

Tom Karier
Chair
Washington

Frank L. Cassidy Jr.
"Larry"
Washington

Jim Kempton
Idaho

Judi Danielson
Idaho



Joan M. Dukes
Vice-Chair
Oregon

Melinda S. Eden
Oregon

Bruce A. Measure
Montana

Rhonda Whiting
Montana

November 2, 2006

MEMORANDUM

TO: Fish and Wildlife Committee members

FROM: Patty O'Toole

SUBJECT: Discussion of Bonneville in-lieu review

Over the last several months of the project selection process, in two separate letters, Bonneville rolled out its "in lieu" policy and two tables of "preliminary" in lieu ratings; the first for new proposals, and the second for existing projects. Our first opportunity to discuss the policy and its application will be at the November Fish and Wildlife Committee meeting.

The "in lieu" policy stems from the language of the last sentence of Section 4(h)(10)(A) of the Power Act, which provides that Bonneville's expenditures "shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law." A copy of the full statutory language is attached, as are Bonneville's August and October 2006 letters containing the policy and the preliminary ratings.

The staff is generally supportive of the direction Bonneville is taking in this policy framework. We do have a few concerns about the policy and its application that we would like to bring to your attention in November. The Council adopted language to regarding the policy and its application in Issue #5 of the Programmatic Recommendations accompanying the Council's FY07-09 project funding recommendations. The "in lieu" section of the programmatic recommendations is inserted at the end of this memo.

First, we believe that we need to see more of a distinction in the preliminary ratings of a project as "in lieu" between what Bonneville considers being "required" and "authorized". If an expenditure is legally "required" from another entity to undertake an action, it almost certainly raises an in lieu limit to Bonneville funding the same activity. If, however, just because an entity has "authority" to fund a type of action, and so does Bonneville, it does not mean that there is necessarily an in lieu problem. Bonneville's preliminary ratings do not distinguish between these two situations, and instead often apply both tags to the project. We believe Bonneville needs to do additional work to make these distinctions clear.

Second, we have concerns about what the policy considers to be the appropriate “proof” that a project is not an in lieu problem in situations in which Bonneville and another entity have overlapping authority. What are the appropriate ways to prove that the Bonneville money is indeed in addition to the funds of the other entity? Bonneville focused its entire policy and ratings solely on the proof presented by per-project cost share. There are other ways to prove the other entity is using its funds appropriately and that Bonneville money to the proposed activity is “in addition” to the funds of the other. We need to discuss with Bonneville what those other types of proof will be.

Third, working with the Council, Bonneville needs to develop a systematic process to allow project sponsors to respond to in lieu concerns. An ad hoc approach to finding remedies to in lieu concerns will be burdensome for all parties.

Finally Bonneville is asserting a sweeping in lieu concern about monitoring and evaluation. This comes from their view that either NOAA or the fish and wildlife managers have the responsibility to fund population status monitoring. The Program has a long history of incorporating status monitoring into planning and evaluation, and more discussion is needed on this topic.

The in lieu letters and tables were received from Bonneville in two separate packages. One containing the in lieu policy and an evaluation of new proposals came to the Council in early August. The policy would prohibit new projects that were found to be “in lieu” from being contracted until the concerns are addressed in some fashion. As the staff prepared project recommendations for the Council, we noted where significant in lieu concerns raised for recommended projects. The second package with Bonneville’s preliminary evaluation of existing projects came to the Council in October, just before the Council’s final project funding decision. We did not have time to use these ratings in the recommendations, and Bonneville indicated that they were preliminary and would be revisiting them soon.

The following several paragraphs are excerpted from the programmatic issue narrative the Council approved at the October Council meeting. It provides a good background on the in lieu discussion.

Bonneville has a legal obligation under the Northwest Power Act to protect, mitigate, and enhance fish and wildlife adversely affected by development and operation of the Columbia hydrosystem. This is Bonneville’s *responsibility*. To help meet this obligation, Bonneville has the *authority* to fund on-site protection and mitigation actions, offsite habitat and production enhancements, and associated monitoring, evaluation and coordination activities. Section 4(h)(10)(A) of the act then *limits* that authority in one particular way, in what is called the “in lieu” provision: “Expenditures of the Administrator pursuant to this paragraph shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law.”

The Council has encouraged Bonneville over the years to develop a policy to help guide Bonneville, the Council and project sponsors through in lieu situations.

Bonneville has been working to develop such a policy, the most recent version communicated to the Council in an August 3, 2006, letter from Greg Delwiche, Vice President for Environment, Fish and Wildlife. While there is still work to do before the policy is final, it is a satisfactory place to start. The policy is particularly sound by emphasizing that in situations in which an entity other than Bonneville has overlapping authority to do the type of work represented by a project proposed for Bonneville funding, the key inquiry will be one of proof about expenditures -- that is, whether it can be shown that Bonneville's funds would be coming in addition to the expenditures of the other entity and not in lieu of or supplanting the funds of the other.

The Bonneville in lieu policy is also sound in recognizing that "[r]easonable cost-sharing (where Bonneville funding is a portion of the overall proposed budget for a proposal) can demonstrate that Bonneville's funding is not supplanting that of another entity already authorized or required to undertake the activity." On the other hand, the Council believes the policy is not yet sound in the way it overemphasizes per-project cost sharing as the primary or preferred or default way of proving the absence of an in lieu problem. There are other ways of equal legal validity to prove that Bonneville's funds are in addition to and not in lieu of the funds of another entity with overlapping authority. The most obvious, and likely the most common, would be at a scale or level above individual projects, situations in which Bonneville and the other entity are funding activities in parallel or in complement (such as different riparian improvement projects in the same area, or different aspects of a monitoring program), even if no particular project is cost shared. Bonneville has developed just such an approach in a recent Memorandum of Understanding with the Forest Service; there is no reason the approach cannot work elsewhere, and it need not be implemented only by agreement. The Bonneville letter does recognize the need to consider other "remedies" besides per-project cost sharing for an in lieu concern, and the Bonneville staff are committed to working with the Council staff to develop these concepts further for consideration by the Council and Bonneville management. The Council expects further to be able to consider a further policy proposal early in FY07.

Bonneville's August 3 in lieu letter also provided preliminary in lieu ratings for all new project proposals. A small number of the projects prioritized for funding by the local review groups are on the list of projects with serious in lieu concerns. To the extent the Council's final funding recommendations include any of these projects, the Council will work with Bonneville and the project sponsors to try to address these concerns, as it appears that funding will not begin until that happens.

Early in October 2006 Bonneville then presented the Council with its preliminary "in lieu" ratings for all on-going projects in the Council's draft funding recommendations. The Council has not had sufficient time to review these ratings in any depth, and they played no role in the Council's final project recommendations. Bonneville confirmed that it was not planning to use these preliminary ratings as a reason not to contract and fund on-going projects in FY07. The Council and

Bonneville will work together with the project sponsors and others in the next few months to address these concerns.

Attachments:

statutory language -- from 4h10A

Bonneville's August 3 letter, with the policy and the ratings of the new project proposals

Bonneville's October 6 letter with the preliminary ratings of the on-going projects.

Attachment

“In lieu” provision: Northwest Power Act, Section 4(h)(10)(A)

4(h)(10)(A) The Administrator shall use the Bonneville Power Administration fund and the authorities available to the Administrator under this Act and other laws administered by the Administrator to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries in a manner consistent with the plan, if in existence, the program adopted by the Council under this subsection, and the purposes of this Act. *Expenditures of the Administrator pursuant to this paragraph shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law.*



Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

Environment, Fish and Wildlife

August 3, 2006

In reply refer to: KE-4

Dr. Tom Karier, Chair
Northwest Power and Conservation Council
851 SW Sixth Avenue, Suite 1100
Portland, OR 97204

Dear Chair Karier:

Northwest Power and Conservation Council (Council) members have asked that Bonneville Power Administration (Bonneville) make its *in lieu* funding concerns known for the proposals received in our joint FY 07-09 solicitation process. Enclosed is a spreadsheet describing our *in lieu* ratings for all of the new project proposals submitted in the solicitation. Also enclosed is the *in lieu* interpretive key and rating system utilized by Bonneville in the rating process.

As you know, the Northwest Power Act obligates Bonneville to use its authorities to fund fish and wildlife measures consistent with the Council's fish and wildlife program and other purposes of the Act. Bonneville's expenditures, however, "shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law."¹

The application of the in lieu provision & the role of cost-sharing

The *in lieu* provision poses two fundamental questions: is another entity authorized or required by law or agreement to undertake the proposed activity? If so, is Bonneville's funding in addition to, rather than *in lieu* of that entity's funding? While the questions are relatively straightforward, their application to specific project proposals is not. As Bonneville discussed in its letter last fall regarding the Bonneville-Forest Service Memorandum of Understanding (October 25, 2005 letter to Ms. Eden), one of the most difficult aspects of the *in lieu* analysis is addressing off-site projects where there is overlapping authority to perform a project. In most cases, off-site projects (activities off of the mainstem Columbia and Snake Rivers) address the impacts from actions other than the construction or operation of the Federal Columbia River Power System (FCRPS). Yet, by implementing these off-site measures recommended by the Council, Bonneville can still protect, mitigate and enhance fish and wildlife affected by the FCRPS.

In such cases, an entity other than Bonneville is frequently "authorized or required" by "other agreements or provisions of law" to undertake the mitigation. The Act prohibits Bonneville from

¹ 16 U.S.C. § 839b(h)(10)(A).

funding the activity unless Bonneville's funding is in addition to rather than *in lieu* of the entity's funding.

In such situations, cost-sharing is one method for confirming that there is no *in lieu* problem. Reasonable cost-sharing (where Bonneville funding is a portion of the overall proposed budget for a proposal) can demonstrate that Bonneville's funding is not supplanting that of another entity already authorized or required to undertake the activity. With reasonable cost-sharing, Bonneville is confident it can defend against challenges that Bonneville is violating the *in lieu* prohibition. Reasonable cost-sharing reconciles a number of the Act's provisions: the requirement that ratepayers pay only for the impacts of power facilities "not the cost of measures designed to deal with the impacts caused by other factors,"² the plain language of the *in lieu* provision itself, and Congress' intent that enhancement measures be used, in appropriate circumstances, as means of achieving offsite protection and mitigation.³

Bonneville's interpretive key & rating system

Bonneville's interpretation of the provision and how Bonneville applies it to review proposals is described in the enclosed "BPA 'In Lieu' Interpretive Key & Ratings System." Our interpretation is not new, but with this document we provide greater transparency by more explicitly stating our interpretation, underlying assumptions, and the general principles used in our review. Cost-sharing with our project partners has always been a factor considered in past *in lieu* reviews; in this key, however, we provide more explicit discussion of the role of cost-sharing as a possible remedy for many potential *in lieu* problems.

As with past practice, Bonneville is rating all proposals a "1" or a "2" or a "3." A "1" rating indicates no *in lieu* concerns, a "2" rating indicates possible *in lieu* concerns, and a "3" rating indicates *in lieu* problems. For 2007, Bonneville will treat the proposals rated as "1" and "2" as fundable. As further delineated in the ratings spreadsheet, however, Bonneville also includes notes about another entity's apparent authority or requirement to fund the activity, the level of cost-sharing (via a rough percentage), and an indication of the status of the cost-sharing proposed. Based on this information and applying the general principles of the key, Bonneville further rated all the "2" proposals as 2.1, 2.2, and 2.3. With these sub-ratings, Bonneville provides its perspective on whether the proposal includes a "reasonable" cost share, with 2.1 being "appears reasonable," a 2.2 "may be reasonable," and 2.3 being "appears unreasonable."

For future solicitations beyond the FY07-09 time period, Bonneville may not support proposals that get a 2.2 or 2.3 rating without additional cost sharing or other remedy for the *in lieu* problem identified. Again, Bonneville considers all projects rated a "2" as fundable for 2007 from an *in lieu* standpoint, but we provide this additional information to give early notice of Bonneville's thinking during this transition period.

² H.R. Rep. No. 96-976, Part II, at 45 (1980); 16 U.S.C. § 839b(h)(8)(B).

³ 16 U.S.C. § 839b(h)(8)(A).

Remedies for in lieu problems

If the Council anticipates recommending Bonneville funding for new proposals in 2007 that are rated in the enclosed list as a “3”, we encourage identification of such project proposals as soon as possible. Bonneville conducted its initial review based on proposals submitted in response to our joint solicitation and listed on the CBFWA website and other publicly available information. As noted in the enclosed key, there are a variety of ways to potentially address an adverse *in lieu* rating, including:

1. Written confirmation including supporting rationale from the proponent that neither it nor any other entity is authorized or required by other agreements or provisions of law to undertake the activity for which Bonneville funding is being sought.
2. Further description of how Bonneville’s funding is in addition to, not *in lieu* of the other entity’s funding, taking into account the principles described in the interpretive key and rating system. For example, a project sponsor could provide additional information showing that it is applying its funds to accomplish other aspects of the same overall project but had not included that explanation in the original proposal.
3. Information about past funding activities by the entity, indicating that the entity has not funded the kind of activity proposed for Bonneville funding.

Since proposals rated as “1” or “2” are considered fundable by Bonneville under the *in lieu* provision for the 07-09 period, BPA does not need additional information about these proposals at this time.

In lieu ratings for on-going project proposals

Bonneville considered whether to evaluate on-going project proposals submitted for the 07-09 solicitation. On the one hand, each of these on-going project proposals has already received an *in lieu* rating in prior project solicitations. On the other hand, some of the project proposals have been modified for the current solicitation. Also, although they are on-going, the nature and extent of another entity’s authority or requirements to undertake the activity may have changed. In addition, we have new or additional information about the amount and nature of cost-sharing offered. As a result, Bonneville concluded it would be reasonable to review all of the on-going project proposals as well, and expects to complete this review by October 1, 2006.

Some on-going proposals that did not have identified *in lieu* issues in past solicitation cycles may now present *in lieu* problems. If an on-going project proposal is rated as a “3” as not fundable, Bonneville expects the project proponent to use the FY07-09 period as a transitional one and seek to remedy the problem in consultation with Bonneville, or wind up the work to be funded by Bonneville in FY’08 and out years.

Our attention to this issue now is intended to offer insights about the appropriate level of cost share that could be expected for those *in lieu* gray areas in the future, particularly for project proposals after 2007. We firmly believe that appropriate adherence to the *in lieu* provision supports a broader, more diverse participation by our project partners, and a more expansive, better coordinated and cost-effective set of ecosystem and recovery efforts.

Thank you for the opportunity to share Bonneville's *in lieu* analysis. I look forward to working with you on these issues.

Sincerely,



Gregory K. Delwiche
Vice President, Environment, Fish and Wildlife

2 Enclosures:
New Proposals Only
In Lieu Key

cc:

Ms. Judi Danielson, Northwest Power & Conservation Council
Mr. Jim Kempton, Northwest Power & Conservation Council
Ms. Joan Dukes, Northwest Power & Conservation Council
Mr. Bruce Measure, Northwest Power & Conservation Council
Ms. Rhonda Whiting, Northwest Power & Conservation Council
Mr. Larry Cassidy, Northwest Power & Conservation Council
Ms. Melinda Eden, Northwest Power & Conservation Council
Mr. Doug Marker, Northwest Power & Conservation Council
Mr. Brian Lipscomb, Columbia Basin Fish & Wildlife Authority
Chairman Dean Adams, Burns Paiute Tribe
Chairman Chief Allan, Coeur d'Alene Tribe
Chairman Mike Marchand, Confederated Tribes of the Colville Reservation
Chairman Glen Nenema, Kalispel Tribe
Chairperson Jennifer Porter, Kootenai Tribe of Idaho
Chairperson Rebecca Miles, Nez Perce Tribe
Chairman James Steele Jr., Confederated Salish & Kootenai Tribes
Chairman Alonzo Coby, Shoshone Bannock Tribes of Fort Hall
Chairman Terry Gibson, Shoshone Paiute Tribes of the Duck Valley Reservation
Chairman Richard Sherwood, Spokane Tribe of Indians
Chairman Antone Minthorn, Confederated Tribes of the Umatilla Indian Reservation
Chairman Ron Suppah, Confederated Tribes of the Warm Springs Reservation
Chairman Lavina Washines, Yakama Indian Nation
Ms. Mary Verner, Upper Columbia United Tribes
Mr. Olney Patt, Jr., Columbia River Intertribal Fish Commission

Proposal Number	Project Title	Species Type	Province	Organization	In lieu rating	Notes	Approx. BPA share of total costs?	Status of Cost Share	
200700100	Aquatic survey protocol comparison.	Anadromous	Mainstem/Systemwide	US Forest Service - National Headquarters	1.0	General aquatic survey protocols; assume covered by MOU	BPA 70% (84)	Under Dev.	
200700300	Dworshak Dam Resident Fish Mitigation	Resident	Mountain Snake	Idaho Department of Fish & Game	1.0	FCRPS mitigation; strobes	BPA 80%	Under Dev.	
200701300	Convert BPA Term Riparian Lease Agreements to Permanent Riparian Conservation Easements	Anadromous	Columbia Plateau	John Day Basin Trust	1.0	Purchase perpetual riparian easements where BPA provided riparian fencing previously; assume wildlife HUs	BPA 91%	Mixed	
200702000	Manastash Instream Flow Enhancement	Anadromous	Columbia Plateau	Kittitas County Conservation District	1.0	Close piping of irrigation, other efficiencies (assuming irrigators not required to do)	BPA 88%	Mixed	
200702400	Coeur d'Alene Trout Ponds	Resident	Intermountain	Coeur D'Alene Tribe	1.0	Trout ponds to replace lost fishery; assume this is for FCRPS and Avista will be providing additional ponds via relicensing	BPA 96%	Confirmed	
200702500	Project Compliance Monitoring	All	Mainstem/Systemwide	XLSolutions	1.0	Independent compliance monitoring of BPA-funded Council projects	BPA 100%		
200702700	Colville Confederated Tribes Acquisition Project	Wildlife	Intermountain	Colville Confederated Tribes	1.0	FCRPS wildlife mitigation project	BPA 100%		
200703300	Monitor sub adult and adult bull trout passage through Lower Granite, Little Goose and Lower Monumental juvenile bypass facilities.	Resident	Mainstem/Systemwide	US Fish & Wildlife Service (USFWS)	1.0	FCRPS bypass monitoring	BPA 100%		
200703500	UPA Project - Methow Basin Riparian Enhancement	Anadromous	Columbia Cascade	Methow Salmon Recovery Foundation	1.0	Riparian fencing/planting, mostly on private; assume that some in lieu problem sites (eg fencing at WDFW managed campground) excluded from funding	BPA 85%	Confirmed	
200704000	Upper Columbia Landowner Incentive Program	Resident	Intermountain	Washington Department of Fish and Wildlife (WDFW)	1.0	Proposed WDFW competitive grant program for private landowners doing various habitat restoration activities; assume program will exclude projects for which landowner may be required to perform the	BPA 92%	Mixed	

						restoration			
200704100	Kalispell Riparian Road Removal	Resident	Intermountain	Washington Department of Fish and Wildlife (WDFW)	1.0	Road decommissioning of FS road); assume covered by BPA-FS MOU	BPA 70% (64)	Mixed	
200704200	UPA Wenatchee Passage Program	Anadromous	Columbia Cascade	Chelan County Natural Resources Department	1.0	Road decommission/culvert replacement on FS lands; assume covered by BPA-FS MOU	BPA 70% (87)	Confirmed	
200704400	Kettle River Tributaries Riparian Habitat Improvement Project	Resident	Intermountain	Ferry Conservation District	1.0	Offstream water sources on NFS land for grazing mitigation; assume covered by FS MOU	BPA 70%	Confirmed	
200705200	Chum Salmon Evaluations Within Bonneville Reservoir	Anadromous	Columbia Gorge	Washington Department of Fish and Wildlife (WDFW)	1.0	BON reservoir monitoring	BPA 78%	Mixed	
200705300	Upper Lolo Creek Watershed Restoration	Resident	Mountain Columbia	US Forest Service: Lolo National Forest	1.0	FS road mitigation; assume covered by BPA-FS MOU	BPA 70%(75)	Mixed	
200705400	Entiat River - UPA - Stillwater Restoration Project	Anadromous	Columbia Cascade	Chelan County Conservation District (SWCD)	1.0	Provide LWD, plantings for riparian restoration on private lands, assume no other entities authorized/required to install here (i.e., no order from state agencies/others to private entities for addressing christmas tree/anchoring?)	BPA 87%	Confirmed	
200706400	Protect and Restore Slate Creek	Anadromous	Mountain Snake	Nez Perce Tribe Dept. Fisheries Resource Management Watershed Division	1.0	Road decommission/culvert replacement on FS lands; assume covered by BPA-FS MOU	BPA 70%(76)	Mixed	
200706500	Coordinate and implement tributary habitat restoration in the Little Salmon River and lower Salmon River Idaho	Anadromous	Mountain Snake	Idaho Soil and Water Conservation District	1.0	Addressing impacts of grazing/irrigation on private lands; assuming covered by BOR MOU	BPA 66%	Under Dev.	
200706700	Lawyer Creek Idaho A-Run Steelhead Spawning and Rearing Restoration and	Anadromous	Mountain Snake	Lewis Soil Conservation District	1.0	Addressing impacts of grazing/agriculture on private lands; assume no entity	BPA 90%	Mixed	

	Enhancement					authorized/required to act due to ESA concerns			
200707300	Dynamics of Gravel Spawning Beds in Lake Pend Oreille, ID	Resident	Intermountain	Woods Hole Oceanographic Institution	1.0	Research re: effects of Albeni Falls on LPO	BPA 86%	Confirmed	
200707700	Hemlock Dam Removal	Anadromous	Columbia Gorge	Gifford Pinchot National Forest	1.0	Removal of FS dam impacting listed steelhead; FS already authorized/required to remove (see NEPA ROD), but assume covered by MOJ	BPA 70% (73)	Under Dev.	
200708400	Shrubsteppe Habitat Acquisition for Terrestrial Species in Need of Conservation in the Upper Mid-Columbia Subbasin.	Wildlife	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	1.0	Wildlife mitigation for FCRPS	BPA 55%	Confirmed	
200708500	UPA Nason Creek Oxbow Reconnection Project	Anadromous	Columbia Cascade	Chelan County Natural Resources Department	1.0	Install arch culverts for oxbow reconnection, mixed private/federal land, assume no entity required to do so	BPA 100%		
200708600	UPA Wenatchee Subbasin Riparian Enhancement Proposal	Anadromous	Columbia Cascade	Chelan County Natural Resources Department	1.0	Fencing/planting of riparian buffer zones on private land, assume no landowner requirement	BPA 100%		
200709200	Restore Selway River Watershed	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Culvert replacements on FS lands; assume covered by BPA-FS MOU	BPA 70% (70)	Mixed	
200709300	Restore Middle Fork Clearwater Face Drainages	Resident	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Culvert replacements, road decommis. on FS lands, also riparian fencing; assume covered by BPA-FS MOU	BPA 70% (77)	Under Dev.	
200709400	Protect & Restore Clear Creek Watershed	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Culvert replacements, road decommis. on FS lands; assume covered by BPA-FS MOU	BPA 70% (77)	Mixed	
200710300	Skookumchuck Watershed	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	1.0	Habitat acquisition for fish protection, irrigation/road/grazing mitigation; okay assuming no other entity (eg Grant Co PUD) required to obtain parcel	BPA 100%		

200710400	Protect and Restore White Bird Creek	Anadromous	Mountain Snake	Nez Perce Tribe Dept. Fisheries Resource Management Watershed Division	1.0	Culvert replacements, road decommis on FS lands; assume covered by BPA-FS MOU	BPA 70% (70)	Mixed	
200711100	Assess impacts of flow augmentation on bull trout in the North Fork and Lower Clearwater Rivers	Resident	Mountain Snake	Idaho Department of Fish & Game	1.0	Bull trout impacts, Dworshak flow augmentation	BPA 100%		
200711200	Teanaway Watershed - Protect critical habitat from development, reduce water temperatures and increase instream flows, restore habitat forming processes in the floodplain.	Anadromous	Columbia Plateau	Kittitas Conservation Trust	1.0	Riparian conservation easements	BPA 78%	Confirmed	
200711700	Comprehensive Assessment of Coho Salmon Restoration Efforts in the Mid-Columbia and Mid-Snake River Basins	Anadromous	Mainstem/ Systemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	1.0	Fund symposium and other coordination of coho reintroduction	BPA 70%	Under Rev.	
200711800	Protect and Restore Anadromous Fish Habitat in Little Naches River Watershed.	Anadromous	Columbia Plateau	US Forest Service (USFS) - Wenatchee National Forest	1.0	Purchase checkerboard lands for Forest Service, Little Naches watershed, assume covered by FS MOU	BPA 70% (90)	Under Dev.	
200711900	Restore Access to Upper Musselshell Creek	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Channel realignment on FS lands after blockage by historic mining tunnel; FS is authorized/required; assume covered by MOU	BPA 70%(77)	Under Dev.	
200712400	Okanogan County Irrigation Water Management Improvement Project	Anadromous	Columbia Cascade	Okanogan Soil & Water Conservation District (SWCD)	1.0	Upgrade irrigation systems for efficiency; assuming no order/requirement to do so	BPA 95%	Confirmed	
200712500	Protect and Restore the Tucannon River Watershed - Nez Perce Tribe	Anadromous	Columbia Plateau	DFRM Watershed Division	1.0	Road decommission/culvert replacement on FS lands; assume BPA-FS MOU applies	BPA 70% (79)	Mixed	
200712700	Reestablish Connectivity and Restore Fish Habitat in	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed	1.0	Reestablish passage through falls, on FS lands; assume	BPA 70%(58)	Mixed	

	the East Fork of the South Fork Salmon River Watershed			Division		covered by BPA-FS MOU			
200712800	Protect and Restore the Little Salmon Watershed	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Culvert removal, fencing on FS lands; assume covered by BPA-FS MOU	BPA 70% (85)	Mixed	
200713200	NEOH Monitoring & Evaluation Implementation (Formerly a component of 198805301)	Anadromous	Blue Mountain	Tribe: Nez Perce Tribe, State: Oregon Department of Fish and Wildlife	1.0	Hatchery M&E; although fishery managers authorized/required, assume FCRPS obligation here since FCRPS hatchery	BPA 73%	Mixed	
200713400	Restore and Protect Crooked River Watershed	Anadromous	Mountain Snake	Nez Perce Tribe	1.0	Culvert replacements, road decommis on FS lands; assume covered by BPA-FS MOU	BPA 70% (62)	Mixed	
200713900	Rock Creek Stabilization and Habitat Rehabilitation	Anadromous	Columbia Gorge	Skamania County	1.0	LWD etc to improve pool/riffle habitat; assume no other entity required to perform	BPA 85%	Mixed	
200714200	Restore and Protect American River Watershed	Anadromous	Mountain Snake	Nez Perce Tribe	1.0	Culvert replace, trib restoration, weed control on FS lands; assume covered by BPA-FS MOU	BPA 70% (80)	Mixed	
200714400	Evaluation of water temperature exposure in the Columbia River hydrosystem on reproductive success of adult and juvenile Chinook salmon and steelhead	Anadromous	Mainstem/ Systemwide	University of Idaho	1.0	FCRPS temp evaluation	BPA 5%	Confirmed	
200714500	Okanogan Livestock and Water	Anadromous	Columbia Cascade	Okanogan Soil & Water Conservation District (SWCD)	1.0	Livestock mitigation (watering sites, fencing)"allowing producers to respond to and prevent complaints;" other entities authorized/required (livestock owners)	BPA 100%		
200715300	Cardwell Hills Wildlife Mitigation and regional Biodiversity Protection Project	Wildlife	Lower Columbia	David Evans and Associates, Inc.	1.0	Wildlife mitigation (but need to confirm FCRPS mitigation species/habitats being acquired & that BPA receiving habitat unit credits, not clear from proposal)-if mitigation	BPA 99.7%	Confirmed	

						authorized/required from other entities, this would be rated a 2.3.			
200715500	Develop a Master Plan for a Rearing Facility to Enhance Selected Populations of White Sturgeon in the Columbia River Basin	Resident	Mainstem/Sy stemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	1.0	White sturgeon hatchery planning; although other entities authorized/required (fishery managers, other dam operators etc), assume okay because will clearly mitigate for FCRPS	BPA 100%		
200716900	Total Dissolved Gas Effects on Incubating Chum Salmon Below Bonneville Dam	Anadromous	Lower Columbia	Pacific Northwest National Laboratory	1.0	BON TDG	BPA 100%		
200717300	Upper South Fork McKenzie Channel Restoration	Anadromous	Lower Columbia	US Forest Service (USFS) - Willamette	1.0	Channel restoration on FS lands; assume BPA-FS MOU covers	BPA 70%(71)	Confirmed	
200717800	Monitoring fine sediment delivery in the Entiat subbasin	Anadromous	Columbia Cascade	US Forest Service (USFS) - Pacific Northwest Research Station	1.0	Develop/test protocols for evaluating fine sediment delivery; assume covered by MOU	BPA 70% (75)	Mixed	
200718000	Evaluating and prioritizing restoration of riparian habitat for improving in-stream conditions for anadromous salmonids in the Columbia River basin.	Anadromous	Mainstem/Sy stemwide	US Forest Service (USFS) - Pacific Northwest Research Station	1.0	Aquatic/riparian model development, assume covered by MOU	BPA 70%(93)	Confirmed	
200718100	Lower Lawyer Creek Stream Restoration Project	Anadromous	Mountain Snake	Flying B Ranch	1.0	Restoring channel meander on private land; assume no ESA or other requirement to do so	BPA 90%	Confirmed	
200718300	Restoration of Historical Salmonid Habitat in South West Idaho	Anadromous	Multiprovinc e	Southwest Idaho RC&D	1.0	Culvert removal on FS lands; assume BPA-FS MOU covers?	BPA 70%(65)	Mixed	
200718600	Middle Fork Willamette River Bull Trout Passage and Habitat Restoration	Resident	Lower Columbia	US Forest Service	1.0	Replacing FS road culvert, assume BPA-FS MOU covers	BPA 70%(49)	Mixed	
200719300	Evaluate potential to enhance spawning of summer/fall chinook salmon in the tailrace of	Anadromous	Columbia Cascade	Colville Confederated Tribes	1.0	FCRPS tailrace spawning	BPA 100%		

	Chief Joseph Dam, Columbia River, WA								
200719400	Oak Flats Acquisition and Habitat Enhancement	Anadromous	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	1.0	Anadromous fish habitat acquisition (addressing irrigation impacts/Wapatox etc)	BPA 86%	Mixed	
200721200	Develop a locally-adapted summer steelhead program to supplement natural production throughout the Okanogan River basin	Anadromous	Columbia Cascade	Colville Confederated Tribes	1.0	Evaluate expansion of Cassimer Bar hatchery for steelhead supplementation; assume in mitigation for FCRPS	BPA 85%	Under Rev.	
200721400	UPA Project - Fender Mill Floodplain Restoration - Phase 1	Anadromous	Columbia Cascade	Methow Salmon Recovery Foundation	1.0	Reconnect floodplain via dike removal etc; assume no entity already required to do	BPA 67%	Confirmed	
200721700	Operation and Maintenance for Walla Walla Basin Passage Projects	Anadromous	Columbia Plateau	Gardena Farms Irrigation Dist. and Hudson Bay Dist. Improvement Co.	1.0	O&M on BPA-constructed screens; assume BPA has already agreed to fund	BPA 100%		
200721900	Clackamas Watershed Prioritized Fish Passage Barrier Removal	Anadromous	Lower Columbia	Clackamas River Basin Council	1.0	Removal of road crossing barrier on private land; assume landowner not already required to address due to impacts to listed species	BPA 88%	Mixed	
200722000	Water and Economic Optimization Project to Restore Streamflow in Fifteenmile Creek in the Fifteenmile Sub-basin.	Anadromous	Columbia Gorge	Wyeast Resource Conservation & Development Area Council	1.0	Testing new approach to withdrawals for irrigation (assuming no order, consent decree etc requiring increased flows here)	BPA 96%	Mixed	
200722900	Development of protocols and priorities for re- establishing naturally reproducing populations of Upper Willamette River Chinook Salmon above US Army Corps of Engineers dams in the Willamette Subbasin	Anadromous	Lower Columbia	Oregon Department of Fish & Wildlife (ODFW)	1.0	FCRPS Willamette mitigation (re-population above blockages)	BPA 66%	Mixed	

200723200	Okanogan-Similkameen Habitat Protection Project - Fish and wildlife habitat protection through fee simple and conservation easement purchases.	Wildlife	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	1.0	Assuming wildlife HUs to be obtained	BPA 100%		
200723500	Proposal to Create a Sub-Basin Plan for the Blackfoot River Sub-Basin	Resident	Mountain Columbia	Trout Unlimited	1.0	(Because we funded development of other sub-basin plans)	BPA 83%	Confirmed	
200723600	Strategic Adaptation of the Federal Columbia River Power System to Climate Variability and Change	Anadromous	Mainstem/Sy stemwide	Portland State University	1.0	FCRPS response to climate change (models & remote sensing)	BPA 96%	Confirmed	
200723700	UPA Project - Elbow Coulee Floodplain Restoration	Anadromous	Columbia Cascade	Methow Salmon Recovery Foundation	1.0	Dike removal, LWD install, assume no entity already required	BPA 57%	Confirmed	
200724200	Fifteenmile Subbasin Efficient Irrigation Technology	Anadromous	Columbia Gorge	Wasco County Soil & Water Conservation District (SWCD)	1.0	Upgrade irrigation systems for efficiency; assume no order/requirement to do so	BPA 72%	Mixed	
200724300	Crab Creek Subbasin Plan 2007	Wildlife	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	1.0	Subbasin plan fix it	BPA 100%		
200724600	Restoration of bull trout passage at Albeni Falls Dam using a trap-and-haul approach in conjunction with investigations to assess effectiveness of rapid genetic analysis in assigning natal tributary	Resident	Intermountain	Kalispel Tribe	1.0	Albeni Falls & bull trout	BPA 100%		
200724700	Priscilla Peak Wildlife Habitat Restoration (Prescribed Fire)	Wildlife	Mountain Columbia	US Forest Service	1.0	Prescribed fire, wildlife in MT assume covered by MOU	BPA 70%(82)	Mixed	
200725500	Protect and Restore the Middle Lochsa	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Culvert replacement, road decomiss on FS lands; assume covered by BPA-FS MOU?	BPA 70% (90)	Under Rev.	
200725900	Wilson Creek Relocation	Resident	Columbia	Central Washington	1.0	Relocate/rehab creek on campus;	BPA	Mixed	

	and Rehabilitation		Plateau	University		assume not required to perform already	61%		
200726000	Acquisition of a Conservation Easement over 1084 acres of Upland Prairie and Oak Habitat, Willamette Subbasin	Wildlife	Lower Columbia	Nature Conservancy	1.0	Wildlife HUs; note too fish interests	BPA 53%	Confirmed	
200726400	UPA Project - Programmatic Habitat Complexity Projects in the Methow River Subbasin	Anadromous	Columbia Cascade	Methow Salmon Recovery Foundation	1.0	Remove dikes, reconnect side channels; assume no existing entity required to conduct	BPA 71%	Under Dev.	
200726500	Complete and Coordinate a Subbasin Plan for the Bitterroot Watershed	Resident	Mountain Columbia	Montana Water Trust	1.0	(Assuming BPA is responsible for new subbasin plans since it funded the original set)	BPA 100%		
200726900	Clearwater Coho Restoration Project	Anadromous	Mountain Snake	Nez Perce Tribe	1.0	Hatchery mitigation, Clearwater, coho, mitigating for Dworshak (but also note, non FCRPS dams originally blocked passage)	BPA 100%		
200727000	Lake Rufus Woods Subbasin Area Stock Assessment, Habitat Assessment and Fisheries Evaluation Program	Resident	Intermountain	Colville Confederated Tribes	1.0	FCRPS reservoir stock assessment, management issues, assume in mitigation for FCRPS	BPA 100%		
200727100	Willamette Basin Capitalized Wildlife Land Acquisitions	Wildlife	Lower Columbia	The Confederated Tribes of Grand Ronde	1.0	Wildlife HUs, minimum HUs promised (650)	BPA 99%	Confirmed	
200727700	Hamilton Creek Stabilization and Habitat Rehabilitation	Anadromous	Lower Columbia	Skamania County	1.0	LWD installment, for BON2 powerhouse mitigation	BPA 70%	Confirmed	
200728000	Columbia River Basin Journal	All	Mainstem/Sy stemwide	Intermountain Communications	1.0	No other entity known to be authorized/required to fund	BPA 94%	Confirmed	
200728300	UPA Wenatchee Subbasin Access Proposal	Anadromous	Columbia Cascade	Chelan County Natural Resources Department	1.0	Channel realignment, LWD etc on private lands	BPA 100%		
200728600	Deschutes Cooperative Stream Flow Restoration	Anadromous	Columbia Plateau	Deschutes Soil and Water Conservation District	1.0	Restoration of streamflows above PRB; instream flow acquisition, irrigation efficiencies	BPA 4%	Mixed	

200728700	Delivering Reliable Fish Passage Information for Hydrosystem Management	Anadromous	Mainstem/Sy stemwide	Pacific Northwest National Laboratory	1.0	FPC (1 rating for all activities in program & mainstem amendment)	BPA 100%		
200728800	Touchet Eastside and Westside Irrigation District Piping	Anadromous	Columbia Plateau	Walla Walla County Soil & Water Conservation District (SWCD)	1.0	Piping of diversions, assume irrigators not required to do	BPA 45%	Confirmed	
200729200	EFFECTIVENESS MONITORING OF IN-STREAM HABITAT RESTORATION IN THE LOWER ENTIAI BASIN AT MICROHABITAT AND REACH SCALES	Anadromous	Columbia Cascade	US Forest Service (USFS) - Pacific Northwest Research Station	1.0	Effectiveness monitoring of instream restoration, assume covered by MOU	BPA 70% (64)	Under Rev.	
200729500	Crow Creek BPA Powerline Channel Restoration Project	Resident	Mountain Columbia	US Forest Service: Lolo National Forest	1.0	Channel reconstruction, assume covered by MOU	BPA 70%(43)	Mixed	
200730000	Fish Passage Technical Services Project	Anadromous	Mainstem/Sy stemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	1.0	Technical/analytical support to fishery agencies for regional collaboratives (eg BiOp remand)	BPA 98%	Confirmed	
200731100	Acquire Land to Protect Critical Habitat in the Upper Lochsa	Anadromous	Mountain Snake	Nez Perce Tribe DFRM Watershed Division	1.0	Purchase Clearwater NF inholding, assume MOU covers	BPA 70% (97)	Confirmed	
200731200	Albeni Falls Dam Operational Loss Assessment of Riparian Ecological Function in the Pend Oreille River Ecosystem	Wildlife	Intermountain	Kalispel Tribe	1.0	Loss assessment for operations	BPA 97%	Confirmed	
200731600	McKenzie Canyon Irrigation Project	Anadromous	Columbia Plateau	Deschutes River Conservancy	1.0	Convert open canal to pipe, provide instream flows (no apparent order/decreed requiring; no BiOp for BOR?)	BPA 58%	Mixed	
200731800	Entiat River - UPA - Knapp-Wham Hanan Detwiler Irrigation System Consolidation Project.	Anadromous	Columbia Cascade	Chelan County Conservation District (SWCD)	1.0	Wells, other irrigation consolidation; assume irrigation entities not already required to do to address passage barriers	BPA 76%	Confirmed	
200732100	Data Management for	All	Mainstem/Sy	Columbia Basin	1.0	FPC (assume all activities are	BPA	Under	

	System Operations		stemwide	Fish & Wildlife Authority (CBFWA)		included in program or mainstem amendment)	84%	Dev.	
200732500	UPA Wenatchee Subbasin Complexity Proposal	Anadromous	Columbia Cascade	Chelan County Natural Resources Department	1.0	Channel realignment, LWD etc on private lands	BPA 100%		
200732600	Monitoring of juvenile and adult salmonid survival through the Federal Columbia River Power System	Anadromous	Mainstem/Sy stemwide	Washington Department of Fish and Wildlife (WDFW)	1.0	FPC (1 rating for all activities in program & mainstem amendment)	BPA 100%		
200733000	Gardena Farms Irrigation District Irrigation Efficiency and Instream Flow Project	Anadromous	Columbia Plateau	Gardena Farms Irrigation District	1.0	Close piping of irrigation (assuming irrigators not required to do)	BPA 100%		
200733600	Effects of short-term flow fluctuations on salmon migration	Anadromous	Columbia Plateau	Oak Ridge National Laboratory	1.0	Research of flow fluctuations at Little Goose	BPA 100%		
200734500	Grande Ronde Coho Restoration	Anadromous	Blue Mountain	Nez Perce Tribe	1.0	Expand NEOH to address coho production in mitigation for FCRPS	BPA 100%		
200734600	Crims Island Habitat Restoration	Anadromous	Columbia Estuary	US Geological Survey (USGS) - Cook	1.0	Assess effectiveness of Corps/BPA tidal marsh restoration	BPA 100%		
200736400	Determining the effects of load following on reservoir hydraulics and migration behavior of juvenile salmonids.	Anadromous	Mainstem/Sy stemwide	Columbia River Research Laboratory	1.0	Load following effects, Little Goose	BPA 47%	Mixed	
200736500	Canyon Creek Culvert Replacements	Anadromous	Columbia Plateau	Malheur National Forest	1.0	Another entity authorized/required (FS roads), assume covered by BPA-FS MOU	BPA 70% (73)	Under Rev.	
200736900	Protect and Restore the North Fork Clearwater Subbasin	Resident	Mountain Snake	Nez Perce Tribe Dept. Fisheries Resource Management Watershed Division	1.0	Culvert removal, road improvements on FS and other lands; assume covered by BPA-FS MOU	BPA 70% (76)	Under Rev.	
200737200	Lake Roosevelt White Sturgeon Conservation	Resident	Intermountain	Spokane Tribe	1.0	White sturgeon hatchery planning, assume in mitigation	BPA 100%		

	Hatchery Project					for FCRPS			
200738100	Lower Columbia Fish Enhancement Group Community-Based Multi-Sub-Basin Habitat Restoration Program	Anadromous	Columbia Estuary	Lower Columbia Fish Enhancement Group	1.0	Hire 3 project managers to facilitate suite of habitat actions; assume that mostly private & that projects where landowner required to undertake activity will be excluded	BPA 9%	Mixed	
200738800	Fish Passage Data System (Key Functions Previously Performed by the Fish Passage Center)	Anadromous	Mainstem/Sy stemwide	Pacific States Marine Fisheries Commission (PSMFC)	1.0	FPC (assume all activities are included in program or mainstem amendment)	BPA 100%		
200701700	Lower Columbia Slough Off-Channel and Floodplain Habitat Restoration Project - Phase Two	Anadromous	Lower Columbia	Columbia Slough Watershed Council	2.1	Floodplain restoration on Portland-owned property, city and Corps authorized/required	BPA 20%	Mixed	
200704300	Lower Columbia Fish Enhancement Group Community-Based Multi-Sub-Basin Habitat Restoration Program	Anadromous	Lower Columbia	Lower Columbia Fish Enhancement Group	2.1	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 9%	Mixed	
200706100	Deschutes Sub-basin Riparian Restoration through USDA Conservation Reserve Enhancement Program (CREP)	Anadromous	Columbia Plateau	Wyeast Resource Conservation & Development Area Council	2.1	Fund riparian planner to recruit/assist/plan with landowners for riparian protection under CREP program; NRCS authorized/required	BPA 7%	Mixed	
200708300	Grande Ronde Cooperative Salmonid Monitoring and Evaluation Project	Anadromous	Blue Mountain	Confederated Tribes of the Umatilla Indian Reservation	2.1	Population/status monitoring; fishery managers authorized/required	BPA 20%	Mixed	
200710200	Subbasin Scale Monitoring and Plan Implementation Monitoring for the Yakima Subbasin Plan	Anadromous	Columbia Plateau	Yakima Subbasin Fish and Wildlife Planning Board	2.1	Subbasin plan implementation, assume similar to other coordination	BPA 62%	Confirmed	
200710600	Spokane Tribe Fish and Wildlife Planning and Coordination	All	Mainstem/Sy stemwide	Spokane Tribe	2.1	Coordination/travel costs for wildlife managers (wildlife managers authorized/required)	BPA 100%		
200710800	Regional Coordination for	All	Mainstem/Sy	Upper Columbia	2.1	Regional coordination for UCUT	BPA		

	Upper Columbia United Tribes		stemwide	United Tribes		(UCUT entities authorized/required)	100%		
200716200	Kalispel Tribe Fish and Wildlife Coordination	All	Mainstem/Sy stemwide	Kalispel Tribe	2.1	Coordination/travel costs for wildlife managers	BPA 100%		
200720000	Idaho Subbasin Planning and Comprehensive Wildlife Conservation Strategy (CWCS) Data Distribution System	All	Mainstem/Sy stemwide	Idaho Department of Fish & Game	2.1	Web-based data distribution for ID subbasin plan implementation; assume similar to other coordination proposals	BPA 46%	Confirmed	
200725800	Development of reliable ESU-specific estimates of escapement, harvest, and straying for adult anadromous salmonids migrating through the Federal Columbia River Power System.	Anadromous	Mainstem/Sy stemwide	University of Idaho	2.1	Assume mostly FCRPS related, though fishery managers authorized/required to some degree	BPA 27%	Mixed	
200735500	Determining the Accuracy of Adult Coho Salmon Population Estimates from a Random, Spatially Balanced design using Area-Under-the-Curve	Anadromous	Lower Columbia	Washington Department of Fish and Wildlife (WDFW)	2.1	Coho population research, other entities authorized/required (eg fishery managers)	BPA 12%	Confirmed	
200737000	Methods of Applying Salmon Timing Mechanisms to Wild and Hatchery Fish Management	Anadromous	Columbia Gorge	The B. Taylor Group LLC	2.1	Hatchery/wild fish interactions research, fishery managers authorized required, but many connections to FCRPS operations/spill etc	BPA 100%		
200702600	Historic Changes in Organic Nutrient Sources and Productivity Proxies in the Columbia River Estuary in Relation to Juvenile Salmon Habitat Restoration Priorities	Anadromous	Columbia Estuary	Pacific Northwest National Laboratory	2.2	Nutrient research, fishery managers, others authorized/required	BPA 65%	Confirmed	
200703100	Identifying prioritized action plans from subbasin strategies using a scenario-based decision support	Anadromous	Lower Columbia	Northwest Fisheries Science Center	2.2	Refinement of "decision support system" for aquatic habitat recovery; multiple entities authorized/required	BPA 55%	Mixed	

	system								
200704500	Beebe Property Upland, Riparian, and Wetland Enhancements	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	2.2	Vegetation, channel restoration on WDFW owned property near WDFW Chelan Falls hatchery; WDFW authorized/required to address	BPA 59%	Confirmed	
200707000	Fish Passage Facility Final Design and Construction - Clear Lake Dam (NF Tieton R.).	Resident	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	2.2	NonFCRPS dam blockage correction; USBR authorized/required	BPA 68%	Under Dev.	
200709700	Restoring connectivity to a floodplain wetland on Multnomah Channel	Anadromous	Lower Columbia	Ducks Unlimited, Inc.	2.2	Creek restoration, but includes fixes to Metro installed (2002) water control that block passage (Metro authorized/required)	BPA 54%	Confirmed	
200709900	Gold Creek (Lakeview District) Bull Trout Habitat and Migration Protection	Resident	Intermountain	Idaho Department of Environmental Quality	2.2	Mine restoration, mixed private & FS; assume MOU does not apply; DEQ, EPA authorized/required to address, along with FS	BPA 54%	Confirmed	
200710500	Protecting & Restoring the Wallowa River Watershed	Anadromous	Blue Mountain	Nez Perce Tribe	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 50%	Mixed	
200710900	Aquatic Nuisance Species monitoring and outreach program for the Mountain Columbia province (Montana portion) of the Columbia River Basin	Resident	Mountain Columbia	Montana Department of Fish, Wildlife and Parks	2.2	Aquatic invasive monitoring, multiple entities authorized/required	BPA 70%	Confirmed	
200711300	Cowiche Restoration and Protection Project (Easement/Fee Simple Acquisition)	Anadromous	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	2.2	Anadromous fish habitat acquisition	BPA 26%	Confirmed	
200711600	Lostine River Watershed Restoration	Anadromous	Blue Mountain	Nez Perce Tribe	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 43%	Mixed	
200713700	Open Channels	Resident	Upper Snake	Friends of the Teton River	2.2	Multiple restoration activities; multiple other entities potentially	BPA 65%	Under Dev.	

						authorized/required			
200714700	Willamette Flow Management Project	Anadromous	Lower Columbia	Nature Conservancy	2.2	Flow management evaluation on Willamette; other hydro operators authorized/required	BPA 65%	Confirmed	
200715000	Expand Salmonid Monitoring in Grays River to Meet Monitoring Needs Identified in the Lower Columbia Salmon Recovery and Subbasin Plan and maintain an at risk Chum Salmon Pop. through Supplementation.	Anadromous	Columbia Estuary	Washington Department of Fish and Wildlife (WDFW)	2.2	Population status monitoring for recovery; fishery managers, others authorized/required	BPA 38%	Confirmed	
200717200	UPA Project - MVID West Canal Diversion and Headworks	Anadromous	Columbia Cascade	Methow Salmon Recovery Foundation	2.2	Irrigation infrastructure improvements to allow for canal use after required diversion reductions; irrigation district assumed to be authorized, if not required to conduct this work already	BPA 50%	Mixed	
200718800	Lower Willamette River Fish Passage and Floodplain Reconnection at Oaks Bottom Wildlife Refuge	Anadromous	Lower Columbia	City of Portland	2.2	Replace culvert in Oaks Bottom Wildlife Refuge; assume neither City nor Corps already required to do	BPA 52%	Mixed	
200719000	Icicle Creek Ecological Recovery and Fish Population Monitoring	Resident	Columbia Cascade	Washington Trout	2.2	Population monitoring of recently restored stream segment; fishery managers others authorized/required	BPA 69%	Mixed	
200721600	Pacific Northwest Aquatic Monitoring Partnership- Fish Population Monitoring (FPM)--RME Design and Protocols. Programmatic and Standardized Work Products for PNW and the Columbia Basin	Anadromous	Mainstem/Sy stemwide	Pacific Northwest Aquatic Monitoring Partnership (PNAMP)	2.2	Multiple entity monitoring program	BPA 43%	Mixed	

200722300	Genetic characteristics and movement patterns of bull trout populations between Chief Joseph and McNary Dams, within the Columbia Cascade and Columbia Plateau Provinces	Resident	Multiprovince	US Fish & Wildlife Service (USFWS)	2.2	Population/genetics studies; fishery managers, other hydro ops authorized/required	BPA 60%	Confirmed	
200724500	Protect and Restore the Joseph Creek Watershed	Anadromous	Blue Mountain	Nez Perce Tribe	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 40%	Mixed	
200725100	UPA Project - Methow Valley Irrigation District East Diversion Dam Replacement	Anadromous	Columbia Cascade	Methow Valley Irrigation District	2.2	Replace existing infrastructure to meet fish passage standards; irrigation district authorized/required to do	BPA 41%	Mixed	
200725200	Multi-scale assessment of hyporheic flow, temperature and fish distribution in Columbia River Tributaries	Anadromous	Mainstem/Systemwide	Confederated Tribes of the Umatilla Indian Reservation	2.2	Floodplain/water temp study/interactions; multiple entities authorized/required (fishery managers, DEQs, other hydro operators, etc).	BPA 34%	Confirmed	
200725700	Protect and Restore the Imnaha Subbasin	Anadromous	Blue Mountain	Nez Perce Tribe	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 48%	Mixed	
200726800	Idaho Watershed Habitat Restoration Project via Custer Soil and Water Conservation District	Anadromous	Mountain Snake	Custer County Soil & Water Conservation District (SWCD)	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 64%	Mixed	
200727200	Conservation and Recovery of Endangered Species Act Listed Floodplain Fishes in the Willamette Basin, with Emphasis on Oregon Chub	Resident	Lower Columbia	US Fish & Wildlife Service (USFWS)	2.2	Multiple restoration activities for recovery of chub; multiple entities authorized/required (fishery managers, other entities impacting)	BPA 63%	Mixed	
200727400	A Proposal to Expand Current Juvenile Salmonid Monitoring in the Lower Columbia Province to Meet the Monitoring Needs Identified in the Lower Columbia Salmon Recovery and Subbasin	Anadromous	Lower Columbia	Washington Department of Fish and Wildlife (WDFW)	2.2	Monitoring for recovery plan implementation; multiple entities authorized/required	BPA 31%	Confirmed	

	Plan.								
200728100	Washington Salmonid Abundance and Productivity Monitoring Framework	Anadromous	Mainstem/Sy stemwide	Washington Department of Fish and Wildlife (WDFW)	2.2	Recovery monitoring; fishery managers authorized/required	BPA 52%	Mixed	
200729300	Umatilla River Basin Stream Temperature Monitoring	Anadromous	Columbia Plateau	Confederated Tribes of the Umatilla Indian Reservation	2.2	Stream temp monitoring relating to recovery/salmonids; fishery managers, land managers, DEQ, others authorized/required	BPA 64%	Mixed	
200733300	Timing and survival of PIT tagged juvenile fall Chinook from the Hanford Reach.	Anadromous	Columbia Plateau	CRITFC	2.2	PIT tagging Hanford Reach fall chinook; multiple other entities authorized/required	BPA 56%	Confirmed	
200734000	A multidisciplinary collaborative approach to aquatic habitat monitoring & evaluation in the Walla Walla Subbasin	Anadromous	Columbia Plateau	Walla Walla Basin Watershed Council	2.2	Aquatic monitoring, multiple entities authorized/required	BPA 33%	Mixed	
200734300	A Proposal to Expand Current Juvenile Salmonid Monitoring in the Columbia Estuary Province to Meet the Monitoring Needs Identified in the Lower Columbia Salmon Recovery and Subbasin Plan.	Anadromous	Columbia Estuary	Washington Department of Fish and Wildlife (WDFW)	2.2	Juvenile monitoring, estuary, recovery focused; other entities authorized/required (fishery managers, other entities impacting listed species)	BPA 34%	Confirmed	
200736200	Assessing Fish Passage Through the Icicle Creek Boulder Field Above Leavenworth National Fish Hatchery	Anadromous	Columbia Cascade	Washington Trout	2.2	Tributary passage assessment; fishery managers authorized/required	BPA 67%	Under Dev.	
200736800	Adult Coho Salmon Monitoring Proposal for the Lower Columbia Province.	Anadromous	Lower Columbia	Washington Department of Fish and Wildlife (WDFW)	2.2	Population status monitoring, fishery managers authorized/required	BPA 54%	Confirmed	

200700700	Determine Status and Limiting Factors of Pacific Lamprey in Fifteenmile Subbasin, Oregon	Anadromous	Columbia Gorge	Confederated Tribes of Warm Springs Reservation of Oregon	2.3	Lamprey research, fishery managers, other hydro ops authorized/required	BPA 84%	Mixed	
200700900	A Spatially Explicit & Web-accessible Database for Managing the Impacts of Expanding Colonial Waterbird Populations on Juvenile Salmonids (<i>Oncorhynchus</i> spp.) in the Columbia River Basin	Anadromous	Mainstem/Sy stemwide	Northwest Fisheries Science Center	2.3	Avian predation database; fishery managers, others authorized/required	BPA 79%	Confirmed	
200701400	Stock specific run timing and upstream migration mortality of adult Chinook and sockeye salmon and steelhead through PIT tagging and genetic analyses at Bonneville Dam.	Anadromous	Mainstem/Sy stemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	2.3	Stock specific run timing; fishery managers authorized/required	BPA 82%	Confirmed	
200701800	Stock Assessment for salmon, steelhead, and other fish species in Lower Crab Creek, Wshington	Anadromous	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	2.3	Population research, fishery managers required/authorized	BPA 96%	Mixed	
200702800	Pend Oreille River Basin Watershed Protection and Enhancement Project	Resident	Intermountain	Kalispel Tribe	2.3	Multiple restoration activities; multiple other entities potentially authorized/required to conduct	BPA 73%	Mixed	
200703400	Columbia Cascade Pump Screen Correction	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	2.3	Correcting irrigation screens; irrigators authorized/required to do (assuming impacting listed fish)	BPA 96%	Mixed	
200703800	Preserving/Enhancing Bull Trout and Westslope Cutthroat Trout within the Upper Pend Oreille Basin.	Resident	Intermountain	Idaho Department of Fish & Game	2.3	Population analysis, limiting factors; fishery managers, Avista authorized/required	BPA 78%	Under Rev.	
200704600	Steelhead Spawning Ground Surveys, Flow, and Temperature Monitoring of Small Tributaries of the	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	2.3	Population/status monitoring; fishery managers authorized/required	BPA 87%	Confirmed	

	Upper Middle Mainstem Columbia River.								
200704900	Efficacy of carcass analogs for restoring the productivity of nutrient limited salmonid streams	Anadromous	Columbia Gorge	Columbia River Research Laboratory	2.3	Evaluation carcass analogs(hatchery) for nutrient deposition; fishery managers, others authorized/required	BPA 97%	Confirmed	
200705100	Assessment of Interactions between Hatchery and Wild Summer Steelhead in the John Day River Subbasin	Anadromous	Columbia Plateau	Confederated Tribes of Warm Springs Reservation of Oregon	2.3	Hatchery interactions with wild fish; fishery managers authorized/required	BPA 77%	Mixed	
200705500	Entiat River - UPA - Lower Entiat River Off-Channel Restoration Project	Anadromous	Columbia Cascade	Chelan County Conservation District (SWCD)	2.3	Multiple irrigation passage fixes, assume irrigators authorized/required	BPA 96%	Confirmed	
200706300	Use of drift nets to monitor production and limiting factors in recruitment of larval Pacific lamprey	Anadromous	Mainstem/Sy stemwide	Oregon State University	2.3	Evaluating larval lamprey via drift nets (McKenzie River); fishery managers, others impacting lamprey authorized/required	BPA 89%	Confirmed	
200707900	Salmon & Steelhead Habitat Restoration and Protection in the Yakima Basin	Anadromous	Columbia Plateau	Mid-Columbia Fisheries Enhancement Group	2.3	Multiple restoration activities, multiple other entities may be authorized/required (or cert. that no projects for entities required?)	BPA 88%	Confirmed	
200709100	The evaluation of limiting factors on resident and anadromous salmonids in Lake Wenatchee, Washington	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	2.3	Assessing limiting factors for recovery, recreational fishery; fishery managers authorized/required	BPA 78%	Confirmed	
200709600	Wildlife Inventory and Habitat Evaluation of Duck Valley Indian Reservation	Wildlife	Middle Snake	Shoshone Paiute Tribes	2.3	Duck Valley Indian Res wildlife inventory, not wildlife mitigation lands; other entity required (tribe, BIA)	BPA 70%	Under Dev.	
200710700	What was old is new again: evaluate the pound net and beach seine as innovative live capture selective harvest gears	Anadromous	Mainstem/Sy stemwide	Washington Department of Fish and Wildlife (WDFW)	2.3	Harvest practices; fishery managers authorized/required	BPA 88%	Under Dev.	

200711000	Differences in Functional Genes Between Hatchery and Wild Chinook Salmon	Anadromous	Mainstem/Sy stemwide	University of Idaho - Aquaculture Research Institute	2.3	Genetic research for hatchery reform efforts; fishery managers authorized/required	BPA 88%	Confirmed	
200712200	White Salmon River watershed assessment above and below Condit Dam before anadromous fish reintroduction.	Anadromous	Columbia Gorge	Columbia River Research Laboratory	2.3	Post Condit dam removal reintroduction assessment; other entities authorized or required (fishery managers; Condit dam owners)	BPA 79%	Mixed	
200712600	Protect and Restore the Lower Snake Tributary and Pataha Streams/Watersheds - Nez Perce Tribe	Anadromous	Columbia Plateau	Nez Perce Tribe DFRM Watershed Division	2.3	Culvert/barrier inventory on mixed ownership lands; multiple entities may be authorized/required to address	BPA 95%	Confirmed	
200713100	Screening diversions for conservation of fish populations in the Columbia River Basin: entrainment losses, prioritization, and the efficacy of alternative technology designs	Anadromous	Mainstem/Sy stemwide	Columbia River Research Laboratory	2.3	Impacts of unscreened diversions study and design suggestions; others authorized/required (fishery managers/state water departments, irrigators)	BPA 92%	Confirmed	
200713300	Systemwide distribution of genetic variation within and among populations of the white sturgeon (Acipenser transmontanus)	Resident	Mainstem/Sy stemwide	University of California at Davis	2.3	White sturgeon genetic research; fishery agencies, other actors authorized/required	BPA 97%	Confirmed	
200713500	Lower Columbia Salmon Recovery Planning: Habitat Restoration Project List Development and Modeling	Anadromous	Lower Columbia	Washington Department of Fish and Wildlife (WDFW)	2.3	Recovery prioritization/planning; multiple entities authorized/require (fishery managers, other actors in recovery)	BPA 95%	Confirmed	
200713600	Beavers as stream restorationists? Determining Systemwide status and trends in beaver impoundments in tributary streams, and the relationships between beaver impoundment and salmonids.	Wildlife	Mainstem/Sy stemwide	University of Idaho	2.3	Beaver research, impacts on salmonid, stream restoration; fish/wildlife managers authorized/required	BPA 87%	Confirmed	

200714100	Bull Trout Effective Population Size in Isolated Populations	Resident	Blue Mountain	Columbia River Fisheries Program Office	2.3	Bull trout viability research; fishery managers authorized/required	BPA 88%	Confirmed	
200714600	Bull Trout Population Status Monitoring in the Snake River Basin of Southeast Washington	Resident	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	2.3	Population status monitoring for bull trout; fishery managers authorized/required	BPA 89%	Mixed	
200714800	Monitoring and Models for Restoration and Adaptive Management of White Sturgeon in the Columbia River Basin	Resident	Mainstem/Sy stemwide	US Geological Survey (USGS) - Cook	2.3	White sturgeon monitoring, fishery managers, others authorized/required	BPA 79%	Under Dev.	
200714900	Pend Oreille Nonnative Fish Suppression Project	Resident	Intermountain	Kalispel Tribe	2.3	Non-native fish suppression, fishery managers authorized/required	BPA 99%	Confirmed	
200715100	Nutrient Enhancement Business Plan	Anadromous	Mainstem/Sy stemwide	Lower Columbia Fish Enhancement Group	2.3	Develop business plan to address use of hatchery carcasses as nutrient analog; fishery managers authorized/required	BPA 91%	Confirmed	
200715600	Rock Creek Fish and Habitat Assessment for the Prioritization of Restoration and Protection.	Anadromous	Columbia Plateau	Yakama Confederated Tribes	2.3	Population monitoring primarily; fishery managers authorized/required	BPA 82%	Confirmed	
200715700	Bull Trout Status and Abundance Monitoring in the Waters in and Bordering the Warm Springs Reservation, Oregon	Resident	Columbia Plateau	Confederated Tribes of Warm Springs Reservation of Oregon	2.3	Bull trout monitoring, lower Deschutes; other entities authorized required (fishery managers; Pelton Round Butte operators)	BPA 84%	Mixed	
200716000	Evaluation of spawning success in Pacific salmon using electromyogram telemetry	Anadromous	Mainstem/Sy stemwide	Pacific Northwest National Laboratory	2.3	Sockeye salmon spawning success study; fishery managers authorized/required	BPA 89%	Under Dev.	
200716600	Lower Columbia River Coastal Cutthroat Trout Population Response to Habitat Restoration	Anadromous	Columbia Estuary	Columbia River Fisheries Program Office	2.3	Coast cutthroat trout response to habitat restoration, via PIT tag study; multiple entities authorized/required (fishery managers requiring habitat restoration; & all entities doing	BPA 86%	Confirmed	

						restoration activity)			
200717000	South Fork Snake River Yellowstone cutthroat trout recruitment and survival improvement	Resident	Upper Snake	Idaho Department of Fish & Game	2.3	Screening of irrigation, and updating fish mgmnt weirs; other entities authorized/required (irrigators for screens, IDFG for weirs)	BPA 96%	Confirmed	
200717500	DNA typing to identify native inland <i>Oncorhynchus mykiss</i>	Resident	Mainstem/Sy stemwide	Washington State University	2.3	DNA research, fishery managers authorized/required	BPA 93%	Under Rev.	
200717700	Protecting wild steelhead populations by minimizing the behavioral differences between hatchery and wild populations.	Anadromous	Mainstem/Sy stemwide	Northwest Fisheries Science Center	2.3	Behavior research, wild vs hatchery steelhead; fishery managers authorized/required	BPA 79%	Confirmed	
200721300	Assessing Recruitment Failure Across White Sturgeon Populations: Differences in Prey Availability and Physical Habitat Among Areas with Consistent, Inconsistent, and no Annual Recruitment to Age-1	Resident	Mainstem/Sy stemwide	US Geological Survey (USGS) - Cook	2.3	Investigate causes of sturgeon recruitment failure; multiple entities authorized/required (fishery managers, other Hs impacting sturgeon)	BPA 77%	Confirmed	
200722400	Implementation of the Okanogan Subbasin Plan. Initiate a Programmatic and Sequenced set of Key Habitat Restoration and Protection Actions	Anadromous	Columbia Cascade	Colville Confederated Tribes	2.3	Multiple restoration activities, multiple other entities may be authorized/required	BPA 90%	Mixed	
200723100	UPA Entiat Subbasin Riparian Enhancement Program	Anadromous	Columbia Cascade	Chelan County Conservation District (SWCD)	2.3	Fencing, livestock management to protect listed species, mixed landownership; other entities authorized/required (FS, pvt, to avoid ESA impacts)	BPA 92%	Confirmed	
200724900	Evaluation of Live Capture, Selective Fishing Gear	Anadromous	Mainstem/Sy stemwide	Colville Confederated Tribes	2.3	Testing selective fishing gear, fishery managers authorized/required	BPA 98%	Confirmed	

200725600	Physical and Biological Testing of a Flow Velocity Enhancement System	Anadromous	Mainstem/Sy stemwide	Natural Solutions	2.3	Flow velocity/enhancement equipment testing; Cowlitz river; other hydro operators authorized/required	BPA 79%	Confirmed	
200726100	Habitat effectiveness survey of existing, historical, and potential beaver habitat in the Upper Columbia Basin, Methow Subbasin	Wildlife	Columbia Cascade	Pacific Biodiversity Institute	2.3	Analysis of beaver, WA watershed, to address relocation needs; other entities authorized/required (WDFW, Forest Service)	BPA 80%	Under Dev.	
200727500	Impact of American shad in the Columbia River	Anadromous	Mainstem/Sy stemwide	Columbia River Research Laboratory	2.3	Basic research on shad; fishery managers authorized/required	BPA 87%	Confirmed	
200727600	Idaho Department of Fish and Game Rearing Expansion for Snake River Sockeye Salmon	Anadromous	Mountain Snake	Idaho Department of Fish & Game	2.3	Expand sockeye facilities to address limits at both LSRCP and Mitchell Act facilities; need clarity on connection with Mitchell Act hatchery (NMFS authorized/required to address)	BPA 98%	Mixed	
200727900	Assess Stream Habitat for Salmonid Recovery in the Lower Clearwater Subbasin	Anadromous	Mountain Snake	Nez Perce Soil & Water Conservation District (SWCD)	2.3	Stream habitat inventory, Lower Clearwater (mixed ownership, tribal, federal, private); multiple agencies authorized/required to inventory streams	BPA 79%	Mixed	
200728200	Okanagan River Restoration Initiative: Phases IV & V	Anadromous	Columbia Cascade	Okanagan Nation Alliance	2.3	Dike setbacks, other river restoration activities on land in Canada (BC agencies authorized/required; also see MidC PUD HCP?)	BPA 81%	Under Dev.	
200728500	Subyearling chinook salmon use of the Lower Willamette River.	Anadromous	Lower Columbia	City of Portland	2.3	Population research, needed by Portland for ESA compliance	BPA 94%	Confirmed	
200729100	Developing and Assessing Freshwater Mussel Distribution, Abundance and Life History Survey Methods in the Columbia Basin in Washington.	Resident	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	2.3	Basic freshwater mussel study, WA, other entities authorized/required (WDFW, entities that impact mussels)	BPA 75%		
200734700	IDL Ponderosa Area Fish Passage	Resident	Mountain Snake	Idaho Department of Lands	2.3	Fish barrier removal on non-federal lands, other entities	BPA 88%	Confirmed	

						authorized/required (state, landowners etc)			
200734900	Monitoring resident salmonid populations and the aquatic food web in the upper Icicle Creek subbasin of the Wenatchee River basin.	Resident	Columbia Cascade	Washington Trout	2.3	Tributary salmonid monitoring, fishery managers authorized/required	BPA 71%	Mixed	
200735200	Feasibility Study and Implementation of a System-wide Conservation Enforcement Web-Based Data Center	Anadromous	Mainstem/Sy stemwide	Steven Vigg & Company	2.3	Conservation law enforcement database, other entities authorized/required (i.e. law enforcement agencies, fish/wildlife regulatory agencies)	BPA 78%	Under Dev.	
200735800	Estimating the detection efficiency of snorkeling for detecting anadromous salmonid parr	Anadromous	Mainstem/Sy stemwide	US Forest Service (USFS) - Rocky Mt Research Station	2.3	Effectiveness of snorkel surveys, other entities authorized/required (eg fishery managers, other entities that rely on snorkel survey data)	BPA 88%	Confirmed	
200735900	Application and enhancement of monitoring protocols for assessing productivity and watershed condition in headwater subcatchments of the John Day subbasin	Anadromous	Columbia Plateau	PNW Research Station -- Wenatchee	2.3	Watershed monitoring, multiple entities authorized/required (FS, landowners, state DEQ etc)	BPA 75%	Under Rev.	
200736000	Columbia River/Cowlitz River Eulachon Research and Monitoring Plan (ERMP)	Anadromous	Columbia Estuary	Steward and Associates	2.3	Smelt population analysis, fishery managers authorized/required	BPA 94%	Under Rev.	
200736100	IDL St. Joe Area Fish Passage	Resident	Mountain Snake	Idaho Department of Lands	2.3	Fish barrier removal on private lands, other entities authorized/required (landowners)	BPA 85%	Confirmed	
200702200	Characterizing stress responses in lampreys: assessments based on cDNA microarrays	Resident	Mainstem/Sy stemwide	Columbia River Research Laboratory	3.0	Lamprey stress response research, fishery managers, other hydro operators authorized/required	BPA 100%		
200702300	Integrated Fruit Production in Fifteenmile and Hood	Anadromous	Columbia Gorge	Wyeast Resource Conservation &	3.0	Pesticide impacts, other entities authorized/required (eg EPA,	BPA 100%		

	River Subbasin Orchards			Development Area Council		NMFS; state DEQs, agricultural users, etc)			
200703000	Determination of steelhead smolt production and smoltification genes in the Yakima River	Anadromous	Columbia Plateau	Columbia River Inter-Tribal Fish Commission (CRITFC)	3.0	Yakima River smolt research, other entities authorized/required (eg fishery managers)	BPA 100%		
200703200	Potential effects of the invasive New Zealand mudsnail in tributaries of Bonneville Reservoir and the Deschutes River, (Potamopyrgus antipodarum).	Anadromous	Columbia Gorge	US Geological Survey (USGS) - Cook	3.0	Invasive species effects, multiple entities authorized/required	BPA 100%		
200703600	Mid-Columbia Trophic Dynamics Project	Anadromous	Columbia Cascade	Washington Department of Fish and Wildlife (WDFW)	3.0	Other entities required (eg non-fed midC project operators)	BPA 100%		
200703700	North Fork Toutle River Fish Passage	Anadromous	Lower Columbia	Steward and Associates	3.0	Mitigation for non-FCRPS COE sediment control structure, Corps authorized/required	BPA 100%		
200704700	Hydrography Spatial Data Enhancement Project - WDFW & WDNR Operational Data Updates and Integration to the PNW Hydrography Clearinghouse for the WA Columbia Basin	Anadromous	Mainstem/Sy stemwide	Interagency Committee (IAC)	3.0	Database improvements for WA policy/technical integration, WA state required	BPA 100%		
200704800	Transboundary Watershed Coordination in the Kootenai River Basin	Resident	Mountain Columbia	Kootenai River Network, Inc.	3.0	Expansion of coordinating office, multiple entities authorized/required (other entities in the network)	BPA 100%		
200705600	IDL Pend Oreille Area Fish Passage #2	Resident	Intermountain	Idaho Department of Lands	3.0	Culvert replacements, county roads (IDLrequired)	BPA 95%	Confirmed	
200705700	Potlatch River Basin Conservation Easement	Anadromous	Mountain Snake	Potlatch Corporation	3.0	Conservation easement acquisition for anadromous fish, mitigating for industrial timber company; timber company authorized/required (note too, no	BPA 100%		

						crediting for capital anadromous fish habitat acquisitions)			
200705900	Abiotic and Biotic Factors Affecting the Success of Reintroductions of Anadromous Salmonids in Cle Elum Lake, Washington	Anadromous	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	3.0	Research for re-introduction due to irrigation dam blockage (Cle Elum Lake), other entity required to address (Reclamation; fishery managers)	BPA 100%		
200706000	Lake Pend Oreille Invasive Fish	Resident	Intermountain	Idaho Department of Fish & Game	3.0	Invasive fish evaluation/management, Idaho DFG authorized/required	BPA 100%		
200706900	Determine status of migratory bull trout in the South Fork Payette River.	Resident	Middle Snake	Idaho Department of Fish & Game	3.0	Basic pop research, fishery managers authorized/required	BPA 100%		
200707200	Flathead Subbasin Flowering Rush and Yellowflag Iris Project	Resident	Mountain Columbia	Salish Kootenai College/University of Montana	3.0	Invasive weed management, landowners required to address	BPA 100%		
200707800	Characterizing the Geographic Distribution of Freshwater Mussels in the Columbia Basin Using Museum Collection Data.	Resident	Mainstem/Sy stemwide	Washington Department of Fish and Wildlife (WDFW)	3.0	Freshwater mussel pop analysis, another entity authorized/required (fishery managers)	BPA 100%		
200708100	WRIA-Based Restoration Project Feasibility Assessment and Prioritization, Coweeman River	Anadromous	Lower Columbia	Lower Columbia Fish Enhancement Group	3.0	Identifying appropriate offsite habitat improvements, multiple entities may be authorized/required'	BPA 100%		
200708900	Monitoring Invasive Species in the mainstem Columbia River: the development of a design to monitor the status and trends and provide for the early detection of invasive species	Anadromous	Mainstem/Sy stemwide	US Geological Survey (USGS) - Cook	3.0	Invasive aquatics species research, multiple entities authorized/required (fish managers, water quality managers; all river users)	BPA 100%		
200709000	Effects of the marine environment on the growth and survival of Columbia Basin spring Chinook and	Anadromous	Mainstem/Sy stemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	3.0	Ocean research re chinook; multiple entities authorized/required (eg fishery managers)	BPA 100%		

	sockeye salmon stocks.								
200711400	Vulcan Mountain Weed Control for Mule Deer and Bighorn Sheep Habitat Improvement	Wildlife	Intermountain	Washington Department of Fish and Wildlife (WDFW)	3.0	Weed control, wildlife managers/others required to address	BPA 100%		
200712000	Malheur Subbasin Habitat Restoration and Fish Enhancement – Logan Valley Project	Resident	Middle Snake	Burns Paiute Tribe	3.0	Logan Valley/Stanbro Ranch acquisition, mitigation for nonFCRPS dam (Warm Springs), other entities authorized/required (Reclamation)	BPA 100%		
200715400	Douglas County Multi Species Habitat Conservation Plan, Previously referred to as the Foster Creek Habitat Conservation Plan (FCHCP)	Wildlife	Columbia Cascade	Foster Creek Conservation District	3.0	County HCP implementation (agriculture, timber); other entities authorized/required to implement	BPA 100%		
200716400	Determination of Steelhead Production and Productivity Response to Habitat Manipulations in the Upper Potlatch River, Idaho	Anadromous	Mountain Snake	Idaho Department of Fish & Game	3.0	Report on steelhead production in Potlatch River, other entities (fishery managers) authorized/required	BPA 100%		
200716500	Relative abundance, distribution, and population structure of lampreys in the Columbia River Basin	Anadromous	Mainstem/Sy stemwide	Columbia River Research Laboratory	3.0	Lamprey population analysis, fishery managers authorized/required	BPA 100%		
200716800	Using otolith microstructure and microchemistry to delineate growth patterns and spatial structure of Snake River Fall Chinook salmon	Anadromous	Mainstem/Sy stemwide	National Oceanic & Atmospheric Administration (NOAA)	3.0	Snake River Fall Chinook basic biology research; other entities authorized/required (eg fishery managers)	BPA 100%		
200717100	Malheur River Subbasin Habitat Restoration and Fish Enhancement–	Resident	Middle Snake	Burns Paiute Tribe	3.0	Habitat to address fish/wildlife losses, but not related to FCRPS dam (Warm Springs dam),	BPA 100%		

	Stinkingwater Project					grazing; another entity authorized/required to address (eg non FCRPS, livestock owners, range managers)			
200717600	A Freshwater Mussel Watch for Biomonitoring in the Columbia River Basin	Resident	Mainstem/Sy stemwide	Confederated Tribes of the Umatilla Indian Reservation	3.0	Research re: mussels as indicator species, other entities authorized/required (eg fish/wildlife agencies, other hydro owners etc)	BPA 100%		
200718700	Use of Mainstem Habitats by Juvenile Pacific Lamprey (<i>Lampetra tridentata</i>)	Anadromous	Mainstem/Sy stemwide	Pacific Northwest National Laboratory	3.0	Lamprey research, mainstem, other entities authorized/required (eg other hydro)	BPA 100%		
200719700	Evaluating the sublethal impacts of current use pesticides on the environmental health of salmonids in the Columbia River Basin.	Anadromous	Mainstem/Sy stemwide	Northwest Fisheries Science Center	3.0	Pesticide impacts, other entities authorized/required (eg EPA, NMFS; state DEQs, agricultural users, etc)	BPA 100%		
200719800	Next Steps in Subbasin Planning: Umatilla Pilot Project	Anadromous	Columbia Plateau	Confederated Tribes of the Umatilla Indian Reservation	3.0	Subbasin plan implementation, multiple entities authorized/required	BPA 100%		
200721000	Mores Creek Watershed Floodplain and Habitat Restoration: Design and Implementation	Resident	Middle Snake	West Central Highlands Resource Conservation and Development Council	3.0	Mitigating non FCRPS dam (?); also mining impacts; other entities authorized/required (eg, Reclamation, FS)	BPA 100%		
200721500	Adult Steelhead Monitoring in Trout Creek	Anadromous	Columbia Gorge	Washington Department of Fish and Wildlife (WDFW)	3.0	Population monitoring, other entities authorized/required (eg WDFW)	BPA 100%		
200721800	Development of single nucleotide polymorphism (SNPs) genetic markers diagnostic between coastal rainbow trout and interior redband trout	Resident	Mountain Columbia	Idaho Department of Fish & Game	3.0	Fish diagnostics/biology research, other entities authorized/required (fishery managers)	BPA 100%		
200722100	Native Trout Restoration in the Methow, Entiat, and	Resident	Columbia Cascade	Washington Department of Fish	3.0	Trout restoration via investigation & invasives	BPA 100%		

	Wenatchee Subbasins			and Wildlife (WDFW)		management; WDFW authorized/required			
200722700	Rapid DNA Profiling of Hatchery and Wild Salmon Stocks with Single Nucleotide Polymorphism (SNP) Profiling	Anadromous	Mainstem/Sy stemwide	Pacific Northwest National Laboratory	3.0	DNA profiling, fishery managers authorized/required	BPA 100%		
200723000	Selective Gear Demonstration Project: Reef Net Fishing Gear for Lower Columbia River Commercial Salmon Fishery	Anadromous	Mainstem/Sy stemwide	Washington Sea Grant Program	3.0	Reefnet fishing gear testing (fishery managers authorized/required)	BPA 100%		
200723300	Distribution and Abundance Monitoring of Oncorhynchus mykiss within the Lower Clearwater Subbasin	Anadromous	Mountain Snake	Nez Perce Tribe Dept. Fisheries Resource Management Watershed Division	3.0	Population analysis for listed species, multiple entities authorized/required (fisheries managers, NMFS, entities with impacts to listed species)	BPA 100%		
200723400	Assessing Habitat and Environmental Suitability for Northern Leopard Frogs in the Crab Creek and Pend O'reille Sub-basins of Eastern Washington	Wildlife	Columbia Plateau	Washington Department of Fish and Wildlife (WDFW)	3.0	RME re: declining leopard frogs in WA; multiple entities authorized/required (WDFW, other sources of habitat decline)	BPA 100%		
200723800	Providing Services to Assist Record Keeping of Over the Bank Sales in Zone 6 Tribal Fisheries	Anadromous	Multiprovinc e	Steven Vigg & Company	3.0	Record keeping for harvest sales; other entities authorized/required (harvest managers)	BPA 100%		
200724100	Well modifications to improve aquatic habitat for Toppenish/Simcoe Creeks.	Anadromous	Columbia Plateau	Yakama Confederated Tribes	3.0	Well modifications to help groundwater; other entities authorized/required (well owners, state etc) [could check not required to do so]	BPA 100%		
200725000	Genetic Evaluation of Chinook Salmon Supplementation in Idaho Rivers	Anadromous	Mountain Snake	Idaho Department of Fish and Game / Nez Perce Tribe	3.0	Hatchery supplementation analysis in ID; other entities authorized/required (eg fishery managers, hatchery managers)	BPA 100%		

200725300	Monitoring of Adult Abundance and Spatial Distribution for Snake River Spring/Summer Chinook Salmon ESU Populations	Anadromous	Mainstem/Sy stemwide	Nez Perce Tribe / Idaho Department of Fish and Game	3.0	Monitoring adult chinook/ESA abundance; other entities authorized/required (fisheries managers, NMFS, others affecting chinook).	BPA 100%		
200725400	StreamNet Support and Services for Conservation and Recovery Data Needs	Anadromous	Mainstem/Sy stemwide	Pacific States Marine Fisheries Commission (PSMFC)	3.0	Fish population inventory coordination with another BPA project; other entities authorized/required (eg fishery managers)	BPA 100%		
200726200	Enhanced Landscape Classification to Improve Assessment of Conservation Restoration and Mitigation Projects	Anadromous	Mainstem/Sy stemwide	Pacific Northwest National Laboratory	3.0	General effectiveness evaluation (especially habitat); multiple entities authorized/required	BPA 100%		
200726700	Probabilistic Monitoring of the Status and Trends of Habitat, Water Quality, and Fish Presence in the Washington Portion of the Columbia River Basin	Anadromous	Mainstem/Sy stemwide	Interagency Committee (IAC)	3.0	Offsite habitat monitoring, using EMAP; multiple other entities authorized/required (WA state, individual landowners etc)	BPA 100%		
200727300	Evaluate the effects of hyporheic exchange on egg pocket water temperature in Snake River fall Chinook salmon spawning areas	Anadromous	Blue Mountain	Pacific Northwest National Laboratory	3.0	Evaluate benefits of changing discharge operations at Hells Canyon; Idaho Power required	BPA 100%		
200729400	Control of BKD by Inactivation of the Renibacterium salmoninarum Sortase Enzyme as an Alternative to Antibiotics	Anadromous	Mainstem/Sy stemwide	Northwest Fisheries Science Center	3.0	Hatchery disease research, other entities (eg hatchery/fishery managers) authorized/required	BPA 100%		
200729600	IDL Clearwater Area Fish Passage	Anadromous	Mountain Snake	Idaho Department of Lands	3.0	Culvert replacement towards meeting state SRBA requirements	BPA 93%	Confirmed	
200729700	Effect of Elevated Water Temperature and Gas Supersaturation on Bull	Resident	Mainstem/Sy stemwide	Abernathy Fish Tech. Center	3.0	Temperature effects on bull trout, other entities authorized/required (eg fishery	BPA 100%		

	Trout Reproduction and Growth.					managers, temperature contributors)			
200729900	Investigation of the Relative Reproductive Success of Stray Hatchery and Wild Steelhead and the Influence of Hatchery Strays on Natural Productivity in the Deschutes River Subbasin	Anadromous	Columbia Plateau	Oregon Department of Fish & Wildlife (ODFW)	3.0	Hatchery/stray research in Deschutes; other entities authorized/required (eg ODFW, Pelton-Round Butte)	BPA 100%		
200731300	Expanded Acquisition and Display of Fish (Initially Anadromous Salmonids) Harvest Data in the StreamNet Database	Anadromous	Mainstem/Sy stemwide	Pacific States Marine Fisheries Commission (PSMFC)	3.0	Harvest data for StreamNet, other entities authorized/required (eg fishery managers)	BPA 100%		
200731400	Regional Consolidation of Habitat Restoration Project Information From Multiple Funding Sources with Dissemination Through the StreamNet Website	All	Mainstem/Sy stemwide	Pacific States Marine Fisheries Commission (PSMFC)	3.0	Coordination of habitat restoration data into StreamNet; multiple other entities authorized/required (e.g, other restoration funders)	BPA 100%		
200731500	Camas Slough/Lower Washougal River Realignment	Anadromous	Lower Columbia	Lower Columbia Fish Enhancement Group	3.0	Feasibility study for re-routing Lower Washougal, multiple entities authorized/required (highway, landowners etc)	BPA 100%		
200731900	WRIA-Based Restoration Project Feasibility Assessment and Prioritization, Kalama River	Anadromous	Lower Columbia	Lower Columbia Fish Enhancement Group	3.0	Identifying appropriate offsite habitat improvements, multiple entities may be authorized/required'	BPA 100%		
200732000	Inventory and Assess Fish Passage and Screening Needs in the Willow Creek Watershed	Anadromous	Columbia Plateau	Morrow County Soil & Water Conservation District (SWCD)	3.0	Inventory of passage barriers in watershed; other entities authorized/required (eg ODFW, landowners etc).	BPA 100%		
200732200	Ecosystem Economics Model for Willamette Basin Restoration and Conservation	Anadromous	Lower Columbia	David Evans and Associates, Inc.	3.0	Ecosystem economics modeling, multiple entities authorized/required	BPA 100%		

200732300	Investigate genetic parentage analysis techniques to estimate spawner abundance in ESA-listed steelhead populations	Anadromous	Mountain Snake	Idaho Department of Fish & Game	3.0	Genetic analysis regarding ESA-listed steelhead; fishery managers authorized/required	BPA 100%		
200732700	Compilation of Location-Specific Hatchery Release Data in Consistent Format Across Agencies by StreamNet	Anadromous	Mainstem/Sy stemwide	Pacific States Marine Fisheries Commission (PSMFC)	3.0	Hatchery release data coordination; fishery managers authorized/required	BPA 100%		
200733200	Mitigation of marine-derived nutrient loss in the Boise-Payette-Weiser subbasin.	Resident	Middle Snake	Idaho Department of Fish & Game	3.0	Marine derived nutrient loss research, other entities authorized/required (other hydro operators; fishery managers etc)	BPA 100%		
200733500	Migration and homing ecology of supplemented and wild spring Chinook salmon.	Anadromous	Columbia Plateau	Northwest Fisheries Science Center	3.0	Hatchery/supplementation research; fishery managers authorized/required; may be a "1" because this is a BPA-funded facility (Cle Elum)?	BPA 100%		
200733700	Oregon Plan Monitoring of Steelhead Status, Trend, and Habitat in the Grande Ronde River Subbasin.	Anadromous	Blue Mountain	Oregon Department of Fish & Wildlife (ODFW)	3.0	Steelhead status/trend monitoring, fishery managers authorized/required	BPA 100%		
200734200	IDL Maggie Cr. Area Fish Passage Proposal	Anadromous	Mountain Snake	Idaho Department of Lands	3.0	Culvert removal on IDL lands, IDL authorized/required (SRBA)	BPA 94%	Confirmed	
200734400	Lower Columbia River Wild Coho DNA Stock Identification Proposal	Anadromous	Lower Columbia	Fish Friendly Inc.	3.0	DNA research wild coho, fishery managers authorized/required	BPA 100%		
200735300	Quantitative and effective analysis of Columbia River Chinook salmon (<i>Oncorhynchus tshawytscha</i>) and steelhead (<i>O. mykiss</i>) population viability.	Anadromous	Mainstem/Sy stemwide	Columbia River Inter-Tribal Fish Commission (CRITFC)	3.0	Population viability analysis, fishery managers authorized/required	BPA 100%		
200736300	IDL Pend Oreille Area Fish Passage	Resident	Intermountain	Idaho Department of Lands	3.0	Culvert replacement, non-federal lands ID, others authorized/required (i.e, IDL)	BPA 87%	Confirmed	

200736700	Klickitat and Rock Creek Subbasin Habitat Improvement Program	Anadromous	Columbia Gorge	Klickitat County	3.0	Offsite habitat improvements/restoration, multiple activities, multiple entities with authority or requirement to fund	BPA 100%		
200737100	Documentation of food-web linkages in the mainstem Columbia River – towards understanding the role of invasive species and establishing a baseline trophic state	Resident	Columbia Gorge	Columbia River Research Laboratory	3.0	Impacts of aquatic invasive species; NOAA (eg National Sea Grant) and others authorized/required	BPA 100%		
200737300	IDL Priest Lake Fish Passage	Resident	Intermountain	Idaho Department of Lands	3.0	Culvert replacements, non-fed lands (IDL authorized/required via forest practices act, Snake River Basin Adjudication to address)	BPA 88%	Confirmed	
200737400	Investigating Juvenile Salmonid Mortality Associated with Lock Flushing	Anadromous	Mainstem/Sy stemwide	bluefish.org	3.0	Navigation impacts, Corps/shippers required/authorized	BPA 100%		
200737500	Does the Decline of Idaho's Sockeye Salmon Correlate with a Mountain Beetle Infestation?	Wildlife	Upper Snake	bluefish.org	3.0	Nutrients, focus on affecting timber resource (timber managers authorized/required)	BPA 100%		
200737700	Cooler Temperatures for Federally Controlled Reservoirs	Anadromous	Mainstem/Sy stemwide	bluefish.org	3.0	Temperature control structure at Brownlee (Idaho Power required)	BPA 100%		
200737800	Investigating Reservoir Sediment Concerns of a Restored Free-Flowing Lower Snake River	Anadromous	Mainstem/Sy stemwide	bluefish.org	3.0	Evaluation of sediment were 4 lower snake dams removed (Corps, Reclamation authorized/required)	BPA 100%		
200737900	Surveying Jobs that Depend on the Existence of Lower Snake River Reservoirs	Anadromous	Mainstem/Sy stemwide	bluefish.org	3.0	Economic impacts of breaching 4 lower snake dams (Corps/others authorized/required and already evaluated)	BPA 100%		
200738000	Keeping Irrigators Whole in the Event of Reservoir	Anadromous	Mainstem/Sy stemwide	bluefish.org	3.0	Impacts to irrigators of removal (irrigators, plus	BPA 100%		

BPA “IN LIEU” INTERPRETIVE KEY & RATINGS SYSTEM

The *in lieu* provision, section 4(h)(10)(A) of the Northwest Power Act states:

“Expenditures of the Administrator pursuant to this paragraph shall be in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law.”

Interpretation:

If another entity is authorized or required under other agreements or provisions of law to undertake an activity, BPA cannot fund the activity unless BPA’s funding is in addition to, not in lieu of that other entity’s funding.

In lieu concerns for BPA will typically arise in areas of overlapping authority—where BPA may be authorized (but not required) to undertake the activity and another entity is also either required or authorized to undertake the activity.

How to apply the provision:

1. Is another entity authorized or required under other agreements or provisions of law to undertake the activity?
2. If no, then no further *in lieu* review is needed.
3. If yes, then BPA’s funding must be in addition to, not in lieu of that entity’s funding.

What is another entity?

BPA interprets this to mean any entity other than BPA, including but not limited to federal, state or tribal governmental entities, corporations, individuals, etc.

What does “authorized or required under other agreements or provisions of law” mean?

Taking into account relevant provisions of the Northwest Power Act, including sections 4(h)(10)(A), as well as sections 4(h)(8)(C),⁴ 4(h)(8)(A),⁵ and 4(h)(8)(B)⁶ in particular,

⁴ “To the extent the program provides for coordination of its measures with additional measures (including additional enhancement measures to deal with impacts caused by factors other than the development and operation of electric power facilities and programs), such additional measures are to be implemented in accordance with agreements among appropriate parties providing for the administration and funding of such additional measures.”

⁵ “Enhancement measures may be used, in appropriate circumstances, as a means of achieving offsite protection and mitigation with respect to compensation for losses arising from the development and operation of the hydroelectric facilities of the Columbia River and its tributaries as a system.”

⁶ “Consumers of electric power shall bear the cost of measures designed to deal with adverse impacts caused by the development and operation of electric power facilities and programs only.”

BPA interprets “authorized” to mean that another entity has been given legal authority under other agreements or provisions of law to undertake the protection, mitigation, or enhancement activity proposed for BPA funding. The entity need not have appropriations or be currently funding the activity to be “authorized” to do so.

BPA interprets “required” to mean that another entity has been directed under other agreements or provisions of law to undertake the activity. BPA interprets this to be a directive to the entity to conduct the activity. The entity need not be currently funding the activity even though “directed” to do so.

BPA interprets “other agreements” to mean a contract, permit, license, settlement, memorandum of agreement or other written arrangement between entities other than BPA.

BPA interprets “provisions of law” to mean a statute, regulation, or regulatory or judicial order.

When is BPA’s funding in addition to, not in lieu of, another entity’s funding?

“In lieu” means “in place of” or “instead of.” BPA interprets this to mean that when another entity is authorized or required under other agreements or provisions of law to undertake an activity, BPA’s funds can also be used, but only if they add to funding by the entity.

A rule of reasonableness has to apply here, so BPA will seek to adhere to the following general principles:

- The central objective is to make sure Bonneville expenditures to benefit fish and wildlife are in addition to and not replacing or supplanting the expenditures others are authorized or required to make.
- In evaluating proposals, BPA may consider a variety of relevant factors, such as the following:
 - the relationship of the project to FCRPS impacts
 - whether the activity has historically been funded by another entity
 - the nature and extent of the other entity’s authority or obligation to take the action
 - the amount and kind of the cost-share
 - the likelihood of the project being implemented without BPA participation

- Where BPA and another entity have overlapping *authority* to do work proposed as BPA mitigation, “cost-sharing”—where BPA funding is a portion of the overall proposed budget for a proposal—can provide the proof needed to demonstrate that the *in lieu* prohibition does not apply.
- BPA is not requiring a set amount of cost-sharing, but the amount of cost-sharing provided must allow BPA to reasonably conclude that its funds are adding to and not effectively supplanting the funding authorized or required of another entity. For example, while cost-sharing of \$1 could technically mean BPA is not supplanting another entity’s funding, this is plainly an unreasonable result; what level is “reasonable” will be evaluated on a case-by-case basis.
- Cost-sharing is not likely to be appropriate when another entity is plainly *required* to conduct the activity. For example, when another entity has contracted or has been ordered to perform the activity, BPA should not fund what’s already covered. BPA’s funding should create additional, measurable value to the project over and above what the entity is responsible for.
- A cost-share agreement between BPA and the entity may address appropriate cost-sharing on a programmatic basis (e.g., the MOU between BPA and the Forest Service).

***In lieu* ratings for proposals**

BPA rated each proposal as follows:

- 1** No *in lieu* concerns identified
- 2** Potential *in lieu* funding issues: another entity is authorized or required to undertake the activity proposed for BPA funding, but BPA funding appears to be in addition to, not *in lieu* of the other entity’s funding, typically due to cost-sharing.

These “2” ratings were further delineated into ratings of “2.1,” “2.2” and “2.3” describing BPA’s perspective on the reasonableness of the cost-sharing, taking into account the relative proportion of cost-sharing, the nature and extent of the other entity’s authorization or requirement to conduct the work, and the other principles outlined above. The ratings are as follows: 2.1—Appears reasonable; 2.2—May be reasonable; 2.3—Appears unreasonable.

- 3** *In lieu* funding problems: another entity is authorized or required to undertake the activity, and BPA’s funding is *in lieu* of that entity’s funding, e.g., the other entity is authorized or required to undertake the

activity and there is no cost-share offered, or the other entity is clearly required to undertake the activity, and the cost-share offered is not sufficient (does not appear to add value rather than just supplanting).

Under BPA's ratings then, a "1" rating is an "okay to fund" rating at the discretion of BPA. A "2" rating is a "may be okay to fund" at the discretion of BPA (with approximate leanings on use of that discretion indicated). A "3" rating is a "not okay to fund, in lieu concerns."

Remedies for *in lieu* concerns

The following are examples of things that can address *in lieu* concerns identified:

4. Written confirmation by the proponent that neither it nor any other entity is authorized or required by other agreements or provisions of law to undertake the activity for which BPA funding is being sought.
5. Further description of how BPA's funding is in addition to, not *in lieu* of the other entity's funding, taking into account the principles described above. For example, a project sponsor could provide additional information showing that it is applying its funds to accomplish other aspects of the same overall project but had not included that explanation in the original proposal.
 - For example, assume a proposal seeking 100 percent BPA funding for replacement of three culverts that another entity is already required to replace was rated a "3." The sponsor could provide information that the proposal to the Council was part of a larger project that would remove six culverts, and the other three were being funded in the same time period by the entity; this would be a potentially reasonable cost-share and result in the project getting a "2" rating.
6. Information about past funding activities by the entity, indicating that it has not funded the kind of activity proposed for BPA funding.



Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

ENVIRONMENT, FISH AND WILDLIFE

October 6, 2006

In reply refer to: KEW-4

In reply refer to: KEW-4

Tom Karier, Chairman
Northwest Power and Conservation Council
851 S.W. Sixth Ave., Suite 1100
Portland, OR 97204-1348

Dear Dr. Karier

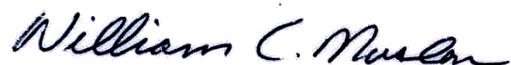
In the enclosure to our August 3, 2006 letter, we provided the Northwest Power and Conservation Council (Council) with our *in lieu* analysis of projects newly proposed in the current solicitation (those with FY2007 project numbers), and committed to providing our assessment of projects with ongoing project numbers. Although our analysis is incomplete and will require further internal review, we are providing the Council with our preliminary *in lieu* ratings for "ongoing" projects during this public comment period. (See attached list.)

As mentioned in our August letter, we considered whether to evaluate on-going project proposals submitted for the 07-09 solicitation. On the one hand, each of these on-going project proposals has already received an *in lieu* rating in prior project solicitations. On the other hand, some of the project proposals have been modified. Also, the nature and extent of another entity's authority or requirements to undertake the activity may have changed. In addition, we have new or additional information about the amount and nature of cost-sharing offered. As a result, Bonneville Power Administration (Bonneville) concluded it would be reasonable to review all of the "on-going" project proposals.

As you can see from the enclosed, our preliminary review indicates that some on-going proposals may present *in lieu* issues. If, in the final analysis accompanying our decision on the Council's recommendations, an on-going project proposal is given an *in lieu* rating of "3" (e.g., not fundable), Bonneville will use the FY07-09 period as a transitional period and will work with affected sponsors to either remedy the problem, or the sponsor will need to finish the work funded by Bonneville. While the FY07-09 period is transitional, we may address *in lieu* problems on a rolling basis, such that sponsors should not assume the *in lieu* resolution can be deferred until FY08 or FY09. We also caution that, while proposals rated a "3" pose the most significant concerns, Bonneville may also address proposals rated as a "2.3" or even a "2.2" with sponsors during this transition period, in order to avoid the problems after FY09. For more information on the *in lieu* rating system, and possible *in lieu* remedies please refer to our previous August letter.

While we are providing these preliminary ratings for your information, additional internal work is needed before we finalize them, including a check on assumptions made about cost-sharing and other factors that may affect the final ratings. Thank you for the opportunity to share Bonneville's draft *in lieu* analysis for "ongoing" projects. I look forward to continuing to work with you on these issues.

Sincerely,



William C. Maslen
Director of Fish and Wildlife

1 enclosure

cc:

Ms. Judi Danielson, Northwest Power & Conservation Council
Mr. Jim Kempton, Northwest Power & Conservation Council
Ms. Joan Dukes, Northwest Power & Conservation Council
Mr. Bruce Measure, Northwest Power & Conservation Council
Ms. Rhonda Whiting, Northwest Power & Conservation Council
Mr. Larry Cassidy, Northwest Power & Conservation Council
Ms. Melinda Eden, Northwest Power & Conservation Council
Mr. Doug Marker, Northwest Power & Conservation Council
Mr. Brian Lipscomb, Columbia Basin Fish & Wildlife Authority
Chairman Dean Adams, Burns Paiute Tribe
Chairman Chief Allen, Coeur d'Alene Tribe
Chairman Michael Marchand, Confederated Tribes of the Colville Reservation
Chairman Glen Nenema, Kalispel Tribe
Chairperson Jennifer Porter, Kootenai Tribe of Idaho
Chairperson Rebecca Miles, Nez Perce Tribe
Chairman James Steele Jr., Confederated Salish & Kootenai Tribes
Chairperson Alonzo Coby, Shoshone Bannock Tribes of Fort Hall
Chairman Terry Gibson, Shoshone Paiute Tribes of the Duck Valley Reservation
Chairman Richard Sherwood, Spokane Tribe of Indians
Chairman Antone Minthorn, Confederated Tribes of the Umatilla Indian Reservation
Chairman Ron Suppah, Confederated Tribes of the Warm Springs Reservation
Chairman Lavina Washines, Yakama Indian Nation
Ms. Mary Verner, Upper Columbia United Tribes
Mr. Olney Patt, Jr., Columbia River Intertribal Fish Commission

bcc:

K. Hunt – DKR-7

B. Cobell – DKT-7

B. Maslen – KEW-4

B. Austin – KEW-4

G. Dondlinger – KEWB-4

P. Lofy – KEWL-4

P. Krueger – KEWR-4

A. L'Heureux – KEWR-4

K. Powers – KEWR-4

M. Shaw – KEWU-4

L. Grimm – LC-7

P. Key – LC-7

Official File – KEW (EX-15-18)

10/6/06 Draft In-Lieu Review of Projects Proposed with Ongoing Project Numbers

Proposal Number	Title	Province	Prelim In lieu Rating	Notes	Approx BPA share of total costs?	Status of Cost Share
198331900	New Marking & Monitoring Tech	Mainstem/ Systemwide	1.0	The goal of this project is to develop and evaluate fish-tracking technologies needed to assess the effectiveness of management actions and strategies for recovery of ESA-listed fish populations. Can be used by multiple agencies with parallel responsibilities, however , as applied to primarily FCRPS projects/inquiries, is okay.	BPA 100%	
198335000	Nez Perce Tribal Hatchery Operations & Maintenance	Mountain Snake	1.0	O&M for BPA-funded hatchery mitigating for FCRPS.	BPA 100%	
198335003	Nez Perce Tribal Hatchery M&E	Mountain Snake	1.0	Hatchery RM&E; although fishery managers authorized/required, assume okay since it is an FCRPS hatchery	BPA 96%	Mixed
198343500	Umatilla Hatchery Satellite Facilities O&M	Columbia Plateau	1.0	O&M for Umatilla hatchery facilities; a "1" rating on assumption these are mitigating for the FCRPS (and credited as such) as opposed to mitigating for irrigation in the Umatilla Basin.	BPA 100%	
198503800	Colville Hatchery	Intermountain	1.0	Resident fish substitution in mitigation for FCRPS.	BPA 100%	
198712700	Smolt Monitoring By Non-Feder	Mainstem/ Systemwide	1.0	Daily passage data through the mainstem, Snake, Columbia and mid-Columbia Rivers to facilitate fish passage management decisions, including Biological Opinion implementation. Most facilities involved are FCRPS	BPA 100%	
198802200	Umatilla Fish Passage Operations	Columbia Plateau	1.0	Increase survival of migrating juvenile and adult salmon and steelhead in the Umatilla Basin by operating passage facilities, flow enhancement measures, trapping facilities, and transport equipment to provide adequate passage conditions. A "1" rating on assumption these are mitigating for the FCRPS (and credited as such) as opposed to mitigating for irrigation in the Umatilla Basin.	BPA 100%	
198805301	Grande Ronde/Imnaha Endemic Spring Chinook Supplementation – Northeast Oregon Hatchery	Blue Mountain	1.0	NEOH project construction, operation	BPA 100%	
198805303	Hood River Production M&E - Ws	Columbia Gorge	1.0	Offsite supplementation program to support summer and winter steelhead populations and reestablish spring chinook salmon. Assuming in mitigation for the FCRPS and not impacts of Powerdale (being removed).	BPA 92%	Mixed

198805307	Hood R Prod O&M - Ws/Odfw	Columbia Gorge	1.0	Restore and maintain populations of summer and winter steelhead, and re-establish and maintain the spring chinook population in the Hood River subbasin. Steelhead and chinook broodstock will be held and spawned at the Parkdale Fish Facility. Assume in mitigation for the FCRPS and not impacts of Powerdale (being removed).	BPA 100%	
198811535	Klickitat Fishery YKFP Design	Columbia Gorge	1.0	Assume in mitigation for FCRPS (other hydropower projects also authorized/required, but will assume this mitigation focused on and creditable to FCRPS only).	BPA 100%	
198902700	Power Repay Umatilla Basin Project	Columbia Plateau	1.0	Umatilla Act requires BPA to fund power costs	BPA 100%	
198903500	Umatilla Hatchery Operation and Maintenance and Fish Liberations	Columbia Plateau	1.0	Assume in mitigation for FCRPS (note some cost share from Idaho Power)	BPA 86%	Confirmed
199001800	Lake Roosevelt Rainbow Tr Hab/Pass Impr Prog	Intermountain	1.0	Resident fish substitution in mitigation for FCRPS.	BPA 100%	
199004401	Lake Creek Land Acquisition	Intermountain	1.0	Wildlife habitat mitigation for Albeni Falls credited with HUs	BPA 100%	
199007700	Dev Of Systemwide Predator Control for Northern Pikeminnows.	Mainstem/Systemwide	1.0	Pikeminnow predator control; direct mitigation for FCRPS.	BPA 100%	
199009200	Wanaket Wildlife Area	Columbia Plateau	1.0	O&M for wildlife mitigation lands, enhancement HU credits; assume requested funds consistent with terms of MOA	BPA 100%	
199101904	Hungry Horse Mitigation - Stocking of Offsite Waters - Creston NFH	Mountain Columbia	1.0	Mitigation (recreational fishery stocking) for impacts of Hungry Horse	BPA 100%	
199102800	Pit Tagging Wild Chinook	Mountain Snake	1.0	PIT tagging, data support management decisions for FCRPS operations.	BPA 100%	
199104600	Spokane Tribal (Galbr Sprgs) H	Intermountain	1.0	O&M for Spokane Tribal hatchery (resident) in mitigation for FCRPS	BPA 100%	
199104700	Sherman Creek Hatchery - O&M	Intermountain	1.0	O&M for BPA-funded hatchery, assume in mitigation for FCRPS.	BPA 100%	
199106000	Pend Oreille Wetlands Wildlife Mitigation Project - Kalispel	Intermountain	1.0	O&M for BPA-funded mitigation property; assume requested funds consistent with terms of MOA..	BPA 88%	Confirmed
199106100	Swanson Lake Wildlife Mitigation Project (Swanson Lakes Wildlife Area)	Columbia Plateau	1.0	O&M and enhancement on wildlife habitat mitigating for Grand Coulee, assume requested funds consistent with terms of MOA	BPA 100%	
199106200	Spokane Tribe Wildlife Mitigation	Intermountain	1.0	Habitat acquisition for mitigation of wildlife	BPA 100%	
199107800	Burlington Bottoms Wildlife Mitigation Project	Lower Columbia	1.0	O&M, restoration activities on BPA-funded mitigation property; assume requested funds consistent with terms of MOA.	BPA 100%	
199204800	Colville Confederated Tribes Wildlife Mitigation Project	Intermountain	1.0	O&M and enhancement on wildlife habitat mitigating for FCRPS; assume requested funds consistent with terms of MOA	BPA 100%	

199205900	Amazon Basin/Eugene Wetlands -	Lower Columbia	1.0	O&M/restoration activities on BPA-funded wildlife mitigation lands; assume requested funds consistent with MOA or other agreements.	BPA 80%	Mixed
199206100	Albeni Falls Wildlife Mitigation	Intermountain	1.0	Land acquisition & O&M on wildlife habitat mitigating for Albeni Falls; assume requested O&M funds consistent with terms of MOA	BPA 99%	Confirmed
199302900	Survival Estimates for the Passage of Juvenile Salmonids Through Snake and Columbia River Dams and Reservoirs	Mainstem/Systemwide	1.0	R&ME relating to mainstem passage.	BPA 70%	Confirmed
199303501	Red River Restoration O & M	Mountain Snake	1.0	Restoration and O&M on BPA-funded mitigation parcel; assume requested funds consistent with MOA terms.	BPA 75%	Mixed
199304000	Fifteenmile Creek Habitat Restoration and Monitoring Project	Columbia Gorge	1.0	O&M for fencing, RM&E for other measures in conjunction with multiple entities; RM&E is linked to measuring success of funded activities; assume that requested funds consistent with terms of MOA	BPA 72%	
199404400	Enhance, protect and maintain shrub-steppe habitat on the Sagebrush Flat Wildlife Area (SFWA)	Columbia Cascade	1.0	O&M, and some enhancement on wildlife mitigation habitat lands; assume requested funds consistent with terms of MOA	BPA 100%	
199404900	Kootenai River Ecosystem Improvements Project	Mountain Columbia	1.0	O&M on BPA-funded wildlife mitigation lands; assume requested funds consistent with terms of MOA	BPA 100%	
199500900	Lake Roosevelt Rainbow Trout N	Intermountain	1.0	Resident fish substitution in mitigation for FCRPS (rainbow trout net pen).	BPA 62%	Mixed
199501100	Chief Joseph Kokanee Enhancement	Intermountain	1.0	Fish passage projects, and channel spawning feasibility studies for kokanee.	BPA 100%	
199501300	Resident Fish Substitution Program	Mountain Snake	1.0	Resident fish substitution, Dworshak	BPA 96%	Under Dev.
199502700	Lake Roosevelt White Sturgeon Recovery Project	Intermountain	1.0	White sturgeon M&E and aquaculture in Lake Roosevelt; assume in mitigation for FCRPS. [compare 198605000?]	BPA 88%	Confirmed
199505701	S Idaho Wildlife Mitigation	Middle Snake	1.0	O&M on wildlife mitigation habitat purchased with BPA funding; assume requested funds consistent with terms of MOA.	BPA 100% (Cost share was listed as "BPA")	
199505702	Southern Idaho Wildlife Mitigation	Upper Snake	1.0	New wildlife mitigation habitat acquisitions, and continued O&M on prior BPA-funded acquisitions; assume requested funds consistent with terms of MOA	BPA 100%	
199505703	Southern Idaho Wildlife Mitigation	Middle Snake	1.0	Wildlife habitat mitigation for Anderson Ranch, Black Canyon, and Deadwood credited with HUs	BPA 100%	

199506001	Iskuulpa Watershed Project	Columbia Plateau	1.0	O&M, acquisition of BIA grazing leases, for fish & wildlife habitat mitigation; assume requested funds consistent with terms of MOA.	BPA 100%	
199601900	Technical Management Team (TMT)	Mainstem/ Systemwide	1.0	DART database management with additional analytical functions addressing FCRPS operational questions	BPA 100%	
199602000	Pit Tagging Spring/Summer Chin	Mainstem/ Systemwide	1.0	Comparative survival study work.	BPA 92%	Under Rev.
199607703	Protect and Restore Waw'aalamnime to 'Imnamatnoon Creek Analysis Area	Mountain Snake	1.0	Road decommissioning, culvert removal, erosion control; assume it occurs on National Forest lands and is covered by BPA-FS MOU.	BPA 84% (70%)	Under Rev.
199607705	Restore McComas Meadows/ Meadow Creek Watershed	Mountain Snake	1.0	Road decommissioning and culvert removal; assume it occurs on National Forest lands and is covered by BPA-FS MOU.	BPA 77% (70%)	Mixed
199608000	Ne Oregon Wldf Proj (Npt) Precious Lands	Blue Mountain	1.0	O&M and restoration activities on BPA-funded wildlife mitigation lands; assume requested funds consistent with terms of MOA.	BPA 87%	Under Dev.
199701501	Imnaha River Smolt to Adult Return Rate and Smolt Monitoring Project	Blue Mountain	1.0	Estimate total juvenile emigrant abundance, smolt survival and smolt-to-adult return rates (SAR) of wild/natural chinook salmon and steelhead at Lower Granite and McNary Dams and support the Smolt Monitoring Program and NEOH M&E Projects	BPA 61%	Confirmed
199800300	Spokane Tribe Wildlife Mitigation Operations & Maintenance	Intermountain	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 100%	
199800702	Gd Ronde Supp Lostine O&M/M&E	Blue Mountain	1.0	Lostine River adult acclimation facility	BPA 98%	Confirmed
199800703	Grande Ronde Supplementation Operations and Maintenance	Blue Mountain	1.0	Assume in mitigation for FCRPS.	BPA 100%	
199800704	Grande Ronde Basin Endemic Spring Chinook Supplementation Project: Northeast Oregon hatcheries implementation-ODFW	Blue Mountain	1.0	NEOH work, including coordination. Assume in mitigation for FCRPS.	BPA 10%	Confirmed
199801001	Grande Ronde Captive Brood O&M	Blue Mountain	1.0	LSRCP hatchery operation & research; research has application beyond LSRCP.	BPA 100%	
199801004	Monitor and Evaluate Performance of Juvenile Snake River Fall Chinook Salmon from Fall Chinook Acclimation Facilities	Blue Mountain	1.0	FCAP (Lyons Ferry Hatchery), assume in mitigation for FCRPS.	BPA 100%	
199801005	Pittsburg Landing Fall Chinook Acclimation Project (FCAP)	Blue Mountain	1.0	Supplement natural production of Snake River fall Chinook above Lower Granite Dam through acclimation and final rearing of Lyons Ferry Hatchery yearling and sub-yearlings	BPA 100%	

199801006	Captive Broodstock Artificial Propagation	Blue Mountain	1.0	Implements the captive broodstock project through the collection of juvenile salmon from the wild and maintaining them in captivity; assume mitigates for FCRPS.	BPA 96%	Under Rev.
199802200	Pine Creek Conservation Area: Wildlife Habitat and Watershed Management on 33,557-acres to benefit grassland, shrub-steppe, riparian, and aquatic species.	Columbia Plateau	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 70%	Mixed
199900301	Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams	Mainstem/ Systemwide	1.0	Spawning studies below FCRPS dams.	BPA 100%	
200000900	Logan Valley Wildlife Mitigation Site	Middle Snake	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 78%	Mixed
200001500	Oxbow Conservation Area Management	Columbia Plateau	1.0	O&M, M&E and restoration activities on BPA-funded wildlife mitigation; assume requested funds consistent with terms of MOA (note sponsor indicates that "as per memorandum of agreement with BPA, project funding is to continue for the life of the hydropower system.")	BPA 79%	Mixed
200001600	Tualatin River NWR Additions	Lower Columbia	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 88%	Mixed
200001900	Tucannon River Spring Chinook Captive Broodstock Program	Columbia Plateau	1.0	Captive broodstock in mitigation for FCRPS.	BPA 42%	Confirmed
200002100	Securing Wildlife Mitigation Sites - Oregon Ladd Marsh WMA and Grande Ronde Subbasin Wetlands	Blue Mountain	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 26%	Confirmed
200002600	Rainwater Wildlife Area Operations and Maintenance	Columbia Plateau	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 91%	Mixed
200002700	Acquisition Of Malheur River Wildlife Mitigation Project	Middle Snake	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 75%	Mixed
200003500	Rehabilitate Newsome Creek - S	Mountain Snake	1.0	Multiple fish habitat restoration activities within Nez Perce National Forest; assume BPA-FS MOU applies.	BPA 78% (70%)	Mixed
200003600	Protect And Restore Mill Creek	Mountain Snake	1.0	Multiple watershed restoration activities, appears to be entirely within/on National Forest lands; assume BPA-FS MOU applies.	BPA 77% (70%)	Mixed
200100300	Adult Pit Detector Installatio	Mainstem/ Systemwide	1.0	PIT tag interrogation systems for FCRPS dams.	BPA 100%	

200103100	Intermountain Province Resident Fish Conference and E-Library	Intermountain	1.0	Host conference and e-library for planning and assessment of resident fish and related programs in the Intermountain Province. Assume no other entity authorized/required to conduct such activity. (See similar rating for, e.g., 200711700)	BPA 100%	
200104101	Forrest Conservation Area Management	Columbia Plateau	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 84%	Mixed
200105300	Reintroduction of Chum Salmon into Duncan Creek	Lower Columbia	1.0	Reintroduction in mitigation for FCRPS mainstem impacts	BPA 47%	Confirmed
200200300	Secure & Restore Resident Fish Habitat	Mountain Columbia	1.0	Habitat acquisition and restoration for resident fish in mitigation for Hungry Horse, credited to BPA.	BPA 90%	Mixed
200201100	Kootenai Floodplain Operational Loss Assessment	Mountain Columbia	1.0	Developing "operational" loss assessment for Libby Dam.	BPA 90%	Mixed
200201301	Water Entity (Rpa 151) Nwppc	Mainstem/ Systemwide	1.0	Purchasing of instream flow rights in mitigation for FCRPS (BiOp credit)	BPA 72%	Mixed
200201400	Sunnyside Wildlife Mitigation	Columbia Plateau	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 68%	Mixed
200204500	Coeur D'Alene Fish Habitat Acq	Intermountain	1.0	Fish habitat mitigation lands acquisition (fee, easements, leases); assume in mitigation for FCRPS; no other entity authorized/required to purchase	BPA 100%	
200301200	Shillapoo Wildlife Area	Lower Columbia	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 32%	Confirmed
200303800	Evaluate Restoration Potential of Snake River Fall Chinook Salmon Spawning Habitat	Mainstem/ Systemwide	1.0	Evaluation of mainstem spawning potential downstream of 4 FCRPS lower snake dams.	BPA 100%	
200304100	Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon through Snake River Dams	Mainstem/ Systemwide	1.0	RM&E of delayed mortality through of FCRPS lower snake dams.	BPA 100%	
200600300	Desert Wildlife Area O&M (Wetland Enhancement)	Columbia Plateau	1.0	Wetland enhancement on BPA-funded mitigation lands; assume costs consistent with MOA requirements.	BPA 75%	Confirmed
200600400	Wenas Wildlife Area O&M	Columbia Plateau	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 100%	
200600500	Asotin Creek Wildlife Area O&M (Schlee Acquisitions)	Blue Mountain	1.0	O&M on BPA-funded wildlife mitigation site; assume requested funds consistent with terms of MOA.	BPA 83%	Mixed
200600600	Habitat Evaluation Procedures (HEP)	Multiprovince	1.0	HEP evaluation team for determining HEP values (and BPA credits) for BPA wildlife acquisitions.	BPA 100%	

200600800	Evaluation of the Biological Effects of the Northwest Power and Conservation Council's Mainstem Amend. on the Fisheries Upstream & Downstream of Hungry Horse & Libby Dams, MT (Renumbered fr 200715200)	Mountain Columbia	1.0	M&E, modeling to identify the effects of Libby/Hungry Horse operations per mainstem amendment by Council.	BPA 88% [BPA share is probably higher as proposal not clear as to what proportion of cost share was MFWP and not just BPA.]	Confirmed
198805305	Northeast Oregon (NEOH) Outplanting Facilities Master Plan	Blue Mountain	2.1	Technical coordination re: NEOH, including review for participation in US v Oregon processes; fishery managers authorized/required to do this (as to US v. Oregon); need confirmation that cost share appropriate given this requirement	BPA 20%	Confirmed
198906201	Annual Work Plan CBFWA	Mainstem/ Systemwide	2.1	Coordination/travel costs for fish and wildlife managers (managers authorized/required)	BPA 75%	Confirmed
199102900	Research, monitoring, and evaluation of emerging issues and measures to recover the Snake River fall Chinook salmon ESU	Mainstem/Systemwide	2.1	Multiple RM&E activities involving SR chinook, including supplementation-related research; other entities authorized/required to perform some (eg fishery managers, Idaho Power for Hells Canyon-related information); however cost share appears appropriate.	BPA 27%	Mixed
199306000	Select Area Fisheries Enhancement Project	Columbia Estuary	2.1	Select/net pen terminal fisheries to mitigate for FCRPS impacts, provide harvest opportunities for commercial/recreational. Other non FCRPS hydropower producers potentially authorized/required; need confirmation that cost share is reasonable	BPA 55%	Mixed
199401807	Improve Habitat For Fall Chinook, Steelhead in the Lower Snake and Tucannon Subbasins	Columbia Plateau	2.1	Multiple habitat restoration activities (fencing, planting, water source development); multiple other entities authorized/required; assume BPA funding not being utilized for specific practices that other entity required to perform.	BPA 37%	Mixed
199607000	Mckenzie Focus Watershed	Lower Columbia	2.1	Multiple watershed restoration activities, including water quality monitoring; multiple other entities may be authorized/required. Recommend confirmation that no project will occur on lands/waters where the activity is already required.	BPA 30%	Mixed

199608600	Clearwater Focus Program, Idaho SCC	Mountain Snake	2.1	Coordinator position for Idaho State; state authorized/required; recommend confirmation that cost share sufficient. [Rated similar to wildlife manager coordination requests]	BPA 95%	Confirmed
199608701	Montana Focus Watershed Coordi	Mountain Columbia	2.1	Flathead watershed coordinator; other entities authorized/required; recommend confirmation that cost share is sufficient.	BPA 41%	Mixed
199702400	Avian Predation on Juvenile Salmonids in the Lower Columbia River	Mainstem/Systemwide	2.1	RM&E regarding avian predation; fishery managers, Corps authorized/required; cost share appears sufficient.	BPA 17%	Mixed
199706000	Focus Watershed Coordinator - Nez Perce Tribe	Multiprovince	2.1	Watershed coordinator position; other entities authorized/required; need confirmation that no cost share is okay [see other coordination funding requests, similar ratings]	BPA 100%	
199800401	Columbia Basin Bulletin	Mainstem/ Systemwide	2.1	Reporting on issues of stakeholder concern in the Basin. Assume similar to coordination requests from sponsors; this is coordination request from public/stakeholders.	BPA 96%	
199802100	Hood River Fish Habitat	Columbia Gorge	2.1	Multiple protection and restoration activities, including activities that other entities may be authorized/required to perform; recommend confirmation of screening to ensure BPA not funding activities where another entity already required to perform.	BPA 33%	Mixed
199802800	Trout Creek Watershed Restoration Project	Columbia Plateau	2.1	Multiple restoration activates on private lands; recommend confirming that activities occurring on private land where landowner not already required to perform.	BPA 34%	Mixed
199803100	Implement Wy-Kan-Ush-Mi Wa-Kis	Mainstem/Systemwide	2.1	CRITFC coordination costs; tribal entities authorized/required; recommend confirmation that cost share is adequate [rated as all other coordination requests]	BPA 59%	Under Rev.
200102100	15 Mile Creek Riparian Buffers	Columbia Gorge	2.1	Coordination, conservation plan development to assist landowners in providing riparian buffer zones (via NRCS funding)' NRCS authorized/required, but cost share appears reasonable.	BPA 8%	Mixed
200102900	Ford Hatchery Operations & Maintenance	Intermountain	2.1	O&M for kokanee production in mitigation for FCRPS; other entities authorized/required (fishery managers) but cost share is addressed	BPA 30%	Confirmed
200103300	Hangman Restoration Project	Intermountain	2.1	Restoration activities and conservation easement acquisitions for resident fish and wildlife in watershed in mitigation for FCRPS; not a "1" because focus is resident fish and no crediting mechanism for acquisitions	BPA 98%	Under Dev.

200200200	Restore Natural Recruitment of Kootenai River White Sturgeon	Mountain Columbia	2.1	Multiple activities to address low recruitment levels of K white river sturgeon; other entities authorized/required, but cost share appears reasonable if confirmed.	BPA 56%	Mixed
200201900	Wasco Riparian Buffers	Columbia Plateau	2.1	Coordination, conservation plan development to assist landowners in providing riparian buffer zones (via NRCS funding)' NRCS authorized/required, but cost share appears reasonable.	BPA 7%	Mixed
200202600	Morrow County Riparian Buffers Umatilla County Riparian Buffers	Columbia Plateau	2.1	Coordination, outreach, technical support for enrolling riparian buffers via NRCS and related programs; other entities authorized/required (eg NRCS) but cost share appears more than reasonable	BPA 21%	
200203400	Wheeler Co Riparian Buffers	Columbia Plateau	2.1	Coordination, conservation plan development to assist landowners in providing riparian buffer zones (via FSA/NRCS funding)' NRCS authorized/required, but cost share appears reasonable.	BPA 7%	Mixed
200203500	Gilliam Co Riparian Buffers	Columbia Plateau	2.1	Coordination, conservation plan development to assist landowners in providing riparian buffer zones (via FSA/NRCS funding)' NRCS authorized/required, but cost share appears reasonable.	BPA 16%	Confirmed
200205000	Continued Riparian Buffer Projects on Couse/Tenmile and other Salmonid Bearing Streams in Asotin County.	Blue Mountain	2.1	Restoration activities occurring on private land; confirm that screening or other criteria employed so that BPA funding not used for activities landowners already required to conduct, otherwise cost share appears fine.	BPA 45%	Confirmed
200206100	Restore Potlatch R Watershed	Mountain Snake	2.1	Multiple watershed restoration activities; multiple other entities possibly authorized/required to perform, but cost share appears reasonable.	BPA 7%	Mixed
200311400	Acoustic Tracking For Survival	Mainstem/ Systemwide	2.1	Large-scale acoustic array, tracking ocean-going; fishery managers and others authorized required; confirm that cost-share is sufficient.	BPA 39%	Mixed
200400200	Pnamp Funding	Mainstem/ Systemwide	2.1	Funding part of coordinator for PNAMP; other entities authorized to participate. Cost share appears reasonable if confirmed.	BPA 27%	Mixed
198201301	Coded-Wire Tag Recovery	Mainstem/ Systemwide	2.2	Coded wire tag program for regional stock identification; fishery managers/others authorized required; recommend confirm cost share sufficient	BPA 49%	Confirmed
198812035	YKFP Klickitat Management, Data, and Habitat	Columbia Gorge	2.2	RM&E and O&M for YKFP; Mitchell Act funding is cost share; recommend confirmation that cost-share appropriate	BPA 46%	Confirmed
199000501	Umatilla Basin Natural Production Monitoring and Evaluation Project	Columbia Plateau	2.2	M&E for Umatilla Basin fisheries; so fishery managers authorized/required (BPA projects as cost share excluded from percentage summary)	BPA 60%	Mixed

199101901	Hungry Horse Mitigation/Flathead Lake	Mountain Columbia	2.2	Multiple activities for habitat restoration as well as RM&E on variety of lands (private, tribal etc); assume no projects occurring where another entity is already required to perform	BPA 51%	
199202601	Grand Ronde Model Watershed Program Habitat Restoration - Planning, Coordination and Implementation	Blue Mountain	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct; need confirmation that funding not applied for entities already required to conduct the work	BPA 57%	Mixed
199206800	Willamette Basin Mitigation	Lower Columbia	2.2	Land acquisition, O&M, enhancement & RM&E regarding wildlife habitat mitigation for FCRPS; some aspects of RM&E may be authorized/required by others (eg Willamette Floodplain study); recommend confirmation that cost share sufficient	BPA 82%	Mixed
199401805	Continued Implementation of Prioritized Asotin Creek Watershed Habitat Projects	Blue Mountain	2.2	Multiple restoration activities; multiple other entities potentially authorized/required to conduct; need confirmation that funding not applied for entities already required to conduct the work	BPA 45%	Confirmed
199404200	Trout Creek Fish Habitat Restoration Project	Columbia Plateau	2.2	Multiple activities for habitat restoration as well as RM&E on variety of lands (private, tribal etc); assume no projects occurring where another entity is already required to perform	BPA 51%	Mixed
199405900	Yakima Basin Environmental Education Program	Columbia Plateau	2.2	Watershed education/outreach program; other entities authorized/required, but cost share appears reasonable.	BPA 48%	Confirmed
199607702	Protect and Restore Lolo Creek Watershed	Mountain Snake	2.2	Road decommissioning and culvert removal; appears to occur on FS lands as well as private lands; confirm that activities on FS lands covered by BPA-FS MOU; confirm that screening/other criteria ensure that BPA not funding activities other entities required to perform; confirm that cost share is reasonable.	BPA 62%	Mixed
199608300	CTUIR Grande Ronde Subbasin Restoration Project	Blue Mountain	2.2	Multiple watershed restoration activities; multiple other entities authorized/required to perform; need confirmation that screening or other criteria ensures that BPA not funding activities others are required to perform; need confirmation that cost share is sufficient.	BPA 52%	Mixed
199705100	Yakima Basin Side Channels	Columbia Plateau	2.2	Acquisition of floodplain habitat; assume in mitigation for FCRPS; assume development of MOA to address mutual roles responsibilities.	BPA 68%	Mixed
199705600	Klickitat Watershed Enhancement	Columbia Gorge	2.2	Multiple restoration activities; other entities may be authorized/required to conduct; assume screening to ensure BPA funding not going to lands/waters where other entities already required to conduct the activity.	BPA 48%	Mixed

200000100	Anadromous Fish Habitat & Pass	Columbia Cascade	2.2	Multiple restoration activities (culvert removal, livestock management infrastructure) on lands within the Colville reservation; assume none of the projects are already required to be performed.	BPA 70%	Under Dev.
200201500	Provide Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon	Columbia Plateau	2.2	Coordination and outreach to private landowners, develop conservation plans for landowners seeking to enroll in USDA programs like CREP; USDA authorized/required; need confirmation that cost share is reasonable (compare with 200102100, for example).	BPA 55%	Mixed
200201800	Tapteal Greenway Riparian Corridor Enhancement, Protection and Education Outreach--Phase II (Tapteal Bend and Horn Rapids).	Columbia Plateau	2.2	Property acquisition, restoration activities, and education/outreach; multiple entities could be authorized/required (eg WDFW, City of Richland); need confirmation of screening or other criteria to confirm that funding not applied to activities that others already required to perform; confirm that cost share is reasonable.	BPA 67%	Mixed
200202501	Yakima Tributary Access & Habitat Program	Columbia Plateau	2.2	Multiple tributary fish passage related activities; other entities may be authorized required; recommend confirming that screening criteria or other mechanism in place to ensure specific projects are not funded by BPA when another entity already required to perform	BPA 55%	Under Dev.
200203200	Snake River fall Chinook salmon life history investigations	Mainstem/Systemwide	2.2	RM&E on the consequences of ocean- and reservoir-type life histories on passage timing, travel rate, survival, and SAR calculations for Snake River fall chinook salmon; fishery managers/other hydro operators authorized/required, but cost share appears reasonable if confirmed.	BPA 71%	Confirmed
200203600	Restore Walla Walla River Flow	Columbia Plateau	2.2	Water conservation efforts (piping of irrigation, groundwater recharge); need confirmation of screening or other criteria to confirm that BPA not funding such efforts if another entity (irrigation district, other) already required to do so; cost share appears reasonable if so.	BPA 51%	Mixed
200207000	Lapwai Cr Anadromous Habitat	Mountain Snake	2.2	Inventory, planning, and multiple restoration activities (weed control, LWD, erosion control measures, CAFO measures et); other entities authorized/required to perform some: need confirmation or criteria or other screening that BPA not funding activities already required of another entity; also need confirmation that cost share is adequate.	BPA 66%	Mixed
200300100	Manastash Crk Passage & Screening	Columbia Plateau	2.2	Irrigation division screening; assuming that irrigation owners/diverters not already required to screen, cost share appears reasonable.	BPA 45%	Confirmed

200300700	Lower Columbia River and Estuary Ecosystem Monitoring	Columbia Estuary	2.2	Development of an ecosystem based monitoring program for estuarine habitats; fishery managers, others, authorized/required; need confirmation that cost share is sufficient.	BPA 61%	Confirmed
200300900	Canada-Usa Shelf Salmon Survival Study	Mainstem/ Systemwide	2.2	RM&E regarding ocean/climate effects on CR salmon; multiple other entities authorized/required to fund (eg fishery managers, others affecting CR salmon); confirm that cost-share is adequate.	BPA 47%	Mixed
200301100	Columbia R/Estuary Habitat	Columbia Estuary	2.2	Multiple restoration activities, other entities may be authorized required; need to confirm that screening or other criteria to ensures BPA funding not being used for specific activities another entity is required to perform, but otherwise cost share appears reasonable	BPA 38%	Mixed
200500100	Ecology of Yearling and Subyearling Salmonids in Shallow Tidal Freshwater Habitats in the Vicinity of the Sandy River Delta in the Lower Columbia River	Lower Columbia	2.2	Pilot study of ecology of juvenile salmon in estuary; fishery managers/others authorized/required; need confirmation that cost share is sufficient.	BPA 59%	Confirmed
198402500	ODFW Blue Mountain Oregon Fish Habitat Improvement	Blue Mountain	2.3	Multiple fish habitat restoration projects (fencing, planting), appears to be on both private and non-private lands; multiple other entities may be authorized/required; need to confirm confirmation of screening or other criteria to ensure BPA is not funding activities landowner already required to perform; need confirmation that cost-share is reasonable.	BPA 62%	Mixed
198605000	White Sturgeon Mitigation and Restoration in the Columbia and Snake Rivers Upstream from Bonneville Dam	Mainstem/ Systemwide	2.3	White sturgeon mitigation, including stock assessments, monitoring, and transplant supplementation; other entities authorized/required (fishery managers, other hydro operators); need confirmation that cost share sufficient	BPA 88%	Under Dev.
198710001	Umatilla Anad Fish Hab - CTUIR	Columbia Plateau	2.3	Multiple fish habitat restoration projects (barrier removal, LWD etc), not clear if occurring on both private and public lands; multiple other entities may be authorized/required; need to confirm confirmation of screening or other criteria to ensure BPA is not funding activities landowner/others already required to perform; need confirmation that cost-share is reasonable.	BPA 77%	Mixed
198710002	Umatilla Subbasin Fish Habitat Improvement Project	Columbia Plateau	2.3	Habitat improvement projects for fish habitat on private lands. Need confirmation that not applied where landowner under requirement to provide (per BiOp or similar order/requirements).	BPA 100%	

198805308	Hood River Powerdale Dam Fish Trap/Oak Springs/Pelton Ladder - Operation and Maintenance	Columbia Gorge	2.3	O&M for facilities in support of Hood River Production Program, which include BPA interests, as well as other non-federal dam owners (PRB, Powerdale); need cost-share from other dam owners.	BPA 98%	
198806400	Kootenai River Native Fish Restoration and Conservation Aquaculture	Mountain Columbia	2.3	White sturgeon/burbot conservation aquaculture; mitigation for Libby, but other entities (other hydro dam owners) authorized required, may need more cost share	BPA 91%	Mixed
198810804	StreamNet (CIS/NED)	Mainstem/ Systemwide	2.3	Data needs/coordination are authorized/require cost share appears low.	BPA 92%	Mixed
198811525	Ykfp - Design & Construction (Nelson Springs replacement facility)	Columbia Plateau	2.3	Funding for new administrative facility; assuming that this facility utilized for BPA funded-projects RM&E only, then rated a "1"; if utilized for other tribal or other activities, then need cost share or other remedy.	BPA 100%	
198902401	Evaluation of Juvenile Salmonid Outmigration and Survival in the Lower Umatilla River Basin.	Columbia Plateau	2.3	RM&E regarding Umatilla species; fishery managers authorized/require; query whether cost share sufficient	BPA 92%	Mixed
199004400	Coeur D'Alene Reservation Habitat Enhancement (Coeur d'Alene Subbasin)	Intermountain	2.3	Multiple M&E and habitat-related activities; multiple other entities may be authorized/required; need screening or other criteria to ensure BPA no funding activities others required to perform; need confirmation that cost share is appropriate.	BPA 82%	Mixed
199101903	Hungry Horse Mitigation Program	Mountain Columbia	2.3	Multiple activities to address HH resident fish losses-- Sekokini Springs hatchery; plantings, O&M on acquired mitigation habitat; multiple other entities potentially authorized/required; need confirmation of screening or other criteria to ensure BPA not funding activities others required to perform; need confirmation that cost share reasonable.	BPA 74%	Mixed
199107200	Redfish Lake Sockeye Salmon Captive Broodstock Program	Mountain Snake	2.3	Captive broodstock program for preserving redfish lake sockeye; fishery managers authorized/required; need confirmation that cost share is sufficient.	BPA 96%	Under Dev.
199107300	Idaho Natural Production Monit	Mountain Snake	2.3	M&E for chinook populations; fishery managers authorized/required to perform as well; need confirmation that cost share sufficient.	BPA 85%	Mixed
199201000	Habitat Imprvmnt/Enhnmnt - Fort Hall, Idaho	Upper Snake	2.3	Restoration activities (fencing, planting etc) for resident fish habitat/substitution program; appears to be mitigating primarily for non-FCRPS project (American Falls) and sponsor-generated grazing impacts; other entities authorized/required to address (other hydro, tribe, BIA etc)	BPA 74%	Confirmed

199202603	Upper Salmon Basin Watershed Project (USBWP) provides technical and administrative support with project implementation guidance to landowners to implement fish habitat projects on private lands.	Mountain Snake	2.3	Multiple habitat-related activities; multiple other entities may be authorized/required; need screening or other criteria to ensure BPA no funding activities others required to perform; need confirmation that cost share is appropriate.	BPA 76%	Under Dev.
199204000	Redfish Lake Sockeye Salmon Captive Broodstock Rearing and Research	Mountain Snake	2.3	Burley Creek hatchery O&M and RM&E regarding captive broodstock; fishery managers authorized/required; query whether cost share is sufficient	BPA 80%	Confirmed
199206200	Yakama Nation - Riparian/Wetlands Restoration	Columbia Plateau	2.3	Multiple restoration, RM&E, coordination activities; need confirmation that screening or other criteria to ensure BPA is not funding activities others already required to perform; need confirmation that cost share is adequate.	BPA 56%	Mixed
199305600	Research to advance hatchery reform, including captive broodstocks	Mainstem/Systemwide	2.3	General RM&E regarding hatchery programs; fishery managers authorized/required; need confirmation that cost share is reasonable.	BPA 88%	Confirmed
199306600	Oregon Fish Screens Project	Columbia Plateau	2.3	Fish screening on private irrigation facilities; irrigators authorized/required to provide screening; are BPA funds being used to provide screens for entities that are required/have been ordered to replace/upgrade their screens? Need confirmation that cost share sufficient.	BPA 54%	Confirmed
199401806	Tucannon Stream and Riparian Protection, Enhancement, and Restoration	Columbia Plateau	2.3	Multiple restoration activities; multiple other entities potentially authorized/required to conduct; need confirmation that funding not applied for entities already required to conduct the work; also question whether BPA can provide funding directly proponent to lease lands from landowners to extend CREP contracts	BPA 76%	Under Dev.
199404300	Lake Roosevelt Fisheries Evaluation Program (formerly Data Collection)	Intermountain	2.3	M&E of Lake Roosevelt hatchery programs; fishery managers authorized/required as well; need confirmation that cost share is adequate.	BPA 98%	Mixed
199404700	Lake Pend Oreille Fishery Recovery Project: purpose to restore fisheries impacted by the federal hydropower system within the Idaho portion of the Pend Oreille drainage.	Intermountain	2.3	M&E, habitat, predator removal in LPO; fishery managers others authorized/required; need confirmation that cost share is reasonable.	BPA 91%	Under Rev.
199405000	Salmon River Habitat Enhancement	Mountain Snake	2.3	M&E on existing enhanced salmon habitat areas and proposed areas for enhancement; other entities (FS, BLM, mining company) may be authorized/required to conduct M&E work. Consider whether FS portions covered by FS-BPA MOU.	BPA 98%	Confirmed

199405400	Migratory Patterns, Structure, Abundance and Status of Bull Trout Populations in Subbasins of the Columbia Gorge, Columbia Plateau and Blue Mountain Provinces	Mainstem/Systemwide	2.3	Bull trout RM&E; fishery managers authorized/required; need confirmation that cost share is sufficient.	BPA 91%	Mixed
199500400	Libby Mitigation Program	Mountain Columbia	2.3	Multiple fish habitat and passage restoration activities; multiple other entities may be authorized/required; need confirmation of screening or other criteria to ensure BPA not funding activities others are required to perform; need confirmation that cost-share is sufficient.	BPA 85%	Mixed
199501500	Duck Valley Fisheries Project – Operations, Maintenance, Monitoring and Evaluation	Middle Snake	2.3	O&M and RME for BPA-funded resident fish substitution program; while other entities authorized or required to mitigate for blocked area, assume this is BPA share because it is the BPA substitution project (?).	BPA 100%	
199502800	Piscivorous Avian Resource Utilization of Moses Lake and the Relationship to Other Systems	Columbia Plateau	2.3	Avian predation RME on off-site lake; focus appears to be mostly addressing resident fishery concerns; connection to FCRPS impacts unclear; WDFW authorized/required to evaluate; needs cost share review	BPA 91%	Mixed
199506335	YKFP - Klickitat Subbasin Monitoring and Evaluation	Columbia Gorge	2.3	Multiple M&E activities, including stream surveys, telemetry, population counts and analysis; multiple other entities authorized/required; need confirmation that cost share is sufficient.	BPA 93%	Confirmed
199601100	Walla Walla Juvenile and Adult Passage Improvements	Columbia Plateau	2.3	Fish passage projects (screening, ladders etc) for agricultural/irrigation diversions; not clear whether entities receiving the fixes already authorized/required to provide for passage; needs confirmation that cost share adequate	BPA 76%	Under Dev.
199603501	Yakama Reservation Watersheds Project	Columbia Plateau	2.3	Multiple watershed restoration activities; multiple other entities may be authorized/required. Recommend confirmation that no project will occur on lands where the activity is already required; needs review of cost share.	BPA 91%	Mixed
199604000	Mid-Columbia Coho Restoration Project	Columbia Cascade	2.3	Coho restoration/hatchery proposal. Other entities authorized/required to address loss of coho, including non-FCRPS hydro projects, as well as other actors (forestry, irrigation, etc); need confirmation that cost share sufficient	BPA 72%	Confirmed
199604601	Walla Walla River Basin Fish Habitat Enhancement	Columbia Plateau	2.3	Multiple restoration activities and coordination activities; other entities may be authorized/required; need confirmation of screening or other criteria to ensure BPA not funding activities others are required to perform; need confirmation that cost-share is adequate.	BPA 93%	Mixed

199606700	Manchester Spring Chinook Captive Broodstock Project	Multiprovince	2.3	Marine rearing facility O&M for captive broodstock for SR spring/summer chinook; broad support for regional recovery efforts; other entities authorized/required, query whether cost-share sufficient.	BPA 72%	Confirmed
199700100	Idaho Chinook Salmon Captive R	Mountain Snake	2.3	Eagle Lake hatchery O&M, RM&E, Redfish Lake captive broodstock program; other entities authorized/required to address this stock & to perform some of the other functions; query whether cost-share sufficient.	BPA 93%	Under Dev.
199700400	Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams	Intermountain	2.3	Population M&E, also water quality surveys, for resident fish, Pend Oreille basin; fishery managers/others also authorized/required to perform; need criteria to confirm BPA not funding activities others required to perform; need confirmation that cost share is sufficient.	BPA 91%	Mixed
199701325	Yakima/Klickitat Fisheries Project Operations and Maintenance	Columbia Plateau	2.3	O&M and RM&E on Yakima hatchery-related efforts (Cle Elum, etc); need confirmation that no cost share needed (are activities being proposed that fishery managers authorized/required to perform?)	BPA 100%	
199701335	Klickitat Fishery YKFP O & M	Columbia Gorge	2.3	O&M at Wahkiacus; this appears to be a Mitchell Act hatchery; need to address whether BPA funding is for BPA-related use at a Mitchell Act hatchery, or otherwise in lieu.	BPA 9%	Mixed
199703800	Listed Stock Chinook Salmon Gamete Preservation	Multiprovince	2.3	Cryogenic gene bank for listed SR species; other entities authorized/required to fund (eg fishery managers, other hydro project owners); query whether cost-share sufficient.	BPA 95%	Confirmed
199800200	Snake River Native Salmonid Assessment	Middle Snake	2.3	Population analysis and recovery planning; fishery managers authorized/required; need confirmation that cost-share is sufficient.	BPA 73% (Cost share numbers identified but not contributors)	Under Dev.
199801003	Spawning distribution of Snake River fall Chinook salmon	Blue Mountain	2.3	Monitor the status and distribution of fall Chinook in the Snake River using redd counts; fishery managers authorized/required to do; also other hydro operators (cost share here coming from IPCo); need confirmation that cost share sufficient	BPA 50%	Confirmed
199801400	Ocean Survival Of Salmonids	Mainstem/Systemwide	2.3	RM&E regarding ocean conditions, plume effect; fishery managers, others authorized/required to study; need confirmation that cost share is sufficient	BPA 85%	Confirmed

199801600	Salmonid Productivity, Escapement, Trend, and Habitat Monitoring in the John Day River Subbasin	Columbia Plateau	2.3	RM&E for salmonids in John Day subbasin to support restoration efforts; fishery managers authorized/required; other actors may also be authorized/required; query whether cost-share is sufficient.	BPA 97%	Confirmed
199801700	North Fork/Mid-John Day Fish Passage Improvement	Columbia Plateau	2.3	Fish screening or other passage alternatives for private irrigation facilities/push up dams in creeks; irrigators authorized/required to perform; are BPA funds being used to provide screens or other facilities that are required/have been ordered to replace/upgrade their screens?.	BPA 67%	Under Dev.
199801800	John Day Watershed Restoration	Columbia Plateau	2.3	Multiple watershed restoration activities; multiple other entities authorized/required to perform; need confirmation that screening or other criteria ensures that BPA not funding activities others are required to perform; need confirmation that cost share is adequate	BPA 80%	Mixed
199801900	Wind River Watershed Restoration	Columbia Gorge	2.3	Multiple restoration activities on FS and private lands; assume activities on FS lands covered by BPA-FS MOU (need to confirm); need to confirm that activities occurring on private land landowner not already required to perform.	BPA 81%	
199901000	Pine Hollow/Jackknife Habitat	Columbia Plateau	2.3	Multiple protection and restoration activities, including activities that other entities may be authorized/required to perform (e.g., range management on BLM lands); recommend confirmation of screening to ensure BPA not funding activities where another entity already required to perform.	BPA 75%	Confirmed
199901500	Big Canyon Fish Habitat	Mountain Snake	2.3	Multiple habitat restoration activities, including things like water temperature surveys; multiple other entities authorized/required; need confirmation BPA funding not being utilized for specific practices that other entity required to perform; need confirmation that cost share is sufficient.	BPA 73%	Confirmed
199901600	Protect & Restore the Big Canyon Creek Watershed	Mountain Snake	2.3	Watershed restoration, mix of tribal and private lands; multiple activities proposed; need confirmation BPA funding not being utilized for specific practices that other entity required to perform; need confirmation that cost share is sufficient.	BPA 84%	Confirmed
199901700	Protect and Restore Lapwai Creek Watershed	Mountain Snake	2.3	Watershed restoration, mix of tribal and private lands; multiple activities proposed; need confirmation BPA funding not being utilized for specific practices that other entity required to perform; need confirmation that cost share is sufficient.	BPA 83%	Confirmed

199901900	Restore Salmon River (Challis, Idaho)	Mountain Snake	2.3	Appears to be BPA funding for Army Corps flood control project, and BPA funding is for work the Corps is authorized/required to perform; query whether cost share sufficient.	BPA 30%	Confirmed
199902000	Analyze Chinook Salmon Spatial and Temporal Dynamics and Persistence	Mainstem/Systemwide	2.3	RM&E on chinook needs; fishery managers/others authorized required; is this covered under BPA-FS MOU (then rate as "1"); otherwise, need confirmation that cost-share is sufficient.	BPA 46%	Confirmed
199902500	Sandy River Delta Habitat Restoration	Lower Columbia	2.3	Multiple restoration activities (plantings, invasive weed control) which may occur on federal land (covered by FS-BPA MOU?); also the dike removal (highest expense item) appears to be a City of Portland requirement for compliance with their own HCP, need clarification of how BPA funding is supplementing not in lieu	BPA 54%	Mixed
200000400	Monitor, Protect, and Rehabilitation of Bull Trout and Westslope Cutthroat Trout Habitat in the Upper Kootenay River Subbasin	Mountain Columbia	2.3	Baseline monitoring of resident fish populations and some instream habitat restoration by BC government in Canadian portion of Libby Dam/Lake Koocanusa and upper Kootenay tributaries to address impacts of Libby Dam. BC government authorized/required; need confirmation that cost share is adequate; the habitat restoration/LWD component needs further legal review (on-the-ground work in Canada).	BPA 95%	Confirmed
200001200	Evaluate Factors Limiting Columbia River Chum Salmon	Lower Columbia	2.3	RME/basic chum population analysis; fishery managers, other hydro operators also authorized or required to evaluate; query whether cost share is sufficient.	BPA 96%	Under Dev.
200001400	Evaluate Population Dynamics And Habitat Use Of Lampreys In Cedar Creek (Lewis River Subbasin), Washington.	Lower Columbia	2.3	RME/basic lamprey population analysis; fishery managers, other hydro operators also authorized or required to evaluate; query whether cost share is sufficient.	BPA 93%	Under Dev.
200001700	Recondition Wild Steelhead Kelt	Mainstem/ Systemwide	2.3	Kelt reconditioning research; other entities authorized/required to address (fishery managers, other hydro operators); recommend confirmation that cost-share sufficient	BPA 72%	Mixed
200002800	Eval Pacific Lamprey In Clearw	Mountain Snake	2.3	RME/basic lamprey population analysis; fishery managers, other hydro operators also authorized or required to evaluate; query whether cost share is sufficient.	BPA 89%	Mixed
200003100	North Fork John Day Basin Anadromous Fish Habitat Enhancement Project	Columbia Plateau	2.3	Multiple restoration activities; other entities may be authorized/required; need confirmation of screening or other criteria to ensure BPA not funding activities others are required to perform (some covered by BPA-FS MOU?); need confirmation that cost is adequate	BPA 90%	Mixed

200003800	NEOH Walla Walla Hatchery - Three Step Master Planning Process	Columbia Plateau	2.3	Planning costs for proposed Walla Walla hatchery; not clear whether planning costs are all BPA responsibility or also sponsor authorized/required; also not clear if this hatchery in mitigation for FCRPS or for other impacts (irrigation etc) as well; needs costs share or other remedy?	BPA 100%	
200003900	Walla Walla Subbasin Collaborative Salmonid Monitoring & Evaluation Project	Columbia Plateau	2.3	M&E throughout the basin; fishery managers authorized/required; query whether cost share is sufficient	BPA 74%	Confirmed
200102600	Status, Genetics, and Life History of Coastal Cutthroat Trout above Bonneville Dam	Columbia Gorge	2.3	Coastal cutthroat trout sampling above BON to aid in population status evaluation; fishery managers/others required/authorized; need confirmation that cost share adequate.	BPA 90%	Confirmed
200102700	Western Pond Turtle Recovery - Columbia River Gorge - Washington	Columbia Gorge	2.3	Western pond turtle recovery efforts; other entities authorized/required (eg FWS, other actors); query whether cost-share sufficient	BPA 74%	Mixed
200102800	Banks Lake Fishery Evaluation Project	Columbia Plateau	2.3	Multiple M&E and other activities related to kokanee (including water quality sampling and creel surveys); fishery managers others are authorized/required. Need confirmation that cost share is adequate.	BPA 77%	Confirmed
200200800	Reconnect Kootenai River with the historic floodplain	Mountain Columbia	2.3	Multiple restoration activities (channel restoration, floodplain connectivity, dike removal); appears to be predominantly on private land in US; need confirmation that BPA funding not going for activities others already required to address (eg dike owners?); need confirmation that no cost share is okay.	BPA 100%	
200201600	Evaluate the Status of Pacific Lamprey in the Lower Deschutes River Subbasin, Oregon	Columbia Plateau	2.3	Population status of lamprey in Deschutes, including harvest rates; fishery managers, other hydro on Deschutes authorized/required; need confirmation that cost share is reasonable (and/or that cost share from eg PGE is supporting at river-level basis)	BPA 91%	Confirmed
200202700	Forecasting Hydrosystem Operations to Benefit Anadromous Fish Migration	Mainstem/Systemwide	2.3	Computer modeling of hydrosystem, including temperature and other variables; is this an FCRPS activity to be funded outside of direct program? If it's linked mostly to FCRPS may be okay for direct program funding, but if generic to the system, then other hydro operations, as well as fishery managers, water quality managers also authorized/required; need confirmation that no cost share is appropriate.	BPA 100%	
200205300	Assess Salmonids Asotin Cr Ws	Blue Mountain	2.3	Population status analysis; fishery managers authorized/required; query whether cost-share is sufficient here.	BPA 97%	Confirmed

200205400	Protect & Restore the Asotin Creek Watershed	Blue Mountain	2.3	Multiple restoration activities, other entities may be authorized required; need to confirm whether BPA-FS MOU covers some/all and/or confirm that screening or other criteria to ensures BPA funding not being used for specific activities another entity already required to perform; query if cost share sufficient	BPA 82%	Mixed
200205900	Yankee Fork Salmon River Dredge Tailings Restoration Project	Mountain Snake	2.3	Restoration activities (addressing impacts of old dredge mining in particular); unclear if on Forest Service lands (in which case, project covered by BPA-FS MOU?) or on private lands (JR Simplot) in which case would need confirmation that Simplot not already required to address, and that cost share is reasonable.	BPA 82%	Mixed
200206000	Nez Perce Harvest Monitoring	Multiprovince	2.3	Tribal harvest monitoring; fishery managers authorized/required; query whether cost-share sufficient (and it comes from LSRCP--BPA funded portion of LSRCP? Then this might be a "3")	BPA 80%	Confirmed
200207200	Protect & Restore Red River Watershed	Mountain Snake	2.3	Culvert replacement/removal, road improvement/decommissioning; weed control, other restoration activities in Red River Watershed; also land acquisition; appears to be on both private and Forest Service lands; other entities authorized/required; need to confirm that BPA-FS MOU covers FS activities, and then need confirmation that no private land activities already required of that landowner.	BPA 78% (70%)	Mixed
200207400	Protect and Restore Crooked Fork to Colt Killed Analysis Area	Mountain Snake	2.3	Road decommissioning and culverts; appears to be mostly on Clearwater NF; confirm that BPA-FS MOU covers this, and the can be a "1"; otherwise, it would be 2.2 if can confirm that screening or other criteria in place to ensure that specific activities not already required of another entity	BPA 87%	Under Rev.
200300600	Effectiveness Monitoring of Estuary Restoration in the Grays River and Chinook River Watersheds	Columbia Estuary	2.3	M&E for effectiveness of a variety of estuary projects (not just BPA-funded estuary projects); other estuary project producers authorized/required to evaluate effectiveness; query whether cost-share here is sufficient.	BPA 89%	Under Rev.
200301300	Grays River Watershed Restoration	Columbia Estuary	2.3	Multiple restoration activities (engineered logjams) in estuary focused on chum; need to confirm that screening or other criteria to ensures BPA funding not being used for specific activities another entity is required to perform; need to check that cost share reasonable	BPA 90%	Mixed

200301700	Integrated Status and Effectiveness Monitoring Program (ISEMP): The design and evaluation of monitoring tools for salmon populations and habitat in the Interior Columbia River Basin.	Mainstem/ Systemwide	2.3	M&E for status/trend of salmonid/steelhead; multiple other entities authorized/required (e.g., fishery managers, others); need confirmation that cost-share is reasonable.	BPA 68%	Mixed
200302200	Okanogan Basin Monitoring and Evaluation Project (OBMEP)	Columbia Cascade	2.3	M&E for long-term status/trend for anadromous fish in Okanogan; fishery managers authorized/required as well; need confirmation that cost share sufficient.	BPA 74%	Mixed
200302300	Chief Joseph Hatchery Program	Columbia Cascade	2.3	Hatchery in mitigation for FCRPS, but also mitigating other sources; need confirmation that cost share adequate & not supplanting authorization/requirements of, e.g., Corps for appropriations for hatchery mitigation for Chief Joseph, or Reclamation for Grand Coulee.	BPA 97%	Mixed
200303600	CBFWA Collaborative Systemwide Monitoring and Evaluation Program	Mainstem/ Systemwide	2.3	Systemwide M&E; confirm that cost share is appropriate.	BPA 78%	Mixed
200303900	Monitor Repro In Wenat/Tuc/Kal	Columbia Cascade	2.3	M&E of the relative reproductive success and survival of naturally spawning hatchery and natural origin spring Chinook salmon in the Wenatchee River watershed above Tumwater Dam; fishery/hatchery managers, others authorized/required; need confirmation that cost share sufficient.	BPA 78%	Under Dev.
200306200	Evaluate the Relative Reproductive Success of Reconditioned Kelt Steelhead	Mainstem/Systemwide	2.3	Comparative M&E regarding the reproductive success of reconditioned kelt steelhead; fishery/hatchery managers authorized/required; need confirmation that cost share is sufficient.	BPA 86%	Confirmed
200306500	Klickitat River Cooperative Evaluation Program (Formerly Bull Trout Presence, Origin, and Movements In Bonneville Reservoir)	Columbia Gorge	2.3	Population baseline M&E for salmon/bull trout in the Klickitat River; fishery managers authorize/required; need confirmation that cost share is sufficient.	BPA 86% (Not counting the cost share attributed to BPA.)	Confirmed
200307200	Habitat and Biodiversity Information System For Columbia River Basin	Mainstem/ Systemwide	2.3	Habitat and "biodiversity" database for planning and monitoring; multiple other entities authorized or required to maintain this information; query whether cost share is too low or is this the kind of "glue" that no one else supports and that BPA can?	BPA 95%	Confirmed

198201302	Annual Stock Assessment - Coded Wire Tag Program (ODFW)	Mainstem/ Systemwide	3.0	Apply coded-wire tags to production releases of coho and chinook salmon at ODFW Columbia Basin hatcheries for stock assessment of hatchery and wild salmon populations. Evaluate survival, contribution and stray rates of hatchery reared salmon; fishery managers authorized/required; needs cost share or other remedy.	BPA 100%	
198201303	Coded Wire Tag - USFWS	Mainstem/ Systemwide	3.0	The Coded-Wire Tag (CWT) Recovery Project is an on-going data collection and data management program by ODFW, WDFW, and PSMFC that contributes to the annual assessment of hatchery and wild salmon populations throughout the Columbia Basin. Fishery managers authorized/required; needs cost share or other remedy.	BPA 100%	
198201304	Coded Wire Tag - WDFW	Mainstem/ Systemwide	3.0	Apply coded-wire tags to production of coho and chinook salmon at WDFW Columbia Basin hatcheries for stock assessment of hatchery and wild populations. Evaluate survival, contribution and stray rates of hatchery reared fish and compare to wild fish. Fishery managers authorized/required.	BPA 100%	
198343600	Umatilla Passage O&M	Columbia Plateau	3.0	O&M of BPA-funded fish facilities at irrigation dams on the Umatilla; irrigators authorized/required to operate and maintain; needs cost share or other remedy.	BPA 100%	
198402100	Mainstem, Middle Fork, John Day Rivers Fish Habitat Enhancement Project	Columbia Plateau	3.0	Multiple fish habitat restoration projects (fencing, water development for livestock), appears to be on both private and public lands; multiple other entities may be authorized/required; need confirmation of screening or other criteria to ensure BPA is not funding activities landowner already required to perform; need confirmation that no cost-share is reasonable.	BPA 100%	
198506200	Juvenile Fish Screen Evaluations in Columbia Plateau Province	Columbia Plateau	3.0	Evaluation of effectiveness/compliance with NMFS standards of fish screens owned by multiple entities; multiple other entities authorized/required to monitor their fish screens; needs cost share or some other remedy.	BPA 100%	
198805304	Hood River Production Program - ODFW M&E	Columbia Gorge	3.0	Monitor and evaluate actions taken to re-establish spring chinook salmon, and improve wild production of summer and winter steelhead, in the Hood River subbasin. Data will be used to develop, and refine, management objectives for the HRPP; fishery managers authorized/required; needs cost share or other remedy.	BPA 100%	

198805315	Hood River Adult Salmonid Trapping Facilities/Parkdale Fish Facility Expansion	Columbia Gorge	3.0	Funding to investigate alternative trapping facilities in support in support of Hood River Production Program, which include BPA interests, as well as other non-federal dam owners (PRB, Powerdale); need cost-share from other dam owners or other remedy.	BPA 100%	
198806500	Kootenai R White Sturgeon Inve	Mountain Columbia	3.0	Multiple monitoring and coordination efforts to address multiple species; multiple other entities may be authorized/required; need to confirm that BPA funding not funding activities other entities required to perform, and/or confirm that all activities funded by BPA addressing specific monitoring/coordination in relation to Libby operations/effects; otherwise needs cost share or other remedy.	BPA 100%	
198812025	Ykfp Management, Data, Habitat	Columbia Plateau	3.0	Multiple restoration, RM&E, coordination activities; need confirmation that screening or other criteria to ensure BPA is not funding activities others already required to perform; otherwise, need cost share or other remedy.	BPA 100%	
198909600	Genetic Monitoring of Snake River Chinook Salmon and Steelhead	Mainstem/ Systemwide	3.0	Genetic monitoring, wild/hatchery interactions; fishery managers authorize/required; needs cost share or other remedy.	BPA 100%	
198909800	Idaho Supplementation Studies	Mountain Snake	3.0	Supplementation evaluation in Idaho; fishery managers/others authorized/required; needs cost share or other remedy.	BPA 100%	
198910700	Statistical Support For Salmonid Survival Studies	Mainstem/ Systemwide	3.0	Statistical support provided to fishery investigators through ought the basin, on request; fishery managers, others, authorized/required. [FPC?] Needs cost share or other remedy.	BPA 100%	
199000500	Umatilla Hatchery - M&E	Columbia Plateau	3.0	M&E for Umatilla Hatchery; M&E addresses issues broader than Umatilla hatchery, so fishery managers authorized/required; needs cost share or other remedy?	BPA 100%	
199005500	Idaho Steelhead Monitoring and Evaluation Studies	Mountain Snake	3.0	Steelhead M&E, fishery managers authorized /required; needs cost share or other remedy	BPA 100%	
199008000	Columbia Basin Pit-Tag Information System.	Mainstem/Systemwide	3.0	PTAGIS; O&M and other support for central PIT tag infrastructure; other entities authorized/required (NMFS, entities utilizing PIT tag programs); need cost share or other remedy.	BPA 100%	
199105100	M&E Statistical Support For Life-Cycle Studies	Mainstem/ Systemwide	3.0	Statistical support for M&E for recovery efforts; multiple other entities authorized/required (eg fishery managers, other hydro operators) [FPC?]	BPA 100%	

199107100	Snake River Sockeye Salmon Habitat and Limnological Monitoring	Mountain Snake	3.0	RM&E supporting SR sockeye; fishery managers authorized required as well; needs cost share or other remedy.	BPA 100%	
199200900	Yakima Phase II/Huntsville Screen Operation & Maintenance	Columbia Plateau	3.0	O&M on BPA-funded fish screens in Yakima basin; need confirmation that BPA has committed to O&M for these (eg BiOp purposes?), otherwise irrigators authorized/required to O&M screens and cost share or other remedy required.	BPA 100%	
199202604	Investigate Life History Of Spring Chinook Salmon and Summer Steelhead in the Grande Ronde River Subbasin	Blue Mountain	3.0	M&E for chinook populations; fishery managers authorized/required to perform as well; need cost share or other remedy..	BPA 100%	
199401500	Idaho Fish Screening and Passage Improvements	Mountain Snake	3.0	Fish screening, irrigation consolidation, other activities; multiple other entities may be authorized/required; need cost share or other remedy.	BPA 100%	
199402600	Pacific Lamprey Research and Restoration Project	Columbia Plateau	3.0	RM&E regarding lamprey in the Umatilla; other entities (fishery managers, irrigation entities etc) authorized/required to address impacts to lamprey in tributary; may be okay with additional cost-share from other entities, or clearer link to how this mitigates for impacts to lamprey from FCRPS.	BPA 100%	
199500100	Kalispel Tribe Resident Fish P	Intermountain	3.0	Resident fish program; portion appears to include specific mitigation for Box Canyon dam, a non FCRPS dam; need cost share (Pend Oreille PUD?) or other remedy.	BPA 100%	
199503300	O&M Yakima Basin Fish Screens	Columbia Plateau	3.0	O&M on Phase II Yakima screens; need confirmation that BPA has committed to O&M, otherwise this needs cost share or other remedy.	BPA 100%	
199505700	S Idaho Wildlife Mitigation	Upper Snake	3.0	O&M and M&E for wildlife mitigation lands; some activities may be responsibility of landowner per MOAs (eg noxious weeds); also need to ensure BPA is not funding activities on BLM-owned lands that BLM already authorized/required to perform; needs cost share or other remedy?	BPA 100%	
199506325	Yakima Klickitat Fisheries Project - Monitoring And Evaluation	Columbia Plateau	3.0	M&E for YKFP, including supplementation research & reintroduction research; fishery managers authorized/required; needs cost share or other remedy.	BPA 100%	
199506425	YKFP Policy/Plan/Technical	Columbia Plateau	3.0	Funding for WDFW to participate in YKFP (policy, technical etc). Since coordination here benefits WDFW in its own management responsibilities, i.e., it is authorized/required to provide support here as well; this needs some cost share or other remedy. [Compare with other coordination proposals?]	BPA 100%	

199600500	ISAB	Mainstem/Systemwide	3.0	Independent science review for Council, NMFS, and CRITFC. Because services provided to NMFS and CRITFC, who are authorized to support, this needs cost share or other remedy.	BPA 100%	
199602100	Gas Bubble Disease Reseach & Monitoring of Juvenile Salmonids	Mainstem/ Systemwide	3.0	Gas bubble monitoring; not clear if only at FCRPS. If not, then other entities authorized/required (e.g., Mid Columbia PUDs) for at least a portion.	BPA 100%	
199604200	Restore and Enhance Anadromous Fish Populations and Habitat in Salmon Creek	Columbia Cascade	3.0	Water leasing and reconnection of stream to address impacts of irrigation dam; Bureau of Reclamation, irrigation district authorized required as well; needs cost share or other remedy.	BPA 100%	
199604300	Johnson Creek Artificial Propation Enhancement Project	Mountain Snake	3.0	Small supplementation & extensive M&E program addressing particular stock; unclear how direct the link is to FCRPS only; other entities authorized/required to address supplementation issues (eg fishery managers); needs cost share or other remedy	BPA 100%	
199609401	Scotch Creek Wildlife Area	Columbia Cascade	3.0	Multiple land & recreation management (parking etc) activities on state-owned & managed habitat; not clear if this is BPA-funded acquired lands for wildlife mitigation or combination. Need to separate BPA-funded from state-acquired, and also clarify which activities are appropriate for BPA fish/wildlife mitigation funding and which are responsibility of the state as landowner (note proponent also asserts that "The BPA accepted full operations and management of the project in 1997").	BPA 100%	
199701100	Shoshone-Paiute Habitat Enhanc	Middle Snake	3.0	Multiple restoration activities; other entities may be authorized/required to conduct; also, basic premise is to address impacts in blocked areas; blockage is not solely due to FCRPS, so other hydro projects authorized/required to address; needs cost share or other remedy.	BPA 100%	
199701900	Evaluate the Life History of Native Salmonids in the Malheur Subbasin	Middle Snake	3.0	Population analysis; fishery managers/land managers authorized/required; need cost share or other remedy.	BPA 100%	
199703000	Chinook Salmon Adult Abundance Monitoring [Formerly - Listed Stock Adult Escapement]	Mountain Snake	3.0	Wild adult salmon stock abundance; other entities (fishery managers) authorized required to conduct this work. Needs cost share or some other remedy.	BPA 100%	
200003300	Walla Walla River Fish Passage Operations	Columbia Plateau	3.0	Coordination and other O&M efforts for Walla Walla irrigation diversions; other entities (irrigators) and fishery managers authorized/required; need to address whether cost-share or other remedy needed	BPA 100%	

200103200	Coeur D'Alene Fisheries Enhancement, Hangman Creek	Intermountain	3.0	Restoration work (channel realignment, plantings etc) for fish habitat on tribal lands; assume tribe/BIA is authorized, but not required) to address; does this need cost share? [Argument for yes: tribe/BIA is authorized, if not required, to address health of reservation land, so like any other governmental landowners, eg FS, state, expect some cost share; argument for no: tribe/bia may be authorized, but assuming no specific requirement to conduct this channel realignment work, and giving deference to tribal trust/other tribal policies, no cost share necessary]	BPA 100%	
200203000	Develop Progeny Marker for Salmonids to Evaluate Supplementation	Columbia Plateau	3.0	RM&E to address supplementation issues; fishery managers authorized/required; some cost share or other remedy needed	BPA 100%	
200203100	Growth modulation in salmon supplementation	Columbia Plateau	3.0	RM&E to address early (too) male maturation in supplementation programs (help improve SAR); fishery managers, other hydro operators authorized/required; need cost share or other remedy.	BPA 100%	
200203700	Freshwater Mussel Research and Restoration Project	Columbia Plateau	3.0	RM&E for freshwater mussel issues in Umatilla; fishery managers/others authorized/required to address; some cost share or other remedy needed	BPA 100%	
200301000	Historic Habitat Opportunities and Food-Web Linkages of Juvenile Salmon in the Columbia River Estuary and Their Implications for Managing River Flows and Restoring Estuarine Habitat	Columbia Estuary	3.0	Multiple research activities to address historic/ongoing changes in estuarine habitat; NMFS, and others authorized or required to conduct this work. Need cost share or other remedy.	BPA 100%	
200302900	Assess the feasibility of the Upper Malheur Watershed to support the reintroduction of anadromous Fish populations above the Beulah and Warm Springs Reservoirs.	Middle Snake	3.0	Assessment of feasibility of reintroduction above non-FCRPS dams; fishery managers, BIA, other hydro operators authorized/required to perform; need cost share or other remedy.	BPA 100%	
200305000	Eval Of Reprod Of Steelhead	Mainstem/ Systemwide	3.0	RM&E of reproductive success of wild vs naturally spawning hatchery steelhead; fishery managers also authorized/required; needs cost share or other remedy.	BPA 100%	
200305400	Repro Of Steelhead In Hood Riv	Mainstem/ Systemwide	3.0	RM&E regarding supplementation efficacy using Hood River populations; other entities authorized/required (fishery managers); need cost share or other remedy	BPA 100%	

200306000	Evaluating relative reproductive success of wild and hatchery origin Snake River fall Chinook spawners upstream of Lower Granite Dam	Mainstem/ Systemwide	3.0	RM&E regarding relative reproductive success of hatchery vs wild; other entities authorized/required (fishery managers); needs cost share or other remedy	BPA 100%	
200500200	Operation of the Lower Granite Dam Adult Trap	Mainstem/ Systemwide	3.0	O&M, M&E for LGR trap; information will be used for US v Oregon and related harvest programs; fishery managers authorized/required; query whether this needs cost share or other remedy	BPA 100%	
200600100	Mcintyre Dam Feasibility Study	Columbia Cascade	3.0	Providing fish passage at Canadian dam; need to confirm that BC law does not require hydro dams to provide fish passage, and if it does not, whether cost share is appropriate; appears unreasonable.	BPA 91%	Under Dev.