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Executive Director

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LOWER COLUMBIA FISH RECOVERY BOARD

REGIONAL LEADER FOR RESTORING HABITAT AND RECOVERING FISH



June 6, 2006

Dr. Tom Karier,
Washington Council Member
Northwest Power and Conservation Council
705 West First Avenue
Spokane, WA 99201-3909

Mr. F. Larry Cassidy, Jr.,
Washington Council Member
Northwest Power and Conservation Council
110 Y. Street
Vancouver, WA 98661

Dear Council Members Karier and Mr. Cassidy:

In your letter of January 31, 2006, you requested that the Lower Columbia Fish Recovery Board (LCFRB) coordinate the local review of the fish and wildlife project proposals submitted to the Council for funding in fiscal years 07-09.

The LCFRB reviewed 43 proposals from the Lower Columbia, Estuary, Grays, Elochoman, Cowlitz, Kalama, Lewis, Washougal, Wind, Little White Salmon and Columbia Gorge subbasins. The results of our review are attached. Specifically, you will find:

1. A description of the our review process and general comments and recommendations;
2. Ranked listings of reviewed projects broken down by Province (Gorge, Lower Columbia, Estuary, and System-Wide); and
3. Review comments for each project.

The LCFRB and its 15-member Technical Advisory Committee (TAC) reviewed each project for consistency with the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2004). The effort involved over 200 hundred hours of staff time and several hundred additional hours by LCFRB and TAC members. Our evaluation and rankings are based solely on the information provided in the written proposals submitted to the Council. Time and resource constraints did not allow in-depth discussions with project sponsors. For this reason, we urge that sponsors be allowed to respond our comments during the Council's fix-it loop.

For habitat projects, we examined whether the project targeted priority species and habitats in the Plan, the expected benefits for targeted species, the likelihood that the project would achieve its goals or proposed outcomes, and whether costs appeared reasonable relative to the benefits. For monitoring and research projects, we examined whether the project would inform key management decisions or address critical uncertainties identified in the Plan, its certainty of success, and its costs relative to benefits.

We were disappointed to find that a number of the projects failed to establish a strong relationship to the Plan. This is particularly the case with research projects. It was often unclear how a research project would inform key management decisions or address critical uncertainties. There also appeared to be lack of effective coordination among research projects and the potential for duplication of effort. In summary, it was not possible to determine whether research projects collectively would result in a strategic, coordinated, and cost-effective approach in addressing critical uncertainties and informing management decisions. A stronger and more focused research agenda based on the needs identified in the Plan is needed.

TO: Council Members Karier and Cassidy
RE: LCFRB 07-09 BPA Funding Recommendations
June 6, 2006, Page 2

Finally, we observed tremendous variation in budgets for projects that are otherwise similar in nature, scope, and scale. We also noted that costs overall seemed high compared to similar projects submitted through other funding processes. Our comments on each project note specifically instances where we felt costs appeared to be high.

We hope that these materials will be of use to you and Council in making the difficult decisions on how to best allocate limited resources. We are pleased that you asked for our review and believe that local reviews can do much to help ensure that funding is directed to projects that will make the greatest contribution to implementing the subbasin plans.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,



Jeff Breckel
Executive Director

Cc: Tony Grover
Stacy Horton
Karl Weist

**2007/2009 NPCC/BPA FISH AND WILDLIFE PROJECT REVIEW -
LOWER COLUMBIA FISH RECOVERY BOARD (LCFRB)
REVIEW PROCESS SUMMARY
June 5, 2006**

Background: The Northwest Power and Conservation Council (hereafter “Council”) makes recommendations to BPA for funding projects aimed at protecting, mitigating and enhancing fish and wildlife affected by the Columbia River basin hydroelectric system. The Council will be making funding recommendations for Fiscal Years 2007 through 2009 in the fall on 2006. As part of the process, the Council seeks the input and advice from local groups on what proposals represent the highest priorities for implementing the Subbasin Plans over the next three years. As the Subbasin planning entity for the Washington portion of Lower Columbia River, the LCFRB has completed a review of project proposals within the area covered by the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (hereafter “Plan”)(LCFRB, 2004).

LCFRB Role: The LCFRB’s role is to review each of the proposals against the subbasin plan adopted by the Council, and to recommend priorities for funding based on this review. Similar to the Salmon Recovery Funding Board (SRFB) process, the LCFRB recommendations for project funding are advisory. In addition to the advice of local groups, the Council will take into account public comment, the reports of the Independent Scientific Review Panel (ISRP), cost-effectiveness, consistency with the full Columbia Basin Fish and Wildlife Program, and other issues in developing the final prioritized list for funding. The LCFRB identified 43 projects for review based on their relationship to the Plan.

LCFRB Project Review Considerations: Per the guidance provided, the LCFRB’s review was to determine project consistency with the goals, objectives, strategies and priorities outlined in the Plan. There were no supplemental criteria provided for local groups to consider. However, the review guidelines allow local groups to develop additional standards (e.g., cost share/economic and partnership considerations, multiple species benefits, etc.) and guidelines to help them prioritize competing proposals. To this end, the LCFRB used a procedure similar to the SFRB project review process to help evaluate and prioritize the proposals, using the Technical Advisory Committee (TAC) as the primary technical review entity and the Lower Columbia Fish Recovery Board (hereafter “Board”) as the final approval authority. The following provides a brief summary of the process used to assist with the technical review and ranking of the BPA project proposals.

LCFRB Project Review Process: The Plan calls for protection, restoration, recovery and management actions to be coordinated across the Lower Columbia Region and across all agencies and organizations. This coordination is necessary to ensure that proposals:

- Focus on highest priority needs for listed and non-listed focal species;
- Complement each other;
- Are implemented in a logical sequence; and
- Make the most efficient use of available resources.

Consistent with these criteria, project scoring was conducted using a three-step process including preliminary TAC ranking, final TAC ranking, and final Board approval. Attachment 1 provides a description of the technical review criteria used to assist with project review and ranking. Two score sheets were developed to facilitate project evaluation, and each contains both “staff review” and “TAC review” elements. One score sheet (Attachment 2) was used to evaluate habitat

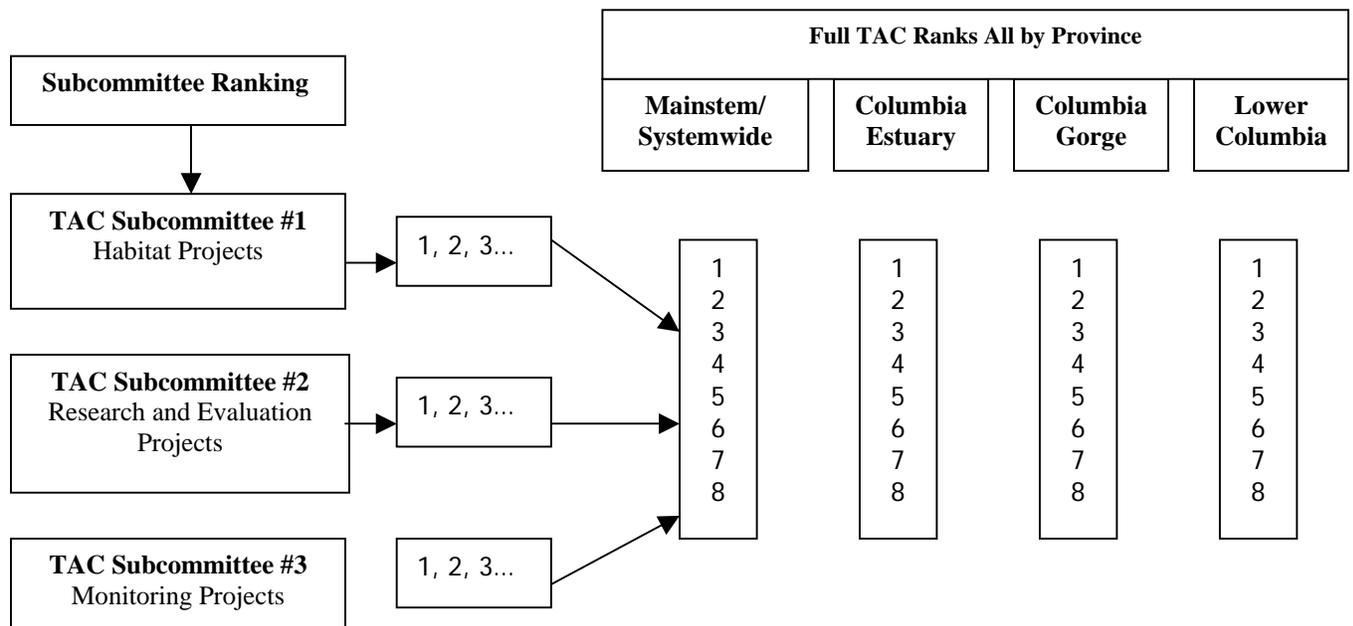
restoration, enhancement, project development and related proposals, and the other score sheet (Attachment 3) was used to evaluate research, monitoring and evaluation projects.

To facilitate a focused and efficient review, the TAC was divided into 3 subcommittees based upon project type (e.g., Habitat Projects, Research/ Evaluation Projects, and Monitoring Projects). Each subcommittee met with LCFRB staff to review and discuss each project, in accordance with the following schedule:

Subcommittee	Date	Location
Habitat	9:00 AM March 29, 2006	LCFRB Office, Longview
Research/Evaluation	9:00 AM April 3, 2006	LCFRB Office, Longview
Monitoring	1:00 PM April 3, 2006	WDW Office, Vancouver

During the subcommittee work sessions, TAC members and staff discussed the merits of each project relative to the criteria described in Attachment 1. The TAC first reviewed the “pre-scored” elements of the score sheets completed by LCFRB staff. Staff scores were adjusted as necessary based on deliberations, subject to consensus by the subcommittee. Subcommittee members then independently scored each project using the score sheets provided. Project scores and narrative comments were then submitted to LCFRB staff for compilation and preliminary ranking (by project type), based on the numerical scores. It is important to note that both the TAC and staff also provided narrative comments on many of the projects to further inform decision makers on relative merits and/or concerns. It is anticipated that these comments will be given substantial weight and consideration in final funding determinations.

On May 10, 2006, the full LCFRB TAC met at the Department of Fish and Wildlife (WDFW) offices in Vancouver, WA to determine project priorities on a province basis. The preliminary project prioritization was based on the relative ranking derived from project scores. The TAC established a final ranking based upon a combination of the review scores and a broader assessment each project’s relative relationship to the goals, objectives, strategies and priorities established in the Plan. The following flow chart summarizes the review process utilized by LCFRB TAC:



Based on the above, a ranked and prioritized project list was prepared for each province. The TAC's recommended project list and narrative comments were forwarded to the Board for final review and approval.

LCFRB Final Project List Approval: The final approval authority for LCFRB project funding recommendations rests with a 15-member, legislatively established Board. On June 2, the Board met to review and approve the TAC's funding recommendations. After deliberation, the Board approved the attached project ranking and review narratives (Attachments 4a and 4b) for consideration by the Council and BPA. **These recommendations represent the highest priorities for implementation for fiscal years 2007 through 2009.**

General Comments and Recommendations: The LCFRB greatly appreciates the opportunity to participate in the Fiscal Year 2007/2009 NPCC/BPA Fish and Wildlife project review cycle. This was the first opportunity for LCFRB to assist with review and ranking, and we are pleased to offer funding recommendations. To help inform and improve future project reviews, we offer the following general comments, observations and recommendations.

Project Priorities and Ranking: The LCFRB observed wide variation in the relative priority and value of projects, as weighed against the Plan. Those projects that fared well and that will contribute substantially toward Plan implementation tended to possess one or more of the following characteristics. These projects:

- Relate outcomes and deliverables to key management decisions outlined in the Plan;
- Establish clear and important connections with multiple Plan goals, objectives and priorities;
- Address high priority actions identified in the Habitat Work Schedule element of the Plan;
- Provide benefits to multiple focal species, and/or those identified as high priority in the Plan;
- Address key data and information gaps outlined in the Plan; and
- Include project elements that are sequenced and coordinated with other efforts, within the context of a broader plan.

Those projects that did not possess the above qualities did not fair as well in the ranking and prioritization process. Specifically, projects that failed to clearly and logically relate outcomes and deliverables to key management decisions and high priority Plan goals, objectives and priorities, ranked low.

Research projects in particular often failed to clearly define outcomes and relate them to critical uncertainties or management decisions. They frequently noted that they would "inform" or "coordinate" with other research effort, but provided little or no insight regarding how this would be done or how it would contribute to or increase the value of expected outcomes. In some cases, there appeared to duplication of work among proposals. Proposed "ongoing" research projects often did not clearly identify what has been accomplished or produced to date. Nor did they clearly relate how the proposed work would build on the past accomplishments. Looking across research projects, it was not possible to determine whether they would collectively result in a strategic, coordinated, and cost-effective approach addressing critical uncertainties and informing management decisions.

Recommendation for Future Project Ranking:

- In coordination with local Subbasin planning entities, develop a guidance document for local review entities and project proponents that outlines key criteria for development of projects, emphasizing the above characteristics.
- Develop a more strategic research agenda for the lower Columbia, one that better and more logically ties research needs to critical uncertainties and/or management decisions and sets clear priorities. This agenda should be used to both solicit and evaluate research proposals.
- Modify the application process to encourage pre-application consultation between the project sponsor, BPA/NPCC staff, and local Subbasin planning entities to facilitate development of sound projects that are well connected to established Plan management priorities.

Project Review Coordination: In addition to completing their own review of 43 projects, the LCFRB also attended the Estuary review workshop, which included both Washington and Oregon participants. A number of the projects reviewed by the LCFRB were also evaluated during the Estuary review process. While similarities in ranking outcomes were evident, discrepancies also existed. We understand that several of the mainstem projects reviewed by the LCFRB will also be reviewed by local entities in Oregon.

Recommendations for Project Review Coordination:

- To improve consistency between local reviewers, develop a guidance document that outlines key criteria for reviewing projects. Review criteria should be developed for each of the major project types (e.g., habitat restoration, research, monitoring, evaluation, harvest management, etc.).
- Modify the process to reduce and/or eliminate overlap in project review and ranking, while still providing opportunity for non-scoring entities to comment on projects of mutual interest. Where overlap cannot be eliminated, develop a process that allows integration of multiple rankings.

Project Budget Development: The LCFRB observed tremendous variation in budgets for projects that are otherwise similar in nature, scope and scale. As noted in the individual project review narratives submitted by LCFRB, the budget elements for report writing, data dissemination, and other administrative functions for many projects are exorbitantly high, especially when compared to similar non-BPA related projects.

Recommendation for Project Budget Development:

- Develop review criteria that place greater emphasis on project cost-effectiveness in establishing funding priorities.
- Establish limits (e.g., % of total budget) for key project budget elements, based on industry averages.

Local Entity Review Costs: The LCFRB believes that local entity review and ranking of Fish and Wildlife Program proposals will improve alignment of BPA funding with Plan priorities, facilitate Plan implementation, and improve the overall cost-effectiveness of BPA's Fish and Wildlife Program. From this perspective, the LCFRB has placed a high priority on participating in the review process. However, the costs associated with this local entity review are substantial and not reimbursable. We understand that this contrasts with costs associated with the Independent Scientific Review Panel (ISRP)

review, which are reimbursable. The LCFRB estimates that we have expended approximately 384 hours of staff and TAC time on the review process, at a cost of over \$18,000.

Recommendation for Local Entity Review Costs:

- Develop a process for reimbursing local entities for expenditures associated with Fish and Wildlife Program project reviews.

Attachments: Attachment 1 – Technical Review Criteria
Attachment 2 - Habitat Project Score Sheet
Attachment 3 - Research, Monitoring and Evaluation Score Sheet
Attachment 4a and 4b - Prioritized and Ranked Project Funding
Recommendations by Province.

cc: LCFRB
LCFRB Technical Advisory Committee

Attachment 1 Technical Review Criteria

The LCFRB has ranked the BPA proposals based on their “Benefits to Fish and Wildlife” and “Certainty of Success”. This ranking and evaluation approach was developed based on guidance issued by the SRFB for use by the Lead Entities for salmon recovery projects, technical input from the LCFRB TAC, and Plan priorities established for habitat restoration, research, monitoring and evaluation projects and efforts. In evaluating benefits, emphasis was placed on evaluating a project’s relationship to the goals, strategies, measures, and priorities outlined in the Plan.

Depending on project type, assessment of “*Benefits to Fish and Wildlife*” gives consideration to the following review criteria:

1. Population priorities from the recovery plan based on

- Current viability,
- Legacy or core population determinations,
- Estimated recovery potential,
- Population viability criteria, and
- Focal species status and designation.

2. Basin, subwatershed and reach priorities

Subbasin priorities for fish take into consideration species/populations in the basin and their priority for recovery. Reach priorities for fish are based on the populations using the reach, the recovery priority of each population, and the importance (current and potential) of the reach to the productivity, abundance, and distribution of the each population.

3. Key limiting factors and life history stages

Project priorities for wildlife and other non-salmon/steelhead focal species are based on a project’s relationship to key limiting factors and management priorities outlined and addressed in the Plan. For fish populations, priorities within a reach are based on key life history stages for each species using the reach and habitat attributes or limiting factors affecting these life history stages.

4. Relationship to key information and data needs

Research, monitoring and evaluation (RME) projects are assessed based on the degree to which they will provide key data and information necessary to support decision-making under the plan or improve the accuracy, efficiency or quality of management decisions. RM&E proposal assessment takes into account the relationship of a project to data and information needs for focal fish populations, wildlife populations, ecological processes and interactions, and critical uncertainties. Project assessment includes comparison with the RM&E priorities and measures specifically outlined in the plan.

5. Extent to which a project would address key priorities and factors

Each proposed project is evaluated to determine the extent or degree to which it will address applicable review priorities and factors. For example, a project may target a high priority reach, population(s), life history stage(s), and limiting factor(s), but may not fully address them.

6. Relationship to 6-year Habitat Project Implementation Schedule

For habitat projects, the Plan evaluates and ranks habitat conditions and needs on a regional, watershed, sub-watershed, and reach-basis. However, the plan itself *does not identify or rank* specific projects. To help facilitate and coordinate habitat projects, the Plan calls for a 6-year habitat project implementation schedule. As the title implies, the purpose of the 6-year habitat project schedule is to identify and rank salmon and steelhead habitat protection and restoration projects to be accomplished during the next six years. It is intended that the schedule be used by federal, state, and local agencies and non-governmental entities that fund and/or undertake habitat projects in the Lower Columbia Salmon Recovery Region, excluding the White Salmon River. The 6-year implementation schedule is based on the needs and priorities of the Plan, recent habitat surveys, new data or information where available, and professional knowledge provide during local workshops. The BPA proposal evaluation and ranking takes into consideration of a project's priority as identified in the 6-year habitat project implementation schedule.

Depending on project type, consideration is given to the following in evaluating a project's "Certainty of Success":

1. The project scope in relation to goals and objectives

The project is evaluated to determine whether the proposal will achieve the stated goals and objectives, and whether it has a well-defined scope that is consistent with and appropriate for the stated goals and objectives,

2. The proposed technology and approach

The project is evaluated to determine whether the technology and approach support the project's objective and whether they are consistent with site conditions, account for watershed processes, and are proven or tested.

3. Coordination and sequencing

The project is reviewed to determine whether it will support or complement other proposals for the reach or watershed, and whether it is being conducted in the proper sequence relative to other needs in the reach or watershed.

4. Sponsor Experience and Qualifications

The sponsor and/or its partners experience and qualifications in completing similar projects is evaluated. This includes technical, project management, and administrative capabilities.

5. Constraints or Uncertainties

The project is assessed to determine whether there is potential for funding, scientific/technical, permitting, legal and/or physical constraints or uncertainties that would affect successful implementation of the project.

6. Community/Landowner Support and Stewardship

For habitat projects, key considerations include the willingness of the landowner, the support and acceptance of the local community, participation of the community in the development and implementation of the project, and how the project will promote broader salmon recovery efforts. Consideration is also given to whether the sponsor has adequately provided for the stewardship needed to ensure the success of the project over time.

7. The cost relative to the expected benefits

As a final step in determining a project's potential benefit to fish or wildlife and certainty of success, the project is evaluated to determine whether the project costs are reasonable relative to the expected outcomes or benefits.

HABITAT SCORE SHEETS

I. BENEFITS TO FISH

Part 1: TARGET REACHES				
Reach Tiers	Number of Reaches		Reach Value	Score
Tier 1 (15 points/reach)		x	15	
Tier 2 (10 points/reach)	0	x	10	0
Tier 3 (5 points/reach)		x	5	
Tier 4 (0 points/reach)	0	x	0	0
Columbia (10 points maximum)			10	
TOTAL				0

Part 2: TARGET POPULATIONS/REACH POTENTIAL				
Populations	Population Score		Average SRP	Score
Primary (5 points/pop)	0	x	1.5	0
Contributing (3 points/pop)	0	x	1	0
Stabilizing (1 points/pop)		x		
Out-of-Basin (5 points maximum)				
TOTAL				0

Part 3: RECOVERY PLAN MEASURES RANKING (0 TO 30 POINTS)			
	Ranking	Range	Score
	Top Third	21 to 30	0
	Middle Third	11 to 20	
	Bottom Third	0 to 10	

Part 4: HABITAT WORK SCHEDULE PROJECT RANKING (0 to 30)			
	Ranking	Range	Score
	Top Third/High	21 to 30	0
	Middle Third/Med	11 to 20	
	Bottom Third/Low	0 to 10	

STAFF COMPLETES

STAFF COMPLETES

HABITAT SCORE SHEETS

I. BENEFITS TO FISH

Part 5: BENEFITS TO FISH (0 to 120 TOTAL)

a. Life History Stage: (0 to 70 points)

1. How many key life history stages for targeted species would the project address?

Ranking	Range	Score
Most	14 to 20	
Several	7 to 13	
One	0 to 6	

2. To what extent would the proposal address the key life history stages for the targeted population(s):

(a) Within the Sub-basin?

Ranking	Range	Score
Significantly	18 to 25	
Moderately	9 to 17	
Minimally	0 to 9	

(b) Within the target reach(es)?

Ranking	Range	Score
Significantly	18 to 25	
Moderately	9 to 17	
Minimally	0 to 9	

b. Watershed Processes/Limiting Factors (0 to 50)

To what extent would the proposal address watershed process(es) or limiting habitat factor(s) that significantly affect the productivity, abundance, and distribution of the targeted population(s)?

Ranking	Range	Score
Significantly	35 to 50	
Moderately	18 to 34	
Minimally	0 to 18	

Part 6: COST (0 to 20)

Are the costs reasonable for the work proposed and expected benefits?

Ranking	Range	Score
High	14 to 20	
Medium	7 to 13	
Low	0 to 6	

TAC COMPLETES

ATTACHMENT 2
HABITAT SCORE SHEETS

II. CERTAINTY OF SUCCESS

1. Scope: 0 to 30 points			
Is the scope appropriate to achieve the stated goals and objectives? Does the proposal have a well defined scope that is consistent with and appropriate for the stated goals and objectives?	Ranking	Range	Score
	High	21 to 30	
	Medium	11 to 20	
	Low	0 to 10	

2. Approach: 0 to 30 points			
<u>a. Acquisition/Restoration Projects:</u>			
Does the proposal apply appropriate and proven methods and technologies? If acquisition, is this approach necessary to achieve the project's objective? What is the threat to the site? How imminent is the threat?	Ranking	Range	Score
	High	21 to 30	
	Medium	11 to 20	
	Low	0 to 10	
<i><u>OR</u></i>			
<u>b. Assessments:</u>			
Will the proposed methodology effectively address an information gap identified in the recovery plan or habitat work schedule or lead to implementation of priority projects within two years?			

3. Coordination/Sequence: 0 to 30 points			
<u>a. Restoration/Acquisition Projects:</u>			
Is the proposal designed and located in coordination with other salmon recovery activities in the reach or watershed? Is it logically sequenced with other restoration needs or projects in the reach or watershed?	Ranking	Range	Score
	High	21 to 30	
	Medium	11 to 20	
	Low	0 to 10	
<i><u>OR</u></i>			
<u>b. Assessments:</u>			
Is the scope, scale, approach, and methods compatible with similar assessments within the watershed and/or region?			

4. Constraints/Uncertainties: 0 to 30 points			
What is the potential for funding, scientific/technical, permitting, legal, and/or physical constraints or uncertainties to affect successful implementation of the project? Considerations: watershed processes affecting project, permitting, site conditions, access, etc.	Ranking	Range	Score
	High	21 to 30	
	Medium	11 to 20	
	Low	0 to 10	

5. Qualifications and Experience: 0 to 15 points			
How qualified and experienced is the project team (sponsor and partners) in successfully undertaking projects of similar scope, nature, and magnitude?	Ranking	Range	Score
	High	11 to 15	
	Medium	6 to 10	
	Low	0 to 5	

6. Community Support: 0 to 35 points			
What is the extent of community support for and involvement in the proposal? Considerations: Has the sponsor obtained significant in-kind or cash match? Will local volunteers participate? Will it enhance public knowledge and support. Will it build capacity and interest for future projects. Does the project address local concerns and interests?	Ranking	Range	Score
	High	25 to 35	
	Medium	12 to 24	
	Low	0 to 11	

7. Landowner Support: 0 to 15 points			
To what extent is the landowner willing to allow the proposed work to be done?	Ranking	Range	Score
	Willing	15	
	Likely	10	
	Unkown	5	

8. Stewardship: 0 to 15 points			
To what extent does the proposal describe and fund stewardship efforts for ten years or more?	Ranking	Range	Score
	High	11 to 15	
	Medium	6 to 10	
	Low	0 to 5	

**BPA PROPOSALS
RME SCORE SHEET**

RESEARCH & EVALUATION SCORE SHEET

BPA # _____

Scorer: _____

A. BENEFITS TO FISH AND WILDLIFE

1a. Will the proposal produce data and information not currently available, and, that necessary to make key management decisions under the Plan? <p align="center"><u>OR</u></p> 1b. Will it substantially improve the accuracy, efficiency or quality of data and information needed to make management decisions under the Plan?			Score
	NA/None	0	0
	Low	10	
	Medium	20	
	High	30	
	Very High	40	

2. Does the proposal address specific measures and actions identified in the Recovery Plan?					
	Citation	# of Measures	Value		Score
1		3+	High	30	0
2		2	Med	20	
3		1	Low	10	

3. To what level will the research, monitoring, and/or evaluation project address data and information gaps for focal population of fish and wildlife? (Note: Complete the most applicable subsection (a, b, c or d) <u>or multiple subsections</u> if the primary project focus clearly and specifically addresses each of them.)									
a. Fish Population									
	#		Score				Range	Score	Score
	1	M	L	L			NA/None	0	0
Species	2	H	M	L			Low	10	
Affected	3+	H	H	M			Medium	20	
		Primary	Contributing	Stabilizing			High	30	
b. Fish Habitat									
	EDT	# of Factors	3+	2	1		Range	Score	Score
	Factor	Tertiary	M	L	L		NA/None	0	0
	Rating	Secondary	H	M	L		Low	10	
		Primary	H	H	M		Medium	20	
							High	30	
c. Non-Salmonid Focal Species									
	Ranking	L	M	H	H		Range	Score	Score
		1	2	3+	1+ State or Federal E, T or S Listed Species		NA/None	0	0
							Low	10	
							Medium	20	
							High	30	
d. Ecological Processes and Interactions									
	# Focal Species	1		M	L	L	Range	Score	Score
		2		H	M	L	NA/None	0	0
		3+ (or 1+ ESA listed species)		H	H	M	Low	10	
							Medium	20	
							High	30	
				# Key Ecological Processes Addressed (predator/prey interactions, nutrient processes, channel forming processes, species-habitat associations, etc.)					

Section A. STOTAL (Max 190)									0
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Comments: _____

B. CERTAINTY OF SUCCESS

1. Scope Will the proposal achieve the stated goals and objectives? Does the proposal have a well defined scope that is consistent with and appropriate for the stated goals and objectives?	Ranking	Range	Score
	No	0	0
	Low	10	
	Medium	20	
	High	30	

2. Approach Are the scope, scale, approach, methods and data outputs compatible with those produced by similar RM&E efforts within the watershed and/or region?	Ranking	Range	Score
	No	0	0
	Low	10	
	Medium	20	
	High	30	

3. Qualifications and Experience How qualified and experienced is the project team (sponsor and partners) in successfully undertaking projects of similar scope, nature, and magnitude?	Ranking	Range	Score
	No	0	0
	Low	10	
	Medium	20	
	High	30	

4. Data and Information Gaps Will the proposed methodology effectively address information or data gaps identified in the recovery plan and contribute toward key management and policy decisions?	Ranking	Range	Score
	No	0	0
	Low	10	
	Medium	20	
	High	30	

OR

For research projects, does the proposed scope of work focus on data and information gaps that constrain effective implementation of recovery measures, rather than mechanistic studies of biological or ecological relationships?	Ranking	Range	Score
	No	0	0
	Low	10	
	Medium	20	
	High	30	

5. Uncertainties What is the potential for funding, scientific/technical, permitting, legal, and/or physical constraints or uncertainties to affect successful implementation of the project? Considerations: watershed processes affecting project, permitting, site conditions, access, etc. (Note: Low = few or no constraints or uncertainties, High = heavy constraints or uncertainties.)	Ranking	Range	Score
	Very High	0	0
	High	10	
	Medium	20	
	Low	30	
STOTAL		Max 150	0

C. COST

I. Cost Effectiveness 0 to 30 points Are the costs reasonable for the work proposed and expected benefits?	Ranking	Range	Score
	Unreasonable	0	0
	Low	10	
	Medium	20	
	High	30	

BPA Project Preliminary Ranking By Project Type

Rank	Project #	Project Title	Sponsor	Province
1	200102700	Western Pond Turtle Recovery - Columbia River Gorge - Washington	WDFW	GORGE
2	200705200	Chum Salmon Evaluations Within Bonneville Reservoir	WDFW	
3	200737100	Documentation of Food-web Linkages in Mainstem Columbia River	CRRL	
4	199801900 Monitoring	Wind River Watershed Restoration - Monitoring Elements	UCD	
5	200102600	Status, Genetics, and Life History of Coastal Cutthroat Trout above Bonneville Dam	USGS	
6	199801900 Habitat	Wind River Watershed Restoration - Habitat Elements	UCD	
7	200713900	Rock Creek Stabilization and Habitat Rehabilitation	Skamania County	
8	200707700	Hemlock Dam Removal (see review comments regarding ranking)	USFS	
9	200721500	Adult Steelhead Monitoring in Trout Creek (see review comments regarding ranking)	WDFW	
*DNF	200704900	Efficacy of Carcass Analogs for Restoring the Productivity of Nutrient Limited Salmonid Streams	CRRL	
*DNF	200737000	Methods of Applying Salmon Timing Mechanisms to Wild and Hatchery Fish Management	Taylor Group	
1	200301100	Columbia River Estuary Habitat	LCREP	
2	200734300	Expand Current Juvenile Salmonid Monitoring in Columbia Estuary	WDFW	
3	200715000	Expand Salmonid Monitoring in Grays River	WDFW	
4	200300700	Lower Columbia River & Estuary Ecosystem Monitoring	LCREP	
5	200736000	Columbia/Cowlitz River Eulachon Research & Monitoring Plan	Steward & Associates	
6	200734600	Crims Island Habitat Restoration	USGS	
7	200301000	Historic Habitat Opportunities Columbia River Estuary	NOAA	
8	200301300	Grays River Watershed Restoration	CREST	
9	200300600	Estuary Restoration Grays River and Chinook Watersheds	CREST	
10	200716600	Lower Columbia Coastal Cutthroat Trout Population Response	CRFPO & USFWS	
11	200738100	Multi-Subbasin Habitat Restoration	LCFEG	
12	200702600	Historic Changes in Organic Nutrient Columbia River Estuary	PNNL	

BPA Project Preliminary Ranking By Project Type

Rank	Project #	Project Title	Sponsor	Province
1	200105300	Reintroduction of Chum Salmon into Duncan Creek	PSMFC	LOWER COLUMBIA
2	200727700	Hamilton Creek Stabilization and Habitat Rehabilitation	Skamania County	
3	200703700	North Fork Toutle River Fish Passage	Steward & Associates	
4	200301200	Shillapoo Wildlife Area	WDFW	
5	200735500	Determining the Accuracy of Adult Coho Salmon Population Estimates from a Random, Spatially Balanced design using Area-Under-the-Curve	WDFW	
6	200731900	WRIA Based Project Feasibility Assessment and Prioritization, Kalama River	LCFEG	
7	200727400	Expand Current Juvenile Monitoring in Lower Columbia Province	WDFW	
8	200736800	Adult Coho Salmon Monitoring in Lower Columbia Province	WDFW	
9	200001200	Evaluate Factors Limiting Lower Columbia Chum Salmon	USFWS	
10	200731500	Camas Slough/Lower Washougal River Realignment	LCFEG	
11	200716900	Total Dissolved Gas Effects on Incubating Chum Salmon Below Bonneville Dam	PNNL	
12	200500100	Pilot Study for Research, Monitoring, and Evaluation of Sub-yearling Salmon in Tidal Freshwater of the Columbia River	PNNL	
13	200708100	WRIA Based Project Feasibility Assessment and Prioritization, Coweeman River	LCFEG	
14	200001400	Evaluate Population Dynamics and Habitat Use of Lamprey in Cedar Creek	USFWS	
15	200704300	LCFEG Community-Based Multi Subbasin Habitat Restoration Program	LCFEG	
16	200734400	Lower Columbia River Wild Coho DNA Stock Identification Proposal	Fish Friendly, Inc.	
17	200713500	LC Salmon Recovery Planning: Habitat Restoration Project List Development and Modeling	WDFW	
*DNF	200703100	Identifying Prioitized Action Plans from Subbasin Strategies Using a Scenario Based Support System	NOAA NWSC	
1	199306000	Select Areas Fisheries Enhancement Project	ODFW	SYSTEMWIDE
2	200715100	Nutrient Enhancement Business Plan	LCFEG	
*DNF = Do Not Fund				

**ATTACHMENT 4b
LOWER COLUMBIA FISH RECOVERY BOARD
2007/2009 BPA PROJECT REVIEW COMMENTS**

PROJECT # & PROVINCE RANK	COMMENTS
GORGE PROVINCE	
200102700 GORGE #1	This is a combination evaluation/research and management project for recovery of Western Pond Turtles. It includes population assessment, continued implementation of the "head start" program, evaluation of population expansion potential, genetic assessment, and habitat management. Given the limited distribution and status of western pond turtles in Washington, this ongoing project is crucial to recovery efforts.
2007005200 GORGE #2	Plan objectives call for establishing a "contributing" population of chum in the Upper Gorge (above Bonneville Dam). This recovery goal is complicated by the fact that Bonneville Dam is a significant, but not total barrier to chum migration and that much of the historical chum habitat above the Dam has been inundated by the Bonneville pool. This project would provide baseline monitoring to evaluate current distribution of chum above Bonneville Dam and identification of potential production and restoration sites. Costs appear high, especially given that tagging and trapping and related equipment are in-kind contributions. The sponsors should evaluate whether project goals could be more effectively and efficiently achieved by directly surveying existing or likely habitat in the project area, which is limited geographic scope, for chum spawning and restoration/creation opportunities.
200737100 GORGE #3	This project would provide baseline information on trophic characteristics and relationships in the mainstem/estuary, and would have implications for future management of fisheries and non-native species (e.g., shad). Near-term benefits to decision makers is questionable. It is not clear how the research could be directly applied in considering specific management actions that could affect food-web relationships. Would additional research be necessary before the results could be used to effectively inform or support decision-making. If so, a full research agenda should be developed in order to put this work context.

<p>199801900 (monitoring)</p> <p>GORGE #4</p>	<p>This is an ongoing multifaceted monitoring project that addresses juvenile life history assessment, harvest status, monitoring, hatchery status monitoring, population/biological status monitoring, water temperature, flow, sediment and erosion control. Outreach and education is also addressed. Emphasis species include native steelhead and hatchery chinook (spring). The Wind River has been identified as an "intensively monitored watershed" (7.5.4). Biological monitoring data from the Wind River is widely used to support management decisions on wild stocks of steelhead. This project includes both RME elements and Habitat Restoration elements. The evaluation sheet only addresses the RME elements, which include the following objectives: Bio OBJ-1, BioOBJ-2, BioOBJ-3, BioOBJ-4, BioOBJ-5, and parts of BioOBJ-8. A separate habitat score sheet 199801900 (hab) addresses the following elements: BioOBJ-6, BioOBJ-7, and parts of BioOBJ-8. The benefits from previous BPA funded monitoring with regard to improved habitat conditions or fish population responses are not discussed. This project includes both habitat and monitoring components, but these elements are not linked sufficiently to address project effectiveness. This project is not well connected to prior work accomplishments, and it is not clear how the various project elements tie together. There are no clear basin-wide goals, objectives, and strategies needed to put work in context. We were unable to determine if work proposed is contributing to achievement of goals (what is the desired end state?), or whether it is doing so in a strategic manner. This proposal appears to consist of many disjunctive pieces instead of a well-coordinated project. The various work elements need to be related to basin goals/priorities, and each other, to demonstrate work is being conducted in a strategic and efficient manner. The individual work elements all have inherent value but it is not clear what the overall goal is. Key questions to answer include the following: What do we want to achieve in the basin? How does the proposed work contribute? Are these the most important monitoring priorities? Are these projects being conducted in a strategic manner? Stronger ties should be established to plan strategies, measures, actions and priorities.</p>
<p>200102600</p> <p>GORGE #5</p>	<p>This project is not very well connected to the Plan goals, strategies and measures. The value of this project to future management decisions is unclear. The budget for report preparation and dissemination (approximately \$220,000 or 29% of the total project budget) appears very high in relation to typical projects. Although cutthroat is a focal species in the plan, it is not ESA listed and therefore should be given a lower priority than projects directed at addressing critical uncertainties for ESA listed salmonids.</p>

199801900 (habitat)	<p>Scores reflect only those reaches specifically identified in the application. This evaluation only includes the habitat components of this project: BioOBJ-6, BioOBJ-7, and applicable section of BioOBJ-1 and BioOBJ-8. Actions include instream LWD placement, riparian restoration, road decommissioning, and invasive plant control. The benefits from previous BPA funded monitoring with regard to improved habitat conditions or fish population responses are not discussed. This project includes both habitat and monitoring components, but these elements are not linked sufficiently to address project effectiveness. Although the project does identify some important habitat restoration priorities outlined in the Plan, it is not well connected to prior work accomplishments, and it is not clear how the various habitat project elements tie together. They appear to be disjunctive rather than coordinated. There are no clear basin-wide goals, objectives, and strategies needed to put work in context. We were unable to determine if work proposed is efficiently or effectively contributing to achievement of goals (what is the desired end state?), or whether it is doing so in a strategic manner. The various habitat work elements need to be related to basin goals/priorities, and each other, to demonstrate work is being conducted in a strategic and efficient manner. The individual work elements all have inherent value but it is not clear what the overall goal is. Stronger ties should be established to plan strategies, measures, actions and priorities.</p>
200713900 GORGE #7	<p>The project site supports steelhead (winter), coho, and chinook (fall), but habitat quantity and quality is limited. Costs appear high relative to expected benefits to focal species. The project reach confined and subject to heavy bedload deposition. It is not clear whether the proposed project adequately addresses watershed conditions (hydrology, sediment, etc.).</p>
200707700 GORGE #8	<p>The SRFB funded the feasibility assessment for this proposal, and it was completed on time and within budget. This proposal addresses an identified restoration priority for the Wind River watershed. The 6-year Habitat Work Schedule ranks correction of fish passage problems at Hemlock Dam as priority #6 of the 12 top restoration priorities for the basin. However, there still remain unresolved technical and community concerns regarding removal of Hemlock Dam. Given these unresolved concerns, funding of this project is premature at this time.</p> <p>The existing Hemlock Dam fish ladder is currently used for biological monitoring activities. Monitoring facilities would be lost through dam removal and should be replaced if this project proceeds. Therefore, to maintain long-term, regionally important monitoring data, Project #200721500 (WDFW, adult steelhead monitoring in Trout Creek)) should be funded as an equally important priority if Project 200707700 proceeds.</p>

<p>#200721500</p> <p>GORGE #9</p>	<p>Removal of Hemlock Dam will result in loss of adult monitoring capabilities in Trout Creek. Hemlock Dam adult counts provide the basis for management of Wind River summer steelhead populations. This project will replace adult monitoring facilities and will also provide for in-depth monitoring capabilities for adult and juvenile salmonids, consistent with monitoring objectives identified in the Plan for this intensively monitored watershed. However, project 199801900 also includes monitoring elements for the Wind River. If funded, these proposals should be coordinated to eliminate any redundancies or duplication. This project includes an outreach and education component. Support only if hemlock dam is removed.</p> <p>See comments for Project 200707700 above for additional recommendations. This project should be funded as an equally important priority if Project 200707700 is funded.</p>
<p>200704900</p> <p>GORGE – Do Not Fund</p>	<p>The use of carcass analogs may offer a significant opportunity to further nutrient enhancement efforts in support of salmon recovery. The USFS and Washington Salmon Recovery Funding Board (SRFB) have provided \$724,000 to fund USGS work to date on evaluating the influence of carcass analogs. The current SRFB grant is scheduled to run through the spring of 2007 at which time USGS is to submit a final report providing: (1) an assessment of the benefits and effectiveness of using carcass analogs for nutrient enhancement; (2) guidelines for analog use; and (3) an analysis and supporting data to facilitate regulatory approvals for analog use. Completion of the current carcass analog study as funded by the SRFB is expected to provide adequate information and data to support efforts to implement a carcass analog nutrient enhancement program. Based on this understanding, we question the need for and considerable expense of continuing the study of carcass analogs as proposed. There is no mention of on-going research (SRFB funded). LCFRB Recommendation: Do not fund.</p>
<p>200737000</p> <p>GORGE – Do Not Fund</p>	<p>The methods, technical/scientific background and project objectives are not defined sufficiently to determine whether this project would promote the goals and objectives of the plan, or facilitate implementation. While an interesting idea, the proposal contains no information to support the idea. LCFRB Recommendation: Do not fund.</p>

ESTUARY PROVINCE

200301100 ESTUARY #1	<p>This project is a request for "programmatic" funds for LCREP. Overall, this is a very comprehensive proposal that includes project implementation, monitoring and adaptive management elements. It will support continued restoration efforts through an ecosystem-based approach. Past accomplishments have been significant and consistent with Plan goals. A substantial portion of the funding would be for on-the-ground restoration efforts. Habitat restoration approaches proposed are consistent with the objectives, strategies, measures, and actions identified in the plan. While specific projects are not fully defined, habitat restoration goals have been set (e.g., acreages, lineal miles, etc.). Projects are reviewed using a sound, but still evolving, project evaluation process to help maximize benefits. LCFRB is involved with LCREP project selection process. This proposal has one of the most complete descriptions of related projects although it is difficult to determine the benefits to be derived from the related projects. This proposal is focused on achieving on-the-ground results as well as further strengthening LCREP's overall habitat restoration program through monitoring, adaptive management, and data sharing.</p>
200734300 ESTUARY #2	<p>This project addresses Level 3 in depth monitoring for chinook, coho, steelhead, chum, and cutthroat in Skamokawa Creek and Elochoman River. This project addresses three primary and one data and information gaps for population productivity and abundance. The Level 3 Monitoring Strategy proposed is the minimum needed to meet the biological monitoring objectives of the plan. This project will provide critical baseline information necessary to provide management decisions regarding hatcheries, harvest, and habitat elements of the plan, and to determine status toward established recovery goals. This project should be given preference in funding.</p>
200715000 ESTUARY #3	<p>This project addresses Level 3 in-depth monitoring needs for the Grays River watershed, and would provide biological data on abundance, status, diversity, and productivity for several focal salmonids, including chum, chinook, coho, and steelhead. The level of sampling proposed is the minimum needed to address biological monitoring objectives of the plan for Grays River basin. This project will also monitor and evaluate the chum supplementation program on Grays River. This project will provide critical baseline information necessary to provide management decisions regarding hatcheries, harvest, and habitat elements of the plan, and to determine status toward established recovery goals. This project should be given preference in funding.</p>

200300700 ESTUARY #4	<p>This broad RME project will provide information on fish habitat associations, prey availability and distribution, primary and secondary productivity, physical and chemical habitat characteristics in the estuary. This project appears to be the most comprehensive monitoring proposal submitted for the estuary, and should be given preference in funding. If funded, any duplication or overlap with project 200300600 & 200301000 should be eliminated. This project should produce key information for design and prioritization of future estuarine restoration projects. Project deliverables should include a prioritized list of restoration and management actions, along with design and implementation considerations, based on the monitoring results. The relationship to future decisions/restoration actions is not entirely clear. Key questions to answer include the following: How will results of specific monitoring elements relate to future decisions? What decisions (within the Plan) will this work support and inform? What will be the decision-making processes or methods for applying information and data? A clear relationship between "need" for data/information and key decisions in Plan implementation needs to be established. The value of this project, as well as other estuary research and monitoring proposals could be much more effectively evaluated if they were placed in the context of an overall estuary strategy that identifies key management issues and associated critical uncertainties, needed research and priorities. Estuary work needs to be more closely coordinated and tied directly to decision-making.</p>
200736000 ESTUARY #5	<p>This project will provide key information and data for decisions regarding management of eulachon, as outlined in the Plan. This proposal would assist in answering basic species status questions and would be useful to future decisions under the Plan. Costs seem high. Eulachon are a focal species, but are currently not listed. They are therefore given lower priority in the Plan. Redundancies may exist with recently completed eulachon studies associated with the Columbia River channel deepening navigation project.</p>
200734600 ESTUARY #6	<p>This project will assess the effectiveness of habitat restoration measures on Crims Island, through pre- (2 years monitoring already completed) and post-project (proposed) monitoring of fish use and associated ecological processes. This type of project will provide important information on species/habitat associations and floodplain restoration effectiveness, and data to help prioritize and design future restoration projects. The presence of pre-project baseline monitoring substantially increases the value of this project when compared to other effectiveness monitoring projects.</p>

<p>200301000</p> <p>ESTUARY #7</p>	<p>We agree that the project would provide a better understanding of salmonid responses to estuarine change, which is key to recovery efforts. However, the relationship and value of this project to broader management actions under the Plan is not clearly defined. In particular, clarification is needed to determine: (1) Whether the Project addresses the highest priority uncertainties associated with estuary restoration; (2) How will this work will support improved management decisions; (3) How and when the data be synthesized and presented to make it useful to decision-makers; and (4) the overall scope and duration of this continuing research effort. The project also cites a relationship with other proposals involving monitoring/research in the Lower Grays River watershed, however, it is not clear how these projects will inform or be integrated with the results of the proposed work. The nature of the relationships should be clearly defined.</p>
<p>200301300</p> <p>ESTUARY #8</p>	<p>Given the dynamic nature of the treatment reaches, including heavy sediment loading, we are hesitant to focus solely on ELJs as the sole in-stream treatment methodology without further technical and engineering evaluation and modeling. No treatment methodology should be ruled out at this time. Based on the PNNL work and additional reach survey efforts, this project should develop clear goals or statements of desired outcomes, and then develop treatment prescriptions using appropriate methods based on hydrologic, sediment transport and the physical conditions of the actual treatment reach. We agree that this reach has important potential for several focal species, particularly chum. Based on analysis to date, hydrological and sediment conditions will limit productivity potential for the next several decades. This Project should be designed to achieve the greatest possible benefits consistent with watershed processes and reach conditions. This proposal jumps too quickly to a prescription without a complete evaluation of alternative approaches based on desired outcomes.</p>

<p>200300600</p> <p>ESTUARY #9</p>	<p>This project will provide information on fish habitat utilization, prey utilization, and prey availability of restoration sites and will inform future design and implementation of projects. However, there is potential overlap with projects 200301700 and 200301000. If funded these projects should be coordinated to ensure habitat utilization monitoring does not overlap, and to improve cost-effectiveness. Given the known importance of estuarine restoration to a variety of focal species, the degree to which project results would significantly change management decisions with regard to broad restoration priorities is moderate. Source of cost share is shown as TBD, and therefore may not be secure. The use of adjacent reference sites may confound the ability to determine value of adjacent restored reaches. The value could be substantially enhanced if treatment and reference sites were selected to avoid potential interaction between the sites. The proposed work would determine habitat utilization, but if fish are able to freely move between reference and treatment sites the findings may be confounded, perhaps overstating any perceived differences. Adjacent reference sites should be used only if pre-project conditions are surveyed. The value of this project, as well as other estuary research and monitoring proposals could be much more effectively evaluated if they were placed in the context of an overall estuary strategy that identifies key management issues and associated critical uncertainties, needed research and priorities. Estuary work needs to be more closely coordinated and tied directly to decision-making processes for the management of estuary resources.</p>
<p>200716600</p> <p>ESTUARY #10</p>	<p>Cutthroat trout are not listed on the Lower Columbia, and they are therefore a lower priority in the Plan. This project would produce information on species distribution and movement patterns, but is not clear what value would be added with regard to habitat restoration and management decisions beyond those associated with listed salmonids. The Plan relies on restoration actions for salmon and steelhead to address the needs of cutthroat trout. The project scope does not seem to be comprehensive or rigorous enough to address the project goal of "determine if habitat restoration efforts in the lower Columbia River and estuary are achieving the recovery goals for coastal cutthroat trout, and indicator species, of reversing declining abundance trends and maintaining life history diversity".</p>
<p>200738100</p> <p>ESTUARY #11</p>	<p>The FEG is an important regional partner in restoring fish habitat on the Lower Columbia River. This proposal would provide important funding for building capacity of the FEG programs. However, this proposal provides no identified projects, outcomes or results to quantifiably judge expected benefits in relation to expenditures. The proponent should provide annual workplans with proposed projects, priorities, specific restoration goals and metrics for the 2007-2009 time period.</p>

<p>200702600</p> <p>ESTUARY #12</p>	<p>While the proposal cites numerous strategies and measures in the sub-basin plan as supporting the project, a clear and logical rationale explaining how this project will support or inform decisions associated with these strategies and measures is lacking. Because of the number and complexity of factors affecting habitat restoration projects, is it questionable whether the project results would be useful in siting or design of future projects. It is questionable whether comparison of natural (historical) versus anthropogenic changes in nutrient levels would provide information that would substantially improve decision making or inform future decisions under the plan. How will the project provide a meaningful differentiation between natural and anthropogenic affects on nutrient levels or a clear connection to salmonid productivity in a manner that will support specific habitat restoration actions? The comparator estuaries (Willapa and Grays Harbor) have also been highly disturbed and altered through anthropogenic influences, including floodplain/wetland diking, dredging, water quality degradation, aquaculture, and channelization. Willapa Bay has also been subjected to extensive invasion by Spartina. These factors may confound use Willapa Bay and Grays Harbor as comparator estuaries. The overall value of this project to decision-making is questionable. There is no direct link to how information could practically be used. There are too many factors to make credible direct associations to anthropogenic and natural impacts.</p>
<p>LOWER COLUMBIA PROVINCE</p>	
<p>200105300</p> <p>LOWER COLUMBIA #1</p>	<p>This project is important for chum reintroduction efforts in Duncan Creek and to provide scientific data and information to inform other reintroduction efforts on the Lower Columbia. It will provide guidance for chum reintroduction strategies (e.g., supplementation, volunteer, stock capture, etc.) that can be used region wide, including helping to define the appropriate role of hatchery supplementation for recovery of chum salmon. Chum are a priority in the plan not only because they are primary population, but also because there are only two viable populations on the Lower Columbia. Budget elements for annual report production and data analysis and interpretation seem high. USFWS and PNNL have both proposed projects addressing Gorge Chum. To avoid redundancy, promote efficiency, and to ensure research and monitoring goals are well defined, PSMFC should work with USFWS and PNNL to develop a comprehensive research agenda for Gorge chum. The agenda should identify critical uncertainties affecting chum management, needed research and priorities.</p>
<p>200727700</p> <p>LOWER COLUMBIA #2</p>	<p>The project reach supports chum salmon, steelhead, coho salmon, and fall Chinook. Habitat quantity and quality is currently limited by subsurface flows during the summer and fall months. Historic loss of floodplain habitat and increased channel confinement has caused excessive in-channel deposition in the target reach. The stated purposes of this project include improved bedload transport and creation of a more stable pool-riffle sequence.</p>

200703700 LOWER COLUMBIA #3	This is a well-designed project that fits well with the LCRFB strategies and priorities for the Toutle River watershed. One of the most widely recognized impediments to fish utilization in the upper Toutle River watershed is the sediment retention structure. The Recovery Plan and 6-Year Habitat Work Schedule therefore designate the improvement of fish passage at the SRS as the top restoration priorities in the Toutle basin.
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200301200

**LOWER
COLUMBIA #4**

This proposal focuses on important focal species outlined in the Plan. However, management efforts should integrate fish and wildlife management given the significant potential for both on the project site.

Shillapoo Wildlife Area

The LCFRB does not have a scoring process established for wildlife projects, and this is the only purely wildlife-related project submitted for 2007 – 2009 BPA funding. The following is a qualitative assessment summary for the project.

This project addresses the habitat needs of several key wildlife species addressed in the plan, including the following:

Species	LCFRB Plan Designation	State/Federal
Sandhill Cranes	Sensitive Species	Endangered
Dusky Canada Geese	Sensitive Species	Game
Bald Eagle	Sensitive Species	Threatened
Osprey	Species of Ecological Importance	Protected
Yellow Warbler	Species of Ecological Importance	Protected
Red-Eyed Vireo	Species of Ecological Importance	Protected
River Otter	Species of Ecological Importance	Protected

This project addresses the following objectives established for these species in the Plan:

Sandhill Cranes

Objective: Support and maintain the wintering population of sandhill cranes in the lower Columbia River, while limiting crop depredation.

Dusky Canada Geese

Objective: Reverse the declining abundance trend and maintain a winter population in the lower Columbia River, while limiting crop degradation.

MI.PO.1 Protect existing over-wintering habitat to insure no future net degradation.

MI.PO.2 Encourage use of public lands over private lands.

MI.PO.3 Increase the availability of over-wintering habitat on public lands.

MI.PO.4 Limit crop depredation.

Bald Eagle

Objective: Increase the viability of the bald eagle breeding population in the lower Columbia River, particularly through increased reproductive success.

BE.PO.2 Protect existing nesting and foraging habitat.

200735500 LOWER COLUMBIA #5	<p>This project is directly called out in the Plan, and is needed to validate the AUC methodology and thereby improve accuracy of coho population estimates. This project has potentially broad implications for future monitoring efforts.</p>
200731900 LOWER COLUMBIA #6	<p>This project would result in development of a prioritized project list for the Kalama watershed, in accordance with reach priorities established in the Plan. Projects would be identified using a procedure developed by LCFRB for adjacent watersheds. This procedure includes the following steps: identify potential projects based on the needs identified in the Lower Columbia Recovery Plan and 6-Year Habitat Work Plan, available technical data, and professional judgment; evaluate the feasibility of projects based on additional site and reach data collected, biological and engineering reviews, land ownership, and logistical considerations; rank feasible projects based on Recovery Plan and Work Schedule priorities, expected benefits, and certainty considerations; and develop conceptual designs, plans, and cost projections.</p>
200727400 LOWER COLUMBIA #7	<p>This project addresses Level 3 in-depth monitoring for juvenile salmonids for the Coweeman, Lower Cowlitz, EF Lewis and Washougal Subbasins in accordance with RME objectives established in the plan. This project clearly addresses important biological monitoring gaps outlined in the plan, and will provide basic information needed for plan implementation, tracking status toward meeting recovery goals, and adaptive management. This project will provide critical baseline information necessary to provide management decisions regarding hatcheries, harvest, and habitat elements of the plan, and to determine status toward established recovery goals. This project should be given preference in funding.</p>
200736800 LOWER COLUMBIA #8	<p>This project will fill data gaps through monitoring adult coho in currently unmonitored watersheds. Information and data on abundance, productivity, diversity, and spatial structure will be provided consistent with plan objectives. The high rating for species affected is based on the broad geographic scope of the project, which includes all population gaps for coho (adult) monitoring throughout the province. Given the paucity of coho data on the Lower Columbia, this project should be placed at the top of the monitoring projects priority list. Scoring does not reflect this high priority because of single species emphasis. This data will support implementation of Coho recovery efforts.</p>

<p>200001200</p> <p>LOWER COLUMBIA #9</p>	<p>This project would result in continuation of routine and intensive monitoring of chum populations in Hamilton and Hardy Creeks. The success of the Hardy Creek chum channel in terms of adult returns has been low. The Hardy Creek habitat assessment components of this project are therefore of questionable value for future decision-making. Monitoring characteristics of properly functioning channels would provide more important information. However, the ongoing adult abundance-monitoring component of this project does provide critical information for population assessment and decision-making under the Plan. The project costs are very high and seem out of line for the limited scope of work and geographical area addressed. WDFW is also proposing a chum monitoring/research project on Duncan Creek (200105300). PNNL is proposing a project to monitor chum vulnerability to gas saturation below Bonneville Dam (200716900). PNNL, WDFW and USFWS should submit a combined proposal for chum monitoring and research efforts (Hamilton, Hardy, Duncan, Ives Island, etc.) should be encouraged to improve efficiency and cost-effectiveness and avoid needless duplication.</p>
<p>200731500</p> <p>LOWER COLUMBIA #10</p>	<p>This project is based on the assumptions that predation levels in Camas Slough are higher than in the mainstem and mouth areas, and that temperature is a significant mortality factor for salmonids in Camas Slough. These assumptions are untested. In addition, potential adverse effects (e.g., increased temperature) of reduced flow through Camas Slough from the proposed channel realignment could also result. Feasibility and assessment work should be completed before undertaking this project to ensure primary limiting factors would be addressed effectively, and would not be exacerbated by the proposed actions.</p>
<p>200716900</p> <p>LOWER COLUMBIA #11</p>	<p>This project addresses a critical uncertainty identified in the Plan. Data and information from this project will address a potential mortality factor for key mainstem chum populations. Maintaining adequate flow depths may perhaps be a more critical limiting factor for spawning chum. PNNL should consider addressing flow and the potential for dewatering redds. PNNL, WDFW (200105300), and USFWS (200105300) should submit a combined proposal for a chum monitoring and research program (Hamilton, Hardy, Duncan, Ives Island, etc.) to improve efficiency and cost-effectiveness and avoid needless duplication. Costs appear high. More information on Corps of Engineers projects with "similar objectives" would have been helpful.</p>

<p>200500100</p> <p>LOWER COLUMBIA #12</p>	<p>This project would provide information on species-habitat associations in the upper estuary, which are currently not well understood. It is unclear whether the focus on the Sandy River Delta and vicinity is broad enough for results to be applied throughout the upper estuary, according to the value of this project in supporting and informing restoration and recovery actions in the upper estuary is questionable. Overall costs seem very high, as do specific costs for data analysis, annual report, and information exchange and data dissemination. Finally, the project is presented as a "pilot study" suggesting that additional or follow-on elements. If this proposal is intended to be part of larger research agenda it should be presented in that context so that its costs, benefits, and overall schedule can be evaluated.</p>
<p>200708100</p> <p>LOWER COLUMBIA #13</p>	<p>This project would result in development of a prioritized project list for the Coweeman watershed, in accordance with reach priorities established in the Plan. Projects would be identified using a procedure developed by LCFRB for adjacent watersheds. This procedure includes the following steps: identify potential projects based on the needs identified in the Lower Columbia Recovery Plan and 6-Year Habitat Work Plan, available technical data, and professional judgment; evaluate the feasibility of projects based on additional site and reach data collected, biological and engineering reviews, land ownership, and logistical considerations; rank feasible projects based on Recovery Plan and Work Schedule priorities, expected benefits, and certainty considerations; and develop conceptual designs, plans, and cost projections.</p>
<p>200001400</p> <p>LOWER COLUMBIA #14</p>	<p>While lamprey have been identified as a focal species, very few measures have been identified for lamprey in the plan. It is not clear how this project would advance management decisions and actions. It is also unclear how this project builds upon and advances the work of the numerous prior studies. Is the proposed work an element in larger lamprey research effort? If so, the lamprey research agenda should be clearly defined and the role of this proposal explained.</p>
<p>200704300</p> <p>LOWER COLUMBIA #15</p>	<p>The FEG is an important regional partner in restoring fish habitat on the Lower Columbia River. This proposal would provide important funding for building capacity of the FEG programs. However, this proposal provides no identified projects, outcomes or results to quantifiably judge expected benefits in relation to expenditures. The proponent should provide annual workplans with proposed projects, priorities, specific restoration goals and metrics for the 2007-2009 time period.</p>

<p>200734400</p> <p>LOWER COLUMBIA #16</p>	<p>The value of this project to recovery decisions under the Plan is not demonstrated. The sampling design fails to include Oregon populations. The need for repeated sampling efforts in 2009-2011 is not clear. The potential for collection of DNA samples by agency field staff (WDFW) during intensive and routine biological monitoring should be investigated.</p>
<p>200713500</p> <p>LOWER COLUMBIA #17</p>	<p>This project would use the EDT analysis and scenario building process to further refine the recovery plan's 6-Year Habitat project list. This proposal builds upon work completed in developing the recovery/subbasin plan, and would allow better use of the existing data and analytical tools in setting habitat restoration priorities. Project lists would reflect effectiveness and duration of actions and would be developed to maximize benefits and achievement of recovery goals. Both "project" and "programmatic" scenarios would be evaluated. This project would improve effective implementation of the Plan. Note: The LCFRB is included in the budget request.</p>
<p>200703100</p> <p>LOWER COLUMBIA – Do Not Fund</p>	<p>The LCFRB has already developed an approach for ranking habitat protection and restoration efforts in the Lower Columbia, pursuant to the NOAA approved Plan. No deficiencies with the LCFRB's existing approach have been identified, and additional benefits above those currently provided have not been presented. Earlier DSS development phases did not include adequate coordination with LCFRB, and results have not been shared in any meaningful way. There has been a general lack of coordination and consultation with development of this proposal, and it is redundant with existing LCFRB approaches. LCFRB Recommendation: Do not fund.</p>

SYSTEMWIDE PROVINCE

199306000

**SYSTEMWIDE
#1**

This proposal is for continuation of the Select Area Fisheries Enhancement (SAFE) project. This project would allow for maintenance of existing SAFE fisheries, and transition from the implementation to expansion phase, through increased production and efficiencies. The SAFE project is specifically described and discussed in Sections A-140 through A-147 of the Plan. By providing harvest opportunities while minimizing impacts to wild populations, this project addresses several Plan strategies and measures, including the following:

F.S1: Assure fishery impacts to lower Columbia naturally-spawning populations are managed to contribute to recovery.

F.S2: Preserve fishery opportunity focus on hatchery fish and strong-naturally spawning stocks in a manner that does not adversely affect recovery efforts.

F.S3. Manage Columbia River fisheries at sustainable levels, maintaining viable populations through consistent recruitment to adulthood and adequate spawner abundance.

The conservation benefits of the SAFE project apply to every anadromous fish population within the Columbia River watershed. Because of these system-wide benefits, the LCFRB recommends that this project be funded through the “Systemwide” Province.

200715100

**SYSTEMWIDE
#2**

This programmatic project would fund development of a system-wide business plan for nutrient enhancement. It is unclear what percentage of the overall project will apply to the NPCC provinces. Additional work would be needed to determine the efficacy of this approach on a region-wide scale. The LCFRB supports nutrient enhancement, and use of carcass analogs appears to be evolving as a viable approach based on current research. We believe that this project should:

- Focus on a specific sub-area of the Columbia basin to pilot a carcass analog nutrient enhancement program. Given carcass analog studies that have been and are being conducted in the Lower Columbia and the fact that the sponsor's area of jurisdiction encompasses the Lower Columbia region of Washington, we recommend that the planning process focus on the lower Columbia from the Wind River downstream to the mouth of the Columbia.
- Develop a projected annual carcass analog need for a ten-year period based on the best available science with regard to application locations and rates and water quality standards. This need should take into consideration expected carcass nutrient enhancement efforts.
- Develop a plan for the placement of carcass analogs in lower Columbia tributaries noting locations, application rates, and responsible parties.
- Identify and evaluate reasonable and cost effective options for obtaining the needed supply of analogs. At a minimum, options should include acquisition of analogs through current commercial sources. The plan should also evaluate the potential use and adequacy of available surplus hatchery carcasses with the region and the potential for obtaining and using shad carcasses.
- Develop a monitoring and evaluation plan for assessing the biological (fish) response to carcass analog placements. Monitoring efforts should be coordinated with ongoing research and monitoring activities.
- Develop priorities, a schedule, work plan, and budget for implementing options, including the cost of raw materials (carcasses), transportation, storage of raw materials and finished analogs, and manufacture of the analogs. Highest priority should be given to areas where the greatest benefit to fish can be expected.
- Identify potential funding sources including in-kind contributions of non-profit organizations.

We recommend funding for initial implementation planning for a carcass analog nutrient enhancement program if the sponsor revises their proposal to address our comments.

