



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Klamath Field Office  
P.O. Box 1006  
Yreka, CA 96907-1006

October 2, 1989

TO: Klamath River Basin Fisheries Task Force

FROM: Ron Iverson, Recording Secretary

SUBJECT: Draft minutes of the Task Force meeting held September 7 and 8, 1989

Attached for your review are minutes of the subject meeting held in Eureka, California. I have followed each motion passed, assignment made, or other decision point with a line of asterisks.

Attachments

KLAMATH RIVER BASIN FISHERIES TASK FORCE

NOTES

MEETING OF 7-8 SEP 89

Bill called the meeting to order, introduced Walter Lara representing the Yurok Tribe (replacing Sue Masten), Dick Ober representing Bob Rice, Paul Hubbell sitting in for Mel Odemar (see attendance roster, Attachment 1).

Minutes approved with no change.

Additions to agenda (Attachment 2)- sponsorship of Restoration Conference.

Status of education project (Iverson) The proposals are due mid Sept. Technical Review Panel (Iverson, Rice, FWS Portland rep) will review proposals Sept 20-22. Trinity's Education Program will be coordinated with the Klamath's to avoid duplication of effort (Chuck Lane and Ron Iverson).

Operating Procedures of the Technical Work Group (Bingham)

Met Sept 6 in Ukiah, see handout (Attachment 3).

Discussion: Iverson wants to have the proposals available for review at an earlier date. Thackeray wants a flow chart added to proposed document clarifying roles. Nat emphasized that the standing committee needs to be set up as early as possible.

Sportfishing Representative (Paul Hubbell) CDFG has recommended 2 people: Dan Petit, and Dr. H.D. Sumner. Decision has not been made.

Funding Sources for FY 90

\$750K fed, \$400K state (Shake)

Proposal #90-190 (\$32,000) is supported, but cannot be funded by state because the state can not fund investigations

Decision made that this project will be funded by USFWS.

Task Force action on FY1990 work plan

First phase of this agenda item was presentation of information by sponsors of proposals carried over from the last meeting for review, with questions and discussion from the Task Force. After discussion of all proposals, the Task Force acted to either recommend or not recommend each proposal for FY1990 funding by the Fish and Wildlife Service. Following is a summary of discussion and action for each proposal, in the order considered.

Proposal 90-01, add a program evaluation biologist to Klamath Field Office staff (\$51,500)

Discussion points (proponent was Jerry Grover):

o Fish and Wildlife Service (FWS) is required to evaluate its programs. Other fish restoration programs - Trinity River and lower Snake River - have one staff person each assigned to this task...and the Klamath program has the same need.

o Present KFO staff is too small to add technical evaluation and monitoring functions...staff must be increased.

o Proposed biologist would have a review function, not an implementing/data-gathering function.

o Concern that Trinity Field Office staffing plan is bigger than once planned, and this could happen in Yreka. Bill Shake's response was that no staff will be added to KFO without Task Force concurrence.

o Question why the technical duties of the proposed position couldn't be assumed by the proposed technical work group, with perhaps an administrative position to support the work group. Response is that the position would, in part, support and coordinate the work of the group...KFO presently doesn't have staff to do this...and a technical person is needed - someone who can contribute to planning and evaluation.

o Proposed position would also provide technical support to Klamath Fishery Management Council.

o FWS Portland Office has requested an increase in Klamath fish restoration funds in FY1991 to cover this and other administrative costs, so \$1 million can go, annually, to restoration work.

o This position completes the KFO staffing plan-- no indication it will in turn cause a need for another clerical position.

Action Proposal recommended.

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Proposal 90-3.1, education/interpretation, Yreka Creek Greenway

Discussion (proponents were Patti Jackson and Carol Wright of the Greenway Committee)

o Yreka Creek is not a first-quality stream for anadromous fish, but has the best potential of Klamath Basin streams for education/interpretation, because of the potentially large number of visitors.

o Considerable funds have been invested in the creek for habitat assessment, and habitat improvement...and the Greenway is funded for master planning and trail development. Lots of volunteer work and in-kind contributions have also been secured.

o Rationale for funding interpretive items now includes tying these items to trail planning, to insure the trail takes visitors to sites of special interest, and to maintain the present high level of public interest in the Greenway.

o City of Yreka has agreed to maintain the Greenway, including interpretive facilities, as a city park. Some maintenance can be done by volunteers, county prisoners, CCC. The Task Force is being asked to fund capital costs only.

o First phase of the Greenway will be in the vicinity of the Siskiyou County Museum, and interpretive displays will be concentrated here. The entire project will extend 4.5 miles from the waste treatment plant upstream to Bell Avenue subdivision.

o State and other funds are being sought to repair Greenhorn Reservoir, a potential source of flow augmentation for Yreka Creek.

o (Wright): Education benefits from examples that can be experienced directly, rather than just being read about or depicted in a brochure. Yreka Creek provides this because of accessibility.

o (West): Habitat typing/fish standing crop data on Yreka Creek will be available in the Forest Service's annual report in about December. The report will include general prescriptions for increasing productivity of Yreka Creek for fish, but won't recommend site-specific actions. Generally, Yreka Creek has fair spawning/early rearing habitat for steelhead, and for some chinook salmon in better water years.

o Pump testing is not completed for wells to be purchased with Klamath fish restoration funds.

o Concerned about siting interpretive facilities when location of fish projects isn't known. Rebuttal: sites of many habitat problems are obvious, well-known to local biologists.

o Concerned that enough money (\$109,000) has already been approved for education/interpretation in FY1990. Rebuttal: Amount being requested is not inappropriate...public needs to know about a \$40+ million restoration program if they are to support it.

o Project is a good one but may not be timely for FY1990 funding.

o Regarding expected number of visitors, the county museum gets about 2,000 out-of-town signatures in their guest register, annually.

o Concern about low potential productivity of Yreka Creek.

o Lack of Task Force support will make it more difficult for the Greenway Committee to get volunteer participation.

Action: Not recommended for funding, based on objection from Paul Hubbell.

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Project 89-3.21, survey questionnaire

Discussion: (proponent was Tricia Whitehouse)

o This work item was included in the original work statement for the education project, which was approved by the Task Force for FY89 funding. We didn't get it contracted this fiscal year, so we propose FY1990 funding. FY1989 funds for this item will be turned back to our Portland Regional

Office. Chico State University is a promising cooperator...they have done similar work for CDFG.

o Q: Isn't this included in the \$109,000 already approved for education in FY1990? A: No. We could have covered it with the \$109,000 in FY1989, but the 1990 education funding is already claimed for other things.

o Q: Can the Task Force review proposed questions prior to the survey? A: Yes.

Action: Approved for funding.

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Proposal 89-3.22: slide presentation, brochure, and newsletter (\$11,000)

Discussion (Proposer was Tricia Whitehouse)

o Another item that was approved and budgeted for FY1989, but didn't get done...funding will be turned back to Portland.

o Items to be bought include photography and sound mixing for the slide presentation, and printing of the brochure and two issues of the newsletter (assume a mailing list of 3,000).

Action: FWS will fund this item from the overhead (\$80,000) already approved for FY1990.

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Proposal 90-2.12: Rogue River chinook project

Discussion: (Keith Wilkinson was proposer)

o Keith said he felt this proposal meets legal requirements for Klamath Restoration Program funding.

o There was discussion of the contention that the Rogue, with a natural stock of fall chinook subject to the same ocean conditions and fisheries as the Klamath fall run, can serve as a control to gauge benefits of the Restoration Program. Rebuttal is that conditions in the two watersheds are so different that Rogue information doesn't really apply to Klamath.

o Feeling was expressed that this is a harvest management proposal rewritten to meet requirements for Klamath Program funding.

Action: Not recommended for funding, on account of objections by several Task Force members.

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Proposal 90-26: Spring chinook radio tagging, Salmon River

Discussion: (Jack West was proposer)

o Past studies have shown that there is enough habitat for spring chinook, but... the problem is that #'s are declining. This study would look

at USE of habitat by spawning steelhead and spring chinook, track fry to identify the habitat used, with the objective being to identify the limiting factors.

o Paul Hubbell questions whether the study would do the job that is needed.

o Craig Tuss supports proposal. This study is not overlapping with Arcata Field Office studies and may even provide useful information that would complement the Arcata office studies.

o (Hubbell): Would like to see the proposal reworked and resubmitted for FY1991

Action: Not approved, on account of objection by Paul Hubbell.

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Proposal 90-4.2: Scott River sediment study, Phase II.

Discussion: (Sari Sommarstrom was proposer)

o The Siskiyou Resource Conservation District is 3/4 done with phase I of the sediment study. Amended Phase II of Proposal, to lower the costs.

o Questions about willingness of private landowners to rehab after problems are identified.

Action: Approved for funding at revised level (\$30,768).

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Proposal 90-36: Improve habitat, Grider Creek

Discussion: (Jack West was proposer)

o Bill Shake asked Jack to review the concerns brought up at the June meeting, Jack referred to comments made by Task Force members about doing projects before we know that they are needed, or "putting the cart before the horse".

o Bill Shake: this is enhancement, not restoration.

o Question from audience (Andy Colonna concerned about pH changes occurring as a result of fire ash, Roger Barnhart added that any pH change would be small.

o Discussion on temperature and shading.

o Concern about investing money until the environment stabilizes from the 1987 fire.

o Forest Service should finance rehabilitation of this watershed.

Action: Not approved, on account of several objections.

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Proposal 90-117: Improve habitat, Terwer Creek

Discussion: (no proposer present)

- o Ronnie Pierce questioned cost of \$74,000 for design work.
- o Concerned about undertaking such a large rehab program in Terwer Creek (total multi-year cost >\$400,000) without an overall plan that assigns this a high priority.
- o Should consider competitive procurement of items like this one.

Action: Not approved, on account of several objections.

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Proposal 89-4.32: Improve maintenance of diversion screens

Discussion: (Proposer was Paul Hubbell)

- o This proposal is to provide temporary help funds to maintain screens (CDFG funded screen construction last year).
- o Hillman, Shake and Bingham voiced support.
- o Concern that this will be an item that arises every year for funding.  
A: Hubbell: it won't be, its just for this year (until CDFG gets its funding caught up).

Action: Approved for funding.

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Proposals costing \$129,963 were recommended for funding today, bringing the estimated total cost of the FY1990 work plan to \$1,280,856. Task Force actions on all proposals submitted for FY1990 funding is presented in Attachment 4. Approved projects are summarized in Attachment 5.

Proposal for Task Force support of the Salmon and Steelhead Restoration Conference

Jud Ellinwood of the Salmon and Steelhead Restoration Federation explained that the conference is held annually to provide for exchange of information among people involved in fishery restoration work. It was initiated by Sea Grant eight years ago, but now depends for funding on registration fees and contributions. Contributions go toward speaker lodging, audiovisual equipment, space rental and the like. Contributions keep registration fees down, encouraging attendance. An accounting of expenditures is provided to donators.

Bill Shake proposed that the Task Force contribute \$1500 from Fish and Wildlife Service funds, matching a CDFG contribution of the same amount. The proposal was approved by consensus.

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Briefing on tonight's public meeting (Kier)

The public scoping session responds to Federal (Council on Environmental Quality) requirements for developing environmental assessments. The meeting has been publicized. Kier Associates will facilitate the meeting and take notes. Task Force members are encouraged to attend.

Public comment

o (A. Colonna): Action today on the Yreka Creek Greenway proposal indicates the Task Force doesn't know how to productively use the consensus process...the idea is not to allow one person to overrule the wishes of the majority, but rather to negotiate a compromise that considers the needs of all parties. The Task Force denial of funds because of alleged poor potential for fish restoration in Yreka Creek appears illogical, considering the various State and Federal investments already committed to the creek. Rebuttal: There has been negotiation over this proposal, which got its third chance today after two earlier reviews.

o Proponents of unsuccessful proposals should be given some indication of what, if any, changes could be made in their proposals to make them acceptable.

o (M. Farro) The proposed process for proposal review, as described today by Nat Bingham, should be an improvement...work of the technical group in rating proposals should not be undone by the Task Force.

The meeting was adjourned at 4 p.m.

8 September 1989

The meeting reconvened at 8 a.m. An invitation was extended (Whitehouse) to Task Force members to visit the Model Stream at Washington School in Eureka.

Report of the planning contractor (Kier)

Bill Kier distributed copies of the work statement for development of the long-range plan for the Klamath Fishery Restoration Program (Attachment 6). Bill called attention to the following planning tasks, which are to be completed early in the process:

Task 1.1. Refine Task Force mission/goals statement, and Task 1.2, identify and reconcile objectives of all agencies with Klamath fishery management responsibilities. This task is managed by Sari Sommarstrom. Bill concludes the current draft of the mission/goals statement, prepared by a Task Force subcommittee, is probably insufficient to guide the long-range plan. An alternative review draft will be distributed to the Task Force about 10 days hence.

Sari Sommarstrom summarized the proposed objective-setting process, which begins by identifying issues (points of debate or controversy) and concerns (marked interest or regard). The process can be depicted as:

issues/concerns -> findings -> goals -> objectives -> policies -> criteria

Kier Associates has identified significant issues/concerns through study of the legislative background of the Klamath Act, the "CH2M-Hill Report", and other documents, and through interviews with Task Force members. Sari distributed a review draft list of issues (Attachment 7) for comment. She \*\*\*\*\* suggested that, when the issues to be addressed by the Klamath Restoration Program are agreed on, those issues be substituted for the six work categories into which the annual work plans are now organized.

Discussion ensued as to whether program evaluation should be treated as an issue. Bill Kier said that evaluation procedures and ways to use new information to modify the long-range plan will be among the products his group will provide.

Other discussion at this point:

- o In developing the long-range plan, it is important to know whether the Klamath Task Force will be a relatively passive advisory group, or take on a politically active role. For example, will the Task Force get involved in instances where existing laws are not being enforced?

- o Note SB2261, passed last year by the state legislature...calls for a doubling of anadromous fish stocks in California. Doubling of runs is also a goal of the Columbia Basin fish restoration program.

- o Use of the courts by management agencies to protect fishery resources may become a significant issue. CDFG has recently begun to bring civil suits for this purpose. A new concept of mitigation may be needed.

- o The "law enforcement" issue in the issues list should be expanded from harvest management to include environmental laws such as NEPA and CERCLA.

- o Need for legal action can be lessened by an active community education program, so that political pressure to correct environmental problems is brought by an enlightened local community.

Sari distributed a draft bibliography of findings (Attachment 8), and requested that missing items be identified.

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Phil Meyer distributed a review list of issues and policies (Attachment 9). Bill Shake asked for some review time. It was agreed comments would be returned to Meyer by October 12.

\*\*\*\*\*

Phil asked for particular review attention to Table 2 of his handout, summarizing which interest groups have stakes in fishery restoration.

Another issue needing review comment is how to group the numerous restoration projects in ways that provide for rational prioritizing and evaluating. A related issue is how to tie instream restoration projects to broader habitat restoration work, given that the latter contributes to success of the former.

Discussion:

o Following up on Meyer's point about dependence of fish restoration efforts on broader environmental quality in the watersheds, there was discussion of timber/fish planning, which is being done formally in Washington state, and more informally in Oregon. Kier suggested a Klamath Basin - wide effort to relate timber harvest to instream effects.

o When factors limiting fish restoration have been identified, one incentive in getting these corrected would be to back off on constraining activities that are found not to be limiting.

Scott Downie reported that Kier Associates has looked at about 100 fish restoration projects in Klamath Basin. Somewhat more than half of these are performing as designed. Many agency staff and local citizens have been interviewed, also. Results of the facilities evaluation will be compiled. Some general comments by Downie:

o As a general rule, environmental protection is much more cost-effective than mitigation for damage that has already occurred.

o Beware the danger of letting the restoration program get driven by short-term objectives, because of a perceived need to produce some fish, or show some progress.

o The technology of instream habitat structures is now pretty good. Likewise, most artificial propagation projects seem to be producing healthy fish in adequate numbers.

o Maintenance is a big problem for instream structures, but technology is bringing down maintenance costs.

o Regarding how to decide where to make instream structure investments, this has often been done on some basis - like equipment access - that doesn't have much to do with biological effectiveness. Habitat typing and other data collection now underway will provide a better basis for investment decisions. For example, conditions for rearing in Shasta River are so poor that artificial propagation may be a better choice there than instream structures.

o Future evaluation of project effectiveness might be better done by neutral parties rather than by the agencies that built the projects...to assure an appearance of impartiality.

o Education and public involvement are probably the best long-term investments of fishery restoration funds and effort.

o Need neutral party to evaluate projects.

Kier

o Asking Task Force for their vision of the physical configuration of the Plan.

Higgins

o Asking Task Force for feedback and ideas on: 1) natural stocks, hatchboxes, 2) habitat typing, 3) limiting factor analysis, striving for a standardized methodology, 4) stock identification

Kier

o The Planning team will be producing the pieces that will go together into a draft plan by late December.

Decision to schedule the next Public Scoping Session in Yreka on Thursday, October 12. Bingham (chair), Thackeray, Rice, and newly appointed Sportfishing Representative will attend.

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Decision to allow one month for Task Force to "digest" the info that Phil Meyer distributed- by the 6th of Oct the Task Force will provide Phil with feedback.

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Discussion

o Pierce recommends looking at the Canadian Fisheries Program to determine pitfalls in this program. Kier will be following up on this with a midpoint review.

o Shake commended Planning Team on the Public Meeting and their presentation of the planning process.

o Pierce wants Request for Proposals advertised in the local papers. Iverson responded that he will check with Contracting in Portland on this.

o McGinnis asked what should be done with the old Mission & Goals committee. Decided to let it stand for now.

NEXT MEETING

The next meeting will be January 24 and 25 in Brookings, Oregon. This date will allow the Task Force to read and review the first draft of the Plan.

a:ktf9-7x

KLAMATH RIVER BASIN FISHERIES TASK FORCE

MEETING AGENDA

September 7, 1989

9:00 a.m. Call to order. Introduction of Yurok representative. Correction and approval of minutes and agenda.

9:15 Status of education project (Iverson); Nomination of Task Force representatives to technical review panel for contractor rating.

9:45 Report of the ad hoc committee to draft operating procedures for a technical work group

10:15 Report of status of sport angling representative appointment (Odemar)

10:30 Break

10:45 Task Force action on FY1990 Work Plan

- o Report on funding sources for projects approved at the June meeting (Odemar and Shake)

- o Comments of proposers of proposals "in review" at this meeting (limit of 15 minutes per proposal for comments and Task Force questions)

12:00 Lunch

1:15 Reconvene. Comments of proposers (continued)

2:30 Break

2:45 Task Force action on proposals in review

3:45 Public comment

4:15 Adjourn

September 7 continued)

7:00 p.m. Public scoping meeting on long-range plan for the Fishery Restoration Program...to be facilitated by Kier Associates

September 8

- 8:00 Reconvene. Report on status of long-range planning (Kier)
- 10:30 Break
- 10:45 Task Force discussion and action on procedures and schedules for interacting with the planning contractor
- 11:00 Other old business
- 11:15 New business
- 12:00 Discussion of next meeting
- 12:15 Adjourn

ATTACHMENT 1

KLAMATH FISHERIES TASK FORCE

Attendance Roster, June 29, 1989 meeting, Klamath, California.

Task Force Members

Nat Bingham	California Commercial salmon fishing industry
Don DeVol	Del Norte County
Rod McInnis	National Marine Fisheries Service
Leaf Hillman	Karuk Tribe of California
Walter Lara, Jr.	Yurok Tribe
Paul Hubbell*	California Department of Fish and Game
Howard Myrick	Trinity County
Mike Orcutt	Hoopa Indian Tribe
Ronnie Pierce	Humboldt County
Dick Ober*	Department of Agriculture
Bill Shake	Department of Interior
George Thackeray	Siskiyou County
Keith Wilkinson	Oregon Department of Fish and Wildlife

\*Paul Hubbell represented Mel Odemar and Dick Ober represented Bob Rice.

Others Attending

Jerry Boberg  
Sari Sommarstrom  
Jack West  
Bruce Taylor  
Robert Franklin  
Pat Higgins  
Robert Will  
Phillip H. Baker  
Bill Kier  
Susan Masten  
Patti Jackson  
Carol Wright  
Terry Brown  
Mitch Farro  
Lisa Sundberg-Brown  
Denver Nelson  
Andy Colonne  
Dianne Higgins  
MC Kier  
Jud Ellinwood  
Roger Barnhart  
Dough McCullogh  
Phillip H. Baker  
Jeanerette Jacops  
Del Robinson



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Klamath Field Office  
P.O. Box 1006  
Yreka, CA 96097

September 5, 1989

### Memorandum

TO: Bill Shake

FROM: Ron Iverson

SUBJECT: Proposed sponsorship of Restoration Conference

The California Salmon, Steelhead and Trout Restoration Federation is a non-profit organization with the objective of promoting the wise management, protection, and restoration of California's salmon, steelhead and trout populations and their habitat. The Federation has conducted workshops on restoration techniques, published newsletters and established an information network within the restoration community.

The annual Restoration Federation Conference is scheduled for February 1990 in the Humboldt County area. Conference planning activities are currently underway including contacting potential sponsors. The Department of Fish and Game and several private organizations (including Cal Trout, PCFFA, HFMA, United Anglers and Trout Unlimited) have made contributions supporting this upcoming conference. The Department of Fish and Game has committed to \$1,500. We propose that the Klamath Restoration Program join this list of sponsors with a contribution of \$1,500.

Could you bring this topic up for discussion at the upcoming Klamath Task Force meeting?

ATTACHMENT 3

Klamath Field Office  
P.O. Box 1006  
Yreka, CA 96097

September 20, 1989

Memorandum

TO: Klamath River Basin Fisheries Task Force  
FROM: Ad hoc committee on technical work group  
SUBJECT: Report

The ad hoc committee, consisting of Nat Bingham, Ron Iverson, Sue Masten, and Mel Odemar (chair), met in Ukiah on August 30. The purpose of our meeting was to respond to the assignment given us by Bill Shake on June 29: Draft mission, tasks, and operating procedures for a technical work group to support the Task Force. We were to give particular attention to operating procedures for review of work proposed for funding under the Klamath Fishery Restoration Program.

Attached please find our proposed draft, for your review and discussion at the September Task Force meeting. This is formulated as two sections to be added to the Task Force Operating Procedures. Please note that we are proposing two standing committees: a staff level technical work group, and an executive level budget committee.

D R A F T

KLAMATH RIVER BASIN FISHERIES TASK FORCE

OPERATING PROCEDURES

SECTION IIB. STANDING COMMITTEES

SECTION IIB.1 Technical work group

1. Mission:

Provide technical and scientific consultation to inform the decisions of the Task Force.

2. Tasks:

- o Assist in technical aspects of program planning
- o Suggest technical/biological program objectives, such as levels of restoration appropriate for various anadromous stocks
- o Review work proposals for likely contribution to technical program objectives, and technical adequacy
- o Evaluate ongoing restoration work for effectiveness

- o Encourage technical quality of the restoration program by advising involved workers, arranging workshops and seminars, and informal discussion
- o Respond to technical questions and assignments from the Task Force
- o Provide members for technical review panels in contractor selection

### 3. Membership

3.1 Qualifications and scope of expertise. This mission requires a true technical work group. Members should meet minimum qualifications for education and technical experience. A sufficiently broad spectrum of expertise should be sought, meaning the group should include more than fish biologists. Areas of expertise that might be represented could include:

- o State fishery and water management
- o Tribal fishery management
- o Fish culture
- o Habitat restoration
- o Education/interpretation
- o Watershed management
- o Biology/ecology/population dynamics of anadromous salmonids

- o Planning of scientific/technical projects

3.2 Appointments Each Task Force member may appoint one representative to the technical work group. Members may not appoint themselves, and should insure that appointees are not drawn from political or policymaking levels. Appointees should be formally identified to the Task Force chairperson by letter or memo. Upon request of any Task Force member, the Task Force chair will review the qualifications of any appointee to the technical work group, and will determine the suitability of that person to serve on the work group.

#### 4. Operations

4.1 Structure The technical work group will elect officers from among its membership by majority vote. Assignments will be made from the Task Force chairperson to the work group chairperson, who will delegate work as needed. Work group officers will serve one-year terms, and no individual may serve as an officer for more than two consecutive terms.

4.2 Public involvement The work group serves as support to the Task Force, and is not a decisionmaking body. No provision will be made for public notice of work group meetings or

public participation in those meetings. Products of work group meetings will be reported to the Task Force, and this information will be made available to the public as attachments to Task Force meeting notes.

#### 4.3 Accomplishment of assignments

4.31 Preparing annual work plans Because of the public and agency interest in contract award, and the large amounts of money involved, the technical work group will be required to follow an approved procedure - outlined here - for drafting the annual work plans for the Klamath Fishery Restoration Program.

Step (1): Request for proposals Drawing upon the long-range plan for the Restoration Program, and other appropriate sources, the technical work group will draft a request for proposals identifying specific tasks to be accomplished in the upcoming fiscal year. Following review and approval of this draft by the Task Force in approximately mid-March(OPTION: GET RFP OUT EARLIER), the RFP will be distributed to the public by one or both of the principal funding agencies (California Department of Fish and Game and Fish and Wildlife Service), with a response deadline of about May 1.

Step (2): Rating proposals Proposals received will

be distributed by the receiving agency(ies) to the technical work group by mid-May. The work group will meet during the first or second week of June to rate proposals. This meeting will be open to the Task Force budget committee. The meeting will have the following elements:

- o A one-day session open to proposers, to give them an opportunity to expand on information contained in written proposals, to respond to questions from the technical work group, and to negotiate i.e. to identify changes they would be willing to make in proposals in order to get funding. For this and subsequent sessions of this meeting, proposals will be grouped into major work categories approved by the Task Force.

- o A second session, open only to the work group, budget committee, and Klamath Field Office support staff, during which the technical work group will discuss proposals, then rate them - individually and privately - using numerical rating criteria approved by the Task Force at its March meeting. KFO support staff will examine individual ratings and calculate an average rating for each proposal. KFO staff will compile a list of proposals, ranked by average rating and organized by work category, and will present this information to the work group. At this point, work group members will be given an

opportunity to change their ratings. Any such changes will

be incorporated into the calculation of average ratings, and a final ranked list of proposals will be prepared.

Step (4): Budgeting the annual work plan This task is the responsibility of the budget committee, but the technical work group may be asked to be present to provide information. The budget committee will consider the final ranked list of proposals prepared by the technical work group, and will assign a proposed level of funding to each major work category. The higher-ranking proposals falling within these funding limits will be recommended to the Task Force as part of the annual work plan. Those ranking below the funding cutoff lines will not be recommended. The ranked list of proposals, with funding cutoff points displayed, will be distributed by KFO to the two standing committees, the Task Force, and proposers within one week of the work plan development meeting.

Step (5): Presentation of the draft annual work plan to the Task Force will be done at a Task Force meeting in the last week of June. The presentation will be made by the chairpersons of the technical work group and the budget committee. Unsuccessful proposers can appeal to the Task

Force at this meeting.

4.32 Other assignments will be accomplished by the technical work group in accordance with direction provided by the Task Force, or, lacking such guidance, at the discretion of the work group chairperson.

## OPERATING PROCEDURES

### SECTION IIB. STANDING COMMITTEES

#### SECTION IIB.2 Budget committee

##### 1. Mission:

Draft annual and multi-year budgets for the Klamath River Basin Fishery Restoration Program, and for various components of the Program.

##### 2. Tasks:

- o Drawing on the long-range plan for the Restoration Program, draft an annual budget
- o Apply the annual budget to proposals received to formulate a detailed annual work plan for review by the Task Force
- o Perform other budgeting tasks as assigned by the Task Force

3. Membership of the budget committee will be drawn from the Task Force, and will consist of a tribal representative, a fishing industry representative, representatives of the Department of the Interior and California Department of Fish and Game, and one at-

large representative. Appointments will be made by the Task Force chairperson.

#### 4. Operations

4.1 Structure The budget committee will elect officers from among its membership by majority vote. Assignments will be made from the Task Force chairperson to the budget committee chairperson, who will delegate work as needed. Budget committee officers will serve one-year terms, and no individual may serve as an officer for more than two consecutive terms.

4.2 Public involvement The budget committee serves as support to the Task Force, and is not a decisionmaking body. No provision will be made for public notice of budget committee meetings or public participation in those meetings. Products of budget committee meetings will be presented to the Task Force, and this information will be made available to the public as attachments to Task Force meeting notes.

#### 4.3 Accomplishment of assignments

4.31 Preparing annual work plans Because of the public and agency interest in contract award, and the large amounts of money involved, the budget committee will be required to follow an approved procedure ( see section 4.31 of section IIB.1, Technical work group) for their part in drafting annual work plans for the Klamath Fishery

Restoration Program.

4.32 Other assignments will be accomplished by the budget committee in accordance with direction provided by the Task Force, or, lacking such guidance, at the discretion of the work group chairperson.

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndk, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
** ADMINISTRATION						
* APPROVED						
90-01	USFWS, KLAMATH FO	ADD A PROGRAM EVALUATION BIOLOGIST TO STAFF	51500	ADMINISTRATION	APPROVED	USFWS
89-0.1	USFWS	OPERATE KLAMATH FIELD OFFICE	187500	ADMINISTRATION	APPROVED	USFWS
89-0.2	USFWS	REGIONAL OFFICE OVERHEAD	80000	ADMINISTRATION	APPROVED	USFWS
* Subsubtotal *						
** Subtotal **			319000			
			319000			
** ARTIF. PROPAG.						
* APPROVED						
90-154	NCIDC	SPRUCE CR. INCUB./REARING FACILITY	15176	ARTIF. PROPAG.	APPROVED	USFWS
90-156	NCIDC	HIGH PRAIRIE CREEK STOCKING PROGRAM	14675	ARTIF. PROPAG.	APPROVED	USFWS
90-153	NCIDC	OMAGAR CR. STOCKING PROGRAM	14675	ARTIF. PROPAG.	APPROVED	USFWS
90-157	NCIDC	HUNTER CR. CAGE REARING	10563	ARTIF. PROPAG.	APPROVED	USFWS
90-158	NCIDC	CAPPELL CR. HATCHERY	36976	ARTIF. PROPAG.	APPROVED	USFWS
90-159	NCIDC	PECWAN CR. CAGE REARING	17588	ARTIF. PROPAG.	APPROVED	USFWS
90-100	SHASTA VALLEY RCD	FALL CR. - REAR 180,000 CHINOOK YEARLINGS	25423	ARTIF. PROPAG.	APPROVED	CDFG
90-12	ORLEANS ROD & GUN	SALMON RIVER STEELHEAD REARING	8810	ARTIF. PROPAG.	APPROVED	CDFG
90-160	CDFG	CAMP CREEK-WEIR AND TRAP	30954	ARTIF. PROPAG.	APPROVED	CDFG
90-155	NCIDC	MIDDLE KLAMATH TRIBS-REARING POND PROGRAM	73990	ARTIF. PROPAG.	APPROVED	CDFG
* Subsubtotal *						
			248830			
* NOT APPROVED						
90-203	EAGLE RANCH	COLD CREEK-STEELHEAD RESCUE FACILITY	29636	ARTIF. PROPAG.	NOT APPROVED	

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndx, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
90-17	ROGERS/WOOD	SHACKLEFORD CR.-REAR STEELHEAD	13131	ARTIF. PROPAG.	NOT APPROVED	
90-20	ROGERS/WOOD	SHASTA R.-DETERMINE REARING CAPACITY OF SPRINGS	28319	ARTIF. PROPAG.	NOT APPROVED	
90-86	HORSE CR REARING CO	HORSE CR-REAR SALMON TO YEARLING	18317	ARTIF. PROPAG.	NOT APPROVED	
* Subsubtotal *			89403			
** Subtotal **			338233			
** EDUCATE						
* APPROVED						
89-3.1	USFWS - CONTRACT	CLASSROOM CURRICULUM, TEACHER TRAINING	69000	EDUCATE	APPROVED	USFWS
89-3.2	USFWS	PUBLIC INFORMATION	40000	EDUCATE	APPROVED	USFWS
89-3.21	USFWS	QUESTIONNAIRE SURVEY	18265	EDUCATE	APPROVED	USFWS
* Subsubtotal *			127265			
* NOT APPROVED						
90-3.1	CITY OF YREKA	EDUCATION/INTERPRETATION, YREKA CREEK GREENWAY	30000	EDUCATE	NOT APPROVED	
90-70	SISKIYOU CTY EDUCAT	FISHERY RESOURCE EDUCATION FOR GRADE SCHOOLS	64542	EDUCATE	NOT APPROVED	
* Subsubtotal *			94542			
** Subtotal **			221807			
** GET INFORMATION						
* APPROVED						
90-2.11	USFWS, ARCATA FAO	BLUE CREEK INCR. JUV. AND ADULT CHINOOK MONITORING	6300	GET INFORMATION	APPROVED	USFWS
90-18	ROGERS/WOOD	SHASTA R.-MONITOR WATER QUALITY	23233	GET INFORMATION	APPROVED	USFWS

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndx, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
90-27	USFS SALMON R RD	SALMON R. MAINSTEM AND FORKS - TYPE HABITAT	45247	GET INFORMATION	APPROVED	USFWS
90-28	USFS SALMON R RD	SPAWNING HABITAT AND UTILIZATION SURVEYS	81568	GET INFORMATION	APPROVED	USFWS
90-89	USFS SIX RIVERS	CAMP CR. OUTMIGRANT TRAP	15000	GET INFORMATION	APPROVED	USFWS
89-2.23	USFWS	BLUE CREEK STUDIES	43800	GET INFORMATION	APPROVED	USFWS
89-2.22	USFWS	STUDIES IN SMALL TRIBS, LOWER KLAMATH	24000	GET INFORMATION	APPROVED	USFWS
89-2.51	USFWS	TRAP OUTMIGRANTS, LOWER KLAMATH RIVER	27200	GET INFORMATION	APPROVED	USFWS
* Subsubtotal *			266348			
* NOT APPROVED						
90-2.12	OREGON DFW	ROGUE RIVER SEINING AND SPAWNING SURVEYS	66217	GET INFORMATION	NOT APPROVED	
90-19	ROGERS/WOOD	KLAMATH RIVER-ESTIMATE YELLOW PERCH PREDATION	37545	GET INFORMATION	NOT APPROVED	
90-35	USFS OAK KNOLL RD	HORSE CR.-WATERSHED IMPROVEMENT PLAN	27789	GET INFORMATION	NOT APPROVED	
90-171	GREAT NORTHERN	SHASTA R.-SURVEY HABITAT, EDUCATE LANDOWNERS	15011	GET INFORMATION	NOT APPROVED	
90-2.5	SHASTA VALLEY RCD	SHASTA VALLEY LANDOWNER SURVEY	20000	GET INFORMATION	NOT APPROVED	
90-2.6	SHASTA VALLEY RCD	SHASTA VALLEY STREAMBANK SURVEY	50000	GET INFORMATION	NOT APPROVED	
90-2.7	SHASTA VALLEY RCD	SHASTA VALLEY STREAM SURVEY	120000	GET INFORMATION	NOT APPROVED	
90-2.8	SHASTA VALLEY RCD	SHASTA SUBBASIN WATER BUDGET	60000	GET INFORMATION	NOT APPROVED	
90-26	USFS	SPRING CHINOOK RADIO TAGGING, SALMON R	41830	GET INFORMATION	NOT APPROVED	
90-166	NORTHWEST BIOLOGICAL	INVENTORY OF SALMON PROJECTS, STATEWIDE	41452	GET INFORMATION	NOT APPROVED	

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndx, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
90-167	NORTHWEST BIOLOGICAL	REVIEW OF HYDRAULIC REHAB PROJECTS	128423	GET INFORMATION	NOT APPROVED	
90-97	X	VIDEO WEIR	92492	GET INFORMATION	NOT APPROVED	
* Subsubtotal *			700759			
** Subtotal **			967107			
** MANAGE HABITAT						
* APPROVED						
90-4.1	CITY OF YREKA	YREKA CR.FISH HABITAT IMPROVEMENTS	12000	MANAGE HABITAT	APPROVED	CDFG
90-63	SISKIYOU RCD	ETNA CR.-- FISH PASSAGE OVER DAM	10450	MANAGE HABITAT	APPROVED	CDFG
90-95	KARUK TRIBE	CAMP CREEK - IMPROVE HABITAT	31920	MANAGE HABITAT	APPROVED	CDFG
90-90	USFS SIX RIVERS	CAMP CREEK-IMPROVE HABITAT	26030	MANAGE HABITAT	APPROVED	CDFG
90-180	CDFG	BOGUS CREEK - RENOVATE BOULDER WEIRS	10120	MANAGE HABITAT	APPROVED	CDFG
90-88	USFS-SIX RIVERS	BLUFF CREEK-INCREASE HABITAT	49950	MANAGE HABITAT	APPROVED	CDFG
90-29	USFS SALMON R RD	SALMON R. MAINSTEM AND FORKS - IMPROVE HABITAT	26912	MANAGE HABITAT	APPROVED	CDFG
90-179	CDFG	PARKS CREEK - SCREEN DIVERSION	10001	MANAGE HABITAT	APPROVED	CDFG
90-178	CDFG	BOGUS CREEK - SCREEN DIVERSION	10001	MANAGE HABITAT	APPROVED	CDFG
90-30	USFS	INDIAN CREEK-IMPROVE HABITAT	19147	MANAGE HABITAT	APPROVED	CDFG
90-33	USFS HAPPY CAMP RD	INDIAN CR. - IMPROVE HABITAT	14094	MANAGE HABITAT	APPROVED	CDFG
90-32	USFS HAPPY CAMP RD	INDIAN CR. - IMPROVE HABITAT	10052	MANAGE HABITAT	APPROVED	CDFG
90-31	USFS	INDIAN CR.-IMPROVE HABITAT	10027	MANAGE HABITAT	APPROVED	CDFG
90-190	HOOPA VALLEY BC	PINE CR.-DEVELOP HABITAT PROJECTS	32624	MANAGE HABITAT	APPROVED	<del>CDFG</del> USFWS
89-4.3	CDFG	IMPROVE MAINTENANCE OF DIVERSION SCREENS	15317	MANAGE HABITAT	APPROVED	USFWS

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndx, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
90-4.2	SISKIYOU RCD	SCOTT R. BASIN SEDIMENT STUDY, PHASE II	30768	MANAGE HABITAT	APPROVED	USFWS
* Subsubtotal *			319413			
* NOT APPROVED						
90-119	TRINITY FISH CONSULT	CAMP CREEK-INCREASE SPAWN/REAR HABITAT	21095	MANAGE HABITAT	NOT APPROVED	
90-13	USDA SCS	SCOTT R. COST SHARE TO INSTALL RIPARIAN FENCING	14698	MANAGE HABITAT	NOT APPROVED	
90-56	CLEARWATER BIOSTUDI	BOGUS/COLD CREEKS - IMPROVE SPAWN HABITAT	42750	MANAGE HABITAT	NOT APPROVED	
90-165	NORTHWEST BIOLOGICAL	YREKA CR. SPAWNING RIFFLES	42750	MANAGE HABITAT	NOT APPROVED	
90-62	SISKIYOU RCD	SCOTT R. RIPARIAN FENCING	14485	MANAGE HABITAT	NOT APPROVED	
90-58	CLEARWATER BIOSTUDI	GRIDER CREEK - PROTECT REARING POND	17200	MANAGE HABITAT	NOT APPROVED	
90-36	USFS-OAK KNOLL RD	GRIDER CR. - IMPROVE HABITAT	16600	MANAGE HABITAT	NOT APPROVED	
90-117	CAL. CONSERV. CORPS	LOWER KLAMATH TRIBS-IMPROVE HABITAT	68000	MANAGE HABITAT	NOT APPROVED	
90-57	CLEARWATER BIOSTUDI	SHASTA R.-IMPROVE SPAWNING HABITAT	28800	MANAGE HABITAT	NOT APPROVED	
90-214	SISKIYOU RCD	SCOTT R.-REMOVE SEDIMENT	28800	MANAGE HABITAT	NOT APPROVED	
90-25	USFS	ELK CR.-IMPROVE HABITAT	20230	MANAGE HABITAT	NOT APPROVED	
90-34	USFS SALMON R RD	HORSE CR.-REMOVE MIGRATION BARRIERS	54000	MANAGE HABITAT	NOT APPROVED	
90-59	CLEARWATER BIOSTUDI	COTTONWOOD CR.-SPAWNING RIFFLES	31620	MANAGE HABITAT	NOT APPROVED	
90-60	CLEARWATER BIOSTUDI	HORSE CR.-SPAWNING RIFFLES	33564	MANAGE HABITAT	NOT APPROVED	
90-91	USFS SIX RIVERS	RED CAP CR. IMPROVE HABITAT	24240	MANAGE HABITAT	NOT APPROVED	
90-137	RURAL HUMAN SERVICES	LYNN CR.-HABITAT IMPROVEMENTS	7498	MANAGE HABITAT	NOT APPROVED	

KLAMATH RIVER BASIN FISHERIES TASK FORCE  
STATUS OF FY1990 WORK PROPOSALS  
SEPTEMBER 1989. Files: action.dbf,  
action.ndx, action.frm

PROP#	PROPOSER	PROPOSAL DESCRIPTION	COST(\$)	CATEGORY	TASK FORCE ACTION	FUNDED BY
90-163	NORTHWEST BIOLOGICAL	BOGUS CR. HABITAT IMPROVEMENT	33751	MANAGE HABITAT	NOT APPROVED	
90-164	NORTHWEST BIOLOGICAL	KLAMATH R. - REDEVELOP SPAWNING CHANNEL	72929	MANAGE HABITAT	NOT APPROVED	
90-169	GREAT NORTHERN CORP	CARDOZA CR. - RIPARIAN IMPROVEMENTS	9199	MANAGE HABITAT	NOT APPROVED	
90-4.3	CALIFORNIA DWR	KLAMATH/SHASTA: PLAN, DESIGN HABITAT IMPROVEMENTS.	31000	MANAGE HABITAT	NOT APPROVED	
* Subsubtotal *						
			613209			
** Subtotal **						
			932622			
*** Total ***						
			2778769			

KLAMATH FISHERY RESTORATION PROGRAM  
ANNUAL WORK PLAN, FISCAL YEAR 1990  
files: action.dbf, catprpsr.ndx,  
90wrkpln.frm

CATEGORY	PROJECT COOPERATOR	PROJECT DESCRIPTION	COST FUNDED BY STATUS
** ADMINISTRATION			
ADMINISTRATION	89-0.1 USFWS	OPERATE KLAMATH FIELD OFFICE	187500 USFWS
ADMINISTRATION	89-0.2 USFWS	REGIONAL OFFICE OVERHEAD	80000 USFWS
ADMINISTRATION	90-01 USFWS, KIAMATH FO	ADD A PROGRAM EVALUATION BIOLOGIST TO STAFF	51500 USFWS
** Subtotal **			319000
** ARTIF. PROPAG.			
ARTIF. PROPAG.	90-160 CDFG	CAMP CREEK-WEIR AND TRAP	30954 CDFG
ARTIF. PROPAG.	90-154 NCIDC	SPRUCE CR. INCUB./REARING FACILITY	15176 USFWS
ARTIF. PROPAG.	90-156 NCIDC	HIGH PRAIRIE CREEK STOCKING PROGRAM	14675 USFWS
ARTIF. PROPAG.	90-153 NCIDC	OMAGAR CR. STOCKING PROGRAM	14675 USFWS
ARTIF. PROPAG.	90-157 NCIDC	HUNTER CR. CAGE REARING	10563 USFWS
ARTIF. PROPAG.	90-158 NCIDC	CAPPELL CR. HATCHERY	36976 USFWS
ARTIF. PROPAG.	90-159 NCIDC	PECWAN CR. CAGE REARING	17588 USFWS
ARTIF. PROPAG.	90-155 NCIDC	MIDDLE KLAMATH TRIBS-REARING POND PROGRAM	73990 CDFG
ARTIF. PROPAG.	90-12 ORLEANS ROD & GUN	SALMON RIVER STEELHEAD REARING	8810 CDFG
ARTIF. PROPAG.	90-100 SHASTA VALLEY RCD	FALL CR. - REAR 180,000 CHINOOK YEARLINGS	25423 CDFG
** Subtotal **			248830
** EDUCATE			
EDUCATE	89-3.2 USFWS	PUBLIC INFORMATION	40000 USFWS
EDUCATE	89-3.21 USFWS	QUESTIONNAIRE SURVEY	18265 USFWS
EDUCATE	89-3.1 USFWS - CONTRACT	CLASSROOM CURRICULUM, TEACHER TRAINING	69000 USFWS

KLAMATH FISHERY RESTORATION PROGRAM  
ANNUAL WORK PLAN, FISCAL YEAR 1990  
files: action.dbf, catprpsr.ndx,  
90wrkpln.frm

CATEGORY	PROJECT #	COOPERATOR	PROJECT DESCRIPTION	COST FUNDED BY STATUS
** Subtotal **				127265
** GET INFORMATION				
GET INFORMATION	90-18	ROGERS/WOOD	SHASTA R.-MONITOR WATER QUALITY	23233 USFWS
GET INFORMATION	90-27	USFS SALMON R RD	SALMON R. MAINSTEM AND FORKS - TYPE HABITAT	45247 USFWS
GET INFORMATION	90-28	USFS SALMON R RD	SPAWNING HABITAT AND UTILIZATION SURVEYS	81568 USFWS
GET INFORMATION	90-89	USFS SIX RIVERS	CAMP CR. OUTMIGRANT TRAP	15000 USFWS
GET INFORMATION	89-2.23	USFWS	BLUE CREEK STUDIES	43800 USFWS
GET INFORMATION	89-2.22	USFWS	STUDIES IN SMALL TRIBS, LOWER KLAMATH	24000 USFWS
GET INFORMATION	89-2.51	USFWS	TRAP OUTMIGRANTS, LOWER KLAMATH RIVER	27200 USFWS
GET INFORMATION	90-2.11	USFWS, ARCATA FAO	BLUE CREEK INCR. JUV. AND ADULT CHINOOK MONITORING	6300 USFWS
** Subtotal **				266349
** MANAGE HABITAT				
MANAGE HABITAT	90-180	CDFG	BOGUS CREEK - RENOVATE BOULDER WEIRS	10120 CDFG
MANAGE HABITAT	90-179	CDFG	PARKS CREEK - SCREEN DIVERSION	10001 CDFG
MANAGE HABITAT	90-178	CDFG	BOGUS CREEK - SCREEN DIVERSION	10001 CDFG
MANAGE HABITAT	89-4.3	CDFG	IMPROVE MAINTENANCE OF DIVERSION SCREENS	15317 USFWS
MANAGE HABITAT	90-4.1	CITY OF YREKA	YREKA CR.FISH HABITAT IMPROVEMENTS	12000 CDFG
MANAGE HABITAT	90-190	HOOPA VALLEY BC	PINE CR.-DEVELOP HABITAT PROJECTS	32624 <del>CD</del> <sup>US</sup> FWS
MANAGE HABITAT	90-95	KARUK TRIBE	CAMP CREEK - IMPROVE HABITAT	31920 CDFG

KLAMATH FISHERY OPERATION PROGRAM  
ANNUAL WORK PLAN, FISCAL YEAR 1990  
files: action.dbf, catprpsr.ndx,  
90wrkpln.frm

CATEGORY	PROJECT #	COOPERATOR	PROJECT DESCRIPTION	COST FUNDED BY STATUS
MANAGE HABITAT	90-4.2	SISKIYOU RCD	SCOTT R. BASIN SEDIMENT STUDY, PHASE II	30768 USFWS
MANAGE HABITAT	90-63	SISKIYOU RCD	ETNA CR.-- FISH PASSAGE OVER DAM	10450 CDFG
MANAGE HABITAT	90-30	USFS	INDIAN CREEK-IMPROVE HABITAT	19147 CDFG
MANAGE HABITAT	90-31	USFS	INDIAN CR.-IMPROVE HABITAT	10027 CDFG
MANAGE HABITAT	90-33	USFS HAPPY CAMP RD	INDIAN CR. - IMPROVE HABITAT	14094 CDFG
MANAGE HABITAT	90-32	USFS HAPPY CAMP RD	INDIAN CR. - IMPROVE HABITAT	10052 CDFG
MANAGE HABITAT	90-29	USFS SALMON R RD	SALMON R. MAINSTEM AND FORKS - IMPROVE HABITAT	26912 CDFG
MANAGE HABITAT	90-90	USFS SIX RIVERS	CAMP CREEK-IMPROVE HABITAT	26030 CDFG
MANAGE HABITAT	90-88	USFS-SIX RIVERS	BLUFF CREEK-INCREASE HABITAT	49950 CDFG
** Subtotal **				319413
*** Total ***				1280356

VOLUME I. TECHNICAL PROPOSAL

PROPOSAL TO PREPARE A PLAN FOR,  
AND ENVIRONMENTAL ASSESSMENT OF,  
A TWENTY-YEAR PROGRAM OF FISHERIES  
RESTORATION IN THE KLAMATH RIVER BASIN,  
CALIFORNIA

In response to Request for Proposals  
FWS1-89013(RWG) issued by the United States  
Fish and Wildlife Service, Region 1  
Portland, Oregon

May, 1989

William M. Kier Associates  
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VOLUME I. TECHNICAL PROPOSAL

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VOLUME II. MANAGEMENT PROPOSAL

VOLUME III. COST PROPOSAL

## Introduction

Public Law 99-552 (the Klamath Act) established the Klamath River Basin Conservation Area Restoration Program, a 20-year federal-state fisheries restoration effort. The Secretary of the Interior has principal responsibility for carrying out the provisions of the act. The Secretary has, in turn, assigned responsibility for implementing the Program to the U.S. Fish & Wildlife Service.

The Klamath Act also created the 12-member Klamath River Basin Fisheries Task Force to assist the Secretary and the Service in implementing the Program. The Act adopted by reference the Klamath River Basin Fisheries Resource Plan, completed by the Department of the Interior in 1985, as the point of departure for the Program. The Service and Task Force have recognized the need to update and expand the Plan, primarily to

- o add new biological information and new concepts in fishery restoration,
- o take into account the extensive fishery restoration work accomplished in the Klamath River basin since 1985, and
- o reduce the scope of the program proposed in the 1985 Plan to the \$42 million level contemplated in the Klamath Act.

This document presents the proposal of William M. Kier Associates, a team of seasoned fishery research biologists, engineers, and natural resources planning and management specialists, to develop the updated and expanded Plan and environmental assessment needed for the guidance and successful implementation of the Klamath River Basin Conservation Area Restoration Program.

## A Word About Plans and Planning

A good planning process should achieve at least the following:

1. the identification of key issues
2. accurate findings regarding those key issues
3. the selection of long-term goals
4. the choice of short-term objectives
5. the development of policies which address the key issues and which will help attain the goals and objectives
6. the identification of specific actions to implement the plan.

A plan that is useful is, by definition, one that can be implemented. The implementation of the plan starts a dynamic "adaptive management" process, a conscientious updating and reconsideration of the plan on the basis of the practical results of carrying out the specific planned actions.

Our review of the 1985 Klamath River Basin Fisheries Resource Plan leads us to the conclusion that it does not possess the necessary elements of a complete and effective plan. Specifically, it lacks the third, fourth and fifth elements listed above. It is not until Chapter 7, for example, that it attempts to organize or classify the problems discussed earlier. Even then the problem categories overlap and lack clarity. Missing altogether is a category concerning habitat protection problems. The final plan should present goals, objectives and, importantly, policies for achieving habitat protection --in addition to the other categories of problems.

William M. Kier Associates (Contractor) proposes, therefore, to address the tasks identified in the request for proposals in a manner which will not only bring the Klamath Fisheries Plan up to date, but will also to make it a complete plan, a sound base for adaptive management throughout the life of a successful restoration program.

**Task 1.1 Restate and explain the mission and goals of the restoration program.**

The Klamath River Basin Fisheries Task Force (Task Force) has adopted a preliminary statement of the Program's mission and goals. The latest draft statement, which appears incomplete, will serve as the Contractor's point of departure.

Based on our review of the 1985 Plan, we propose to develop alternative language to (1) expand the scope of the Task Force's draft statement and (2) make it more precise and, therefore, more applicable to the full range of actions likely to be addressed in the revised Plan. It appears advisable, for example, for the mission and goals statement to recognize the relationship between the restoration program and the harvest management advisory responsibilities of the Klamath Fishery Management Council.

This task will involve close consultation with members of the Task Force's missions and goals subcommittee, Service project management personnel and, ultimately, with the full Task Force. In view of its critical bearing on the balance of the planning process, this task will begin immediately and will produce a more complete discussion draft within three weeks of the award of the contract.

We do not mean to suggest that a complete and lasting mission and goals statement can be finalized in three weeks. The work on stocking priorities, quantitative objectives and the rationale for those objectives will promote Task Force and general public discussions throughout the planning process that will ease the tensions that have characterized the discussion of mission and goals thus far and will, as well, give greater strength and specificity to the Program's final policy framework.

The William M. Kier Associates team is committed to, and has been highly successful in, the process of easing conflict between competing resource user interests through open public planning processes.

**Task 1.2 Identify and reconcile the fishery management objectives of all agencies claiming jurisdiction over Klamath River anadromous fish.**

Chapter 4 of the 1985 Plan provides an extensive discussion of the policies and responsibilities of the agencies claiming jurisdiction over Klamath River anadromous fish. In addition to updating that information this task should review, as well, those public agencies and private interests -- the U.S. Forest Service and other landholders and regulators, for example -- whose actions affect the present and future quality of the basin's fishery habitat.

The Contractor has extensive experience in gathering and analyzing the laws, regulations and policies that govern state, federal and private natural resources management agencies and their regulatory and management programs. The Contractor undertook such an analysis more than 20 years ago ("A Study of Resources Policy Directions for California", Resources Agency of California, December, 1965), has frequently updated that information and created a very similar analysis for the 1984 "Mendocino

County Salmon and Steelhead Management Plan".

Two major policy developments which have occurred since the publication of the Department of the Interior's 1985 Klamath Plan are the enactment of the State of California's "Salmon, Steelhead Trout and Anadromous Fisheries Program Act" (Chapter 1545, Statutes of 1988) and the "Hoopa-Yurok Settlement Act", U.S. Public Law 100-580. The state act adopts both broad and specific policies to guide actions toward a doubling of the "current natural production of (the state's) salmon and steelhead trout resources". The federal act, while confirming important rights of the Hoopa Valley Indian tribe, reallocates Indian fishing rights in the lower Klamath River in ways that open opportunities for more creative in-river fisheries allocations. These opportunities should be addressed in the revised Klamath Basin Fisheries Restoration Plan.

The Contractor has substantive experience with the origins and purposes of both new laws. We have been the principal technical and administrative consultant to the California Advisory Committee on Salmon and Steelhead Trout and have assisted the Advisory Committee in developing the policies of Senate Bill 2261 (1988), which were enacted as the Salmon, Steelhead Trout and Anadromous Fisheries Program Act. Further, one member of our team has been professionally involved in the development and implementation of the P.L. 100-580 program from its inception.

Inasmuch as the Contractor already has a substantial database related to this task, we propose that it begin immediately and be completed within 30 days. Drafts of the analysis will be available at that time for review and comment of Task Force members, Service personnel and key contacts at the state, federal, tribal and private agencies involved.

Task 1.3 Identify species for restoration and recommend stocking priorities.

The 1985 Plan provides substantial discussion concerning the status of various fish stocks throughout the Klamath River Basin, including the Trinity River watershed. Some of that information is out of date now, however, and its updating will likely influence the revised Klamath Fisheries Plan significantly.

For example, the Lewiston and Iron Gate hatcheries are no longer having difficulty acquiring fall run chinook broodstock, as they were at the time the 1985 Plan was developed. In fact, the Trinity River system is showing signs of becoming hatchery-fish dominated. The new "Salmon, Steelhead Trout and Anadromous Fisheries Program Act" recognizes the inherent danger to the state of becoming overly-reliant on hatchery production. This management issue should be fully addressed in the revised Plan.

The Contractor will consult with Task Force members, Service personnel and other agency specialists in identifying opportunities for rebuilding natural stocks through decentralized "satellite" bioenhancement programs, in addition to those opportunities for increasing natural stream production.

The 1985 Plan notes that the coho salmon stocks of the Klamath River Basin shifted significantly in distribution following the 1964 floods and that hatchery returns were eclipsing production from wild stocks. We propose (at Task 1.6) to investigate whether pool depths and pool-to-riffle ratios of the region's streams are recovering and what the recovery, or lack thereof, suggests might be accomplished in the rehabilitation of coho stocks.

Klamath River Basin steelhead trout stocks remain depressed. Unlike chinook salmon, hatchery steelhead returns have been

meager. The 1988 enactment of Proposition 70 provides \$6 million dollars for the improvement of wild trout and steelhead populations. Investment of a portion of these funds in the Klamath Basin would appear appropriate. Along with the other proponents of the Proposition 70 wild trout and steelhead rehabilitation funds, California Trout, Inc. have expressed early interest in enhancement projects for the South Fork Trinity and Big Springs on the Shasta River. The Contractor will consult with Task Force members, Service personnel, agency specialists and private groups like Cal-Trout to identify opportunities and reasonable expectations for rehabilitating steelhead stocks in the Basin.

Recent large runs of hatchery-origin spring chinook may be masking the continued decline of wild spring run stocks. The 1985 Plan notes that spring run had, at that time, probably been declining steadily for more than 20 years. Inasmuch as these fish could contribute substantially to recreational fishing in the region, bioenhancement opportunities for increasing wild stocks should be investigated thoroughly, particularly in the Salmon River and other large tributaries to the mainstem Klamath.

This task will have to be completed in a preliminary fashion very early in the project (we propose within 45 days of the award of contract and following the updating of the mission and goals statement) inasmuch as it contributes, as do two other tasks, to the substance of Task 1.4. The temporal relationship of these technical tasks is shown on Figure 1, their workplan relationships on Figure 2.

Task 1.4 Recommend quantitative objectives for restoration of fish stocks and provide the rationale for the recommendations.

The 1985 Klamath River Plan suggests the overall fish stock

restoration goals to which its recommended actions are directed: 115,000 fall chinook spawners, production of 220,000 in-river adult steelhead, 12,000 spring run chinook spawners and at least 15,000 spawning cohos. The approximate costs of the recommended actions are provided together with projected benefit values.

More recent analyses conducted for the California Advisory Committee on Salmon and Steelhead Trout (Meyer, 1988) suggest that the 1985 Plan's quantitative objectives are reasonable. The Advisory Committee's work would also appear to confirm the values which the 1985 Plan assigned to the region's fishery restoration potential. These values provide at least a preliminary rationale for the restoration actions.

As suggested by the workplan (Figure 2) this task is interrelated with Task 1.5, since the updated and expanded analysis of the Basin's habitat conditions, potentials and recent restoration results will not only improve our ability to recommend specific biological objectives, but will make clearer the cost of attaining those objectives. This plan element will be designed to facilitate the adaptive management process. Habitat surveys already underway in the Basin will improve the focus of the Programs's objectives and the confidence of investment decisions.

**Task 1.5 Recommend objectives and procedures for identifying and conserving genetic diversity of fish stocks**

In adopting and enacting Senate Bill 2261 last year, the Legislature and Governor gave explicit support to the policy of conserving the full range of California's genetically different anadromous fish stocks. This policy is absolutely fundamental to the long-range conservation and restoration of the fish life of the Klamath River Basin.

The California Gene Resources Program of the National Council on Gene Resources published its extensive "Anadromous Salmonid Gene Resources, An Assessment and Plan for California" in 1982. That assessment and plan stimulated an effort by the California Department of Fish & Game and the U.S. Fish & Wildlife Service to develop a "Salmon and Steelhead Stock Management Policy for the State of California". The California Advisory Committee on Salmon and Steelhead Trout urged the Department to complete the stock management policy, however its present status is unclear. The Advisory Committee incorporated the sense of the draft state-federal policy in the provisions of Senate Bill 2261 and those general provisions are now the official policy of the State.

Work on this task will benefit substantially from the extensive research on this subject performed by the Contractor for the California Advisory Committee on Salmon and Steelhead Trout. We have maintained close interest, for example, in the efforts of Dr. Graham A. E. Gall and others of the Department of Animal Science, University of California, Davis to gather and evaluate information from gel electrophoresis and other sources concerning California's mixed-stock chinook salmon fisheries. Humboldt State University's Dr. Eric Laudenslager's work with steelhead from the South Fork Trinity River strongly suggests they are distinct from mainstem stocks in several key characteristics. Efforts by Drs. Gall, Laudenslager and others will, in time, improve our understanding of the protein differences between the Klamath River Basin's "source populations" of anadromous salmonids.

While work by Dr. Gall and the others goes forward, however, available information concerning run timing, emergence from the gravel, patterns of downstream migration and so forth can be analyzed to improve recognition of the different races of salmon and steelhead of the Basin. Information concerning the effects

of hatchery planting operations on the survival of wild stocks, including that recently reported by Riesenbichler, McIntyre and others will be summarized and recommendations developed from it.

Work on this task will commence immediately and, given its relationship to Tasks 1.4 and 1.6, draft recommendations will be furnished the Task Force for its review within six weeks.

Task 1.6 Provide additional information to augment and update that information contained in the Klamath Fisheries Plan on: fisheries management; anadromous fish status; anadromous fish production constraints; and any area where data gaps exist in the plan. The information in the plan shall be made current as of the spring of 1989.

It is clear that the most vexing problem in the development of the 1985 Plan was the lack of sufficient information concerning the quantity and quality of available spawning and rearing habitat in the several Klamath River sub-basins. While the U.S. Forest Service's habitat inventory program addresses the problem, it will be some time before their data can be expected to provide a reliable base for the analysis of limiting factors and for pinpointing restoration investment needs systemwide. In the meantime, we propose to recommend a standard methodology for identifying limiting factors to be incorporated in the updated Plan.

With substantial leadership from U.S. Fish & Wildlife Service professionals, significant work has been accomplished in the Basin since 1984. Spawning surveys have been expanded, counting weirs have been installed and maintained, downstream migrants have been sampled, tagging has continued, habitat inventoried, stream restoration projects have been completed and rearing programs expanded. Information regarding all these efforts will

be gathered, evaluated and summarized. We have maintained a bibliography of Klamath River fisheries management and restoration, and related technical activities, in conjunction with the projects we are currently conducting in the region (see appendix A).

Our project engineer and our restoration specialist will provide updated cost estimates for proposed construction and will recommend redirection of effort where experience since 1985 has placed in doubt any of the structural treatments recommended in the earlier Plan.

We propose to evaluate and report on the condition of a representative sample of the restoration sites and fishery structures completed in recent years. The project engineer will evaluate the structures and sites as to their ability to withstand flood flows during the life of the restoration program. The project restoration specialist, mindful of the problems that have been indentified with certain enhancement methods in recent years, will summarize the ability of the projects to improve productivity in the streams of the Basin.

A development that should be addressed in the updated Plan involves the recent and extensive wildfires in the Salmon River watershed and, to a lesser extent in the Scott and South Fork Trinity drainages. We will consult with those who have surveyed the burn areas, evaluate the potential for these areas causing further damage to the region's fishery habitat and, in cooperation with the land management agencies, recommend strategies for preventing further damage. As in the case of our proposed evaluation of sites and structures, we will make extensive use of photographs to document both problem areas and desirable situations. These photographs will contribute substantially to the restoration program's public outreach efforts.

We will review existing aerial photographs, particularly those of the U.S. Forest Service, in order to evaluate their usefulness for determining what has happened to fishery habitat in the Basin over time. By analyzing photo images of 1964 flood damage, 1987 burn areas and other significant events the use of aerial photography as an on-going Program evaluation tool will be determined.

Aerial photographs can reveal information concerning the filling of pools in streams, changes in pool-to-riffle ratios and related matters of critical importance to fisheries conservation and restoration efforts. Information concerning active earth flows and channel morphology, changes in sediment supply and stages of channel recovery can tell us whether natural production is likely improving or whether increased bioenhancement efforts will be needed.

We specifically propose to expand the Plan by identifying individuals who are interested in the restoration program and who are knowledgeable concerning fish stocks and fishery conditions in the several sub-basins. We were extremely successful in doing this on behalf of the California Advisory Committee on Salmon and Steelhead Trout. Largely through our efforts, the Advisory Committee has a statewide network of several hundred persons who both provide and disseminate information vital to the success of the State's new salmon and steelhead program.

The 1985 Plan relied principally on information from a few agencies. The success of the long-term plan and program will depend in large measure on the depth and breadth of its public constituency. We will make a special effort during our work in the field, therefore, to help the Service and Task Force to identify that potential constituency.

This task will be completed by October, 1989.

**Task 1.7 Identify and adapt up-to-date concepts of fishery restoration planning for incorporation into the Klamath River Restoration Program.**

We are familiar with the Northwest Power Planning Council's approach to "system planning". It seeks to assure that the dozens of agencies that are helping to develop salmon and steelhead restoration plans for the 31 Columbia River sub-basins use a consistent approach that will aggregate naturally into a system-wide plan capable of doubling the Basin's spawning runs. While the Power Planning Council's system planning is probably more elaborate than any required to guide the Klamath River restoration program, its goal -- to double the Columbia's runs -- is actually simpler than the Klamath program's charge to "restore the anadromous fish populations of the Area to optimum levels".

While each major West Coast fisheries restoration or enhancement program offers an experience useful in upgrading the Klamath River Plan, none appears to be a panacea. Progress on the Power Planning Council's program has been disappointingly slow. Canada's salmonid enhancement program has been criticized for its lack of timely evaluation. The failure of winter run chinook "management" on the Sacramento River suggests the need for a substantial redirection of efforts in that system.

Recalling the introductory note in this proposal concerning the essential elements of effective planning and what we saw as the shortcomings in the 1985 Klamath Plan, it appears nonetheless that the makings of a proper plan for the Klamath program are at hand.

With direction from the Task Force we will

1. Update and improve the plan's discussion of factors limiting fish production in the Basin,
2. Complete the program's statement of mission and goals,
3. Identify those policies necessary to attain the goals,
4. Identify near-term objectives which will contribute to the goals,
5. Identify specific actions for reaching the objectives and, over time, for achieving the goals.
6. Identify the means by which restoration actions will be evaluated and evaluation results will be used to frequently update and improve the plan.

It will be necessary to improve the Klamath Program's record-keeping ability. We specifically propose to investigate the usefulness for this purpose of the surface water classification system being developed by the State Water Resources Control Board's Division of Water Rights. The system has assigned every stream in the Basin a code number. This numerical system will likely improve the Program's ability to keep track of run counts, habitat inventory data, habitat improvement projects, water diversions, fish screens -- in short, the information with which the plan will be maintained and the program managed adaptively. Other classification systems, including those being developed by the U.S Environmental Protection Agency and the California Department of Water Resources will be investigated.

We will also provide an evaluation of computer-based fisheries restoration planning programs. The most advanced of

these, that of the Northwest Power Planning Council, is not yet operable. We will investigate, as well, the efforts of Resources for the Future to develop a related analytical model for the Bonneville Power Administration.

We will recommend a model appropriate to the Klamath Program, as part of this task, by October, 1989.

**Task 2.1 Provide an estimate of the cost-effectiveness of the recommended fishery restoration actions.**

The cost of the recommended actions will be determined by the project engineer and the project restoration specialist, together with other members of the project team. Biological effects of the actions will be estimated by the team's fishery scientists. The value of the actions will be determined by the project economist, following consultation with the Task Force and Service managers, using the Klamath River fishery restoration values recently developed for the California Advisory Committee on Salmon and Steelhead Trout.

We wish to point out that the firm has made a substantial start on this task through its recent efforts on behalf of our client, the California Advisory Committee on Salmon and Steelhead Trout. Specifically, we prepared for the Advisory Committee the following highly relevant reports

- o "Alternative Approaches to Provide an Adequate Economic Methodology for Valuing Salmon and Steelhead",
- o "An Economic Methodology for Valuing Salmon and Steelhead in California", and
- o "Benefits from Present and Future Salmon and Steelhead Production in California".

Our reports provide an excellent and detailed discussion of how the State of California should value the results of its salmon and steelhead conservation and restoration generally and how those values should be applied to conservation problems and restoration opportunities in the Klamath and Trinity river basins, specifically.

**Task 2.2 Provide an estimate of socio-economic effects of recommended fishery restoration actions.**

The cost-effectiveness analysis produced under Task 2.1 will yield one element of our analysis of the full range of social and economic costs and benefits associated with the recommended fishery restoration actions. "Socio-economics of the Idaho, Washington, Oregon, and California Coho and Chinook Salmon Industry", prepared for the Pacific Fishery Management Council in 1978, provides a checklist, in effect, of the commercial fishery considerations that will be addressed in carrying out this task.

As noted in the report "Restoring the Balance" which we prepared for the California Advisory Committee on Salmon and Steelhead Trout in 1988 (and which we enclose here as an example of our work) severe fluctuations in the size of the Klamath River runs have confounded the process of establishing quotas for the region's commercial, recreational and Indian fisheries. The resultant uncertainty has adversely affected those businesses in the region that depend on tourism, services to commercial fishermen and the reliable income to fishermen, including Indians. To the extent that we can predict a larger, more reliable supply of fish, we can assign benefits to the restoration program for firming up local economies and resolving those social problems which

result from the present uncertainty.

Less clear at this point is the need to estimate potential costs of the program resulting from proposals that greater consideration be given the fish-habitat impacts of forestry, livestock production, mining and other land use activities in Basin watersheds. The 1985 Plan specifically recommends that tax incentive programs for upgrading these Basin land uses (that is, from a fisheries restoration view) be explored. With the guidance from the Task Force, following its review of our October 1, 1989 Plan, we will identify the nature and extent of the costs to land management agencies and others of the new watershed protection proposals.

Much of the basic information needed for an adequate analysis of socio-economic effects of the restoration program has been developed by the California state departments of Water Resources, Food & Agriculture, and Forestry & Fire Protection; the University of California, the U.S Department of Agriculture and the Northwest Fisheries Development Foundation. These data bases will be used to prepare a discussion of the socio-economic effects of the restoration program in (1) a preliminary fashion for use in the October 1, 1989 draft environmental assessment and (2) with greater focus and detail when the Task Force has had an opportunity to react to the draft plan.

Task 3.1 Recommend an up-dated, expanded plan for review by the Task Force for implementing the twenty year restoration program.

This is where we pull together, into a review draft, the results of all the field inspections, community-level discussions, agency contacts and desk analyses performed in conjunction with the earlier tasks. The review draft will, among other things

- o update and expand the discussion of the factors limiting fish production within the Klamath River Basin -- that is, present accurate statements concerning the key issues,
- o update and expand the statement of the restoration program's mission and goals,
- o update cost estimates for those 1985 Plan actions not yet accomplished and still viewed as practical,
- o adjust the twenty year budget total down to \$42 million, including state participation,
- o recommend a methodology for estimating the probable effectiveness of stream rehabilitation and enhancement structures,
- o recommend a process by which the Klamath River restoration program can continually gather, retrieve and analyze information as part of its adaptive management and Plan updating responsibilities.

The draft plan will be submitted to the Task Force for its review by October 1, 1989.

Task 4.1 Prepare an assessment of the environmental effects of recommended actions, sufficient to satisfy the requirements of the Council on Environmental Quality.

The Contractor will review, as necessary, the policies and procedures of the Department of the Interior, the U.S. Fish & Wildlife Service and the State of California to determine precisely what is required to document, and to provide adequate

public review and participation in the completion of documents relating to, the environmental effects of the actions recommended in the updated Klamath River fisheries restoration plan. The Contractor will assure in executing the plan of work that the public has the necessary documentation, review and comment opportunity to satisfy the requirements of the National Environmental Policy Act and the California Environmental Quality Act.

We have substantial familiarity with NEPA and CEQA procedures and have successfully pursued similar needs on behalf of clients recently. The environmental assessment will be completed in draft form, together with the draft plan, by October 1, 1989 and will be completed following the public and agency review and comment period ending January 31, 1990.

**Task 5.1 Make the draft plan and assessment available for public and agency comments.**

The Contractor maintains an extensive (2,600-name) computer file of names and addresses of persons interested in fisheries conservation, generally, and salmon and steelhead trout restoration specifically. A subset of this file will be created that will include all of the agencies and most of the individuals interested in or having jurisdiction over the matters addressed in the Klamath River Plan. The names of individuals and agencies encountered in the course of the summer-fall, 1989 project field work will be added to the computer list.

The Contractor will prepare the mailing list, in consultation with Service personnel, by November 15, 1989. Following review of and comment on the draft plan and assessment by the Task Force, the plan and assessment will be amended and that amended copy will be distributed to the list of persons and agencies having interest in, and responsibilities concerning, the

Klamath River Program plan.

**Task 5.2 Organize a forum for direct public comment on the draft plan and environmental assessment to the Task Force.**

The draft plan and assessment will be distributed for review by agencies and individuals between November 15 and December 1. Public forums involving the Task Force members should be conducted during January.

The Contractor recommends that at least two public forums be held during January, one in the Humboldt Bay region and another in an upstream community like Yreka.

The public and agency review and comment period will be completed by January 31, 1990.

**Task 5.3 Provide public and agency comments to the Task Force.**

This task is (1) a mechanical process of recording, reproducing and accurately reporting the comments on the draft plan and environmental assessment received from agencies and provided by individuals at the public forums and related contacts and (2) a more thoughtful process of evaluating these comments and bringing to the Task Force's attention in a timely fashion how the reviewers have perceived the strengths and weaknessness, including any legal deficiencies, of the draft documents.

This process, which will be completed as near the January 31 comment deadline as possible, will be expedited some by the proposed participation of Task Force members in the two public

forums.

Task 5.4 Provide a draft plan and environmental assessment which incorporates both public and agency comments.

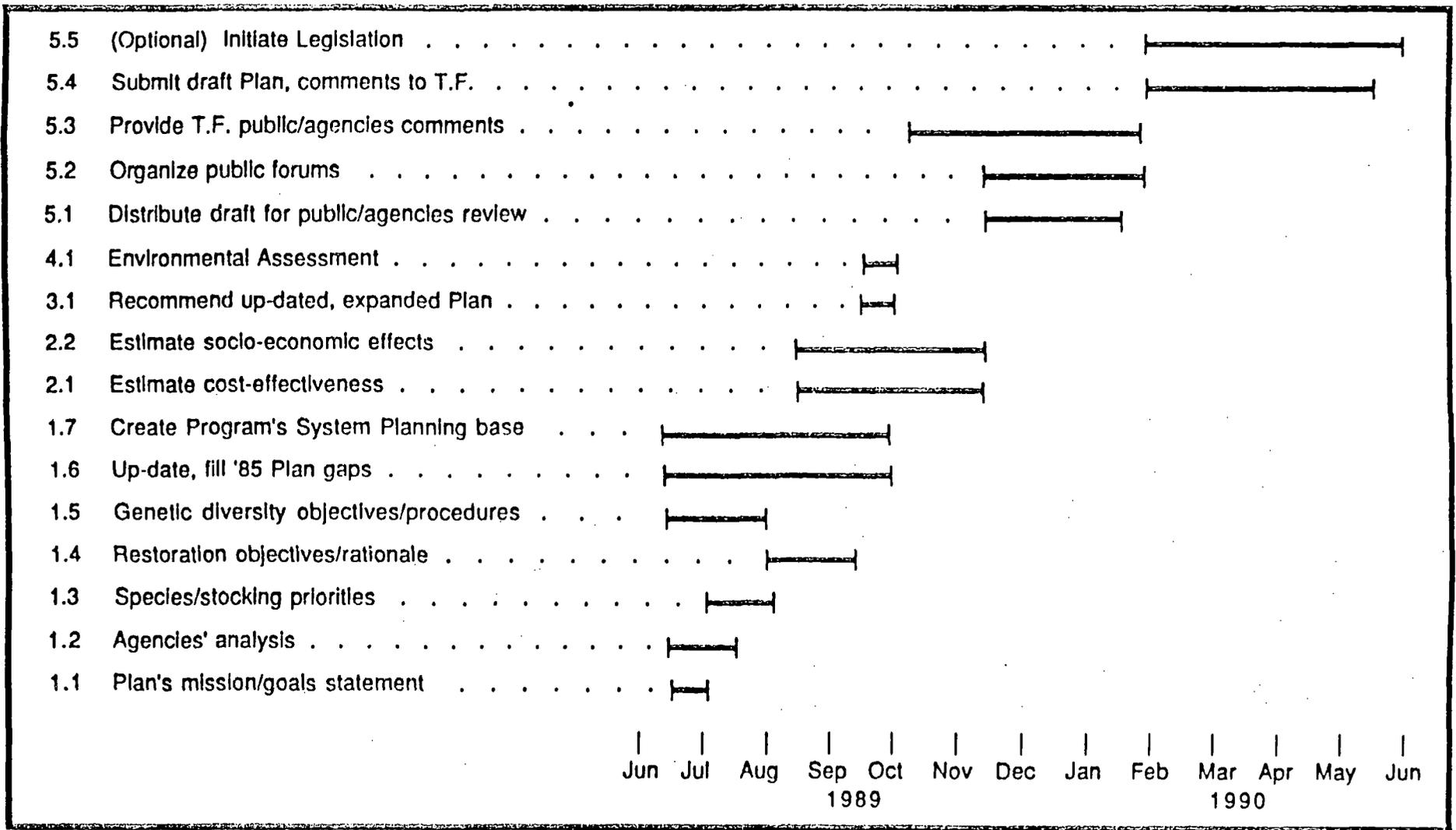
This task involves a final editing of the draft plan and environmental assessment which takes into consideration the comments and concerns of the Task Force, the cooperating agencies and the public. A minimum of 20 copies of this draft, in an updatable format, will be provided the client by May 1, 1990.

Task 5.5 (Optional) Develop and initiate implementing legislation, as needed.

The 1985 Plan contemplates the need for state legislation to provide, among other things, incentive programs to promote greater landowner concern with stream habitat protection.

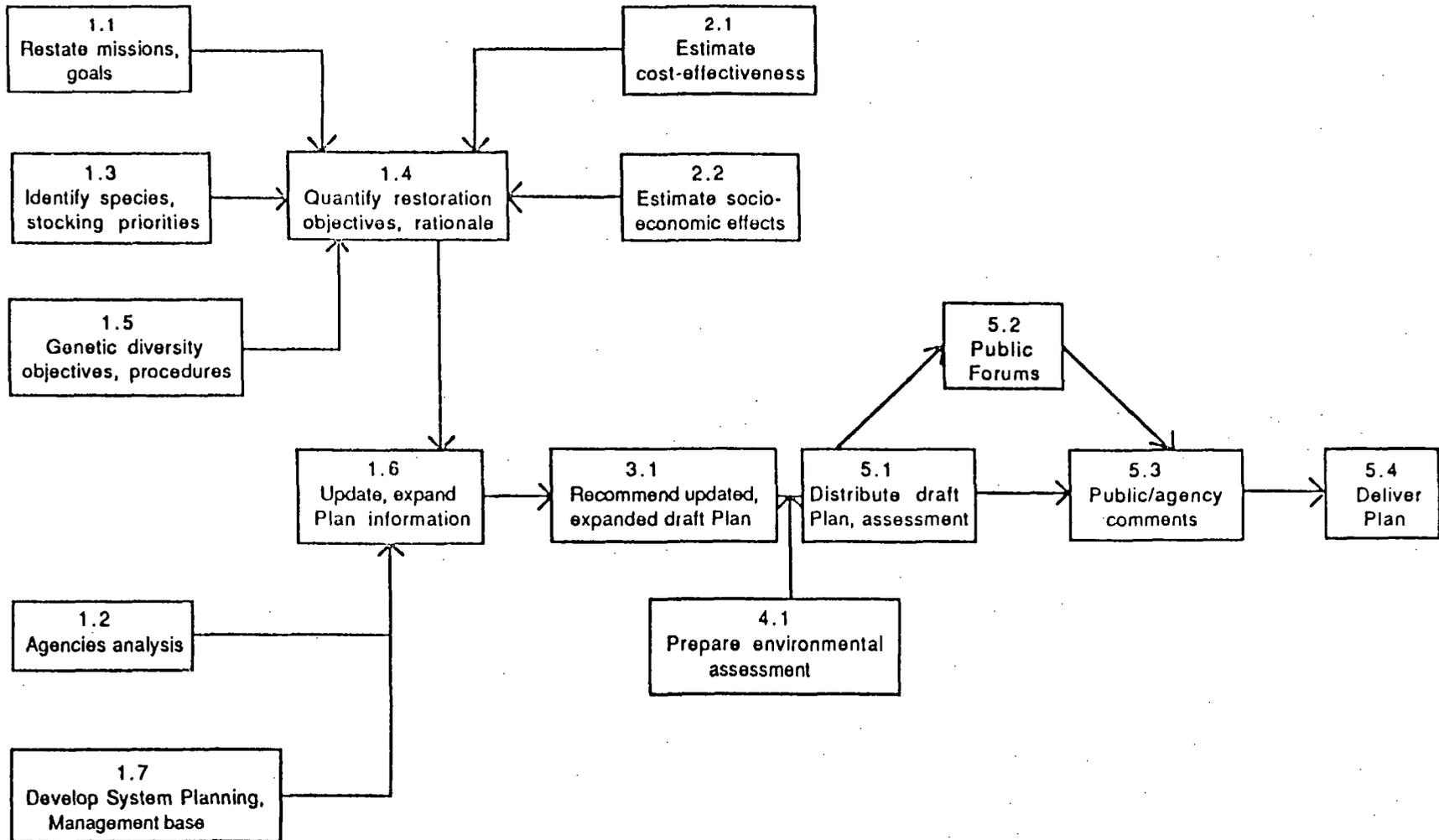
William M. Kier Associates has demonstrated strong skills in researching and developing successful legislative initiatives. The firm developed and managed, for example, the successful "Salmon, Steelhead Trout and Anadromous Fisheries Program Act" in 1988 on behalf the California Advisory Committee on Salmon and Steelhead Trout.

If the client wishes, the Contractor will investigate alternative approaches to implementing, through legislation, the watershed and habitat protection incentive recommendations of the 1985 Plan. This task would be the subject of further contract negotiation but would not likely increase the total project costs beyond that level indicated in the Klamath Basin Fishery Restoration workplan and budget of March 31, 1989.



**FIGURE 1. INITIATION AND COMPLETION DATES  
KLAMATH RIVER FISHERIES RESTORATION PROJECT**

FIGURE 2. WORK PLAN  
 KLAMATH RIVER FISHERIES RESTORATION PROJECT



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APPENDIX A

KLAMATH RIVER BASIN FISHERIES RESOURCE PLAN  
AND ENVIRONMENTAL ASSESSMENT

Updated and Expanded Bibliography

by

Sari Sommarstrom

4/30/89

- Anderson, L.G., 1981. "The economics of salmon management under the FCMA: muddling through from gravel to gravel". In: Economic analysis for fisheries management plans. Ann Arbor Science (?), Ann Arbor. 319p.
- Bottom, D.L., P.J. Howell, and J.D. Rodgers, 1985. The effects of stream alterations on salmon and trout habitat in Oregon. Oregon Dept. of Fish and Wildlife, Portland. 70p.
- California Advisory Committee on Salmon and Steelhead Trout, 1986. The tragedy continues. 1986 annual report. Sausalito, 36p.
- , 1987. A new partnership. 1987 annual report. Sausalito, 36p.
- , 1988. Restoring the balance. 1988 annual report. Sausalito 84p.
- California Dept. of Fish and Game, 1988. Klamath River fall chinook spawner escapement, in-river harvest and run-size estimates, 1978-1988. Arcata, 5 p.
- , 1985-1988. Annual administrative reports: Iron Gate salmon and steelhead hatchery and Bogus rearing pond.
- , 1988. Report to the Fish and Game Commission, July 1, 1987-June 30, 1988. Sacramento, 81p.
- , 1989. Request for proposals for the California Dept. of Fish and Game Inland Fisheries Division 1989-90 grant program. Sacramento, 13p.
- California Dept. of Water Resources, 1987. Klamath River water quality study, Hamburg to Orleans. Northern District, Red Bluff. 277p.
- California Regional Water Quality Control Board, North Coast Region, 1989. Public report on proposed action to amend the Water Quality Control Plan for the North Coast Region to incorporate policy on the regulation of fish hatcheries, fish rearing facilities, and aquaculture operations. Santa Rosa, 4/24/89, 13p.
- California Salmon, Steelhead, and Trout Restoration Federation, 1989. Proceedings of the Seventh California Salmon, Steelhead and Trout Restoration Conference. ( Feb. 24-26, 1989 in Arcata, Calif.) Edited by Chris Toole, California Sea Grant Publication UCSGEP -89-02, Davis. 52p.
- Fausch, K.D., C. Hawles, and M. Parsons, 1988. Models that predict standing crop of stream fish from habitat variables:1950-85. Gen. Tech. Rep. PNW-GTR-213. U.S. Forest Service, Pacific Northwest Research Station

Portland, 52p.

Hassler, T.J., ed., 1984. Proceedings: Pacific Northwest stream habitat management workshop. (Oct.10-12, 1984, Arcata). Calif. Coop. Fish. Res. Unit. Arcata, 329p.

Irizarry, R., J. Zustak, D. Carrier, and K. Coop, 1988. A combined plan for fish habitat improvement in the Trinity River Basin. Shasta-Trinity National Forests. Redding, 26p.

Jackson, W.L., ed., 1986. Engineering considerations in small stream management. Water Resources Bulletin 22(3):351-415.

Klamath River Basin Fisheries Task Force, 1988a. Federally-funded work plan and budget, fiscal year 1989 - Klamath Basin Fishery Restoration. Yreka, 2p.

-----, 1988b. Statement of goals. Draft. Mission and Goals Committee. 11-1-88, 1p.

Leidy, R.A. and G.R. Leidy, 1984. Life stage periodicities of anadromous salmonids in the Klamath River Basin, Northwestern California. U.S. Fish and Wildlife Service, Sacramento. 38p.

McEvoy, A.F., 1986. The fisherman's problem: ecology and law in the California fisheries, 1850-1980. Cambridge Univ. Press, 368p.

Meyer Resources, 1987. An economic methodology for valuing salmon and steelhead in California. A report to the Calif. Adv. Comm. on Salmon and Steelhead Trout, Davis. #129-J, 75p.

-----, 1988. Benefits from present and future salmon and steelhead production in California. A report to the Calif. Adv. Comm. on Salmon and Steelhead Trout, Davis. # 130-J, 78p.

National Council on Gene Resources, 1982. Anadromous salmonid genetic resources: an assessment and plan for California. Calif. Gene Resources Program. Berkeley, 168p.

Northwest Power Planning Council, 1988. Columbia Basin salmon and steelhead system planning. Portland, 6p.

Oregon Dept. of Fish and Wildlife. 1982. Comprehensive plan for production and management of Oregon's anadromous salmon and trout. Part I-General considerations; Part II-Coho salmon plan. Fish Div., Anadromous Fish Section. Portland.

Pacific Fishery Management Council, 1978. Final environmental impact statement and fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978. With National Marine Fisheries Service, Portland and Seattle.

-----, 1985-89. Proposed plan for managing the 19(85-89) salmon fisheries off the coasts of California, Oregon, and Washington. Portland.

Platts, W.S. et al., 1986. Methods for evaluating riparian habitats with

applications to management. U.S. Forest Service Gen. Tech. Report INT-221, Ogden. 177p.

Rice, R.L., 1989. 1989 update of fishery resource data for SFI report. Memorandum to Regional Forester from Forest Supervisor, Klamath National Forest, Yreka.

Senn, H., J. Mack, and L. Rothfus. 1984. Compendium of low-cost Pacific salmon and steelhead trout production facilities and practices in the Pacific Northwest. Fish Management Consultants for U.S. Dept. of Energy, Bonneville Power Adm., Div. of Fish and Wildlife, Portland. 488p.

Sommarstrom, S. 1984. Mendocino County Salmon and Steelhead Management Plan. Adopted by Mendocino Co. Board of Supervisors, 2/13/84, Ukiah. 103p.

State of California Resources Agency, 1989. Upper Sacramento River Fisheries and Riparian Habitat Management Plan, by the Upper Sacramento River Fisheries and Riparian Habitat Advisory Council, 158p.

U.S. Fish and Wildlife Service, 1983. Environmental impact statement for the Trinity River Basin fish and wildlife management program, Trinity River, northwestern California. 148p.

-----, 1985. Statement of responsibilities and role. Fishery Resources Program. Washington, D.C., 39p.

-----, 1986. Annual report: Klamath river fisheries investigation program, 1985. Fisheries Assistance Office, Arcata, 117p.

-----, 1987. Annual report: Klamath River fisheries investigation program, 1986. Fisheries Assistance Office. Arcata, 93p.

-----, 1988. Annual report: Klamath River fisheries investigation program, 1987. Fisheries Assistance Office. Arcata, 101p.

U.S. Forest Service, 1979. Summer steelhead habitat management plan for the Klamath National Forest. Klamath National Forest, Yreka, 24p.

Vondracek, B. and R. Callahan. 1987. California's salmon and steelhead trout: a research and extension program. U.C. Wildland Resources Center Report No. 13. Berkeley, 33p.

APPENDIX B

STATE OF CALIFORNIA - STATE AND CONSUMER SERVICES AGENCY  
DEPARTMENT OF GENERAL SERVICES  
Office of Small and Minority Business  
1808 - 14th Street, Suite 100  
Sacramento, CA 95814

June 3, 1988.

William M. Kier Associates  
Schoonmaker Bldg., Ste. 120, 10 Liberty Ship Way  
Sausalito, CA 94965

Dear Businessperson:

Your request to become prequalified for the Small Business Preference under Section 1896 et., seq., of Title 2, of the Administrative Code has been approved effective (03-03-88 - 12-31-89). This approval as a small business and subsequent consideration for the 5% Small Business Preference will only be for Service Contracts. It is not relevant to Commodity or Construction Contracts.

Your firm's status must be reestablished at the end of each fiscal year. Our office will notify you on or about (01-15-90).

Contractor Identification Number (914011) has been assigned to you on a permanent basis. Use this number on all bids with the State of California.

Your firm has also become eligible for the prompt payment program. Therefore, upon being awarded a State contract, you must make a written request, accompanied with a photocopy of your award letter for a small business stamp.

Thank you for doing business with the State.

Sincerely,



Charmaine Sonnier  
Services Verification Officer  
(916) 323-0843

CS:p1  
CS002

ATTACHMENT 7

KLAMATH RIVER BASIN FISHERIES RESTORATION PROGRAM  
LONG RANGE PLAN

9/8/89

**DEFINITIONS**

ISSUE: a point of debate or controversy

CONCERN: a marked interest or regard, usually arising through a personal tie or relationship

FINDING: the results of an investigation; "the facts of the matter"

GOAL: an enduring statement of purpose; the end toward which effort is directed

OBJECTIVE: the specific attainable ends toward which effort is directed

POLICY: the specification in concrete details of ways and means for the attainment of goals and objectives.

**MAJOR CATEGORIES FOR ISSUES/CONCERNS AND POLICIES**

Habitat Protection

Habitat Restoration

Population Protection

Population Restoration

Education

Program Administration and Coordination

Funding and Economic Analysis

# KLAMATH RIVER BASIN LONG RANGE FISHERIES RESTORATION PLAN

## ISSUE IDENTIFICATION

9/5/89

### Habitat Protection

#### Land Management

- habitat damage from past mining, timber harvest practices, and roadbuilding, causing sedimentation and degraded water quality, and compounding effect of natural conditions of floods, drought and El Nino conditions. (Congress)
- impact of 1987 Klamath National Forest fires and salvage logging on fish habitat (9/23/87)
- sediment control in Scott River Basin remains an unresolved problem (3/1/88)
- concern about both short- and long-term effects of public and private forest management activities on fisheries resources (KNF)
- State Board of Forestry's timber harvest rules are inadequate to protect habitat from heavy sedimentation, which: a) raises questions about constructing in-stream structures, and b) calls for improvement in rules.
- what will cumulative effects of land management activities be on the streams in the Basin (e.g., channel stability, water temp., sediment levels) (KNF)
- how can you log the forest and have no erosion
- impact of current mining activities on habitat
- lack of riparian vegetation on some streams due to flood damage, grazing, beavers, etc.
- impact of private and county roads not related to timber harvest

#### Water Management

- habitat damage from construction and operation of dams, diversion and hydroelectric projects, causing reduced flows and degraded water quality, and compounding effect of natural conditions of floods, drought and El Nino conditions (Congress)
- impact of a new water development project in upper Klamath Basin on fish
- need to identify instream flow needs for anadromous fish in the Klamath River, using modern techniques (9/23/87)
- inadequate stream flows and dewatering of streams remain a major problem (9/23/87) (ex.- Scott River)
- are agricultural and urban water uses increasing, and can we have any fish with such water demands
- proposal by US Bureau of Reclamation to market additional Trinity River water to Central Valley users (2/9/89)
- proposal by Bureau of Reclamation to reduce flows in the Trinity River to 120,500 acre-feet per year will harm effort to test instream flow studies (3/20/89)
- concern that a representative for farmers be added, since it will be most difficult to get more water for fish if organized agriculture is opposed (3/20/89)
- farmers worried that result of studies will be strong demand for their water; they feel fishermen fish for pleasure while farmers farm for a living
- how to generate more water in streams for fish
- water quality in Upper Klamath area above Iron Gate Dam appears to adversely affect downstream fish life due to many uses of the water
- Shasta River has water quality problem impairing fish rearing capacity

## Habitat Improvement and Restoration

### Status of Habitat

- should detailed field assessment (e.g., habitat typing/standing crop estimates) precede any major investments in habitat restoration (3/20/89)
- need inventory of existing fishery restoration projects and studies in Basin
- desire for an analysis of unmet needs in fish restoration work (9/23/87)
- what is habitat's potential for fish production (KNF)
- need for before/after evaluation of each habitat project (3/20/89)
- lack of knowledge about historical habitat capacity; what are we "restoring" to?
- is limiting factor spawning or rearing habitat or both?
- how much habitat improvement should be done ? (KNF)

### Evaluation of Restoration Work

- desire for monitoring and assessment to be emphasized (7/23/87)
- effectiveness of long-term rehabilitation efforts for streams damaged as a result of the 1987 fires (9/23/87)
- apparent interagency conflicts over objectives of Kelsey Creek spawning facility (3/1/88)
- question value of investing in depleted stocks and damaged habitats as a means of restoring fish runs (5/31/88)
- impact of streambed restoration projects on channel stability, substrate quality downstream of project site

### Watershed Restoration

- more attention to mainstem Klamath in future work plans (e.g., aggradation of lower river) (5/31/88)
- how should the National Forests (Klamath and Six Rivers) manage watershed improvement efforts so that all watersheds are capable of producing water quality at or above the objectives stated in the Klamath Basin Plan and the Clean Water Act? (KNF)
- is it cost-effective to perform erosion control work upslope?
- value of treating causes of sediment problem upslope instead of the symptoms in the stream

### Instream Restoration

- should structures be focused on one stream instead of scattered all over
- need to find more ways to build and maintain screens on water diversions, since DFG staffing constraints are now limiting(3/1/88)
- need to correct source of habitat problem before installing instream structures
- need to define criteria for when, where, and how to build structures so we don't create more problems than we're trying to solve
- are we creating a massive instream infrastructure which will need constant maintenance in the future

## Population Protection

### Status of Population

- need to restore anadromous fish populations to optimum levels (Congress)
- decline of fall chinook population (80%) from historic levels (Congress)
- significant reduction in steelhead population (Congress)
- need for more information on spring chinook and summer steelhead because of

the new commercial net fishery, and possible listing of summer steelhead as a threatened stock (6/29/89)

- why are fish no longer available in middle and upper parts of the Basin except in very late part of year; spring and summer runs are gone
- why was Salmon River so understocked with fish in 1989, when the habitat seemed quite able to support more
- implications of possible competition between chinook , coho and steelhead for spawning and rearing habitat
- lack of knowledge of historical run conditions
- concern that restoration monies may be spent on population studies which could lead to closure of the fishery for certain users instead of increasing the population through other means.
- much concern for the health of the natural stocks as of 1988
- how to define "natural spawner"
- difficulty in accurately predicting Klamath stock abundance of fall chinook adults (FWS)

#### Harvest Allocation

- ineffective fisheries management (Congress)
- need for primary focus of rehabilitation efforts to be restoration of wild stocks as the most significant and cost-effective long-term benefit (Congress)
- increased conflict in 1980's over Indian fishing rights due to continuing declines in spawning escapement (USDI)
- closure of the 1985 salmon troll fishery off northern California/southern Oregon by the PFMC (USDI)
- who should establish fishery regulations (USDI)
- concern that user groups' self-interest in harvest levels will influence harvest maximization in the near-term and not give sufficient consideration to the viability of the stocks over the long-run.(USDI)
- chinook harvest allocation between ocean and in-river Klamath harvesters remains unresolved for the short and long-term
- effect of changing to "harvest rate management" from "spawning escapement" as goal for Klamath fall chinook, as PFMC supports (3/20/89)
- everyone should take only a fair share of harvest ("everyone's ox is getting gored")
- concern over abuse of half-pounders by sportsfishermen; they need to appreciate role of these fish so stocks aren't weakened
- may need to change season and target hatchery run to protect natural stocks
- increased pressure for more fish in people's diets due to concern over cholesterol
- resumption of commercial fishing by tribes after being halted for over 50 years (1932? to 1987)
- implication of Federal court cases for harvest allocation between Indian and non-Indian users
- use of runs other than fall chinook for commercial purposes
- no one has decided what we need to know, when, or how regarding allocation decisions; plan is needed, at least for fall chinook
- hard feelings between different users and user groups over harvest allocation decisions can be slow in healing
- concern for fishery management measures which would provide flexibility to allow the salmon trollers a viable fishery
- effect of closure of commercial ocean fishery on supporting coastal communities
- difficulty for biologists to predict effects of various closures on catch and ocean distribution (FWS)

- adequacy of state sport fishing regulations to protect juvenile and adult salmon and steelhead
- concern over status of summer steelhead and possible closure of sport fishery

#### Enforcement

- inadequate enforcement of fish harvest regulations (Congress)
- effect of change in enforcement authority as BIA phases out and tribal wardens and court system phase in with more responsibilities
- need for new authority to ensure more effective long-term coordination of fisheries under sound conservation and management principles that ensure adequate spawning escapement (Congress)
- requirement for formal agreement among all parties with fishery and other enforcement responsibilities in the Klamath Basin might not enhance and could impede existing enforcement efforts due to inflexibility (USDI)

#### Predation

- impact of predation by wild animals on fish in ocean (seals) and in river (ducks, otters, etc.)

### Population Restoration

#### Stocking Needs

- need to restore anadromous fish populations to optimum levels (Congress)
- desire for an analysis of unmet needs in fish restoration work (9/23/87)
- need for propagation of steelhead trout (5/31/88)
- possible export of excess chinook eggs from Iron Gate and Bogus Creek egg-taking program to areas outside of Klamath Basin (2/9/89)
- role of bioenhancement, and where is it feasible (2/9/89)
- concern that State's restoration funding guidelines use an unrealistic rationale for ranking pond rearing proposals (3/20/89)
- what is proper role of artificial propagation in furthering the purposes of the Restoration Program (3/20/89)
- concern that artificial propagation not be unreasonably constrained as a tool of stock restoration (3/20/89)
- which stocking priorities should be established for each species (RFP)
- need to define quantitative objectives for restoration of fish stocks and provide the rationale for recommendations (RFP)
- possibility of fin clipping or other marking of all releases from hatcheries in order to target these runs better

#### Evaluation of Efforts

- need inventory of existing fishery restoration projects and studies in Basin
- desire for monitoring and assessment to be emphasized (7/23/87)
- question value of investing in depleted stocks and damaged habitats as a means of restoring fish runs (5/31/88)
- need for before/after evaluation of each fish-rearing project (3/20/89)

#### Genetic Integrity

- potential for adverse impacts of hatchery production on wild fish populations (Congress)
- need for primary focus of rehabilitation efforts to be restoration of wild stocks as the most significant and cost-effective long-term benefit (Congress)
- question desirability to expand Iron Gate Hatchery, as called for in 1985

Plan, due to unresolved biological problems associated with outplanting of hatchery fish (3/1/88)

- need to recommend objectives and procedures for identifying and conserving genetic diversity of fish stocks (RFP)
- impact of overescapement on streams near hatcheries: natural chinook interbreed with hatchery stocks (e.g., Bogus Creek) (FWS)
- value of protecting naturally spawning fall chinook to provide the genetic diversity that will maintain the stock through periods of adverse environmental conditions (FWS)

#### Disease Problems

- can classroom aquarium incubator program lead to stocking of diseased fish (6/29/89)
- concern that a rearing pond project has lost many juvenile steelhead of local native stock to disease (6/29/89)

#### Education

- educational part of Program is one of the most important
- start with the kids
- need to educate users about the biological needs of the fish
- perception needs to change about fish runs and how timing of seasons can affect each run
- need to keep explanation of biological needs simple and repeat the basics over and over again
- wardens could be a help instead of a hindrance
- Task Force and Council meetings themselves can be, and have been, very educational to members and the audience
- long time required to understand the complexities of fisheries management before you can participate effectively in the decision-making
- lack of recognition of significance of anadromous fish: implications and tradeoffs not understood
- everyone likes fish but how do you translate this affinity into change
- need to educate farmers about sediment runoff and need for buffer strips along streams, and better water management practices
- recreational use attracts people to fish first, then you have an opportunity to educate them about related issues
- need for Newsletter to reach at least interested folks (e.g., tackle shops, motels, etc.) or mailing list
- expand newspaper coverage with examples of completed or on-going projects

#### Program Administration and Coordination

- overlapping federal/state/local jurisdictions (Congress)
- need for the activities of all three panels (Task Force, Council, and Trinity River Task Force) to be complimentary (Congress)
- membership of Council: user groups as members or advisors (USDI)
- composition of Task Force should be similar to that of Trinity River T.F. (USDI)
- need to provide formal liaison with Management Council and Trinity Basin Task Force (9/23/87)
- role and responsibility of Task Force in providing data to the Council

(e.g., identify productive capacity of Basin in order to set escapement objectives) (3/1/88)

- should Task Force coordinate and get involved in the many fishery activities already underway in the Basin
- should Task Force have a say in State research projects in Basin (3/1/88)
- whether funds from the Klamath and Trinity Restoration Programs are being used in a joint manner when appropriate (2/9/89)
- need for better public information in the lower Klamath River area to clear up misconceptions about roles of the Task Force and Council (6/29/89)
- should increase visibility of Program; too low key now and few people know of its existence or accomplishments; impression that it's more meetings and politics than substance
- need to improve communication between the KFMC Technical Advisory Team and the PFMC Salmon Technical Team (6/29/89)
- how to reconcile the fishery management objectives of all agencies claiming jurisdiction over Klamath River anadromous fish (RFP)
- need to improve communication and trust between members of Task Force
- need to be creative and innovative in fisheries management; stalemate leads back to the courts
- hard feelings from allocation decisions at KFMC and PFMC meetings may carry over to Task Force decision on restoration activities

#### Funding and Economic Analysis

- conflict between "socialization", or permanent capture of Program funds by entrenched interests/agencies, and needs of "adaptive management" , where flexible funding is needed

#### Federal Share

- lack of assurance that Klamath funding will be included each year in the President's budget
- federal budget justifications need to note subbasins, types of mitigation measures, updated priorities (9/23/87)
- concern about the share of Federal funding that is going into things other than fish production or habitat improvement (e.g., studies, administration)
- possibility of new sources of funding for operations of the Council (3/20/89)

#### Non-Federal Share

- problem of stimulating new non-federal financial contributions to fishery restoration (7/23/87)
- need to identify "rulemaking" on qualifications for non-federal contributions and volunteer services (7/23/87)
- should existing or ongoing non-Federal activities be accounted toward the 50 percent non-Federal contribution required by Act
- low probability that substantial new State funding will be added to existing programs to meet matching requirement
- need for work plan displaying how State matching funds in CDFG budget will be expended (Governor's request) (9/23/87)
- possibility of TF funding restoration of private lands damaged in 1987 fires (3/1/88)
- types of possible funding arrangements to implement Program (5/31/88)
- State funds available for FY 88-89 for Klamath fish restoration much less than anticipated, owing to revenue shortfalls and competing resource demands

- concern that inability to demonstrate significant non-federal matching could jeopardize federal funding of Restoration Program in future budgets
- concern expressed that 50% requirement of non-federal participation in diverting State funds from other river basins (11/1/88)

Economic Analysis

- need to provide an estimate of cost-effectiveness of the recommended fishery restoration actions (RFP)
- need to provide an estimate of socio-economic effects of recommended fishery restoration actions (RFP)
- need for analysis of socioeconomic effects of various options for harvest allocation and restoration investments for use by those making tradeoff decisions between fish and competing values (2/9/89)
- will display of economic values for fishery benefits provide a target for attack (2/9/89)
- impact of ocean fishery closures on supporting coastal communities

## Planning Process

### Long Range Plan: Overall

- non-adoption of 1985 Plan (CH2M-Hill) by any area agency having fishery resources jurisdiction (USDI)
- need for developing a cost-effective restoration plan for the Basin
- considerable planning of the Restoration Program remains to be done beyond the 1985 Plan (\$73 million vs. \$42 million) (7/23/87)
- need to develop a long-range plan, rather than a list of projects
- need for mission statement to be reviewed by public and user groups (5/31/88)
- how to evaluate annual budget needs without long-range plan
- need for non-federal matching contributions to be consistent with new long-range plan (3/1/88)
- need for long-range plan to provide guidance on issues that will require multi-year actions (6/29/89)
- need to identify and adapt up-to-date concepts of fishery restoration planning for incorporation into the Klamath River Restoration Program (RFP)
- need to prepare an assessment of the environmental effects of recommended actions in the long-range plan, sufficient to satisfy the requirements of the CEQ (RFP)
- Long-Range Plan needs to be user-friendly, readable, enjoyable, vibrant, and redone often enough to rekindle the public's interest, or Plan will sink into the ooze (TF)

### Project Selection and Evaluation

- need for more information on proposals; lack of concensus by Technical Work Group (5/31/88)
- need for annual report on progress of restoration program and some kind of cost-accounting (5/31/88)
- need to evaluate completed fish restoration projects as to their success or failure (3/1/88)
- use of a relatively unmodified subbasin in the Klamath Basin to serve as a control for evaluating restoration actions (6/29/89)
- identify role of non-profit entities in restoration work (5/31/88)
- need to show that information gathered with funds is clearly needed to restore anadromous stocks of the Klamath River Basin (2/9/89)
- how to employ more unemployed persons dependent on Klamath fish resources in rehab work, as Klamath Act calls for (3/20/89)
- need to have rehab project selection be driven by needs of the system rather than by proposals received (3/20/89)
- what is proper balance between studies and on-the-ground restoration projects
- relative funding needs for "information-gathering", habitat management, and artificial propagation (3/20/89)
- concern that there is plenty of data on salmonid restoration and information is not a limiting factor (3/20/89)
- concern that Task Force funding recommendations for action be well-informed ones and that more information is needed (3/20/89)
- need to formally establish the Technical Work Group to provide technical expertise as needed for the Task Force (3/20/89)
- concern about apparent conflict-of-interest in work group rating process
- question usefulness or long-term value of certain projects, particularly "pet projects"
- need for projects to benefit many people and not just one person or group

- project proponents should have opportunity to discuss their proposal with Technical Committee before decisions are made
- concern about weighting upriver projects more heavily than downriver ones
- does each spawner have an equal value, no matter where the location
- concern that funding is being expended on projects benefiting agencies involved in establishing funding priorities which may provide very little benefit to the resource for the money spent

ATTACHMENT 8

**KLAMATH RIVER BASIN FISHERIES LONG RANGE RESOURCE PLAN  
AND ENVIRONMENTAL ASSESSMENT**

Updated and Expanded Bibliography

by

Sari Sommarstrom

9/5/89

- American Fisheries Society. 1982. The best management practices for the management and protection of western riparian stream ecosystems. Western Div., 45p.
- Amidei, R.(ed.), 1987. Educating fisheries managers. Proceedings of California Sea Grant workshop. Calif. Sea Grant Rept. No. T-CSGCP-016. La Jolla, 43p
- Anderson, L.G., 1981. "The economics of salmon management under the FCMA: muddling through from gravel to gravel". In: Economic analysis for fisheries management plans. Ann Arbor Science, Ann Arbor. 319p.
- Bottom, D.L., P.J. Howell, and J.D. Rodgers, 1985. The effects of stream alterations on salmon and trout habitat in Oregon. Oregon Dept. of Fish and Wildlife, Portland. 70p.
- California Advisory Committee on Salmon and Steelhead Trout, 1986. The tragedy continues. 1986 annual report. Sausalito, 36p.
- , 1987. A new partnership. 1987 annual report. Sausalito, 36p.
- , 1988. Restoring the balance. 1988 annual report. Sausalito 84p.
- California Dept. of Fish and Game, 1980. Scott River Waterway Management Plan. Prepared with EDAW, et al. Sacramento. 120p.
- , 1980. Salmon River Waterway Management Plan. Sacramento.
- , 1988. Klamath River fall chinook spawner escapement, in-river harvest and run-size estimates, 1978-1988. Arcata, 5 p.
- , 1985-1988. Annual administrative reports: Iron Gate salmon and steelhead hatchery and Bogus rearing pond.
- , 1988. Report to the Fish and Game Commission, July 1, 1987-June 30, 1988. Sacramento, 81p.
- , 1988. Ocean stock size estimates and allowable harvest levels for Klamath River Fall Chinook, 1989 season. 12p.
- , 1989. Request for proposals for the California Dept. of Fish and Game Inland Fisheries Division 1989-90 grant program. Sacramento, 13p.
- California Dept. of Water Resources, 1981. Klamath and Shasta Rivers spawning gravel enhancement study. Northern District, Red Bluff.
- , 1982. Watershed management for unstable and erodible areas in

- north coastal California. Prepared for the U.S. Env. Prot. Agency and the State Water Res. Cont. Bd., Red Bluff, 68p.
- , 1982. Inventory of instream flow requirements related to stream diversions. Bulletin 216, Sacramento. 301p.
- California Dept. of Water Resources, 1986. Shasta/Klamath rivers water quality study. Red Bluff, 406p.
- , 1987. Klamath River water quality study, Hamburg to Orleans. Northern District, Red Bluff. 277p.
- California Regional Water Quality Control Board, North Coast Region, 1989. Public report on proposed action to amend the Water Quality Control Plan for the North Coast Region to incorporate policy on the regulation of fish hatcheries, fish rearing facilities, and aquaculture operations. Santa Rosa, 4/24/89, 13p.
- California Salmon, Steelhead, and Trout Restoration Federation, 1989. Proceedings of the Seventh California Salmon, Steelhead and Trout Restoration Conference. ( Feb. 24-26, 1989 in Arcata, Calif.) Edited by Chris Toole, California Sea Grant Publication UCSGEP -89-02, Davis. 52p.
- Duhnkrack, N.E. 1984. Oregon's incentive approach to riparian area protection. Oregon Environmental Foundation. Portland, 76p.
- Everest, F.H. and D.R. Talheim. 1982. Evaluating projects for improving fish and wildlife habitat on National Forests. US Forest Service Gen. Tech. Rep. PNW-146, Portland. 12p.
- Fausch, K.D., C. Hawles, and M. Parsons, 1988. Models that predict standing crop of stream fish from habitat variables:1950-85. Gen. Tech. Rep. PNW-GTR-213. U.S. Forest Service, Pacific Northwest Research Station Portland, 52p.
- Hankin, D. 1982. "Salmon enhancement strategies and wild stocks: evaluation of enhancement success and wild stock impacts". pp.52-61 in: Propagation, enhancement, and rehabilitation of anadromous salmonid populations and habitat symposium proceedings (Oct.15-17, 1981, Humboldt State Univ.). Calif. Coop. Fish. Res. Unit, Arcata.
- Hassler, T.J., ed., 1984. Proceedings: Pacific Northwest stream habitat management workshop. (Oct.10-12, 1984, Arcata). Calif. Coop. Fish. Res. Unit. Arcata, 329p.
- Huntington, C.W. 1988. Benefit-cost analysis of fish screening and rescue activities in the Klamath river drainage, Calif. Clearwater BioStudies, Sherwood OR. Prepared for Calif. Dept. of Fish and Game, Yreka. 12p.
- Irizarry, R., J. Zustak, D. Carrier, and K. Coop, 1988. A combined plan for fish habitat improvement in the Trinity River Basin. Shasta-Trinity National Forests. Redding, 26p.
- Jackson, W.L., ed., 1986. Engineering considerations in small stream

management. Water Resources Bulletin 22(3):351-415.

Jones and Stokes, Inc. 1976. "Case Study #1: Iron Gate Dam, Klamath River". pp.19-35 In: Assessment of effects of altered stream flow characteristics on fish and wildlife. Part B: California, Case Studies. Prepared for U.S. Fish and Wildlife Service, Fort Collins, Colo.

Kershner, J.L. and R.R. Van Kirk. 1984. Characteristics and attitudes of some Klamath River anglers. Calif. Fish and Game 70(4):196-209.

Kesner, W.D. and R.A. Barnhart. 1972. Characteristics of the fall-run steelhead trout of the Klamath River system with emphasis on the half-pounder. Calif. Fish and Game 58:204-220.

Klamath River Basin Fisheries Task Force, 1988a. Federally-funded work plan and budget, fiscal year 1989 - Klamath Basin Fishery Restoration. Yreka, 2p.

-----, 1988b. Statement of goals. Draft. Mission and Goals Committee. 11-1-88, 1p.

Lanse, R.I. 1972. An estimate of the 1970-71 angler pressure and sport harvest from the Scott River, California. Calif. Dept. of Fish and Game, Anad. Fish. Branch, Admin. Rept. No. 72-7, Sacramento. 22p.

Leidy, R.A. and G.R. Leidy, 1984. Life stage periodicities of anadromous salmonids in the Klamath River Basin, Northwestern California. U.S. Fish and Wildlife Service, Sacramento. 38p.

Lund, T.A. 1980. American wildlife law. Univ. Calif. Press, Berkeley. 179p.

Marin County Resouce Conservation District, 1987. Groundwork: a handbook for erosion control in North Coastal California. By Liza Prunuske. 60p.

McEvoy, A.F., 1986. The fisherman's problem: ecology and law in the California fisheries, 1850-1980. Cambridge Univ. Press, 368p.

Mendocino County Resource Conservation District, 1988. Stream channel and gully grade stabilization structures. Ukiah, 12p.

Meyer Resources, 1987. An economic methodology for valuing salmon and steelhead in California. A report to the Calif. Adv. Comm. on Salmon and Steelhead Trout, Davis. #129-J, 75p.

-----, 1988. Benefits from present and future salmon and steelhead production in California. A report to the Calif. Adv. Comm. on Salmon and Steelhead Trout, Davis. # 130-J, 78p.

Mills, T.J., 1988. Klamath Basin: A glimpse of salmon biology. Outdoor California (Sept.-Oct.):13-16.

Moyle, P.B. 1976. Inland fishes of California. Univ. Calif. Press, Berkeley. 405p.

Murphy, G.I. and L. Shapovalov. 1951. A preliminary analysis of northern California salmon and steelhead runs. Calif. Fish and Game 37(4):497-507

- National Council on Gene Resources, 1982. Anadromous salmonid genetic resources: an assessment and plan for California. Calif. Gene Resources Program. Berkeley, 168p.
- Northwest Power Planning Council, 1988. Columbia Basin salmon and steelhead system planning. Portland, 6p.
- Oregon Dept. of Fish and Wildlife. 1982. Comprehensive plan for production and management of Oregon's anadromous salmon and trout. Part I-General considerations; Part II-Coho salmon plan. Fish Div., Anadromous Fish Section. Portland.
- Pacific Fishery Management Council, 1978. Final environmental impact statement and fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978. With National Marine Fisheries Service, Portland and Seattle.
- , 1985-89. Proposed plan for managing the 19(85-89) salmon fisheries off the coasts of California, Oregon, and Washington. Portland.
- , 1988. Review of 1988 ocean salmon fisheries. Portland.
- Pacific Power and Light Company and Oregon Wildlife Commission. 1974. Review and analysis of Klamath River (Oregon) steelhead program. 21p.
- Platts, W.S. et al., 1986. Methods for evaluating riparian habitats with applications to management. U.S. Forest Service Gen. Tech. Report INT-221, Ogden. 177p.
- Reichard, N. 1987. Stream care guide for streamside property owners and residents, with special emphasis for Humboldt and Del Norte Counties. Nat.Res.Div., Redwood Community Action Agency. Eureka, 14p.
- Resources for the Future, 1988. Design of studies for development of Bonneville Power Administration fish and wildlife mitigation accounting policy. Phase II Final Report. Prepared for U.S. Dept. of Energy, Bonneville Power Admin., Portland. 2 vol.
- Rice, R.L., 1989. 1989 update of fishery resource data for SFI report. Memorandum to Regional Forester from Forest Supervisor, Klamath National Forest, Yreka.
- Roberts, R.K. 1932. Conservation as formerly practiced by the Indians in the Klamath River Region. Calif. Fish and Game 18(4):283-290.
- Roelofs, T.D. 1983. Current status of California summer steelhead stocks and habitat, and recommendations for their management. Prepared for Region 5, U.S. Forest Service, Arcata. 120p.
- Sedell, J.R. and K.J. Luchessa. 1981. Using the historical record as an aid to salmonid habitat enhancement. Symposium on Acquisition and Utilization of Aquatic Habitat Inventory Information. pp.210-223
- Senn, H., J. Mack, and L. Rothfus. 1984. Compendium of low-cost Pacific salmon and steelhead trout production facilities and practices in

the Pacific Northwest. Fish Management Consultants for U.S. Dept. of Energy, Bonneville Power Adm., Div. of Fish and Wildlife, Portland. 488p.

Shaw, P. and J. Maga. 1943. The effect of mining silts on yield of fry from salmon spawning beds. Calif. Fish and Game 29(1):29-41

Smith, O.R. 1939. Placer mining silt and its relation to salmon and trout on the Pacific Coast. Trans. Am. Fish. Soc. 69:135-139.

Sommarstrom, S. 1984. Mendocino County Salmon and Steelhead Management Plan. Adopted by Mendocino Co. Board of Supervisors, 2/13/84, Ukiah. 103p.

State of California Resources Agency, 1989. Upper Sacramento River Fisheries and Riparian Habitat Management Plan, by the Upper Sacramento River Fisheries and Riparian Habitat Advisory Council, 158p.

Taft, A.C. 1933. California steelhead trout problems. Calif. Fish and Game 19:192-198.

Taft, A.C. and L. Shapovalov. 1935. A biological survey of streams and lakes in the Klamath and Shasta National Forests of California. U.S. Bur. Fisheries. Stanford Univ., Palo Alto. 63p.

U.S. Department of the Interior, Heritage Conservation and Recreation Service, 1980. Proposed designation of five California rivers in the National Wild and Scenic Rivers System, Final Environmental Impact Statement. San Francisco, 2 volumes.

U.S. Fish and Wildlife Service, 1983. Environmental impact statement for the Trinity River Basin fish and wildlife management program, Trinity River, northwestern California. 148p.

-----, 1985. Statement of responsibilities and role. Fishery Resources Program. Washington, D.C., 39p.

-----, 1986. Annual report: Klamath river fisheries investigation program, 1985. Fisheries Assistance Office, Arcata, 117p.

-----, 1987. Annual report: Klamath River fisheries investigation program, 1986. Fisheries Assistance Office. Arcata, 93p.

-----, 1988. Annual report: Klamath River fisheries investigation program, 1987. Fisheries Assistance Office. Arcata, 101p.

-----, 1989. Annual report: Klamath River fisheries assessment program, 1988. Fisheries Assistance Office, Arcata. 79p.

U.S. Federal Power Commission. 1961. FPC order amending license no. 2082 (Iron Gate Dam, California, operated by Pacific Power and Light Co.). 3p.

U.S. Forest Service, 1979. Summer steelhead habitat management plan for the Klamath National Forest. Klamath National Forest, Yreka, 24p.

- U.S. Forest Service, 1988. Adopt a stream: a volunteer program for restoring streams and wetlands on the National Forests in California. Pacific Southwest Region. San Francisco, 4p.
- U.S. Forest Service, 1988. Partners in fish. Six Rivers National Forest, Eureka, 24p.
- U.S. Forest Service, 1989. Grider fire recovery project: final environmental impact statement. Klamath National Forest, Yreka.
- U.S. Senate. Permanent Fact Finding Committee on Natural Resources. 1963. Second progress report to the Legislature - the Iron Gate Dam project- its effect on the Klamath River fishery. 71p.
- Van Deventer, J.S. and W.S. Platts. 1989. Microcomputer software system for generating population statistics from electrofishing data - user's guide for MicroFish 3.0. US Forest Service, Gen. Tech. Rep. INT-254, Ogden UT. 29p.
- Van Kirk, R.R. and S.G. Ahern. 1985(?). Socio-economic profile of non-resident sportsfishermen and their economic impact on Humboldt and Del Norte Counties, California. Final report, Humboldt State Univ. Fdn., Arcata. 26p.
- Vondracek, B. and R. Callahan. 1987. California's salmon and steelhead trout: a research and extension program. U.C. Wildland Resources Center Report No. 13. Berkeley, 33p.
- Weaver, W.E. et al, 1987. An evaluation of experimental rehabilitation work, Redwood National Park. Technical Report No. 19. Arcata, 164p.+
- West, J.R. 1983. Scott River fisheries information. Klamath National Forest, Etna. 2p.
- West, J.R. 1984. Enhancement of salmon and steelhead spawning and rearing conditions in the Scott and Salmon Rivers, California. pp.117-127 In: Pacific Northwest Stream Habitat Management Workshop, Proc., Amer. Fish. Soc., Arcata.

ATTACHMENT 9

Discussion Listing of  
Klamath Fishery Restoration Policies and Goals

<u>Key Issue</u>	<u>Potential Policy</u>
1. Breadth of restoration program emphasis	1. The restoration plan should deal with habitat restoration, fish production, water quality and instream flows (G1,G2).
2. Balance between natural and artificial stocks	2. Emphasize natural stock wherever possible (or feasible?) (G1 & G2). Use artificial production to supplement natural production.
3. Weak stock restoration	3. Weak stock restoration is desirable, but should not reduce catch in mixed stock fisheries.
4. Diversity	4. Genetic diversity should be retained and/or enhanced as far as possible by the restoration plan. The plan should also build back stocks that return over broader periods of the year.
5. Fish disease	5. Projects that pose a high risk of fish disease should be avoided.
6. Habitat protection	6. Key habitat protection issues, particularly those affecting instream flows and forest practice/water quality issues, must be integrated into the Plan.
7. Fishery research	7. Fishery research should be related to fish restoration - and integrated into the Plan on that basis.
8. Restoration goals	8. Restoration goals should be expressed as total adult stock produced for spawning escapement and users. These goals should be sensitive to the basic needs of each important user group and sub-area-inclusive of both in-river and ocean users.
9. Effect of Restoration on user groups	9. The restoration plan should meet the basic needs of conservation and of each important user group and sub-area on an equitable basis.
10. A Public Plan	10. The restoration plan should enable public involvement.
11. Education	11. The plan should provide educational opportunities for the public.

### Integration of Policy Objectives

While it is useful to spell out the separate policy objectives for Klamath Basin restoration, it is also important to have an overall expression of policy that integrates these goals into a single purpose. The following statement is presented - again - for purposes of discussion with the Task Force. It is borrowed from other authors - and changed slightly to fit Klamath circumstances.

"Neither a continuation of past hatchery practices nor the elimination of fishing will restore this once-diverse renewable resource. Instead, fish advocates will have to work together to protect water quality and quantity, to preserve and rehabilitate habitat, and where appropriate, to use innovative and biologically sound artificial means to complement the remaining natural production of wild stocks, which are the foundation and source of all Klamath River salmon and steelhead runs".

Table 2  
Potential Users and Sub-Areas - Klamath Long Term Plan.

<u>Geographic Area</u>	<u>User Groups</u>
Ocean	- Commercial Trollers - Sport Fishermen - Charter Operators - General Fishery Recreation Business
Lower Klamath (1) - river mouth to Weitchpec area	- Yurok Tribe - Sport Fishermen - Sport Service Business
Middle Klamath (1) - Weitchpec area to Iron Gate	- Hoopa Tribe - Karok Tribe - Sport Fishermen - Sport Service Business
Trinity Basin (2)	- Hoopa Tribe - Sport Fishermen - Sport Service Business
Scott Basin	- Sport Fishermen - Sport Service Business
Shasta Basin	- Sport Fishermen - Sport Service Business
Upper Klamath - above Iron Gate	- Karok Tribe - Sport Fishermen - Sport Service Business - Klamath Indians(?)
All areas	- Conservationists

- 1) Note that boundary between Lower Klamath and Middle Klamath is changed for that in CH2M Hill.
- 2) The Trinity Basin does not enter production actions in the Klamath Long Term Plan, but will likely need to be considered with respect to mixed stock catch and equity among users.

### Grouping of Plan Actions to Make Fishery Restoration Sense

Fishery restoration projects presently identified for the Klamath Basin are broken out on an "action by action" basis. In some cases, this undoubtedly makes sense. In others, it does not, and certain (usually small) projects "hang together" as integratable "restoration units" (RU's). Projects on a single small stream may be an example of such an RU. There will be no single formula for such RU's, but people with practical knowledge of the Klamath basin will likely be able to group projects on what makes ecological and practical restoration sense. Further, "biological information" projects can be directly integrated with the production projects for which they are required in such a restoration unit approach. Such grouping of projects will increase the realism of our work in terms of what makes sense along the stream, and will also ensure that subsequent economic evaluation does not qualify some projects and disqualify others that are closely linked in the actual restoration process.

Dealing With Habitat Protection Issues as Constraints  
to Restoration of Fisheries

The degree of protection received in the Klamath system with respect to adverse events - particularly those associated with instream flow (and temperature) and forest practices is an important issue for the Task Force and for the Plan. A method of dealing with this issue by overlaying the basic restoration potential we associate with projects with a series of assumed alternative conditions with respect to water quantity, water quality and siltation. Potentially, these overlays could represent present circumstance, the desired stream and stream-side condition recommended by fishery agencies, and possibly a more adverse condition- if that seems required. This will permit us to sensitize the plan with respect to important habitat quality considerations, and will enable the Task Force to directly address opportunities associated with improved instream and stream bank conditions subsequently.