIANLEY AGREE WITH DESPERATE NEED FOR RESTORING THE CANOPY AND RIPARIAN, AS WELL AS DEEP POOL AND RIFFLE RATIO TO STREAM

THIS WILL BE THE KEY TO A SUCCESSFUL PROGRAM. THANKS TO THE HOCMA TRIBE FOR GETTING SOME WATER BACK. THE MAJOR INGREDIENT TO IT ALL.

HOWEVER HATCHERY PRODUCTION HAS BEEN THE MAIN TOOL USED TO INCREASE ABUNDANCE OF FISH. AS WITH EVERY HATCHERY PROGRAM, WHEN IT'S STOCK STARTS TO RECYCLE IT LOOSES AT'S PRODUCTIVE CAPABILITY.

I BELIEVE THIS NOW IS ONE OF THE MAJOR PROBLEMS, THE BIG RETURN FROM LOW SPANNER ESCAPEMENTS LOW HATCHERY PRODUCTION AND EXCELLENT WATER FLOW OF 82 THRU 84 THAT RETURNED FROM 85 TO 88 WAS BEYOND A DOUBT HATCHERY DOMINATED.

RESULTING IN MORE DILUTION OF NATURAL STOCKS, AS WELL AS DIRECT COMPETITION FOR HABITAT. REMEMBER THE HABITAT HAD NOT HEALED FOR THIS TO HAPPEN!

THE SMALL RELEASE SIZE OF HATCHERY STOCKS, MAKES IT DIFFICULT TO SEPERATE THEM FROM NATURAL STOCK THRU SCALE ANATYSIS, YOU ARE NOW DOING.

WAS THIS A PART OF THE PROGRAM??

PLEASE LOOK AT THE BALANCE THAT OCCURED IN SPANNER ESCAPEMENTS, WATER FLOW, AND HATCHERY PRODUCTION, THAT CREATED THOSE GOOD RETURN YEARS -- NOW COMPARE IT TO THE 1986 THRU 1989. WAS THAT A GOOD BALANCE? SOME ONE MUST HAVE THOUGHT SO.

THESE ARE FACTORS THAT MAN HAS SOME CONTROL OVER, AND WHEN THEY ARE BALANCED EVEN DURING EXTREMELY DRY PERIODS, YOU CAN HAVE GOOD RESULTS (1992 RETURNS AND JACK COUNTS.

UNTIL YOU CAN CONSISTANTLY PRODUCE QUALITY SMOLT, WITH A MINIMUM IMPACT ON NATURAL PRODUCTION, AND STILL GET TO SEA. DON'T BLAME OCEAN CONDITIONS

THIS APPLIES TO ALL OF THE LONGERS SYSTEMS SUFFERING FROM 6 TO 7 YEARS OF DROUGHT AND OVER PRODUCTION OF HATCHERY STOCK

I WOULD ALSO LIKE TO REMIND ALL OF YOU FISHERY MANAGERS THAT EVERY THING IN NATURE HAS A BALANCE AND LIMIT..

IS PUSHING THESE SYSTEMS TO THEIR LIMITS WISDOM?

I DON'T THINK SO

## BACKGROUND INFORMATION

### PROPOSAL FOR A PACIFIC NORTHWEST WATERSHED AND SALMON HABITAT RESTORATION PROGRAM

Restoration can be defined as returning riverine systems toward their "pre-European" conditions. In the Pacific Northwest, this requires focusing on selectively repairing ecosystem function and structure, and recreating natural dynamic stream processes. The temporal and spatial scales of restoration efforts must be large enough to provide for these functions.

There have been many well-meaning but unsuccessful attempts to restore rivers and streams and salmonid habitat. Most fail because they have depended on technological rather than natural solutions, focused on isolated stream segments, on single fish species, or on superficial aspects of salmon habitat (primarily deep pool reconstruction) rather than stream function. In addition, most fail because they were planned without consideration of the whole watershed. All of these approaches generally do not address the real causes of salmonid habitat and riverine degradation, and instead focus on "symptoms". Thus they fail to adequately analyze the historic characteristics of the stream to establish baseline data. Without baseline data on the pre-European function and conditions of a river, there is no way to effectively determine restoration goals, or measure success or failure. Consequently, most restoration programs have also failed to include effective long-term monitoring to evaluate progress.

Past approaches to restoring streams or watersheds can be characterized primarily as the "rathole" approach. As stated earlier, the goal has generally been to restore single fish species (usually game fish), isolated stream segments, or deep pool habitat. Generic standards for recovery are established along with generic treatments (e.g. stream structures such as log weirs). Usually, the worst-looking sites or segments are targeted and the generic techniques applied to bring the stream up to (generic) standards. Treatments tend to be cosmetic or "band-aids," that focus on the symptoms and do not directly address the causes or processes that lead to loss of biodiversity, and ecosystem/habitat damage within the watershed. Monitoring has generally been aimed at ensuring that treatment funds were actually spent, with little or no evaluation of treatment effectiveness.

The first step is the identification of large-scale "refugia" in the basin: generally tributaries harboring remnant populations of biological diversity, unusually diverse assemblages, and/or relatively intact and undisturbed large habitat and ecosystem areas. The principle is that these refugia are the kingpins, or "focal habitats", of current biodiversity and ecosystem health within the riverine system. Protection of these focal habitats is necessary to provide a secure source of fish colonists and other forms of biodiversity to re-occupy other areas as they are restored, and to maintain existing levels of riverine ecosystem integrity.

The first priority of restoration is to secure or "storm-proof" the larger focal habitats by minimizing the possibility that past and future activities will degrade the refugia. Securing these areas involves precluding unstable, steep hillsides from logging and roadbuilding, precluding new roads within the watershed, and identifying and treating ongoing problems within the watershed that may degrade refugia, such as sedimentation from roads, grazing and timber harvest. Treating these problems generally requires careful planning and heavy equipment and manual work. Thus, restoration based on "securing" the healthier remaining areas will create a significant number of family wage jobs regionwide.

Reductions in forest road mileage and eliminating chronic and potentially catastrophic road problems should be a program implemented regionwide on all public lands, not just surrounding the focal habitats, though this should be the first priority. Further, no new roads should be constructed in roadless areas.

The second step is to identify other biological and ecological "hotspots" or "nodal habitats" found throughout the entire system that may be disturbed, and only seasonally occupied, but nevertheless provide critical habitat for certain life stages of biodiversity in the watershed, or controls for ecological processes. Restoration of these nodal habitats is the second priority, and important to sustain the present populations and current levels of ecosystem integrity in the watershed.

Next, areas which may be called "adjunct habitats" would be identified. These are habitat and ecosystem patches near larger refugia and nodal habitats, but which have been impacted and degraded. The third priority is protection and restoration of these areas. They are readily colonized by riverine biodiversity as they become suitable, allowing relatively rapid biotic response to restoration activities. As these areas are secured and restored, the geographic scope of healthier riverine areas expands.

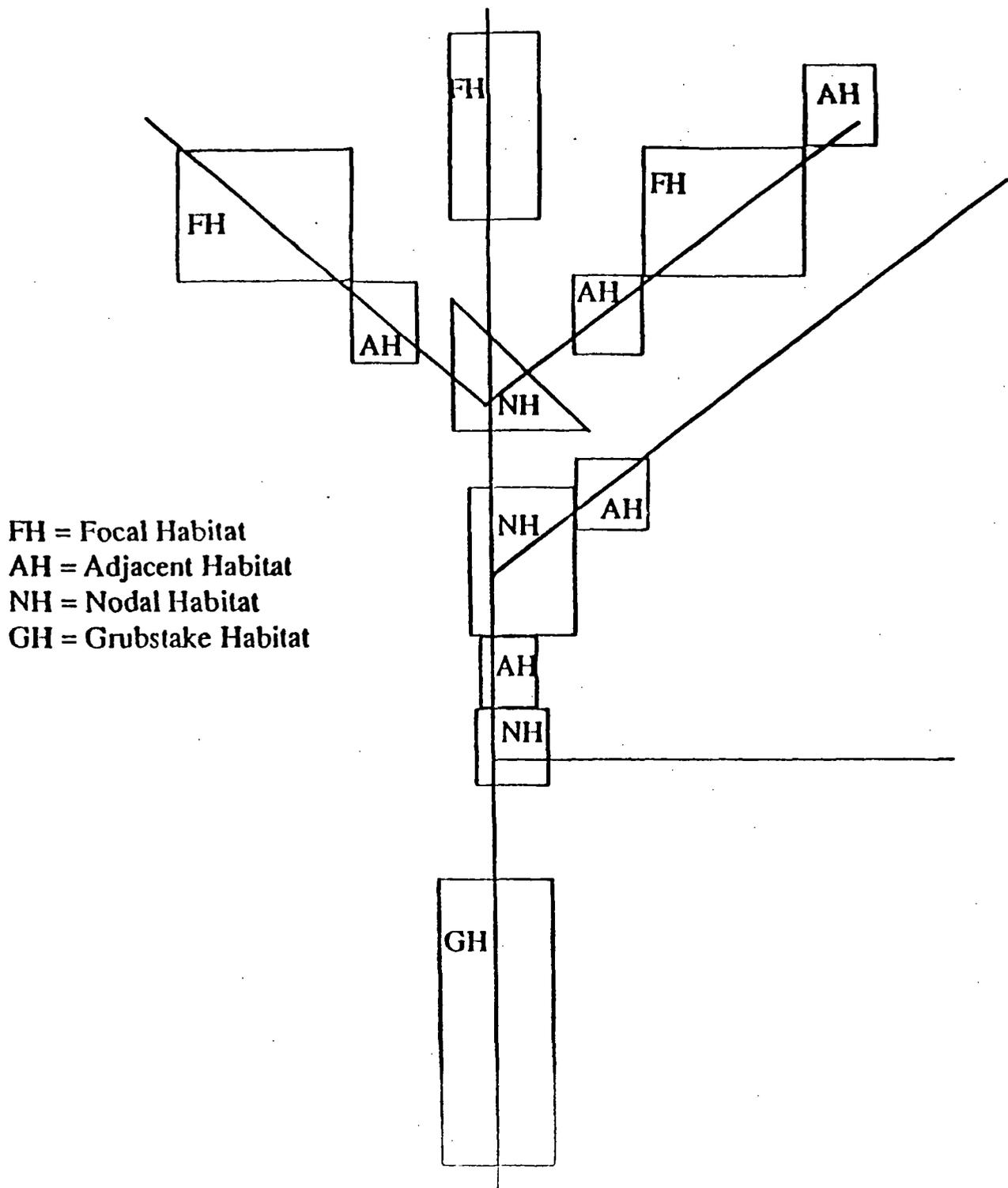
hyporheic zones across the landscape and other biological hotspots can carefully selected and planned restoration begin or be effective. Restoration without initial protection of these areas is pointless, because it would always be threatened by degradation elsewhere in the system. Further, without initial protection, restoration can be harmful: expectations are raised as people begin to believe they are addressing problems when they are not, as thousands of dollars are spent only to find later that they were wasted.

No matter what stream restoration strategies are used, they must be designed at the system or watershed level. This means that the first step in all restoration programs must be to attempt to reconstruct the historical conditions of the entire river system before extensive human-caused disturbance. Historical data can be obtained from old maps, pioneer journals, aerial photos, and interviews with descendants of early settlers. In addition, soil, vegetation and geologic maps are useful. The goal of historical reconstruction is to develop a picture of how the relatively undisturbed system functioned, and how the system compares today. To do this, an assessment of the entire watershed is needed. This comparison provides the first template for developing restoration goals--returning certain areas within the system to a more natural condition. Long-term monitoring is needed to determine the success or failure of reaching the restoration goals.

Restoration treatments should focus on riverine systems that have the greatest potential for restoration. This means a priority system must be established that targets the watersheds with key focal habitats first, then moves to other watersheds. When specific restoration treatments are needed separate from securing the focal habitats, they should focus on reconnecting the stream with the floodplain and riparian ecosystem, thus providing watershed connectivity. Thus, "in-stream" fish habitat projects should be used only on an experimental basis, and primarily as a last resort. Reforestation of native riparian vegetation is another priority. These projects should be pursued only after a watershed assessment is completed that has carefully identified the most appropriate treatment sites.

It is important to note that while this proposed program may provide a short term (5-20 year) safety net for many at-risk salmonid populations, this program is but one important step towards wild salmonid population maintenance and recovery. That is, protection of the remaining healthier focal, adjacent, nodal, and grubstake habitats, riparian ecosystems and floodplains is a necessary step to maintain existing levels of salmonid populations, but it is insufficient to restore salmonids. Stream flows,

# The Rapid Biotic and Ecological Response Restoration Strategy



**SALMON HABITAT RESTORATION:**  
**RATIONALE AND FRAMEWORK FOR LEGISLATION**

**PACIFIC RIVERS COUNCIL**

To have any hope of recovering the magnificent salmon runs of the Pacific Northwest and in the Columbia Basin, salmon habitat must be protected and restored.

The Pacific Rivers Council believes that, in the context of the resolution of ancient forest and endangered salmon debates, a Salmon Habitat Restoration Act is urgently needed to identify and secure much of the best remaining salmon habitat. Note that the term "salmon" will be used generically throughout this document to refer to all the native salmonids: Pacific salmon; steelhead; other trouts; and the chars, including bull trout. "Habitat" is used to address ecosystem processes that support habitat as well as spawning and rearing areas themselves.

Good habitat is the necessary anchor for any eventual recovery of the salmon runs, but good habitat is both increasingly rare and quite vulnerable to degradation from existing sources. The legislation outlined here is derived from the sound conservation principle that habitat conservation must include (1) protection of watershed-level refuges (2) appropriate management of habitats that connect refuges and (3) restoration. The three elements are part of a comprehensive package, and will not achieve the desired results if implemented alone or in some limited combination.

The Pacific Rivers Council believes that restoration is good economics -- both the direct restoration work that is needed to secure the existing patches of good habitat and the return of salmon themselves are clearly in the best economic interest of the Pacific Northwest.

Even the best remaining salmon habitat is subject to ongoing degradation from (or accelerated by) human sources. The good habitat that remains tends to be high up in the watersheds, in the more remote tributaries where the degrading effects of land use activities have yet been less severe than in the agricultural and urban lands in the valleys. Historically, salmon habitat was lost to degradation from agriculture, urbanization, channelizing of rivers, and other practices. Over time, degradation of lowland habitats has forced many salmonids to retreat to headwater "refuges", so that today land uses in the headwaters -- particularly logging, grazing and roadbuilding -- are the primary on-going threats to salmon refuge areas. [Fully cited technical testimony on refuges is available from our office.]

Even without new logging and roadbuilding within refuges, however, an immediate threat remains: during the severe winter storms that are natural to the Pacific Northwest even the best refuges can be wiped out by landslides and sediment torrents of human origin. The existing forest road systems represent the largest single source of potentially devastating

expansion of the stormproofing program to the balance of the coastal Pacific Northwest and the interior Pacific Northwest would considerably expand the economic benefits.

In the context of salmon habitat that is anchored by ecologically significant forest reserves, legislation is needed that would direct and fund the establishment and restoration of salmonid refuges, and plan for wider habitat recovery:

### FRAMEWORK FOR AN AQUATIC HABITAT RESTORATION ACT

It shall be the policy of the United States to establish, protect, and restore a national system of aquatic biodiversity refuges and connecting habitats, beginning with salmonids; and to aid rural communities strongly affected by changes in the timber industry through substantial investment in riverine restoration activities and training.

#### **SECTION ONE: SALMON REFUGES**

I. The Secretary of Agriculture and the Secretary of Interior shall promptly, and not later than within one year, adopt rules and regulations that establish a system of salmon refuges, refuge management, refuge restoration, and long-term monitoring. The Secretaries shall:

A. Using a landscape or bio-regional perspective, identify refuges. Refuges shall be generally 3rd to 5th order watersheds, and shall be distributed to minimize recolonization distances.

1. Where refuges have already been identified by the Scientific Panel on Late Successional Forest Ecosystems or the Eastside Forests Scientific Society Panel, the Secretaries shall adopt changes specified in I (B) and subsequent sections.

2. In any bio-region where refuges have not been identified they shall: Convene a outside panel, consistent with the Panels in I(A)(1), and cause that panel to identify refuges, consistent with the intention of this Act.

B. Identify the threats to the integrity of the refuges over the time periods required to reestablish nodal, adjacent and grubstake habitats lower down in the watersheds, and report those findings to the public within one year of any refuges identified in section I(A).

C. Amend the Forest Plans, Resource Management plans, and other equivalent plans in order to adopt refuge management regulations, including but not limited to:

1. Extended rotation age.
2. Protection of old growth forest anchors.

D. A riparian reforestation and monitoring program shall be implemented for all riparian areas on federal lands.

E. The Secretaries shall convene an outside review panel of independent scientists to review management of habitats that connect refuges, and shall publish their report within one year.

### **SECTION THREE: ROADS**

III. The Secretaries shall create a Road Obliteration Program on all federal lands, with the aim of reducing and minimizing road system mileage, substantially improving road drainage, and reducing sediment.

A. No new road shall be established in any inventoried roadless area.

B. Roads within each National Forest and BLM District shall be prioritized for removal, on the basis of their potential for delivery of sediment to active channels of streams.

C. On all remaining roads a systematic drainage program shall be promptly adopted, with priority attention to roads that deliver or may deliver sediment to active channels.

D. A yearly review of Road Obliteration Program will be made as part of the performance rating of each Forest Supervision, Regional Forester, District Manager, and State Director.

### **SECTION FOUR: EXTERNAL REVIEW**

IV. The Secretaries shall convene an independent panel of scientists and economists to develop criteria for the identification of adjunct, nodal, and grubstake habitats (*sensu* Frissell 1992) and report to Congress on the direct, indirect and induced economic effects of protecting, reconnecting and restoring such habitats -- including particularly the economic externalities. The Panel shall report within one year.

### **SECTION FIVE: FUNDING**

A. \$50 million per year for three years shall be appropriated for implementing Section I(D). Contract size for sediment treatment contracts shall be no more than \$25,000 so that they may most closely accrue to local firms and communities.

B. An Aquatic Habitat Restoration Trust Fund of \$1 billion shall be established, for permanent funding of the purposes of this act.

## ASSESSMENT OF STREAM PROTECTION REGULATIONS/STANDARDS Technical Work Group of the Klamath Task Force

### INTRODUCTION

The Technical Work Group of the Klamath Task Force was given the assignment to determine and recommend "What is the minimum necessary to protect a stream?". After some discussion the TWG decided to collect and review existing stream protection standards from respective agencies and attempt to answer the question following that review. This executive summary encapsulates common issues addressed by existing standards and presents them in a comparative manner for discussion by the Klamath Task Force. The attached Appendix consists of respective agency standards and input from each of the responding Technical Work Group members.

### GENERAL PARAMETERS

Adequate management of streamside or riparian areas is site specific and the TWG believes interdisciplinary review of proposed activities is necessary, at least where exceptions to standards are requested. The TWG believes that appropriate management activities should be based on striving to attain a Desired Future Condition which is formulated from the best scientific information available. Further, the TWG members also believe that stream protection is more complicated than just managing riparian area condition, and adequate management must consider watershed condition and upslope areas.

Some common attributes to consider in developing a Desired Future Condition and establishing management standards are:

- 1) Adequate water quality - temperature, sediment loads, and nutrient loads;
- 2) Maintain stream channel integrity and channel processes;
- 3) Maintain instream flows or the natural elevation of water tables;
- 4) Maintain the native and desired non-native plant community;
- 5) Maintain riparian vegetation to provide for future recruitment of large woody debris;
- 6) Provide adequate summer and winter thermal regulation using the vegetative canopy;
- 7) Maintain vegetative conditions to provide for adequate ground cover, minimize soil erosion and sediment movement, and provide stream channel stability;
- 8) Allow for identification and special management of areas or

roads and facilities management, range management, recreation management, minerals management, fire and fuels management, lands and hydropower development, watershed and habitat restoration.

### KARUK TRIBE OF CALIFORNIA

Though this tribal entity has no specific standards for management, they have made recommendations which identify their concerns and suggest necessary actions. They specifically identify a need for landscape planning from a total watershed perspective, and believe it is appropriate to adopt as the minimum existing standard the forest management regulatory process that offers the most protection for fishery resources during timber harvest. Their recommendations are:

- a) ...implementation of consistent forest and watershed management standards for all landownerships;
- b)...adopt existing U.S. Forest Service standards and guidelines as the minimum for the protection of a stream during timber management...
- c)...U.S. Forest Service should formally respond to the report entitled, "Alternatives for Management of Late Successional Forest Ecosystems of the Pacific Northwest."
- d) Timber management needs to be implemented from a total watershed perspective and managed consistently throughout the entire Klamath River basin.
- e) Conduct a "comprehensive inventory of all relatively intact watershed and stream habitat conditions..."
- f) ...the quantitative surveillance method approved by the Task Force in the Salmon River between USFS and USFWS should be used basin-wide..
- g)...accomplish a quantitative surveillance of basin-wide conditions....

### HUMBOLDT COUNTY

The Humboldt County representative echoed many of the concerns and recommendations expressed by the Karuk Tribe. The representative expressed strong concern over the need for watershed scale planning and management and better compliance with existing forest practice rules. He also expressed a concern for consistency of management approaches but specifically a "tightening-up" of cumulative impact assessments and stiffening regulations on all tractor harvest operations. The state forest practices should have stronger language in the WLPZ possibly including: surface cover

**DRAFT**

**COPY FOR YOUR  
INFORMATION**

**Klamath River Fishery Restoration Program Report  
Fiscal Year 1992**

**Prepared by  
Klamath River Fishery Resource Office  
U.S. Fish and Wildlife Service  
P.O. Box 1006  
Yreka, CA 96097**

**January 1993**

# DRAFT

## Background:

1.1 Public Law 99-552, the "Klamath Act," was adopted by the Congress on October 27, 1986 for the purpose of authorizing a 20-year Federal/State cooperative Klamath River Basin Conservation Area Restoration Program for the rebuilding of the river's fish resources. The Act created a 14-member Klamath River Basin Fisheries Task Force (Task Force) and directed the U.S. Secretary of Interior to cooperate with the Task Force in the creation and implementation of a "Klamath River Basin Conservation Area Fishery Restoration Program" (Restoration Program). In 1991, the Task Force produced a long range plan which established goals and policies for the Restoration Program. These goals, along with supporting objectives and tasks and the degree of accomplishment, were discussed extensively in the Program Evaluation Report for FY1989-1992. Critical needs for the program, and entities logically or lawfully responsible for meeting those needs were also discussed.

1.2 This document is an update on the Restoration Program, including development of the FY1993 work plan, and also contains recommendations for future actions. These recommended actions complement the priority objectives developed in 1992 by the Task Force's Technical Work Group (Appendix A). This report is divided into four primary sections: Section I - an update on current efforts to implement tasks and accomplish long range plan objectives; Section II - a compilation of recommendations resulting from studies funded with Restoration Program monies; Section III - discussion of long term monitoring to assess the recovery of the Klamath Basin ecosystem and its natural fish populations; Section IV - Conclusion and recommendations for future action.

1.3 If you are interested in knowing how you can get involved in the Klamath River Fishery Restoration Program, you are invited to contact staff at:

U.S. Fish and Wildlife Service  
Klamath River Fishery Resource Office  
P.O. Box 1006  
Yreka, California 96097  
Telephone: (916) 842-5763

## Section I: Policy Implementation

### Chapter 2, Fish Habitat Protection:

2.1 The primary objective within this chapter is to protect stream and riparian habitat from potential damages caused by land management activities and natural catastrophic events. Excessive sediment load in the mainstem Klamath River and tributaries, suction dredge mining, water impoundments, in addition to water

# DRAFT

2.7 An inventory of riparian conditions on the mainstem Scott River was completed by the Siskiyou Resource Conservation District. The survey identified riparian areas in need of repair in the Scott Valley reach, and provided recommendations for restoration. Specifically, the project identified 170,805 lineal feet of unfenced and unprotected streambank in the survey area. The Siskiyou RCD utilized this survey to develop three project proposals to be funded by California Department of Fish and Game in FY1993. The projects will utilize riparian fencing and rip-rap construction to stabilize banks and re-establish riparian vegetation.

2.8 California Department of Fish and Game began habitat typing Hunter Creek, a lower Klamath River tributary, following completion of habitat improvement work by the California Conservation Corps, CDFG, and Simpson Timber Company.

2.9 The Task Force supported the Klamath National Forest's spring chinook recovery strategy for the Klamath River Basin by approving funding for a sediment survey and watershed improvement needs survey in the Salmon River subbasin. The Klamath National Forest received funding approval from the U.S. Forest Service for implementing the first phase of the recovery strategy, with special emphasis on the Salmon River subbasin. The USDA agency provided an additional \$250,000 to implement this strategy in FY1992. They anticipate an additional \$800,000 of FY1993 funds to continue this recovery strategy. Spring chinook are the target species, however habitat and watershed restoration will benefit other salmonid species as well.

2.10 California Department of Fish and Game proposed new mining regulations for the 1993 suction dredge season in the Klamath Basin. Primarily, the proposed changes would have delayed the start of the season by 30 days to protect late-spawned eggs still in the gravel, and would have reduced the dredge intake size to 4 inches in smaller tributaries. Following public comment on these proposed regulation changes, the Department determined that further investigations of impacts would be necessary before implementing these rule changes.

2.11 California Department of Fish and Game brought the issue of "reasonable use" for stockwatering diversions in the Scott River subbasin, to the attention of the State Water Quality Control Board - Division of Water Rights. The Division of Water Rights responded by attending a meeting of resource agency representatives, and stated that the letter from CDFG was viewed simply as an information request. A formal complaint would have to be filed before the Division of Water Rights would make an official response. No complaint of unreasonable use has been filed.

2.12 The French Creek CRMP developed a road management plan and a fire and fuel management plan for the French Creek watershed. The Task Force funded preliminary sediment and erosion inventories that were instrumental in persuading the California Department of Forestry to provide financial support for this CRMP group. The result in 1992 is a cooperative attempt by landowners to reduce erosion and fire hazards in this watershed.

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the fishery resource by requesting through appropriate State and Federal legislators that this Compact be assessed for sufficiency in protecting the aquatic environment. An amendment to this Compact, to ensure minimum instream flows consistent with existing FERC permit requirements, may be necessary to restore Klamath River anadromous fish runs to optimum size. A letter from FERC to Pacific Power and Light Company (PP&L) in summer, 1992, indicated that PP&L would have to file a request to deviate from the minimum flow requirements as soon as the present drought ends. This might provide an opportunity for the Task Force to provide comment to FERC on future flow variances at Iron Gate Dam.

2.18 The instream flow needs of anadromous fish must be identified for the mainstem Klamath, Shasta, and Scott Rivers. The long range plan policy 2.E.8. states that the Task Force will seek to establish law that mandates minimum instream flow standards. These minimum standards must be determined by developing and implementing instream flow studies for these streams. Pacific Power and Light Company will be required to initiate an instream flow study for the mainstem Klamath River for purposes of relicensing the Iron Gate Dam by the year 2006. No such requirement exists for either the Shasta or Scott Rivers.

2.19 The passage of California's SB 301, which allows water right holders to leave their allocated water in the stream to benefit aquatic resources, provides an opportunity for the Task Force to secure water. The Task Force should acquire water rights in stream systems depleted by diversions. Additional funds would most likely be required to purchase these water rights as they become available.

2.20 The Task Force should pursue the issue of reasonable use for stock watering in the Scott Valley, by corresponding with the Scott Valley CRMP to work on this problem. If attempts to resolve the problem are unsuccessful, the State Water Quality Control Board's Division of Water Rights should be contacted directly and requested to look into this matter more carefully. A formal complaint, with documentation of unreasonable use would be necessary if the problem remained unresolved after notifying the Board.

2.21 The new timber harvest rules package known as the "Grand Accord" failed to become State law in 1992. For most of 1991, the timber industry was regulated with the pre-1991 rules and regulations instituted by the State Board of Forestry. Under those rules, California Department of Forestry and California Department of Fish and Game experienced much difficulty in preventing further degradation of the aquatic environment in timber harvest areas. Late in 1992, the State Board of Forestry approved four newly developed rules packages which address specific issues in timber harvest. These issues are: 1) silviculture, with specific reference to long-term sustainable yield, 2) sensitive watershed protection measures including monitoring and evaluation of hillslope erosion rates, 3) wildlife habitat management with reference to late seral stage management, and 4) streamside protection (these issues were incorporated into the rules package for item 2). These new rules essentially lessen the harvest constraints

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that would have been imposed by the Grand Accord, but increase the level of professional review of Timber Harvest Plans for adequacy in protecting the aquatic environment. One requirement newly imposed on the Director of the Department of Forestry is to develop a report on the effectiveness of these new rules packages for review by the State Board of Forestry, by December, 1994. The State Board of Forestry will seek public comment on that report, and may provide an opportunity for the Task Force to provide technical input on the effectiveness of those newly approved rules packages. The State Board of Forestry is developing a pilot project to monitor stream water quality in specific watersheds to determine a correlation between monitoring techniques and real impacts resulting from these new harvest rules. The Task Force must be prepared to provide written and oral comment as public hearings are held for these reports. Evidence gathered by cooperators for the Task Force indicate that the pre-1991 rules were inadequate to protect fish habitat in the Turwar Creek watershed on the lower Klamath.

2.22 The Task Force representative on the Shasta Valley CRMP resigned in 1992. A representative should be assigned to this CRMP while interest and activity are high.

2.23 The restoration program is plagued with late reporting of study results, which delays implementation of restoration projects. Project proposers respond to various surveys of habitat conditions by submitting proposals to implement restoration projects recommended in these surveys. Cooperators must submit reports according to schedules to allow implementation of problem solving projects.

## Chapter 3, Fish Habitat Restoration:

3.1 Basin wide degradation of anadromous fish habitat necessitates a well organized approach to watershed and fish habitat restoration. The recommended course of action is to assess the habitat condition, prioritize needs, and then develop a restoration strategy. Improving fish habitat through watershed restoration takes years, while instream structures can offer habitat improvement more quickly. In an ideal situation, structures would be used to accelerate habitat recovery after watershed stabilization is well underway. Methods of improving or restoring fish habitat, in addition to those involving channel and bank stabilization, include the removal of migration barriers, screening stream diversions, increasing stream flows, replacing gravel, creating spawning or rearing channels below dams, and restoring riparian vegetation. The underlying message within this chapter is that adequate protection of fish habitat and watersheds must precede instream restoration work to maximize effectiveness.

### Accomplishments:

3.2 The Task Force contributed funds in support of the 1992 California Salmon and Steelhead Restoration Conference, and committed to support this conference again in 1993. One objective of this conference is to share current information on techniques

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and results of restoration projects implemented throughout the state. The 1993 conference focused on the restoration work occurring in the Klamath Basin.

3.3 Inventories of riparian conditions on the Shasta and Scott Rivers resulted in proposals to fence and revegetate more than 11 miles of streambank on these two rivers in 1993. California Department of Fish and Game decided to fund 13 of these projects (more than 5 miles of streambank). The Task Force approved two additional projects not funded by the State (more than 1 mile of streambank).

3.4 Erosion site restoration was implemented by the Hoopa Valley Tribe in the Pine Creek watershed. Over 30 erosion sites identified in the 1990 inventory were treated in the summers of 1991 and 1992, to reduce the potential sediment supply into Pine Creek. The Hoopa Valley Tribal Fisheries Department staff is monitoring sediment in Pine Creek to document changes in bedload transport rates and composition.

3.5 The Task Force funded a riparian seed collection and germination project to establish a source of seedlings for replanting riparian zones in the Salmon River subbasin. A mix of deciduous and conifer species will be utilized to offer shade and thermal insulation. Habitat surveys performed in 1989 and 1990 indicated that riparian zone revegetation would improve fish rearing habitat. Restoration of this watershed was also identified as a most critical priority objective by the Technical Work Group (Appendix A).

Critical needs:

3.6 Over 30 miles of streambank in the Scott River still need fencing, stabilization, and revegetation according to the 1991 survey of riparian condition. The Shasta River has a similar, but not yet quantified riparian restoration need.

3.7 The survey of riparian conditions in the Upper South Fork of the Salmon River indicates extensive riparian revegetation efforts are needed to improve fish habitat.

3.8 A policy contained in the long range plan suggests that the Task Force should seek to mandate by law, minimum fish habitat standards in streams affected by land management activities (Policy 3.14).

## Chapter 4, Fish Population Protection:

4.1 Population exploitation, habitat destruction and migration blockage, have contributed to the extinction of some distinct salmonid stocks in the Klamath basin. Declining fish populations and potential loss of fisheries were the reasons that Congress initiated this Restoration Program. The Task Force recognizes that protection of genetic diversity within natural and hatchery salmonid stocks is the key to insuring restoration success and maintaining viable fisheries. To protect the stocks that remain, population trends must be monitored, life histories must be known, and

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"stocks" must be identified. Fisheries managers depend on this information to establish fishing seasons and harvest rates.

## Accomplishments:

4.2 The Task Force delegated a committee of biologists to identify unique salmonid stocks in the Klamath Basin. The list of stocks presented in Chapter 4 of the long range plan was the focus of discussion by this committee. The committee deferred the use of the term "stock" to a more broadly defined "breeding population" and "metapopulation." The committee's findings appear to reduce the number of specific groups from the list of stocks in Chapter 4 of the long range plan.

4.3 The Humboldt Chapter of the American Fisheries Society published a paper on the status and trends of Northern California anadromous salmonid stocks, titled "Factors In Northern California Threatening Stocks With Extinction." Summer steelhead stocks of the middle Klamath River tributaries and the Salmon River are classified as at "high risk" of becoming extinct. Salmon River spring chinook and Shasta River fall chinook are also classified with a "high risk" of becoming extinct. Late fall chinook of the lower Klamath are classified as being at "moderate risk" of becoming extinct. Coho salmon and cutthroat trout of the lower Klamath River, and fall chinook of the Scott River are each classified as a "stock of concern." Causes for declines and recommendations for management are similar and consistent with policies contained in the long range plan.

4.4 The CDFG - Yreka Screen Shop employee, funded by the Restoration Program, was used primarily for fish rescue efforts in the Scott River system, and for maintenance of existing diversion screens. A diversion screen was manufactured and installed on the Crystal Lakes State Wildlife Area, primarily to serve as a debris screen.

4.5 Surveys in spring 1992 indicate that Shasta River juvenile salmonids outmigrate later in the season than once thought. Biologists for CDFG witnessed juvenile salmonids in the valley reach near the Grenada irrigation pumps in mid-June, 1992. The Shasta Valley CRMP was informed that fish remain in the system at that time. Local resource professionals are working with the CRMP to develop ways to lessen the impact of stream diversions on these stocks.

## Critical needs:

4.6 Population trends of the stocks identified as "at risk of extinction" or as a "stock of concern" should be quantified to substantiate the assessed condition of these stocks. Some stocks not mentioned such as winter steelhead are not well studied because of inclement weather conditions during migration and spawning. The long range plan suggests that adult counting weirs be operated later in the fall to assess populations of coho and steelhead. Protection and restoration of these stocks at risk were identified as most critical objectives by the Technical Work Group (Appendix A).

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4.7 Policy 4.2 of the long range plan indicates that the Task Force will work closely with the Klamath Fishery Management Council to protect stocks. This coordination effort is extremely important in 1993 because in-river escapement of naturally spawning fall chinook has fallen below the target of 35,000 adults for three consecutive years (1990-1992).

## Chapter 5. Fish Population Restoration:

5.1 Large hatcheries located on the Klamath and Trinity Rivers at Iron Gate and Lewiston Dams, respectively, are used to mitigate for loss of habitat upstream of those dams. These hatcheries are also used to augment harvest and for fish population enhancement. Large scale hatchery production at Iron Gate and Trinity River Hatcheries has caused some concern among local fishery scientists because of the potential impact on gene resources, introduction of diseases, and increased competition between hatchery produced and naturally spawned fish. The latter mentioned concern leads to a phenomenon termed "density-dependent rearing mortality."

5.2 Small scale fish rearing projects attempt to supplement a natural population with artificially produced juveniles, until a self-reproducing population can be established. This kind of propagation is most effective when locally adapted strains are used for brood stock. The plan emphasizes the need for better communication between hatchery and fishery managers to reduce the impacts of hatchery reared fish on natural populations.

### Accomplishments:

5.3 Increasing concern over impacts of large hatchery operations on wild fish prompted CDFG to initiate an internal review of hatchery operations at Iron Gate and Trinity River Hatcheries. Results of that review indicate that the recommended revised hatchery operational guidelines are consistent with operational goals and constraints developed earlier by CDFG.

5.4 The chairs of the three advisory committees functioning in the Klamath Basin (the Trinity River Task Force, the Klamath River Basin Fisheries Task Force, and the Klamath River Fishery Management Council) delegated representatives to sit on a committee with CDFG representatives to assess hatchery production and consequent impacts on natural stocks. The primary objective is to ensure that large scale hatchery production has minimum impact on the natural stocks of the Klamath Basin.

5.5 The Task Force-funded outmigrant monitoring project on the mainstem Klamath River indicated that large quantities of salmonid fingerlings migrated in spring, 1992, compared to past years. Biologist on the project theorize that this could be a result of very high spawning and hatching success due to low winter flows, or could be a

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response by all fingerling salmonids to outmigrate early because of warm water temperatures.

5.6 A survey of natural and hatchery produced outmigrating juvenile salmonids (coho, chinook, and steelhead) was implemented in 1992 with Restoration Program funding. The objective of this survey is to compare disease occurrence rates in hatchery and natural salmonids. To date, no conclusive results are reported.

5.7 The mid and lower Klamath River fall and late fall chinook rearing pond programs were supported with Task Force approved funding. The mid and lower river programs produced approximately 141,000 and 33,000 fall and late fall chinook yearlings, respectively. The lower river program also produced over 13,000 fingerling late fall chinook which were released in Salt and High Prairie Creeks. Representative groups were coded wire tagged from each lot in these programs. Returns of coded wire tagged 3-year olds (brood year 1989) are expected in the fall run of 1992.

Critical needs:

5.8 Large and small scale artificial propagation of salmon in the basin continues without a thorough knowledge of impacts to natural stocks. The long-range plan specifies that these impacts must be determined, and methods to assess these impacts must still be developed.

5.9 The Task Force consented that some of the tasks identified in the long range plan, Chapters 4 and 5, might be impossible to implement; specifically, policies 4.7 and 5.B.3.C, which deal with determining carrying capacity of a stream. This information is still needed, but may not be obtainable because of the dynamic nature of stream carrying capacity.

## Chapter 6. Education and Communication:

6.1 The Task Force realizes that education of school children and communication with the public are essential elements of this restoration program. Without these, the success of the Klamath Restoration Program would be limited. The long-range plan objective "Education and Communication" calls for promoting public interest in the Klamath River Basin's anadromous fish, their beneficial use and habitat requirements and gaining support for the Restoration Program's plans and efforts to restore fish habitat and population numbers.

Accomplishments:

6.2 The Klamath River Educational Program has been designed to meet the educational needs of school children with curriculum, field activities, teacher training and workshops that present materials specific to the Klamath River. This curriculum covers the subject areas of salmon and steelhead life history, restoration and harvest

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management and will eventually encompass grades K-12. The 7th-8th grade curriculum (and related activities) were completed this year.

6.3 An evaluation of the 4th-6th grade curriculum (developed in 1991) was also completed in 1992. This evaluation shows that the seventy-five teachers who attended the teacher training workshops are using the 4th-6th grade curriculum in their classrooms. Another 100 Klamath basin teachers have requested copies of the curriculum.

6.4 In addition to this educational program for school children, communication efforts with the public are also underway. Public communication activities have been designed for both the Task Force's restoration efforts and the Management Council's harvest management efforts. Media produced last year (brochure, newsletter, introductory slide program, long range restoration plan, and Siskiyou fair display) are being used as a foundation for conducting more specific outreach efforts this year. A new slide program on "Fish Restoration Activities Underway in the Klamath Basin" has been developed and shown to several interest groups.

6.5 Community workshops will be used to help get the fish restoration message to the local citizens of small, remote towns in the Klamath basin. Initial workshops were held in communities within the Salmon River basin and were deemed successful for reaching the public with information about: 1) tribal, state and federal fish restoration efforts, 2) the Salmon River Spring Chinook Recovery Program, 3) salmonid life history and 4) efforts to reduce poaching. Soon, these communities will be organizing to begin identifying restoration projects that should be completed within their subbasin.

6.6 A transportable display has been completed that adds to the existing informational materials. In the short time since its completion (Spring, 1992) the display has really travelled the country. The display was set up in the following locations: Yreka - Task Force meeting, Siskiyou County Visitor's Bureau, Siskiyou Golden Fair; Eureka - Management Council meeting, Redwood Environmental Education Fair, Humboldt County Courthouse, Humboldt County Fish and Game Commission; Fort Bragg - Salmon Barbecue, San Francisco: San Francisco Zoo. The display is already scheduled to appear at many more locations in the upcoming year.

6.7 Siskiyou Golden Fair was again home to a display highlighting the specific riparian restoration efforts that have been, or are about to be, completed in the Shasta and Scott subbasins.

6.8 KRFRO staff submits final reports of all projects to the U.S. Fish and Wildlife Reference Service in Washington D.C. Information on Klamath Restoration Program activities is made available to the public through this program and this same information is also disseminated by the Great Northern Corporation in Weed, California.

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6.9 A cooperative effort to develop an educational information sharing event in Yreka is being developed with the assistance of many local tribes, agencies, and resource stakeholders (Farm Bureau, Cattlemen's Association, Siskiyou County Office of Education etc.). This "Klamath Watershed Salmon Symposium and Festival" will provide an educational setting where technical information is exchanged and informal feelings are shared. The Task Force has provided \$4,000 of funding for the second annual event to be held during fall 1993.

## Critical needs:

6.10 The Task Force must continue work to instill an environmental ethic in the general public. The remaining grade levels (K-3 and 9-12) of the K-12 curriculum development project should be supported by the Task Force.

6.11 Public communication/involvement workshops were held in areas of the middle Klamath and Salmon River. Similar efforts should be increased in the lower part of the Klamath River this coming year. (The Chief Interpreter at Redwood National Park has been contacted and proposals are being drafted to begin pursuing this task.) During the following year, communication efforts will be expanded in the upper basin. A transportable display will be constructed during FY1993 for use in the upper basin. Eventually all areas of the basin will be receiving a wide range of the benefits of public communication and involvement programs.

6.12 More workshops to involve people on a subbasin level in the fishery restoration projects are needed throughout the basin. The Task Force has approved an initial group of workshops to be conducted in FY1993.

6.13 Impartial evaluation of the education and communication products should be initiated.

6.14 The new 4-H Environmental Stewardship program needs to continue to be tracked in order to find a way to incorporate youth education projects for riparian restoration into the established communities activities that 4-H groups perform.

6.15 The Task Force needs to decide whether, and how, to accommodate points of view in the newsletter. Options would include a guest opinion column, a format where pro and con arguments are presented on an issue or a debate (argument/rebuttal) format. There needs to be a method to get the issues addressed frankly and in a balanced way.

## Chapter 7, Program Administration:

7.1 Program administration for the Klamath Restoration Program is organized as required by the Klamath Act. The Secretary of the Interior and the Director of the California Department of Fish and Game are responsible for providing administrative

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support to the Task Force and Management Council. The Secretary of Interior appointed the Fish and Wildlife Service to set up an office to serve as "operation central" for the Klamath Restoration Program. The Klamath River Fishery Resource Office in Yreka, California, is staffed with five people to provide administrative support to the Task Force and Management Council.

## Accomplishments:

7.2 The Task Force implemented a watershed subbasin planning approach to the overall Restoration Program. The Task Force's Technical Work Group identified specific subbasins and developed restoration objectives for each subbasin. (The list of subbasins and objectives are provided as Appendix A.) A significant result of this planning effort was the development of restoration groups in the Scott and Salmon River subbasins. These planning groups sought and received FY1993 funding approval from the Task Force, for coordination and planning restoration work for those two subbasins. The Shasta Valley CRMP project coordinator position was approved for an additional year of funding to implement habitat restoration projects in the Shasta subbasin. This position had been previously funded in FY1992.

7.3 KRFRO received a grant of \$51,000 in FY1992 to develop a computerized water body monitoring system based on the EPA/SWRCB reach file system. The grant is administered by the NCRWQCB, and is supported by U.S. Environmental Protection Agency funding. In 1993, \$51,000 additional funds will be provided by the NCRWQCB. Approximately 40% of the funding will be matched with non-federal funds over the next two years.

7.4 The project selection process has been refined. The Technical Work Group now meets to review and rank proposals at the same time that the federal review committee meets to assess proposal adequacy. Information from the federal review committee is shared with the Technical Work Group after the proposals have been ranked.

7.5 Our information resources are continually being upgraded and the first stage of developing a catalogued technical library at KRFRO has been initiated.

7.6 The three chairs of the Klamath advisory committees (Klamath Fisheries Task Force, Klamath Fishery Management Council and the Trinity Task Force) met at joint meeting in June 1992 (LRP policy 7.9.d). This meeting was a prime opportunity to discuss mutual needs of the three advisory groups. The chairs decided to hold a series of these meetings to continue discussing several actions items that have been identified.

7.7 The draft upper basin amendment to the long-range fishery restoration plan was approved by the Task Force in spring, 1992. This document focuses on upper basin issues affecting fishery restoration work; primarily water management and

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quality. In fall, 1992, the Task Force consented to reopen the public comment period on this document. Comments received in 1993 will be used to revise the existing document prior to submittal to the Secretary of Interior for adoption.

## Critical Needs:

**7.8** Tasks identified last year still need to be completed. Each entity represented on the Task Force must continue efforts to commit fully to implementing the policies in the long-range plan. In doing this, each Task Force representative must pursue additional funding, staffing, and resource commitment from their respective groups, and work on implementing these policies. Overlapping jurisdiction and responsibilities should be resolved so that each agency or group knows what its function is in this restoration program.

**7.9** The Task Force still needs to develop a workable management concept for implementing policies and write a workable action plan that prioritizes actions and addresses immediate needs.

**7.10** The Task Force should establish subcommittees with the specific task of reviewing a chapter in the long-range plan and ensuring that each policy is addressed or evaluated annually. Reports of subcommittee findings should be made to the Task Force.

**7.11** The Task Force should continue to investigate alternate funding sources to increase the degree of implementation of long-range plan policies.

**7.12** A long term Memorandum of Agreement should be drafted for all agencies to work cooperatively in the Restoration Program, as required by the Klamath Act.

**7.13** The Task Force should clarify the intent of Congress on the preferential employment requirement of the Klamath Act. A more equitable method for providing preference to targeted employment groups is needed for the proposal selection process.

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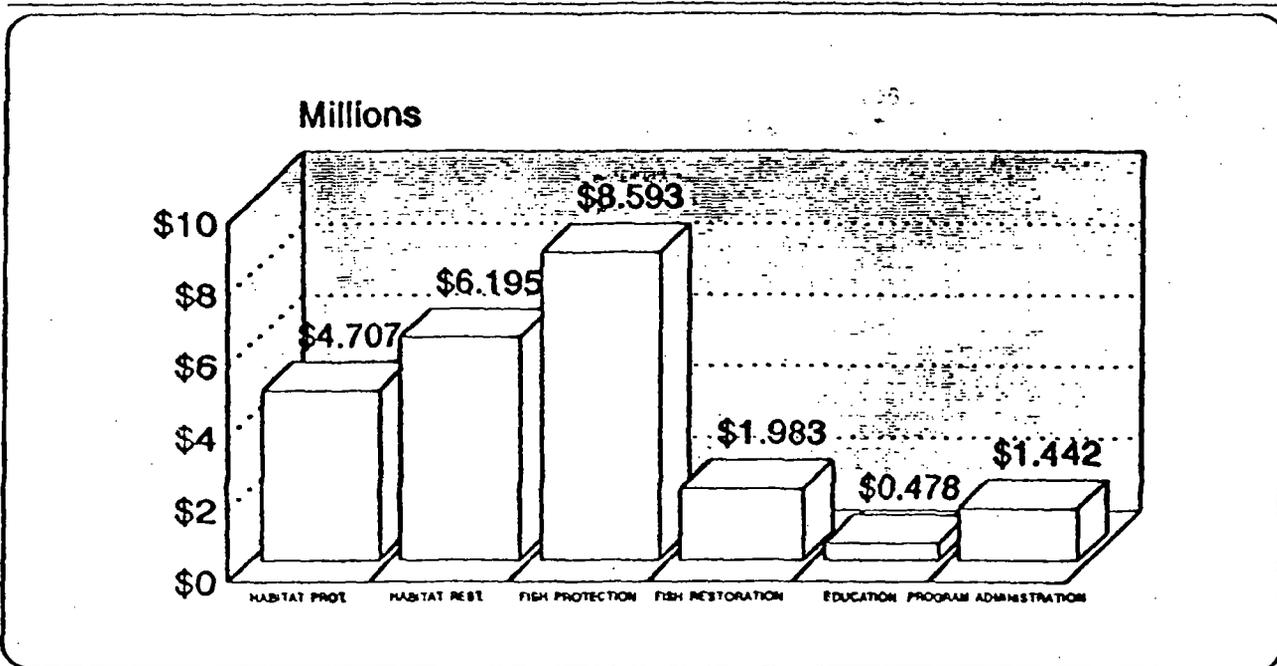
## Expenditures, FY1989 through FY1993:

8.1 Restoration Program funds for Fiscal Years 1989 through 1993 (approximately \$5 million) and an additional \$18.4 million contributed by the California Department of Fish and Game, Hoopa and Karuk Tribes, U.S. Bureau of Indian Affairs, and the U.S. Forest Service - Klamath and Six Rivers National Forests, and the National Marine Fisheries Service, for the same time period, are totalled by category and presented in Figure 1.

## KLAMATH RESTORATION PROGRAM

FY1989-FY1993

GRAND TOTAL \$23,398,073



Cumulative expenditures by: USFWS, Bureau of Indian Affairs, USFS - Klamath National Forest, USFS - Six Rivers National Forest, California Department of Fish and Game, Hoopa Tribe, Karuk Tribe, and National Marine Fisheries Service. Chart prepared 1/93.

FIGURE 1.

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## Section II - Summary of recommendations from Restoration Program funded projects

### Background

9.1 The long range plan identifies information needs in each chapter. The Task Force has supported information gathering projects in each annual work plan since FY1989. As reports are completed, staff at KRFRO disseminates this information to Task Force and Technical Work Group members upon request. A semi-annual digest of final report abstracts is prepared and sent to advisory committees and interested parties, identifying the Fish and Wildlife Reference Service in Washington D.C. and the Great Northern Corporation in Weed, California, as repositories for these reports.

9.2 Serving in advisory roles to the Secretary of Interior, the Klamath River Basin Fisheries Task Force and the Klamath Fishery Management Council must have accurate information from which to base decisions and provide advice. In many cases biological information for Klamath River anadromous fish populations is lacking. Habitat surveys were inadequate; standing crop and fish carrying capacity information was almost non-existent. The Task Force has begun the restoration program with a series of information gathering projects in order to get some of the needed information. Cooperators often draw conclusions and make recommendations from their field evaluations. What follows is a compilation of recommendations from all final reports completed for the Restoration Program, to date. The recommendations are grouped by applicability to chapters in the long range plan.

### Project Reports:

9.3 The final reports received at KRFRO to date, containing recommendations for action are listed below. Numeric references are provided in the ensuing discussion of recommendations so the reader can identify the source of the recommendations.

Cooperator:	Project Title:	Date
1. California DWR	Scott River Flow Augmentation Study	1991

Description -- The mainstem Scott River is notoriously dry in the Scott Valley reach during summer months. The Task Force requisitioned this study to investigate the potential for improving instream flows.

2. Hoopa Valley Tribe	Pine Creek Watershed Assessment	1991
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Description -- Pine Creek is one of the largest tributaries and most significant producers of fall chinook in the lower Klamath River below Trinity River. Extensive timber harvest and road construction in the watershed has caused increased

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sediment supply to the creek. This survey of current and potential erosion sites is to be used to reduce potential sediment supply by preventing excessive erosion in the upper watershed.

3. Shasta Valley RCD      Shasta River Water Quality Study      1991

Description -- Water quality in the Shasta River is suspected to be impacting the anadromous fish populations in this river system. This study monitors physical and chemical parameters thought to be contributing to the decline in water quality.

4. Siskiyou RCD      Scott River Riparian Survey      1992

Description -- Fish habitat in the mainstem Scott River in the Scott Valley reach is impacted by excessive cattle grazing in the riparian zone, and by bank destabilization from livestock and natural flood events. A survey of riparian conditions on the mainstem Scott River in the Scott Valley reach will assist landowners and the Siskiyou RCD in targeting high priority sites for fencing and bank stabilization.

5. Siskiyou RCD      Scott River Basin Granitic Sediment Study      1990

Description -- Fish habitat in the Scott River is severely impacted by excessive sedimentation from upslope land disturbances, primarily in areas of decomposed granitic soils. This study determines the relative contribution of sand from specific watersheds, and discusses impacts on fish habitat. Land management strategies can be developed for watersheds known to be contributing inordinate proportions of sediment.

6. U.S. Fish & Wildlife Investigations on Blue Creek      1990

Description -- Blue Creek, the most significant producer of late fall run chinook, tributary to the lower Klamath River, is investigated to determine habitat condition, production levels, and estimate carrying capacity.

7. U.S. Fish & Wildlife Survey of Lower Klamath River Tributaries      1990/91

Description -- Lower Klamath River tributaries <sup>are</sup> were surveyed to determine habitat condition, present salmonid production, and to prescribe restoration treatments.

8. U.S. Forest Service      S. Fork Salmon River WIN Inventory      1992

Description -- A Watershed Improvement Needs Inventory on the upper South Fork Salmon River is performed to establish a list of high priority restoration projects, including cost estimates.

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## 9. U.S. Forest Service Sediment Budget, Salmon River Basin 1992

Description -- Extensive landslide activity in the Salmon River subbasin is surveyed from historic and present air photographs. Additional sediment sources (i.e. roads, fire, timber management) are described and quantified, with an attempt to correlate sediment supply with fish habitat.

## 10. U.S. Forest Service Evaluation of Fish Habitat and Utilization 1990

Description -- 125 miles of Klamath River tributaries from the Shasta River subbasin to the Salmon River subbasin are habitat typed and spawner use is surveyed during 1989/90. Recommendations for habitat improvements are made.

## 11. U.S. Forest Service Evaluation of Instream Structures 1990

Description -- Ten types of instream structures are evaluated for fish utilization, cost efficiency, and long-term durability.

## 12. U.S. Soil Cons. Svc. French Creek Erosion Site Inventory 1991

French Creek is identified in the Scott River Granitic Sediment Study as a major contributor of decomposed granitic sediment to the Scott River. Erosion sites in the French Creek watershed are inventoried in Phase II of the Scott River sediment analysis (See Scott River Granitic Sediment Study for Phase I). 38 priority reaches in the watershed were recommended for erosion control treatments.

### Recommendations:

#### Chapter 2 - Fish Habitat Protection

##### River Flow and Temperature:

10.1 The Shasta and Scott Rivers suffer from excessive water use and high water temperatures during the irrigation season. SB 301, which allows a water right holder to designate water for instream beneficial uses, should be exercised to alleviate these recurring problems. Specifically, the Task Force is recommended to secure adequate instream flow releases from Dwinnell Reservoir during critical outmigration periods in the Shasta River (3). Development of tailwater recovery systems is also recommended to reduce the water diversion needs and tailwater return flow in the Shasta River (3). Purchase of high seniority water rights in the Scott River is recommended as a means of increasing instream flows in that system (1). The Butts water right of 3.7 cfs is specifically recommended for purchase, and Mr. Butts was a willing seller in 1991 (1).

10.2 The California Department of Water Resources recommends that the Department of Fish and Game should request the State Water Resources Control

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Board to review the conditions and stipulations of the Scott River adjudication with individual water right holders in the Scott Valley (1). This would help eliminate inadvertent or deliberate violations of the terms of the adjudication.

10.3 Riparian fencing, revegetation, or bank stabilization are strongly recommended for the Shasta and Scott River systems (1, 3, 4, 8, 10). Landowners in the Shasta Valley recommend that these activities be accompanied with efforts to control the beaver population to allow establishment of woody vegetation. Riparian zone revegetation would also benefit the South Fork Salmon River, Shackelford/Mill Creeks, Yreka Creek, and Indian Creek (8, 10).

## Sedimentation:

10.4 Sediment supply from road surfaces, cuts, fill, and stream crossings, is significant in all portions of the Klamath River Basin (2, 5, 8, 9, 12). In many subbasins, road construction, failure, and maintenance contribute more than 50% of the sediment (2, 5). The Task Force must encourage landowners and land management agencies to reduce the density of roads in high erosion areas by putting abandoned roads out of service, excavating stream crossings, and outslipping roads specifically in sections that concentrate runoff (2, 5, 8). Areas of special concern are those with highly erodible decomposed granitic soil (5). Approximately five miles of roads in the South Fork Salmon River drainage could be obliterated, blocked, or restructured to alleviate erosion, maintenance, and safety hazards (8).

10.5 Landslides are shown to be providing a substantial amount of sediment into the South Fork Salmon River (8, 9). Specifically, stabilizing the landslides at the Big Flat Campground and at the confluence with Grizzly Creek should be given high priority. A significant landslide on the West Branch of Indian Creek was also noted in a different report, but impacts to fish habitat were not thought to be significant (8, 10).

## Suction Dredge Mining:

10.6 The Klamath National Forest and CDFG should strengthen coordination and enforcement of dredge operating permits on Klamath River tributaries. Out of season extensions granted to suction dredge operators should be coordinated with existing site specific spawning ground information (10).

## Critical Fish Spawning Areas:

10.7 Stream mapping techniques should be integrated with spawning ground investigations for the purpose of developing an inventory of persistent spawning beds. This information would aid resource managers and law enforcement personnel in protecting these critical areas (10).

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## Further study:

10.8 Instream flow studies to quantify fish habitat needs in the mainstem Klamath, Scott, and Shasta Rivers are recommended by California Department of Water Resources. Fish habitat in these three river systems is identified as being severely impacted by excessive water withdrawal (1).

10.9 The relationship between groundwater levels and streamflow in the Scott River should be investigated to assess the value of pumping groundwater to provide instream flow (1).

10.10 The Scott River granitic sediment report stated "the question of how to control or mitigate sedimentation from roads needs to be studied with specific reference to granitics (5). Further studies on road sedimentation should also include field measurements of the relative proportion of sediment coming from the cut as opposed to the road surface."

## Chapter 3 - Fish Habitat Restoration

10.11 The evaluation of instream habitat restoration structures (11) revealed that structures which provided high habitat and cover diversity received the best response from juvenile fish. An accurate survey of existing habitat and fish utilization is prerequisite to prescribing instream structure modifications. Of the ten habitat modification techniques investigated, digger logs provided the best increase in fish standing crop (fish/m<sup>2</sup>) for the lowest cost. The investigators also concluded that backfilling of instream structures with gravel should be discontinued. Large woody debris appears to be heavily utilized and may provide the highest benefit to fish.

10.12 Authors of the instream structure evaluation report (11) stated "consideration of structural restoration should be driven by specific objectives based on sound assessment of habitat condition, species, seasonal fish needs, life history stage specific requirements (alevin, fry, parr, smolt, adult), and historical condition of the resources."

10.13 The investigation of habitat types and fish utilization revealed that large woody cover is needed in slow velocity habitats in the South Fork Salmon River, Scott River, Nordheimer Creek, Elk Creek, Indian Creek, Grider Creek and Beaver Creek. Stable spawning areas are needed in North Fork Salmon River, Shasta River, Elk Creek, Indian Creek, and Grider Creek. Seasonal migration barriers in Scott River, Nordheimer Creek, and Beaver Creek should be modified (10).

10.14 Surveys of the lower Klamath River tributaries revealed that seasonal migration barriers at the mouths of many tributaries may be limiting production (7). Specifically, the mouths of Surpur, Mettah, Salt Creek, High Prairie, Ah Pah, and Roach Creeks are

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recommended for modification. Surpur and Mettah Creeks would benefit from construction of spawning gravel retention structures.

## Further study:

10.15 The interaction of large woody debris/channel processes/fish utilization in tributaries to the Klamath River should be further investigated through implementation and evaluation of future restoration projects and review of historic channel conditions (11).

10.16 If migration barriers at the mouths of tributaries are modified, biological and physical monitoring should be performed to assess effectiveness (7).

10.17 Spawning ground surveys should be implemented on tributaries with minimal effects from land management and stocking (eg. Dillon Creek, Clear Creek) to contrast health of remaining wild salmon and steelhead runs (10).

## Chapter 4 - Fish Population Protection

10.18 The investigation of habitat types and fish utilization surveys revealed that poaching was a considerable problem on south and north forks of the Salmon River, Shackelford/Mill Creeks, and Indian Creek. Aggressive enforcement and education are needed in all areas of the basin, but specifically these areas mentioned (10). A common mark for all hatchery steelhead is recommended as a means to protect natural steelhead (long range plan).

10.19 Spring chinook and summer steelhead should have special emphasis for protection from poaching and over fishing (10). Angler use surveys are recommended for streams containing these species to determine the extent of potential harvest (long range plan).

10.20 Stream mapping techniques should be integrated with spawning ground investigations for the purpose of developing an inventory of persistent spawning beds (10). This information would aid resource managers and law enforcement personnel in the protection of these critical areas.

## Chapter 5 - Fish Population Restoration

10.21 Investigation of spring and fall chinook spawning habitat utilization indicate that the upper reaches of the South Fork Salmon River are used extensively by spring chinook, and therefore bioenhancement is not recommended. Investigators suggest that bioenhancement objectives be clearly defined before initiating projects in the Salmon River subbasin because of the extensive natural production in this system (10).

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## Section III - Long Term Monitoring

### Background:

11.1 The Klamath River Fishery Restoration Program was initiated in 1986; data gathering and restoration projects have been funded annually since Fiscal Year 1989. The Task Force is faced with rectifying 100+ years of habitat degradation and run declines in a short 20 year period. Improvements in fish habitat may take many years to result in increased fish production. How do we assess the value of restoration work in the interim? Platts (1989) suggests that long-term monitoring on the South Fork Salmon River, Idaho, enabled scientists to conclude that the watershed was not healing as quickly as earlier, short-term monitoring had indicated. Conclusions on long-term processes drawn from short-term studies may not provide decision makers with accurate results. The point is that there are many ways to monitor change, but it might serve this restoration program well by selecting a few monitoring strategies and staying with them. Some long-term data sets that exist for the Klamath Basin, and the agencies collecting or maintaining data include the following:

- o Annual run size estimates of adult fall chinook in the Shasta River since 1931 (CDFG);
- o Klamath Basin estimates for fall chinook escapement since 1978 (CDFG);
- o Estimates of adult spring chinook escapement in the Salmon River since 1980, excluding 1983/4 (USFS);
- o Estimates of holding adult fall chinook in many mid-Klamath tributaries since the late 1960's (USFS);
- o Estimates of holding adult spring chinook and summer steelhead in Wooley Creek since the late 1960's (USFS);
- o Iron Gate Hatchery adult fall chinook and steelhead return rates since the mid 1960's (CDFG);
- o Instream flow level on the Shasta, Scott, Salmon, Trinity and mainstem Klamath Rivers since the early 1900's (USGS);
- o Periodic seasonal water temperature, conductivity, dissolved oxygen on the Shasta River since the early 1980's (NCRWQCB);
- o Periodic summer temperatures of some mid-Klamath tributaries since the mid 1980's (USFS);

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**11.2 More recent monitoring projects have been initiated by various agencies. Some of these are:**

- o In 1992 the US Fish and Wildlife Service began monitoring habitat conditions and population structures on Wooley Creek to establish a baseline from which to measure long-term change.**
- o Water temperatures on the mainstem Klamath River are to be monitored by the Karuk Tribe with assistance from the Klamath Task Force, CDFG, and USFS.**
- o The U.S. Forest Service has established 20 monumented cross-sections in the Indian Creek drainage for transect measurements to determine long-term change in the stream channel cross-section, over time. Changes in the cross-sections will be interpreted for the coarse sediment budget of Indian Creek.**
- o The U.S. Forest Service is compiling all water temperature data collected on the Klamath National Forest through FY1992. This data will be loaded into a spreadsheet, summarized by monthly averages and extremes, and be made available to other interested parties.**
- o The U.S. Forest Service is surveying coarse woody material in portions of streams minimally affected by man's activities. This data will be used to as a baseline to determine desired future condition standards for coarse woody material in other Klamath Basin streams.**
- o The Klamath Information System is being developed to correlate all existing data by stream reach in the Klamath Basin. Once operational, this information system will be an integral component to the Klamath National Forest's Arc/Info GIS system.**
- o The Task Force collaborated with the U.S. Forest Service to assess fish habitat in 125 miles of tributaries to the Klamath River in 1989.**

**11.3 The long range plan for this fishery restoration program specifically calls for monitoring fish habitat quality and fish location to provide information to foresters in preparing more complete and accurate timber harvest plans. The plan recommends monitoring trends in water quality and riparian cover in streams impacted by agriculture practices. Some additional environmental parameters which may be useful indicators of the Klamath Basin's ecological well-being are discussed below. Long term monitoring of some of these parameters would provide managers with feedback regarding the efficacy of this restoration program. (To avoid redundancy in this report, we did not reiterate recommendations for monitoring or additional studies identified in Section II.)**

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## Bedload composition/stream morphology -

### Percent Fines:

Sommarstrom, et al. (1990) points out the variety of research results relating percent fines to impacts on salmonid reproduction. The consistent revelation is that there exists an inverse relationship between the amount of fine sediment in spawning or rearing areas versus fish survival and abundance. Long term monitoring of grain size distribution would provide a baseline of information from which we would be able to evaluate change. Stowell, et al. (1983) presents a standardized model to predict sediment yields and the effect of various sediment yields on fish. Stowell points out that the complex sequence of sediment movement and its effect on fish habitats and populations have not been fully described and therefore the model may not be universally applicable.

### Fine Sediment in Pools:

The U.S. Forest Service is developing a technique to determine how inputs of sediment affect stream channel morphology, flow conditions, and substrate (USFS 1991a). One method to make this determination is to measure fine sediment in pools. The logic is that as scouring flows recede, pools become areas of silt deposition. The fraction of pool volume filled with fine sediment is directly related to the supply of sediment and the mobility of the channel as a whole. Measurement of the relative volume of fine sediment in pools serves as a sensitive index of a channel's response to the volume of sediment delivered to it. Good correlations have been determined in test measurements, and methodology is being refined. In addition to indexing sediment load, staff developing this technique found that a sequence of measurements down a channel can be used to reveal sediment sources in a stream network and to evaluate the magnitude and extent of their effect. This technique may also prove worthy as a tool for monitoring long term change in a stream system. As sediment supply is reduced by erosion control efforts on the uplands, relative volume of sediment in pools should decline.

### Incidence of large pools:

Sedell and McIntosh (1992) compared historic stream survey data from 975 km of streams in the Columbia River System, with more recent surveys of the same streams. Their findings show that human-impacted river systems have lost 37% of the large pools over the past 50 years. For the same time period, the number of large pools has increased in wilderness and relatively unmanaged river drainages by 79%.

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## Monitoring Biological Indicator Species -

### Amphibian species:

U.S. Forest Service biologists are suggesting that each district office initiate an inventory of frogs and toads in all watersheds (USFS 1991b). The logic here is that amphibians comprise a major component of stream vertebrate biomass, being both predators and prey in the aquatic food web. Their numbers and biomass can equal or exceed fish in some streams. They are relatively long-lived and utilize both terrestrial and aquatic habitats in different stages of their life histories. Amphibians are linked closely to the habitats they occupy; only a few species migrate, and those only short distances. These combined factors make amphibians excellent biological indicators. Recent declines of amphibians in the western United States may indicate serious problems in both aquatic and terrestrial environments.

### Fish (population):

Hocutt and Stauffer (1980) state that it is a good idea to monitor fish populations because legislators can better understand the effects of environmental degradation on fish than on other aquatic taxa. An additional advantage of fish is that they are at the top of the aquatic food chain and therefore integrate the responses of the food chain to environmental stress. Furthermore, the environmental requirements of fish are more widely known than those of invertebrates or for that matter of any other aquatic taxonomic group. Collection and identification of fish are relatively fast and easy, and therefore turnover time for data interpretation is rapid. Problems associated with monitoring fish are: 1) nonrandom distribution of fishes, 2) selectivity of gear, and 3) efficiency of the sampling gear.

### Disease/parasite infestation:

Carleton (1989) observed seasonal occurrences of Ceratomyxa shasta in the Klamath River from April (15°C) through December (7°C), with water temperature ranging from 15°C in April, to 7°C in December. No occurrence was reported between December 5, 1986 and April 9, 1987. Periodic monitoring for this organism might reveal a change in seasonal occurrence due to reductions in flow and increased water temperatures caused by the extended drought.

Post (1983) states that infestation of trematodes in fish is dependent on water quality, temperature, and length of exposure to the free swimming stage of this parasite. The free swimming, infectious stage known as the cercariae is not active enough at 15°C to infect fish, but can do so at 18°C or above. The parasite typically infests the kidney, causing osmoregulatory problems when parasite numbers are large. Recent disease surveys of outmigrating Klamath River salmon and steelhead indicate significant infestation of the parasite Nanophyetus

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salmonicola (S. Foott, personal communication). Monitoring incidence of the trematode in Klamath stocks, and correlating this information with environmental conditions (primarily flow and temperature) may reveal ways to reduce infestation rates of outmigrating salmonids.

## Monitoring steelhead angler success rates -

Policy 4.3.f. of the long range plan indicates that the Task Force should encourage CDFG to analyze angler success data currently collected from guides to provide a steelhead catch-per-effort baseline from which to measure the success of the Restoration Program (KRBFTF 1991).

11.4 These are just a few parameters identified in a literature search for long-term monitoring projects. Many other physical and biological indicators could be monitored but are not covered here. If the Task Force decides to implement one or more long-term monitoring projects, further investigation would be necessary. Investigation by staff or by the Technical Work Group would be appropriate.

11.5 Bedload composition, transect geometry, and water quality (dissolved oxygen, temperature) are some of the standards by which fish habitat quality is assessed. New and innovative techniques such as measuring fine sediments in pools and surveys of amphibian communities may prove useful, but further development of these techniques are recommended.

## Section IV: Conclusion and Recommendations

12.1 The 1991 run of fall chinook in the Klamath River totalled 31,741 which was the lowest run on record since record keeping began in 1978. By way of comparison, the Shasta River had a run of 18,731 fall chinook in 1978; a run of 726 in 1991. Low run size projections for 1992 forced the Pacific Fisheries Management Council and the California Department of Fish and Game to impose extreme commercial and sport fishing closures to protect these stocks. Estimates of economic losses to fishing communities exceed \$100 million in 1992.

12.2 1992 marked the sixth consecutive year of drought in Northern California and an unprecedented low-runoff year in the upper Klamath Basin. The total runoff into Upper Klamath Lake was estimated at 44% of normal (J. Bryant, personal communication). This low runoff translated into extremely low deliveries in the mainstem Klamath River below Iron Gate Dam. The Bureau of Reclamation imposed a flow reduction at Iron Gate Dam on February 13, 1992, and dam releases have not met minimum flow requirements since that time. Efforts to get higher flow releases below Iron Gate Dam by various agencies and interest groups were marginally successful. Flows were increased for three weeks in April to aid in juvenile

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outmigration. The three week increase raised water flows from approximately 500 cfs to 800 cfs but the minimum flow requirement is 1,300 cfs for that time.

12.3 Forest practice reform has yet to fully materialize in the basin. The Klamath and Six Rivers National Forests have not completed their respective forest management plans. Although many timber harvest restrictions have been implemented in the National Forests, they are still working under the auspices of the 1970's land management plans. The California forestry reform acts known as the Sierra Accord, and later the Grand Accord failed to become law. Presently, private timber lands are regulated by pre-1991 timber harvest rules and regulations. The long range plan quotes an investigation team for the State Board of Forestry as stating "actual forest practices as currently conducted under the rules and process do not provide the best feasible protection of the beneficial uses of water."

## Recommendations:

12.4 The Task Force has implemented about two thirds of the policies contained in the long range plan (about the same number as reported in last year's progress report). Some of the critical needs identified in last year's program report have been addressed by the Task Force and respective entities (see Section I Accomplishments), but few are completely resolved at this writing. The critical needs are still pertinent in 1992. The key issues of land and water management are slow to change and require the Task Force to continue efforts. The recommendations that follow are intended to supplement the recommendations made in the previous year's report. The following list consists of high priority actions intended to hasten long-range plan policy implementation, but more importantly, to address the immediate needs of the resource.

## The Task Force should --

- o pursue completion of the amendment of the long range plan to include the upper basin;
- o continue supporting efforts of subbasin restoration coordinating groups;
- o contribute to the State Board of Forestry rules and regulations process by providing comment on the upcoming rules proposals (Policy 2.A.4.b);
- o continue negotiations with water delivery agencies to obtain adequate flows for fish in the mainstem Klamath, Shasta, and Scott Rivers, and pursue the development of instream flow studies for these (Policies 2.E through F, and 3.7);
- o be prepared to provide comment to FERC on potential Iron Gate Dam flow variance in upcoming irrigation season;

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- o encourage reassessment of water use priorities in the Klamath Compact to ensure adequate fish protection flows in the mainstem Klamath River below Iron Gate Dam;
- o implement one or more long-term monitoring projects to enable evaluation of the restoration program;

## California Department of Fish and Game --

- o support the Task Force in their efforts to obtain adequate instream flows by ensuring pertinent Fish and Game Codes are enforced at the local level;
- o investigate impacts of suction dredge operations on Klamath River fish populations and propose changes for the 1994 mining season, if necessary;
- o pursue limiting or closing Klamath River tributaries to "trout" fishing;
- o continue financial support for riparian fencing projects on the Shasta and Scott Rivers;

## Tribes --

- o pursue the development of an instream flow study on the mainstem Klamath River to specify flow needs for fish;
- o develop operational guidelines for small scale rearing pond operations for mid and lower Klamath rearing pond programs, which will reduce potential impacts on genetic structure of natural stocks.

## U.S. Forest Service --

- o continue to seek add-on funding for the Salmon River chinook recovery strategy;
- o ensure timely completion and implementation of the management plan for the Klamath National Forest.

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- Bryant, J. Acting project manager, U.S. Bureau of Reclamation - Klamath Project, Klamath Falls, Oregon.
- Foott, J. S. Pathologist, U.S. Fish and Wildlife Service, CA/NV Fish Health Center, Anderson, California.

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Table 1: Fiscal Year 1994 priority objectives for Klamath River project proposals by Subbasin (X denotes high priority objective, XX denotes most critical objective).

Objective	Basinwide	Mainstem	Lower Klamath	Mid. Klamath	Upper Klamath	Salmon	Scott	Shasta
A. Hatchery Practices	XX	XX	XX	XX	XX	XX	XX	XX
B. Foster CRMP	XX	XX	XX	XX	XX	XX	XX	XX
C. Water Quality		XX	X	X	XX	X	X	XX
D. Public ed/involve			X	X	X	XX	XX	XX
E. Restore Fish Stocks	XX	XX	XX	XX		XX	XX	XX
F. Restore Riparian			XX	X		XX	X	XX
G. Protect Habitat			XX	XX	X	X	X	X
H. Fish Passage		X	XX	X	X		X	X
I. Restore Habitat			XX	X	X	X	X	X
J. Control Erosion			XX	XX			XX	
K. Flow Adequacy		XX			XX			
L. Enforce Law/Regs.			XX	XX				
M. Determine Flow Needs							XX	X
N. Restore Estuary		XX						
O. Restore Watersheds						XX		
P. Conserve Water					XX			
Q. Develop Cooperation			X					
R. Protect Sturgeon		X						

Definitions of subbasin planning units and a glossary of objectives are on the following page.

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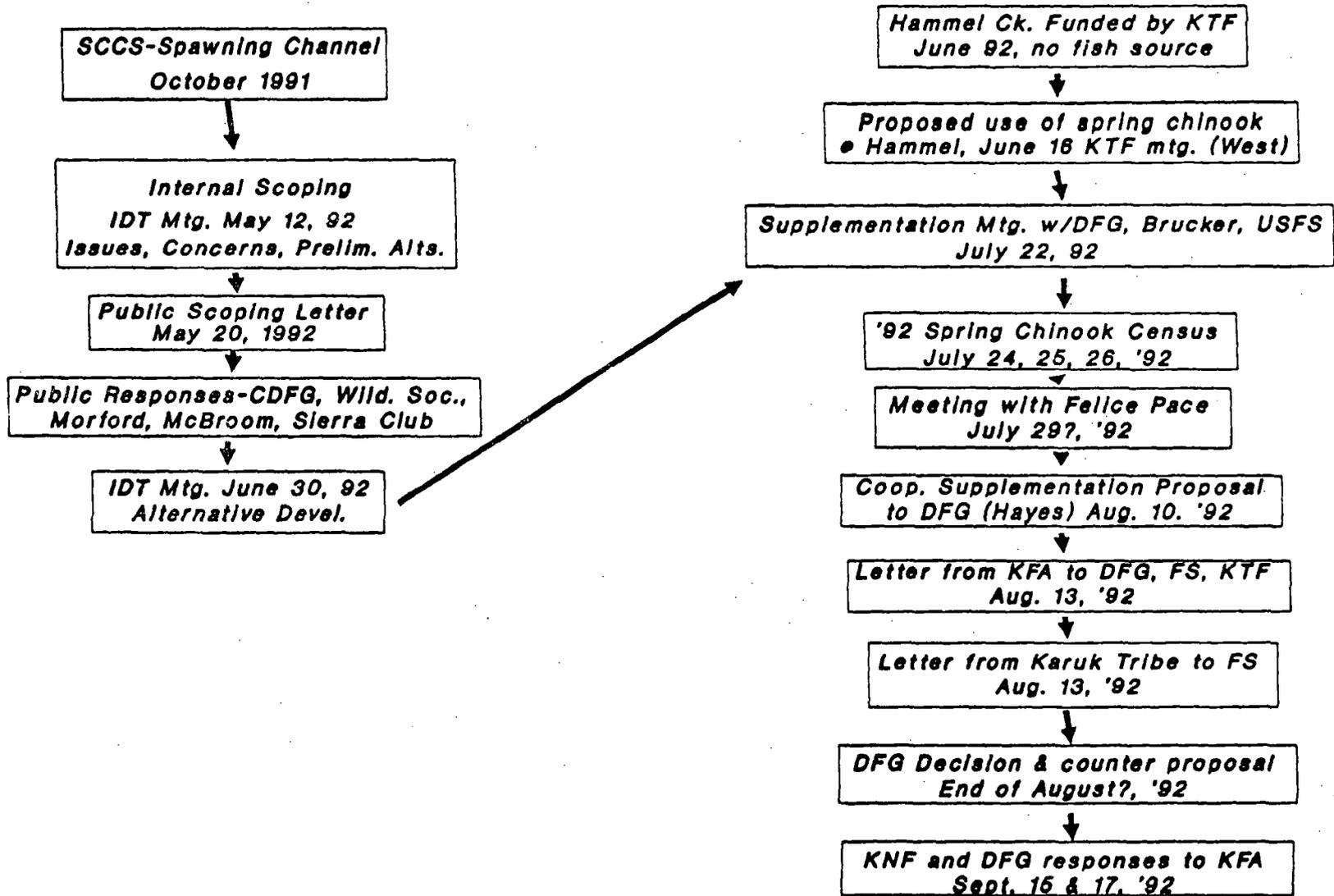
## Definition of Subbasin Planning Units

Mainstem	The estuary and the main river all the way to Klamath Lake.
Lower Klamath	All tributaries/watersheds from the mouth to the confluence with the Trinity River.
Mid Klamath	All tributaries/watersheds from the Trinity River to Iron Gate Dam.
Upper Klamath	All tributaries/watersheds <sup>above</sup> from Iron Gate Dam <u>to Link River Dam.</u>
Salmon	The Salmon River watershed.
Scott	The Scott River watershed.
Shasta	The Shasta River watershed.
Basinwide	The Klamath River watershed, or activities that encompass more than one subbasin.

## Glossary of Objectives

- A. Hatchery Practices - Investigate the effectiveness of artificial propagation methods and the impacts of artificial propagation on native fish stocks.
- B. Foster CRMP - Foster Coordinated Resource Management Plan development.
- C. Water Quality - Protect/Restore high water quality.
- D. Public ed/involve - Provide landowner and/or public education and workshops, encourage involvement.
- E. Restore Fish Stocks - Protect/restore depleted native fish stocks through artificial propagation.
- F. Restore Riparian - Riparian and/or wetland protection or restoration.
- G. Protect Habitat - Protect high quality habitat.
- H. Fish Passage - Correct fish passage problems.
- I. Restore Habitat - Restore damaged habitats.
- J. Control Erosion - Erosion prevention/control measures.
- K. Flow Adequacy - Promote adequate water flow for all anadromous species and life stages.
- L. Enforce Law/Regs. - Improve compliance with existing environmental laws/regulations.
- M. Determine Flow Need- Determine instream flow needs/optimize flows.
- N. Restore Estuary - Investigate and restore estuary habitat.
- O. Restore Watersheds - Protect/restore watershed condition.
- P. Conserve Water - Initiate water conservation measures.
- Q. Develop Cooperation - Encourage cooperation of affected interests.
- R. Protect Sturgeon - Protect/restore green sturgeon.

# Salmon River Spring Chinook Broodstock Capture and Rearing Project Events



DEPARTMENT OF FISH AND GAME

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*Agenda item 30*

December 16, 1992

Dr. Ron Iverson  
U.S. Fish and Wildlife Service  
Klamath River Fishery Resource Office  
P.O. Box 1006  
Yreka, California 96097-1006

*Ron*  
Dear Dr. Iverson:

Attached for your information is the table titled, "Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1992."

Please note that all figures for years, 1978 through 1991, are now final; 1992 figures are preliminary, and subject to revision.

Sincerely,

Paul M. Hubbell, Supervisor  
Klamath-Trinity Program  
Field Operations

Attachment

**KLAMATH RIVER BASIN FALL CHINOOK SALMON RUN-SIZE,  
HARVEST AND SPAWNER ESCAPEMENT--1992 SEASON<sup>1/</sup>**

The 1992 adult fall chinook salmon run into the Klamath River system has turned out to be significantly smaller than that projected preseason. It is the smallest run recorded since 1978, when the California Department of Fish and Game began generating annual, basin-wide figures. This year's grilse return, however, is the largest recorded since 1988.

Earlier this year, as part of efforts to formulate the 1992 season fishing regulations, fisheries scientists projected that 40,600 adult fall chinook salmon would return to the Klamath River this fall. Using this figure, they projected an in-river harvest of 4,100 adults, with the remaining 36,500 going to natural and hatchery spawning escapements. The following table presents, in abbreviated form, 1992 preseason adult harvest and spawner escapement projections, along with corresponding postseason estimates.

	Preseason projection	Postseason estimate (*)
<b><u>Harvest</u></b>		
Indian net	3,300	5,577 (169.0)
Angler	800	1,310 (163.8)
Subtotals:	4,100	6,887 (168.0)
<b><u>Spawner Escapement</u></b>		
Natural	27,000	11,120 (41.2)
Hatchery	9,500	7,238 (76.2)
Subtotals:	36,500	18,358 (50.3)
Totals:	40,600	25,717 (63.3)

\* Percent of projected figures in parentheses.

Complete run-size, harvest and spawner escapement figures for both adults and grilse for years, 1978-1992, are presented in the accompanying table.

<sup>1/</sup> Prepared December 10, 1992 by the California Department of Fish and Game, Klamath-Trinity Program.

**Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1992<sup>a</sup>**

**SPAWNER ESCAPEMENT**

	1978			1979			1980		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Hatchery Spawners</b>									
Iron Gate Hatchery (IGH)	915	6,925	7,840	257	2,301	2,558	451	2,412	2,863
Trinity River Hatchery (TRH)	1,325	6,034	7,359	964	1,335	2,299	2,256	4,099	6,355
Subtotals	2,240	12,959	15,199	1,221	3,636	4,857	2,707	6,511	9,218
<b>Natural Spawners</b>									
<b>Trinity River basin</b>									
(above Willow Creek, excluding TRH)	4,712	31,052	35,764	3,936	8,028	11,964	16,837	7,700	24,537
Salmon River basin	1,400	2,600	4,000	150	1,000	1,150	200	800	1,000
Scott River basin	1,909	3,423	5,332	428	3,396	3,824	2,245	2,032	4,277
Shasta River basin	6,707	12,024	18,731	1,040	7,111	8,151	4,334	3,762	8,096
Bogus Creek basin	651	4,928	5,579	494	5,444	5,938	1,749	3,321	5,070
Main Stem Klamath River (excluding IGH)	300	1,700	2,000	466	4,190	4,656	867	2,468	3,335
Misc. Klamath tributaries (above Hoopa and Yurok Reservations)	735	2,765	3,500	147	1,068	1,215	500	1,000	1,500
Hoopa and Yurok Reservation tribs.	-- b	-- b	-- b	100 c	400 c	500 c	250 c	400 c	650 c
Subtotals	16,414	58,492	74,906	6,761	30,637	37,398	26,982	21,483	48,465
<b>Total Spawner Escapement</b>	<b>18,654</b>	<b>71,451</b>	<b>90,105</b>	<b>7,982</b>	<b>34,273</b>	<b>42,255</b>	<b>29,689</b>	<b>27,994</b>	<b>57,683</b>

**IN-RIVER HARVEST**

	1978			1979			1980		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Angler Harvest</b>									
Klamath River (below Hwy 101 bridge)	122	854	976	216	484	700	835	727	1,562
Trinity River basin (above Willow Creek)	-- d	-- d	-- d	765	1,157	1,922	2,456	998	3,454
Balance of Klamath system	1,960	840	2,800	1,200	500	1,700	2,600	2,771	5,371
Subtotals	2,082	1,694	3,776	2,181	2,141	4,322	5,891	4,496	10,387
<b>Indian Net Harvest<sup>e</sup></b>									
Klamath River (below Hwy 101 bridge)	--	--	--	--	--	--	495	9,605	10,100
Klamath River (Hwy 101 to Trinity mouth)	--	--	--	--	--	--	272	1,528	1,800
Trinity River (Hoopa Reservation)	--	--	--	--	--	--	220	880	1,100
Subtotals	1,800	18,200	20,000	1,350	13,650	15,000	987	12,013	13,000
<b>Total In-river Harvest</b>	<b>3,882</b>	<b>19,894</b>	<b>23,776</b>	<b>3,531</b>	<b>15,791</b>	<b>19,322</b>	<b>6,878</b>	<b>16,509</b>	<b>23,387</b>

**IN-RIVER RUN**

	1978			1979			1980		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Totals</b>									
In-river Harvest and Escapement	22,536	91,345	113,881	11,513	50,064	61,577	36,567	44,503	81,070
Angling Mortality (2% of harvest) f	42	34	76	44	43	87	118	90	208
Net Mortality (2% of harvest) f	144	1,456	1,600	108	1,092	1,200	79	961	1,040
<b>Total In-river Run</b>	<b>22,722</b>	<b>92,835</b>	<b>115,557</b>	<b>11,665</b>	<b>51,199</b>	<b>62,864</b>	<b>36,764</b>	<b>45,554</b>	<b>82,318</b>

**Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates  
1978-1992 \***

**SPAWNER ESCAPEMENT**

	1981			1982			1983		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Hatchery Spawners</b>									
Iron Gate Hatchery (IGH)	540	2,055	2,595	1,833	8,353	10,186	514	8,371	8,885
Trinity River Hatchery (TRH)	1,004	2,370	3,374	4,235	2,058	6,293	271	5,494	5,765
<b>Subtotals</b>	<b>1,544</b>	<b>4,425</b>	<b>5,969</b>	<b>6,068</b>	<b>10,411</b>	<b>16,479</b>	<b>785</b>	<b>13,865</b>	<b>14,650</b>
<b>Natural Spawners</b>									
Trinity River basin									
(Above Willow Creek, excluding TRH)	5,906	15,340	21,246	8,149	9,274	17,423	853	17,284	18,137
Salmon River basin	450	750	1,200	300	1,000	1,300	75	1,200	1,275
Scott River basin	3,409	3,147	6,556	4,350	5,828	10,178	170	3,398	3,568
Shasta River basin	4,330	7,890	12,220	1,922	6,533	8,455	753	3,119	3,872
Bogus Creek basin	912	2,730	3,642	2,325	4,818	7,143	335	2,713	3,048
Main Stem Klamath River (excluding IGH)	1,000	3,000	4,000	1,000	3,000	4,000	200	1,800	2,000
Misc. Klamath tributaries (above Hoopa and Yurok Reservations)	500	1,000	1,500	600	1,500	2,100	140	1,270	1,410
Hoopa and Yurok Reservation tribs.	--- b	--- b	--- b	--- b					
<b>Subtotals</b>	<b>16,507</b>	<b>33,857</b>	<b>50,364</b>	<b>18,646</b>	<b>31,951</b>	<b>50,597</b>	<b>2,526</b>	<b>30,784</b>	<b>33,310</b>
<b>Total Spawner Escapement</b>	<b>18,051</b>	<b>38,282</b>	<b>56,333</b>	<b>24,714</b>	<b>42,362</b>	<b>67,076</b>	<b>3,311</b>	<b>44,649</b>	<b>47,960</b>

**IN-RIVER HARVEST**

	1981			1982			1983		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Angler Harvest</b>									
Klamath River (below Hwy 101 bridge)	536	1,714	2,250	1,252	3,539	4,791	60	750	810
Trinity River basin (above Willow Creek)	1,456	3,174	4,630	2,554	2,321	4,875	116	2,360	2,476
Balance of Klamath system	5,260	1,095	6,355	8,678	2,479	11,157	175	1,125	1,300
<b>Subtotals</b>	<b>7,252</b>	<b>5,983</b>	<b>13,235</b>	<b>12,484</b>	<b>8,339</b>	<b>20,823</b>	<b>351</b>	<b>4,235</b>	<b>4,586</b>
<b>Indian Net Harvest *</b>									
Klamath River (below Hwy 101 bridge)	912	23,097	24,009	290	4,547	4,837	12	800	812
Klamath River (Hwy 101 to Trinity mouth)	1,104	8,405	9,509	1,195	8,424	9,619	421	5,700	5,821
Trinity River (Hoopa Reservation)	449	1,531	1,980	314	1,511	1,825	30	1,390	1,420
<b>Subtotals</b>	<b>2,465</b>	<b>33,033</b>	<b>35,498</b>	<b>1,799</b>	<b>14,482</b>	<b>16,281</b>	<b>163</b>	<b>7,890</b>	<b>8,053</b>
<b>Total In-river Harvest</b>	<b>9,717</b>	<b>39,016</b>	<b>48,733</b>	<b>14,283</b>	<b>22,821</b>	<b>37,104</b>	<b>514</b>	<b>12,125</b>	<b>12,639</b>

**IN-RIVER RUN**

	1981			1982			1983		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
<b>Totals</b>									
In-river Harvest and Escapement	27,768	77,298	105,066	38,997	65,183	104,180	3,825	56,774	60,599
Angling Mortality (2% of harvest) †	145	120	265	250	167	417	7	85	92
Net Mortality (8% of harvest) ‡	197	2,643	2,840	144	1,159	1,303	13	631	644
<b>Total In-river Run</b>	<b>28,110</b>	<b>80,061</b>	<b>108,171</b>	<b>39,391</b>	<b>66,509</b>	<b>105,900</b>	<b>3,845</b>	<b>57,490</b>	<b>61,235</b>

Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1992<sup>a</sup>

SPAWNER ESCAPEMENT

	1984			1985			1986		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Hatchery Spawners</b>									
Iron Gate Hatchery (IGH)	764	5,330	6,094	2,159	19,951	22,110	1,461	17,096	18,557
Trinity River Hatchery (TRH)	766	2,166	2,932	18,166	2,583	20,749	3,609	15,795	19,404
Subtotals	1,530	7,496	9,026	20,325	22,534	42,859	5,070	32,891	37,961
<b>Natural Spawners</b>									
<b>Trinity River basin</b>									
(above Willow Creek, excluding TRH)	3,416	5,654	9,070	29,454	9,217	38,671	20,450	92,548	113,007
Salmon River basin	216 g	1,226 g	1,442 g	905	2,250	3,164	949	2,716	3,665
Scott River basin	358	1,443	1,801	1,357	3,051	4,408	4,865	3,178	8,041
Shasta River basin	480	2,362	2,842	2,227	2,897	5,124	683	3,274	3,957
Bogus Creek basin	465	3,039	3,504	1,156	3,491	4,647	1,184	6,124	7,308
Main Stem Klamath River (excluding IGH)	200	1,350	1,550	156	468	624	196	603	799
Misc. Klamath tributaries (above Hoopa and Yurok Reservations)	150	990	1,140	646	4,214	4,860	606	4,919	5,525
Hoopa and Yurok Reservation tribs.	-- b	-- b	-- b	50 h	80 h	130 h	-- b	-- b	-- b
Subtotals	5,285	16,064	21,349	35,951	25,677	61,628	28,942	113,360	142,302
<b>Total Spawner Escapement</b>	<b>6,815</b>	<b>23,560</b>	<b>30,375</b>	<b>56,276</b>	<b>48,211</b>	<b>104,487</b>	<b>34,012</b>	<b>146,251</b>	<b>180,263</b>

IN-RIVER HARVEST

	1984			1985			1986		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Angler Harvest</b>									
Klamath River (below Hwy 101 bridge)	175	548	723	1,479	2,427 I	3,906	704	2,456	3,160
Trinity River basin (above Willow Creek)	393	736	1,129	5,442	154 I	5,596	3,438	12,039	15,477
Balance of Klamath system	384	2,056	2,440	4,274	1,001 I	5,275	5,266	6,532	11,798
Subtotals	952	3,340	4,292	11,195	3,582 I	14,777	9,408	21,027	30,435
<b>Indian Net Harvest<sup>a</sup></b>									
Klamath River (below Hwy 101 bridge)	132	11,878	12,010	132	5,700	5,832	191	15,286	15,477
Klamath River (Hwy 101 to Trinity mouth)	183	5,622	5,805	476	3,925	4,401	377	5,033	5,410
Trinity River (Hoopa Reservoir)	140	1,170	1,310	947 J	1,941 J	2,888 J	286	4,808	5,094
Subtotals	455	18,670	19,125	1,555	11,566	13,121	854	25,127	25,981
<b>Total In-river Harvest</b>	<b>1,407</b>	<b>22,010</b>	<b>23,417</b>	<b>12,750</b>	<b>15,148</b>	<b>27,898</b>	<b>10,262</b>	<b>46,154</b>	<b>56,416</b>

IN-RIVER RUN

	1984			1985			1986		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Totals</b>									
In-river Harvest and Escapement	8,222	45,570	53,792	69,026	63,359	132,385	44,274	192,405	236,679
Angling Mortality (2% of harvest) f	19	67	86	224	72	296	188	421	609
Net Mortality (2% of harvest) f	36	1,494	1,530	124	925	1,049	68	2,010	2,078
<b>Total In-river Run</b>	<b>8,277</b>	<b>47,131</b>	<b>55,408</b>	<b>69,374</b>	<b>64,356</b>	<b>133,730</b>	<b>44,530</b>	<b>194,836</b>	<b>239,366</b>

**Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates  
1978-1992 \***

**SPAWNER ESCAPEMENT**

	1987			1988			1989		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Hatchery Spawners</b>									
Iron Gate Hatchery (IGH)	1,825	15,189	17,014	609	16,106	16,715	831	10,859	11,690
Trinity River Hatchery (TRH)	2,453	13,934	16,387	4,752	17,352	22,104	239	11,132	11,371
<b>Subtotals</b>	<b>4,278</b>	<b>29,123</b>	<b>33,401</b>	<b>5,361</b>	<b>33,458</b>	<b>38,819</b>	<b>1,070</b>	<b>21,991</b>	<b>23,061</b>
<b>Natural Spawners</b>									
<b>Trinity River basin</b>									
(above Willow Creek, excluding TRH)	5,949	71,920	77,869	10,628	44,616	55,242	2,543	29,445	31,988
Salmon River basin	118	3,832	3,950	327	3,273	3,600	695	2,915	3,610
Scott River basin	797	7,769	8,566	473	4,727	5,200	1,188	3,000	4,188
Shasta River basin	398	4,299	4,697	256	2,586	2,842	137	1,440	1,577
Bogus Creek basin	1,208	9,748	10,956	225	16,215	16,440	444	2,218	2,662
<b>Main Stem Klamath River</b>									
(excluding IGH)	65	863	928	164	2,982	3,146	214	1,011	1,225
<b>Misc. Klamath tributaries</b>									
(above Hoopa and Yurok Reservations)	237	3,286	3,523	418	4,167	4,585	248	3,239	3,487
Hoopa and Yurok Reservation tribs.	-- b	-- b	-- b	55 k	320 k	375 k	40 h	450 h	490 h
<b>Subtotals</b>	<b>8,772</b>	<b>101,717</b>	<b>110,489</b>	<b>12,544</b>	<b>78,886</b>	<b>91,430</b>	<b>5,509</b>	<b>43,718</b>	<b>49,227</b>
<b>Total Spawner Escapement</b>	<b>13,050</b>	<b>130,840</b>	<b>143,890</b>	<b>17,905</b>	<b>112,344</b>	<b>130,249</b>	<b>6,579</b>	<b>65,709</b>	<b>72,288</b>

**IN-RIVER HARVEST**

	1987			1988			1989		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Angler Harvest</b>									
Klamath River (below Hwy 101 bridge)	146	2,455	2,601	124	3,367	3,491	137	1,328	1,465
Trinity River basin (above Willow Creek)	923	9,433	10,356	2,735	9,341	12,076	209	3,054	3,263
Balance of Klamath system	4,367	8,281	12,648	2,552	9,495	12,047	1,921	4,393	6,314
<b>Subtotals</b>	<b>5,436</b>	<b>20,169</b>	<b>25,605</b>	<b>5,411</b>	<b>22,203</b>	<b>27,614</b>	<b>2,267</b>	<b>8,775</b>	<b>11,042</b>
<b>Indian Net Harvest *</b>									
Klamath River (below Hwy 101 bridge)	36	39,978	40,014	138	36,914	37,052	0	37,130	37,130
Klamath River (Hwy 101 to Trinity mouth)	117	8,136	8,253	173	9,667	9,840	120	4,961	5,081
Trinity River (Hoopa Reservation)	262	4,982	5,244	267	5,070	5,337	71	3,474	3,545
<b>Subtotals</b>	<b>415</b>	<b>53,096</b>	<b>53,511</b>	<b>578</b>	<b>51,651</b>	<b>52,229</b>	<b>191</b>	<b>45,565</b>	<b>45,756</b>
<b>Total In-river Harvest</b>	<b>5,851</b>	<b>73,265</b>	<b>79,116</b>	<b>5,989</b>	<b>73,854</b>	<b>79,843</b>	<b>2,458</b>	<b>54,340</b>	<b>56,798</b>

**IN-RIVER RUN**

	1987			1988			1989		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Totals</b>									
In-river Harvest and Escapement	18,901	204,105	223,006	23,894	186,198	210,092	9,037	120,049	129,086
Angling Mortality (2% of harvest) f	109	403	512	108	444	552	45	176	221
Net Mortality (2% of harvest) f	33	4,248	4,281	46	4,132	4,178	15	3,645	3,660
<b>Total In-river Run</b>	<b>19,043</b>	<b>208,756</b>	<b>227,799</b>	<b>24,048</b>	<b>190,774</b>	<b>214,822</b>	<b>9,097</b>	<b>123,870</b>	<b>132,967</b>

**Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1992 \***

**SPAWNER ESCAPEMENT**

	1990			1991			1992		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Hatchery Spawners</b>									
Iron Gate Hatchery (OCH)	321	6,704	7,025	65	4,002	4,067	3,733	3,560	7,313
Trinity River Hatchery (TRH)	371	1,348	1,719	205	2,482	2,687	229	3,658	3,887
Subtotals	692	8,052	8,744	270	6,484	6,754	3,962	7,238	11,200
<b>Natural Spawners</b>									
Trinity River basin (above Willow Creek, excluding TRH)	241	7,682	7,923	382	4,867	5,249	2,292	6,547	8,839
Salmon River basin	596	4,071	4,667	143	1,337	1,480	628	898	1,524
Scott River basin	206	1,379	1,615	146	2,019	2,165	892	1,689	2,581
Shasta River basin	118	415	533	10	716	728	57	484	541
Bogus Creek basin	53	732	785	20	1,261	1,281	555	597	1,152
Main Stem Klamath River (excluding OCH)	59	505	564	8	572	580	234	366	600
Misc. Klamath tributaries (above Hoopa and Yurok Reservations)	30	694	724	9	495	504	197	381	578
Hoopa and Yurok Reservation tribs.	17 h	59 h	75 h	0 h	232 h	232 h	0 h	160 h	160 h
Subtotals	1,350	15,536	16,886	718	11,499	12,217	4,858	11,120	15,975
<b>Total Spawner Escapement</b>	<b>2,042</b>	<b>23,588</b>	<b>25,630</b>	<b>988</b>	<b>17,983</b>	<b>18,971</b>	<b>8,817</b>	<b>18,358</b>	<b>27,175</b>

**IN-RIVER HARVEST**

	1990			1991			1992		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Angler Harvest</b>									
Klamath River (below Hwy 101 bridge)	58	291	349	19	314	333	115	78	191
Trinity River basin (above Willow Creek)	22	328	350	94	1,177	1,271	137	553	690
Balance of Klamath system	2,020	2,934	4,954	573	1,892	2,465	3,425	681	4,106
Subtotals	2,100	3,553	5,653	686	3,383	4,069	3,677	1,310	4,987
<b>Indian Net Harvest *</b>									
Klamath River (below Hwy 101 bridge)	13	3,536	3,549	7	3,902	3,909	37	1,032	1,069
Klamath River (Hwy 101 to Trinity mouth)	138	3,447	3,585	25	5,016	5,041	196	3,599	3,795
Trinity River (Hoopa Reservation)	36	811	847	30	1,280	1,310	42	946	988
Subtotals	187	7,794	7,981	62	10,198	10,260	275	5,577	5,852
<b>Total In-river Harvest</b>	<b>2,287</b>	<b>11,347</b>	<b>13,634</b>	<b>748</b>	<b>13,581</b>	<b>14,329</b>	<b>3,952</b>	<b>6,887</b>	<b>10,839</b>

**IN-RIVER RUN**

	1990			1991			1992		
	Grise	Adults	Totals	Grise	Adults	Totals	Grise	Adults	Totals
<b>Totals</b>									
In-river Harvest and Escapement	4,329	34,935	39,264	1,736	31,564	33,300	12,769	25,245	38,014
Angling Mortality (2% of harvest) †	42	71	113	14	68	82	74	26	100
Net Mortality (8% of harvest) ‡	15	624	639	5	816	821	22	448	468
<b>Total In-river Run</b>	<b>4,386</b>	<b>35,630</b>	<b>40,016</b>	<b>1,755</b>	<b>32,448</b>	<b>34,203</b>	<b>12,865</b>	<b>25,717</b>	<b>38,582</b>

**Klamath River Basin Fall Chinook Salmon Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1992 a/ (continued)**

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- a/ Prepared December 10, 1992. All figures are California Department of Fish and Game counts/estimates unless otherwise indicated. All figures for Iron Gate and Trinity River hatcheries represent counts of fish entering those facilities. All spawner escapement figures for the Shasta River basin for 1978-1987, plus those for the Bogus Creek basin for 1980-1991 are based on counts made at counting stations located near the mouths of those streams. All remaining spawner escapements and all harvest figures are estimates developed from data obtained through ongoing field investigations in the Klamath-Trinity system. Figures for years through 1991 are final; 1992 figures are preliminary, subject to revision.
- b/ Figure not available.
- c/ U.S. Fish and Wildlife Service (USFWS) estimate.
- d/ In 1978, the Klamath River system sport salmon fishing season was closed August 25. There was essentially no sport harvest of fall chinook in the Trinity River basin in 1978.
- e/ USFWS estimates for years through 1982; 1983 through 1992 estimates jointly made by USFWS and Hoopa Valley Business Council Fisheries Department (HVBCFD).
- f/ Factors for non-landed catch mortality calculated by the Klamath River Technical Advisory team (KRTAT, 1986, "Recommended Spawning Escapement Policy for Klamath River Fall-run Chinook").
- g/ U.S. Forest Service Estimate.
- h/ HVBCFD estimate. Estimate for streams in Hoopa Valley Indian Reservation only.
- i/ In 1985, the Klamath River system sport salmon fishing season was closed to the taking of all salmon below the U.S. Highway 101 bridge from September 9 through December 31; the Klamath from the U.S. Highway 101 bridge to Iron Gate Dam and the Trinity River from its mouth to Lewiston Dam were closed to the taking of salmon 22 inches and longer from September 23 through December 31, 1985.
- j/ Estimates for Hoopa Valley Indian Reservation portion of catch (=947 grilse and 1,941 adults) are of catch occurring during open fishing periods only.
- k/ Estimates jointly made by USFWS AND HVBCFD.
- l/ Final figures for Salmon River basin natural spawners shown in the December 11, 1991 table were incorrect. Corrected figures, plus necessary revisions to 1990 totals, are presented here.