

# Proposal Reviews

## **#123: Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California**

S.P. Cramer & Associates, Inc.

**Final Selection Panel Review**

**Initial Selection Panel Review**

**Research and Restoration Technical Panel Review**

**Bay Regional Review**

**Delta Regional Review**

**San Joaquin Regional Review**

**Sacramento Regional Review**

**External Scientific Review** #1

#2

**Prior Performance/Next Phase Funding**

**Environmental Compliance**

**Budget**

# Final Selection Panel Review:

## CALFED Bay-Delta 2002 ERP PSP Final Selection Panel Review

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Please provide an overall evaluation rating.

<b>Fund</b>	
As Is	-
In Part	-
With Conditions	-
Consider as Directed Action	X
Not Recommended	-

Amount: **\$698,730**

Conditions, if any, of approval (if there are no conditions, please put "None"):

**None**

Provide a brief explanation of your rating:

**A comment letter was submitted during the public comment period that noted that this proposal received a low rating from the Sacramento Regional Review Panel. The Selection Panel notes that this proposal has application throughout the Central Valley and received higher ratings from the three other regional review panels, and therefore continues to support the initial recommendation.**

## Initial Selection Panel Review:

### CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Please provide an overall evaluation rating.

#### Explanation of Recommendation Categories: Fund

- **As Is** (a proposal recommended for funding as proposed)
- **In Part** (a proposal for which partial funding is recommended for selected project phases or components)
- **With Conditions** (a proposal for which funds are recommended if the applicant contractually agrees to meet the specified conditions)

**Consider as Directed Action in Annual Workplan** (a proposal addressing a high priority action that requires some revision followed by additional review prior to being recommended for funding)

**Not Recommended** (a proposal not currently recommended for funding-after revision may be considered in the future)

#### Note on "Amount":

For proposals recommended as Fund As Is, Fund In Part or Fund With Conditions, the dollar amount is the amount recommended by the Selection Panel.

For proposals recommended as Consider as Directed Action in Annual Workplan, the dollar amount is the amount requested by the applicant(s).

<b>Fund</b>	
<b>As Is</b>	-
<b>In Part</b>	-
<b>With Conditions</b>	-
<b>Consider as Directed Action</b>	<b>X</b>
<b>Not Recommended</b>	-

Amount: **\$698,730.00**

Conditions, if any, of approval (if there are no conditions, please put "None"):

**None**

Provide a brief explanation of your rating:

**Although the technical review panel gave the proposal an above average rating, the panel recommended the proposal be revised to reflect clear coordination of genetics collections with CDFG and NMFS, and be coordinated with CDFG's otolith microchemistry study of steelhead (Proposal 13, Central Valley Steelhead Population Structure Evaluation). The proposal should be revised to address these and other concerns raised by the technical panel and be focused on the Central Valley ESU and on that portion of the Central California Coast ESU that resides within the ERP geographic scope. The Selection Panel recommends that the applicant revise the proposal to address the technical panels comments and submit the revised proposal for consideration as a directed action.**

# Research and Restoration Technical Panel Review:

## CALFED Bay-Delta 2002 ERP PSP Research and Restoration Technical Panel Review Form

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

**Review:**

Please provide an overall evaluation summary rating:

**Superior:** outstanding in all respects;

**Above Average:** Quality proposal, medium or high regional value, and no significant administrative concerns;

**Adequate:** No serious deficiencies, no significant regional impediments, and no significant administrative concerns;

**Not Recommended:** Serious deficiencies, significant regional impediments or significant administrative concerns.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Superior	<b>This proposal received two external review ratings of good and we have given it a rating of above average to encourage serious consideration of this proposal. This above average rating would be fully warranted if the proposal were revised so as to (a) reflect clear coordination of genetics collections with CDFG and NMFS, and (b) be coordinated with CDFGs otolith microchemistry study of steelhead (proposal #13, assuming this proposal is funded).</b>
XAbove average	
-Adequate	
-Not recommended	

1. **Goals and Justification.** Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

**The goals, objectives and hypotheses of this proposal all seem intelligent and worthy of study and are also timely with respect to recent listings of steelhead under the ESA.**

2. **Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).** Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

**The authors are probably correct that there has not been a systematic study of variation of life history traits (age at ocean entry, age at maturity) of CA rainbow trout/steelhead. This project would primarily involve scale analysis of 18,000-27,000 scales collected from *O. mykiss* originating the six ESUs that have thus far been identified as part of ESA biological**

review and listing processes. In addition, a relatively small number of scales would be sent to Jennifer Nielsen for unspecified genetic analyses designed to allow an improved assessment of genetic relationships among ESUs. The success of this project would depend on the degree to which voluntary (free) scale collections produced high quality standardized scale collections, similar issues concerning scale reading, on whether or not sufficient genetic samples are worked up by Nielsen, and on whether locations of genetic samples add to rather than duplicate existing genetic information for this species.

3. **Outcomes and Products.** Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

The project would produce a life history and genetic database based on scale analyses and genetic analyses. This database would no doubt be of value for both NMFS recovery planning under the ESA and for CALFED restoration proposals. It would be much more exciting and valuable if the project would also make an attempt at analysis and interpretation of genetic and life history relationships among populations, but that kind of product does not seem to be contemplated by the PI.

4. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

The budget (about \$700 k for 3 years) seems high for what appears to be primarily a scale reading exercise that could be accomplished at a relatively low hourly labor charge. The costs for genetics research seem too small compared to those allocated for scale analysis, but the proposal does not indicate the degree to which scale-based life history data or genetic data have been previously collected and analyzed. It would seem foolish to start from scratch given the existence of prior studies in specific coastal streams that have focussed on life history and/or genetics of this species.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

This proposal received a medium rating from the Bay Region, high ratings from the Delta and San Joaquin regions, but a low rating from the Sacramento Region. Both positive (has worked in Oregon) and negative (quality control) attitudes were expressed regarding the use of voluntary collection of scale samples by sport fishermen. Concerns were raised concerning the unclear degree of involvement of the contracted geneticist who would seem critical for the programs success.

6. **Administrative Review.** Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

No unusual concerns were expressed.

#### Miscellaneous comments:

The proposal notes that CALFED may not see fit to fund research of this nature in all six CA steelhead/rainbow trout ESUs. If the project were restricted to the Central Valley ESU total project cost might be just \$188k as compared to \$700k. A CALFED policy decision is needed to

**determine if funding is appropriate for all 6 identified ESUs, just for the CV ESU, or for some intermediate number of ESUs that have some reasonable relation to CALFED priorities.**

**It is unfortunate that the submitted proposal is not coordinated with the CDFG proposal to study the variability in expression of anadromy vs residency in this species. Cramer acknowledges the existence of these two types in his proposal and the two types can generally be identified from scale analysis, but scale analysis (in contrast to otolith microchemistry) cannot reveal the degree to which interbreeding may take place between the two forms. Genetic analyses would not provide such information either unless little or no interbreeding had taken place for a large number of generations.**

## Bay Regional Review:

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Overall Ranking:   -Low   Medium   -High

Provide a brief summary explanation of the committee's ranking:

**The panel supports research, like this, that delivers scientific information which improves understanding about key ecosystem processes in the Bay + Suisun Marsh or about species and habitats which are insufficiently understood. It is a good project, but not essential in this region.**

1. Is the project feasible based on local constraints?

Yes -No

How?

**Project staff well qualified.**

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

Yes -No

How?

**MR-6 (Ensure recovery of at-risk species by developing conceptual understanding + models that cross multiple regions), CVPIA and fish restoration programs**

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

Yes -No

How?

**Author seems well informed of other *O. mykiss* work.**

4. Does the project adequately involve local people and institutions?

Yes -No

How?



**Widespread involvement of volunteer samplers. Some (more) community outreach in return for their efforts would be nice.**

Other Comments:

**Would scale samples be archived in some public institution for future availability?**

## Delta Regional Review:

**Proposal Number:** 123

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Overall Ranking:   -Low   -Medium   **XHigh**

Provide a brief summary explanation of the committee's ranking:

**This action-oriented research could be very helpful in salmonid restoration activities in the Delta. Its public involvement program is exemplary.**

1. Is the project feasible based on local constraints?

**X**Yes -No

How?

**o The program has a three-year time frame for completion. This appears to be a reasonable schedule.**

**o The proposal relies on the participation of local citizens, and discusses what will be required to sustain this involvement.**

**o No CEQA or NEPA documents will be required to complete the proposal.**

**o A Federal Endangered Species Act Section 10 permit will be required for the voluntary angler program.**

**o Scale samples and otoliths will be obtained from existing collections, ongoing sampling by State and Federal agencies and by volunteer angling efforts. Landowner consent is not relevant to the accomplishments of this program.**

**o Although the final report(s) is referenced in the text to occur at the end of the study, it is not evident in the text, nor is it even identified as a task to be completed in Table 1 (Proposed Annual Work Schedules), precisely when the report will be prepared.**

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

**X**Yes -No

How?

**o The proposal is consistent with the ERP Draft Stage 1 Eastside Tributaries Restoration Priority #7, the Multi-Region Restoration Priority #6 plus restoration priority specific to the ERP San Joaquin River Region and to the Sacramento River Region.**

**o The proposal is consistent with the Salmon, Steelhead Trout and Anadromous Fisheries Program Act which directs the Department of Fish and Game to double the 1988 population level of steelhead trout.**

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

XYes -No

How?

**o The proposal is consistent with Central Valley Project Improvement Act Section 3406(b)(1) which calls for doubling the natural production of salmonids in the Central Valley.**

**o The proposal is consistent with the Salmon, Steelhead Trout and Anadromous Fisheries Program Act which directs the Department of Fish and Game to double the 1988 population level of steelhead trout in the Central Valley.**

**o The proposal builds on CALFED-funded steelhead restoration projects in the Yuba River, on a comparison of the genetic composition of steelhead stock in Clear Creek versus populations in Mill Creek, Deer Creek and the Upper Sacramento River, and on an analysis of Central Valley steelhead genetics.**

4. Does the project adequately involve local people and institutions?

XYes -No

How?

**o A technical work group composed of State and Federal biologists and representatives from conservation groups will be formed to oversee the development of the program.**

**o A volunteer sport-angler collection program will be created with members of local groups to collect scale and otolith samples.**

**o A website will be created to inform the public of program status, program products and the data assembled in the program.**

**o Dennis McKeown, Department of Fish and Game statewide steelhead coordinator was apprized of the proposal and supports the program concept.**

Other Comments:

XX

## San Joaquin Regional Review:

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Overall Ranking:    -Low    Medium    -High

Provide a brief summary explanation of the committee's ranking:

**The need for this information is high. However, the panel had serious concerns about the ability to properly train and monitor the local anglers to be used for data acquisition.**

1. Is the project feasible based on local constraints?

Yes -No

How?

**There is concern about the ability to properly train and monitor the local anglers to be used for data acquisition. Anglers will use established catch-and-release and non-detrimental scale collection protocols (which I am supposing can be done without real harm to the fish). A Section 10 permit will be required (in process) for the volunteer angler program and NMFS has expressed a desire for the collected data and has suggested that the permitting process be expedited.**

**Other scale collection activities will center on monitoring programs already underway as well as archived scale collections. That way, the project will maximize existing opportunities to collect needed information.**

**The actual analysis of the scales to determine age structure, growth patterns, ages of migration and spawning, periods of freshwater and ocean residence, frequency of repeat spawning, and genetic similarities is well established and no difficulties should be expected.**

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

Yes -No

How?

**SJ-4 and MR-6: Gain a deeper understanding of the needs of at-risk species. This study specifically addresses this. The study is designed to elucidate the distribution, genetic relatedness and needs of each of the three life-history strategies (resident, fluvial and anadromous) and to determine the effects of environmental conditions on each. Its possible that environmental factors that may influence the expression of anadromy or residency might be determined.**

**In order to protect, restore and enhance (CVPIA and AFRP goals) O. mykiss populations, a clear understanding of how environmental factors (ie flow,temp) may effect life-history expression and survival.**

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

Yes -No

How?

**Any information that will accurately describe steelhead behavior in the SJR and it tributaries and elucidate factors that may benefit life stages and their strategies will greatly enhance any fish restoration activity in the region. SJRMP was established to develop comprehensive and compatible solutions to water supply, water quality, flood control, fisheries, wildlife habitat and recreational needs in the SJR and region. Greater understanding of O. mykiss life-history strategies can help determine the most effective measures needed.**

**The proposed project will also build upon previous steelhead restoration projects funded by CALFED on life-history and stock composition on the Yuba, genetic comparisons of populations on Clear Creek, Mill Creek, Deer Creek and Upper Sacramento, and general Central Valley steelhead genetics.**

4. Does the project adequately involve local people and institutions?

Yes -No

How?

**The proposed project is absolutely dependent upon local participation and cooperation. The collection of scales is dependent on the angler groups voluntarily providing samples and doing it in a manner consistent with NMFS, USFWS and CDFG requirements. Other collection will be from archived samples which again requires cooperation with the agencies. And finally, the support of agencies, local IDs and other monitoring programs (RSTs, etc) for scale samples will require a great deal of cooperation and coordination with all of the various entities involved. There has been contact and discussions with the various angler groups, agencies and other entities and the desire for cooperation and assistance has been strongly expressed.**

**The responsible agencies have been consulted and a section 10 permit is underway and may be expedited.**

**The proposal contains plans for keeping the anglers involved by providing data back to the individual that collected the samples. Previous studies in Oregon indicated that retention of anglers can be difficult and feedback and information back to the volunteers might be a good way to keep them involved as well as a cross check on data trends.**

Other Comments:

**The cooperative nature of the means of data collection is extremely appealing. It utilizes resources already in place and builds new data collection through a group of people that can be instrumental in helping ANY project later on concerning the restoration of steelhead populations.**

**Anglers have an obvious vested interest in fish populations, are integral to the local communities, and can be very vocal in their The need for training the anglers cannot be overstated. Serious training efforts would be required.**

## Sacramento Regional Review:

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

Overall Ranking:    Low    Medium    High

Provide a brief summary explanation of the committee's ranking:

**The panel believes this proposal would be strengthened by: clarifying measures to ensure quality control of data collected by volunteer anglers; better coordination with similar CDF&G projects; and clarifying level of involvement of genetics expert, J. Neilsen.**

1. Is the project feasible based on local constraints?

Yes -No

How?

**The panel believes the study is feasible, but has concerns about ensuring quality control in having volunteer anglers participate in data collection. The project should explicitly describe their quality control measure. Furthermore, there is some question about the level of involvement of Jennifer Neilsen in this project, as she is not listed in the budget nor in the personnel descriptions.**

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

Yes -No

How?

**The proposal addresses PSP restoration priorities: SJ4, MR6, and CVPIA goals to "protect, restore and enhance fish" and "evaluate the effects of the CVP on fish."**

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

Yes -No

How?

**The project will provide information to the San Joaquin River Management Program and ongoing CALFED projects on steelhead (e.g. life history studies in Yuba River and Central Valley genetic characteristics).**

4. Does the project adequately involve local people and institutions?

XYes -No

How?

**This project involves volunteer sport-anglers, but needs to therefore describe how quality control of data will be assured. Also, this project should be well-coordinated with CDF&G efforts. There is some concern that CDF&G is already doing similar work on steelhead populations under AFRP.**

Other Comments:



# External Scientific: #1

## Research and Restoration External Scientific Review Form

Proposal Number: 123

Applicant Organization: S.P. Cramer & Associates, Inc.

Proposal Title: **Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California**

### Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

**None**

### Review:

**Please provide an overall evaluation summary rating:**

**Excellent: outstanding in all respects;**

**Good: quality but some deficiencies;**

**Poor: serious deficiencies.**

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	<b>This is an interesting project that has the potential to provide a lot of science for the money. Issues of concern are 1) can the scale analysis techniques truly deliver all of the characteristics (i.e., genetic, life-history, behavior) claimed here? 2) are the risks of involving volunteers acceptable? and 3) is it acceptable to CalFed to fund a project that extends to a state-wide level?</b>
<input checked="" type="checkbox"/> Good	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

**The goals of this project are to assess life-history characteristics and genetic composition of anadromous steelhead and resident rainbow trout populations throughout California. Also mentioned is the estimation of behavioral similarities among populations.**

**The project is based on three very clearly stated and relevant hypotheses. However, testing the hypotheses requires that the entire project be funded and not only Central Valley populations.**

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

**The applicants make a strong case for the necessity of information on life-history characteristics and population genetic structure of this complex species. The conceptual diagram is very clear and I believe the scale of the project is well justified.**

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

**The approach consists primarily of scale analysis of fish collected from archived scale collections, ongoing monitoring programs and a volunteer collection program. The central thesis of the project is that scale deposition patterns can provide information on relative growth rates in fresh and saltwater, ages of migration and spawning, periods of freshwater and ocean residence, frequency of repeat spawning, and life-history diversity within and among populations as well as genetic population characteristics (from scale DNA).**

**Specific objectives are 1) to establish a technical workgroup of government agencies, consultants and conservation groups; 2) to compile a database of scale information from six 'evolutionarily significant units'; 3) determine behavioral and genetic similarities and differences between populations by scale analysis.**

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

**The applicants have estimated the number of samples that they have judged to provide a 'statistically robust sample' however it is not stated on what they based such a judgment.**

**The heavy involvement of volunteers is an interesting aspect of the project. It has the advantages of enhancing communication among stakeholders and being a relatively inexpensive way to collect information, but may involve certain risks in terms of data quality and delivery and will require careful supervision.**

**There is very little detail provided with regard to objective 3. It is stated that discriminant analysis will be used to compare characteristics within and among populations but no further details are given. Fish characteristics are also planned to be compared to basic habitat and environmental information, but it is not stated what this information is (other than temperature) nor how the data will be analyzed.**

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

**The project will be overseen by a technical workgroup (objective 1) that should ensure appropriate sampling as well as transfer of the science into management applications.**

**Monthly updating of scale samples into a GIS map should help to ensure that the geographical representativeness and number of samples are achieved.**

**It is planned that subsamples of the scale analyzed by the primary laboratory are sent to an independent laboratory for verification.**

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

**The project should provide information that is useful for improving management strategies for this species. Knowledge of the genetic population structure should aid in identifying appropriate management units and likewise the extent to which key life-history characteristics are controlled by aspects of the habitat is also important.**

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

**It is difficult to evaluate the track record of the applicants. Only short paragraph descriptions are provided for each (no CVs) and I do not know them personally. It appears that the infrastructure for the project is available (e.g., GIS at SPCA and presumably the required equipment, etc. for DNA analysis at USGS Anchorage).**

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

**This is a relatively inexpensive project (total budget for 3 years is ca. \$700,000). The applicants that if only the Central Valley is funded total project cost would be 1/6 (ca. \$116,000), but the scope would be so much reduced that I am not convinced it would be worth funding at such a reduced scale.**

**Miscellaneous comments:**

**Nowhere in the proposal is 'evolutionarily significant unit' defined, nor is it clear how these units were identified.**

**The project proposes to collect information from a wider geographical scale than that covered by CalFed's priority region, but their arguments seem justified.**

**Not being an expert in fish scale analysis I would have liked to see further justification that scale analysis provides repeatable and reliable estimates of all of the parameters that the applicants are planning to use them for. It is unclear to me how well established these techniques are for the purposes proposed.**

## External Scientific: #2

### Research and Restoration External Scientific Review Form

Proposal Number: 123

Applicant Organization: S.P. Cramer & Associates, Inc.

Proposal Title: **Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California**

#### Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

**I worked with Steve Cramer as co-leader of ODFW's chinook salmon planning effort from 1986-1987.**

#### Review:

**Please provide an overall evaluation summary rating:**

**Excellent: outstanding in all respects;**

**Good: quality but some deficiencies;**

**Poor: serious deficiencies.**

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	<b>Depite my concerns regarding the exceptionally high cost of what is basically a low-tech "scale reading project", I am supportive of this work. I believe that the total budget should be revised according to a listing of streams according to whether or not they provide possible eventual access to saltwater. If any streams do not, then I do not feel that any sampling should be supported by CALFED funds. The existing list may already have such restrictions, but that was not clear to me.</b>
XGood	
-Poor	<b>It is regrettable that the CDFG proposal on CV "population structure" of steelhead/rbt was not coordinated with Cramer's proposal. For example, at p. 2 Cramer acknowledges the existence of resident/anadromous forms, but he proposes to address this issue exclusively using scale analysis rather than the otolith chemistry methods used in the CDFG proposal. Scales cannot identify type of parent, only attributes of progeny.</b>

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

**The goals, objectives and hypotheses expressed in this proposal all seem intelligent and worthy of study. They also seem timely in view of listings of steelhead in CA.**

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

**I believe that the authors are correct that there has not been a systematic study of California waters in which rainbow trout/steelhead theoretically have access to the ocean.**

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

**The approach is basically to collect scales from, ideally, adult fish from streams throughout each of 6 identified ESUs in CA. Based on analysis of scale patterns, life histories of fish will be determined and Jennifer Nielsen would do some DNA work designed to allow the genetic relations among populations to be determined. Scales would be collected primarily by volunteer recreational anglers because capture of adults in traditional seines and nets is inefficient and expensive. TONS of scale reading would be required - around 18,000-27,000 scales are proposed for collection over the 3 year study. Few genetic samples would be taken due to the greater expenses of genetics research.**

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

**If the volunteer scale collection system worked, it might be feasible to collect the numbers of scale samples proposed and to get them analyzed over the three years of this project.**

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

**the usual reports, etc.**

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

**Results from a study like this would be of definite value for restoration/recovery planning throughout CA.**

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

**I believe that Cramer's consulting firm could carry this project off.**

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

**The budget seems EXTREMELY high. Each year about \$112k goes to analysis of scale patterns. At the bottom of p. 18, the authors note that if CALFED would only fund studies within the bounds of the CV ESU, total project cost would only be \$188k as compared to \$700k. At p. 19 the authors make reference to a "similar study" conducted by CDFG and a similar life-history and genetics project conducted on the Yuba River, but they do not indicate whether or not these studies were conducted on steelhead/rainbow trout. The costs for genetics research seem much too small compared to the scale reading and I suspect that sample sizes for genetics work may be too small.**

**Miscellaneous comments:**

## **Prior Performance/Next Phase Funding:**

**New Proposal Number:** 123

**New Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

1. Prior CALFED project numbers, titles, and programs: *(list only projects for which you are the contract manager)*
2. Prior CVPIA project numbers, titles, and programs: *(list only projects for which you are the contract manager)*

### **11332-0-M007 Juvenile Salmon Outmigration Monitoring at Caswell**

3. Have negotiations about contracts or contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

Yes -No -N/A

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

Yes -No -N/A

If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

-Yes -No N/A

If no, please explain:

Other Comments:



## **Environmental Compliance:**

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

Yes -No

If no, please explain:

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

Yes -No

If no, please explain:

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

-Yes No

If yes, please explain:

Other Comments:

## **Budget:**

**Proposal Number:** 123

**Applicant Organization:** S.P. Cramer & Associates, Inc.

**Proposal Title:** Assessment of Life-History Characteristics and Genetic Composition of *Oncorhynchus mykiss* Throughout California

1. Does the proposal include a detailed budget for each year of requested support?

Yes -No

If no, please explain:

2. Does the proposal include a detailed budget for each task identified?

Yes -No

If no, please explain:

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

Yes -No

If no, please explain:

4. Are appropriate project management costs clearly identified?

Yes -No

If no, please explain:

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

Yes -No

If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

6. Does the budget justification adequately explain major expenses?

Yes -No

If no, please explain:

7. Are there other budget issues that warrant consideration?

-Yes No

If yes, please explain:

Other Comments: