

**Independent Scientific Review Panel  
for the Northwest Power Planning Council**

**Preliminary Review**

of

**Fiscal Year 2002 Project Proposals  
for the Mountain Columbia Province**

ISRP 2001-2  
February 9

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# ISRP Preliminary Review of Fiscal Year 2002 Proposals for the Mountain Columbia Province

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24001	Lake Pend Oreille Predation Research	Idaho Fish and Game	No, fundable.	4
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24003	Acquire and conserve high priority bull and westslope cutthroat trout habitat in Trestle Creek.	Idaho Department of Fish and Game	Yes	13
24004	Pend Oreille/Priest Exotic Fish Species Suppression and Native Fish Protection	Idaho Department of Fish and Game	Yes	13
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24006	Pend Oreille Erosion Abatement and Landform Restoration	Idaho Department of Fish and Game	Yes	14
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24013	Assessment of Operational Impacts of Hungry Horse Dam on Riparian Wildlife habitats and their associated aquatic components	Montana Department of Fish, Wildlife and Parks	No, do not fund.	40
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24015	Wetland/Riparian Protection, Restoration, Enhancement and Maintenance in the Coeur d'Alene Subbasin	Coeur d'Alene Tribe	Yes	18
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24017	Restoring Bull Trout Habitat in The Blackfoot River's North Fork	Trout Unlimited's Western Water Project	Yes	20
24018	Secure and Restore Critical Fish and Wildlife Habitats	Confederated Salish and Kootenai Tribes	Yes	20
24019	Research, Monitor, and Restore Native Species	Confederated Salish & Kootenai Tribes	Yes	22
24020	Center for GIS Analysis and Information in the Coeur d'Alene Subbasin	Coeur d'Alene Tribe	No, fundable.	7
24021	Implement Floodplain Operational Loss Assessment, Protection, Mitigation and Rehabilitation on the Lower Kootenai River Watershed Ecosystem	Kootenai Tribe of Idaho	Yes	23
24023	Purchase Conservation Easement from Plum Creek Timber Company (PCT) along Fisher River	Montana Fish, Wildlife & Parks	No, fundable.	8
24025	Pend Oreille Subbasin Native Westslope Cutthroat Population Study	Washington Trout	Yes	24
198806400	Kootenai River White Sturgeon Studies and Conservation Aquaculture	Kootenai Tribe of Idaho	Yes	25
198806500	Kootenai River Fisheries Recovery Investigations	Idaho Department of Fish and Game	No, fundable.	9
199004400	Implement Fisheries Enhancement Opportunities on the Coeur d'Alene Reservation	Coeur d'Alene Tribe	Yes	26

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199101903	Hungry Horse Mitigation	Montana Fish, Wildlife & Parks	Yes	31
199101904	Stocking of offsite waters for Hungry Horse Mitigation - Creston National Fish Hatchery	U.S. Fish and Wildlife Service	No, fundable.	10
199106000	Pend Oreille Wetlands Wildlife Mitigation Project - Kalispel	Kalispel Tribe of Indians	Yes	32
199206100	Albeni Falls Wildlife Mitigation Project	Albeni Falls Interagency Work Group	Yes	33
199404700	Lake Pend Oreille Fishery Recovery Project	Idaho Department of Fish and Game	No, fundable.	11
199404900	Improving the Kootenai River Ecosystem	Kootenai Tribe of Idaho	No, fundable.	11
199500100	Kalispel Tribe Resident Fish	Kalispel Tribe of Indians	Yes	34
199500400	Mitigation For The Construction And Operation Of Libby Dam	Montana Department of Fish, Wildlife and Parks	Yes	35
199608720	Focus Watershed Coordination in the Kootenai River Watershed	Montana Department of Fish, Wildlife and Parks	Yes	37
199700400	Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams	Kalispel Tribe of Indians	Yes	38
200000400	Monitor and protect bull trout for Koocanusa Reservoir.	BC Environment	Yes	38

# **ISRP Preliminary Review of Fiscal Year 2002 Proposals for the Mountain Columbia Province**

## **Introduction**

This report provides preliminary comments and recommendations of the Independent Scientific Review Panel (ISRP) and Peer Review Groups on projects submitted for Fiscal Year 2002 funding in the Mountain Columbia Province. It provides project sponsors and the public an opportunity to respond to ISRP concerns before the ISRP makes its final recommendation to the Council on April 6, 2001. This report also provides information to the Columbia Basin Fish and Wildlife Authority for its use in project prioritization.

The Mountain Columbia review is the third conducted under the new province review process. The ISRP continues to support this new approach

## **ISRP Review Process for Preliminary Report**

Project evaluation and selection occur in several steps. This report marks the end of the first step, which included peer review of proposals and subbasin summaries, site visits to the provinces, and project sponsor presentations. This first step and subsequent steps in the process are described below.

### ***Site Visits***

Unlike the Columbia River Gorge and Inter-Mountain province site visits, the Mountain Columbia site visit occurred before the reviewers had proposals in hand. This schedule was dictated by the inaccessibility of sites in the winter. The Mountain Columbia review team comprised two groups that visited the province on August 31 and September 1, 2000. One group visited the Pend Oreille and Coeur d'Alene subbasins. The other group visited the Kootenai and Flathead subbasins. The team profited from informal discussions with project leaders during the visits. These discussions combined with oral presentations at Kalispell were invaluable in identifying potential issues and clarifying the nature of the projects.

However, a process in which proposals are reviewed before a site visit is preferable. The detail contained in proposals provides context and specificity to a site review. The sequence of subbasin summaries, proposals, tours, oral presentations and ISRP deliberations, as occurred for the Inter-Mountain and Columbia Gorge provinces, is the most effective.

### ***Proposal Review***

By December 20<sup>th</sup>, proposals for the Mountain Columbia were distributed to the ISRP and CBFWA review teams. At least three ISRP/Peer Review Group members reviewed and commented on each proposal prior to the proposal review workshop. These comments were used by the ISRP to scope questions for the workshop presentations but

were not made available to the project sponsors at the workshop. At least one ISRP reviewer was assigned to be familiar with any technical background material submitted with the proposal.

### ***Project Presentations***

The Mountain Columbia project presentation workshop was held on January 17-18 in Kalispell, Montana. Each set of subbasin presentations began with a subbasin summary. Project sponsors then presented a summary of their project. Following each presentation, there was an opportunity for a question and answer session between reviewers and the project proponents. Projects were limited to about 15 minutes for the presentation and follow-up questions.

Overall, the presentations were an improvement over those in the Gorge and Inter-Mountain province workshops. Sponsors made good use of maps (which often should have been included in the proposal) to describe the limiting factors they proposed to address. However, many presentations were simply reiterations of material in the proposals and failed to present the project as a component of a sound subbasin mitigation and recovery strategy. Most subbasin summaries and presentations of ongoing projects failed to present data demonstrating the biological results of past efforts. Demonstrated benefits to fish and wildlife is a basic review criterion and its absence is a glaring omission in this and previous reviews.

### ***Review Team Evaluation Meeting***

On January 19, the ISRP review team met alone to discuss the review, evaluate project proposals, and reach consensus on proposal evaluations. Findings from the review are included in this preliminary report.

## **Background on Preliminary Recommendations**

Preliminary recommendations and comments are provided for each proposal. These recommendations are split into three basic categories: 1) fundable, further ISRP response review is not needed (10 projects); 2) a response review is needed (25 projects); and 3) do not fund, a response is not warranted (3 projects).

Proposals receiving “a response review is needed” will not be recommended for funding until information addressing reviewer concerns is provided. A project will be recommended as fundable only if the response adequately addresses reviewer comments. Many of the ISRP comments on proposals in the “response needed” category contain language such as “fundable, but a response is needed” or “fundable in part ...” This is to inform the sponsors and CBFWA about the level of the ISRP’s concerns.

## **The Next Step: ISRP Response Review and CBFWA Prioritization**

With the release of this report, project proponents and the public have the opportunity to respond to the ISRP's preliminary report. Responses should focus on the technical comments, answer all review questions, and clarify uncertain information. Responses should be formatted to address concerns point by point, clearly identifying each concern and providing a response. The title and project number of the proposal should be displayed prominently on the front page of the response.

Responses and comments must be received at the Northwest Power Planning Council no later than 5 p.m., February 23, 2001. Please email responses and comments to [kphillips@nwppc.org](mailto:kphillips@nwppc.org). Attachments should be in Microsoft Word or Excel (for tables).

If email is not available, please mail the response and diskette/CD to:  
Northwest Power Planning Council  
Attention: Kendra Phillips  
Response to ISRP  
851 SW 6<sup>th</sup> Avenue, Suite 1100  
Portland, OR 97204

The Council staff will verify that responses were received and successfully downloaded via email. If you have any questions regarding the response process please contact Erik Merrill at the Northwest Power Planning Council at (503) 222-5161 or 1-800-452-5161, or by email: [emerrill@nwppc.org](mailto:emerrill@nwppc.org). If you need assistance incorporating graphs or maps in your response, please contact Eric Schrepel at the Council or by email: [eschrepel@nwppc.org](mailto:eschrepel@nwppc.org).

Concurrently, CBFWA, with the ISRP's technical review in hand, will generate a list of projects recommended for funding and finalize the subbasin summaries as part of its draft annual implementation work plan. The work plan is scheduled for release in mid-March. For more details on the CBFWA process and province reviews in general see [www.cbfwa.org](http://www.cbfwa.org)

The ISRP will then review the responses and CBFWA's recommended list of projects and provide a second and final report to the Northwest Power Planning Council by April 6, 2001.



## **The Final Step: Northwest Power Planning Council Recommendations to the Bonneville Power Administration**

Based on the advice provided by CBFWA and the ISRP, the Council makes the final selection of annual projects and transmits funding recommendations to Bonneville. If Council decisions differ notably from recommendations of the ISRP, the basis of their decisions is documented and included in the Council's final recommendations.

### **Preliminary Recommendation and Comments on Each Proposal**

ISRP recommendations and comments are presented in order of ISRP category (Fundable, A Response is Requested, Do Not Fund) then project number.

#### ***Fundable: A Response is not Requested***

ProjectID: 24001

Lake Pend Oreille Predation Research

**Sponsor:** Idaho Fish and Game

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$141,000

**3 YR Estimate:** \$444,000

**Short Description:** Project seeks to balance predators with the kokanee prey base in Lake Pend Oreille, reduce competition between bull trout and other predators, and to enhance or decrease the rainbow trout population as the kokanee population changes.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. This project proposes to use hydroacoustic surveys coupled with cluster analysis and tagging studies to define fish species abundances in order to achieve a balance between kokanee populations and their rainbow and lake trout predators. The brief proposal adequately describes methods. The investigators are qualified and the project has a high likelihood of reaching its analysis objectives. Whether it can reach its management objectives remains to be seen over time.

The sponsors should carefully segregate the costs between their base project and this one. This could be contracted as a new task within the old project. Is Bonneville the appropriate source of funding for the derby? Sponsors should consider educating the public on keeping the rainbows and the value of catch and release in various scenarios. They should also consider a prize for the most fish caught or pounds caught. The proposal would have been stronger if the derby and prize money incentive strategy were supported by references that demonstrated the veracity of this approach. It was not clear that adding \$5K to fishing derby prizes would significantly increase the number of lake and rainbow trout killed. Some better justification is needed. Also, proposal 24004 would provide \$10K for identical prize money (duplication?). Further, why is prize

money not matched by IDFG funds? These comments do not require a response to the ISRP but are for consideration by the investigators, the Council, and CBFWA.

**ProjectID: 24005**

Smith Creek Restoration

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Kootenai

**FY02 Request:** \$52,680

**3 YR Estimate:** \$358,040

**Short Description:** Restore lower Smith Creek stream channel to improve native fish habitat and complement wetland restoration.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. This is a proposal to restore about one-half mile of lower Smith Creek between its mouth at the Kootenai River and an impassable falls approximately two miles upstream of the mouth. The intent is to improve habitat currently used by a remnant kokanee run from Kootenay Lake, through return of the stream to its natural channel. Restoration of this reach of Smith Creek would bypass the current ditch linking the creek at the floodplain edge directly to the river. This ditch has little useful fish habitat, whereas the restored original creek channel should have much more, both in quantity and quality. The restoration would be a component of overall wetland restoration in the adjacent lands under the NRCS's Wetland Reserve Program. Proposers have acted in cooperation with permitting agencies (COE, IDWR), and the project would complement a conservation management project of the NRCS Wetland Reserve Program. The project constitutes a practical alternative to a channel-cleaning project being proposed to protect private property from erosion. The panel applauded inclusion of explicit monitoring and evaluation tasks; which would monitor the effect of restored natural riparian habitat on several species of fish.

The proposal is somewhat meager. The absence of a map was mitigated somewhat by the presentation, but location information should have been included in the proposal. Further, background on negative impacts of stream channelization, and specifics regarding salmonid habitat or lack thereof in the Kootenai River basin, is thin. Other BPA-funded or other projects are not mentioned. On the positive side, anticipated results from restoration are given, and the work is related to the Subbasin Summary and Idaho's 1996 fish management plan. Overall, although aspects of the proposal are lacking, the project would have a large benefit to fish and wildlife, and merits funding.

**ProjectID: 24007**

Characterize and Assess Wildlife-Habitat Types and Structural Conditions for Sub-Basins within the Mountain Columbia Ecoprovince

**Sponsor:** Northwest Habitat Institute

**Subbasin:** Mountain Columbia

**FY02 Request:** \$327,600

**3 YR Estimate:** \$490,140

**Short Description:** Fine-scale wildlife habitat assessment for the Inter-Mountain Ecoprovince will produce critical baseline data for planning and monitoring efforts that is consistent within the NWPPC Framework wildlife-habitat relationships process.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. The proposal makes a convincing case for the value of presenting complex habitat information in map form. The investigators have demonstrated the ability to produce high-quality maps at the Columbia Basin level. The project would develop Landsat maps of wildlife-habitat types for the Mountain Columbia subbasin at a finer level of resolution than is currently available. The maps would be made available to wildlife managers for the development of “coarse filter” conservation strategies. Subbasin summaries, while not directly calling for these maps, do demonstrate a need for mapping products.

The sponsor responded adequately to the ISRP's previous comments on the need for validation. Ample field-testing and verification are included in the project. Good detail on validation methods is provided. If this proposal and proposal #24020 are funded, they should be coordinated to avoid duplication.

**ProjectID: 24008**

Genetic Inventory of Bull Trout and Westslope Cutthroat Trout in the Pend Oreille Subbasin

**Sponsor:** Kalispel Tribe of Indians

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$243,490

**3 YR Estimate:** \$450,490

**Short Description:** Establish a genetic sampling program for bull trout and westslope cutthroat in the Pend Oreille Subbasin. This information will be used in the recovery of bull trout in the Lower Pend Oreille Recovery Unit and to document hybridization among westslope.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. Bull trout and westslope cutthroat trout will be collected (by electrofishing) from 60 locations in the Pend Oreille subbasin in Washington, Idaho, and British Columbia by the Kalispel Tribe, WDFW, IDFG, and a consultant. Genetic analysis from fin portions, done by WDFW and representing the most costly component of the project, would assess the extent of hybridization with non-native salmonids.

This project seems to be consistent with the goals and objectives of the subbasin summary. The proposal is concise and has clear goals. The information should help to clarify population structures and dynamics (gene flow). The microsatellite DNA analysis proposed is an important component of the management of threatened populations.

**ProjectID: 24020**

Center for GIS Analysis and Information in the Coeur d'Alene Subbasin

**Sponsor:** Coeur d'Alene Tribe

**Subbasin:** Coeur d'Alene

**FY02 Request:** \$180,700

**3 YR Estimate:** \$563,100

**Short Description:** Provide GIS analysis and act as central data repository for all organizations within the Coeur d'Alene Subbasin

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable, but the priority given to this activity is a policy issue that depends on the extent to which this project duplicates other efforts, including the Council's subbasin planning.

This is a proposal to develop a Coeur d'Alene Tribe GIS central data repository and to provide GIS training and analysis services in the Coeur d'Alene Subbasin. It builds on work already done in water and soils for the subbasin with plans to update the server and integrate biological data to the existing GIS system. There are good plans for coordinating with other agencies and GIS users and for monitoring the effectiveness of each stage of the project. Plans for information transfer are reasonable. The education component looks good. Personnel are well qualified to perform the tasks described.

Given that there is a need for GIS capability within the subbasin, the project proponents still need to think about how this can best be provided. Duplicating services available elsewhere makes little sense. For example, aren't well-developed GIS services available through the federal land management agencies (USFS, BLM)? Couldn't funding be requested for a high-speed network connection to state and/or federal agencies to help local GIS expertise support FWP activities in the basin?

The history of GIS centers is that they take on a life of their own with escalating costs over time. The GIS center should work toward being self-supporting, an idea to which the Tribe is receptive.

**ProjectID: 24023**

Purchase Conservation Easement from Plum Creek Timber Company (PCT) along Fisher River

**Sponsor:** Montana Fish, Wildlife & Parks

**Subbasin:** Kootenai

**FY02 Request:** \$500,000

**3 YR Estimate:** \$1,500,000

**Short Description:** Purchase perpetual conservation easement on 56,400 acres (163 stream miles) of PCT lands along the Fisher River to preclude subdivision/development; protect fish habitat, maintain public recreational opportunities, and insure responsible management.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable, but benefits to fish and wildlife might be better assured with a more restrictive conservation easement. This is a proposal for partial funding (about 5 percent of the total cost) of purchase of a conservation easement for Plum Creek Timber Lands in the Fisher River watershed (a tributary of the Kootenai River below Libby Dam), primarily the bottomlands. Limiting development of the area will help establish refuges for wild stocks and prevent further habitat degradation. It will also provide a touchstone or reference point for habitat restoration efforts within the basin. Although this is a new proposal, it has been proposed and favorably reviewed for the past two years but not funded. The acquisition of a conservation easement for this huge block of land, in addition to the planned acquisition of the Thompson River project, “will result in completion of most, and possibly all, of the wildlife mitigation goals for both Libby and Hungry Horse dams.” The current proposal has a reduced BPA commitment and greater commitment by other funding sources than the original proposal two years ago (now heavily supported by the state of Montana). The negotiated easement includes establishment of baseline forestry practices (not restoration projects), restriction of residential development, and preservation of recreation. The project would offer benefit to both fish and wildlife. Plum Creek would apply an existing Habitat Conservation Plan (HCP) to these lands and is stated to have monitoring in place. The proposal is straightforward and succinct. The significance is illustrated by an array of relevant regional plans and other BPA-funded projects. The acquisition is related to other non-BPA projects. Conventional tasks and methods do not apply, although the narrative outlines the acquisition process.

The ISRP offers the comments below for consideration by the sponsors:

- Success of this proposal seems to depend on things that have not proven dependable in the past. It needs the continuing support of the landowner (present and future), protection from politicians, adherence to water allocation guides during low flow periods and years, and adherence to what is referred to here as “reasonable” forest management practices. Can the required agreements be written so that they are enforceable, will exist in perpetuity, and even though the language says that the agreement can be changed by mutual consent, permit only trivial changes?

- Many of headwater areas are outside the area to be “protected.” Is there any assurance that they will be protected from disruption?

**ProjectID: 198806500**

Kootenai River Fisheries Recovery Investigations

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Kootenai

**FY02 Request:** \$825,391

**3 YR Estimate:** \$2,834,892

**Short Description:** Recover the Kootenai River white sturgeon, develop a recovery plan for burbot and bull trout, improve fishing for rainbow and cutthroat trout and mountain whitefish, rehabilitate ecosystem health.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. This is a well-prepared proposal that addresses the deficiencies noted in the FY 2000 ISRP review. The technical and scientific background is complete, well organized by topic, and includes numerous pertinent references to the literature. The proposal links its work to all relevant plans, specifically including the FWP, Subbasin Summary, Idaho’s regional plan, and the FWS’s BiOp and Recovery Plan. There are specific linkages discussed with other projects, with the strong statement that this work is collaborative with others. The proposal showed strong indication of active cooperation between KTOI and BCME. There is a good listing and narrative showing the project history in terms of funding, studies, and principal results. The objectives and tasks are well organized and expressed. The methods are well described. Monitoring and evaluation constitute a large part of the program and the relevant objectives, tasks and methods are well presented. Facilities, equipment, and personnel are described and are appropriate for the work. Information transfer has been a strong feature of this project and its professional staff, and the proposal indicates that this information transfer will continue. There is less direct evidence in the proposal of basinwide coordination for sturgeon studies than is shown for Project 198806400. The benefit to fish and wildlife from this project should be high, with no negative side effects. However, the hypotheses for reduced recruitment are still evolving, and further consideration of alternative hypotheses seems desirable. For example, the actual physical processes involved with the relationship of spawning location to lake elevation were not discussed and could form the basis for additional hypotheses.

The sturgeon program objectives seemed reasonable and would take advantage of "new" information to propose a test of the hypothesis that fish will spawn in the cobble at RM 242 if Kootenay Lake elevation is held high enough. However, this may be very expensive emergency room surgery without being sure of the exact causes of the patients' maladies. The stress assessment objective for burbot still shows no indication that it would be done by qualified personnel. These comments do not require a response, but are for the benefit of the investigators.

**ProjectID: 199101904**

Stocking of offsite waters for Hungry Horse Mitigation - Creston National Fish Hatchery

**Sponsor:** U.S. Fish and Wildlife Service

**Subbasin:** Flathead

**FY02 Request:** \$106,672

**3 YR Estimate:** \$329,712

**Short Description:** Produce hatchery fish for offsite stocking to mitigate losses to Flathead Lake caused by construction and operation of Hungry Horse Dam.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable, this is a continuation proposal for use of Creston National Fish Hatchery for the production of westslope cutthroat trout and rainbow trout for stocking in waters chosen by the MDFWP and CSKT. This is a clear, concise, well-written proposal and is much simplified from earlier proposals, and simply reflects the hatching and rearing components of the state and tribal management agencies' stocking programs. Gone is the plan for Lake McDonald rehabilitation, as proposed last year. Gone is specific responsibility for species and lakes to be stocked.

The proposal is straightforward and clear. The background section is mostly history of the hatchery's involvement rather than scientific/technical background for stocking. The significance is given in the context of both the Subbasin Summary and the Fish and Wildlife Program (with sections cited). The proposal cites relevant projects in the basin and the constrained role of the hatchery in those programs. The project history is given well, including stocking data. Objectives and tasks are clear and limited. The essence of methods is provided with details referred to the HGMP. Monitoring and evaluation are discussed as the responsibility of the management agencies, and the essence of the approach is given. Facilities and equipment are appropriate, and the hatchery manager is experienced. Information transfer is to a limited audience—the management agencies. The benefit to fish and wildlife is largely to the fisheries in closed lakes and to wild stocks on which fishing mortality does not occur as a result of alternative fishing opportunities.

The management agency (MFWP) has studied the potential for doing damage to organisms such as amphibians in the stocked waters and concluded that it is not a problem.

**ProjectID: 199404700**

Lake Pend Oreille Fishery Recovery Project

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$362,000

**3 YR Estimate:** \$1,100,000

**Short Description:** Project researches ways to recover the impacted fisheries of Lake Pend Oreille and the upper Pend Oreille River.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable. This excellent proposal rates high on all counts. Favorable ISRP comments and recommendation from last year still apply. The researcher has consistently addressed concerns raised by the ISRP and other scientific peer reviews. Although not very different from last year, as much of the effort is a continuing monitoring and evaluation operation, the proposal is updated with the Subbasin Summary and FWS BiOp as further rationale for the project.

**ProjectID: 199404900**

Improving the Kootenai River Ecosystem

**Sponsor:** Kootenai Tribe of Idaho

**Subbasin:** Kootenai

**FY02 Request:** \$710,891

**3 YR Estimate:** \$3,535,891

**Short Description:** Identify the most appropriate and effective management strategies to enhance aquatic biota in the Kootenai River Ecosystem and recover native species assemblages across multiple trophic levels.

**Response to ISRP comments requested:** No, fundable.

**Comments:**

Fundable, but with comments for consideration by investigators (no ISRP response needed). This proposal and project remain the broadest of the several Kootenai River projects. The attention is to the whole ecosystem rather than to the more limited fish species components of other studies. Various components of the ecosystem either are or have been studied by this project or others. Integration has been accomplished by cooperative development of an ecosystem model and an adaptive management process. The project is strongly cast as leading up to potential whole-ecosystem fertilization of the Kootenai River, in parallel with Canadian whole ecosystem fertilization projects for Kootenay Lake and Arrow Lake. The study has also become the vehicle for BPA to pay for fertilizer for the Canadian fertilization projects.

The lack of focus and unclear direction perceived last year by the ISRP has largely been corrected. There is now an excellent scientific background section, with plenty of scientific references, some from this study. The information is well organized by topic, and the evidence for environmental problems is well summarized. The proposal ties this work to all relevant plans, including the FWP, the Subbasin Summary, the federal Biological Opinion and Recovery Plan for sturgeon and other species, CBFWA's multi-



year implementation Plan, and the local River Network. Specific sections of these plans are cited. The proposal emphasizes the role of this project in overall, long-term, cooperative planning for improving the Kootenai River ecosystem from the Montana border to (and into) Kootenay Lake. With fertilization as a long-range objective (based on results of prior work), the project logically proposes use of mesocosms to first test fertilization on a small scale. Responsiveness of the lower trophic levels at the mesocosm level will foster confidence that whole-ecosystem fertilization could work to improve the system productivity.

The relationships to other projects funded by BPA are clearly presented. However, more detail about relevant non-BPA projects would have been informative. The project history is good, with good references, a good progression of logic, and a good sense of progressively integrating the accumulated knowledge of the river basin. There are well-written objectives keyed to major aspects of the work, coupled with good tasks for each objective. Methods are well described at an appropriate level of detail. There is a great deal of monitoring, with good rationale. There are no problems with facilities or personnel. Information transfer is especially good, with annual meetings.

From the evidence presented, there should be a good benefit to fish and wildlife from this project's gradual testing of the value of fertilization, and eventual implementation. The value of fertilization in Canada seems to have been proven, and the expense for fertilization justified scientifically. Whether this is the best administrative route for the purchases, is not the ISRP's responsibility.

However, the work and the ecosystem still present a confused and confusing situation. The proposal presumably seeks to assess limiting factors below Libby Dam but appears to discount all options other than nutrient limitation (isn't flow regime driven by power peaking?). Objectives are to evaluate primary and secondary productivity, etc. before and "potentially after" large-scale nutrient supplementation, without giving criteria for deciding whether to proceed with that supplementation. Yet >1/2 of budget is for fertilizer, suggesting that the decision regarding nutrient limitation as the key factor in the basin has already been made and data gathering may be window-dressing. Much of the fertilization would be done in Arrow Reservoir although that water body is only mentioned in 1-2 paragraphs and is actually outside the lower Kootenai River. The proposal states that the 1995 and draft 2000 NMFWS BiOp "mandates" the fertilization. Yet, for the reach at issue, the fertilization is not yet a proven key factor. It is just a management option for which two more years of in-depth work should provide the data to make the decision whether to implement.

## ***A Response is Requested***

### **ProjectID: 24003**

Acquire and conserve high priority bull and westslope cutthroat trout habitat in Trestle Creek.

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$290,400

**3 YR Estimate:** \$290,400

**Short Description:** Purchase conservation easements of fee title interests on 500 acres of private land in the Trestle Creek watershed.

**Response to ISRP comments requested:** Yes

#### **Comments:**

Fundable, but a response is needed to describe the monitoring plan for which funding is requested. A map showing the watershed and those easements acquired and under consideration is also needed.

This is a high priority project for bull trout in this subbasin. It is a well-written proposal to obtain conservation easements and fee titles to riparian land along Trestle Creek, important bull trout habitat. Avista Corporation is also a significant contributor to this effort. The proposal makes a convincing case for the importance of the land acquisition benefits it will bring to protection of bull trout habitat. It identifies key factors that are likely to contribute to success. More detail could have been provided on how conservation objectives will be defined for each parcel and how parcels will be prioritized. It would also be useful to have the proposed acquisitions put into a context of total habitat needs.

### **ProjectID: 24004**

Pend Oreille/Priest Exotic Fish Species Suppression and Native Fish Protection

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$448,500

**3 YR Estimate:** \$958,000

**Short Description:** Protect threatened stocks of native bull and westslope cutthroat trout in the Priest and Pend Oreille lakes watersheds by removing lake and brook trout, and implementing measures to prevent recolonization.

**Response to ISRP comments requested:** Yes

#### **Comments:**

A response is needed, including a map of the system. Much of the discussion in the proposal was relatively site specific and a map with key water bodies and landmarks referred to in the text would have facilitated review of the proposed work.

A better-defined plan is needed that focuses on the upper lake first and lays out a sequential strategy, rather than the proposed shotgun approach throughout the watershed. The overall objectives of the proposal are worthwhile, as it is clear that lake trout and

brook trout are having detrimental effects on bull trout and westslope cutthroat trout populations. Nevertheless, both proposal and presentation indicated the efforts would be spread somewhat equally among Upper Priest, Priest, and Pend Oreille. A more biologically defensible approach would be to focus in priority order on suppression and removal of exotics from the Upper Priest Lake system before moving downstream to Priest and Pend Oreille lakes.

The sponsors should consider focusing efforts on cleaning the Upper Priest Lake and its tributaries of lake and brook trout entirely, and installation of a complete passage barrier in the Thorofare area. If the barrier has downstream and upstream trapping capabilities, the barrier could be used to remove any downstream migrating lake trout, while passing migrating westslope cutthroat trout or bull trout up or down as needed. The proposal focuses on lake trout control, but only minimally on brook trout removal, which may prove the more difficult to control or eradicate. The proposed work needs to be much more detailed and aggressive on brook trout removal. This is the weakest part of the proposal. Consideration should be made after these efforts are successful to designate the upper Priest watershed as a native fish refuge. Restoration efforts would then more appropriately move downstream into Priest Lake, then into Pend Oreille.

**ProjectID: 24006**

Pend Oreille Erosion Abatement and Landform Restoration

**Sponsor:** Idaho Department of Fish and Game

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$73,000

**3 YR Estimate:** \$115,000

**Short Description:** A detailed study of feasibility, design, and cost for erosion control measures and landform restoration techniques within Pend Oreille Lake and the Pend Oreille River upstream of Albeni Falls Dam. Study results would be implemented in a future project.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable if the response adequately addresses the ISRP's concerns. The proposed (new) project would review alternative methods for abatement of shoreline erosion in Lake Pend Oreille and the Pend Oreille River upstream of Albeni Falls Dam, which has occurred as a result of changes in natural lake level fluctuations associated with the operation of the dam. The project would extend work previously performed by Findlay Engineering (2000) to develop site-specific remedies. The panel was struck that the project would primarily deal with after-the-fact "fixes", and would not consider the real cause of the problem, management of lake levels due to hydropower operation.

Apparently this would be taken as a constraint, an approach the panel does not feel is necessary. The project would be more valuable if it also considered changes in reservoir operating policy necessary to get at the heart of the problem. Nonetheless, although the proposal is quite short, it does identify the need for the project, and the nature of the work to be undertaken. Details of the methods that would be used to accomplish the outlined tasks are largely lacking though. Furthermore, the panel feels strongly that the project must include a qualified biologist on the contractor's staff. Funding for this project

should be provisional on this qualification being met, and a more detailed methods section being provided.

**ProjectID: 24009**

Assess Feasibility of Enhancing White Sturgeon Spawning Substrate Habitat, Kootenai R., Idaho

**Sponsor:** Kootenai Tribe of Idaho

**Subbasin:** Kootenai

**FY02 Request:** \$350,000

**3 YR Estimate:** \$1,510,000

**Short Description:** Construct sediment transport models to assess the feasibility to enhance white sturgeon spawning substrate habitat, Kootenai R., ID. Study temporal/transient changes in sediment type, bedform, and erosion/deposition on spawning substrate.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed to justify the large effort focused on sediment dynamics when it is not clear biologically that this is the critical element. This is a resubmitted, new proposal by the U.S. Geological Survey to characterize sediment in the mainstem Kootenai River white sturgeon spawning areas, downstream of Libby Dam in the vicinity of Bonners Ferry, Idaho. The proposition is that sediment delivery and movement in the channel system has been significantly modified by Libby Dam, the specifics of the effects on sturgeon bottom habitat are hypothesized but not well documented and quantified, and that research is needed to plan for habitat remediation (in a Phase II to be done separately). This is a component of the overall sturgeon work in the lower Kootenai River, especially Project 198806400.

This year's proposal addresses the main concern of last year's ISRP review, that the FY 2001 proposal was not well linked to an overall umbrella for the Kootenai River work. Although the work proposed this time appears to be essentially the same as the previous proposal, with some refinements, this proposal explicitly links the work to items called for in the USFWS Biological Opinion and Recovery Plan for white sturgeon and the Subbasin Summary. The objectives are matched directly to statements and requirement given in these documents. The regional context is thus much clearer and the apparent need well established.

However, the technical and scientific background to justify such a strong focus on sediment dynamics is weak. Despite well-recognized problems with incubation success of sturgeon eggs, the proposal does not make a compelling argument nor present sufficient evidence that this problem is caused by sedimentation (as ISRP noted last year, also). No evidence is presented that hard substrate is actually used for egg attachment here or elsewhere. A previous study of velocities in the vicinity of the proposed work has not been published except as an abstract, and no summary data from it are presented in the proposal. Other studies were noted in the rationale section, but they were not used directly as supporting evidence for the importance of sedimentary substrate in this case. The proposal assumes that the sediment hypothesis for lack of incubation success is

correct without suggesting any alternative hypotheses that might be addressed by the research. What if sediment dynamics has nothing to do with reproductive success? If it does not, then the benefit to fish and wildlife from the detailed sediment study could be nil, regardless of the opinions in the BiOp, Recovery Plan, and Subbasin Summary. The tribe should perhaps pursue other aspects of the effort before implementing this large task. The sediment model can be used to measure turbulence, sediment transport, etc., which need to be better tied to the biological needs of the sturgeon.

Other criteria are met. Agency cooperation and coordination now seem excellent. Objectives and tasks are clear and well organized. Methods are ok, but brief. Monitoring and evaluation are addressed briefly. Personnel resumes are excellent. Information transfer got first attention in the objectives (web site).

**ProjectID: 24010**

Reconnection of floodplain slough habitat to the Kootenai River

**Sponsor:** Kootenai Tribe of Idaho

**Subbasin:** Kootenai

**FY02 Request:** \$139,974

**3 YR Estimate:** \$719,974

**Short Description:** Assess the feasibility and options for reconnecting slough habitat that has been isolated from the Kootenai River by dikes.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable in part for first stage of proposal if response is received that addresses the ISRP's concerns. This is a proposal to restore some of the natural function of the Kootenai River upstream of Kootenay Lake via reconnection of off-stream sloughs. Diking and channelization of this portion of the river have removed much of the historical habitat, and operation of Libby Dam upstream has further modified function of the stream system through regulation of the natural hydrograph. The proposal would conduct a feasibility study in the first year. The proposal (in common with many others) desperately needs a site map. The technical/scientific background gives a good scientific basis for the proposed effort as it relates to sturgeon. The section could have given more background information on the broad flood-pulse concept that generically relates the importance of river ecology to the floodplain, especially during high-water episodes. Other Kootenai River white sturgeon proposals do a better job describing this fundamental concept, which is the real reason for doing the project. On the other hand, the rationale and significance to regional programs are well described, although the Council's FWP is inexplicably not referenced. The project history section, while not required for new projects like this, discusses the relevant historical underpinnings of this proposal. The objectives section lists objectives from the Subbasin Summary but does not specifically relate them to the project's objectives (thus leaving it to the reviewer to make the connections). This is a deficiency that should be corrected. Otherwise, the objectives and tasks are clearly spelled out (and match in parts 1 & 2).

One shortcoming of the proposal is that similar work outside the region (notably within the Mississippi River basin) is not mentioned, and may well be unknown to the

proposers. There is no need to “reinvent” relevant experience elsewhere, which is documented in the literature. An even more glaring shortcoming is that the proposal makes no attempt whatever to address the problem of possible remobilization of chemical pollutants. This is mentioned as a potential problem, but never addressed. Why not? What are the water quality implications of chemical contamination of the sloughs that would be reconnected to the main channel? This problem must be addressed in the feasibility study, or some indication must be provided of how it will be addressed elsewhere. Furthermore, this is clearly a two-phase project. The ISRP can only support funding of the feasibility phase (year 1), provided that the above-mentioned deficiencies in the proposal are addressed. Subsequent funding should be made provisional on review following completion of the feasibility study, i.e., approve only first year funding at this point.

**ProjectID: 24012**

Riparian Habitat Preservation - Weaver Slough and McWinegar Slough

**Sponsor:** Flathead Land Trust

**Subbasin:** Flathead

**FY02 Request:** \$1,080,000

**3 YR Estimate:** \$1,080,000

**Short Description:** Protect a range of natural resources compromised by rapid subdivision and development of this area. Acquisition of purchased easements on five properties will extend private protection of Flathead River riparian corridor.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable but a response is needed. This proposal is for acquisition of riparian easements along the mainstem Flathead River above Flathead Lake. The proposal is extremely brief, and provides no information justifying the purchase relative to other similar proposals. Information provided in the presentation helped alleviate this concern in part, although a more detailed proposal would have been desirable. The substantial cost share is a plus – FWP funds would account for just over \$1M of a total of about \$3.5M. In general, the ISRP is supportive of purchase of conservation easements like this one if the acquisition can be demonstrated to provide critical habitat to the benefit of fish and wildlife. Additional information providing assurances that a) these lands are, as stated in the proposal, “vital habitat for migratory waterfowl?” and b) assurances are built into the easements and/or other agreements to ensure protection of benefits and to protect them in perpetuity is needed. Conditional on the project sponsors providing adequate justification on these points, the ISRP supports funding.

**ProjectID: 24015**

Wetland/Riparian Protection, Restoration, Enhancement and Maintenance in the Coeur d'Alene Subbasin

**Sponsor:** Coeur d'Alene Tribe

**Subbasin:** Coeur d'Alene

**FY02 Request:** \$1,996,131

**3 YR Estimate:** \$6,535,188

**Short Description:** This project intends to protect wetland/riparian habitats within the Coeur d'Alene Subbasin through management rights acquisition and restore, enhance and maintain those habitats for the benefit of native fish and wildlife in perpetuity.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. This project proposes to restore wetland and riparian habitats by acquiring conservation easements on 1,000 acres per year and conducting restoration activities. The project complements ongoing efforts to restore cutthroat trout on reservation lands. Specific properties have not yet been defined. Acquisition criteria are being developed and will be included in a Conservation Easement Plan. Both purchases and voluntary easements will be included. The landowner's incentive to provide voluntary easements is that the Tribe will perform the restoration work.

The proposal does a good job describing the limitations to ongoing fish mitigation activities and the reasons it is difficult to obtain sufficient riparian conservation agreements from landowners. It makes a good case for the need to protect important habitat areas to achieve long-term mitigation benefits. The two-tiered monitoring plan is one of the proposal's strengths.

The project proponents should specify goals for restoration and enhancement, define the criteria and process used to prioritize acquisitions, and describe how proposed acquisitions will fit into the larger set of existing easements. The Conservation Easement Plan should be scientifically reviewed prior to project funding. Project proponents should develop a timeline specifying delivery of products and subsequent review.

Because a large number of objectives are listed under different types of activities (planning and design, construction and implementation, monitoring and evaluation) it would be helpful to put activities in a flow chart to clarify their sequence and interrelationships.

**ProjectID: 24016**

Kootenai River Subbasin Stakeholders Symposium

**Sponsor:** Kootenai River Network

**Subbasin:** Kootenai

**FY02 Request:** \$51,450

**3 YR Estimate:** \$162,197

**Short Description:** Provide a forum to encourage resource information exchange among stakeholders in the Kootenai River subbasin (BC Canada, Montana and Idaho).

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed that better defines project focus and justifies the budget. The sponsors should consider coordinating with the Lake Roosevelt Forum for the continuing education activities.

The Kootenai River Network proposes to enhance coordination and collaboration among various stakeholders in the Kootenai River Subbasin through an annual symposium and training workshop, and through the enhancement of a website. The symposium would provide a forum for information exchange among researchers, fish and wildlife managers, industry, environmental groups and landowners. The overall goal is to include those stakeholders in the process for their understanding of, and support for, fish and wildlife reclamation. A less pressing role is technical coordination, which also has other avenues.

The proposal is well prepared and reflects a thorough understanding of the technical issues by the authors, who are part of technical teams. The technical background gives an appropriate overview of the basin. It reflects the diversity of uses of basin lands and waters and resulting stakeholders. Significance to regional programs is clearly identified. Major players in the basin are listed, with their principal activities. The proposal reflects and cites the Subbasin Summary and white sturgeon Recovery Plan. It clearly states the importance of stakeholder participation. However, it does not cite the Columbia Basin Fish and Wildlife Program.

The proposal relates the planned symposium to other projects. It cites the analogous symposium in the Lake Roosevelt subbasin, and cites linkages to other projects in the basin, many by project number. The proposal is careful to say it is not intended to replace the information transfer functions of other projects. The objectives are clearly stated, along with appropriate tasks and activities (=methods, in this case). Evaluation of the symposium and workshops is a specified task. Facilities and equipment appear up to the work, and the staff is experienced in basin research activities as past or current participants. Information transfer is the main focus of the proposal. The website function looks like an effective way to maintain coordination and to educate the Province on subbasin planning.

The proposal makes a good case for the benefits of information exchange and coordination of recovery efforts given the size, diversity and remoteness of the subbasin. The project is modeled on the Lake Roosevelt Forum, which focuses on specific resident



fish issues in the Inter-Mountain Province. However, the focus of this symposium is less clear. What would be the focus of the stakeholders meetings? Could the KRN evolve into a watershed council?

The project is likely to provide benefits to fish and wildlife through additional research/management, coordination and stakeholder participation and support.

**ProjectID: 24017**

Restoring Bull Trout Habitat in The Blackfoot River's North Fork

**Sponsor:** Trout Unlimited's Western Water Project

**Subbasin:** Blackfoot

**FY02 Request:** \$329,128

**3 YR Estimate:** \$349,128

**Short Description:** Comprehensive bull trout recovery project aimed at instream restoration and streamflow enhancement, using irrigation efficiencies projects and habitat restoration in combination with voluntary water leasing.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable, but a response is needed. It was unfortunate that the sponsors did not present. Without a subbasin summary it is hard to determine the priority of this effort in the province; however, the proposal appears to offer greater flow in these tributaries. Upon the reviewers' independent inquiry, it appears the water would remain instream for the benefit of fish; however, the response should describe the legal assurances that the water will remain instream for the benefit of fish. Although the proposal seems like a good approach to protect a strong existing population, the response should make a stronger case that bull trout in the North Fork are in jeopardy. What evidence exists to show that spawning and rearing area in tributaries limits the size of this population?

Reviewers need assurances that MDFWP is doing appropriate monitoring; e.g. Page 13, Objective 2. The number of juvenile bull trout also will be influenced by population size. It will be difficult (require extended data series) to separate effects of habitat improvements from effects of population density. What is the monitoring plan?

**ProjectID: 24018**

Secure and Restore Critical Fish and Wildlife Habitats

**Sponsor:** Confederated Salish and Kootenai Tribes

**Subbasin:** Flathead

**FY02 Request:** \$4,918,444

**3 YR Estimate:** \$13,996,096

**Short Description:** Utilize land acquisition and habitat restoration to protect and enhance habitats critical to fish and wildlife. Reduce human-wildlife conflicts on acquired and restored lands to increase their value for wildlife.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable in part but a response is needed. A better description of the programmatic tie of all the individual efforts is needed. Much of the proposal is devoted to a discussion of the

need to mitigate grizzly bear and elk habitat lost as a result of construction of Hungry Horse reservoir, although there is some discussion of riparian habitat as well. The proposal includes no specifics on what purchases would be made, just vague statements like “the proposal to mitigate for riparian habitat lost or degraded ... will allow the Tribes to regain lost or degraded riparian habitat values.”

The proposal claims to be responsive to the goal “... to rebuild to sustainable levels of weak, but recoverable, native populations injured by the hydropower system.” To meet that goal, it proposes to secure “... habitats through land acquisition and conservation easements,” and enhance “... existing and newly acquired habitats to maximize their value to fish and wildlife.” Gaining control of land-use practices is a logical strategy for protecting habitats. It also is logical that available resources be applied where they will most likely facilitate restoration of viability in the target populations. Before any resources are committed to these agreements, population segments that are key to the long-term viability and productivity of the regional population, or populations, need to be identified. Pursuit of habitat protection for these segments can then proceed with some expectation of benefit to the population(s). Pursuit of agreements for “what is available” is not a systematic approach to the problem. One of the proposal objectives is “Develop prioritized property list.” This task alone is fundable for one year, after which an evaluation of the need for the larger project could be considered.

A similar approach is needed for bear and elk, as implied by language on page 8 of the proposal, although criteria for setting priority are not discussed. We know that humans will be in the area and likely to be expanding their control of the landscape. If the area is also to have large mammals, what is truly “critical” to their persistence must be identified and limited resources directed to purchase, lease, and regulation of those areas.

Part of the proposal is a new position to develop and implement methods and strategies for limiting human-bear conflicts. Such a position seems like a logical step to help prevent bear-human conflicts. The FTE required depends on the magnitude of the problem.

Is there a database of agreements similar to those they propose here to show that in the majority of cases, the results have been successful? Stating that land technicians are needed to “work with landowners to assure compliance” seems to suggest only marginal confidence that an agreement will work as desired.

The proposal to model shoreline erosion should include the need to be addressed by development of a predictive model, the objectives of the modeling effort, and how the results will contribute to a solution. Presumably, the modeling proposal itself has been subjected to critical review.

Habitat actions are fundable after the funding agency has received convincing evidence that a rigorous monitoring program is in place with indicators that will provide a basis for program evaluation and for adaptive management needs.

Objective #8 is to “Develop an electronic-based subbasin plan for the Flathead Subbasin.” The relation of this plan to existing plans is not described. The problem causing need for the proposal was not described. The proposal states, “Once the plan is completed, locally based watershed restoration projects will be initiated and recovery strategies formulated and implemented.” This leaves an impression that ongoing projects do not have an equivalent basis.

Some specific questions:

Page 12, first paragraph: Please clarify what is meant by “adaptive management” here.

Page 12, Monitoring, Item 1. Why did it fail?

Page 12, Monitoring, Item 2. What does “baseline” mean here?

Page 12, Monitoring, Item 3. What are the trends?

Page 12, Monitoring, Item 4. What is a baseline trend, and what is the reason for doing it?

Page 12, Monitoring, Item 5. Why is it important to monitor these parameters?

Page 112, Implementation, Item 1. If they successfully emigrated, why was it necessary to create a “tributary?” What impact did the new tributary have on the marsh?

Page 12, Implementation, Item 3. Have these improvements resulted in benefits to fish?

Page 12, Implementation, Items 5-9. Have significant fishery benefits resulted from these projects?

Page 12, Research, Item 1. How will this knowledge be used?

Page 16, Fish Habitat. Does monitoring of past habitat work show significant fishery benefits?

Page 17, second paragraph. Have any of these monitoring programs identified gains as a result of watershed projects?

### **ProjectID: 24019**

Research, Monitor, and Restore Native Species

**Sponsor:** Confederated Salish & Kootenai Tribes

**Subbasin:** Flathead

**FY02 Request:** \$131,400

**3 YR Estimate:** \$415,400

**Short Description:** Implement and monitor fisheries improvement activities for native species and conduct a feasibility study on the reintroduction of sharp-tailed grouse.

Research factors limiting the successful application of mitigation and restoration measures.

**Response to ISRP comments requested:** Yes

#### **Comments:**

Responses are needed for both the fisheries and the wildlife components. This is a new proposal to continue activities formerly under BPA fisheries project number 9101901, and to initiate a feasibility study of strategies for re-introducing sharp-tailed grouse.

Fisheries component – Objective #1 of the fisheries component of the proposal is to provide the monitoring of success or failure of habitat alterations in the Flathead Basin. It provides data to describe trends in adult bull trout and cutthroat trout in the lake. These adfluvial species leave the lake to spawn in tributaries where the presumption is that

degraded habitat strongly influences their growth and survival. In all likelihood, the number of spawners is now more a reflection of lake trout predation than of habitat quality, thus confounding efforts to assess progress in stream improvement. A response is needed including documentation that a monitoring program is in place that can and will show clear, and timely distinction between benefits to adult populations of bull trout and cutthroat trout produced by reduction of lake trout predation and those caused by habitat improvements in spawning and rearing areas. These data are required for effective adaptive management.

The proposal needs to include explanation of the reasons for doing the things described under Objectives 3, 4, and 5 (Fisheries Component). To what ends are these data being accumulated?

Wildlife component – Objective 7, “Expand an existing interagency working group to develop a detailed examination of potential Columbia sharp-tailed grouse habitat” is fundable, but the proposal needs to be written as a research project and resubmitted. A systematic research project is needed before any stocking program is proposed. Alternative hypotheses should be carefully and rigorously developed for restoring the species, followed by innovative tests for eliminating incorrect alternatives. Objective 7 is to identify from existing data what appear to be suitable areas of habitat. These data can be used to help develop hypotheses for explaining why birds are not presently using these areas, and as a basis for testing the conclusions.

**ProjectID: 24021**

Implement Floodplain Operational Loss Assessment, Protection, Mitigation and Rehabilitation on the Lower Kootenai River Watershed Ecosystem

**Sponsor:** Kootenai Tribe of Idaho

**Subbasin:** Kootenai

**FY02 Request:** \$192,864

**3 YR Estimate:** \$968,864

**Short Description:** Pilot project to assess operational losses with long-term mitigation, protection, enhancement, and rehabilitation in floodplain ecosystems on the Lower Kootenai River Watershed.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable but a response is needed. This is a proposal to assess the losses of ecological function in the Lower Kootenai River watershed due to historic diking, land management, and operation of Libby Dam. The proposal notes various ways in which control of flooding has affected the ecological function of the system. The proposal would develop various data sets, models, etc to help to better understand the effects of those changes. The intent is to use this information to develop a scientifically grounded plan for restoration of the most critical off-channel habitats and functions for fish and wildlife. The proposal does a good job of integrating both fish and wildlife values, although the main focus here is for wildlife. The background is thorough, with many references to scientific literature in fish, wildlife, geography and hydrology. The significance to regional programs is made quite clear, with adequate references to what might be called

habitat listing by various organizations, ties to tribal history, the old and new Fish and Wildlife Program (with section cites), and the Subbasin Summary (with quotes). There is an excellent listing and short paragraphs on related projects and proposals including more than just BPA (probably the most thorough listing of any proposal in the set). The objectives are appropriate and well presented, with detailed tasks and nicely identified methods for each. Monitoring and evaluation is prominent. Facilities, equipment and personnel are adequately given.

The proposal does have three significant deficiencies. First, the flood-pulse concept from the river-ecology literature is not mentioned. Even more important, although the proposal recognizes that “the watershed has little likelihood of functioning the same way it did 200 years ago”, there is no mention of what alternative land and water management practices will be considered. For instance, are there alternate operating policies for Libby Dam that might help to restore functioning of the flood plain? If there is no chance of restoring ecological function, what is the purpose of a five-year, \$5M project? Furthermore, the proposal includes information about only one of the “key personnel” – for this kind of money, there must be more people working on the project? In any case, there is no evidence that a qualified hydrologist will be involved in the project. Given the magnitude of the funding requested, ISRP requests a revised proposal that addresses the above three deficiencies, and in addition provides a concise list of deliverables, an internal review process, and funding milestones. Vitae for key project personnel are essential.

**ProjectID: 24025**

Pend Oreille Subbasin Native Westslope Cutthroat Population Study

**Sponsor:** Washington Trout

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$73,275

**3 YR Estimate:** \$227,875

**Short Description:** Establish baseline information on instream habitat-trout population structure to assess risks to population persistence and effectiveness of land management actions on Colville National Forest intended to benefit native cutthroat trout.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable but a response is needed. The response needs to include a list of hypotheses that better acknowledge existing literature and more robustly test the relationships between trout population and sedimentation from forest management practices. This could be important baseline information as roads are considered for decommissioning or as new roads are proposed for construction.

Quantitative relations between fish population health/abundance and watershed quality/health are not well defined currently for any salmonid species. Does a watershed that is 50% degraded by some set of measures lose 50% of its fish production potential, or is the relation some non-linear function? This proposal is to begin definition of such a relation for cutthroat trout. The ISRP is aware that continuing and focused study urgently needs to be done to bolster the status of westslope cutthroat trout. This proposal would be

strengthened by demonstration of better awareness of the results of existing studies, including an assessment and review of existing methods for predicting incremental change of population health with habitat change.

The ISRP questions whether the cost (killing cutthroat in streams where the population is jeopardized by non-native trouts) offsets the benefit to sacrificing fish from other streams to obtain age-at-length and fecundity data. Proposers are urged to utilize existing data. Similarly, sacrificing fish for whole-body lipid analysis was not justified by the proposal.

Identifying inter-annual fluctuations in trout population size (Platts and Nelson, N. Amer. J. Fish. Mgt. 1988) would be a valuable additional objective for the project. The ability of the study to successfully identify the effects of fine sediments from forest roads will likely hinge on the choice of study streams that are identical except that they straddle a range of sediment coincident with some biological threshold. A maximum road density of 3.7 mi/sq. mi. may be too low to show an effect. USDA-Forest Service personnel, Region 1, have described stream sediments vs. road density. Reviewers recommend that such relations be examined and used to show that a range of habitat conditions related to road density is likely to exist across the proposed study streams. They also suggest the proposers consider directly assessing the pathway(s) of sediment impact, specifically (a) pool volume possibly legislating summer carrying capacity of adult fish and (b) possible reduction of critical living space by sediment in winter (Cunjak, Can. J. Fish. and Aquat. Sci. 1996).

**ProjectID: 198806400**

Kootenai River White Sturgeon Studies and Conservation Aquaculture

**Sponsor:** Kootenai Tribe of Idaho

**Subbasin:** Kootenai

**FY02 Request:** \$1,230,000

**3 YR Estimate:** \$5,833,000

**Short Description:** Prevent extinction, preserve existing gene pool, and begin rebuilding healthy age class structure of the endangered white sturgeon in the Kootenai River using conservation aquaculture techniques with wild broodstock.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable in part, but a response is needed for the trout pond component, which does not fit well with the remainder of the work and is not justified under this proposal. This is an exceptionally well-done proposal. Questions raised by the ISRP in previous reviews have been thoroughly answered. There is an excellent scientific background with plenty of references cited. The work is clearly and explicitly tied to relevant plans, including the white sturgeon Biological Opinion and Recovery Plan, the Council's FWP, and the Artificial Production Review items. The project plans and efforts are clearly given in the context of other projects, both in the up-front listing and in the narrative section. The narrative specifically relates the sturgeon work to other sturgeon work funded by BPA. Evidence of such linkage to regional plans and project coordination was specifically requested in previous ISRP reviews. The rationale for both new construction and work with kokanee (both questioned in previous ISRP reviews) is now clearly presented. The

history of accomplishments is well presented both in the up-front listing and in the narrative, where results are well grouped by topic. Again, relevant literature citations are given, as are web sites for additional information. The objectives and tasks are clearly laid out and keyed to specific elements of the Recovery Plan and Subbasin Summary. Methods are clearly presented (with references) for each task. Monitoring and evaluation comprise a large part of the project, and these objectives and tasks are clearly presented. Facilities and equipment were not discussed as a separate heading, but were woven into the narrative sections on tasks, which was a logical approach given the wide diversity of topics covered. Information transfer appears to be excellent with the thorough coordination among cooperators and users that is shown. Benefit to fish and wildlife is well demonstrated, assuming that the mutual planning reflected in BiOp, Recovery Plan, and other synthesis efforts are on the right track.

Reviewers were somewhat uneasy, however, because of no indication of success in dealing with the real problem (sturgeon survival in the Kootenai) and little apparent program accountability. It would be helpful to provide more information on milestones for operation of the hatchery. The trout pond work needs further justification.

**ProjectID: 199004400**

Implement Fisheries Enhancement Opportunities on the Coeur d'Alene Reservation

**Sponsor:** Coeur d'Alene Tribe

**Subbasin:** Coeur d'Alene

**FY02 Request:** \$1,174,365

**3 YR Estimate:** \$3,540,071

**Short Description:** Enhance critical watershed habitat to mitigate limiting factors for westslope cutthroat in the Coeur 'd Alene subbasin. Compile physical, chemical and biological trend data and implement an environmental education and outreach program.

**Response to ISRP comments requested:** Yes

**Comments:**

Do not fund in present form. A response is needed that addresses the ISRP's concerns. The proposal and the project(s) it entails were difficult to review. The proposal and the presentation were filled with loosely linked information and observations, and were very difficult to find major themes and projects within. The proposal needs to be tightened significantly. Background material in the first section of proposal needs to be referenced and discussed without its present excessive detail. For example, the proposed objectives and methods begin on page 24 of the proposal.

Parts of the proposed program of fisheries enhancement appear to be well justified from subbasin analyses; others appear to be a potpourri of fisheries activities that may or may not address critical factors limiting salmonid abundance. Taken together, the activities do not add up to a coherent approach to subbasin level fisheries enhancement activities.

The program appears to lack a clear focused approach that is based strongly in the fisheries literature and on regional analyses of factors limiting salmonid distributions and abundance. The program appears disjointed. The proposed fisheries enhancement program would benefit from involvement and input from a senior fisheries ecologist.

Development of a suite of focused fisheries activities strongly linked to the subbasin analyses needs to occur.

Specific comments and questions:

This project has been implementing watershed restoration - sediment retention ponds, riparian plantings, etc. - since 1990 on 4 small tributaries, with the primary goal of increasing numbers of westslope cutthroat trout. The original problem was identified as a decline in abundance of native salmonids caused by reduced streamflow, elevated water temperature, and increased fine sediment in stream substrates.

1. Please provide a concise description of the extent to which restoration activities have increased summer base flows, reduced water temperature, and reduced fine sediments. Such a description was lacking from the proposal and presentation.
2. Please provide average (and range) for trout density in the four streams that represent abundance prior to the restoration efforts.
3. Is there evidence that fish abundance has significantly increased as a result of this program?
4. What are the endpoints of this program? How will program/project managers know when they have met their goals and objectives?
5. Revegetation is used extensively in this program. Is there evidence that revegetation is necessary or effective? A good experimental design and monitoring program could and should address these.
6. Benthic samples are notoriously variable. Do the results to date show promise as a monitoring tool or are the results so variable that detection of a trend in any reasonable time seems unlikely?
7. Non-native brook trout are abundant in at least one stream (Alder Creek) and cutthroat trout restoration efforts elsewhere in the West generally have not been effective without eliminating or suppressing them. What is the basis for, and expectation of, the ongoing program, which is apparently based solely on habitat modification?



**ProjectID: 199004401**

Lake Creek Land Acquisition and Enhancement

**Sponsor:** Coeur d'Alene Tribe

**Subbasin:** Coeur d'Alene

**FY02 Request:** \$1,463,070

**3 YR Estimate:** \$5,030,784

**Short Description:** Protect, enhance, and maintain wetland and riparian habitat in the Lake Creek drainage as partial mitigation for the impacts attributed to the construction and operation of the Albeni Falls hydroelectric facility.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. This is a proposal to purchase and manage about 2500 acres in the lower Lake Creek watershed. The cost amounts to about \$3000 per acre spread over five years. It is difficult to understand from the proposal how much of the budget is for outright purchase, versus management. It would have helped if the proposal had outlined the objectives to be achieved by the purchase, and what other alternatives exist (for instance, wildlife easements, covenants, etc).

This is an ongoing project of some duration; however, the proposal did not describe progress to date, or present adequate data demonstrating results. The response should describe results.

**ProjectID: 199004402**

Coeur D' Alene Tribe Trout Production Facility

**Sponsor:** Coeur d' Alene Tribe

**Subbasin:** Coeur d'Alene

**FY02 Request:** \$775,469

**3 YR Estimate:** \$2,516,120

**Short Description:** Enhancement of native stocks of CTT into natal tributaries by utilizing native CTT broodstocks and providing RBT for an interim fishery.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. The proposal was not clearly constructed and showed very little evidence of substantive results from work completed to date. The technical background section was identical to that of proposal 199004400, an indication of the redundancy and lack of clarity here.

The proposal does not adequately reflect input provided by the ISRP during Step One of the Three Step Review Process (ISRP 2000-1). The Step One review process included conversations with the project sponsors responsible for this project. The sponsors provided responses to a number of questions the ISRP posed. This process resulted in the ISRP's final recommendations, which specified a set of four conditions we thought needed to be met before the project moved to Step Two (or as part of the Step Two process). We also proposed two amendments to the Production Facility Master Plan that were to be considered by the tribe. The proposal should have discussed these, explaining

how the conditions had been met and the proposed amendments dealt with. The ISRP notes that the proposal does state that the Coeur d'Alene Tribe proposes that the BPA fund a monitoring and evaluation program consistent with the recommendations of the NWPPC and the ISRP reviews of the project during the 3-step process. However, the response should specifically state how the proposed plan addresses the ISRP's Step One review regarding M&E.

About 10% of the proposed annual M&E budget is to monitor cutthroat trout abundance and rainbow trout catch from the put-and-take pond fisheries. The remainder (\$303K) is for vaguely described data gathering on Coeur d'Alene Lake and tributaries that appears hugely redundant with work proposed by proposal 199004400. The proposal states that some of that work apparently would be done on Hangman Creek in the Intermountain Province (p 31 & 33); is that intended?

Despite previous reviews (FY 1999, 2000, 3-Step), the contents of this proposal and discussion during the presentation have led the ISRP to be increasingly convinced that the proposed hatchery program for adfluvial cutthroat trout does not appear to be scientifically justified. As Rieman and Apperson point out in their 1989 review of the status of westslope cutthroat trout in Idaho, no hatchery program has ever been successful for a stream-dwelling population of the subspecies. To be effective this program will need to be particularly well designed and executed. At this point in time, we are seeing more, rather than less cause to be skeptical of the possibility of success of this portion of the hatchery program.

The larger program is based on a premise that westslope cutthroat populations are depressed because of degraded habitat and, if the habitat is renovated, the populations will respond favorably. If that is the case, why is it logical to stock hatchery fish? Great effort in the proposal is put into overcoming what seems to be an assumption that stream conditions are limiting the target populations. What evidence is there to support that assumption? What consideration is given to possibility that space, food, predation, competition, or water quality in downstream waters is actually limiting population size?

We identify three alternative approaches to bolstering cutthroat populations as a basis for soliciting a response from the Tribe:

1. Enhance adfluvial cutthroat trout but without a hatchery. Three of the four study streams (Benewah, Alder and Evans creeks) seem especially poorly suited for adfluvial cutthroat trout restoration, because the migrating trout must transit through low gradient, warmer rivers or lakes such as Cave and Chatcolet lakes that hold abundant warmwater and coolwater predators before they enter Coeur d'Alene Lake. As the proposal notes, smallmouth bass are quickly expanding in the system following their illegal introduction a decade ago, and other predators seem abundant. A better approach to restoring adfluvial fish might be the continued focus of activities on Lake Creek and those few similar higher-quality (albeit off-reservation) tributaries that have existing adfluvial runs but no brook trout. These activities include a combination of habitat restoration, fish translocation, and selective lakeshore predator removal at critical periods to increase trout survival.

2. Concentrate on resident cutthroat (with habitat restoration, as is currently being done under proposal 199004400) instead of the adfluvial form. The probability of increasing their population size appears good, much better than the high risks involved with adfluvial fish and, as we pointed out in our review of 22 February 2000, doing this may also enhance adfluvial runs.

3. Acquire adfluvial fish for stocking, but from an outside source such as IDFG. This would alleviate fiscal concerns, which are not central to the ISRP but should be considered. Under the current hatchery proposal, each of the cutthroat fingerlings that would be stocked into the four target streams would cost approximately \$10. An alternative approach might be to purchase cutthroat fingerlings elsewhere for stocking by Tribal staff.

Other specific questions to be addressed the response:

Page 3, line 4: “Usable spawning habitat comprises 4.1% of the total stream area in 2nd order tributaries.” Is this conclusion based on a biologist’s view of what is “usable” or is it based on the areas used by fish when the spawning population is large? Spawning site selection is influenced by factors that cannot be seen even by experienced observers. A value of 4.1% of stream area may be excessive of actual fish needs.

What is the goal of the rainbow trout stocking (angler hours? return percentage?).

What does a limiting factor analysis in Coeur d'Alene Lake entail? What results expected from Objectives 3a, 3b, 3c will help to conclude what is limiting?

We anticipate potential further interaction with the personnel involved in this project after they respond to our comments.

**ProjectID: 199101903**

Hungry Horse Mitigation

**Sponsor:** Montana Fish, Wildlife & Parks

**Subbasin:** Flathead

**FY02 Request:** \$982,850

**3 YR Estimate:** \$3,037,850

**Short Description:** Mitigation for the construction and operation of Hungry Horse Dam. Implements habitat restoration, improves fish passage, protects and recovers native fish populations and reestablishes fish harvest opportunities.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable, but a response is needed that better ties the work to the current subbasin summary with objectives of the summary and the project explicitly linked in the proposal. This project is to mitigate effects of Hungry Horse dam on native fisheries within the Flathead Lake basin. It is a successful, continuing project that includes many specific and quite diverse small projects. As the ISRP noted the last two years, it is very difficult to determine from the proposal the relative priorities, and their rationale, of the many projects, and how effective they have been on the broad scale of dam/reservoir mitigation. Rather than fitting under an umbrella proposal, as last year, the project is presented in the framework of the Subbasin Summary. However, the format of quoting objectives from the Subbasin Summary followed by the project's objectives and tasks does not make the necessary linkage that demonstrates that the Subbasin objectives are being met by the project's activities. The proposal reviewer should not have to decipher the connections; the proposal should make the connections explicitly.

The quality of the proposal is borderline, especially in contrast to the high quality of other proposals reviewed. However, the good presentation provided a great boost for the written proposal. The scientific background is more administrative than scientific. Much of the content is actually material that relates to item 2 (rationale and significance to the region). That rationale section does a good job of relating the work to the FWP, but does not mention the Subbasin Summary. The emphasis of the proposal is on carrying out the long-range plan of the early 1990s. That plan should have been clearly identified as consistent (or not) with the current planning embodied in the Subbasin Summary. The proposal gives good linkage and description with other projects, demonstrating a broad range of cooperation. The project history is good, especially if the material presented in the background and rationale are tacitly included. The work objectives and tasks seem good, although the place for methods was often used for more statements of rationale, with methods often not mentioned. In general, the methods were not well explained. A large part of the project is comprised of monitoring and evaluation (as listed in Part 1), but these efforts are not clearly called out in the narrative section.

There is a good complement of facilities and staff. Information transfer seemed particularly deficient, for little was said about it in the proposal. If this aspect is being handled by another project (as it is in the Montana part of the Kootenai basin; project 199608720) then this should have been clearly stated.

**ProjectID: 199106000**

Pend Oreille Wetlands Wildlife Mitigation Project - Kalispel

**Sponsor:** Kalispel Tribe of Indians

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$167,300

**3 YR Estimate:** \$440,450

**Short Description:** Protect, restore, enhance and maintain important wetland/riparian wildlife habitat along the Pend Oreille River as partial mitigation for the construction and operation impacts associated with Albeni Falls Dam consistent with regional planning documents.

**Response to ISRP comments requested:** Yes

**Comments:**

A response review is needed to address ISRP concerns.

This is a proposal for maintenance and enhancement of lands previously purchased by BPA, apparently near the north end of Lake Pend Oreille. (The proposal would benefit from a map or maps showing location of lands and of on-going restoration, enhancement, and monitoring efforts.) The ISRP previously recommended that this proposal be funded for one year and that subsequent funding be contingent on a better description of the maintenance and monitoring methods. The project appears to include extensive active enhancement activities, and it is critical that the effectiveness of these be tested by a monitoring and evaluation program. However, descriptions of monitoring and maintenance on this project proposal continue to be sparse. The proposal states that a detailed M&E plan will be developed in conjunction with regional efforts, but why has one not been developed in the year since getting the last review comments that indicated M&E detail was required? The data presented at the oral presentation led the reviewers to believe that the current M&E was inadequate. The proposal lists 8 types of monitoring that will be included, but includes little specific detail on methods; it does not adequately describe how the monitoring will be done, nor does it give a description of the sampling design for monitoring. Monitoring of interactions between wildlife enhancement efforts and fishery enhancement also is not discussed. The critical missing elements that should be provided for the response review are:

- 1) Description (with data presented) of past successes and failures of enhancement activities. These evaluations should be shown in terms of ultimate biological objectives (benefit to fish and wildlife) as possible. The proposal should note adaptive management decisions that have been made using M&E.
- 2) Measurable biological objectives, associated with tasks by which they will be addressed.
- 3) Description of monitoring and evaluation plans, including their sampling design, how data will be analyzed and evaluated, and the rationale for choosing particular species, processes, or components for monitoring. A list of sample techniques is not adequate to establish a scientifically sound, useful monitoring system.

**ProjectID: 199206100**

Albeni Falls Wildlife Mitigation Project

**Sponsor:** Albeni Falls Interagency Work Group

**Subbasin:** Pend Oreille Upper

**FY02 Request:** \$6,178,795

**3 YR Estimate:** \$19,331,635

**Short Description:** Protect, restore, enhance, and maintain wetland wildlife habitat in all Mountain Columbia subbasins (except the Bitterroot, Flathead, and Blackfoot) as ongoing mitigation for construction impacts associated with the Albeni Falls hydroelectric project.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed to address the ISRP's concerns. This proposal presents the objectives, scope, and progress of the Albeni Falls Wildlife Mitigation Project. It describes the Albeni Falls Interagency Work Group as an agency-Tribal coalition that coordinates wildlife mitigation work. The proposal gives a complete description of the scientific background, rationale, and relationship to other projects and establishes a need to protect land and an expectation that restoration will be prudent for at least some purchases. The proposal requests funding for a very large amount of active restoration and ongoing O&M, yet neither restoration nor O&M techniques nor their evaluation are described in adequate detail. The project is ongoing and should be able to present data to evaluate the success or failure of past restoration and O&M efforts. Reviewers questioned the priority of purchasing land that requires continuing, expensive restoration actions. The project presentation indicated that M&E are accomplished by subcontracts, but their design and results to date should be presented in the proposal as these are key areas for evaluation of scientifically sound approach. .

A response should include specific description of the procedures by which active restoration and other O&M are decided, including description of the monitoring programs by which these efforts are evaluated. The sample design for restoration, O&M, and M&E activities should be specified. Examples of past successes or failures in meeting biological objectives (i.e. those linked as closely as possible to benefit to fish and wildlife) and of modification of O&M as dictated by M&E could contribute to justifying the project.

**ProjectID: 199500100**

Kalispel Tribe Resident Fish

**Sponsor:** Kalispel Tribe of Indians

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$410,000

**3 YR Estimate:** \$1,319,600

**Short Description:** Assess native trout habitat in tributaries to the Pend Oreille River and implement recommendations for enhancement. Provide largemouth bass habitat in mainstem Pend Oreille River and supplement population. Monitor and evaluate all enhancement measures.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. Prior ISRP concerns regarding the effectiveness of a largemouth bass hatchery were reinforced by the presentation. It remains unclear from the proposal and the presentation that the productivity of the reservoir is, or will be, amenable to a largemouth bass hatchery. This should be considered an experiment. The response should lay out the bass hatchery as an experiment with milestones and performance standards to determine success or failure.

The task of assessing performance of two types of artificial winter cover for bass (obj 6, task a) seemed appropriate.

Salmonid tributary assessment and habitat structure placement has been conducted since 1996 at a cost of over \$1 million. No description of the type of structures placed was provided. It was evident from the results presented that the structures did not in most cases result in an increase in native trout, but did in some cases benefit non-native salmonids. It appears from the proposal (obj. 2, task a) that further structure placement is proposed. The reviewers were not supportive of endorsing additional construction of structures based on results to date. Perhaps it is time to consider alternative hypotheses for addressing the problem. What evidence will indicate that habitat is limiting the population and needs to be enhanced?

Brook trout removal in selected streams (obj 5, task a) has merit in enhancing westslope cutthroat trout populations, and funding for that and its monitoring and evaluation continues to be supported. From the site visit, the LeClerc looks like an appropriate site for restoration and enhancement of westslope cutthroat populations. However, the proposal was not as convincing.

Section 5 Objective 1. What is the purpose of determining species distribution and abundance? How are the results interpreted?

Page 5, Goal 1: How will project personnel know when the goal is met?

Page 5. Goal 1, Objective 1: How will project personnel know when adult escapement is well distributed? What are the criteria for defining a “healthy spawning population” and how far are these populations from that level at present?

**ProjectID: 199500400**

Mitigation For The Construction And Operation Of Libby Dam

**Sponsor:** Montana Department of Fish, Wildlife and Parks

**Subbasin:** Kootenai

**FY02 Request:** \$805,000

**3 YR Estimate:** \$2,505,000

**Short Description:** Implementation of watershed-based habitat enhancement and fish recovery actions to mitigate the losses caused by hydropower in the Kootenai subbasin. Montana Fish, Wildlife & Parks collaborates with the Tribes of Montana and Idaho, IDFG and B. C., Canada.

**Response to ISRP comments requested:** Yes

**Comments:**

Do not fund in present form; a response review is needed. A new proposal is needed for this work. Except for an excellent and well-organized scientific background section, this proposal is fragmented. The theme seemed to be to do a bit of everything imaginable in the Montana section of the basin. However, this impression may have been given because of the style of quoting from the Subbasin Summary followed by an outline of objectives that mixed results with plans. The proposal is much poorer quality than the one reviewed for this project last year.

The scientific background was excellent. It was clearly organized by species and topic. There were good references to the scientific literature. The section integrated the upper basin issues with the entire watershed. The narrative did not, however, relate the proposed work to the Subbasin Summary. Quotation of the Summary in the objectives section did not accomplish the desired integrative explanation. There were few other projects mentioned in the narrative. Related projects listed in Part 1 were not discussed in the narrative. The section on project history gave little information on results of prior work. The objectives sections in both parts gave the impression of too many small topics. Their presentation was confusing. Few methods were given, and not well matched to the objectives and tasks. Monitoring and evaluation were not clearly identified. Facilities, etc. were reasonable. Information transfer seemed largely lacking. The benefit to wildlife is unclear because of the plethora of small projects.

This is a weak proposal for over \$4M for five years. This is a collection of ongoing research, “fix-it,” exploration, social action, and construction projects each of which deserves careful scrutiny to assess whether or not it is increasing fish abundance. The abstract claims that the objective is to mitigate for Libby Dam via habitat enhancement, fish passage improvements, etc., and through investigation of alternate upstream reservoir operating procedures. Just how any of that would be done is missing from the proposal. There is no work plan, no indication of what’s been accomplished to date and how proposed actions (which aren’t specified) would relate to past work. What would be done with almost \$1M per year is not clear. Most of the proposal is a statement of



problems resulting from dam construction, with nothing on what will be done, and why it might be effective. Furthermore, the project team appears to have no hydrologic or water management expertise, which will be essential if anything realistic is to be accomplished relative to investigation of reservoir operations.

The review team had many specific questions about the work. Listed below are some of them, which may be helpful in recasting the proposal.

1. Page 13, Objective 3. Have the disruptive conditions that led to poor riffle, run, and pool frequencies been stopped so that project efforts will be long-term?
2. Page 13, Objective 4, Bullet 1. Shouldn't this be an experiment to determine what structure and dynamics would favor native species assemblages?
4. Page 13, Objective 4, Bullet 2. This statement says that natural densities will be increased implying that a population already exists, but its density will be increased. Why wouldn't natural spawn take advantage of the available food and space?
5. Page 13, Objective 4, Bullet 3. What are methods for selective removal of non-natives?
6. Page 14, Objective 1, Bullet 4. What is revegetation here? Is planting necessary?
7. Page 15, Objective 6. Don't these deltas form during each flood event making need for a continuing project? If so, what rotation timing is needed to keep all streams open?
8. Page 15, Objective 15. What is the hypothesis to be tested here?
9. Page 15, Objective 1. Have land uses and flow restrictions been changed to ensure maintenance of any restoration?
10. Page 15, Objective 2. When actions such as those proposed are taken, what are the assessment criteria? Are the same criteria applied to any location along the channel's course? Are the criteria designed to protect the diversity of substrate composition that might be found in a comparable wilderness stream?
11. Page 16, Objective 3. Same as previous question. What is the natural diversity in stream temperatures?
12. Page 16, Objective 1. Does removal method include use of poison? If so, what precautions are taken to protect non-target organisms such as amphibians?
13. Page 16, Work Objectives and Tasks. How do the elements that follow here fit with the former?
14. Page 17, items b, c and f. These elements suggest that a system for assigning priorities to streams. Do these choices reflect what is needed to protect and enhance the structure of resident fish populations needed to maximize their viability in the long-term?
15. Page 18, first paragraph. Isn't habitat limiting for adult fish in any stream? What can be done if food is the limiting factor?
16. Page 20, item 9. Implication here is that the structure of the population(s) is known. Is that true?
17. Page 20, Item 11a. Reason?
18. Page 21, Item 12c. How will this experiment be designed and the results evaluated?
19. Page 21, statement after 12c. What is success?
20. Page 22, Item 15. Is this possible given the variation seen in comparable studies elsewhere?

**ProjectID: 199608720**

Focus Watershed Coordination in the Kootenai River Watershed

**Sponsor:** Montana Department of Fish, Wildlife and Parks

**Subbasin:** Kootenai

**FY02 Request:** \$101,500

**3 YR Estimate:** \$305,250

**Short Description:** Fosters “grass-roots” public involvement and interagency cooperation for habitat restoration to offset deleterious impacts to the Kootenai River watershed fisheries. Establishes cost-share arrangements with government agencies and private groups.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. This project functions as MDFWP’s information transfer for their projects in the Kootenai subbasin and as such, it performs an important role of public interfacing. However, the proposal provides an inadequate basis for multi-year funding.

The proposal is incomplete, despite quotes from the Subbasin Summary and attachment of the 1998 mitigation and implementation plan. The “technical and scientific background” section contains the relevant information but provides few references. A long reference list is included at the end of the proposal but few of these references are cited in the narrative. The “rationale and significance to regional programs” section is deficient in not citing the Subbasin summary, FWP, BiOp, or even the appended mitigation and implementation plan. The “relationships to other projects” section does not mention any Idaho state or tribal projects on the lower Kootenai River. The narrative does, however, describe a good approach to coordination and cooperation with the public.

The project history provides an interesting summary of accomplishments. Examples are given of improvements in mitigation actions resulting from information produced under the project. Proposal objectives contain a short explanation of FWC’s coordination with other entities. Objectives are reasonable but fail to link to the quoted sections of the Subbasin Summary or the appended mitigation and implementation plan. How is a “limiting factor” defined? Are conditions (predation, fishing, competition, water quality, etc.) in downstream rearing areas considered in the analysis? Methods are not included as such, although the narratives include an indication of how things might be done. Monitoring and evaluation is included explicitly as an objective but without detail on methods for evaluating effectiveness. Is a monitoring program already in place? How does the monitoring in this project interface with other monitoring in the basin? Facilities and equipment are reasonable.

Despite the proposal’s deficiencies, the project, if staffed by a director, is likely to have a positive effect on fish and wildlife.

**ProjectID: 199700400**

Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams

**Sponsor:** Kalispel Tribe of Indians

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$518,000

**3 YR Estimate:** \$1,588,000

**Short Description:** Assess the fish assemblages and habitat conditions for all resident fish species in the blocked area by compiling existing data and performing research where data gaps are identified.

**Response to ISRP comments requested:** Yes

**Comments:**

A response is needed. The proposal describes baseline assessment work in progress to support the Blocked Area Plan and the Kalispel Natural Resources Department Management Plan. Although the proposal has received favorable reviews in the past and the ISRP is supportive of the value of collecting baseline data, two items need additional clarification. The first regards the sequencing of the data collection effort. As indicated during the oral presentation, the current plan is to move systematically from east to west across the project area. Although that might be most appropriate, an alternative approach, that of first focusing on sites given priority in subbasin summaries, might provide a more efficient allocation of limited resources (and would more easily enable the identification of critical milestones along the way).

Secondly, the sampling of fish populations needs to be clarified. The ISRP understands the inherent difficulties in conducting actual population estimates in lakes and agrees that the JSAP protocol of gathering catch per unit effort (CPUE) data is generally appropriate in lakes. In streams, however, population estimates are more easily obtained but the proposal (p. 12) does not clearly state whether CPUE data or actual population estimates are the standard. Please clarify. Further, describe the basic stream electrofishing protocol (number of passes, possible use of block nets, site length). How will population data be obtained in larger rivers using the drift boat electrofishing unit identified for purchase in the proposed budget?

**ProjectID: 200000400**

Monitor and protect bull trout for Koocanusa Reservoir.

**Sponsor:** BC Environment

**Subbasin:** Kootenai

**FY02 Request:** \$62,000

**3 YR Estimate:** \$186,000

**Short Description:** Access and monitor the status of wild, native stocks of bull trout in tributaries to Lake Koocanusa and the upper Kootenay River and protect these fish from inappropriate reservoir operating regimes and land use practices.

**Response to ISRP comments requested:** Yes

**Comments:**

Fundable but a response is needed that considers expanding the project to include collection of data that could be used to examine population dynamics and habitat quality.

The project has potential value because it is beginning to develop a relatively long-term database of the dynamics of a strong population of bull trout. It has additional benefit given that measures of habitat quality are expected to change through time as logging proceeds, thus providing an opportunity to test the validity of assumed relations between measures of habitat condition and population health. The project proposal should be recast to include consideration, and test, of hypotheses concerning the impact of land use (forest practices) on the productivity of bull trout populations. An outcome should be development of quantitative, and thus predictive, relations for use by land managers between population health and habitat conditions. There may also be possibility for study of the movements of individuals between sub-populations; this could provide data needed by conservation managers to assess the viability of bull trout in this and other locations.

### ***Do Not Fund: A Response is not Warranted***

A response is not warranted for these proposals because of their deficiencies, especially lack of necessary detail. To consider these proposals in the response review would essentially define the initial solicitation as a placeholder to later develop a sound proposal.

#### **ProjectID: 24002**

Using DNA from bear hair samples to confirm grizzly bear presence in the Lower Pend Oreille Sub-basin.

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

**Subbasin:** Pend Oreille Lower

**FY02 Request:** \$74,516

**3 YR Estimate:** \$74,516

**Short Description:** We propose a project to confirm the presence of grizzly bears within the Washington State portion of the Selkirk Grizzly Bear Recovery Zone through the use of hair snag collection techniques and subsequent DNA analysis.

**Response to ISRP comments requested:** No, do not fund.

#### **Comments:**

Do not fund; a response is not warranted. This is a proposal to collect and analyze hair samples to confirm the presence of grizzly bears in the Washington portion of the Selkirk Grizzly Bear Recovery Zone. The proposal lacks detail on a number of key considerations. The work is stated to monitor the presence of grizzlies, but the genetic analyses described would address considerably more than presence of bears. The “objectives” are tasks and both lack adequate detail on sample design and sampling methods. This is a superficial proposal for research that lacks specific well-formed questions or hypotheses and does not present any experimental design. The genetic tools seem more sophisticated than are necessary for the stated goal of establishing presence of bears; no explanation is given of why additional genetic analyses will be done on samples that prove to be grizzlies or on what sort of sampling program might allow reasonable inferences to be drawn from the data. Coordination should be demonstrated with adjacent areas harboring grizzly populations.

**ProjectID: 24013**

Assessment of Operational Impacts of Hungry Horse Dam on Riparian Wildlife habitats and their associated aquatic components

**Sponsor:** Montana Department of Fish, Wildlife and Parks

**Subbasin:** Flathead

**FY02 Request:** \$188,949

**3 YR Estimate:** \$498,839

**Short Description:** Enhance and protect native wildlife communities in the Flathead Basin through multi-species assessments, design of habitat improvements, develop approaches to habitat protection, mitigate variable river flows, and identify off-site mitigation potential

**Response to ISRP comments requested:** No, do not fund.

**Comments:**

Do not fund; a response review is not warranted. This is a proposal to begin assessing operational impacts of Hungry Horse Dam by conducting an inventory of songbirds and amphibians along the Flathead River from Hungry Horse Dam to Flathead Lake. The proposal does a good job of describing the riparian effects of dam operations, demonstrating the need for mitigation and the potential benefits of extending understanding of operational impacts of hydropower to riparian habitats and terrestrial wildlife. However, this proposal is superficial in presentation and lacks detail that is needed to establish a sound scientific approach.

The proposal lacks a coherent list of tasks and provides no methods section and no description of data management or analysis. Methods for choosing species to assess, conducting population inventories, and assessing dam impacts on successional patterns are not described. No experimental design (e.g. location of samples, plot sizes, replicates) is given. Furthermore, the proposal does not explain how the proposed inventory would contribute to Fish and Wildlife program goals, and, although it is for research, it cites no open peer-reviewed literature and does not provide evidence of qualification of personnel (e.g., resumes or curricula vitae that establish competency to conduct the work in a scientifically sound fashion).

**ProjectID: 24014**

Assessment of Operational Impacts of Libby Dam on Riparian Wildlife habitats and their associated aquatic components

**Sponsor:** Montana Department of Fish, Wildlife and Parks

**Subbasin:** Flathead

**FY02 Request:** \$188,949

**3 YR Estimate:** \$498,839

**Short Description:** Enhance and protect native wildlife communities in the Flathead Basin through multi-species assessments, design of habitat improvements, develop approaches to habitat protection, mitigate variable river flows, and identify off-site mitigation potential

**Response to ISRP comments requested:** No, do not fund.

**Comments:**

Do not fund, a response is not warranted. See 24013.

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