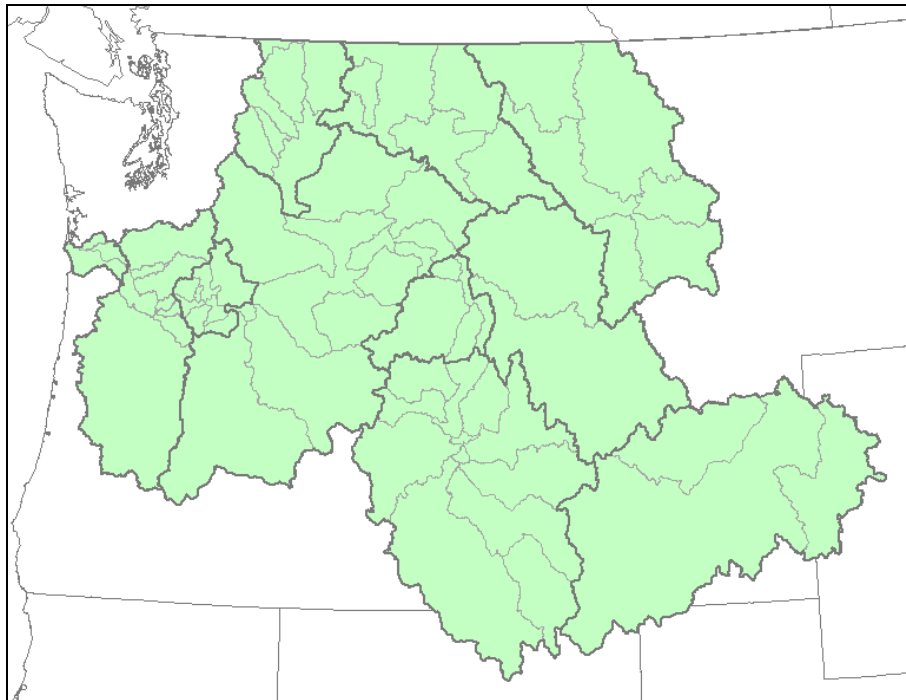


Draft FY 2003-2005 Mainstem & Systemwide Province Work Plan



Prepared for the
Northwest Power Planning Council

by the
Columbia Basin Fish and Wildlife
Authority

October 24, 2002

Draft FY 2003-2005 Mainstem & Systemwide Province Work Plan

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Introduction

The Rolling Provincial Review process was developed by the Northwest Power Planning Council (NWPPC) in February 2000 in response to recommendations by the Independent Scientific Review Panel (ISRP) and the Columbia Basin Fish and Wildlife Authority (CBFWA). Under this new province-based process each individual project proposal within a province will be reviewed for technical merit and management relevance every three years. Under the previous process all project proposals for Bonneville Power Administration (BPA) funding under the Fish and Wildlife Program (FWP) were reviewed annually. The purpose of the NWPPC's new multi-year process is to reduce the burden of reviewing large numbers of proposals, most of which had been reviewed just one year before, and to provide for a more thorough review of the project proposals in the context of a subbasin summary. Additionally, the process is intended to provide the opportunity for site visits by reviewers, project presentations with a question and answer period, and provide reviewers with more detailed background and planning documents which will reduce the reviewer's reliance strictly on the proposal form.

The subbasin summaries developed under this process are intended to be interim and will be replaced by subbasin plans developed to meet requirements of the recently amended Fish and Wildlife Program. The Mainstem & Systemwide Province was the twelfth review cycle under this new process. The results of this review are summarized here. For the purpose of this province review, Program Summaries were developed for specific focus areas within the Fish and Wildlife Program to use as context for review.

This document was developed collaboratively by the NWPPC staff, ISRP, fish and wildlife managers, other stakeholders, and CBFWA staff, culminating in project and budget recommendations for FY 2003-2005.

The CBFWA process for providing these recommendations utilized the ISRP preliminary findings and integrated manager evaluations of the technical and management merits of the project proposals relative to anadromous fish, resident fish and wildlife management needs, and the goals and objectives identified in the program summaries. A total of 104 project proposals were submitted and reviewed with two proposals being withdrawn and twelve proposals receiving a "Do Not Fund" recommendation. Four of the proposals were considered a NWPPC responsibility and should be funded from that budget. The 86 recommended projects address needs identified in the program summaries and include 53 new and 33 ongoing projects totaling \$56.1 million in Fiscal Year 2003.

Project Review Process

Program Summaries

The Mainstem and Systemwide Province Review was initiated at an October 31, 2001 meeting in Portland, Oregon. An invitation was sent to an extensive distribution list to encourage all interested parties to attend and provide input. The purpose of this first meeting was to provide all interested parties with the opportunity to identify sources of information necessary for the development of program summaries for this province. The intent was to ensure BPA expenditures for fish and wildlife projects compliment and enhance existing efforts and ensure that priority needs are addressed. Subsequent meetings were held to review draft summaries and identify goals and objectives.

Previously, ecosystem summaries for each subbasin were developed as a means of providing context for project proposals. Under the new process, a more formal structure with teams was formed to develop the more comprehensive program summaries of the newly identified provinces.

Program summaries for the Mainstem and Systemwide Province were completed in February 2002. The BPA issued the solicitation for project proposals for Mainstem and Systemwide Province on April 24, 2002, with project proposals due June 3, 2002. The project sponsors were asked to show a direct tie between their projects and the needs identified in the program summaries.

Federal Action Agency Research, Monitoring and Evaluation Work Group Comments

In the Mainstem and Systemwide Province project solicitation, special emphasis was placed on soliciting projects that would meet the Action Agencies' (U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and BPA) responsibilities under the National Marine Fisheries Services' FCRPS 2000 Hydro Biological Opinion (BiOp), especially those responsibilities associated with Reasonable and Prudent Alternative (RPA) actions 179-199. BPA, in coordination with the National Marine Fisheries Service (NMFS) and the NWPPC, agreed to implement a modified review process for this province. The purpose of this review was to provide some preliminary information to the ISRP and project sponsors on the ability of proposals to meet the RME needs identified in the Biological Opinion or as further defined by the NMFS-AA RME working group efforts. This process was intended to aid in the development, selection, and funding of a suite of integrated projects that will meet the intent of these BiOp RPA actions in the most effective, economic way possible.

The Action Agencies and NMFS members of the RME Work Group identified a group of proposals that potentially addressed implementation of the RME BiOp RPA action items. Written comments on these proposals addressed how well the proposed project would meet the RME requirements of the BiOp. Some of the comments address shortcomings in the proposal relative to BiOp requirements and/or how the proposals might

be modified to more directly meet the intentions of the RPA actions. The comments were reported in the document entitled “*The RME Work Group Preliminary Comments on Mainstem and Systemwide Proposals.*”

The RME Work Group consists of a facilitating Planning Group of four members and six sub-groups: 1) Status Monitoring; 2) Habitat Action Effectiveness Research; 3) Hydro RME; 4) Harvest and Hatcheries RME; 5) Estuary and Ocean RME; and 6) Data Management. Each subgroup developed comments on the proposals addressing RPAs in their area. Some proposals addressing RPAs in more than one area received a secondary comment from another subgroup. Although comments from each subgroup vary in formatting, each attempted to adhere to the following guidelines:

1. Identify the general project elements/requirements that are needed to meet the goals/objectives/intent of each RME RPA, and assess if the proposal possesses those features by addressing the following issues:
 - a. Does the proposal satisfy the objectives of the RPA?
 - b. If not, explain what elements are lacking.
 - c. If the proposal partially satisfies the RPA objectives, suggest means or opportunities to strengthen the proposal.
 - d. If a proposal is entirely satisfactory, indicate so and note the particular strong points.

2. Assess the feasibility of the proposed work in general terms.

The RME Work Group sent comments to the NWPPC, the proposal sponsors, the CBFWA, and the ISRP. On a voluntary basis, the sponsors of these selected proposals opted to work directly with the RME Work Group to discuss and/or revise their proposal prior to final review by the ISRP in late August. Alternatively, sponsors may have chosen to address the comments of the ISRP and the RME Work Group without any further collaboration.

Review by the ISRP

The ISRP reviewed 104 project proposals for the Mainstem & Systemwide Review Cycle. To ensure a consistent and fair evaluation, standard formats and criteria were applied to all proposals to generate comments and scores prior to the proposal review workshop. These scores and comments were not made available to the project sponsors at the workshop, but were used by the ISRP to develop questions for the workshop presentations.

Project Presentation (July 16-18, 2002)

Project proposals were grouped by area of focus and presented as a group. Where possible, the program team leaders provided a general overview for their respective summaries prior to the presentation of individual project proposals. Project proposals were

presented to the ISRP, CBFWA province review team, fish and wildlife managers, NWPPC staff, CBFWA staff and other stakeholders. All project sponsors were provided 15 minutes to present their proposal and answer questions.

Preliminary ISRP Report

On August 2, 2002, the ISRP released a *Preliminary Review of Fiscal Year 2003 Mainstem and Systemwide Proposals* (ISRP 2002-13 at NWPPC). This report summarized the ISRP's preliminary review of each project proposal and identified areas of concern where they had requested a written response to questions. The due date for written responses to this report was August 23, 2002.

CBFWA Province Review Group

During September 23-27, 2002, the CBFWA Province Review Group reviewed all project proposals within the province using criteria listed in Table 1 which resulted in a consensus Yes or No. Subbasin team members also participated in the review of the project proposals. The following elements were considered during the review:

- How well does the project relate to the criteria (Table 1)
- Validation of existing work- is the current funding level appropriate (Section 6 O&M and Section 7 M&E of existing projects)? Is it appropriate to continue implementation of existing work (Section 4 P&D and Section 5 C&I of existing projects)?
- Evaluation of proposed new work -- does a new project proposal demonstrate a priority need over implementation strategies within existing projects (Sections 4 and 5 of existing projects)?

Table 1. The CBFWA subbasin project review criteria.

| Technical Criteria | |
|---|---------------|
| 1. Does the proposal demonstrate that the project uses appropriate scientifically valid strategies or techniques and sound principles (best available science)? | Y or N |
| 2. Are the objectives clearly defined with measurable outcomes and tasks that contribute toward accomplishment of the objectives? | Y or N |
| 3. Are the resources proposed (staff, equipment, materials) appropriate to achieve the objectives and time frame milestones? | Y or N |
| 4. Does the proposal include monitoring and evaluation to determine whether objectives are being achieved (including performance measures/methods) at the project level? | Y or N |
| 5. Will the proposed project significantly benefit the target species/ indicator populations? | Y or N |
| 6. Does the proposal demonstrate that project benefits are likely to persist over the long term and will not be compromised by other activities in the basin? | Y or N |
| 7. Does the proposal demonstrate that all reasonable precautions have been taken, to not adversely affect habitat/populations of wildlife, native resident and anadromous fish? | Y or N |
| 8. Are there explicit plans for how the information, technology etc. from this project will be disseminated or used? | Y or N |

| Management Criteria | |
|---|---------------|
| 1. Does the proposed project address fish and wildlife related objectives, strategies, needs and actions as identified in the subbasin summaries? | Y or N |
| 2. Does the project address an urgent requirement or threat to population maintenance and/or habitat protection (i.e., threatened, endangered or sensitive species)? | Y or N |
| 3. Does the project promote/maintain sustainable and /or ecosystem processes or maintain desirable community diversity? | Y or N |
| 4. Is there cost share for the construction/implementation and/or monitoring and evaluation of the project? | Y or N |
| 5. Will the project complement management actions on private, public and tribal lands and does the project have demonstrable support from affected agencies, tribes and public? | Y or N |
| 6. Will the project provide data critical for in season, annual and/or longer term management decisions? | Y or N |
| 7. Will this project provide or protect riparian or other habitat that may benefit both fish and wildlife? | Y or N |

Project proposals were grouped by program or focus area during their review. The preliminary ISRP technical review of all proposals was utilized while discussing the technical merits of each project. Following the technical and management review, the project proposals were prioritized within each area of focus according to the fish and wildlife and Program needs. The following definitions were used for the subbasin prioritization:

- Core Program - These projects are integral to the infrastructure and/or information needs of the F&W Program in the Columbia River Basin for planning and management.
- High Priority - These projects or tasks within a project are high priority within the subbasin. The project addresses a specific need within the subbasin (program) summaries.
- Recommended Actions - These are good projects that cannot demonstrate a significant loss by not being funded this year. These projects should be funded, but under a limited budget, they could be delayed temporarily without significant loss.
- Do not fund - These projects are either technically inadequate or do not address a need within the subbasin (program) summaries. These projects may be inappropriate for BPA funding.

Finally, the project sponsors in the top category (Core Program and Urgent) were contacted and asked to provide updated budget information. The project sponsors were asked to “sharpen their pencils” and certify their true funding needs to complete their proposed work over the next three years. This revised budget information is provided in the CBFWA recommendations.

CBFWA Review and Approval of Project Recommendations and Subbasin Summaries

On September 9, 2002 the Resident Fish Committee (RFC) reviewed the resident fish related projects and provided recommendations to the CBFWA membership.

On October 4, 2002, the recommendations from the Province Review Group and the RFC were discussed in the CBFWA Anadromous Fish committee meeting. Individual members of the Resident Fish and Wildlife Committees also attended. The committees made some modifications to the province recommendations based on technical or regional management concerns.

On October 15, 2002 the final recommendations were reviewed and approved by the Members Management Group (MMG). Final modifications to project recommendations were incorporated into the work plan and the final recommendations were approved by the MMG.

The final step in the project proposal review process was the consensus approval of the project recommendations by CBFWA Members. The CBFWA Members review and the final recommendations in the province work plan demonstrate regional support by the fish and wildlife managers.

Proposal Review Results

A total of 104 project proposals were reviewed in the Mainstem and Systemwide Province (Appendix 1). Two proposals were withdrawn from review (Project Numbers 35001 and 35018). Twelve proposals were categorized as "Do Not Fund" (Project Numbers 35004, 35011, 35022, 35023, 35038, 35050, 35058, 35059, 35061, 198910700, 199105100, and 199601900). Four proposals were considered to be NWPPC responsibility to fund (Project Number 35005, 198907201, 199600500, 199800401)

Three-year Budget Recommendation

Appendix 2 provides a three-year funding recommendation for the Mainstem and Systemwide Province that strives to meet the goals, objectives, and needs of the Province Program Summaries. A total of 86 projects that address needs identified in the program summaries are recommended for funding and include new and ongoing projects totaling \$56 million for Fiscal Year 2003. All of the projects recommended here should be initiated within the next three years.

This recommendation varies slightly from previous Province Work Plans in that we include an Urgent and Core Program category that reflects our highest priorities. Consistent with previous NWPPC decisions, these priorities include ongoing projects that are technically sound, address management priorities, and protect significant prior investments. The priorities also include 12 new projects that are critical to program implementation and/or species protection. Four of these projects (Project Numbers 35010, 35019, 35033, and 35036) are particularly critical because failure to immediately fund

them poses a high risk of significant and immediate negative impact on the successful implementation of the Fish and Wildlife Program.

Project Index

Urgent and Core Program Projects

Project: 198201301 - Coded-Wire Tag Recovery Program

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Recovery of CWTs and PIT tags from salmonids sampled in the commercial/sport fisheries (Columbia River and Oregon ocean), spawning grounds and hatcheries. Provides critical stock identification information required to evaluate the status of Columbia Basin stocks.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program. The new task that supports a statistician wholly supported by this project may be redundant and should be removed. There are currently two oversight committees for this project that provide statistical support and review of sampling methods that could address this need. The budget has been adjusted to reflect the removal of the statistician.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$2,672,053 | Rec: \$2,745,294 | Rec: \$2,910,012 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Project Sponsor Budget Comments:

Two objectives (PIT tag sampling and addition of a Statistician) could be considered new tasks. The AFC recommends funding only the PIT tag sampling. The recommended funding level includes funding for the modification of the CWT recovery program to also recovery PIT tags from salmonids landed in mainstem Columbia River fisheries. The totals include costs for both ODFW and WDFW's sampling programs. The detection of PIT tags will require the purchase of detection equipment. In addition, it will require some increase in sampling personnel to prevent a corresponding degradation in the quality of CWT sampling. The one time equipment costs have been removed from the budgets for 2004 and 2005.

Project: 198201302 - Annual Stock Assessment - Coded Wire Tag Program (ODFW)

Sponsor: Oregon Department of Fish and Wildlife

Short description:

Apply coded-wire tags to production releases of coho and chinook salmon at ODFW Columbia Basin hatcheries for stock assessment of hatchery and wild salmon populations. Evaluate survival, contribution, and stray rates of hatchery reared salmon.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$217,881 | Rec: \$225,000 | Rec: \$231,000 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Project Sponsor Budget Comments:

The original budget estimates were developed in the spring of 2002. Since then ODFW has completed hatchery production planning for the 2003 brood year, which includes fish that will be tagged by this project in FY 2003. We also now have actual project costs for tagging in FY 2002. Thus, we can estimate the FY 2003 costs from FY 2002 costs instead of FY 2001 costs. The proposed budget for this project was reviewed/ updated for this new information and any possible cost reductions, without changing the scope and level of the proposed work in FY 2003. The result was a reduction of \$251 for FY 2003. As the out year budgets (FY 2004 and 2005) are rounded to the nearest \$1,000 this small reduction did not change these estimates.

If additional cuts were required for this project, please refer to the full response to CBFWA.

Project: 198201304 - Annual Stock Assessment - Coded Wire Tag Program (WDFW)

Sponsor: Washington Department of Fish and Wildlife

Short description:

Apply coded-wire tags to production of coho and chinook salmon at WDFW Columbia Basin hatcheries for stock assessment of hatchery and wild populations. Evaluate survival, contribution and stray rates of hatchery reared fish and compare to wild fish.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$319,137 | Rec: \$330,307 | Rec: \$341,868 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Project Sponsor Budget Comments:

Production of spring Chinook was ended at Toutle Hatchery, thereby reducing the total coded-wire tag output for the project from 1,590,000 to 1,490,000. The budget has been reduced to reflect this change.

Project: 198331900 - New Marking and Monitoring Techniques for Fish

Sponsor: National Marine Fisheries Service

Short description:

Develop, install, and evaluate PIT tag interrogation systems and ancillary equipment to expand the capabilities of the Columbia River Basin (CRB) PIT tag technology to meet fishery resource stakeholders needs

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This is a basic research and development project to support fish marking and monitoring for the Fish and Wildlife Program. It is imperative that as technology is developed, information transfer occurs quickly and efficiently to insure that duplicate development efforts are not initiated by others due to lack of communication. This project addresses RPAs 85 and 87. In the project sponsor response to the ISRP, Objective 3 appears to be redundant to a USFWS study that was originally funded through the Innovative funding category and continues under non-BPA funding. Objective 5 has been offered as a lower priority task by the project sponsor and should be considered for elimination or reduction under a limited funding scenario. CBFWA supports elimination of Objective 5 from the proposal and the budget has been adjusted to reflect these changes.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$816,500 Category: Urgent | Rec: \$798,300 Category: Urgent | Rec: \$508,600 Category: Urgent |

Project Sponsor Budget Comments:

The budgets for the submitted BPA Mainstem proposals have been reviewed. The budgets are appropriate for the proposed research. Therefore, reductions in the funding requests without a corresponding reduction in the scope of work would be inappropriate. In our response to the ISRP in August, as asked we prioritized the project's objectives - hopefully that effort will assist you in any future discussions; however, at this time we believe all of the tasks originally submitted are important to the fisheries community.

The AFC recommended reducing FY2003 by \$61,500 and FY2004 by \$234,000 to eliminate Objective 5 from this proposal in concert with the project sponsors response to the ISRP.

Project: 198605000 - White Sturgeon Mitigation and Restoration in the Columbia and Snake Rivers Upstream from Bonneville Dam

Sponsor: Oregon Department of Fish and Wildlife

Short description:

Restore and mitigate for hydrosystem-caused loss of white sturgeon productivity through intensive fisheries management, supplementation, and modified hydropower system operation. Assess success of mitigation and restoration efforts.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has progressed logically from research on the population status, life history, and habitat requirements of sturgeon through development and implementation of mitigation, management, and monitoring actions based on the research. The accomplishments of the project have been published extensively in peer-reviewed journals. The RFC commends the sponsors on developing an umbrella proposal for all sturgeon research in the basin. The proposal provides a clear description of accomplishments to date and provides a logical plan for completing the research objectives, evaluating mitigation actions, and monitoring population status through 2005.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$1,984,000 Category: Urgent | Rec: \$2,167,000 Category: Urgent | Rec: \$2,040,029 Category: Urgent |

Project Sponsor Budget Comments:

Minor reductions for 2003 result from a decrease in the number of PIT tags to be purchased and the deferral of computer purchases. Annual budget for the project has actually decreased since 1997. No increase over 2002 was requested for 2003. The budget has been adjusted accordingly.

Project: 198712700 - Smolt Monitoring by Federal and Non-Federal Agencies

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Daily passage data through the mainstem, Snake, Columbia, and mid-Columbia rivers to facilitate fish passage management decisions, including Biological Opinion implementation, is collected daily. Sampling and marking occur at 8 sites of the larger region.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Information produced by this project is specifically called for in the Hydrosystem Biological Opinion, Appendix H (Research and Monitoring).

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$2,435,941 Category: Core Program | Rec: \$2,533,379 Category: Core Program | Rec: \$2,634,714 Category: Core Program |

Project Sponsor Budget Comments:

The Smolt Monitoring budget proposal total for FY 2003 of \$2,481,100 is 2% below the forecast made in FY 2001. We believe we can further reduce this budget by 1.82% by lowering the cost of living allowances and reducing the inflation factor, which seems reasonable considering the overall flat US economy in 2002 to date. However, the PIT tag portion of the budget could not be reduced because the tags will remain at the cost of \$2.25 per tag in the foreseeable future, according to Sean Casey of Destron. The total reduction from the 2001 projection would then be 3.82%. The caution in reducing this budget, however, is that, if the scope of work and number of PIT tags increase to satisfy the

requirements of the ISRP comments, the budget will likely increase rather than decrease from the original projection.

Project: 198810804 - StreamNet

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Provides regionally consistent, georeferenced data pertaining to fish and their habitats obtained from the basin's state, tribal and federal fish management agencies via the Internet at www.streamnet.org, and custom data services to FWP participants.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project manages and provides needed data to regional fish and wildlife agencies and tribes. A regional discussion is necessary to define StreamNet's work plan for the next three years. CBFWA will facilitate the development of a long term work plan that is consistent with subbasin planning, recovery plans, and regional monitoring and evaluation needs for anadromous fish, resident fish and wildlife. The specific budget will be provided in the final CBFWA recommendation. The budget that is recommended in the Mainstem and Systemwide "Province" work Plan will be considered as a placeholder with specific tasks. As an RM&E (Research, Monitoring and Evaluation) work plan is developed for the region, StreamNet's work plan will be modified to provide support for that effort in an appropriate manner.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$2,261,033 | Rec: \$2,383,924 | Rec: \$2,503,120 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

The budget has been reduced with the following explanation:

1. The 2003 budget includes a ONE TIME decrease of \$9,371 due to payment of FY-03 computer software license fees on a different contract. These costs recur in subsequent years.
2. The base StreamNet Project is now composed of 84% personnel related costs. Key staff at the regional office (programmer, GIS specialist, and biological data coordinator) have already been reduced to only nine months each on the StreamNet contract. The cooperating projects have also reduced staff time. Even if all travel and discretionary current expense costs were eliminated and only 3 fixed costs (office rent,

software licenses, and computer system administration) are funded, it is no longer possible to balance the budget to level funding without further reducing staff time.

The estimated budget represents the actual costs of personnel for core staff for base level tasks only. All new work was dropped. At the regional level, the budget was reduced by cutting travel by 70% (hard for a project with staff in 4 states) and trimming Supplies and Services (S&S) costs by eliminating training costs, one time elimination of software costs (comment 1), and miscellaneous other cuts. S&S was reduced by only 2.5%, but that represents cutting 25% of the discretionary portion of S&S, since such a large proportion of S&S (90% in FY-02) is composed of the non-discretionary costs of rent, software licenses, and computer system operation, administration and maintenance (including T-1 line and web services). The largest remaining discretionary S&S expense is phone service.

3. No specific costs were broken out for the Monitoring and Evaluation phase, a point raised by the ISRP. Even though no specific budget was developed, there is a task included in the statement of work that relates to evaluating how well the project meets its planned annual statement of work. This task represents a small fraction of time for the program manager and StreamNet Steering Committee members, and is included within the operations phase budget. Results of that evaluation are included as part of the annual performance report.

Project: 198906201 - Fish and Wildlife Program Implementation

Sponsor: Columbia Basin Fish & Wildlife Authority

Short description:

Coordinate fish and wildlife participation in regional mitigation activities in implementation of the FWP, annual project and funding recommendations, rolling provincial review, subbasin planning, program amendment recommendations, etc.

ISRP Rating: Not applicable - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$2,217,415 | Rec: \$2,266,872 | Rec: \$2,339,575 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

The staff portion of this budget is \$1,301,884. Reductions have been made in the office supplies and travel budget. As of November 1, 2002 CBFWF is not able to join PSMFC in the large group health insurance plan. Any savings found in the budget have been applied to insurance costs that have risen by 52%. The member's portion of this

budget is \$747,048 for hourly compensation and travel for regional coordination and \$168,489 for the HEP team. Indirect costs are included in these budgets.

Project: 198906500 - Annual Stock Assessment - CWT (USFWS)

Sponsor: US Fish and Wildlife Service

Short description:

Apply coded-wire tags to production groups of salmon at federal hatcheries not tagged by other programs. Prepare a report on survival trends and the distribution of anadromous stocks from 11 federal hatcheries for basin-wide stock assessment.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$119,268 | Rec: \$126,424 | Rec: \$133,973 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

Project: 198909600 - Monitor and evaluate genetic characteristics of supplemented salmon and steelhead

Sponsor: National Marine Fisheries Service, Northwest Fisheries Science Center

Short description:

Direct and indirect estimates for reproductive success. Estimate selection gradients in hatchery and wild. Monitor changes in hatchery, natural (supplemented), and wild (un-supplemented) populations. Evaluate effectiveness of hatchery supplementation.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

There has been a substantial increase in the funding level.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$593,900 Category: Urgent | Rec: \$460,500 Category: Urgent | Rec: \$478,960 Category: Urgent |

Project Sponsor Budget Comments:

In summary, it was clear to the project sponsors early in the proposal process that funds would be extremely tight in this cycle. Therefore, they drafted a lean study that is tightly integrated and simply does not have room for budget reductions without significant sacrifices in the central goals of the project.

For detailed comments refer to the full response to CBFWA.

Project: 199007700 - Northern Pikeminnow Management Program

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Reduce predation on juvenile salmonids by implementing fisheries to harvest northern pikeminnow in the mainstem Columbia and Snake rivers. Monitor effects of fisheries on predation by northern pikeminnow and other resident fish.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Results from this project clearly show that it is an effective management tool that has directly benefited salmon recovery efforts in the Columbia River Basin. The project's cost effectiveness appears to remain stable or slightly increasing, further corroborating the effectiveness and importance of this project to salmon recovery efforts and the need to continue funding through 2007. The O&M phase of the project has been reduced by \$88,000 in order to remove the site specific and dam angling fisheries due to their reduction in cost effectiveness. For FY 2003, an additional \$40,000 has been added to the M&E phase to cover the expense of an economic analysis of promotion cost and sport reward costs. This project is required by the 2000 FCRPS NMFS BiOp and supports RPA 100.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$2,870,000 Category: Urgent | Rec: \$3,151,000 Category: Urgent | Rec: \$3,079,000 Category: Urgent |

Project Sponsor Budget Comments:

A reduction of approximately \$88k for 2003 and beyond results from elimination of dam-angling and site-specific fisheries. Although a \$40k economic evaluation was inserted into the budget at the CBFWA review, it should be eliminated, and the totals above do not include it. Further reductions in the out-year budgets are the product of increased efficiencies. The blip in the project for 2004 is for periodic (every 5 years) detailed evaluation, which is a necessary component of the project.

Project: 199008000 - Columbia Basin PIT Tag Information System

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Provides basic infrastructure for all PIT tag related projects in Columbia River Basin. Operates and maintains long-term data repository for PIT tag information, Operates and maintains permanent PIT tag interrogation sites. Supports other PIT research.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

PTAGIS provides support to all PIT tag projects in the Fish and Wildlife Program. CBFWA and PSMFC need to modify the memorandum of agreement to develop non-salmon fish species codes and support non-salmon applications. CBFWA also needs to support PTAGIS's involvement and support of all PIT tag projects occurring in the basin (i.e., USFWS studies). This project meets RPAs 189 and 193.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$2,431,442 | Rec: \$2,480,071 | Rec: \$2,529,672 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

I caution decision makers to consider resource and budget impacts to the PTAGIS project prior to approving any new PIT tagging related projects. I further suggest that the CBFWA request that the Action Agencies provide better coordination of new PIT tag related initiatives that affect PTAGIS. I have made an effort to identify some savings at the risk of 1) causing continued unpaid overtime work for project staff; 2) deferring project activities related to Corps of Engineers initiatives; 3) reducing 2004-2005 out year cost increases from 4% to 2%. New PIT tag related projects may cause additional increases to the PTAGIS budget as identified by the coordination process suggested above.

The 2003 PTAGIS budget is reduced by 1) eliminating one new hire for Database Administration and replacing partial function with consulting services (saves \$50,000); 2)

removal of Task 2.g, “Integrate Full Flow Bypass PIT tag electronics into PTAGIS standard data collection platforms at Ice Harbor and John Day” (saves \$51,269). This activity is required by the Corps of Engineers Columbia Basin Studies program, and it may be funded there already.

Project: 199009300 - Genetic Analysis of *Oncorhynchus nerka* (modified to include chinook salmon)

Sponsor: University of Idaho

Short description:

This ongoing project provides genetic information to assess immediate and long-term genetic risks to federally endangered Snake River sockeye and threatened Salmon River chinook salmon currently in artificial production programs.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The FY 2004 budget may increase to FY 2003 level.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$126,436 | Rec: \$126,000 | Rec: \$98,000 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

Our current proposed budget (\$126,436.00) represents an 8.4% decrease from our FY2002 budget (\$138,015.00). We have removed all cost-of-living increases for project personnel and all capital acquisitions from the FY 2003 budget. The remaining budget includes only objectives and personnel essential to carry out stated scientific goals. Our level of cost sharing from the University is currently at a maximum with respect to this project. We anticipate one additional year (FY2004) at the FY2002 budget level in order to allow us to complete genetic analysis of captive-reared chinook populations within the Columbia Basin. Following FY2004, our budget requirements will substantially decrease (22.2%) for FY2005 and remain at this level until FY2008, the expected completion date of the sockeye genetic analysis objectives.

Project: 199105500 - Natural Rearing Enhancement Systems (NATURES)

Sponsor: National Marine Fisheries Service

Short description:

Evaluate NATURES effects on salmonid behavior, morphology, physiology, post-release survival, and ecological interactions.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has a 93% increase in cost from previous years. A significant increase in the budget is due to a robust statistical analysis of the individual components of the NATURES concept. CBFWA will determine the specific components of the proposal that should move forward now, versus deferring funding of some activities due to cost limitations. The project sponsor provided options for funding this project so CBFWA can determine the appropriate scope of implementation. There is currently a NATURES evaluation occurring at the Cle Elum Hatchery and other hatcheries (i.e., Eagle Creek and Warm Springs hatcheries). Other NATURES evaluations need to be summarized to assist in determining whether this portion of the project needs to proceed over the next three years.

The project sponsor provided options and CBFWA is recommending a reduced scope of work. The CBFWA managers have determined that the robust statistical analysis of individual components of NATURES is not deemed necessary at this time due to related efforts elsewhere within the Columbia River Basin.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$559,800 Category: Urgent | Rec: \$578,800 Category: Urgent | Rec: \$598,600 Category: Urgent |

Project Sponsor Budget Comments:

At your request, we are providing a revised budget estimate for the NATURES project (Project 199105500) that excludes Objective 1, even though we feel CBFWA is foregoing a unique opportunity by requesting elimination of Objective 1. For the most part, the NATURES-type modifications that are being funded for implementation at production level throughout the region are using untested iterations of NMFS NATURES variables of cover, structure, and substrate. It is possible that the unique combinations of these variables being implemented in each of these production programs may convey similar, or even enhanced, benefits as compared to the versions developed and tested by NMFS; however, we consider this an untested hypothesis. There is considerable risk that some or all of the chosen NATURES-type approaches currently being implemented at

production facilities throughout the region may not result in the expected benefit as described by NMFS foundational research. This risk seems unacceptable considering the large investment the region is making in implementing NATURES-type strategies.

We feel that our proposed production-scale full factorial evaluation of NATURES cover, structure, and substrate variables at the USFWS Carson National Fish Hatchery (Objective 1) will be of extreme value to the region for future focus of specific conservation hatchery strategies. Nonetheless, as requested, the budget information presented details coverage necessary to conduct activities described under Objectives 2 and 5 (Construction/Implementation section) and Objectives 3 and 4 (Operation and Maintenance section). Cost projections for FY2004 and FY2005 were calculated by application of a minimal inflation factor of 3.4%/year to the FY2003 budget components.

Project: 199302900 - Estimate Survival for the Passage of Juvenile Salmonids Through Dams and Reservoirs of the Lower Snake and Columbia Rivers

Sponsor: National Marine Fisheries Service

Short description:

Provide precise measurements of survival of juvenile salmon as they pass through dams and reservoirs in the Snake and Columbia Rivers and relate to adult returns.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

A task to perform paired trawl sampling in the lower river had previously been funded through the Corps, but now the cost is being split 50/50 by BPA through this project. This project meets RPAs 185, 189, 190, and 193. There appears to be overlap in tasks provided in this project, Project Number 19891070, and Project Number 199105100. These projects should be critically reviewed to insure that tasks are not redundant. There is approximately \$761,000 between these projects in contracts to one consultant for statistical work. How much of this work is also being performed by NMFS and other fish and wildlife agencies?

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$1,884,200 | Rec: \$1,940,600 | Rec: \$1,998,800 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

We have reviewed our budget for BPA Project 199302900 and found the amount originally requested is necessary to complete all work as proposed.

Project: 199305600 - Assessment of Captive Broodstock Technologies

Sponsor: National Marine Fisheries Service

Short description:

Develops technologies to improve genetic integrity, in-culture survival, maturation, and re-introduction success of ESA-listed salmon captive broodstocks. Applies research on physiology, behavior, genetics, ecology, microbiology, and nutrition.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$1,468,100 | Rec: \$1,542,800 | Rec: \$1,620,400 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

We have identified potential reductions in the budget for Project 199305600, “Assessment of Captive Broodstock Technologies.” This is a research project with no planned construction, so all reductions will come from the Operation and Maintenance category. We have identified in-kind cost sharing from other related (non-BPA funded) research projects to help offset the reduction, mainly from increased sharing of laboratory supplies and equipment. In addition, we estimate cost savings from re-using video and data storage media and repairing rather than purchasing new fish culture and sampling supplies and equipment. Our proposed reduction results in an overall budget request that is 1.0% less than the FY03 budget forecast from FY01. These budget revisions result in an overall cost savings for the Assessment of Captive Broodstock Technology project of \$30.0K in FY2003, \$31.1K in FY2004, and \$32.3K in FY2005.

Project: 199403300 - The Fish Passage Center

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Provide the fishery agencies and tribes with technical expertise regarding hydrosystem operations, analysis of smolt monitoring data for daily, weekly and monthly fish passage management decisions, and regional fish passage data base management.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The project meets RPA 152 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$1,302,904 | Rec: \$1,367,440 | Rec: \$1,439,047 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

The Fish Passage Center budget proposal total for FY 2003 of \$1,316,323 is 8.6% below the forecast made in FY 2001. We believe we can reduce this budget another 1% by lowering the cost of living allowances and reducing the inflation factor, which seems reasonable considering the overall flat US economy in 2002 to date. The total reduction from the 2001 projection would then be 9.6%. However, the Fishway Inspection portion of the FPC budget, which is reimbursed by federal and state agencies, would not be reduced, but would remain at \$43,725 for 2003 and stay the same as previously projected for 2004 and 2005.

Project: 199602000 - Comparative Survival Rate Study (CSS) of Hatchery Pit Tagged Chinook & Comparative Survival Study Oversight Committee

Sponsor: Pacific States Marine Fisheries Commission & Columbia Basin Fish & Wildlife Foundation

Short description:

Adult and juvenile PIT tag recovery data are analyzed to compare survival estimates for transported fish of known origin, downriver stocks, wild and hatchery transported fish, and fish handled and not handled at dams.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project is critical to Hydrosystem Biological Opinion check-in points. It provides data and analyses to evaluate the Biological Opinion at the 2005 and 2008 check-ins. It also provides data on delayed mortality for transport and inriver groups of fish. This project addresses RPAs 46, 47, 185 and 187 of the NMFS 2000 FCRPS BiOp. The budget has been increased to include a steelhead release group and the additional tagging and analysis required.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$1,736,542 Category: Core Program | Rec: \$1,806,066 Category: Core Program | Rec: \$1,878,373 Category: Core Program |

Project Sponsor Budget Comments:

The CSS budget is difficult to change significantly without reducing the scope of work and the number of fish that are PIT tagged, since the bulk of the budget is the cost of PIT tags (65%) and they are projected to remain at a cost of \$2.25 per tag in the foreseeable future. We did, however, lower the program and oversight costs 1% by reducing the cost of living allowances and the inflation factor.

Project: 199602100 - Gas bubble disease research and monitoring of juvenile salmonids

Sponsor: U.S. Geological Survey-Biological Resources Division, Columbia River Research Lab

Short description:

Provide support for the Smolt Monitoring Program (SMP) monitoring juvenile salmonids for signs of gas bubble disease. Activities include (1) care and maintenance of equipment, (2) training, and (3) QA/QC

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The Water Quality Planning Group recognizes the importance of this project as an ongoing and required supporting component of the Biological Opinion Spill Program, e.g., the work supported by this project is required by the state water quality agencies to maintain the annual BiOp spill monitoring program. The group noted the low cost of continued implementation. Unlike the Independent Scientific Review Group, combining this project with the previous project, i.e., 35013, was deemed unnecessary.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$16,885 Category: Core Program | Rec: \$17,753 Category: Core Program | Rec: \$18,441 Category: Core Program |

Project Sponsor Budget Comments:

None.

Project: 199606700 - Manchester Spring Chinook Broodstock Project

Sponsor: National Marine Fisheries Service

Short description:

Smolt to adult seawater rearing of spring and summer chinook salmon broodstocks from Idaho's Salmon River and Oregon's Grande Ronde River subbasins. Provides adult fish for spawning or direct release in recovery programs for ESA-listed stocks.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

Captive broodstock rearing is still being investigated and has not proven absolute benefits to the stocks being protected. This study will facilitate addressing those important questions. Cost per fish is very high for this program due to the needs for the seawater life history phase of the rearing program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$877,600 Category: Urgent | Rec: \$792,000 Category: Urgent | Rec: \$767,200 Category: Urgent |

Project Sponsor Budget Comments:

We have revised our FY2003 Operation and Maintenance budget request for the Manchester Spring Chinook Broodstock project from an initial \$750K to \$717.6K. The Operation and Maintenance budget revision was gained through a combination of many small cost reductions in items of manpower, supplies, and equipment. In addition, we revised our Construction/Implementation request for the installation/upgrade of our pipeline system that is critical to the continued operation of the program from an initial \$200k in FY2003 to \$160K. This Construction/Implementation cost savings is the result of NMFS NWFSC agreeing to increase its cost sharing to cover a larger portion of the labor cost of installation of the NMFS cost share contributed pipeline. Cost savings in FY2004 and FY2005 are a result of applying a minimal inflation factor of 3.4%/year to the Operation and Maintenance budget instead of the previously used larger factor that allowed for replacement of aging critical equipment. These budget revisions result in an overall cost savings for the Manchester Spring Chinook Broodstock project of \$72.4K in FY2003, \$83.0K in FY2004, and \$139.8K in FY2004.

Project: 199702400 - Avian Predation on Juvenile Salmonids in the Lower Columbia River

Sponsor: Oregon State University/U.S. Geological Survey/Columbia River Inter-Tribal Fish Commission/Real Time Research

Short description:

Determine predation rates by waterbirds on juvenile salmonids, evaluate the efficacy of management initiatives to reduce avian predation, and assist resource managers in the development of plans for long-term management of avian predation, as warranted.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project meets RPA 101, 102 and 103 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$680,000 Category: Urgent | Rec: \$690,000 Category: Urgent | Rec: \$710,000 Category: Urgent |

Project Sponsor Budget Comments:

Budget cuts were achieved by eliminating two tasks (i.e., Task 3.2 and 3.3), increasing the cost sharing with other federal agencies for completion of Task 1.1, and increasing cost efficiencies on most of the remaining tasks.

Project: 199705900 - Securing Habitat Mitigation Sites - Oregon

Sponsor: Oregon Mitigation Coalition

Short description:

Protect, restore, enhance, and maintain NWPPC target habitat types and associated species in all Oregon subbasins within the Columbia River Basin to mitigate for impacts caused by hydro-electric facilities.

ISRP Rating: Fundable (Qualified) - no response required

Project Proposal Review Comments:

Meets some of the RPAs identified in the 2000 NOAA Fisheries Biological Opinion. This project needs to coordinate closely with Project Number 200201100, Systemwide Operational Loss Assessment.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$2,153,000 Category: Urgent | Rec: \$4,124,402 Category: Urgent | Rec: \$4,106,590 Category: Urgent |

Project Sponsor Budget Comments:

Although the initial budget request reflected a 66% reduction from the 2001 forecast, the Coalition determined that a short-term 50% reduction in habitat protection activities and related tasks could be instituted for one fiscal year without significantly undermining this programmatic project's intent to "protect, restore, enhance, and maintain priority habitats and species throughout the Columbia Basin in the state of Oregon." The 50% reduction of acquisition-related objectives and tasks resulted in a savings of \$1,890,500 for FY 2003, and a reduction \$950,931 for FY 2004 and 2005 by establishing a base level for implementation without factoring in an inflation rate. Objective/Task 1.c. was removed from the O&M Phase and Objective/Task 2.e. was removed from the M&E Phase for FY 2003. Objective/Task 1.c. (Conduct prescribed burns, in accordance with approved interim management plans) was reinstated for the 2004 and 2005 outyears. Otherwise, all Objectives and related tasks were considered essential to maintain the viability of the project. Budget reductions were the result of scoping down the acquisition-related objectives/tasks.

Significant regional issues such as credit allocation to BPA for wildlife as well as fish projects, long-term O&M for acquisitions, and quantification of FCRPS operational losses have yet to be resolved and will require active participation by Coalition members during the next year, as well as involvement in the subbasin planning process, the development of finer resolution criteria for project prioritization, and the development of M&E protocols for Oregon habitats. Maintenance of these core activities is reflected in the requested budget allocation and the interim reduction in implementation funding.

Because the "Securing Habitat Mitigation Sites – Oregon" has identified the overall spatial array of watersheds and habitat types (through the GAP Analysis) needed to protect important fish and wildlife populations, the goal to fulfill BPA's mitigation obligations for lost habitat values through concrete, habitat-based deliverables can resume when sufficient funding levels for the implementation phase of the project are provided. The reality is that short-term reduction in budget and deferral of acquisition opportunities until budgetary shortfalls and critical regional issues are addressed will result in the loss of opportunities to protect habitat that is often ecologically significant and threatened with development.

Project: 199800800 - Regional Forum Facilitation Services

Sponsor: Project is requested by the National Marine Fisheries Service, NOAA, DOC

Short description:

Provide professional facilitation services to enhance communication, assist in conflict resolution, and improve decision-making capabilities among participants in the NMFS Regional Forum Process which addresses hydropower operations for salmon.

ISRP Rating: Not applicable - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$101,000 | Rec: \$101,000 | Rec: \$101,000 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

The project sponsor provided an updated estimate of hours that will be required for facilitation for the Implementation Team, System Configuration Team, Technical Management Team, Water Quality Team, Water Quality Planning Group, and Regional Executives.

Project: 199803100 - Implement Wy-Kan-Ush-Mi Wa-Kish-Wit Watershed Assessment and Restoration Plan Now

Sponsor: Columbia River Inter-Tribal Fish Commission

Short description:

Provide effective and efficient watershed restoration through coordination and support of tribal restoration planning and project implementation consistent with the Wy-Kan-Ush-Mi Wa-Kish-Wit and the NPPC Fish & Wildlife Program.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$314,093 Category: Core Program | Rec: \$329,798 Category: Core Program | Rec: \$346,288 Category: Core Program |

Project Sponsor Budget Comments:

None

Project: 199900301 - Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams

Sponsor: Pacific States Marine Fisheries Commission, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Geological Survey, Pacific Northwest National Laboratory

Short description:

Monitor, protect, and enhance the spawning populations of fall chinook and chum below Bonneville Dam. Search for evidence of fall chinook spawning below The Dalles, John Day, and McNary dams.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

New tasks have been added. Budget needs to be reviewed. This project meets RPAs 157 and 199 of the NMFS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$994,000 Category: Urgent | Rec: \$1,044,000 Category: Urgent | Rec: \$1,096,000 Category: Urgent |

Project Sponsor Budget Comments:

Modified budget reduction includes -\$10,000 for chum genetic analysis and -\$8,000 for airplane flights to count possible chum spawning in the mainstem Columbia downstream of the I-5 bridge. The new tasks for this project total approximately \$164,000 in 2003, \$172,000 in 2004, and \$181,000 in 2005.

If further reductions are required, please refer to the full response to CBFWA.

Project: 200000700 - Infrastructure to Complete FDA Registration of Erythromycin

Sponsor: University of Idaho, College of Natural Resources

Short description:

Continue to provide agencies and tribes access to erythromycin feed additive while working to complete FDA approval of erythromycin feed additive, a therapeutant needed for sustained hatchery production and maintenance of captive broodstocks of salmon.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$160,919 | Rec: \$171,000 | Rec: \$119,000 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

The reductions I can find in my project at this time would be in the field portion of the studies under Objective 3: Conduct experiments to address the fate of erythromycin in sediment ponds with a history of erythromycin treatment. This proposed savings is based on an optimistic review letter received from the Food and Drug Administration (FDA) after the BPA proposal was submitted. The FDA indicated that the scope of the field tests of environmental aspects could be reduced, providing we identified low laboratory risks.

Project: 200001700 - Kelt Reconditioning: A Research Project to Enhance Iteroparity in Columbia Basin Steelhead (*Oncorhynchus mykiss*)

Sponsor: Columbia River Inter-Tribal Fish Commission

Short description:

Continue to test and evaluate methods to recondition steelhead kelts and/or transport them around hydro system, generate science-based management recommendations, and assist in their implementation to rebuild wild steelhead populations throughout the Basin

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has a 97% increase in costs from previous years. Significant expansion at this time may be premature due to budget constraints. Expansion to one additional

stream would allow for comparison of different stream types. This project addresses RPA 184. The project sponsor has been contacted and will provide an updated budget.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$555,121 Category: Urgent | Rec: \$544,119 Category: Urgent | Rec: \$563,688 Category: Urgent |

Project Sponsor Budget Comments:

In response to the request to scrutinize the 200001700 budget, we are currently debating the pros and cons of eliminating one of the two proposed reconditioning sites in the Snake River basin. This design reduction may constitute the least jeopardy to the scientific rigor of the kelt reconditioning program, as the remaining Snake River basin site may serve as a reasonable analogue. Thus, if such a decision is made, in conjunction with cooperating programs and personnel (see below), it could result in a potential savings in the \$ 50,000 to \$ 80,000 range, including reductions in personnel, telemetry, and capital costs; however, specific budget figures are not available until impacts of such actions are more carefully evaluated.

CRITFC project personnel were able to identify a cost savings on the Kelt Reconditioning Project (BPA 20001700) of approximately \$108K (see itemized attachment). Although not ideal to the project, we felt that elimination of one of the two Snake River reconditioning sites in the interest of cooperative budget reduction represented the least harm to the project's integrity and rigor.

For more detailed comments, refer to full response to CBFWA.

Project: 200002900 - Identification and thermal requirements of larval Pacific, river, and western brook lampreys

Sponsor: United States Geological Survey

Short description:

Determine morphological and molecular characteristics that differentiate sympatric larval lampreys and evaluate thermal tolerances of larval lampreys by species

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Fund for two years as proposed to complete project work and protect prior investment in project. This information will be useful to managers as lamprey management plans are developed. An element has been added to the identification task within the

proposal. A molecular tool is being investigated to assist with morphometric identification. This new task should be retained during funding.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|---|---|
| Rec: \$186,945 Category: Urgent | Rec: \$75,000 Category: Urgent | Rec: \$ 0 Category: Urgent |

Project Sponsor Budget Comments:

The proposal for this project describes three objectives: Objective 1) determine diagnostic characteristics of egg and larval stages of lampreys; Objective 2) evaluate temperature effects on the survival and early development of lampreys; and Objective 3) develop molecular techniques suitable for distinguishing Columbia River Basin lamprey species. The funding request for the first two of these objectives is necessary to provide a final completion product for this work as originally proposed. The funding level requested is a bare minimum already (with USGS actually picking up a greater portion of staff costs than expressed in the cost-share estimate in the proposal) and no level of reduction is possible to complete the tasks as described. Objective 3 is really an additional element of Objective 2. We described these as separate objectives in the proposal so that it would be transparent to reviewers why we needed additional funds and time. We feel this element is critical to reaching our goal of providing lamprey identification methodology to managers in the Columbia River Basin; however, since it is possible to defer this element of the work to a later year, I have placed the funding request for FY03 (\$99,095) and FY04 (\$75,000) for this element in the table below as you requested. We feel strongly that it would be more efficient to perform these activities simultaneously.

Project: 200005500 - Enhanced Conservation Enforcement for Fish and Wildlife Watersheds of the Nez Perce

Sponsor: Nec Perce Tribe - Conservation Enforcement Department

Short description:

Increase conservation law enforcement (CE) protection of fish, wildlife, critical habitats and other natural resources within watersheds managed by the Nez Perce Tribe. The CE program will be coordinated with all of the NPT resource enhancement projects.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$511,210 Category: Urgent | Rec: \$536,770 Category: Urgent | Rec: \$563,610 Category: Urgent |

Project Sponsor Budget Comments:

The Nez Perce Tribe is investigating the use of a surplus travel trailer, which may eventually reduce their budget by approximately \$11,500 (budget has not been adjusted).

Project: 200005600 - Protect Anadromous Salmonids in the Mainstem Corridor

Sponsor: Columbia River Inter-Tribal Fish Commission, Law Enforcement Department

Short description:

Protect anadromous salmonids from illegal take throughout the Columbia Basin -- with emphasis on conservation of depleted stocks. CRITFE will concentrate protection in the Zone 6 migration corridor (Bonneville to McNary dams) and focus on adult spawners.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$435,787 Category: Urgent | Rec: \$478,556 Category: Urgent | Rec: \$502,473 Category: Urgent |

Project Sponsor Budget Comments:

The project sponsors reviewed the CRITFE Mainstem Conservation Enforcement Project. They have authorized a twenty thousand dollar (\$20,000) budget reduction from the O&M Category of Project 2000-056 for FY2003 only -- to assist in your attempt to balance this year's work plan budget. Any additional budget reduction for Project 2000-056 would cause a reduction in personnel and thus a direct loss of project effectiveness. This voluntary budget reduction was made by CRITFE with the expectation that (a) additional mandatory budget cuts would not be made by NWPPC or BPA further along in the FY2003 process, and (b) consideration would be given for making funding available to the other Conservation Enforcement projects.

Project: 200100300 - ISO Adult PIT Interrogation System Installations

Sponsor: Pacific States Marine Fisheries Commission

Short description:

Provides for procurement of PIT tag interrogation system electronic components and labor for assembly and installation in adult fish ladders at Ice Harbor, Lower Granite and The Dalles in FY02/03 and at John Day, Lower Monumental and Little Goose in FY03.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

An evaluation should be done to determine the extent of cost share by GPUD and the USBOR for operating the monitoring systems. It is not appropriate for the Fish & Wildlife Program to pay the full price of the monitoring system that is applied at non-BPA dams. This project meets RPA 194 of the NMFS BiOp. This project was spun off of Project Number 198331900 in 2001 to separate Adult monitoring technology.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------|-------------------------------|-------------------------------|
| Rec: \$1,972,106 | Rec: \$1,660,200 | Rec: \$665,000 |
| Category: Core Program | Category: Core Program | Category: Core Program |

Project Sponsor Budget Comments:

The costs for the “ISO Adult PIT Interrogation System Installations” are based upon the implementation schedule discussed in regional planning forums. Costs could be deferred by making a decision to delay deployment of Adult PIT tag installations on a site by site basis. Some funds have been identified as cost share. I do not recommend removing this cost from that of the overall project. The reason for this is that the Corps of Engineers plans for installation are different from the installation assumptions made in the proposal. For example, at Ice Harbor, the proposal assumed four PIT tag detectors located at the counting windows of the Ice Harbor fish ladders. The Corps decided not to pursue the counting window approach due to technical difficulties, and have instead opted to install detectors in the weirs. This approach doubles the amount of electronics required and makes the antenna cost increase by a substantial amount.

Project: 200100700 - Evaluate live capture selective harvest methods for commercial fisheries on the Columbia River 2001-007-00.

Sponsor: Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife

Short description:

Evaluate the use of live capture commercial fishing gears and methods to capture hatchery-produced spring chinook and minimize catch of, and impact to, bycatch including ESA listed species.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has been combined with Project Number 35018. The budgets and proposals have been combined. This project meets RPAs 164 and 167 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$923,551 Category: Urgent | Rec: \$878,551 Category: Urgent | Rec: \$878,551 Category: Urgent |

Project Sponsor Budget Comments:

As the suggestions of the ISRP, two proposals evaluating commercial and recreational mark selective fisheries (35018 and 200100700 – Evaluate commercial and recreational selective fisheries) submitted for funding in the Mainstem Province by the Oregon and Washington departments of Fish and Wildlife were extensively revised and combined, then resubmitted to the ISRP for final review. To realize significant cost reductions, we have further modified the joint proposal to three objectives: Objective 1 - We will use a series of mark-recapture experiments to estimate the long-term survival of adult winter steelhead captured in and released from tangle nets used to harvest spring chinook salmon. Winter steelhead will be captured in tangle nets and at Bonneville Dam (control) and fitted with radio tags. Radiotags will be tracked throughout the Columbia River Basin using an extensive system of stationary receivers. In addition, we will estimate the net depth range in which 90% of the steelhead are captured. Objective 2 - In cooperation with contracted fishers, we will evaluate the effects of mesh size (between 3.5" and 4.5") on species-specific catch rates, condition at capture profiles, physical capture profiles, and survival rates (both immediate and short-term) of spring chinook and steelhead. Other products of this objective include an evaluation of the result of incorporating a steelhead excluder device in the tangle nets and a measure of the effectiveness of the current recovery box system. Objective 3 - We will implement, monitor, and evaluate a full-fleet demonstration fishery using live capture techniques to

harvest spring chinook salmon. This includes an education and certification program for fishers and a fishery monitoring program. The monitoring program will continue the education of fishers, estimate catch rates of target and non-target stocks, and measure immediate mortality rates on non-target stocks. This objective also includes a study to estimate the rate of multiple encounters associated with released fish and an investigation of the short-term survival rate of steelhead released from the actual fishery.

The project sponsors removed the new work associated with sportfishing evaluations.

For detailed comments, refer to the full response to CBFWA.

Project: 35010 - An Interactive Biodiversity Information System for the Columbia River Basin

Sponsor: Northwest Habitat Institute

Short description:

To complete development of a resident fish and wildlife information system on the Internet to allow users/resource managers to access, query, and retrieve spatial, text, and tabular data. Interactive and decision support tools will also be developed.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

A systemwide RM&E plan has not been developed; therefore, information needs (database elements) are unknown at this time. This is a coarse scale assessment tool. CBFWA does not support the marine fish portion of the proposed actions. This project needs to tie in to the spatial scale being implemented through subbasin planning. This project is considered a Core Program project for support for the wildlife managers planning and management.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--------------------------------|--------------------------------|--------------------------------|
| Rec: \$460,926 | Rec: \$583,902 | Rec: \$611,552 |
| Category: Core Program* | Category: Core Program* | Category: Core Program* |

* Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program.

Project Sponsor Budget Comments:

The Northwest Habitat Institute (NHI) has revised its proposed budget based on anticipation that all tasks will transpire at the highest possible efficiency. The Operation and Maintenance Phase budget has been reduced by ten percent for each year in

anticipation of greater efficiency from additional experience, supplemental training and adoption of new, emerging technologies. The Monitoring and Evaluation phases of all years have been left the same as originally proposed since they are comprised of fewer, more discrete tasks that were easy to accurately estimate.

For fiscal year 2003, NHI has kept the Planning and Design phase budget the same since success in this phase during the first year will be critical for success in the other 2003 phases and subsequent year phases. The Construction/Implementation phase budget for FY2003 has been reduced by 20 percent due to potential cost savings by overlapping some of these tasks with some of the Planning and Design phase tasks. The overlapping tasks of the Implementation phase should be more quickly achieved since the startup times will already have been absorbed in the Planning and Design phase.

For FY2004 and FY2005, both Planning and Design and Construction/Implementation phases have been reduced by ten percent. NHI believes that after working on the project full-time the first year, it will be able to more efficiently achieve subsequent tasks. Additionally, time saved through realized efficiencies in some tasks can be used to overcome problems arising in other tasks since all of the tasks are related and NHI's team will work closely together to achieve all of the tasks by the most efficient means possible.

If further reductions are required, refer to full response to CBFWA.

Project: 35019 - Develop and Implement a Pilot Status and Trend Monitoring Program for Salmonids and their Habitat in the Wenatchee and Grande Ronde River Basins

Sponsor: National Marine Fisheries Service, Northwest Fisheries Science Center

Short description:

This proposal seeks to develop, as subbasin scale pilot programs, status and trend monitoring efforts for anadromous salmonids and their habitat in the upper Wenatchee and Grande Ronde River basins.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project will provide timely information and supports the full implementation of RPA 180. This, combined with work in the Columbia Plateau, is the genesis of a region-wide RME program, long overdue. This proposal focuses on Tier II monitoring described in the 2000 NMFS BiOp. If funded, this proposal should be closely coordinated with Project Number 35033. CBFWA would also like to see this type of effort expanded to address non-salmon species.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$250,000 Category: Urgent* | Rec: \$500,000 Category: Urgent* | Rec: \$500,000 Category: Urgent* |

* Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program.

Project Sponsor Budget Comments:

All Planning and Design tasks and Monitoring and Evaluation tasks associated with coordination and facilitation will be accomplished on a cost-share basis with NMFS. All expenses of these components of the proposed work will be covered by funds from other sources (TBD). These reductions represent a reduction in the requested budget of \$100,000 over the entire performance period.

Project: 35033 - Collaborative, Systemwide Monitoring and Evaluation Program.

Sponsor: Columbia Basin Fish and Wildlife Authority

Short description:

This project proposes an integrated effort of state, tribal and federal fisheries managers to catalogue, make available, critically assess, and improve system-wide monitoring and evaluation for fish and ecosystem status.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project would develop a regional M&E effort based on existing, on the ground monitoring efforts. The proposal was developed to address the Stock Status Program Summary specifically as it relates to the NMFS BiOp, as well as other aquatic resources. The proposal is the only existing proposal that addresses all the needs that have been identified by the Federal Action Agencies RME Work Group.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$968,800 Category: Core Program* | Rec: \$968,802 Category: Core Program* | Rec: \$968,802 Category: Core Program* |

* Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program.

Project Sponsor Budget Comments:

Due to the apparent lack of available funds for new start projects, the project sponsors reduced the budget by 3% across the board.

Project: 35036 - Identify the mechanisms of stranding of juvenile fall chinook salmon in the Hanford Reach

Sponsor: U.S. Geological Survey; U.S. Fish and Wildlife Service

Short description:

Predict stranding-related mortality using a GIS and statistical approach by incorporating fish behavior and ramping rate information.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has full support from CBFWA. Other studies have been proposed, or initiated, by other entities that resemble this effort, but those studies are judged to be inadequate by these project sponsors and the reviewers.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--------------------------|--------------------------|--------------------------|
| Rec: \$250,332 | Rec: \$225,868 | Rec: \$207,000 |
| Category: Urgent* | Category: Urgent* | Category: Urgent* |

* Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program.

Project Sponsor Budget Comments:

The budget for FY03 and FY04 has been reduced by 10% from that originally proposed. We have cut back on some of the experiments that were proposed in Task 1.b., but we will still be able to provide useful information from this task. We also reduced the amount for Task 2.c., which will defer its completion, but this task is of lower priority in the first year of the study.

Project: 35002 - Determine origin, movements and relative abundance of bull trout in Bonneville Reservoir.

Sponsor: Washington Department of Fish and Wildlife; Confederated Tribes and Bands, Yakama Nation

Short description:

Determine the abundance of bull trout in Bonneville Reservoir. Monitor movements into Hood River and Klickitat River.

ISRP Rating: Fundable (Qualified) - no response required

Project Proposal Review Comments:

The RFC acknowledges that the projects objectives will aid with bull trout recovery efforts and is consistent with the goals of the NWPPC's 2000 Columbia Basin Fish and Wildlife Program and the USFWS Bull Trout Biological Opinion (2000). This project will collect some baseline data to help meet requirements 10.A.2.1, 11.A.2.1.c, and 11.A.2.1.d set forth in the FCRPS Biological Opinion for bull trout.

The RFC recommends two years funding for Objective 1 to assess the feasibility and effectiveness of capturing bull trout in Bonneville Reservoir using various trapping techniques and suggests that various capture methods may be needed during the second year of the project if none of the capture techniques are effective. Subsequent funding (Objectives 2-6) should be contingent on results of Objective 1 (e.g., capture efficacy, distribution, and relative abundance information). At the end of two years, the RFC recommends that an RFC review of the results occurs prior to the allocation of additional funds.

This proposal addresses key information needs around critical uncertainties regarding bull trout populations in the Bonneville Reservoir. Recent research (Baxter, 2001, OSU Ph.D. Dissertation) demonstrated significant use of the Snake River by Grande Ronde bull trout. The potential clearly exists for the lower river. Potential information from this project could significantly improve management actions that directly impact bull trout in the region. The project addresses a critical issue; however, the ability to address this issue through laboratory based experiments is doubtful. The project is not likely to provide definitive information for making management decisions.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$293,351 | Rec: \$305,000 | Rec: \$ 0 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

The following revised budget is based upon a reduction in scope from six objectives to two. The 2 objectives are: 1) evaluate different sampling methods for capturing bull

trout in Drano Lake, where bull trout are known to exist; and 2) determine if bull trout migrate from Bonneville Reservoir into the Klickitat River by installing and operating a trap at Lyle Falls. This budget eliminates any radio telemetry, genetic analysis, or coordination of sampling efforts. It also eliminates sampling in Bonneville Reservoir, unless objective 1 is successful in year one.

Objective 1 has been increased from 1 to 2 years to allow for any extreme environmental conditions, or adapting techniques if the first year proves unsuccessful. If objective 1 is successful in the first year, then year 2 would proceed as outlined in the original proposal, i.e. applying successful techniques in the mainstem. Objective 1 is the most difficult to accomplish, but is a necessary first step for examining bull trout in Bonneville Reservoir. It specifically addresses the Biological Opinion: 10.A.2.1: Determine the extent of bull trout use of the Lower Columbia River affected by the FCRPS and 11.A.2.1.c: ...estimate the annual population size of bull trout migrating to and from the Lower Columbia River reservoirs, and develop abundance trends over time.

Objective 2 (formerly objective 3) would be conducted for 2 years. This objective has a high likelihood to successfully determine if significant numbers of bull trout migration between the Klickitat River and Bonneville Reservoir. Objective 2 also specifically addresses the Biological Opinion: 11.A.2.1.d: ...cooperate in studies to determine the movements of bull trout from the Hood River and other tributaries into Bonneville Dam reservoir.

For a complete description of the Objectives refer to full response to CBFWA.

Project: 35020 - Regional Project Effectiveness Monitoring Program for Columbia River Basin Listed Anadromous Salmonids.

Sponsor: National Marine Fisheries Service, Northwest Fisheries Science Center

Short description:

This proposal seeks to coordinate the design and implementation of experimental monitoring projects aimed at determining the impact of specific habitat actions. As part of this effort, it will coordinate and implement two or three pilot projects.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This proposal is the genesis of a long overdue programmatic effectiveness monitoring program for the Columbia Basin. Without this type of information, managers and policymakers will continue to operate in the dark in regards to the efficacy of habitat restoration in the region. This project will provide timely information and supports the full implementation of RPA 183. This effort focuses on Tier III monitoring identified in the

2000 NMFS BiOp. If funded, this project needs to closely coordinate with the regional M&E effort proposed under Project Number 35033.

This project needs to be closely coordinated with the Innovative project (number 34008) currently being negotiated with ESSA Technologies.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$475,000 Category: Urgent | Rec: \$415,000 Category: Urgent | Rec: \$390,000 Category: Urgent |

Project Sponsor Budget Comments:

If a specific target reduction is identified, the project sponsors will revisit which of the tasks need to be removed from the work plan.

Project: 35024 - Evaluating the sublethal impacts of current use pesticides on the environmental health of salmonids in the Columbia River Basin.

Sponsor: National Marine Fisheries Service/Northwest Fisheries Science Center

Short description:

Screen for the effects of a broad range of current use pesticides on a model species (zebrafish). Evaluate the effects of specific pesticides on the physiology and fitness of at-risk chinook. Incorporate data into a model of chinook population viability.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Are other funding sources available for this project? This proposal addresses a very important issue.

The Water Quality Planning Group (WQP) recognizes the long term nature of fish research projects involving fish and toxic chemicals, e.g., current use pesticides. However, the WQP group could not reach a consensus recommendation on this project. Following are a range of comments provided by group members:

- The impacts of sub-lethal concentrations of pesticides on salmonid survival in the Columbia River is a large gap in our current knowledge base. If the impacts are significant, as current research suggests, then this knowledge needs to be factored into our overall approach to salmon recovery. For that reason, it is important to know the significance of this issue as soon as possible so that appropriate measures can be developed, i.e., this is an urgent project.

- The project proposal addresses key technical information needs and some critical uncertainties that are identified in the Mainstem and Systemwide Province Water Quality Summary, specifically, item III.D.2., Comprehensive Water Quality Knowledge in the Columbia River Basin; III.D.3. Scientific Uncertainties Associated with Water and Sediment Quality Evaluations; and III.D.4. CRITFC View of Salmon Recovery and Toxic Contaminants.
- Projects involving toxics and effects on fish often require extensive time and effort. This fact alone suggests that delaying the initiation of projects such as this can only be detrimental, i.e., the longer these projects are deferred, the longer this type of information will be unavailable to the region and salmon recovery efforts.
- Based on results recently released by EPA regarding fish tissue contamination (EPA Columbia River Basin Fish Contamination Survey, July 2002), the information these projects can provide is especially valuable to the protection of both fish and human health. As the EPA results indicate, contaminants such as dioxin, PCB's, DDT, arsenic, and mercury were present in the tissues of both resident and anadromous fish, with higher concentrations occurring in bottom feeding resident fish, such as sturgeon. Surveys have indicated that average fish consumption by CRITFC member tribes is nine times greater than that of the average American. Studies involving anadromous fish and current use pesticides (#35024) would not only be pertinent, but also timely. For the above three reasons, this is a high priority project.
- Although the Water Quality Planning Group believes that projects investigating the fate and biological effects of current-use pesticides and other toxic chemicals found in the environment are important to the region, further regional discussion is needed on what the next steps should be to develop an integrated, comprehensive research approach or work plan. In addition, topics and projects regarding toxic materials are scheduled to be addressed by the group in the next calendar year. The immediate emphases of this group are improvements in water temperature and total dissolved gas. For this reason, this project is a recommended action.
- While this may be a good project technically, at least one member felt there would not be a significant loss that could be demonstrated by not funding this project this year, or in a limited budget condition. Moreover, it is difficult to determine how this study would contribute to the management of current use pesticides in the Columbia Basin.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$304,905 Category: Urgent | Rec: \$285,000 Category: Urgent | Rec: \$285,870 Category: Urgent |

Project Sponsor Budget Comments:

This project only has two tasks, and the individual studies within each task are closely interrelated and interdependent. To ensure we can complete the work as originally proposed, we have increased the amount of cost sharing by NMFS/NWFSC. Specifically, we have removed salary support and associated overhead for the Principal Investigator from our request. This will result in a cost savings of \$58,600 for each year of the three-year study. Thus, our revised request is for \$876,375. The NWFSC will contribute salary support for the Principal Investigator (\$175,800), the equipment necessary to conduct phenotypic screens (~\$95,000), and facilities support for all project personnel as a cost share.

Project: 35027 - Evaluation of Two Captive Rearing Methods for Assisting with Recovery of Naturally Spawning Populations of Steelhead and Coho Salmon

Sponsor: U.S. Fish & Wildlife Service, U.S. Department of the Interior

Short description:

Test and evaluate two hatchery reform methodologies; Assess natural reproductive success of returning hatchery-origin adults; Establish Abernathy, Germany, and Mill creeks as a Tier 3 "monitoring and evaluation" site for anadromous salmonids.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The project sponsor is dropping the coho portion of the proposal in order to add additional tasks on steelhead in response the ISRP comments. The project sponsor will submit a revised budget that represents the proposed modifications. If this project and Project Number 35060 are funded, cost efficiencies will be available. Is there a data gap in knowledge for raising steelhead in captivity? It is the understanding of several of the reviewers that the underpinnings of captive broodstock technology were based on developing steelhead protocols.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$396,116 | Rec: \$207,800 | Rec: \$329,050 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

A revised budget was requested for #35027 by itself because of the recommendations of the ISRP, which resulted in deleting one Objective (#3) and adding a new Objective (new Objective #3) to address the potential genetic effects of culture. Overall, this reduced slightly the FY03 budget.

The project sponsor received a commitment from USFWS for funds to replace the outdated electric weir with a new electric barrier system. These new funds reduce the cost of their proposed budget (Project Number 35027 or 35027/35060 combined) by \$64,233 in FY2003 and by approximately \$500,000 in FY2004. Funds requested in FY2003 were for surveying, permitting, and design. Funds requested in FY2004 were for construction. The majority of funds requested under our reduced budget are now personnel related. We sincerely hope this new commitment of USFWS funds will greatly improve the chances of BPA funding for our proposed RME studies under Project Numbers 35027 and 35060.

The proposed budget presented here is for 35027 alone. See the full response to CBFWA for combining this project with 35060.

Project: 35030 - Evaluate potential to enhance spawning of summer/fall chinook salmon in the tailrace of Chief Joseph Dam, Columbia River

Sponsor: Pacific Northwest National Laboratory and Colville Confederated Tribes

Short description:

Evaluate the potential to increase mainstem spawning habitat for summer/fall chinook salmon in the Upper Columbia

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The urgent need for this project is to assess the current use of the tailrace for spawning and available habitat that would have the potential for spawning. The project sponsor will submit a revised budget to address these specific concerns.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|--|--|
| Rec: \$25,000 Category: Urgent | Rec: \$125,000 Category: Urgent | Rec: \$130,000 Category: Urgent |

Project Sponsor Budget Comments:

The budget has been revised to include only the redd surveys (Objective 1) during FY 2003-2005.

Project: 35041 - Monitoring the reproductive success of naturally spawning hatchery and natural spring chinook salmon in the Wenatchee, Tucannon, and Kalama Rivers

Sponsor: Washington Department of Fish and Wildlife, National Marine Fisheries Service

Short description:

Evaluate the relative fitness (mating success and progeny survival) of hatchery and wild spring chinook that spawn naturally in rivers

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The reviewers recommend a less aggressive study design to include fewer initial sampling streams due to cost considerations. The project sponsors will provide a revised study design and budget to reflect a scaled back approach.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------|-------------------------|-------------------------|
| Rec: \$830,474 | Rec: \$1,121,268 | Rec: \$994,696 |
| Category: Urgent | Category: Urgent | Category: Urgent |

Project Sponsor Budget Comments:

We have gone over our proposed budget in detail, looking for areas where cost savings could be made without substantially impacting the objectives of the project. We have also taken to heart CBFWA's recommendation to consider reducing the scope of the project in order to gain additional savings. In doing so, we have focused on ways of achieving greater efficiency within each stream system in the study, rather than eliminating an entire stream from the study. We believe that studying hatchery fish reproductive success in multiple streams is essential for achieving NMFS's conservation goals (specifically RPA's 182 and 184 in the hydrosystem biological opinion), and therefore the BPA and the NWPPC should have the opportunity to evaluate the full three-stream proposal. It is urgent to conduct this work in multiple streams throughout the Columbia River Basin at this time, because the information obtained by these experiments will be of immediate and critical relevance to fishery managers.

Nonetheless, we appreciate the CBFWA's concern that given the limiting funding available it is essential to address urgent questions as efficiently as possible. We are gratified, therefore, that we were able to substantially reduce our budget by eliminating some desirable but not absolutely essential tasks. These reductions were nearly entirely made in the tasks related to the collection of juvenile samples, which was the most labor intensive and expensive part of our proposal. By placing a greater reliance on existing juvenile sampling infrastructure and eliminating baseline smolt trapping in 2003 in all three streams, we have succeed in reducing our 2003 budget request to \$830,474 from \$1,079,140. Reductions in the 2004 and 2005 budgets are somewhat less because of

necessary smolt trapping in those years, but are also substantial (see Table 1). We describe the specific budget adjustments in more detail below.

Tucannon: We can achieve cost savings by conducting all of the juvenile trapping at the existing (lower river) smolt trap in the lower river. This trap is in a less optimal location than the new trap we originally proposed for the study, and using it will result in a reduction in statistical power compared to our original design; however, if costs saving are essential, we are confident that the goals of the project can be achieved with the existing trap.

Kalama: In the Kalama we were able to achieve considerable cost saving by putting a greater reliance on cost sharing with other projects, thereby reducing travel and personnel expenses. We also eliminated some tagging equipment that would be useful, but not absolutely essential, for our proposed study.

Wenatchee: In the Wenatchee we achieved cost savings by placing a greater reliance on cost sharing with other projects, thereby reducing travel, service, and personnel costs.

As in the original proposal, our revised budget request for 2004 remains higher than our request for 2003. There are two reasons for the high budget requirements in 2004. First, the smolt sampling, a major expense, is not scheduled to begin until FY2004. Second, in 2004 we will need to purchase an additional DNA genotyper in order to process the high number of samples necessary to conduct the study.

Project: 35052 - Conservation Enforcement to Enhance and Restore Fish & Wildlife Resources of the Upper Columbia River under Jurisdiction of the Colville Tribes

Sponsor: Confederated Tribes of the Colville Reservation

Short description:

Protect anadromous salmonids from illegal take throughout the Columbia Basin - with emphasis on conservation of depleted stocks. We will focus fish & critical habitat protection - Chief Joe tailrace, Wells Pool and Okanogan R. fisheries/water diversions.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Conservation enforcement is a very important activity that needs to be supported at some level through Fish and Wildlife Program. A broader evaluation of specific needs by subbasin should be pursued in order to put these projects into a larger context.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$241,221 Category: Urgent | Rec: \$237,422 Category: Urgent | Rec: \$250,318 Category: Urgent |

Project Sponsor Budget Comments:

A comprehensive briefing document was provided to CBFWA by the project sponsor. This briefing is available upon request from CBFWA.

We have reviewed the budget for this project and identified \$51,400 of cost savings. In FY03, the airplane flights for fishery patrol and creel survey will be deferred. In FY04 and FY05, the purchase of police equipment and navigation equipment for the CCT patrol boat will be deferred or covered by non-BPA funding sources if possible.

Project: 195505500 - Umatilla Tribal Fish & Wildlife Enforcement

Sponsor: Confederated Tribes of the Umatilla Indian Reservation

Short description:

Increase law enforcement (LE) protection to fish, wildlife, their critical habitats and other essential natural resources within watersheds managed by CTUIR. The program will be coordinated with all other resource enhancement projects of the tribe.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Conservation enforcement is a very important activity that needs to be supported through Fish and Wildlife Program. A broader evaluation of specific needs by subbasin should be pursued in order to put these projects into a larger context. This project has been identified as a new start based on the fact that no BPA funds have been obligated in recent years. However, BPA funding has been provided in the past and the project still maintains stranded personnel and equipment from those previous efforts.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$108,320 Category: Urgent | Rec: \$108,320 Category: Urgent | Rec: \$108,320 Category: Urgent |

Project Sponsor Budget Comments:

We offer to reduce the proposal from the original \$178,073 (2 FTE - enforcement officers) down to \$108,320 (1 FTE).

High Priority Projects

Project: 35008 - Systemwide Lamprey Program Coordinator

Sponsor: U.S. Geological Survey

Short description:

Provide coordination for the Lamprey Technical Working Group

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

If this project moves forward, funding should be provided to support the coordinator (part-time position). Activities under this project should lead to development of a coordinated RM&E plan for lamprey in the basin, so research and monitoring tasks can be prioritized on a systemwide basis. USFWS has indicated that they have a budget for supporting a partial FTE to support this coordination task.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|--|--|
| Rec: \$111,370 Category: High Priority | Rec: \$96,351 Category: High Priority | Rec: \$96,351 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35009 - Evaluate Status of Pacific Lamprey in the Willamette River Subbasin

Sponsor: Oregon Department of Fish and Wildlife

Short description:

Determine distribution and population status of Pacific lamprey in the Willamette River subbasin. Evaluate system-wide implications of trends in distribution and abundance of Willamette subbasin Pacific lamprey.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

There was confusion among the Lamprey project sponsors as to where lamprey project would be funded. Due to the development of a Lamprey Program Summary, the project sponsors understood that the project would be funded in this "province." Project 35008 should be funded first to coordinate lamprey research and monitoring activities, and

determine the appropriate sequence for initiating new projects. Funding could be initiated in the outyears.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$129,991 Category: High Priority | Rec: \$260,000 Category: High Priority | Rec: \$259,000 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35012 - Spatial scales of homing and the efficacy of hatchery supplementation of wild populations

Sponsor: National Marine Fisheries Service

Short description:

Determine the spatial and temporal patterns of homing and spawning by wild and hatchery-reared salmon released from supplementation facilities and examine the physiological changes in the olfactory system during imprinting.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$370,100 Category: High Priority | Rec: \$369,000 Category: High Priority | Rec: \$387,000 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35013 - Species- and site-specific impacts of gas supersaturation on aquatic animals

Sponsor: U.S. Geological Survey-Biological Resources Division, Columbia River Research Lab

Short description:

Address critical uncertainties about effects of gas supersaturation on aquatic animals

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

CBFWA supports the multi-species approach that is proposed by this project. The project has been prepared in a way that specific species could be targeted by elimination of tasks.

The Water Quality Plan Work Group comments stated:

- The information developed in this project focuses on the possible effects of TDG on both Columbia River resident species (bull trout, sturgeon and aquatic insects) and adult salmonids. Availability of this information could have a beneficial impact on listed juvenile salmonids by assisting in the state water quality agency gas waiver/variance process associated with implementing the NMFS 2000 Biological Opinion Spill Program, i.e., this information could allow for continued implementation of the BiOp spill program.
- The project addresses specific technical information needs and critical uncertainties identified in the Mainstem and Systemwide Province Water Quality Summary, III.D.1., page 53, Columbia River Basin Gas Bubble Trauma TDG Threshold.
- The “Total Maximum Daily Load (TMDL) for Lower Columbia River Total Dissolved Gas” written by the Washington and Oregon water quality agencies indicates support for evaluation of modifying water quality standards or establishing site-specific standards. Revisions of this nature would be based on protection of beneficial use and on scientific information such as proposed in this project.
- Modification of water quality standards or establishment of site-specific standards could aid the implementation of the NMFS 2000 Biological Opinion Spill Program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$263,783 Category: High Priority | Rec: \$252,831 Category: High Priority | Rec: \$178,288 Category: High Priority |

Project Sponsor Budget Comments:

Each of the five objectives of this project address a different species (or group) and can stand alone. I have reduced the budget significantly by prioritizing the species and establishing a “rolling” sequence in which we will work with two species at a time. These budget figures assume that money remaining at the end of the year will carryover in addition to the new budget. This is especially important in the first year when the funds will probably not be available until late in the fiscal year.

2003 – Bull trout & white sturgeon

2004 – Bull trout (finish), White sturgeon & Pacific lamprey

2005 – Pacific lamprey & adult salmon

Project: 35014 - Measurement of Quantitative Genetic Variation Among Columbia River Basin Chinook Propagation Programs

Sponsor: Columbia River Inter-Tribal Fish Commission/University of Idaho (Aquaculture Research Institute)

Short description:

To investigate the existence of genotype-environment interactions in salmon, the building block of local adaptation, and thus refine the concept of conservation units.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Significant technical concerns were expressed by the ISRP. The sponsor responded that the study design had been modified (substantially) to address the ISRP concerns. ISRP comments from a review of the modified proposal were not available for this review; therefore, the technical merits of the proposed study are unknown. In their response to the ISRP, the sponsor indicates that the budget was reduced to reflect changes in the study design. Information provided through this project is of limited management value, and the project is not a high priority at this time. The increasing dependence on local brood stocks in conservation/recovery hatcheries likely would not change regardless of the results of this study.

The proposed project is the genesis of Tier 1 monitoring called for in FCRPS. The sponsors provided significantly more detail in the ISRP response. This, in addition to the

track record of the proponents, warrants further consideration for funding of critical long term monitoring for the Columbia Basin.

The project sponsor provided a response to the CBFWA review. This information is available upon request from CBFWA.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$313,855 Category: High Priority | Rec: \$300,150 Category: High Priority | Rec: \$300,618 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35015 - Replicated stream system for the evaluation of hatchery and wild juvenile salmonid interaction and development of innovative culture technologies

Sponsor: University of Idaho/Columbia River Inter Tribal Fisheries Commission

Short description:

Develop sixteen independent streams using spring water at the University of Idaho Hagerman Research Station with the goal of providing a research facility for investigating interaction between wild and hatchery salmonids and rearing technique development.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$300,114 Category: High Priority | Rec: \$843,796 Category: High Priority | Rec: \$394,409 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35016 - A Pilot Study to Test Links Between Land Use / Land Cover Tier 1 Monitoring Data and Tier 2 and 3 Monitoring Data

Sponsor: Northwest Fisheries Science Center

Short description:

Pilot test use of LU/LC spatial data in Willamette subbasin as Tier 1 monitoring data base, link to Tier 2 fish data in Willamette River floodplain and Tier 3 data for floodplain restoration projects; transfer lessons of same to John Day/Wenatchee

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

This project was developed to address RPA 181.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$436,000 Category: High Priority | Rec: \$586,000 Category: High Priority | Rec: \$586,000 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35029 - Transfer IHN virus genetic strain typing technology to fish health managers

Sponsor: USGS, BRD, Western Fisheries Research Center

Short description:

Application of new genetic strain typing technology to epidemiology of IHN virus throughout the Columbia River basin, and transfer of technology to agency fish health laboratories.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This technology has a great deal of application in fish culture and may be equivalent to the ELISA technique we currently use for control of bacterial kidney disease. This sequence-based technique could be more broadly applied to other fish pathogens like the whirling disease parasite and strain differentiation of bacterial pathogens to determine the mechanism of introduction into fish culture facilities that currently are not apparent. The same DNA sequence equipment would find application in trout and salmon genetic determination as well.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$116,479 Category: High Priority | Rec: \$149,816 Category: High Priority | Rec: \$156,816 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35032 - Assess the Feasibility of Reducing Predation on Juvenile Salmonids in the Columbia River Through Operation of the Hydropower System

Sponsor: U. S. Geological Survey; Oregon Department of Fish and Wildlife

Short description:

Evaluate components of riverine habitat that might be manipulated to limit predators and predation loss. Examine and collate existing information, evaluate methods to estimate effects on predator populations, and collect additional information needed.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project was developed to address RPAs 105 and 100 of the NMFS 2000 FCRPA BiOp. This project should be scaled back to address one species at a time (i.e., smallmouth bass) and focus on locations with less potential of conflict with salmon species needs (i.e., lower snake reservoirs or John Day reservoir).

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$509,671 Category: High Priority | Rec: \$442,241 Category: High Priority | Rec: \$461,063 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35039 - The influence of hatcheries and their products on the health and physiology of naturally rearing fish

Sponsor: U.S. Geological Survey

Short description:

This research will determine whether standard hatchery or supplementation operations influence the concentration of *Renibacterium salmoninarum* in streams and subsequently affects the health of naturally-rearing salmonids

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The budget for this project needs to be closely scrutinized. The carcass portion of the project may be underway through another project or lab.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$303,448 Category: High Priority | Rec: \$652,993 Category: High Priority | Rec: \$814,700 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35042 - Evaluate the Effects of Prey Availability on Recruitment of White Sturgeon in the Columbia River

Sponsor: U.S. Geological Survey

Short description:

Ascertain how forage influences recruitment by investigating the influence of food deprivation at the onset of exogenous feeding, compare prey availability among areas with differing recruitment, and determine growth rate potential among areas.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

White sturgeon upstream from the Bonneville Dam are not listed as threatened, endangered, or sensitive; however, these populations have reduced productivity due to hydropower development. Some reservoirs upstream from Priest Rapids Dam no longer appear to support any reproduction. The project is complementary to planned restoration activities for white sturgeon conducted by states and tribes. Data provided will be useful in evaluation and interpretation of research and management activities involving release of hatchery and transplanted white sturgeon, interpreting reduced growth and recruitment in some reservoirs, and determining appropriate actions to restore reduced productivity (both planned and ongoing).

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--------------------------------|--------------------------------|--------------------------------|
| Rec: \$248,445 | Rec: \$383,000 | Rec: \$328,000 |
| Category: High Priority | Category: High Priority | Category: High Priority |

Project Sponsor Budget Comments:

Project: 35044 - Determine Effects of Contaminants on White Sturgeon Reproduction and Parental Transfer of Contaminants to Embryos in the Columbia River Basin

Sponsor: Oregon State University

Short description:

Determine contaminant load in mature sturgeon and the effects of parental transfer of contaminants on non-specific immune factors and offspring fitness. Develop a nondestructive tool to monitor sturgeon contaminant load.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The obvious, easily recognized benefit is knowledge of parental transfer, which may assist in eventual broodstock selection. Less obvious is what to do about contaminants in general. Although the hydropower system has exacerbated the contaminant problem, it is not solely responsible. Significant cost share from contaminant sources would seem appropriate.

The Water Quality Plan Work Group provided the following comments:

- The Water Quality Planning Group recognizes the long term nature of fish research projects involving contaminants and their effect on fish; however, the group could not reach a consensus recommendation on this project. Following are a range of comments provided by group members.

- Projects involving toxics and effects on fish often require extensive time and effort. This fact alone suggests that delaying the initiation of projects such as this can only be detrimental, i.e., the longer these projects are deferred, the longer this type of information will be unavailable to the region and salmon recovery efforts.
- Based on results recently released by EPA regarding fish tissue contamination (EPA Columbia River Basin Fish Contamination Survey, July 2002), the information these projects can provide is especially valuable to the protection of both fish and human health. As the EPA results indicate, contaminants such as dioxin, PCB's, DDT, arsenic, and mercury were present in the tissues of both resident and anadromous fish, with higher concentrations occurring in bottom feeding resident fish, such as sturgeon. Surveys have indicated that average fish consumption by CRITFC member tribes is nine times greater than that of the average American. Studies involving resident fish and contaminants existing in the Columbia River Basin from past activities (#35044) would not only be pertinent, but also timely. This is a high priority project.
- Projects investigating the fate and biological effects of current-use pesticides and other toxic chemicals found in the environment will be addressed by the Water Quality Planning Group in the next calendar year. The immediate emphases of this group are water temperature and total dissolved gas. The group believes it is necessary that topics regarding toxic materials be pursued on a comprehensive and integrated regional basis. Funding this proposal at this time might preclude the ability to initiate more appropriate research on this topic after regional prioritization is established. This is a do not fund.
- The results of the EPA Columbia River Basin Fish Contamination Survey (July 2002) indicates that contaminants are indeed a problem. This study would provide valuable information on how those contaminants are affecting white sturgeon survival. Since sturgeon are not threatened or endangered at present, this study has less immediate need but is important work that should be considered a recommended action.
- The project does address some of the technical needs and critical uncertainties identified in the Mainstem and Systemwide Province Water Quality Summary.
- Some participants of the Water Quality Planning Group expressed concern for the implied funding source for this project, suggesting that another avenue of funding would be more appropriate for a toxic material problem.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$652,376 Category: High Priority | Rec: \$571,746 Category: High Priority | Rec: \$530,883 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35046 - Estimate juvenile salmon residence in the Columbia River Plume using micro-acoustic transmitters.

Sponsor: National Marine Fisheries Service

Short description:

Estimate juvenile chinook salmon residence time and areas of utilization within the Columbia River plume.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project meets RPAs 17 and 193 of the NMFS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$878,300 Category: High Priority | Rec: \$1,443,300 Category: High Priority | Rec: \$3,587,000 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35047 - Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon Smolts through Snake River Dams

Sponsor: National Marine Fisheries Service

Short description:

Determine if downstream migration through Snake River dams results in extra or delayed mortality.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Before this study proceeds, the project sponsors and co-managers implementing tagging studies on the Columbia River need to meet and discuss this proposal and determine an appropriate statistical and logistical study design to resolve this critical uncertainty identified in the 2000 NMFS BiOp. CBFWA members will provide specific comments to the project sponsor.

This task is considered an urgent need for the Basin, although this proposal is not adequate for funding at this time. CBFWA recommends that the project sponsor work closely with the CSS Oversight Committee to develop a regionally accepted study design and revised proposal. The proposal should only be funded following approval from the AFC and CBFWA Members.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$1,083,900 Category: High Priority | Rec: \$923,200 Category: High Priority | Rec: \$950,900 Category: High Priority |

Project Sponsor Budget Comments:

I have reviewed the budget for the proposal "Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon Smolts Through Snake River Dams," Project # 35047. The budget is appropriate for the proposed research and tasks. A reduction in the funding request without a corresponding reduction in the scope of work would be inappropriate.

Project: 35049 - A multiscale evaluation of steelhead supplementation in the West Fork Elochoman River

Sponsor: National Marine Fisheries Service

Short description:

Evaluate the effects of the release of hatchery-reared steelhead on the growth, survival, movement, and behavior of wild salmonids in the West Fork Elochoman River.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$683,324 Category: High Priority | Rec: \$614,612 Category: High Priority | Rec: \$634,944 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35060 - Instream evaluation of populations, migration, individual adult return and wild-hatchery interactions of naturally produced salmonids

Sponsor: United States Fish and Wildlife Service

Short description:

Evaluate stock status, distribution, and abundance of juvenile and adult salmonids using new PIT tag techniques.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

This project follows up the Innovative project that developed PIT tagging technology for monitoring smolts in small streams. The goal of the project would be to develop a standardized procedure for implementing this technology throughout the Basin and expanding the sampling to include returning adults. If this project and Project Number 35027 are both funded, cost efficiencies will be available.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$229,606 Category: High Priority | Rec: \$214,185 Category: High Priority | Rec: \$197,717 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 35062 - Impacts of Flow Regulation on Riparian Cottonwood Ecosystems in the Columbia River Basin

Sponsor: University of Idaho

Short description:

Research riparian cottonwoods and geomorphic responses to regulated flows in the Yakima Basin, compare responses to an unregulated reach of the Flathead River with the objective of enhancing flows to restore riparian habitats in the Columbia Basin.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project was recently reviewed by CBFWA as a within year request. CBFWA recommended to the NWPPC that this project should be funded. CBFWA recommends that the project investigators coordinate with the regional fish and wildlife managers and related projects (e.g., Project Number 2002001100, 199705900, etc.) to better facilitate regional ecological based assessment efforts.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$382,024 Category: High Priority | Rec: \$328,383 Category: High Priority | Rec: \$333,511 Category: High Priority |

Project Sponsor Budget Comments:

None

Project: 198740100 - Assessment of Smolt Condition: Biological and Environmental Interactions

Sponsor: USGS,CRRL

Short description:

Provide research support to regional hatchery and fishery managers to determine interactions between juvenile salmonid physiological development and the environment that affect smoltification, disease resistance and smolt-to-adult returns.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

There appears to be a significant change in scope for this ongoing project. There was some question whether this project should be viewed as a new proposal, rather than an

ongoing, planned study as originally proposed. The proposal is taking on a new path in developing it's own study design and research plan. The ISRP has raised significant concerns regarding the study design. Some of the CBFWA reviewers agree with their concerns and will provide additional comment.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$187,000 Category: High Priority | Rec: \$287,000 Category: High Priority | Rec: \$375,000 Category: High Priority |

Project Sponsor Budget Comments:

2003 budget revision includes use of part-time personnel, limiting technical assistance to two ongoing projects, running smolt workshop locally to eliminate travel, and limiting site visits and meetings for coordination and set-up of 2004 and 2005 tasks.

2004 revision includes using wild/natural stock that is already part of the Upper Columbia River PIT tagging effort and elimination of seawater survival evaluation at the marine field station.

2005 revision assumes a reduction in number of sample dates, samples and number of analyses run based on 2004 results; genetic analysis by other BPA project; coordination of PIT tagging with basin-wide effort; sampling by hatchery and field crews; and elimination of seawater survival experiment at the marine field station.

Additional information was provided by the project sponsor including a response to CBFWA's review. This information is available on request from CBFWA.

Project: 20005200 - Upstream migration of Pacific lampreys in the John Day River: behavior, timing, and habitat use

Sponsor: U.S. Geological Survey

Short description:

Determine behavior (timing and movement patterns) of upstream migrating Pacific lampreys in the John Day River Basin using radiotelemetry. Characterize overwintering and spawning habitats of Pacific lampreys in the John Day River Basin.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

Significance of this project to the Mainstem/Systemwide program is not clear. This project is carried out entirely within the John Day River basin, and if a high priority need, should be funded through the Columbia Plateau province. CBFWA rated this project a High Priority in the Columbia Plateau Province. This project was initially funded as an Innovative project in 2000. The project was not funded in the Columbia Plateau because the project did not qualify as an ongoing project based on the Innovative criteria. Data has been lost due to the lack of funding during the FY 2001 and FY 2002 field seasons. One year of data (2000-2001 field season) has been collected to date.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$250,000 Category: High Priority | Rec: \$260,000 Category: High Priority | Rec: \$155,000 Category: High Priority |

Project Sponsor Budget Comments:

None

Recommended Action Projects

Project: 35003 - Vitality based studies of Delayed Mortality

Sponsor: University of Washington

Short description:

Based on the vitality survival model we will develop and deploy a field procedure to evaluate the contributions of freshwater events on delayed and extra mortality.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

A good portion of this project is being performed through other projects.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$207,180 Category: Recommended Action | Rec: \$200,375 Category: Recommended Action | Rec: \$195,103 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35006 - Use of Mainstem Habitats by Juvenile Pacific Lamprey (*Lampetra tridentata*)

Sponsor: Pacific Northwest National Laboratory

Short description:

Characterize the use of mainstem Columbia and lower Snake river habitats by juvenile Pacific lamprey and identify river reaches with high potential for restoration or expanded use.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Project 35008 should be funded first to coordinate lamprey research and monitoring activities, and determine the appropriate sequence for initiating new projects. Funding could be initiated in the outyears.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|---|
| Rec: \$100,985 Category: Recommended Action | Rec: \$142,066 Category: Recommended Action | Rec: \$90,315 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35007 - Evaluate Restoration Potential of Snake River Fall Chinook Salmon Spawning Habitat

Sponsor: Pacific Northwest National Laboratory

Short description:

The research to be conducted under this proposal will evaluate the restoration potential of mainstem habitats for fall chinook salmon, especially spawning habitat in the lower Snake River.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

This project meets RPA 155 of the 2000 NMFS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$315,000 Category: Recommended Action | Rec: \$406,700 Category: Recommended Action | Rec: \$423,300 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35017 - Inventory and Synthesis of Physical Process Models and Methods to Supplement Habitat Conditions Analysis and Subbasin Planning

Sponsor: KWA Ecological Sciences, Inc. and Golder Associates Inc.

Short description:

Engage earth scientists, civil/systems engineers, geomorphologists, hydrogeologists and others familiar with the science of physical processes. Conduct a synthesis inventory of tools and develop a Landform Library, database, web based app. and model.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

This proposal is long on concepts and short on details. The conceptual model is largely driven by physical models with little consideration of biological moderators to ecosystem function.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$769,609 Category: Recommended Action | Rec: \$348,064 Category: Recommended Action | Rec: \$473,659 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35021 - Purchase And Evaluation of Automated Marking and Tagging Systems (MATS)

Sponsor: Oregon Department of Fish and Wildlife

Short description:

ODFW proposes to purchase and further evaluate equipment designed to mass mark hatchery reared juvenile fish. The technology for automated fin marking and/or Coded Wire Tagging has recently been advanced and new equipment is available.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

Fish marking to support fishery management as identified in the proposal is the management responsibility of the project sponsor. Funds to purchase mass marking equipment should be sought through other management and regulatory forums. The project sponsor should address the ISRP comments and should also identify the proportion of effort that falls under BPA's responsibility. This project meets RPA 174 of the NMFS 2000 BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Rec: \$843,396 | Rec: \$839,797 | Rec: \$847,990 |
| Category: Recommended Action | Category: Recommended Action | Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35025 - Optimization of FCRPS Impacts on Juvenile Salmonids: Restoration of Lower-Estuary and Plume Habitats

Sponsor: Oregon Health & Science University, OGI School of Science and Engineering, Department of Environmental Science and Engineering

Short description:

Restore Columbia River estuary and plume juvenile salmonid habitats and optimize FCRPS impacts on the plume through improved understanding of estuary and plume physical processes and definition of possible future management scenarios

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Much of this work may have been accomplished during the channel deepening project that has recently undergone tremendous regional scrutiny. This project meets RPA 194 of the NMFS 2000 BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$435,192 Category: Recommended Action | Rec: \$355,705 Category: Recommended Action | Rec: \$415,428 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35026 - On-line Subbasin Planning/Watershed Newsletter

Sponsor: Intermountain Communications

Short description:

Delivers on-line news, information about Columbia Basin subbasin planning and other locally-based fish and wildlife restoration efforts to public and private stakeholders and interested parties.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

This project would expand the CBB website to include information directly related to subbasin planning. The subbasin planning master contract contains funding for public outreach. This proposal should be considered for funding through the subbasin planning placeholder currently being implemented by the NWPPC.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$115,200 Category: Recommended Action | Rec: \$120,810 Category: Recommended Action | Rec: \$126,850 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35028 - Evaluate White Sturgeon Nutritional Needs & Contaminant Effects Influenced by the Hydroelectric System

Sponsor: Portland State University

Short description:

Evaluate the effects of the hydroelectric system on white sturgeon nutritional needs and contaminant effects that would be used in white sturgeon management decisions for the mitigation and restoration of Columbia River white sturgeon populations.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

Although the hydropower system has exacerbated the contaminant problem, it is not solely responsible. Significant cost share from contaminant sources would seem appropriate.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$456,241 Category: Recommended Action | Rec: \$388,696 Category: Recommended Action | Rec: \$219,389 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35031 - Tagging Study Technical Committee

Sponsor: Bonneville Power Administration

Short description:

This project will establish a forum (the Tagging Study Technical Committee) to assist the region in mapping and tracking PIT tag studies to help identify gaps and overlaps; to coordinate funding and implementation among the Corps, BPA, and the PUDs; to

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

From a technical standpoint, all parties involved in PIT tagging in the basin agree that technical coordination among proposed and ongoing studies is necessary. Prior to finding this project a determination should be made as to whether or not existing coordination-infrastructure for fish tagging in the basin could satisfy the needs identified. Funding this project may create redundancy. Most or all of the coordination objectives

presented in this proposal may be achieved through existing committees or processes. For example, the PSMFC Regional Mark Committee coordinates coded wire tagging in the basin, and includes representatives from federal and state agencies and tribes.

CBFWA recommends that existing tagging and monitoring oversight committees review their charters to facilitate better communication and coordination between the various committees.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$150,000 Category: Recommended Action | Rec: \$160,000 Category: Recommended Action | Rec: \$170,000 Category: Recommended Action |

Project Sponsor Budget Comments:

None

**Project: 35034 - Fish Behavioral Guidance Through Water Velocity Modification
PHASE ONE**

Sponsor: Natural Solutions in Cooperative Agreement with BioSonics Inc.

Short description:

Field evaluation of a prototype mechanism for guiding juvenile and adult fish through a hydro facility. Test insitu the ability of induced turbulent flow and water velocity to simulate natural migratory ques for guiding fish to safe passage routes.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project would more appropriately be reviewed and funded through the Anadromous Fish Evaluation Program at the Corps of Engineers.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$285,020 Category: Recommended Action | Rec: \$254,280 Category: Recommended Action | Rec: \$565,296 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35035 - Incorporating PIT Tag Technology to Evaluate and Monitor the Reintroduction Effort for Anadromous Salmonids in the Upper Cowlitz Watershed

Sponsor: Washington State Dept. Fish & Wildlife

Short description:

We propose to update pit tag system to basin ISO standards at the Cowlitz Falls Dam and Fish Facility and use pit tags to monitor and measure collection, collection efficiency, smolt production, and a prototype surface collector entrance.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$203,740 Category: Recommended Action | Rec: \$141,554 Category: Recommended Action | Rec: \$145,147 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35037 - Measuring the potential for domestication selection of spawn timing in chinook captive and supplementation programs; implications for recovery.

Sponsor: School of Aquatic and Fishery Sciences, University of Washington and Northwest Fisheries Science Center, National Marine Fisheries Service

Short description:

Analyze the genetic response to (and recovery from) inadvertant domestication selection for spawn timing in supplementation and captive programs, using quantiative genetic approaches to trend analysis

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

It is unclear whether the timeline proposed will allow complete evaluation of the proposed study.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|---|
| Rec: \$129,498 Category: Recommended Action | Rec: \$135,495 Category: Recommended Action | Rec: \$68,246 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35040 - Determination of post-release survival of spring chinook salmon in a mark-selective sport fishery

Sponsor: Pacific Northwest National Laboratory

Short description:

Determine the effects of capture and release by angling on the post-release survival of spring chinook salmon and steelhead. Different groups (one control, one treatment) will be radio-tagged and tracked through spawning.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project meets RPA 167 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$268,745 Category: Recommended Action | Rec: \$281,000 Category: Recommended Action | Rec: \$295,050 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35043 - Monitoring and Models for Adaptive Management of White Sturgeon

Sponsor: US Geological Survey

Short description:

Develop a quantitative tool for adaptive management that allows feedback from monitoring data and adjust policies related to harvest translocation, and stocking.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

The end product may benefit white sturgeon. Significant benefits to some extent depend on the quality of model inputs and the current state of knowledge regarding sturgeon population characteristics. The model will serve as a framework for organizing information developed by forums of managers in a collaborative setting. Such forums will be comprised of knowledgeable fisheries managers and sturgeon biologists.

At a recent workshop more than 50 interested biologists and managers were enthusiastic about working together to develop a synthesis that addresses our current understanding of population biology, sampling techniques, conservation aquaculture, health management, genetics, status of geographic or reservoir-specific populations, and prioritizes or outlines research information gaps that impede recovery of white sturgeon populations and fisheries. Representatives from the CBFWA and from BPA agreed to help set up a web space and list-server that will allow sturgeon biologists from throughout the Basin to form working groups and contribute to the synthesis.

Project sponsors have a demonstrated track record for publishing and presenting findings in a variety of peer-reviewed forums. Workshops will be scheduled to receive information and to review products developed. The end product will likely not be distributed initially due to the need to ground truth.

Cost share shown is work that will be completed in finalizing a white sturgeon population viability analysis for Idaho Power Company. The project is complementary to planned restoration activities for white sturgeon conducted by states and tribes. Data provided will be useful in evaluation and interpretation of research and management activities intended to restore white sturgeon productivity.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$176,000 Category: Recommended Action | Rec: \$190,000 Category: Recommended Action | Rec: \$190,000 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35045 - Modeling and Information Management System to Assess Effectiveness of Alternative Actions

Sponsor: Pacific Northwest National Laboratory

Short description:

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project addresses RPA 183. The model developed by this proposal would not be directly applicable to other subbasins without creation of a supporting database. The states are not staffed up to support transfer of this model for its use in other basins and the creation of the supporting databases, or the software language that the model will be developed in. Buy-in by the participating agencies will be required for successful implementation of this project.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$500,000 Category: Recommended Action | Rec: \$500,000 Category: Recommended Action | Rec: \$500,000 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35048 - NWFSC Salmon Data Management, Analysis, and Access for Research Monitoring and Evaluation Programs

Sponsor: National Marine Fisheries Service, Northwest Fisheries Science Center

Short description:

.Assess and consolidate all listed salmon related data and metadata sources in the Columbia Basin, develop and deploy Internet-based information repository and related analysis/reporting tools in support of science based research.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The review of this project identified a need for a formal coordination between NMFS's data systems and Streamnet. We recommend that NMFS re-engage in the

Streamnet Oversight Board. Concern was expressed during the review over the use BPA funds to support NMFS corporate data support needs. As a regional M&E effort moves forward, the specific needs of various data management projects will be identified, as well as standardized data collection protocols and reporting processes. It is difficult to determine how this effort will be staffed by reading the proposal. The project sponsor also requires all data to be housed on an in-house server, which will potentially force their data to become outdated without diligent updating currently provided on other websites.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$763,150 Category: Recommended Action | Rec: \$625,000 Category: Recommended Action | Rec: \$650,000 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35051 - Evaluate Feasibility of a System-wide Multi-Agency Fish, Wildlife & Habitat Conservation Enforcement Web-Based Data Center

Sponsor: Steven Vigg & Company

Short description:

Develop a Columbia Basin web-based data center - within a GIS framework - to facilitate conservation law enforcement data compilation & analysis and information sharing for enforcement programs, resource managers, and public information & education.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$41,347 Category: Recommended Action | Rec: \$ 0 Category: Recommended Action | Rec: \$ 0 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35053 - Biological Feasibility of Reintroducing Fishwheels to the Columbia River System

Sponsor: Steward and Associates

Short description:

This project will determine whether a fishwheel can be successfully constructed and operated as selective harvest and sampling gear.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project meets RPAs 164 and 167 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|---|---|
| Rec: \$236,260 Category: Recommended Action | Rec: \$56,510 Category: Recommended Action | Rec: \$ 0 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35054 - Engaging the Public in Watershed Planning; A Tool Box for Cultural Shift

Sponsor: Columbia Basin Fish & Wildlife Authority, in partnership with Watershed Legacy Learning Community

Short description:

WATERSHED LEGACY will demonstrate the principles of participatory planning in partnership with Walla Walla and Tualatin communities in developing a set of face-to-face and web-based tools and processes for citizen engagement in watershed planning.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$278,391 Category: Recommended Action | Rec: \$182,623 Category: Recommended Action | Rec: \$154,874 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35055 - Role of Bacteria as Indicator Organisms for Watershed Assessment and in Determining Fish Pathogen Relationships with Fauna of Abernathy Creek

Sponsor: US Fish and Wildlife Service
Abernathy Fish technology Center

Short description:

The purpose of this project is to develop techniques to assess watershed health and fish health using bacteria as system indicator organisms.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project would appropriately be submitted in the Innovative category if unsuccessful in getting funded in the Systemwide "Province".

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Rec: \$76,000 | Rec: \$59,400 | Rec: \$61,200 |
| Category: Recommended Action | Category: Recommended Action | Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35056 - Develop Human Resources Necessary to Exercise Co-Management Responsibilities

Sponsor: Columbia River Inter-Tribal Fish Commission

Short description:

This proposal will assist the tribes to develop human resources necessary to exercise their co-management responsibilities, effectively manage production facilities and implement ecologically sound artificial production programs.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

Potential for reducing requested budget based on reduced overhead (indirect) calculations for pass-through scholarships. This project would assist in training Tribal members to participate and manage their mitigation hatcheries currently under construction and operation.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$405,024 Category: Recommended Action | Rec: \$420,426 Category: Recommended Action | Rec: \$441,447 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35057 - Habitat Condition and Restoration Potential of Columbia River Flood Plains: A Critical, Missing Element of Fisheries Recovery Science and Policy

Sponsor: The University of Montana

Short description:

Restoration of alluvial floodplains is critical if fisheries are expected to flourish. We will identify all floodplains in the Columbia River Basin and assess ecological integrity relative to human disturbance.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

CBFWA is reluctant to proceed with a limited (predictive) model of habitat condition/restoration potential prior to a regionally accepted methodology to determine an ecologically based operational loss assessment. CBFWA recommends that the project investigators coordinate with the regional fish and wildlife managers and related project activities (e.g., Project Number 2002001100, 199705900, etc.) to better facilitate regional ecological based assessment efforts. Criteria T8 - CBFWA is concerned about the statement in the proposal that all data collected for this project will be proprietary to the project sponsor.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$1,200,000 Category: Recommended Action | Rec: \$1,282,603 Category: Recommended Action | Rec: \$1,479,494 Category: Recommended Action |

Project Sponsor Budget Comments:

None

Project: 35063 - Compare Bacterial Fish Pathogen Populations in Hatchery Water and in Adjacent Creek Water and Evaluate Possible Disease Transfer Between Them.

Sponsor: U.S. Fish and Wildlife Service

Short description:

Determine the presence of bacterial fish pathogens within a hatchery water system and in the waters of an adjacent creek used as part of the hatchery water supply. Determine the potential for pathogen transfer between the two water systems.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$71,678 Category: Recommended Action | Rec: \$34,487 Category: Recommended Action | Rec: \$ 0 Category: Recommended Action |

Project Sponsor Budget Comments:

None

NWPPC Responsibility Projects

Project: 35005 - Independent Economic Analysis Board

Sponsor: Northwest Power Planning Council

Short description:

Analyze the cost effectiveness of fish and wildlife projects as requested by the NWPPC. Help fulfill NW Power Act requirements for cost effectiveness determination of Fish and Wildlife Program and projects

ISRP Rating: Not applicable - no response required

Project Proposal Review Comments:

CBFWA believes that it is inappropriate for this activity to be funded from the Direct Program. This is a service provided to the NWPPC and has been historically funded by the NWPPC.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility |

Project Sponsor Budget Comments:

None

Project: 198907201 - Independent Scientific Advisory Board Support

Sponsor: Department of Energy/Oak Ridge National Laboratory

Short description:

Provide support through contract with DOE for Dr. Charles Coutant for the Independent Scientific Advisory Board (ISAB), for scientific advice to the NWPPC's FWP, NMFS's ESA program, and the Columbia River Basin Indian Tribes fish and wildlife programs.

ISRP Rating: Not applicable - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility |

Project Sponsor Budget Comments:

None

Project: 199600500 - Independent Scientific Advisory Board

Sponsor: Columbia Basin Fish and Wildlife Foundation

Short description:

Provide independent scientific advice and recommendations on issues related to regional fish and wildlife recovery programs under the Northwest Power Act, the Endangered Species Act, and tribal treaties.

ISRP Rating: Not applicable - no response required

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility |

Project Sponsor Budget Comments:

Project #199600500 – ISAB – has reduced their budget from \$681,816 to \$550,277, for a savings of \$131,539. These are cost savings in the Contractor Hourly Services and Travel budget.

Project: 199800401 - Electronic Fish and Wildlife Newsletter

Sponsor: Intermountain Communications

Short description:

Delivers by e-mail (and posted on the web) to policymakers, Basin stakeholders, and general public a weekly electronic newsletter containing objective, timely, summary information about Columbia Basin fish and wildlife issues.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

This is a very important part of the Fish and Wildlife Program (information and outreach) and is strongly supported by the CBFWA members. This is a key responsibility of the NWPPC (outreach and public awareness) and funding for this project should be pursued through the NWPPC overhead budget. Funding the project through the Program puts at risk other important activities that may have a more direct impact on the recovery and mitigation of the fish and wildlife populations.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|--|--|--|
| Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility | Rec: \$0 Category: NWPPC responsibility |

Project Sponsor Budget Comments:

None

Do Not Fund Projects

Project: 35004 - Harvest Model Development

Sponsor: University of Washington

Short description:

None

ISRP Rating: Do not fund - response required

Project Proposal Review Comments:

This project is redundant to a NMFS harvest modeling project.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35011 - The Floating Net Pen Transportation System Pilot Project

Sponsor: Columbia Basin Fishery Restoration L.L.C.

Short description:

The transportation of Chinook salmon smolts in floating net pens from various fish hatcheries and collector systems ,to be released at the mouth of the Columbia River or in the Pacific Ocean.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

The proposal is technically inadequate, and does not clearly demonstrate the proposed approach would solve or alleviate current transportation issues. For example, the proposers expect improved imprinting and improved homing response through the use of net pens. Transportation would have to originate in rearing or nursery areas to achieve this outcome and methods to collect and transport juveniles from nursery areas are not presented. As proposed, the project would only investigate transportation in the Columbia River from a single hatchery.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35022 - Habitat Mitigation Tracking System

Sponsor: Steward and Associates

Short description:

Assist BPA in meeting its habitat mitigation obligation and, if appropriate, receiving credit, as specified under RPAs 180 and 183 in the FCRPS Biological Opinion.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project would establish a data base for habitat projects funded through BPA and other funding sources. The data base would try to assign specific benefits to each project by either life stage or habitat improvement using habitat surrogates for biological response. Once the data base had been developed and accepted, discussion could ensue as to possible crediting of benefits to BPA for actions taken. For this project to be successful, regional buy-in to the process is mandatory. Unless all habitat projects (BPA funded or not) are entered into the eventual database, it will not be possible to assign benefits to individual activities. There appears to be significant overlap with other database projects and the regional RM&E project currently being recommended in the Fish and Wildlife Program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35023 - Establish Relationship between Fish Passage Survival and Turbine Operating Efficiency

Sponsor: Normandeau Associates

Short description:

Provide guidance to turbine operators for maximizing passage survival; provide quantitative information for turbine rehabilitation/replacement at dams; and assess whether survival targets are met

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

Major survival benefits from this project are doubtful. This project would be more appropriately funded in the Corps of Engineers AFEP program.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35038 - Develop Computational Fluid Dynamics Model to Predict Total Dissolved Gas Below Spillways

Sponsor: ENSR International, Inc.

Short description:

Develop a computational fluid dynamics model to predict total dissolved gas levels below spillways that can be used to manage operation of a particular project and/or to predict benefit of proposed structural changes prior to their implementation.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The Corps of Engineers DGAS Program was completed in the past year. That effort included a significant amount of field monitoring and modeling work to characterize the gas generation potential of the Lower Snake and Columbia rivers FCRPS projects. Simultaneously, the SYSTDG model was developed in relation to Grand Coulee, Chief Joseph and Mid-Columbia PUD projects. As a result of these efforts, the Water Quality Planning Group members believe that little additional value would be added by initiating a new modeling effort to predict TDG below mainstem project spillways.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|--|--|
| Rec: \$0 Category: Do Not Fund | Rec: \$ 0 Category: Do Not Fund | Rec: \$ 0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35050 - UW Offsite Habitat and Fish Survival Effectiveness Monitoring

Sponsor: University of Washington

Short description:

None

ISRP Rating: Do not fund - inadequate proposal

Project Proposal Review Comments:

None

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35058 - Evaluation of food availability and juvenile salmonid growth rates under differing thermal and sediment regimes.

Sponsor: Columbia River Inter-Tribal Fish Commission

Short description:

Evaluate food availability as an index to potential salmonid growth and survival on stream continua representing varied combined land management effects, such as water temperature regime, substrate composition, and riparian condition.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

The Water Quality Planning Group agreed with the ISRP views regarding this proposal. The proposal is not fundable in its present form.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35059 - Rapid Detection of White Sturgeon Iridovirus in Spawning Fluids, Eggs and Juvenile Tissues of White Sturgeon

Sponsor: Abernathy Fish Technology Center, U. S. Fish & Wildlife Service

Short description:

Develop a rapid nested PCR assay for the detection of White Sturgeon Iridovirus from reproductive fluids, eggs and tissues of infected fish. Utilize the assay to determine viral prevalence and geographic distribution within the Columbia River Basin.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

The RFC questions the utility of the proposed work due in part to the following information that was included in Project 198806400: In cooperation with pathologists from the USFWS Dworshak Fish Health Lab and pathologists from Clear Springs Foods (Buhl, ID.), Project 198806400 has “developed and implemented non-lethal sampling procedures for detecting an endemic sturgeon pathogen, White Sturgeon Iridovirus (WSIV). This development now successfully permits the examination of recaptured hatchery released fish and wild white sturgeon adults. Prior to this development, natural prevalence was undetectable. This collaboration provides great realized and potential utility, and is directly applicable by others for similar issues throughout the geographical range of white sturgeon.”

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|------------------------------|------------------------------|------------------------------|
| Rec: \$0 | Rec: \$0 | Rec: \$0 |
| Category: Do Not Fund | Category: Do Not Fund | Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 35061 - Prophylactic Treatments for White Sturgeon Infected with the White Sturgeon Iridovirus (WSIV)

Sponsor: U.S. Fish and Wildlife Service

Short description:

This project looks at a number of different prophylactic treatments targeting secondary pathogens found in outbreaks of the White Sturgeon Iridovirus in order to minimize total mortalities.

ISRP Rating: Do not fund - no response required

Project Proposal Review Comments:

See review for Proposal 35059.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 198910700 - Statistical Support for Salmonid Survival Studies

Sponsor: University of Washington

Short description:

Improve monitoring and evaluation capabilities by developing better measurement tools and study designs to estimate juvenile and adult salmonid survival and survival relationships. Provide statistical guidance to investigators in the Columbia Basin.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

There appears to be overlap in tasks provided in this project, Project Number 199302900, and Project Number 199302900. These projects should be critically reviewed to insure that tasks are not redundant. There is approximately \$761,000 between these projects in contracts to one consultant for statistical work. How much of this work is also being performed at NMFS and other fish and wildlife agencies?

This project funds analyses that are potentially provided through other projects within the Fish and Wildlife Program. This project is funded in order for BPA to obtain statistical support. This effort should be funded through BPA's Fish and Wildlife Division overhead.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 199105100 - Monitoring and Evaluation Statistical Support

Sponsor: University of Washington

Short description:

Develop statistical methods for monitoring and evaluating salmonid recovery plans. Provide added-value analyses and statistical support on regional fisheries issues. Provide smolt migration timing predictions on the internet.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

There appears to be overlap in tasks provided in this project, Project Number 198910700, and Project Number 199302900. These projects should be critically reviewed to insure that tasks are not redundant. There is approximately \$761,000 between these projects in contracts to one consultant for statistical work. How much of this work is also being performed through NMFS and other fish and wildlife agencies? This project addresses RPAs 185, 188, and 190.

This project funds analyses that are potentially provided through other projects within the Fish and Wildlife Program. This project is funded in order for BPA to obtain statistical support. This effort should be funded through BPA's Fish and Wildlife Division overhead.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|------------------------------|------------------------------|------------------------------|
| Rec: \$0 | Rec: \$0 | Rec: \$0 |
| Category: Do Not Fund | Category: Do Not Fund | Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Project: 199601900 - Second-Tier Database Support

Sponsor: University of Washington

Short description:

Provide single-point, internet-based access to a subset of information to guide and support BPA's independent decisions pertaining to its responsibilities under the Power Act and Endangered Species Act.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

The DART website is partially redundant to the Fish Passage Center website. BPA funds DART for an independent source of information and should fund the project through BPA Fish and Wildlife Division overhead.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund | Rec: \$0 Category: Do Not Fund |

Project Sponsor Budget Comments:

None

Withdrawn Projects

Project: 35001 - Habitat Monitoring and Restoration Program for the Lower Columbia River and Columbia River Estuary

Sponsor: Lower Columbia River Estuary Partnership

Short description:

Establish ecosystem based program to identify, prioritize and implement habitat restoration projects and implement pilot project to develop habitat monitoring protocols for monitoring and evaluation of habitat protection and restoration projects.

ISRP Rating: Fundable - no response required

Project Proposal Review Comments:

The project was withdrawn by sponsor because it is redundant with funding of 35015 & 35016 in the Lower Columbia and Columbia Estuary Provinces.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: Withdrawn | Rec: \$0 Category: Withdrawn | Rec: \$0 Category: Withdrawn |

Project Sponsor Budget Comments:

None

Project: 35018 - Evaluate recreational and commercial mark-selective fisheries.

Sponsor: Washington Department of Fish and Wildlife; University of Idaho

Short description:

Estimate post-release survival of steelhead bycatch in tangle net fishery. Evaluate post-release spawning success of spring chinook and steelhead. Measure hooking mortality in recreational salmon fisheries.

ISRP Rating: Fundable only if response is adequate

Project Proposal Review Comments:

This project has been combined with project number 200100700 and the proposal is no longer viable in it's original design.

The project sponsors have combined this proposal with Project Number 200100700. If this portion of the project is funded, greater efficiencies need to be identified. This project should not necessarily be combined with the ongoing work, however, if funded the two projects should be very closely coordinated. This project meets RPAs 164 and 167 of the NMFS 2000 FCRPS BiOp.

Recommended Budget

| FY2003 | FY2004 | FY2005 |
|---|---|---|
| Rec: \$0 Category: withdrawn | Rec: \$0 Category: withdrawn | Rec: \$0 Category: withdrawn |

Project Sponsor Budget Comments:

None

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | | Project Review Comments | CBFWA Category | |
|-----------|--|---|-------------|--------------------|----|----|----|----|----|----|----|---|----|----|----|---------------------|----|----|----|---|---|---|-------------------------|--|--------------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T | M1 | M2 | M3 | M4 | M5 | M6 | M7 | | | | | | |
| 35006 | Use of Mainstem Habitats by Juvenile Pacific Lamprey (Lampetra tridentata) | Pacific Northwest National Laboratory | Lamprey | Y | Y | N | n | n | n | n | Y | Y | n | n | n | Y | Y | n | n | Y | n | n | a | Project 35008 should be funded first to coordinate lamprey research and monitoring activities, and determine the appropriate sequence for initiating new projects. Funding could be initiated in the outyears. | Recommended Action |
| 35007 | Evaluate Restoration Potential of Snake River Fall Chinook Salmon Spawning Habitat | Pacific Northwest National Laboratory | Habitat | Y | Y | Y | N | n | n | n | Y | Y | n | n | n | Y | Y | n | n | Y | Y | n | a | This project meets RPA 155 of the 2000 NMFS BIOp. | Recommended Action |
| 35008 | Systemwide Lamprey Program Coordinator | U.S. Geological Survey | Lamprey | n | Y | Y | n | n | n | n | Y | Y | n | n | n | Y | Y | n | n | Y | n | n | a | If this project moves forward, funding should be provided to support the coordinator (part-time position). Activities under this project should lead to development of a coordinated RM&E plan for lamprey in the basin, so research and monitoring tasks can be prioritized on a systemwide basis. USFWS has indicated that they have a budget for supporting a partial FTE to support this coordination task. | High Priority |
| 35009 | Evaluate Status of Pacific Lamprey in the Willamette River Subbasin | Oregon Department of Fish and Wildlife | Lamprey | Y | Y | Y | n | n | n | n | Y | Y | n | n | n | Y | Y | n | n | Y | n | n | a | There was confusion among the Lamprey project sponsors as to where lamprey project would be funded. Due to the development of a Lamprey Program Summary, the project sponsors understood that the project would be funded in this "province". Project 35008 should be funded first to coordinate lamprey research and monitoring activities, and determine the appropriate sequence for initiating new projects. Funding could be initiated in the outyears. | High Priority |
| 35010 | An Interactive Biodiversity Information System for the Columbia River Basin | Northwest Habitat Institute | Data Manag. | Y | Y | Y | n | n | n | n | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | n | a | A systemwide R,M, & E plan has not been developed, therefore information needs (database elements) are unknown at this time. This is a coarse scale assessment tool. CBFWA does not support the marine fish portion of the proposed actions. This project needs to tie in to the spatial scale being implemented through subbasin planning. This project is considered a Core Program project for support for the wildlife managers planning and management.* Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program. | Core Program* |
| 35011 | The Floating Net Pen Transportation System Pilot Project | Columbia Basin Fishery Restoration L.L.C. | Habitat | N | Y | N | Y | n | n | n | Y | Y | n | n | n | Y | Y | n | n | Y | n | n | a | The proposal is technically inadequate, and does not clearly demonstrate the proposed approach would solve or alleviate current transportation issues. For example, the proposers expect improved imprinting and improved homing response through the use of net pens. Transportation would have to originate in rearing or nursery areas to achieve this outcome, and methods to collect and transport juveniles from nursery areas are not presented. As proposed, the project would only investigate transportation in the Columbia River from a single hatchery. | Do Not Fund |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | | Project Review Comments | CBFWA Category | | |
|-----------|--|--|---------------|--------------------|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------|----|----|----|----|----|----|-------------------------|---|---------------------------|--------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | M1 | M2 | M3 | M4 | M5 | M6 | M7 | | | | |
| 35022 | Habitat Mitigation Tracking System | STEWARDS AND ASSOCIATES | Data Manag. | Y | N | N | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | n | a | This project would establish a data base for habitat projects funded through BPA and other funding sources. The data base would try to assign specific benefits to each project by either life stage or habitat improvement using habitat surrogates for biological response. Once the data base had been developed and accepted, discussion could ensue as to possible crediting of benefits to BPA for actions taken. For this project to be successful, regional buy-in to the process is mandatory. Unless all habitat projects (BPA funded or not) are entered into the eventual database, it will not be possible to assign benefits to individual activities. There appears to be significant overlap with other database projects and the regional RM&E project currently being recommended in the Fish and Wildlife Program. | Do Not Fund | |
| 35023 | Establish Relationship between Fish Passage Survival and Turbine Operating Efficiency | Normandeau Associates | M&E | N | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | n | a | n | a | Major survival benefits from this project are doubtful. This project would be more appropriately funded in the Corps of Engineers AFEP program. | Do Not Fund | |
| 35024 | Evaluating the sublethal impacts of current use pesticides on the environmental health of salmonids in the Columbia River Basin. | National Marine Fisheries Service/North west Fisheries Science Center | Water Quality | Y | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | n | a | See Response in Narrative | Urgent |
| 35025 | Optimization of FCRPS Impacts on Juvenile Salmonids: Restoration of Lower-Estuary and Plume Habitats | Oregon Health & Science University, OGI School of Science and Engineering, Department of Environmental Science and Engineering | Habitat | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | n | a | n | a | Much of this work may have been accomplished during the channel deepening project that has recently undergone tremendous regional scrutiny. This project meets RPA 194 of the NMFS 2000 BiOp. | Recommended Action | |
| 35026 | On-line Subbasin Planning/Watershed Newsletter | Intermountain Communications | Support | n | Y | Y | N | a | Y | N | n | a | Y | Y | Y | Y | Y | N | Y | n | a | n | a | This project would expand the CBB website to include information directly related to subbasin planning. The subbasin planning master contract contains funding for public outreach. This proposal should be considered for funding through the subbasin planning placeholder currently being implemented by the NWPPC. | Recommended Action | |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | | Project Review Comments | CBFWA Category |
|-----------|--|---|-----------|--------------------|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------|----|----|----|---|--------------------|----|-------------------------|----------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | M1 | M2 | M3 | M4 | M5 | M6 | M7 | | |
| 35032 | Assess the Feasibility of Reducing Predation on Juvenile Salmonids in the Columbia River Through Operation of the Hydropower System | U. S. Geological Survey; Oregon Department of Fish and Wildlife | Predation | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | This project was developed to address RPAs 105 and 100 of the NMFS 2000 FCRPA BiOp. This project should be scaled back to address one species at a time (i.e., smallmouth bass) and focus on locations with less potential of conflict with salmon species needs (i.e., lower snake reservoirs or John Day reservoir). | High Priority | | | |
| 35033 | Collaborative, Systemwide Monitoring and Evaluation Program. | Columbia Basin Fish and Wildlife Authority | M&E | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | This project would develop a regional M&E effort based on existing, on the ground monitoring efforts. The proposal was developed to address the Stock Status Program Summary specifically as it relates to the NMFS BiOp, as well as other aquatic resources. The proposal is the only existing proposal that addresses all the needs that have been identified by the Federal Action Agencies RME Work Group. * Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program. | Core Program* | | | |
| 35034 | Fish Behavioral Guidance Through Water Velocity Modification PHASE ONE | Natural Solutions in Cooperative Agreement with BioSonics Inc. | Habitat | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | This project would more appropriately be reviewed and funded through the Anadromous Fish Evaluation Program at the Corps of Engineers. | Recommended Action | | | |
| 35035 | Incorporating Pit Tag Technology to Evaluate and Monitor the Reintroduction Effort for Anadromous Salmonids in the Upper Cowlitz Watershed | Washington State Dept. Fish & Wildlife | M&E | Y | Y | n | a | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | | Recommended Action | | | |
| 35036 | Identify the mechanisms of stranding of juvenile fall chinook salmon in the Hanford Reach | U.S. Geological Survey; U.S. Fish and Wildlife Service | Habitat | Y | Y | Y | n | a | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | This project has full support from CBFWA. Other studies have been proposed, or initiated, by other entities that resemble this effort, but those studies are judged to be inadequate by these project sponsors and the reviewers. * Failing to fund this project immediately will pose a high risk of significant and immediate negative impact on successful implementation of the Fish and Wildlife Program. | Urgent* | | | |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | Management Criteria | | | | | | Project Review Comments | CBFWA Category |
|-----------|--|------------------------|----------|--------------------|----|----|----|----|----|----|----|----|-----|---------------------|----|----|----|----|----|--|--------------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | M1 | M2 | M3 | M4 | M5 | M6 | | |
| 35042 | Evaluate the Effects of Prey Availability on Recruitment of White Sturgeon in the Columbia River | U.S. Geological Survey | Sturgeon | | | | | | | | | | | | | | | | | White sturgeon upstream from Bonneville Dam are not listed as threatened, endangered, or sensitive; however, these populations have reduced productivity due to hydropower development. Some reservoirs upstream from Priest Rapids Dam no longer appear to support any reproduction. The project is complementary to planned restoration activities for white sturgeon conducted by states and tribes. Data provided will be useful in evaluation and interpretation of research and management activities involving release of hatchery and transplanted white sturgeon, interpreting reduced growth and recruitment in some reservoirs, and determining appropriate actions to restore reduced productivity (both planned and ongoing). | High Priority |
| 35043 | Monitoring and Models for Adaptive Management of White Sturgeon | US Geological Survey | Sturgeon | | | | | | | | | | | | | | | | | The end product may benefit white sturgeon. Significant benefits to some extent depend on the quality of model inputs and the current state of knowledge regarding sturgeon population characteristics. The model will serve as a framework for organizing information developed by forums of managers in a collaborative setting. Such forums will be comprised of knowledgeable fisheries managers and sturgeon biologists. At a recent workshop more than 50 interested biologists and managers were enthusiastic about working together to develop a synthesis that addresses our current understanding of population biology, sampling techniques, conservation aquaculture, health management, genetics, status of geographic or reservoir-specific populations, and prioritizes or outlines research information gaps that impede recovery of white sturgeon populations and fisheries. Representatives from the Columbia Basin Fish and Wildlife Authority and from Bonneville Power Administration agreed to help set up a web space and list-server that will allow sturgeon biologists from throughout the Basin to form working groups and contribute to the synthesis. Project sponsors have a demonstrated track record for publishing and presenting findings in a variety of peer-reviewed forums. Workshops will be scheduled to receive information and to review products developed. The end product will likely not be distributed initially due to the need to ground truth. Cost share shown is work that will be completed in finalizing a white sturgeon population viability analysis for Idaho Power Company. The project is complementary to planned restoration activities for white sturgeon conducted by states and tribes. Data provided will be useful in evaluation and interpretation of research and management activities intended to restore white sturgeon productivity. | Recommended Action |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | | Project Review Comments | CBFWA Category |
|-----------|---|---|---------------|--------------------|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------|----|----|----|----|---|--------------------|-------------------------|----------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | M1 | M2 | M3 | M4 | M5 | M6 | M7 | | |
| 35044 | Determine Effects of Contaminants on White Sturgeon Reproduction and Parental Transfer of Contaminants to Embryos in the Columbia River Basin | Oregon State University | Water Quality | Y | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | See Response in Narrative | High Priority | | |
| 35045 | Modeling and Information Management System to Assess Effectiveness of Alternative Actions | Pacific Northwest National Laboratory | Data Manag. | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | This project addresses RPA 183. The model developed by this proposal would not be directly applicable to other subbasins without creation of a supporting database. The states are not staffed up to support transfer of this model for it's use in other basins and the creation of the supporting databases, or the software language that the model will be developed in. Buy-in by the participating agencies will be required for successful implementation of this project. | Recommended Action | | |
| 35046 | Estimate juvenile salmon residence in the Columbia River Plume using micro-acoustic transmitters. | National Marine Fisheries Service | Habitat | Y | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | This project meets RPAs 17 and 193 of the NMFS BIOp. | High Priority | | |
| 35047 | Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon Smolts through Snake River Dams | National Marine Fisheries Service | M&E | N | Y | Y | N | n | a | Y | Y | Y | Y | Y | N | Y | Y | Y | n | a | Before this study proceeds, the project sponsors and co-managers implementing tagging studies on the Columbia River need to meet and discuss this proposal and determine an appropriate statistical and logistical study design to resolve this critical uncertainty identified in the 2000 NMFS BIOp. CBFWA members will provide specific comments to the project sponsor. This task is considered an urgent need for the Basin although this proposal is not adequate for funding at this time. CBFWA recommends that the project sponsor work closely with the CSS Oversight Committee to develop a regionally accepted study design and revised proposal. The proposal should only be funded following approval from the AFC and CBFWA Members. | High Priority | | |
| 35048 | NWFSC Salmon Data Management, Analysis, and Access for Research Monitoring and Evaluation Programs | National Marine Fisheries Service, Northwest Fisheries Science Center | Data Manag. | Y | Y | N | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | The review of this project identified a need for a formal coordination between NMFS's data systems and Streamnet. We recommend that NMFS re-engage in the Streamnet Oversight Board. Concern was expressed during the review over the use BPA funds to support NMFS corporate data support needs. As a regional M&E effort moves forward, the specific needs of various data management projects will be identified, as well as standardized data collection protocols and reporting processes. It is difficult to determine how this effort will be staffed by reading the proposal. The project sponsor also requires all data to be housed on an in-house server, which will potentially force their data to become outdated without diligent updating currently provided on other websites. | Recommended Action | | |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | Project Review Comments | CBFWA Category | | | | | | |
|-----------|--|--|-----------------|--------------------|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------|----|----|----|----|----|-------------------------|----------------|----|----|---|--|--|--------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | M1 | M2 | M3 | M4 | M5 | M6 | | | M7 | M8 | M9 | M10 | | |
| 35062 | Impacts of Flow Regulation on Riparian Cottonwood Ecosystems in the Columbia River Basin | University of Idaho | Habitat | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | This project was recently reviewed by CBFWA as a within year request. CBFWA recommended to the Council that this project should be funded. CBFWA recommends that the project investigators coordinate with the regional fish and wildlife managers and related projects (e.g., Project Number 2002001100, 199705900, etc.) to better facilitate regional ecological based assessment efforts. | High Priority | | |
| 35063 | Compare Bacterial Fish Pathogen Populations in Hatchery Water and in Adjacent Creek Water and Evaluate Possible Disease Transfer Between Them. | U.S. Fish and Wildlife Service | Art. Production | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Recommended Action | | |
| 195505500 | Umatilla Tribal Fish & Wildlife Enforcement | Confederated Tribes of the Umatilla Indian Reservation | Enforceme nt | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Conservation enforcement is a very important activity that needs to be supported through Fish and Wildlife Program. A broader evaluation of specific needs by subbasin should be pursued in order to put these projects into a larger context. This project has been identified as a new start based on the fact that no BPA funds have been obligated in recent years. However, BPA funding has been provided in the past and the project still maintains stranded personnel and equipment from those previous efforts. | Urgent | |
| 198201301 | Coded-Wire Tag Recovery Program | Pacific States Marine Fisheries Commission | CWT | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program. The new task that supports a statistician wholly supported by this project may be redundant and should be removed. There are currently two oversight committees for this project that provide statistical support and review of sampling methods that could address this need. The budget has been adjusted to reflect the removal of the statistician. | Core Program | |
| 198201302 | Annual Stock Assessment - Coded Wire Tag Program (ODFW) | Oregon Department of Fish and Wildlife | CWT | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program. | Core Program | |
| 198201304 | Annual Stock Assessment - Coded Wire Tag Program (WDFW) | Washington Department of Fish and Wildlife | CWT | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | BPA should fund only the appropriate share of the Fish and Wildlife Program demands on the coded wire tagging program. | Core Program |

| ProjectID | Title | Sponsor | Program | Technical Criteria | | | | | | | | | | | | Management Criteria | | | | | | | Project Review Comments | CBFWA Category |
|-----------|--|---|-----------------|--------------------|----|----|----|----|----|----|----|----|-----|-----|-----|---------------------|----|----|----|----|----|--|-------------------------|----------------------|
| | | | | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | M1 | M2 | M3 | M4 | M5 | M6 | M7 | | |
| 199105500 | Natural Rearing Enhancement Systems (NATURES) | National Marine Fisheries Service | Art. Production | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | This project has a 93% increase in cost from previous years. A significant increase in the budget is due to a robust statistical analysis of the individual components of the NATURES concept. CBFWA will determine the specific components of the proposal that should move forward now, versus, deferring funding of some activities due to cost limitations. The project sponsor provided options for funding this project so CBFWA can determine the appropriate scope of implementation. There is currently a NATURES evaluation occurring at the Cle Elum Hatchery and other hatcheries (i.e., Eagle Creek and Warm Springs hatcheries). Other NATURES evaluations need to be summarized to assist in determining whether this portion of the project needs to proceed over the next three years. The project sponsor provided options and CBFWA is recommending a reduced scope of work. The CBFWA managers have determined that the robust statistical analysis of individual components of NATURES is not deemed necessary at this time due to related efforts elsewhere within the Columbia River Basin. | Urgent | |
| 199302900 | Estimate Survival for the Passage of Juvenile Salmonids Through Dams and Reservoirs of the Lower Snake and Columbia Rivers | National Marine Fisheries Service | M&E | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | A task to perform paired trawl sampling in the lower river had previously been funded through the Corps, but now the cost is being split 50/50 by BPA through this project. This project meets RPAs 185, 189, 190, and 193. There appears to be overlap in tasks provided in this project, Project Number 19891070, and Project Number 199105100. These projects should be critically reviewed to insure that tasks are not redundant. There is approximately \$761,000 between these projects in contracts to one consultant for statistical work. How much of this work is also being performed by NMFS and other fish and wildlife agencies? | Core Program | |
| 199305600 | Assessment of Captive Broodstock Technologies | National Marine Fisheries Service | Art. Production | Y | Y | n | a | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | | Urgent | |
| 199403300 | The Fish Passage Center | Pacific States Marine Fisheries Commission | M&E | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | The project meets RPA 152 of the NMFS 2000 FCRPS BiOp. | Core Program | |
| 199600500 | Independent Scientific Advisory Board | Columbia Basin Fish and Wildlife Foundation | Support | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | Y | n | a | | NWPPC responsibility |
| 199601900 | Second-Tier Database Support | University of Washington | Data Manag. | Y | N | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | n | a | The DART website is partially redundant to the Fish Passage Center website. BPA funds DART for an independent source of information and should fund the project through BPA Fish and Wildlife Division overhead. | Do Not Fund | |

Appendix 2. CBFWA 3-year Project Recommendations for the Mainstem/Systemwide Review Cycle

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|---|--|-----------------|----------------------|----------------|------------------|-----------|-----------|-----------|
| 35001 | Habitat Monitoring and Restoration Program for the Lower Columbia River and Columbia River Estuary | Lower Columbia River Estuary Partnership | M&E | Withdrawn | | \$220,000 | \$0 | \$0 | \$0 |
| 35002 | Determine origin, movements and relative abundance of bull trout in Bonneville Reservoir. | Washington Department of Fish and Wildlife; Confederated Tribes and Bands, Yakama Nation | M&E | Urgent | | \$379,601 | \$293,351 | \$305,000 | |
| 35003 | Vitality based studies of Delayed Mortality | University of Washington | M&E | Recommended Action | | \$207,180 | \$207,180 | \$200,375 | \$195,103 |
| 35004 | Harvest Model Development | University of Washington | Harvest | Do Not Fund | | \$278,398 | \$0 | \$0 | \$0 |
| 35005 | Independent Economic Analysis Board | Northwest Power Planning Council | Support | NWPPC responsibility | | \$170,000 | \$0 | \$0 | \$0 |
| 35006 | Use of Mainstem Habitats by Juvenile Pacific Lamprey (Lampetra tridentata) | Pacific Northwest National Laboratory | Lamprey | Recommended Action | | \$100,985 | \$100,985 | \$142,066 | \$90,315 |
| 35007 | Evaluate Restoration Potential of Snake River Fall Chinook Salmon Spawning Habitat | Pacific Northwest National Laboratory | Habitat | Recommended Action | | \$315,000 | \$315,000 | \$406,700 | \$423,300 |
| 35008 | Systemwide Lamprey Program Coordinator | U. S. Geological Survey | Lamprey | High Priority | | \$111,370 | \$111,370 | \$96,351 | \$96,351 |
| 35009 | Evaluate Status of Pacific Lamprey in the Willamette River Subbasin | Oregon Department of Fish and Wildlife | Lamprey | High Priority | | \$129,991 | \$129,991 | \$260,000 | \$259,000 |
| 35010 | An Interactive Biodiversity Information System for the Columbia River Basin | Northwest Habitat Institute | Data Manag. | Core Program* | | \$432,950 | \$460,926 | \$583,902 | \$611,552 |
| 35011 | The Floating Net Pen Transportation System Pilot Project | Columbia Basin Fishery Restoration L.L.C. | Habitat | Do Not Fund | | \$3,291,275 | \$0 | \$0 | \$0 |
| 35012 | Spatial scales of homing and the efficacy of hatchery supplementation of wild populations | National Marine Fisheries Service | Art. Production | High Priority | | \$370,100 | \$370,100 | \$369,000 | \$387,000 |
| 35013 | Species- and site-specific impacts of gas supersaturation on aquatic animals | U.S. Geological Survey-Biological Resources Division, Columbia River Research Lab | Water Quality | High Priority | | \$494,249 | \$263,783 | \$252,831 | \$178,288 |
| 35014 | Measurement of Quantitative Genetic Variation Among Columbia River Basin Chinook Propagation Programs | Columbia River Inter-Tribal Fish Commission/University of Idaho (Aquaculture Research Institute) | Art. Production | High Priority | | \$313,855 | \$313,855 | \$300,150 | \$300,618 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|---|--|-----------------|--------------------|----------------|------------------|-----------|-----------|-----------|
| 35015 | Replicated stream system for the evaluation of hatchery and wild juvenile salmonid interaction and development of innovative culture technologies | University of Idaho/Columbia River Inter Tribal Fisheries Commission | Art. Production | High Priority | | \$300,114 | \$300,114 | \$843,796 | \$394,409 |
| 35016 | A Pilot Study to Test Links Between Land Use / Land Cover Tier 1 Monitoring Data and Tier 2 and 3 Monitoring Data | Northwest Fisheries Science Center | M&E | High Priority | | \$436,000 | \$436,000 | \$586,000 | \$586,000 |
| 35017 | Inventory and Synthesis of Physical Process Models and Methods to Supplement Habitat Conditions Analysis and Subbasin Planning | KWA Ecological Sciences, Inc. and Golder Associates Inc. | M&E | Recommended Action | | \$769,609 | \$769,609 | \$348,064 | \$473,659 |
| 35018 | Evaluate recreational and commercial mark-selective fisheries. | Washington Department of Fish and Wildlife; University of Idaho | Harvest | withdrawn | | \$797,420 | \$0 | \$0 | \$0 |
| 35019 | Develop and Implement a Pilot Status and Trend Monitoring Program for Salmonids and their Habitat in the Wenatchee and Grande Ronde River Basins | National Marine Fisheries Service, Northwest Fisheries Science Center | M&E | Urgent* | | \$270,000 | \$250,000 | \$500,000 | \$500,000 |
| 35020 | Regional Project Effectiveness Monitoring Program for Columbia River Basin Listed Anadromous Salmonids. | National Marine Fisheries Service, Northwest Fisheries Science Center | M&E | Urgent | | \$475,000 | \$475,000 | \$415,000 | \$390,000 |
| 35021 | Purchase And Evaluation of Automated Marking and Tagging Systems (MATS) | Oregon Department of Fish and Wildlife | CWT | Recommended Action | | \$843,396 | \$843,396 | \$839,797 | \$847,990 |
| 35022 | Habitat Mitigation Tracking System | STEWART AND ASSOCIATES | Data Manag. | Do Not Fund | | \$462,131 | \$0 | \$0 | \$0 |
| 35023 | Establish Relationship between Fish Passage Survival and Turbine Operating Efficiency | Normandeau Associates | M&E | Do Not Fund | | \$3,887,500 | \$0 | \$0 | \$0 |
| 35024 | Evaluating the sub-lethal impacts of current use pesticides on the environmental health of salmonids in the Columbia River Basin. | National Marine Fisheries Service/Northwest Fisheries Science Center | Water Quality | Urgent | | \$364,105 | \$304,905 | \$285,000 | \$285,870 |
| 35025 | Optimization of FCRPS Impacts on Juvenile Salmonids; Restoration of Lower-Estuary and Plume Habitats | Oregon Health & Science University, OGI School of Science and Engineering, Department of Environmental Science and Engineering | Habitat | Recommended Action | | \$435,192 | \$435,192 | \$355,705 | \$415,428 |
| 35026 | On-line Subbasin Planning/Watershed Newsletter | Intermountain Communications | Support | Recommended Action | | \$115,200 | \$115,200 | \$120,810 | \$126,850 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|---|--|-----------------|--------------------|----------------|------------------|--------------|--------------|--------------|
| 35027 | Evaluation of Two Captive Rearing Methods for Assisting with Recovery of Naturally Spawning Populations of Steelhead and Coho Salmon | U.S. Fish & Wildlife Service, U.S. Department of the Interior | Art. Production | Urgent | | \$472,941 | \$396,116 | \$207,800 | \$329,050 |
| 35028 | Evaluate White Sturgeon Nutritional Needs & Contaminant Effects Influenced by the Hydroelectric System | Portland State University | Sturgeon | Recommended Action | | \$456,241 | \$456,241 | \$388,696 | \$219,389 |
| 35029 | Transfer IHN virus genetic strain typing technology to fish health managers | USGS, BRD, Western Fisheries Research Center | Art. Production | High Priority | | \$116,479 | \$116,479 | \$149,816 | \$156,816 |
| 35030 | Evaluate potential to enhance spawning of summer/fall chinook salmon in the tailrace of Chief Joseph Dam, Columbia River | Pacific Northwest National Laboratory and Colville Confederated Tribes | Habitat | Urgent | | \$134,220 | \$25,000 | \$125,000 | \$130,000 |
| 35031 | Tagging Study Technical Committee | Bonneville Power Administration | M&E | Recommended Action | | \$150,000 | \$150,000 | \$160,000 | \$170,000 |
| 35032 | Assess the Feasibility of Reducing Predation on Juvenile Salmonids in the Columbia River Through Operation of the Hydropower System | U. S. Geological Survey; Oregon Department of Fish and Wildlife | Predation | High Priority | | \$509,671 | \$509,671 | \$442,241 | \$461,063 |
| 35033 | Collaborative, Systemwide Monitoring and Evaluation Program. | Columbia Basin Fish and Wildlife Authority | M&E | Core Program* | | \$998,763 | \$968,800.11 | \$968,802.05 | \$968,802.05 |
| 35034 | Fish Behavioral Guidance Through Water Velocity Modification PHASE ONE | Natural Solutions in Cooperative Agreement with BioSonics Inc. | Habitat | Recommended Action | | \$285,020 | \$285,020 | \$254,280 | \$565,296 |
| 35035 | Incorporating PIT Tag Technology to Evaluate and Monitor the Reintroduction Effort for Anadromous Salmonids in the Upper Cowlitz Watershed | Washington State Dept. Fish & Wildlife | M&E | Recommended Action | | \$203,740 | \$203,740 | \$141,554 | \$145,147 |
| 35036 | Identify the mechanisms of stranding of juvenile fall chinook salmon in the Hanford Reach | U.S. Geological Survey; U.S. Fish and Wildlife Service | Habitat | Urgent* | | \$278,132 | \$250,332 | \$225,868 | \$207,000 |
| 35037 | Measuring the potential for domestication selection of spawn timing in chinook captive and supplementation programs; implications for recovery. | School of Aquatic and Fishery Sciences, University of Washington and Northwest Fisheries Science Center, National Marine Fisheries Service | Art. Production | Recommended Action | | \$129,498 | \$129,498 | \$135,495 | \$68,246 |
| 35038 | Develop Computational Fluid Dynamics Model to Predict Total Dissolved Gas Below Spillways | ENSR International, Inc. | Water Quality | Do Not Fund | | \$604,998 | \$0 | \$0 | \$0 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|--|---|-----------------|--------------------|----------------|------------------|-------------|-------------|-------------|
| 35039 | The influence of hatcheries and their products on the health and physiology of naturally rearing fish | U.S. Geological Survey | Art. Production | High Priority | | \$303,448 | \$303,448 | \$652,993 | \$814,700 |
| 35040 | Determination of post-release survival of spring chinook salmon in a mark-selective sport fishery | Pacific Northwest National Laboratory | Harvest | Recommended Action | | \$268,745 | \$268,745 | \$281,000 | \$295,050 |
| 35041 | Monitoring the reproductive success of naturally spawning hatchery and natural spring chinook salmon in the Wenatchee, Tucannon, and Kalama Rivers | Washington Department of Fish and Wildlife, National Marine Fisheries Service | Art. Production | Urgent | | \$1,079,140 | \$830,474 | \$1,121,268 | \$994,696 |
| 35042 | Evaluate the Effects of Prey Availability on Recruitment of White Sturgeon in the Columbia River | U.S. Geological Survey | Sturgeon | High Priority | | \$248,445 | \$248,445 | \$383,000 | \$328,000 |
| 35043 | Monitoring and Models for Adaptive Management of White Sturgeon | US Geological Survey | Sturgeon | Recommended Action | | \$176,000 | \$176,000 | \$190,000 | \$190,000 |
| 35044 | Determine Effects of Contaminants on White Sturgeon Reproduction and Parental Transfer of Contaminants to Embryos in the Columbia River Basin | Oregon State University | Water Quality | High Priority | | \$652,376 | \$652,376 | \$571,746 | \$530,883 |
| 35045 | Modeling and Information Management System to Assess Effectiveness of Alternative Actions | Pacific Northwest National Laboratory | Data Manag. | Recommended Action | | \$500,000 | \$500,000 | \$500,000 | \$500,000 |
| 35046 | Estimate juvenile salmon residence in the Columbia River Plume using micro-acoustic transmitters. | National Marine Fisheries Service | Habitat | High Priority | | \$878,300 | \$878,300 | \$1,443,300 | \$3,587,000 |
| 35047 | Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon Smolts through Snake River Dams | National Marine Fisheries Service | M&E | High Priority | | \$1,083,900 | \$1,083,900 | \$923,200 | \$950,900 |
| 35048 | NWFSC Salmon Data Management, Analysis, and Access for Research Monitoring and Evaluation Programs | National Marine Fisheries Service, Northwest Fisheries Science Center | Data Manag. | Recommended Action | | \$763,150 | \$763,150 | \$625,000 | \$650,000 |
| 35049 | A multi-scale evaluation of steelhead supplementation in the West Fork Elochoman River | National Marine Fisheries Service | Art. Production | High Priority | | \$683,324 | \$683,324 | \$614,612 | \$634,944 |
| 35050 | UW Offsite Habitat and Fish Survival Effectiveness Monitoring | University of Washington | M&E | Do Not Fund | | \$177,048 | \$0 | \$0 | \$0 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|--|---|-----------------|--------------------|----------------|------------------|-------------|-------------|-------------|
| 35051 | Evaluate Feasibility of a System-wide Multi-Agency Fish, Wildlife & Habitat Conservation Enforcement Web-Based Data Center | Steven Vigg & Company | Enforcement | Recommended Action | | \$41,347 | \$41,347 | | |
| 35052 | Conservation Enforcement to Enhance and Restore Fish & Wildlife Resources of the Upper Columbia River under Jurisdiction of the Colville Tribes | Confederated Tribes of the Colville Reservation | Enforcement | Urgent | | \$245,636 | \$241,221 | \$237,422 | \$250,318 |
| 35053 | Biological Feasibility of Reintroducing Fishwheels to the Columbia River System | Steward and Associates | Harvest | Recommended Action | | \$236,260 | \$236,260 | \$56,510 | |
| 35054 | Engaging the Public in Watershed Planning: A Tool Box for Cultural Shift | Columbia Basin Fish & Wildlife Authority, in partnership with Watershed Legacy Learning Community | Support | Recommended Action | | \$278,391 | \$278,391 | \$182,623 | \$154,874 |
| 35055 | Role of Bacteria as Indicator Organisms for Watershed Assessment and in Determining Fish Pathogen Relationships with Fauna of Abernathy Creek | US Fish and Wildlife Service Abernathy Fish technology Center | Art. Production | Recommended Action | | \$76,000 | \$76,000 | \$59,400 | \$61,200 |
| 35056 | Develop Human Resources Necessary to Exercise Co-Management Responsibilities | Columbia River Inter-Tribal Fish Commission | Support | Recommended Action | | \$405,024 | \$405,024 | \$420,426 | \$441,447 |
| 35057 | Habitat Condition and Restoration Potential of Columbia River Flood Plains: A Critical, Missing Element of Fisheries Recovery Science and Policy | The University of Montana | Habitat | Recommended Action | | \$1,200,000 | \$1,200,000 | \$1,282,603 | \$1,479,494 |
| 35058 | Evaluation of food availability and juvenile salmonid growth rates under differing thermal and sediment regimes. | Columbia River Inter-Tribal Fish Commission | Water Quality | Do Not Fund | | \$218,885 | \$0 | \$0 | \$0 |
| 35059 | Rapid Detection of White Sturgeon Iridovirus in Spawning Fluids, Eggs and Juvenile Tissues of White Sturgeon | Abernathy Fish Technology Center, U. S. Fish & Wildlife Service | Sturgeon | Do Not Fund | | \$97,452 | \$0 | \$0 | \$0 |
| 35060 | Instream evaluation of populations, migration, individual adult return and wild-hatchery interactions of naturally produced salmonids | United States Fish and Wildlife Service | Art. Production | High Priority | | \$229,606 | \$229,606 | \$214,185 | \$197,717 |
| 35061 | Prophylactic Treatments for White Sturgeon Infected with the White Sturgeon Iridovirus (WSIV) | U.S. Fish and Wildlife Service | Sturgeon | Do Not Fund | | \$69,681 | \$0 | \$0 | \$0 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|--|---|-----------------|----------------------|----------------|------------------|-------------|-------------|-------------|
| 35062 | Impacts of Flow Regulation on Riparian Cottonwood Ecosystems in the Columbia River Basin | University of Idaho | Habitat | High Priority | | \$382,024 | \$382,024 | \$328,383 | \$333,511 |
| 35063 | Compare Bacterial Fish Pathogen Populations in Hatchery Water and in Adjacent Creek Water and Evaluate Possible Disease Transfer Between Them. | U.S. Fish and Wildlife Service | Art. Production | Recommended Action | | \$71,678 | \$71,678 | \$34,487 | |
| 195505500 | Umatilla Tribal Fish & Wildlife Enforcement | Confederated Tribes of the Umatilla Indian Reservation | Enforcement | Urgent | \$0 | \$178,073 | \$108,320 | \$108,320 | \$108,320 |
| 198201301 | Coded-Wire Tag Recovery Program | Pacific States Marine Fisheries Commission | CWT | Core Program | \$2,330,180 | \$2,989,812 | \$2,672,053 | \$2,745,294 | \$2,910,012 |
| 198201302 | Annual Stock Assessment - Coded Wire Tag Program (ODFW) | Oregon Department of Fish and Wildlife | CWT | Core Program | \$208,413 | \$218,132 | \$217,881 | \$225,000 | \$231,000 |
| 198201304 | Annual Stock Assessment - Coded Wire Tag Program (WDFW) | Washington Department of Fish and Wildlife | CWT | Core Program | \$332,887 | \$334,412 | \$319,137 | \$330,307 | \$341,868 |
| 198331900 | New Marking and Monitoring Techniques for Fish | National Marine Fisheries Service | M&E | Urgent | \$712,280 | \$878,000 | \$816,500 | \$798,300 | \$508,600 |
| 198605000 | White Sturgeon Mitigation and Restoration in the Columbia and Snake Rivers Upstream from Bonneville Dam | Oregon Department of Fish and Wildlife | Sturgeon | Urgent | \$2,415,224 | \$2,041,140 | \$1,984,000 | \$2,167,000 | \$2,040,029 |
| 198712700 | Smolt Monitoring by Federal and Non-Federal Agencies | Pacific States Marine Fisheries Commission | M&E | Core Program | \$2,269,287 | \$2,481,100 | \$2,435,941 | \$2,533,379 | \$2,634,714 |
| 198740100 | Assessment of Smolt Condition: Biological and Environmental Interactions | USGS,CRRL | Art. Production | High Priority | \$233,955 | \$256,000 | \$187,000 | \$287,000 | \$375,000 |
| 198810804 | StreamNet | Pacific States Marine Fisheries Commission | Data Manag. | Core Program | \$2,164,967 | \$4,211,435 | \$2,261,033 | \$2,383,924 | \$2,503,120 |
| 198906201 | Fish and Wildlife Program Implementation | Columbia Basin Fish & Wildlife Authority | Support | Core Program | \$2,093,000 | \$2,217,415 | \$2,217,415 | \$2,266,872 | \$2,339,575 |
| 198906500 | Annual Stock Assessment - CWT (USFWS) | US Fish and Wildlife Service | CWT | Core Program | \$117,972 | \$119,268 | \$119,268 | \$126,424 | \$133,973 |
| 198907201 | Independent Scientific Advisory Board Support | Department of Energy/Oak Ridge National Laboratory | Support | NWPPC responsibility | \$103,427 | \$100,027 | \$0 | \$0 | \$0 |
| 198909600 | Monitor and evaluate genetic characteristics of supplemented salmon and steelhead | National Marine Fisheries Service, Northwest Fisheries Science Center | Art. Production | Urgent | \$263,163 | \$593,900 | \$593,900 | \$460,500 | \$478,960 |
| 198910700 | Statistical Support for Salmonid Survival Studies | University of Washington | M&E | Do Not Fund | \$255,707 | \$265,850 | \$0 | \$0 | \$0 |
| 199007700 | Northern Pikeminnow Management Program | Pacific States Marine Fisheries Commission | Predation | Urgent | \$2,910,792 | \$0 | \$2,870,000 | \$3,151,000 | \$3,079,000 |
| 199008000 | Columbia Basin Pit Tag Information System | Pacific States Marine Fisheries Commission | M&E | Core Program | \$1,499,165 | \$2,532,711 | \$2,431,442 | \$2,480,071 | \$2,529,672 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|--|---|-----------------|----------------------|----------------|------------------|-------------|-------------|-------------|
| 199009300 | Genetic Analysis of Oncorhynchus nerka (modified to include chinook salmon) | University of Idaho | Art. Production | Urgent | \$135,003 | \$126,436 | \$126,436 | \$126,000 | \$98,000 |
| 199105100 | Monitoring and Evaluation Statistical Support | University of Washington | M&E | Do Not Fund | \$379,517 | \$394,655 | \$0 | \$0 | \$0 |
| 199105500 | Natural Rearing Enhancement Systems (NATURES) | National Marine Fisheries Service | Art. Production | Urgent | \$517,000 | \$1,158,969 | \$559,800 | \$578,800 | \$598,600 |
| 199302900 | Estimate Survival for the Passage of Juvenile Salmonids Through Dams and Reservoirs of the Lower Snake and Columbia Rivers | National Marine Fisheries Service | M&E | Core Program | \$1,010,319 | \$1,884,200 | \$1,884,200 | \$1,940,600 | \$1,998,800 |
| 199305600 | Assessment of Captive Broodstock Technologies | National Marine Fisheries Service | Art. Production | Urgent | \$1,344,200 | \$1,498,981 | \$1,468,100 | \$1,542,800 | \$1,620,400 |
| 199403300 | The Fish Passage Center | Pacific States Marine Fisheries Commission | M&E | Core Program | \$1,229,012 | \$1,316,323 | \$1,302,904 | \$1,367,440 | \$1,439,047 |
| 199600500 | Independent Scientific Advisory Board | Columbia Basin Fish and Wildlife Foundation | Support | NWPPC responsibility | \$728,064 | \$681,876 | \$0 | \$0 | \$0 |
| 199601900 | Second-Tier Database Support | University of Washington | Data Manag. | Do Not Fund | \$252,111 | \$275,111 | \$0 | \$0 | \$0 |
| 199602000 | Comparative Survival Rate Study (CSS) of Hatchery Pit Tagged Chinook & Comparative Survival Study Oversight Committee | Pacific States Marine Fisheries Commission & Columbia Basin Fish & Wildlife Foundation | M&E | Core Program | \$449,220 | \$1,742,776 | \$1,736,542 | \$1,806,066 | \$1,878,373 |
| 199602100 | Gas bubble disease research and monitoring of juvenile salmonids | U.S. Geological Survey-Biological Resources Division, Columbia River Research Lab | Water Quality | Core Program | \$16,069 | \$16,885 | \$16,885 | \$17,753 | \$18,441 |
| 199606700 | Manchester Spring Chinook Broodstock Project | National Marine Fisheries Service | Art. Production | Urgent | \$568,700 | \$950,000 | \$877,600 | \$792,000 | \$767,200 |
| 199702400 | Avian Predation on Juvenile Salmonids in the Lower Columbia River | Oregon State University/U.S. Geological Survey/Columbia River Inter-Tribal Fish Commission/Real Time Research | Predation | Urgent | \$663,827 | \$713,000 | \$680,000 | \$690,000 | \$710,000 |
| 199705900 | Securing Habitat Mitigation Sites - Oregon | Oregon Mitigation Coalition | Support | Urgent | \$7,525,964 | \$4,043,000 | \$2,153,000 | \$4,124,402 | \$4,106,590 |
| 199800401 | Electronic Fish and Wildlife Newsletter | Intermountain Communications | Support | NWPPC responsibility | \$171,230 | \$179,800 | \$0 | \$0 | \$0 |
| 199800800 | Regional Forum Facilitation Services | Project is requested by the National Marine Fisheries Service, NOAA, DOC | Support | Core Program | \$123,414 | \$153,300 | \$101,000 | \$101,000 | \$101,000 |
| 199803100 | Implement Wy-Kan-Ush-Mi Wa-Kish-Wit Watershed Assessment and Restoration Plan Now | Columbia River Inter-Tribal Fish Commission | Support | Core Program | \$299,136 | \$314,093 | \$314,093 | \$329,798 | \$346,288 |
| 199900301 | Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams | Pacific States Marine Fisheries Commission, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Geological Survey, Pacific Northwest National Laboratory | Habitat | Urgent | \$636,349 | \$1,012,405 | \$994,000 | \$1,044,000 | \$1,096,000 |

| ProjectID | Title | Sponsor | Program | CBFWA Category | FY2002 Funding | Proposed FY 2003 | FY03 | FY04 | FY05 |
|-----------|--|---|-----------------|----------------|----------------|------------------|-------------|-------------|-----------|
| 200000700 | Infrastructure to Complete FDA Registration of Erythromycin | University of Idaho, College of Natural Resources | Art. Production | Urgent | \$76,017 | \$166,419 | \$160,919 | \$171,000 | \$119,000 |
| 200001700 | Keit Reconditioning: A Research Project to Enhance Iteroparity in Columbia Basin Steelhead (Oncorhynchus mykiss) | Columbia River Inter-Tribal Fish Commission | Art. Production | Urgent | \$235,733 | \$633,292 | \$555,121 | \$544,119 | \$563,688 |
| 200002900 | Identification and thermal requirements of larval Pacific, river, and western brook lampreys | United States Geological Survey | Lamprey | Urgent | \$79,609 | \$186,945 | \$186,945 | \$75,000 | |
| 200005200 | Upstream migration of Pacific lampreys in the John Day River: behavior, timing, and habitat use | U.S. Geological Survey | Lamprey | High Priority | \$0 | \$250,000 | \$250,000 | \$260,000 | \$155,000 |
| 200005500 | Enhanced Conservation Enforcement for Fish and Wildlife Watersheds of the Nez Perce | Nez Perce Tribe - Conservation Enforcement Department | Enforcement | Urgent | \$481,340 | \$511,210 | \$511,210 | \$536,770 | \$563,610 |
| 200005600 | Protect Anadromous Salmonids in the Mainstem Corridor | Columbia River Inter-Tribal Fish Commission, Law Enforcement Department | Enforcement | Urgent | \$434,082 | \$455,787 | \$435,787 | \$478,556 | \$502,473 |
| 200100300 | ISO Adult Pit Interrogation System Installations | Pacific States Marine Fisheries Commission | M&E | Core Program | \$1,174,590 | \$1,972,106 | \$1,972,106 | \$1,660,200 | \$665,000 |
| 200100700 | Evaluate live capture selective harvest methods for commercial fisheries on the Columbia River 2001-007-00. | Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife | Harvest | Urgent | \$659,368 | \$579,039 | \$923,551 | \$878,551 | \$878,551 |

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