

Wildlife Crediting Forum Report on Forum Deliberations January 2010 – March 2011

Prepared for

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EXECUTIVE SUMMARY

The Northwest Power and Conservation Council (NPCC) chartered a Wildlife Crediting Forum (Forum) in late 2009 to examine longstanding issues with the crediting of wildlife mitigation actions implemented through the NPCC's Columbia River Basin Fish and Wildlife Program. The Program accounts for credits (informally called the "Ledger") for wildlife habitat improvements mitigating for the impacts of construction and operation of the Columbia River Hydropower System. The Bonneville Power Administration (BPA) makes acquisitions or direct payments funded from FCRPS customer rate payer revenues to fish and wildlife co-managers to support mitigation based on a series of methodologies, practices, and NPCC policies.

Over the nearly 30 years of the Program, evolving policy direction, changes and refinements in methodologies, and individual mitigation agreements have created significant variations and misunderstandings. The initial charge of the Forum was to examine the wildlife part of the Program, and make recommendations to resolve issues with the application of the Habitat Evaluation Procedure (HEP) methodology used to value habitat through Habitat Units (HU). The Forum consists of the wildlife co-managers and key interests in the Wildlife Program: the 14 Columbia River Basin Tribes, the U.S. Fish and Wildlife Service, the states of Washington, Oregon, and Idaho, and BPA and BPA Customers. The Forum met eight times over the course of 2010, and established ad-hoc sub-committees to examine particular issues. ***The attached report and appendices detail the course and outcomes of the Forum's deliberations.*** The most notable achievements of the Forum are:

- The Forum worked together in a consistently collaborative and consensus driven manner, notwithstanding the differing experiences and visions for the Program held by individual members.
- The system of valuing and accounting for wildlife mitigation is better and more uniformly understood by managers and key interests than perhaps at any time in the past. While not every issue or dispute has been resolved, and significant anomalies remain, the commonalities developed by the Forum provide a solid basis for bring the Program to a successful conclusion.
- Members of the Forum came to a general consensus that the Ledger could and should be improved and better understood, but that the best way to successfully conclude the Program was to undertake agreement negotiations.

Other key achievements of the Forum include:

- Agreeing on logical sub-regions within the Basin for the purposes of understanding and refining the Ledger more effectively, and for defining the geographic scope of future agreement negotiations.
- Making significant advances in correcting Ledger inconsistencies, and where corrections were not possible providing for a clear understanding of the origins of those inconsistencies.
- With the guidance of ad-hoc Forum subcommittees, the Forum came to general consensus on issues addressing wildlife credits in Federal lands, wildlife credits for primarily fish mitigation projects, and the reasons for variation in HEP application across Columbia River Basin.

- Agreed that, with only one exception, the 2009 NPCC accounting of Loss Assessments was acceptable (the nuance being Idaho, where separate efforts ongoing in the course of Forum deliberations appear to be resolving issues in that region).
- Analyzing the pattern and particulars of the assignment of HUs credits to hydroelectric facilities and making suggestions for more consistent and equitable assignments in the future.
- Developing extensive tables and mapping clarifying a wide range of elements and considerations with respect to the Wildlife Program.
- Mitigation undertaken “Pre-Act” (e.g.: before the Federal Northwest Power Act of 1980) was undertaken in such a different manner and by a different set of agencies that an equitable and accurate incorporation into the post-Act Ledger is probably not possible

PURPOSE

The purpose of this summary report is to capture the work conducted by the Wildlife Crediting Forum (**Forum**). The Forum was chartered in late 2009 by the Northwest Power and Conservation Council (**NPCC**) to provide input on the Council’s Wildlife Crediting Program (**WCP**). This summary report provides an overview of the Forum’s discussions and direction through December 2, 2010. This summary report and appendices also reflect the additional work conducted in January and February 2011 with Bonneville Power Administration (BPA) and Columbia Basin Fish and Wildlife Authority (CBFWA) staff to further analyze WCP records by sub-basin. The Forum is scheduled to meet on March 17, 2011 to review this sub-basin work.

This summary report only reflects the input of individual Forum members, and does not necessarily represent the policy position(s) of the tribes, agencies, and stakeholders they represent. Forum members have been clear that they serve only in an advisory role to NPCC.

BACKGROUND

NPCC chartered the Forum to provide advice on the quantifying and accounting system (informally known as the **Ledger**) for the wildlife habitat mitigation credits associated with the construction and inundation impacts of the Federal Columbia River Power System (**FCRPS**) within the Columbia River Basin (**Basin**). The database that currently houses the Ledger is called **Pisces**. The WCP was initiated in 1981, and has been modified from time to time (most recently in 2009) by NPCC in updating the overarching Columbia River Basin Fish and Wildlife Program (**Program**).

The Forum consists of wildlife co-managers representing the 14 tribes and 3 state fish and game departments (Oregon, Washington, Idaho) impacted by FCRPS; and representatives of the U.S. Fish and Wildlife Service (USFWS), BPA, and BPA Customers. The State of Montana is not a Forum participant, as wildlife mitigation issues relating to FCRPS have been settled by prior agreement between BPA and that state. CBFWA and NPCC staff acted as advisors to the Forum. A private consulting firm (Parametrix) was engaged to facilitate Forum processes and to provide for augmented technical analysis of the Ledger.

The original Forum charter called for the development of recommendations with respect to:

- Developing a commonly accepted “Ledger” of Habitat Units acquired by BPA.
- Developing a common database for tracking, assigning and recording HU’s.
- Resolving other issues about accounting for HU’s.
- Other issues related to wildlife crediting, including the use of Habitat Evaluation Procedures (HEP) or alternative evaluation procedures.

The Forum met eight times in 2010 to address the WCP. The Forum also convened three sub-committees to discuss specific issues (credits for fish projects, Federal lands, and general Ledger issues). Each of these sub-committees met one or two times, and produced reports which were provided to the full Forum. The Forum conducted WCP orientation and reviews over the course of its first three meetings. Starting in May 2010, the Forum focused on the difficulty of coming to collective agreement on the resolution of even the first issue specified in its NPCC charter (see above). Several factors contributed to this challenge:

- Over the course of nearly 30 years, the NPCC has modified the WCP from time to time. In addition, some changes have not been uniformly interpreted by the co-managers.
- Crediting issues were found to differ depending on geographic area, specific hydropower projects, and the tribes or agencies involved.
- The database system housing the Ledger has also changed and evolved, and some ad-hoc “workarounds” have been made to fit data into database formats.
- The methodologies involved in the WCP have changed and evolved, and interpretation and application has varied in the field, across different sub-regions, and as entered in the Ledger.

In many cases, crediting has been resolved through individual project agreements. The terms of some such agreements are at variance with “standard policies” as articulated by the NPCC through its Program. *NOTE: the use of individual agreements is permitted by the Program.*

Reflecting on these factors, the Forum concluded that the many technical and recordkeeping issues with the Ledger, overlaid with unresolved policy issues, would make full resolution in accordance with the original NPCC charter difficult. The Forum discussed therefore the possibility of “settlement agreements” as a more effective means of resolution. At the same time, the Forum indicated that the technical analysis of the Ledger should continue to help resolve or make clear as many outstanding issues as possible. NPCC concurred with this overall “revised” approach and goals at its July, 2010 meeting.

NOTE: The possibility of shifting to a “settlement agreement” option is briefly referenced as an acceptable alternative in the original Forum charter: “.... or strategies that will allow parties to achieve long-term settlement agreements.” In October 2010, a settlement for the Willamette River Sub-basin of the FCRPS was signed between BPA and the State of Oregon.

On December 2, 2010, the Forum met and discussed ongoing issues and concerns. NPCC staff and the consultants recommended that additional Basin-wide technical analysis was becoming more costly than merited by the resulting understanding or improvements to the Ledger. The suggestion was made that the most valuable additional analysis would be that conducted at the sub-basin level. A considerable effort with respect to this detailed technical

analysis was undertaken **up through March 1, 2011**. The outcomes of these sub-basin by sub-basin reviews are attached as Appendix D.

Also at the Forum's December 2 meeting, a matrix prepared by NPCC and Parametrix staff was presented that estimated the level of agreement (high, medium, low) by sub-basin for each of the remaining issue topics. A version of this matrix, revised as per sub-basin reviews, is included in each of the attached sub-basin appendices.

NOTE: Inclusion of the following issue topics in this summary report does not mean that the Forum has reached full consensus on any given item. Each may require additional discussion on the part of the full Forum and/or at the sub-group level. Accordingly, specific recommendations are not included. Some divergent viewpoints remain (an example being over the 2:1 crediting ratio). It is also important to keep in mind that within the context of developing settlement agreement(s) that a full resolution of many of the remaining Ledger issues identified herein may be moot, as settlement(s) may simply supplant the issue irrespective of the degree to which it is technically resolved (or not).

CREDITS ON FEDERAL LANDS

NOTE: This issue was referred to an ad-hoc sub-committee of the Forum. The summary below reflects the deliberations of that sub-committee.

Some parcels identified, acquired and restored through WCP are in Federal ownership. The purchase of Malheur River parcels included federal grazing allotments along with the fee title property. To maintain control of the allotments, they must be grazed to some degree. It is clearly more beneficial for the WCP to have the allotments under a manager's control, but crediting must take into account this special management situation. The other cases where Federal lands are involved are on US Forest Service lands with riparian restoration projects for fish benefits. These projects include some degree of upland management that provides wildlife benefits, but this also needs to be evaluated on a case-by-case basis.

In all cases, the issues are twofold:

- Whether Federal actions that are generally creditable, but have happened or would have happened anyway based on a Federal agency's usual and customary responsibilities, should be included.
- Whether the Federal agency's usual and customary responsibilities are such that the protections for wildlife values are assured over time.

This Forum sub-committee suggested that the following standards be applied to the question of crediting of Federal land projects:

- Must meet the current Program criteria for wildlife projects.
- Must be "permanently" protected – minimum of an easement with a term of equal to the life of the FCRPS, or an appropriately formulated and adopted Federal management plan.
- Must primarily benefit priority wildlife habitat, species or populations (as defined by Federal, state, or tribal wildlife management plans or sub-basin plans).
- Subject to a completed wildlife management plan.
- Subject to an "adequately funded" long-term restoration and/or maintenance agreement

- Located in the same province as the FCRPS hydroelectric dam against which it is being credited.

The sub-committee also suggested that BPA receive credit for any enhancement provided by the management actions taken by the Federal agency, subject to:

- The enhancement credit shall be determined through the use of baseline HEP data if available, or from existing Federal agency data sets if HEP data are not available.
- The enhancement credit being in “perpetuity” (e.g.: life of the FCRPS), unless there is a change in the management plan employed by the Federal agency that results in the reduction of enhancement values. In such cases, the enhancement credits would be adjusted to reflect the reduced value.

CREDITS FOR FISH MITIGATION

NOTE: This issue was referred to an ad-hoc sub-committee of the Forum. The summary below reflects the deliberations of that sub-committee.

This Forum sub-committee clearly recognized that acquisition and restoration projects primarily, or even exclusively, designed for the purposes of mitigating for fish losses resulting from the FCRPS hydroelectric dam system could and does benefit wildlife. The sub-committee identified the need to develop guidelines for future habitat projects; and the need to state up-front what type of benefits were being sought (e.g.: what are the benefits for fish and wildlife?). The sub-committee also felt that projects that have joint benefits to fish and wildlife should be encouraged.

The sub-committee suggested the following should apply for fish projects to receive wildlife credits:

- Specific wildlife management plans for the project area need to be completed, approved and implemented.
- Long-term operations and maintenance funding for wildlife species/habitats must be in place and “adequate.”
- Appropriate permanent land protections (easements) should be applied, in perpetuity and with adequate protection language.
- The protected wildlife species/populations/habitats should be “priority” and so defined by in-place Federal, state or tribal management or sub-basin plans.

The sub-committee also reviewed a specific list of such projects (Table B-1). Projects were classified into three tiers. Tier 1 includes wildlife projects supported by anadromous fish funds that should be credited. The projects shown as Tier 2 were left as subject to “further review”. Projects in the Lower Columbia Estuary were flagged as “special case” and included as Tier 3. These Tier 3 projects were identified by the sub-committee as potentially available as operational loss offsets for project elsewhere in the FCRPS. Tier 4 projects are special existing projects on federal lands that may be considered for credit. These three projects (Bear Valley, Deer Creek, Elk Creek) were moved by the Forum from the Federal Lands topic of this summary report and were directed to be included in Table B-1.

Table B-1: Candidate Fish Projects for Wildlife Credits

Parcel Name	Proponent	Sub-Basin	Acres	Tier
Forrest Conservation Area	CTWSRO	John Day	4,232	1
Oxbow Conservation Area	CTWSRO	John Day	1,022	1
Pine Creek (Wagner Conservation Area)	CTWSRO	John Day	9,000	1
Rainwater Wildlife Area (Part II)	CTUIR	Walla Walla	2,340	1
Yakima Side Channels (Lower Naches)	Yakama Nation	Yakima	376	1
Yakama Nation Riparian/Wetlands Restoration	Yakama Nation	Yakima	5,000*	1
Colville Fish Habitat Projects	Colville Tribes	Okonogan	176	2
Cottonwood Farms / Witte Place	NFWF, Methow Conservancy	Methow	54	2
Hancock Springs	NFWF, Methow Conservancy	Methow	122	2
Heath	NFWF, Methow Conservancy	Methow	140	2
Mid-Methow / Lehman	NFWF, Methow Conservancy	Methow	93	2
Oak Flats (Naches River)	WDFW	Yakima	289	2
Red River Wildlife Area (Little Ponderosa)	IDFG	Clearwater	1,300	2
Sandy River Delta	Forest Service	Sandy	1,400	2
Wolf Bay Wildlife Project	Columbia Land Trust	Willamette	77	2
Yakima Side Channels (Upper Yakima)	Yakama Nation	Yakima	544	2
Zumwalt Prairie Preserve (Camp Creek Ranch)	Nature Conservancy	Imnaha	27,000	2
Crims Island	Columbia Land Trust	Columbia Estuary	451	3
Crazy Johnson Creek	Columbia Land Trust	Grays	305	3
Crooked Creek (F&W)	Columbia Land Trust	Columbia Estuary	60	3
Elochoman River	Columbia Land Trust	Columbia Estuary	183	3
Germany Creek	Columbia Land Trust	Columbia Estuary	155	3
Walker Island	Columbia Land Trust	Columbia Estuary	100	3
Willow Grove	Columbia Land Trust	Columbia Estuary	312	3
Bear Valley		Upper Snake	n/a	4
Deer Creek		Upper Snake	n/a	4
Elk Creek		Upper Snake	n/a	4

* This figure is assumed to be double counting acreage by being included in the Fish Program and the Wildlife Crediting at the same time – need to verify in databases.

HEP APPLICATION VARIATIONS

*NOTE: This issue was referred to an ad-hoc sub-committee of the Forum. The summary below reflects the deliberations of that sub-committee. In addition, this particular sub-committee addressed other Crediting issues. **The full report of the sub-committee is attached as Appendix A.***

The quality of habitat varies widely between watersheds, sub-basins, and major regions across the Basin. Thus the number of HU's per acre will also vary from watershed to watershed, sub-basin to sub-basin, etc. Similarly, acquisition costs differ greatly based on the location and type of acquisition. The type of acquisition method also varies greatly (see Table C-2 below). These variables were recognized by the Forum as a "fact of life" across such a large region, and such variation cannot be necessarily construed as inequity. The sub-committee's suggestions focused primarily on resolving such issues in future applications of HEP:

- Use tools, models, and methods that most accurately reflect the quality and quantity of the habitats being protected and managed.
- HEP methods used should reflect the site specific habitat parameters and management goals of the property and may differ from the HEP methods used in determining the losses.
- When disagreements arise, the project proponent should seek resolution through consultation with BPA, HEP team, and sub-basin or provincial co-managers to assure consistency and accuracy.
- Consider validating new or significantly modified models with appropriate testing and review.

One issue that became apparent after this sub-committee provided its report, and as the result of the sub-regional technical analysis conducted in January-February 2011, is that the interpretation and application of HEP could vary widely based on the sub-region involved. Significant variation in Northern Idaho was found for instance.

Table C-1: Acres and HU's by Project Manager

Project Manager	Acres*	Current	Protected	Enhanced	Minimum**
Burns-Paiute Tribe	8,145	4,705	3,937	768	0
CdA Tribe	3,432	3,284	1,671	239	3,155
CdA Tribe, IDFG, Kalispel Tribe, KTI	163	454	454	0	0
Colville Confederated Tribes	59,257	37,731	37,812	0	2,639
Confederated Tribes Of Warm Springs	25,146	18,976	14,057	4,919	0
IDFG	13,853	18,932	13,827	555	4,550
Kalispel Tribe	4,158	5,209	2,150	0	3,292
KTI	1,120	1,324	115	0	1,209
Nez Perce Tribe	10,306	21,118	21,118	0	0
ODFW	1,336	1,960	1,547	413	0
Shoshone-Bannock Tribes	5,160	8,028	5,898	1,904	226
Shoshone-Paiute Tribes	938	557			557
Spokane Tribe	4,233	4,487	4,476	0	38
Umatilla Confederated Tribes (CTUIR)	17,470	12,842	12,091	751	0
USFWS	1,223	622	622	0	0
WDFW	152,107	87,832	67,119	18,895	1,014
Yakama Nation	21,479	35,130	34,077	973	80
Grand Total	329,526	263,191	220,971	29,417	16,760

* Acreage totals are under-reported due to missing acreage data for some parcels.

** Minimum totals are those parcels where there is only a minimum HU letter, or the subsequent HEP survey is less than the minimum HU letter total.

By way of further illustration, Table C-2 lists each acquisition type, and illustrates the acreage and percentage of each type as compared to the entire WCP. These acres only include those entered in Pisces for wildlife projects (fish projects are excluded).

Table C-2: Land Acquisition or Protection Method*

Acquisition Type	Percent
Easement	4.86%
Exchange	0.21%
Fee Title	44.50%
Lease	5.92%
Mix	4.18%
WDFW (enhancement only)	25.52%
None/unknown	14.81%
Total	100.00%

* Approximate percentages based on manager feedback. Recent updates to the Ledger have increased the portion of None/Unknown as more detailed updates are underway.

LOSS ASSESSMENTS

The Forum chose not to reconsider prior loss assessments, and generally accepted *Wildlife Crediting Program Table C-4* (as published in the NPCC-approved 2009 Program) as an agreed to measure of loss assessments (Program Table C-4 is attached as Appendix B to this summary report).

The Forum's determination notwithstanding, Shoshone-Bannock, Shoshone-Paiute, Idaho Department of Fish and Game (IDFG) and CBWFA staff have recently re-examined the Anderson Ranch, Palisades, Black Canyon, Minadoka, and Deadwood loss assessments for accuracy and consistency relative to other loss assessments across the Basin, and for the number of HUs credited against hydro facilities. HU losses reported in *Program Table C-4* were found by this group to be in error for the number of HUs listed for the Anderson Ranch, Black Canyon, and Palisades projects. In one instance, HUs were listed for sharp-tailed grouse, which was not a target species in any of the SE Idaho loss assessments.

NOTE: BPA's position is that it is not responsible for Deadwood Dam mitigation.

SE Idaho loss assessment calculations subtracted estimated post-project HU gains from the total losses in reporting "net" losses. Because most other loss assessments show just the "total" losses, the "net" HU losses reported in SE Idaho were 4,835 fewer than if the SE Idaho loss assessments had listed only the "total" HU losses (as was the case in other parts of the Basin). Habitat units gained from SE Idaho mitigation projects were also examined and subtracted from the losses shown in *Program Table C-4*. Results show 34.71% of the SE Idaho HUs (including those from Deadwood Dam) as mitigated.

NOTE: Program Table C-4 as published also included habitat gains.

AGREEMENT LENGTH & "CURRENCY"

The term of any settlement agreement(s) could conceptually range from 10 years, as with the Tribal Fish Accords; to 60 years, the projected life of the Federal hydroelectric system (FCRPS). The recent Willamette Settlement specifies a term of 15 years, which was deemed to be an adequate period for remaining mitigation obligations to be satisfied in that sub-basin. Conceptually, the term might also be in perpetuity, or for the life of the project(s). An issue to consider is the consequences of any events, natural or human made, that may change habitat conditions over the term of the agreement(s). This requires predicting those natural events which would increase or change the calculations of the remaining habitat needed for "full" mitigation, or identifying the impacts of other agreements encompassing the Basin, such as the Tribal Fish Accords.

The value of the agreement could also vary based on the term and the type of losses to be mitigated. For example, the value of the Willamette Settlement varies across several increments within its overall term. Settlement agreement(s) could also potentially use a variety of "currencies," including habitat units, acres, or funding. Agreements based on lump sum payments are considered most desirable by many Forum members, although there are challenges around how this may occur based on appropriate Federal funding levels, and regulatory compliance issues for BPA.

AGREEMENT SUB-REGIONS

The Forum suggests that several agreements are more feasible than a single Basin-wide settlement agreement. Several sets of sub-regions based on groupings of hydroelectric projects were identified. At its December 2 meeting, the Forum decided on the following sub-regions on which to base further technical analysis and potentially to define agreement groups.

- Main-stems - Lower Columbia (Bonneville, The Dalles, John Day, McNary) & Lower Snake (Ice Harbor, Little Goose, Lower Monumental, Granite)
- Upper Snake
- Northern Idaho (Albeni Falls)
- Upper Columbia (Chief Joseph, Grand Coulee)

PRIOR AGREEMENTS

Prior BPA-to-tribe/agency agreements, Memoranda of Understanding, or contracts may inform and/or limit how settlement agreement(s) are reached. Some of these prior agreements include specific decisions about issue topics discussed in this summary report (for instance the 2:1 ratio), as well as including differing terms and requirements. The Forum does not consider it appropriate to re-open these prior agreements as part of any settlement package, but recognizes the impact such prior agreements may have on settlement considerations.

AGREEMENT TIMELINE

For any settlement agreement(s) to be funded, a series of steps must first occur, including NEPA review, budgeting and inclusion in a future rate case for BPA. These steps are identified in Appendix C as requested by the Forum, including estimated time requirements for each step. Appendix C assumed a certain timeframe for initiating negotiations, but as these are not definitive, this information should only be treated as an EXAMPLE of the relative time scale of any settlement process.

CREDITING RATIO

The 2000 Program applied a 2:1 ratio to all remaining habitat units (HU) in the Ledger that had not been previously satisfied by habitat acquisitions and projects, and went into effect on April 1, 2001. The balance of HU's that remained on April 1, 2001 were to be doubled as a means of "settling" questions over the actual mitigation work remaining to reach full compensation for dam inundation and construction losses. NPCC specified that all credits from projects prior to April 2001 were to remain at the levels previously agreed to by BPA and project proponents. At its April 2010 meeting, the NPCC responded to questions put forth by some Forum members with respect to this policy, and confirmed its earlier policy decision establishing a 2:1 ratio effective April 1, 2001. Notwithstanding the NPCC's recent confirmation, two Forum members groups (BPA and WDFW) requested that their positions with respect to 2:1 be recorded in this summary report:

- According to BPA, all agreements between BPA and project proponents over the last 10 years have effectively set other ratios. BPA's position is that the NPCC did not mandate 2:1, and cites all subsequent project agreements to demonstrate that the "rule" to the extent it was a rule is essentially moot at best. Application of the BPA

position from April 1, 2001 onward would change the *Total Lost HU's Outstanding* figure in Table I-2 from 349,774 to 141,376.

- The Washington Department of Fish and Wildlife (WDFW) agrees with the 2:1 ratio but asserts that it should be applied to projects from 1990 onward. The stated basis for this position is that Washington lost out on potential mitigation credits by having been more efficient in getting mitigation projects on the ground before 2001. Current HU acquired prior to 1990 total to 86,019, or 33% of the ledger total. Application of the WDFW position from January 1, 1990 onward would change the *Total Lost HU's Outstanding* figure in Table I-2 from 352,822 to 459,924.

The application of the 2:1 mitigation ratio results in a change in the total habitat units outstanding for mitigation. Table I-2 show the increase in habitat units or acreage needed to meet the mitigation obligation with the 2:1 ratio applied. Data on HUs are currently maintained at the project level, and acquisition data is maintained at the parcel level. Project level data captures the three types of habitat units recorded: current, protected, and enhancement. Of particular concern is that the Protected and Enhanced HU's do not sum up to the Current HU total. The Protected and Enhanced credits should sum up to provide the Current total, however there is a greater number of Current HU's than the sum of Protected and Enhanced HU's.

Table I-2: 2001 Program Ratio Application to HU Ledger

Habitat Unit Status	Current HU's
Lost HU Total	404,567
FY1978 – FY 2001 Current HU's	- (196,169)
Pre-2001 Program Balance	208,398
Post-2001 Agreements with 1:1	<i>No Data</i>
Application of 2:1 Ratio	+ 208,398
FY2002 – FY2010 Current HU's	- (51,570)
Total Lost HU's Outstanding	365,226
Parcels without Acquisition Date Data	15,452
Grand Total	349,774

* Some parcels do not have acquisition date information. These parcels sum up to 15,452 Current HU's and apply to the total. Some of these will apply in the pre-2001 period and some after. Total in this table is conservatively treating all of these as post-2001.

HYDROELECTRIC FACILITY CREDIT ASSIGNMENTS

Credits are assigned to specific FCRPS hydroelectric facilities. In some cases, credits have been assigned to hydro facilities in different sub-basins from the actual project, to facilities that are more distant from projects than other hydro sites, or to more than one facility. Although to an extent a recordkeeping issue, this practice has resulted in uncertainty over what HU's remain in any given sub-basin, whether mitigation has been adequately met for a given dam (or even over-mitigated), and concern that other sub-basins may end up being "short changed" when mitigation responsibilities are rolled up to the system-wide total. Table J-1 lists the facilities and shows the assignment of estimated habitat units by each grouping. Figure 1 maps the location of wildlife projects and shows the relationship with facilities mitigated by the projects.

Forum members have asked that the assignment of wildlife projects to multiple dams be evaluated. The listing in Table J-1 indicates a number of projects assigned to multiple dams. The available data does not specify the specific division of HU's to each dam. The way the data is stored in the Ledger prevents double counting of credits when applied to multiple projects, but it does create new groupings of dams in addition to individual dams. Accordingly, a single dam may not easily be reviewed based on mitigation projects. Another concern raised by the Forum was the sets of species used for HEP evaluation when spread across multiple dams. The available data does not indicate the species used, or if the species at the dam site are the same as at the wildlife project site.

In general, the geographic distribution of projects effectively assigns projects to the closest dam. In some cases this can be a considerable distance, such as in the Lower Snake. However, these projects are in the nearest watershed for the facilities. The Forum has indicated a preference that projects assigned to a hydro facility should at a minimum be in the same province as that hydro facility.

Table J-1: Habitat Units Assigned by Hydroelectric Facility

Facility or Grouping	Acres	Current	Protected	Enhancement	Minimum
Albeni Falls	12,533	14,317	5,158	335	10,838
Anderson Ranch	4,163	2,988	1,063	0	1,925
Black Canyon	166	57	57	0	0
Bonneville OR, Cougar, Hills Creek	417	1,319	1,319	0	0
Bonneville WA	377	226	213	13	0
Bonneville WA, John Day WA	3,231	2,359	1,622	737	0
Bonneville WA, John Day WA, The Dalles WA	477	199	98	100	0
Bonneville WA, McNary WA	361	894	894	0	0
Chief Joseph	3,417	3,941	3,941	0	0
Chief Joseph, Grand Coulee	62,424	41,884	40,145	1,637	2,570
Chief Joseph, John Day WA, McNary WA	1,000	1,193	776	417	0
Deadwood	0	0	0	0	0
Grand Coulee	138,900	76,700	61,388	13,666	1,121
Grand Coulee, John Day WA, McNary WA	8,391	5,171	2,846	2,325	0
John Day OR	25,146	18,976	14,057	4,919	0
John Day WA	4,977	4,047	3,967	0	80
John Day WA, McNary WA	12,225	24,975	24,002	973	0
John Day WA, The Dalles WA	983	1,177	1,177	0	0
Lower Snake	19,370	26,464	25,283	1,181	0
McNary OR	8,702	7,655	6,904	751	0
McNary WA	9,068	5,826	5,826	0	0
McNary WA, The Dalles WA	1,236	2,397	2,397	0	0
Minidoka	377	338	112	0	226
Minidoka, Palisades	2,659	3,769	2,576	1,193	0
Palisades	8,926	16,319	15,149	1,170	0
Total	329,526	263,191	220,971	29,417	16,670

Notes: The sum of protected, enhancement and minimum HU's should equal current HU. However, some parcels are still being updated and a small discrepancy exists between the totals. This is due to some protected numbers being lower than minimum. The protected total is kept here to document the existing HEP results even if less than the minimum.

Table J-2 provides the sum of habitat units by hydroelectric facility captured in the NPCC adopted 2009 *Program Table C-4* (see additional discussion of this *Table C-4* under the earlier **Loss Assessments** topic of this summary report). The first sum includes the gains in habitat units from inundation. The second column sums only the losses tallied in the report. Because the credits from parcels are assigned to multiple projects in some cases, this table does not match Table J-1 categories exactly.

Table J-2: Loss Assessments by Facility

Facility	Habitat Units (Exc. Gains)
Albeni	-28,658
Anderson Ranch	-9,619
Black Canyon	-2,170
Bonneville	-12,317
Chief Joseph	-8,833
Deadwood	-4,787
Dworshak	-28,452
Grand Coulee	-111,515
John Day	-36,555
Lower Snake	-26,774
McNary	-23,545
Minidoka	-10,503
Palisades	-37,070
The Dalles	-2,330
Total	-343,128

BPA Wildlife Mitigation Projects: Wildlife Management Areas Assigned to FCRPS Dams

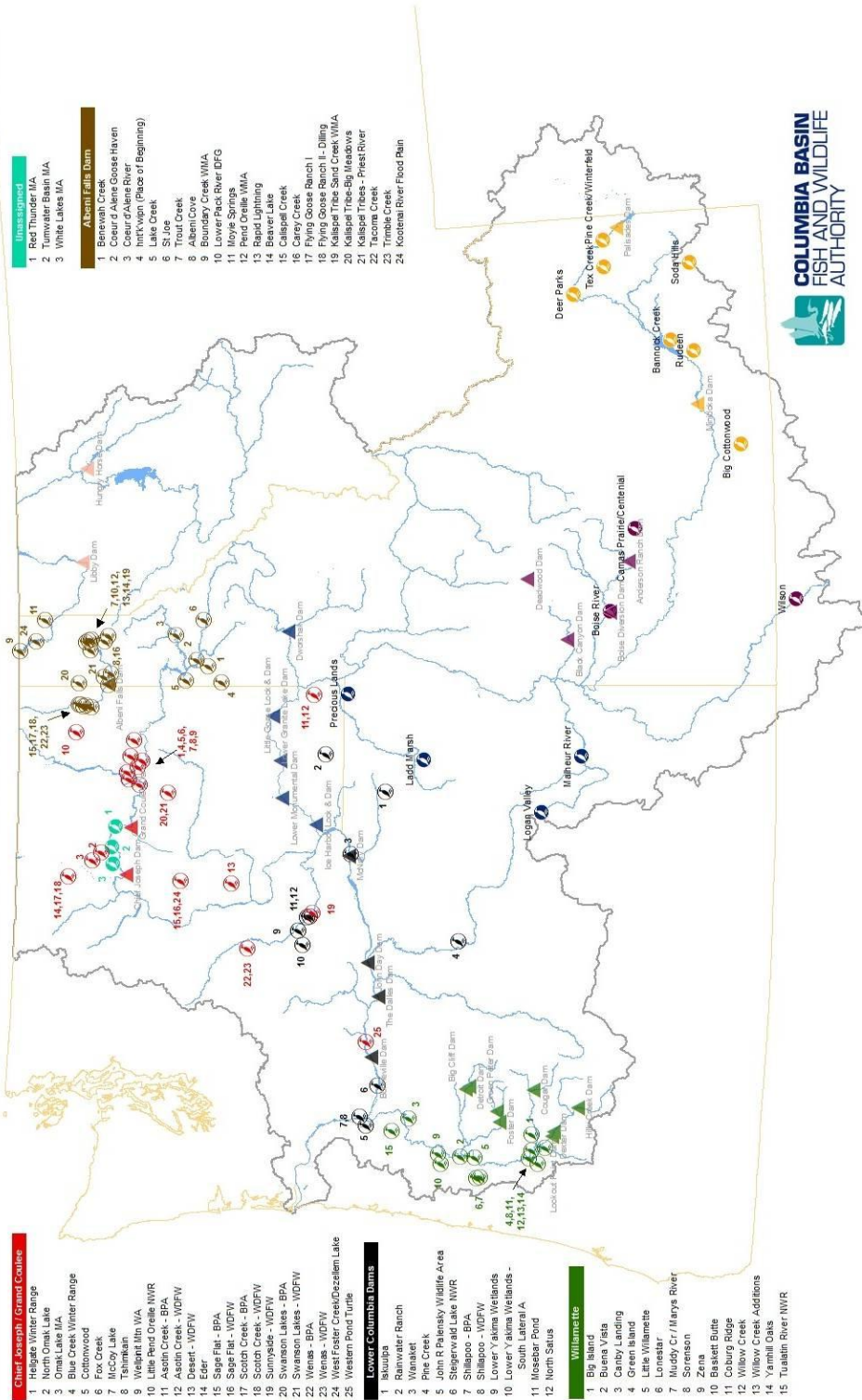


Figure 1: Projects and Facilities Mitigated

OPERATION AND MAINTENANCE

The success of mitigation projects often relies on active and ongoing management to maintain the habitat benefits obtained from land acquisition and restoration. Crediting decisions that favor projects with built-in operation and maintenance (O&M) funding and higher BPA O&M cost shares may be appropriate.

The 2007 Independent Economic Analysis Board (IAEB) report, “Investigation of Wildlife O&M Costs” identified several key findings. The findings relevant to the charter of the Forum include:

- O&M cost data in Pisces is very coarse and needs to be more detailed to provide support for informed comparisons. Current data on O&M does not allow for parcel to parcel comparisons.
- IAEB recommended data be added to Pisces to capture the other non-BPA cost shares and the expected life of investments.

These findings are still a challenge for Pisces, as O&M funding and cost-share data is incomplete. Funding amounts and cost share percentages are available for only approximately a third of the total projects included in the WCP. Even at this partial level of reporting, the O&M funding amounts are only available from FY10, and cost share percentages only from FY09. For funding, the amounts for FY10 ranged from \$12,000 up to \$1.5 million. Based on these two time periods, definitive conclusions cannot be drawn.

INUNDATION GAINS

The permanent dam reservoir pools resulting from inundation created a significant expansion of open water habitat on the Columbia River. Not all wildlife species benefiting (and expanding) from new open water were those that lost suitable habitat due to inundation. Tribes and agencies (WDFW and IDFG) participating at the Forum’s December meeting concurred that allowing crediting for such species did not appear to be appropriate. Some suggested that such gains were only appropriate (perhaps) in Operational Loss discussions (Operational Losses have been taken off the table by the Forum). BPA felt that there are legitimate circumstances where open water gains should be accounted for, but they may apply to operational losses and not the construction and inundation losses. The following species appear to have benefited from open water gains created by inundation:

Table L-1: Species and Gains from the 2009 Wildlife Program

Species	Habitat Units
Bald Eagle	5,693
Black-capped Chickadee	68
Common Merganser	1,042
Greater Scaup	820
Lesser Scaup	20,577
Mallard	174
Mallard (wintering)	13,744
Marsh Wren	207
Osprey	6,159
Redhead	4,475
Other Waterfowl	423
Western Grebe	273
Yellow Warbler	8
Total	53,663

PRE-ACT MITIGATION

Prior to the Northwest Power Act of 1980, official mitigation efforts in response to FCRPS system impacts were undertaken by Federal water resource managers (U.S. Army Corps of Engineers, Bureau of Reclamation) and the U.S. Fish and Wildlife Service. Some mitigation actions go back as far as the 1930's, and in many cases are very difficult or impossible to fully document and assess. Wildlife mitigation prior to 1980 was in part generated through consultation with the US Fish and Wildlife Service under the Fish and Wildlife Coordination Act of 1934, and the subsequently more rigorous requirements from amendments in 1946 and 1958. The majority of the Pre-Act mitigation is associated with the McNary and John Day dams. The 1991 Geiger Report and 2004 USFWS Coordination Act Report identified 50,938 acres of Pre-Act mitigation.

APPENDIX A

HEP Crediting (Hames) Sub-committee Report

April 20-21, 2010 Crediting Forum Technical Team (*The Hames Commission*) Meeting

The Hames Commission addressed technical HEP issues that make reconciling the crediting ledger difficult and contribute to the misunderstandings and disagreements within the region on crediting. We identified issues in three tiers with the first tier representing technical HEP issues, the second tier focusing more on sub-regional issues that have policy implications for some but not all managers or areas in the region, and the third tier being primarily overarching, regional policy issues needing resolution. We sought to establish a foundation for greater consistency to the extent possible while recognizing the limitations of existing agreements. The following are working notes from the meeting and have not received regional peer review or input.

Tier 1 Issues: Technical HEP w/ little or no policy implications

Sources of Variation in crediting due to HEP methods

1. Cover Typing - Delineation of cover type boundaries
2. Similarity (or lack thereof), between habitats characterized in losses and compensation lands
3. Choice of HEP species- for original losses and compensation lands
 - *Should be a good representation of habitat quality*
4. Lack of peer review or consistency of HEP models chosen for losses or compensation lands.
5. Choice of substitute HEP species when out of kind-
 - Covering same habitat attributes with same number of species
6. Modification or lack of suitable modification of HEP models.
 - Appropriate/inappropriate selection of model
 - Use of updated models for mitigation while losses are static with old models.
 - Appropriate/inappropriate alteration of equations to address site specific realities.
 - Real world differences in application of model from original area
7. Field Data Collection techniques-
 - Changes in Techniques and intensity of survey
 - Changes in survey staff
 - Season of survey/phenology
 - Under represented or over represented cover types

Variation SOP:

- *Use tools, models, and methods that most accurately reflect the quality and quantity of the habitats being protected and managed.*
- *HEP methods used should reflect the site specific habitat parameters and management goals of the property and may differ from the HEP methods used in determining the losses.*
- *When disagreements arise, the project proponent should seek resolution through consultation with BPA, HEP team, and sub-basin or provincial co-managers to assure consistency and accuracy.*
- *Consider validating new or significantly modified models with appropriate testing and review.*

Species Stacking

Stacking occurs when multiple species are used to characterize the quality of a single cover type. It becomes a crediting issue when the same number of species used to assess losses are not in turn used to characterize the compensation lands. Stacking is an issue of how you adjust the credits of the mitigation sites to be in balance with the number of species used to characterize the losses. Loss assessments are what they are and should not be revised or replaced to address stacking issues.

Stacking SOP

- *SOP options to address staking issues include:*
 - a. Use the same number of species to characterize the out of kind cover types as were used to characterize the loss assessment cover types.*
 - b. If using fewer species to characterize the mitigation site cover type than were used to characterize the losses, average the HSI of the out of kind mitigation cover types and multiply by the number of species used in the losses. However, species selection must be peer reviewed and approved by the regional HEP team, BPA and the project proponent.*
 - c. If incidental out of kind cover types (inclusions) are associated with a mitigation acquisition, assume the same HSI as the adjacent cover type.*
 - d. Willamette crediting will use the CHAP methodology to address stacking issues.*
 - e. Do not credit the same acres of a given cover type between two or more hydro projects with a combination of species from both.*

Tier 2 Issues: Sub-regional issues with policy implications

Crediting public lands actions, trust lands, and non-permanent or unsecured lands mitigations

How to credit BLM lease for range lands.

How to credit State DNR Land mitigations.

How to credit BIA Trust lands leases or easements

How to credit leases or easements on fee lands

How to credit areas where BPA contributed to but did not fully provide protection or operations and maintenance funding.

How to credit BPA where they were not involved in the protection of the habitat but provide all or part of the O&M and enhancements.

Crediting SOP:

- *Project proponents must provide minimum irreducible HU letter for each compensation site including statements on each of the following issues:*
 - a. *Hydro project being mitigated*
 - b. *Cover type(s) and target species used to characterize habitat quality on the compensation site*
 - c. *Commitment to follow SOPs to quantify and qualify habitat*
 - d. *Minimum number of habitat units being credited from the site*
- *Crediting of Non-permanent protection- The Hames Commission recommends that the region have a Crediting SOP covering sites without permanent protection. The specific operating procedure adopted needs to be further defined and agreed to.*
- *Partial purchase- credit for proportion of protection funding provided*
- *Partial O&M or enhancements- credit for HU increases proportional to 10 year average investment.*
- *Credit for leases that may not provide permanent protection- credit against operational or secondary losses or normal full credit when the protection and credit from a non-permanent compensation site gets rolled over to another non-permanent site with an equal or greater amount of habitat value*
- *Credit for lands protected with partial lease such as the purchase of an annual grazing lease on Indian trust lands or a federal grazing allotment - receive credit for cover types*

enhanced by the annual protection and O&M. Assumption of replacement with similar lease if lease terminated.

Tier 3 Issues: Policy level resolution required

1. Socio-political issues of crediting projects that are out of kind and out of place from impacts.
2. Allocation HUs among resource managers.
 - a. Crossing political boundaries with mitigation actions.
 - b. Crossing ecological/population boundaries.
3. Crediting of fish projects against construction and inundation wildlife losses.
4. Crediting non-permanent or unsecured lands
5. How to deal with “over mitigation”?

Where do we go from here?

1. Regional Agreements on SOPs after vetting through all Forum members.
2. Direct the HEP team to work with project managers at each compensation site to address technical shortcomings identified above.
 - For new projects, do this with baseline HEPs.
 - For existing projects, do this with follow-up HEPs.
 - Consider adding to HEP team’s contract an express mandate and responsibility to identify inconsistencies in technical HEP applications throughout the region.
3. Incorporate fish credit findings and recommendations as appropriate.
4. Reassign credits within lower four mainstem Columbia River dams.
 - Unlike other areas in the basin, the lower four crediting can be reassigned based on existing HEP reports, so no need to wait or gather additional data.
5. Develop draft ledger for recommendation to Council for review and approval.
 - The ledger will report HUs protected and enhanced through the Council’s Fish and Wildlife Program.

APPENDIX B

Loss Assessment Summary, Table C-4, 2009 Program

Table C-4 Estimated Losses and Gains Due to Hydropower Construction

(losses are preceded by a “-”, gains by a “+”)

Species	Total Habitat Units
Albeni Falls	
• Mallard Duck	-5,985
• Canada Goose	-4,699
• Redhead Duck	-3,379
• Breeding Bald Eagle	-4,508
• Wintering Bald Eagle	-4,365
• Black-Capped Chickadee	-2,286
• White-tailed Deer	-1,680
• Muskrat	-1,756
• Yellow Warbler	+171
Lower Snake Projects	
• Downy Woodpecker	-364.9
• Song Sparrow	-287.6
• Yellow Warbler	-927.0
• California Quail	-20,508.0
• Ring-necked Pheasant	-2,646.8
• Canada Goose	-2,039.8
Anderson Ranch	
• Mallard	-1,048
• Mink	-1,732
• Yellow Warbler	-361
• Black Capped Chickadee	-890
• Ruffed Grouse	-919
• Blue Grouse	-1,980
• Mule Deer	-2,689
• Peregrine Falcon	-1,222 acres*
* Acres of riparian habitat lost. Does not require purchase of any lands.	
Black Canyon	
• Mallard	-270
• Mink	-652
• Canada Goose	-214
• Ring-necked Pheasant	-260
• Sharp-tailed Grouse	-532
• Mule Deer	-242
• Yellow Warbler	+8
• Black-capped Chickadee	+68
Deadwood	
• Mule Deer	-2080
• Mink	-987
• Spruce Grouse	-1411
• Yellow Warbler	-309

Table C-4 (cont.) Estimated Losses and Gains Due to Hydropower Construction
(losses are preceded by a “-”, gains by a “+”)

Species	Total Habitat Units
Palisades	
• Bald Eagle	-5,941 breeding
	-18,565 wintering
• Yellow Warbler	-718 scrub-shrub
• Black Capped Chickadee	-1,358 forested
• Elk/Mule Deer	-2,454
• Waterfowl and Aquatic Furbearers	-5,703
• Ruffed Grouse	-2,331
• Peregrine Falcon*	-1,677 acres of forested wetland
	-832 acres of scrub-shrub wetland
	+68 acres of emergent wetland
* Acres of riparian habitat lost. Does not require purchase of any lands.	
Willamette Basin Projects	
• Black-tailed Deer	-17,254
• Roosevelt Elk	-15,295
• Black Bear	-4,814
• Cougar	-3,853
• Beaver	-4,477
• River Otter	-2,408
• Mink	-2,418
• Red Fox	-2,590
• Ruffed Grouse	-11,145
• California Quail	-2,986
• Ring-necked Pheasant	-1,986
• Band-tailed Pigeon	-3,487
• Western Gray Squirrel	-1,354
• Harlequin Duck	-551
• Wood Duck	-1,947
• Spotted Owl	-5,711
• Pileated Woodpecker	-8,690
• American Dipper	-954
• Yellow Warbler	-2,355
• Common Merganser	+1,042
• Greater Scaup	+820
• Waterfowl	+423
• Bald Eagle	+5,693
• Osprey	+6,159
Grand Coulee	
• Sage Grouse	-2,746
• Sharp-tailed Grouse	-32,723
• Ruffed Grouse	-16,502
• Mourning Dove	-9,316
• Mule Deer	-27,133
• White-tailed Deer	-21,362
• Riparian Forest	-1,632
• Riparian Shrub	-27
• Canada Goose Nest Sites	-74

Table C-4 (cont.) Estimated Losses and Gains Due to Hydropower Construction
(losses are preceded by a “-”, gains by a “+”)

Species	Total Habitat Units
McNary	
• Mallard (wintering)	+ 13,744
• Mallard (nesting)	-6,959
• Western Meadowlark	-3,469
• Canada Goose	-3,484
• Spotted Sandpiper	-1,363
• Yellow Warbler	-329
• Downy Woodpecker	-377
• Mink	-1,250
• California Quail	-6,314
John Day	
• Lesser Scaup	+14,398
• Great Blue Heron	-3,186
• Canada Goose	-8,010
• Spotted Sandpiper	-3,186
• Yellow Warbler	-1,085
• Black-capped Chickadee	-869
• Western Meadowlark	-5,059
• California Quail	-6,324
• Mallard	-7,399
• Mink	-1,437
The Dalles	
• Lesser Scaup	+2,068
• Great Blue Heron	-427
• Canada Goose	-439
• Spotted Sandpiper	-534
• Yellow Warbler	-170
• Black-capped Chickadee	-183
• Western Meadowlark	-247
• Mink	-330
Bonneville	
• Lesser Scaup	+2,671
• Great Blue Heron	-4,300
• Canada Goose	-2,443
• Spotted Sandpiper	-2,767
• Yellow Warbler	-163
• Black-capped Chickadee	-1,022
• Mink	-1,622
Dworshak	
• Canada Goose-(breeding)	-16
• Black-capped Chickadee	-91
• River Otter	-4,312
• Pileated Woodpecker	-3,524
• Elk	-11,603
• White-tailed Deer	-8,906
• Canada Goose (wintering)	+323
• Bald Eagle	+2,678
• Osprey	+1,674
• Yellow Warbler	+119

Table C-4 (cont.) Estimated Losses and Gains Due to Hydropower Construction
 (losses are preceded by a “-”, gains by a “+”)

Species	Total Habitat Units
Minidoka	
• Mallard	+174
• Redhead	+4,475
• Western Grebe	+273
• Marsh Wren	+207
• Yellow Warbler	-342
• River Otter	-2,993
• Mule Deer	-3,413
• Sage Grouse	-3,755
Chief Joseph	
• Lesser Scaup	+1,440
• Sharp-tailed Grouse	-2,290
• Mule Deer	-1,992
• Spotted Sandpiper	-1,255
• Sage Grouse	-1,179
• Mink	-920
• Bobcat	-401
• Lewis’ Woodpecker	-286
• Ring-necked Pheasant	-239
• Canada Goose	-213
• Yellow Warbler	-58

Monitor and Evaluate Wildlife Efforts at Non-federal Projects

Non-federal hydroelectric projects are licensed by the Federal Energy Regulatory Commission. The Electric Consumers Protection Act of 1986 (ECPA) mandates that the Federal Energy Regulatory Commission give equal consideration to the protection, mitigation of damage to, and enhancement of wildlife in licensing and relicensing decisions.

Mitigation Considerations in Dam Licensing Decisions

Federal Energy Regulatory Commission

In developing license conditions, take into account to the fullest extent practicable the policies established in this section, and the measures taken by Bonneville and others to implement this section. In particular, it is important to take into account the mitigation efforts at federal projects undertaken pursuant to this section, to ensure that license conditions are consistent with and complement these wildlife mitigation projects and contribute fully and proportionately to regional wildlife mitigation goals.

Council

The Council will monitor the Federal Energy Regulatory Commission licensing and relicensing proceedings and comment or intervene where appropriate.

APPENDIX C

Example Agreement Timeline

APPENDIX D
Sub-basin Reviews

Lower Columbia and Lower Snake

March, 2011

Introduction

The Wildlife Crediting Forum (**Forum**) was chartered in late 2009 by the Northwest Power and Conservation Council (**NPCC**) to provide input on the Council’s Wildlife Crediting Program (**WCP**). NPCC chartered the Forum to provide advice on the quantifying and accounting system (informally known as the **Ledger**) for the wildlife habitat mitigation credits associated with the construction and inundation impacts of the Federal Columbia River Power System (**FCRPS**) within the Columbia River Basin (**Basin**). The database that currently houses the Ledger is called **Pisces**. The WCP was initiated in 1981, and has been modified from time to time (most recently in 2009) by NPCC in updating the overarching Columbia River Basin Fish and Wildlife Program (**Program**).

The activities of the Forum are documented in a **Forum Summary Report** that is currently in review draft. As requested at the December 2, 2010 meeting of the Forum, four separate sub-regional (see the table below for sub-regions) analyses have been performed to understand the implication of various crediting choices and decisions. These four supplemental analyses reflect the heading structure of the overall Summary Report, but provide more detail to help review each sub-region’s remaining issues with respect to the WCP. *Note: The ratings in the “Level of Agreement” table below were made in consultation with NPCC staff. Although reviewed in draft form by the Forum on December 2, 2010, these ratings have not been concurred in by the Forum.*

Level of Agreement on Issues by Sub-Region

	A. Federal Lands	B. Fish Projects	C. HEP Issues	D. Loss Assessment	I. Ratios	J. Facility Assignment	K. O&M	L. Inundation Gains	M. Pre-Act Mitigation
Lower Four and Lower Snake	High	Low	Low	High	Low	Low	Low	Low	Low
Upper Columbia	High	Medium	High	High	Low	High	Low	Medium	High
Upper Snake	Low	High	Medium	Low	Low	Low	Low	Medium	High
Northern Idaho	High	High	Low	Low	Low	High	Low	High	High

Data Source

The data used here is an updated version of the Ledger from the wildlife mitigation data in Pisces and in the Program. Updates include new information from managers and the regional HEP team. This data includes some parcels not included in Pisces and will differ from reports generated out of Pisces.

To conduct the analysis for each region parcel level data was necessary. In some cases HEP data is available at the parcel level. However, many follow-up HEP surveys have only been recorded in Pisces at the Wildlife Management Area (WMA) level. In this case, the WMA data was apportioned to parcels based on the acreage ratio of the parcel to area. In some cases the minimum HU letter was the only source for HU data, or the minimum HU amount was greater than subsequent HEP surveys. In these cases the minimum HU was used as the parcel's value.

A. Federal Lands

There are no remaining issues on the use of federal lands for wildlife mitigation projects in this sub-region. The sole project using federal land occurred with the US Fish and Wildlife Service Steigerwald Lake National Wildlife Refuge.

B. Credits for Fish Mitigation

Of the 24 fish projects reviewed by Forum, 18 are within this sub-region. Included in these are all of the Tier 3 projects that are considered least likely candidates for inclusion as construction and inundation mitigation.

Table B-1: Candidate Fish Projects for Wildlife Credits

Parcel Name	Proponent	Sub-Basin	Acres	Tier
Forrest Conservation Area	CTWSRO	John Day	4,232	1
Oxbow Conservation Area	CTWSRO	John Day	1,022	1
Pine Creek (Wagner Conservation Area)	CTWSRO	John Day	9,000	1
Rainwater Wildlife Area (Part II)	CTUIR	Walla Walla	2,340	1
Yakima Side Channels (Lower Naches)	Yakama Nation	Yakima	376	1
Yakama Nation Riparian/Wetlands Restoration	Yakama Nation	Yakima	5,000*	1
Oak Flats (Naches River)	WDFW	Yakima	289	2
Red River Wildlife Area (Little Ponderosa)	IDFG	Clearwater	1,300	2
Sandy River Delta	Forest Service	Sandy	1,400	2
Yakima Side Channels (Upper Yakima)	Yakama Nation	Yakima	544	2
Zumwalt Prairie Preserve (Camp Creek Ranch)	Nature Conservancy	Imnaha	27,000	2
Crims Island	Columbia Land Trust	Columbia Estuary	451	3
Crazy Johnson Creek	Columbia Land Trust	Grays	305	3
Crooked Creek (F&W)	Columbia Land Trust	Columbia Estuary	60	3
Elochoman River	Columbia Land Trust	Columbia Estuary	183	3
Germany Creek	Columbia Land Trust	Columbia Estuary	155	3
Walker Island	Columbia Land Trust	Columbia Estuary	100	3

Willow Grove	Columbia Land Trust	Columbia Estuary	312	3
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These projects are expected to meet the following requirements before inclusion in the Ledger:

Specific wildlife management plans for the project area need to be completed, approved and implemented.

Long-term operations and maintenance funding for wildlife species/habitats must be in place and “adequate”.

Appropriate permanent land protections (easements) should be applied, in perpetuity and with adequate protection language.

The protected wildlife species/populations/habitats should be “priority” and so defined by in-place Federal, state or tribal management or sub-basin plans.

Unique to this sub-region are the Columbia River Estuary projects that are currently Tier 3. Most recent discussions have indicated that these projects will not provide credits for the Construction and Inundation Losses, but rather may apply to future mitigation for Operation Losses.

C. HEP Application Variations

The variation of HEP models has some issues in this sub-regional group. Paul Ashley, of the regional HEP team, has developed proposed solutions for the Malheur River WMA where crediting for a unique land ownership pattern is required. In general the loss assessment and projects in this sub-region have applied HEP more uniformly when compared with other sub-regions in the Basin.

Table C-1: Acres and HU by Manager*

Manager	Acres	Current	Protected	Enhancement	Minimum
Burns-Paiute Tribe	8,145	4,705	3,937	768	0
Confederated Tribes Of Warm Springs	25,146	18,976	14,057	4,919	0
Nez Perce Tribe	10,306	21,118	21,118	0	0
ODFW	1,336	1,960	1,547	413	0
Umatilla Confederated Tribes (CTUIR)	17,470	12,842	12,091	751	0
USFWS	317	201	201	0	0
WDFW	10,762	6,753	3,578	3,175	0
Yakama Nation	21,479	35,130	34,077	973	80
Grand Total	94,961	101,685	90,606	10,999	80

* Note: In general, the Current total is a sum of the Protected, Enhanced and where applicable Minimum HU totals by WMA. Minimum values are summed only when they are greater than the results of HEP surveys or no HEP survey has been entered into Pisces.

I. Ratio Application

The application of any ratios in the WCP are not agreed on by all Forum members, but are documented in the Forum Summary Report. Table I-1 below documents how projects in this sub-region break out based on the year they were booked to the Ledger.

The percentage column measures the proportion of projects which the 2:1 ration would apply to, based on the 2009 Program. Multiple opinions were expressed on how to handle the results of this ratio analysis, and further analysis should be completed manager-by-manager as needed. Table J-2 below provides the losses for this sub-region and those losses can be compared to Table I-4 to determine the level of mitigation. If 2:1 is the adopted policy, the 1978-2001 total can be subtracted 1:1 from the losses. The remainder then can be doubled to compare to the 2001-Present data.

Table I-1: Dates of Project Credits

Fiscal Years	Parcel Current HU	Percent of Total
1978-2001	93,140	91.6%
2001-Present	855	0.84%
No Data	7,690	7.56%
Grand Total	100,534	100%

J. Facility Assignment

Because of the early projects and many parties in this sub-region, the assignment of projects to facilities is still unresolved. The primary issue of concern is the assignment of project credits across multiple projects and between the various managers. Paul Ashley of the regional HEP team is developing a proposed approach to resolving the decisions made on assigning the credits.

Please note that in Table J-1, a number of projects are combined together and it is not clear how to separate out the portion of HU's assigned. This creates a series of composite projects with multiple facilities listed.

Table J-1: Habitat Unit Assignment to Facilities

Projects	Current	Protected	Enhanced	Minimum
Bonneville OR, Cougar, Hills Creek	1,319	1,319	0	0
Bonneville WA	226	213	13	0
Bonneville WA, John Day WA	2,359	1,622	737	0
Bonneville WA, John Day WA, The Dalles WA	199	98	100	0
Bonneville WA, McNary WA	894	894	0	0
Grand Coulee, John Day WA, McNary WA	5,171	2,846	2,325	0
John Day OR	18,976	14,057	4,919	0
John Day WA	4,047	3,967	0	80
John Day WA, McNary WA	24,975	24,002	973	0
John Day WA, The Dalles WA	1,177	1,177	0	0

Lower Snake	26,464	25,283	1,181	0
McNary OR	7,655	6,904	751	0
McNary WA	5,826	5,826	0	0
McNary WA, The Dalles WA	2,397	2,397	0	0
Grand Total	101,685	90,606	10,999	80

Table J-2: Loss Assessment by Facilities

Facility	Habitat Units (Exc. Gains)
Bonneville	-12,317
John Day	-36,555
Lower Snake	-26,774
McNary	-23,545
The Dalles	-2,330
Total	-101,521

L. Inundation Gains

The 2009 Program includes totals for species gains from inundation, but does not specify the role of these gains in evaluating mitigation. The data is presented here as additional issue to be addressed at the sub-region. Two species are included in the adopted 2009 *Program Table C-4* for this sub-region. They are:

Table L-1: Inundation Gains by Species

Species	HU
Lesser Scaup	19,137
Mallard (Wintering)	13,744
Total	32,881

M. Pre-Act Mitigation

Pre-Act mitigation primarily applies to this sub-region. The 1991 Geiger Report and 2004 USFWS Coordination Act Report identified 50,938 acres of Pre-Act mitigation.

Parcel Accounting Concerns

Parcel data has been updated with assistance from managers and the HEP regional team leader. This is reflected in the parcel data attached to this report. WDFW data is one area that may require extra review. Updates were made based on WDFW comments – but a mix of parcel and project names may have caused some updates to be captured slightly incorrectly. This is not expected to impact totals.

Parcel Data for the Sub-Region

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Burlington Bottoms	Burlington Bottoms	ODFW Umatilla Confederated Tribes	1,319	1,319	0		Fee Title	1991	417	Bonneville OR, Cougar, Hills Creek
Iskuulpa	Iskuulpa	(CTUIR)	4,570	4,570	0		Fee Title	1997	5,937	McNary OR
Ladd Marsh	Conley Lake	ODFW	112	40	72		Fee Title	2001	160	Lower Snake
Ladd Marsh	North City	ODFW	52	19	34		Fee Title	2001	75	Lower Snake
Ladd Marsh	Simonis	ODFW	262	93	169		Fee Title	2001	375	Lower Snake
Ladd Marsh	Wallender	ODFW	216	77	139		Fee Title	2002	309	Lower Snake
Logan Valley	Logan Valley	Burns-Paiute Tribe	1,376	608	768		Fee Title	2000	1,760	Lower Snake
Lower Yakima Wetlands	Bailey	Yakama Nation	80			80	Fee Title	1978	40	John Day WA
Lower Yakima Wetlands	Graves	Yakama Nation	283	283	0	200	Fee Title	2006	140	McNary WA
Lower Yakima Wetlands	Carl	Yakama Nation	356	356	0	300	Fee Title	2006	160	McNary WA
Lower Yakima Wetlands	Buena	Yakama Nation	65	65	0		Mix	1978	157	John Day WA
Lower Yakima Wetlands	Campbell	Yakama Nation	125	125	0		Mix	1978	360	Bonneville WA, John Day WA
Lower Yakima Wetlands	Dry Creek	Yakama Nation	160	160	0		Lease	1978	160	Bonneville WA, John Day WA
Lower Yakima Wetlands	East 80 Pumphouse	Yakama Nation	227	227	0		Easement	1978	78	John Day WA, The Dalles WA
Lower Yakima Wetlands	Garcia	Yakama Nation	69	69	0		Lease	1978	82	John Day WA
Lower Yakima Wetlands	Island Road	Yakama Nation	229	229	0		None/ unknown	1978	243	John Day WA
Lower Yakima Wetlands	L. Satus Creek	Yakama Nation	367	367	0		None/ unknown	1978	409	John Day WA, The Dalles WA
Lower Yakima Wetlands	Lawrence	Yakama Nation	87	87	0		None/ unknown	1978	81	John Day WA
Lower Yakima Wetlands	Lawrence I (J. Lawrence)	Yakama Nation	55	55	0		None/ unknown	1978	61	Bonneville WA, John Day WA
Lower Yakima Wetlands	Lawrence II	Yakama Nation	28	28	0		None/ unknown	1978	40	John Day WA
Lower Yakima Wetlands	Lower Satus	Yakama Nation	8,637	8,637	0		Mix	1978	3,694	John Day WA, McNary WA
Lower Yakima Wetlands	Meninick	Yakama Nation	504	504	0		Mix	1978	428	John Day WA, The Dalles WA
Lower Yakima Wetlands	Meninick North	Yakama Nation	1,640	1,640	0		None/ unknown	1978	1,052	John Day WA, McNary WA
Lower Yakima Wetlands	Meninick South	Yakama Nation	79	79	0		None/ unknown	1978	68	John Day WA, The Dalles WA
Lower Yakima Wetlands	Mill Creek North	Yakama Nation	141	141	0		Mix	1978	159	Bonneville WA, John Day WA
Lower Yakima Wetlands	Mill Creek South	Yakama Nation	173	173	0		Easement	1978	165	John Day WA
Lower Yakima Wetlands	Old Goldendale	Yakama Nation	123	123	0		Easement	1978	184	Bonneville WA, John Day WA
Lower Yakima Wetlands	Olney Drain	Yakama Nation	375	375	0		Easement	1978	451	Bonneville WA, John Day WA

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Lower Yakima Wetlands	Parker	Yakama Nation	25	25	0		Lease	1978	36	John Day WA
Lower Yakima Wetlands	Plank	Yakama Nation	390	390	0		None/ unknown	1978	685	John Day WA
Lower Yakima Wetlands	Plank Road (East Plank)	Yakama Nation	113	113	0		Mix	1978	168	John Day WA
Lower Yakima Wetlands	Satus	Yakama Nation	8,329	8,329	0		Mix	1978	4,474	John Day WA, McNary WA
Lower Yakima Wetlands	Satus Corridor	Yakama Nation	2,177	2,177	0		Lease	1978	2,718	John Day WA
Lower Yakima Wetlands	Shuster Road	Yakama Nation	1,404	1,404	0		Mix	1978	667	John Day WA, McNary WA
Lower Yakima Wetlands	South Barkes Rd.	Yakama Nation	86	86	0		Lease	1978	75	John Day WA
Lower Yakima Wetlands	Sunnyside Dam	Yakama Nation	22	22	0		Lease	1978	22	Bonneville WA, John Day WA
Lower Yakima Wetlands	T 2126	Yakama Nation	116	116	0		None/ unknown	1978	95	John Day WA
Lower Yakima Wetlands	T 3669	Yakama Nation	134	134	0		None/ unknown	1978	116	John Day WA
Lower Yakima Wetlands	T 4433	Yakama Nation	30	30	0		None/ unknown	1978	44	John Day WA
Lower Yakima Wetlands	T 565	Yakama Nation	89	89	0		None/ unknown	1978	80	John Day WA
Lower Yakima Wetlands	T 570	Yakama Nation	93	93	0		None/ unknown	1978	73	John Day WA
Lower Yakima Wetlands	Tillman	Yakama Nation	63	63	0		Fee Title	1978	79	John Day WA
Lower Yakima Wetlands	Toppenish Creek Pumphouse	Yakama Nation	2,397	2,397	0		Mix	1978	1,236	McNary WA, The Dalles WA
Lower Yakima Wetlands	Wanity Slough	Yakama Nation	894	894	0		Mix	1978	361	Bonneville WA, McNary WA
Lower Yakima Wetlands	Wapato	Yakama Nation	1,352	1,352	0		Mix	1978	770	John Day WA, McNary WA
Lower Yakima Wetlands - South Lateral A	South Lateral A (Zimmerman)	Yakama Nation	1,114	682	432		Fee Title	1978	414	John Day WA, McNary WA
Malheur River	Malheur River Ranch (Denny Jones)	Burns-Paiute Tribe	3,329	3,329	0		Fee Title	2001	6,385	Lower Snake
Mosebar Pond	Mosebar Pond	Yakama Nation	891	791	100	0	Mix	1980	432	John Day WA, McNary WA
North Satus	North Satus	Yakama Nation	1,608	1,167	441	1,167	Mix	1979	722	John Day WA, McNary WA
Pine Creek	Pine Creek	Confederated Tribes Of Warm Springs	18,976	14,057	4,919		Fee Title	1999	25,146	John Day OR
Precious Lands WMA	Graham Tree Farm	Nez Perce Tribe	0	0						Lower Snake
Precious Lands WMA	Beach Ranch	Nez Perce Tribe	2,007	2,007						Lower Snake
Precious Lands WMA	Jackman	Nez Perce Tribe	4,532	4,532						Lower Snake
Precious Lands WMA	ODL #1	Nez Perce Tribe	911	911						Lower Snake
Precious Lands WMA	ODL #2	Nez Perce Tribe	240	240						Lower Snake
Precious Lands WMA	Helm	Nez Perce Tribe	13,428	13,428	0		Fee Title	1999	10,306	Lower Snake
Rainwater Ranch	Rainwater Ranch	Umatilla Confederated Tribes (CTUIR)	5,187	5,187	0		Fee Title	1998	8,768	McNary WA
Shillapoo - BPA	Egger	WDFW	698	307	390	0	Fee Title	1980	612	Bonneville WA, John Day WA
Shillapoo - BPA	Herzog	WDFW	239	106	134	0	Fee Title	1978	210	Bonneville WA, John Day WA

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Shillapoo - WDFW	Chapman Island	WDFW	25	12	13	0	No purchase (enhancement only)	1978	60	Bonneville WA
Shillapoo - WDFW	Shillapoo	WDFW	421	208	213	0	No purchase (enhancement only)	1978	1,012	Bonneville WA, John Day WA
Shillapoo - WDFW	Vancouver Lake - Alcoa	WDFW	199	98	100	0	No purchase (enhancement only)	1978	477	Bonneville WA, John Day WA, The Dalles WA
Steigerwald Lake NWR	Bliss	USFWS	8	8	0		Fee Title	1996	9	Bonneville WA
Steigerwald Lake NWR	Burlington Northern	USFWS	18	18	0		Fee Title	1999	27	Bonneville WA
Steigerwald Lake NWR	James	USFWS	56	56	0		Fee Title	1996	90	Bonneville WA
Steigerwald Lake NWR	Straub	USFWS	119	119	0		Fee Title	1995	191	Bonneville WA
Sunnyside - WDFW	Sunnyside - WDFW	WDFW	5,171	2,846	2,325	4,330	None/unknown	1996	8,391	Grand Coulee, John Day WA, McNary WA
Wanaket	Wanaket (Conforth Ranch)	Umatilla Confederated Tribes (CTUIR)	3,085	2,334	751		Fee Title	1993	2,765	McNary OR

Northern Idaho

January, 2011

Introduction

The Wildlife Crediting Forum (**Forum**) was chartered in late 2009 by the Northwest Power and Conservation Council (**NPCC**) to provide input on the Council’s Wildlife Crediting Program (**WCP**). NPCC chartered the Forum to provide advice on the quantifying and accounting system (informally known as the **Ledger**) for the wildlife habitat mitigation credits associated with the construction and inundation impacts of the Federal Columbia River Power System (**FCRPS**) within the Columbia River Basin (**Basin**). The database that currently houses the Ledger is called **Pisces**. The WCP was initiated in 1981, and has been modified from time to time (most recently in 2009) by NPCC in updating the overarching Columbia River Basin Fish and Wildlife Program (**Program**).

The activities of the Forum are documented in a **Forum Summary Report** that is currently in review draft. As requested at the December 2, 2010 meeting of the Forum, four separate sub-regional (see the table below for sub-regions) analyses have been performed to understand the implication of various crediting choices and decisions. These four supplemental analyses reflect the heading structure of the overall Summary Report, but provide more detail to help review each sub-region’s remaining issues with respect to the WCP. *Note: The ratings in the “Level of Agreement” table below were made in consultation with NPCC staff. Although reviewed in draft form by the Forum on December 2, 2010, these ratings have not been concurred in by the Forum.*

Level of Agreement on Issues by Sub-Region

	A. Federal Lands	B. Fish Projects	C. HEP Issues	D. Loss Assessment	I. Ratios	J. Facility Assignment	K. O&M	L. Inundation Gains	M. Pre-Act Mitigation
Lower Four and Lower Snake	High	Low	Low	High	Low	Low	Low	Low	Low
Upper Columbia	High	Medium	High	High	Low	High	Low	Medium	High
Upper Snake	Low	High	Medium	Low	Low	Low	Low	Medium	High
Northern Idaho	High	High	Low	Low	Low	High	Low	High	High

Data Source

The data used here is an updated version of the Ledger from the wildlife mitigation data in Pisces and in the Program. Updates include new information from managers and the regional HEP team. This data includes some parcels not included in Pisces and will differ from reports generated out of Pisces.

To conduct the analysis for each region parcel level data was necessary. In some cases HEP data is available at the parcel level. However, many follow-up HEP surveys have only been recorded in Pisces at the Wildlife Management Area (WMA) level. In this case, the WMA data was apportioned to parcels based on the acreage ratio of the parcel to area. In some cases the minimum HU letter was the only source for HU data, or the minimum HU amount was greater than subsequent HEP surveys. In these cases the minimum HU was used as the parcel's value.

A. Federal Lands

There no current issues on the use of federal lands for wildlife mitigation projects in this sub-region.

B. Credits for Fish Mitigation

There are no fish projects within this sub-region.

C. HEP Application Variations

The variation of HEP models at facilities and at mitigation projects sites is not considered a challenge aside from some individual cases. In general the loss assessment and projects in this sub-region have applied HEP more uniformly when compared with other sub-regions in the Basin.

Table C-1: Acres and HU by Manager*

Manager	Acres	Current	Protected	Enhancement	Minimum
CdA Tribe	3,432	3,284	1,671	239	3,155
CdA Tribe, IDFG, Kalispel Tribe, KTI	163	454	454	0	0
IDFG	3,660	4,046	768	96	3,182
Kalispel Tribe	4,158	5,209	2,150	0	3,292
KTI	1,120	1,324	115	0	1,209
Grand Total	12,533	14,317	5,158	335	10,838

* Note: In general, the Current total is a sum of the Protected, Enhanced and where applicable Minimum HU totals by WMA. Minimum values are summed only when they are greater than the results of HEP surveys or no HEP survey has been entered into Pisces. Goose Haven, Benewah and Kalispel Beaver Lake-Strong have Minimum's greater than HEP results. But the HEP results are presented here for reference.

I. Ratio Application

The application of any ratios in the WCP are not agreed on by all Forum members, but are documented in the Forum Summary Report. Table I-1 below documents how projects in this sub-region break out based on the year they were booked to the Ledger.

The percentage column measures the proportion of projects which the 2:1 ration would apply to, based on the 2009 Program. Multiple opinions were expressed on how to handle the results of this ratio analysis, and further analysis should be completed manager-by-manager as needed. Table J-2 below

provides the losses for this sub-region and those losses can be compared to Table I-4 to determine the level of mitigation. If 2:1 is the adopted policy, the 1978-2001 total can be subtracted 1:1 from the losses. The remainder then can be doubled to compare to the 2001-Present data.

Table I-1: Dates of Project Credits

Fiscal Years	Parcel Current HU	Percent of Total
1978-2001	6,251	43.7%
2001-Present	6,674	46.6%
No Data*	1,392	9.7%
Grand Total	14,317	100%

* Parcels with no data include: Trout-Elkhorn Flats, Gold Creek, Kline, Marsh, and Shield 2.

J. Facility Assignment

Please note that in Table J-1, a number of projects are combined together and it is not clear how to separate out the portion of HU's assigned. This creates a series of composite projects with multiple facilities listed.

Table J-1: Habitat Unit Assignment to Facilities

Projects	Current	Protected	Enhanced	Minimum
Albeni Falls	14,317	5,158	335	12,533
Grand Total	14,317	5,158	335	12,533

Table J-2: Loss Assessment by Facilities

Facility	Habitat Units (Exc. Gains)
Albeni Falls	-28,658
Total	-28,658

L. Inundation Gains

The 2009 Program includes totals for species gains from inundation, but does not specify the role of these gains in evaluating mitigation. The data is presented here as additional issue to be addressed at the sub-region. One species is included in the adopted 2009 *Program Table C-4* for this sub-region. It is:

Table L-1: Inundation Gains by Species

Species	HU
Yellow Warbler	171
Total	171

M. Pre-Act Mitigation

Pre-Act mitigation does not apply to this sub-region.

Parcel Accounting Concerns

Parcel data has been updated with assistance from managers and the HEP regional team leader. This is reflected in the parcel data attached to this report. WDFW data is one area that may require extra review. Goose Haven, Benewah and Kalispel Beaver Lake-Strong have Minimum's HU letter totals greater than subsequent HEP results. These parcels may need to be reviewed.

Parcel Data for the Sub-Region

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Albeni Cove	Albeni Cove	IDFG	96	0	96	95	Fee Title	2000	70	Albeni Falls
Beaver Lake	Kalispel Beaver Lake-Strong	Kalispel Tribe	255	233	0	255	Fee Title	2003	255	Albeni Falls
Beaver Lake	West Beaver Lake	Kalispel Tribe	103	103	0	40	Fee Title	2004	40	Albeni Falls
Beaver Lake	North Eaton Lake	Kalispel Tribe	235	235	0	105	Fee Title	2005	90	Albeni Falls
Beaver Lake	Gamlin Lake	Kalispel Tribe	274	274	0	244	Fee Title	2002	156	Albeni Falls
Beaver Lake	South Eaton Lake	Kalispel Tribe								Albeni Falls
Benewah Creek	Benewah Creek	CdA Tribe	832	831	0	832	Fee Title	2001	411	Albeni Falls
Boundary Creek WMA	Boundary Creek	IDFG	607			607	Fee Title	1999	1,405	Albeni Falls
Boundary Creek WMA	Smith Creek	IDFG	86			86	No purchase (enhancement only)	2007	620	Albeni Falls
Boundary Creek WMA	Deep Creek	IDFG	78	78	0	78	No purchase (enhancement only)	2005	40	Albeni Falls
Boundary Creek WMA	Sullivan	IDFG	24			24	Fee Title	2008	24	Albeni Falls
Calispell Creek	Calispell Creek - Northwest - Carney	Kalispel Tribe	268			268	None/unknown	2007	442	Albeni Falls
Calispell Creek	Calispell Creek - Northeast - Twigg	Kalispel Tribe	140	140	0	90	None/unknown	2004	170	Albeni Falls
Carey Creek	Carey Creek	Kalispel Tribe	173	173	0	164	Fee Title	2002	117	Albeni Falls
Coeur d Alene Goose Haven	Goose Haven Lake	CdA Tribe	1,078	774		1,078	None/unknown	2002	648	Albeni Falls
Coeur d'Alene River	Cougar Creek	CdA Tribe, IDFG, Kalispel Tribe, KTI	454	454	0	163	None/unknown	2006	163	Albeni Falls
Elkhorn Flats	Trout - Elkhorn Flats	CdA Tribe	650			650			612	Albeni Falls
Flying Goose Ranch 1	Flying Goose Ranch	Kalispel Tribe	945			945	Fee Title	1992	436	Albeni Falls
Flying Goose Ranch II - Dilling	Flying Goose Ranch II - Dilling Addition	Kalispel Tribe	367			367	Fee Title	1997	164	Albeni Falls
hnt'k'wipn (Place of Beginning)	Upper Hangman Creek	CdA Tribe	364			364	Fee Title	2005	1,382	Albeni Falls
IDFG Gold Creek	Gold Creek	IDFG	606	606	0	310			310	Albeni Falls
Kalispel Tribe Sand Creek WMA	Sand Creek	Kalispel Tribe	126			126	None/unknown	2006	80	Albeni Falls
Kalispel Tribe-Big Meadows	Big Meadows	Kalispel Tribe	620			620	Fee Title	2007	620	Albeni Falls
Kalispel Tribes - Priest River	Priest River	Kalispel Tribe	142	142	0	105	Fee Title	2001	63	Albeni Falls
Kootenai River Flood Plain	Nimz Ranch	KTI	693			693	Fee Title	2009	693	Albeni Falls
Kootenai River Flood Plain	Trout Creek Peninsula	KTI	70			70	Fee Title	2002	112	Albeni Falls
Lake Creek	Windy Bay	CdA Tribe	67	66	239	67	Fee Title	2002	148	Albeni Falls
Lower Pack River IDFG	Lower Pack River	IDFG	84	84	0	30	Fee Title	1999	30	Albeni Falls
Moyie Springs	Perkins Lake	KTI	115	115	0	115	Fee Title	2002	99	Albeni Falls
Pend Oreille WMA	Gold Creek	IDFG	606			606	Fee Title	2005	310	Albeni Falls

Wildlife Crediting Form

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Pend Oreille WMA	Derr Creek	IDFG	380			380	Fee Title	1997	240	Albeni Falls
Pend Oreille WMA	Carter's Island	IDFG	311			311	Fee Title	1997	96	Albeni Falls
Pend Oreille WMA	Cocolalla Lake	IDFG	186			186	Fee Title	2000	98	Albeni Falls
Pend Oreille WMA	Lower St. Joe	IDFG	87			87	Fee Title	2007	62	Albeni Falls
Pend Oreille WMA	Westmond Lake	IDFG	87			87	Fee Title	2000	65	Albeni Falls
Pend Oreille WMA	Marsh	IDFG	49			49			49	Albeni Falls
Pend Oreille WMA	Denton Slough	IDFG	41			41	Fee Title	1997	17	Albeni Falls
Pend Oreille WMA	Anselmo	IDFG	27			27	Fee Title	2008	27	Albeni Falls
Pend Oreille WMA	Kline	IDFG	20			20			20	Albeni Falls
Rapid Lightning	Rapid Lightning	IDFG	604			604	Fee Title	1999	110	Albeni Falls
Rapid Lightning	Shields 2	IDFG	67			67			67	Albeni Falls
Rapid Lightning	Ginter 1	IDFG								Albeni Falls
Rapid Lightning	Ginter 2	IDFG								Albeni Falls
Rapid Lightning	Shield/Pack River Ridge	IDFG								Albeni Falls
St Joe	Hepton	CdA Tribe	206			144	Mix	2007	144	Albeni Falls
St Joe	St Joe	CdA Tribe	87			87	Fee Title	2007	87	Albeni Falls
Tacoma Creek	Tacoma Creek - North - Sivert	Kalispel Tribe	412	412	0	412	Fee Title	2000	437	Albeni Falls
Tacoma Creek	Tacoma Creek - South - Carstens	Kalispel Tribe	187	187	0	76	Fee Title	2004	94	Albeni Falls
Trimble Creek	Lower Trimble Creek - Scheibel	Kalispel Tribe	528			528	Fee Title	2001	450	Albeni Falls
Trimble Creek	Upper Trimble Creek - South - Doramus	Kalispel Tribe	183			183	Fee Title	2000	303	Albeni Falls
Trimble Creek	Upper Trimble Creek - North - Testall	Kalispel Tribe	251	251	0	120	Fee Title	2004	241	Albeni Falls
Trout Creek	Trout Creek	KTI	446			446	Fee Title	2000	216	Albeni Falls

Upper Columbia

March, 2011

Introduction

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Level of Agreement on Issues by Sub-Region

	A. Federal Lands	B. Fish Projects	C. HEP Issues	D. Loss Assessment	I. Ratios	J. Facility Assignment	K. O&M	L. Inundation Gains	M. Pre-Act Mitigation
Lower Four and Lower Snake	High	Low	Low	High	Low	Low	Low	Low	Low
Upper Columbia	High	Medium	High	High	Low	High	Low	Medium	High
Upper Snake	Low	High	Medium	Low	Low	Low	Low	Medium	High
Northern Idaho	High	High	Low	Low	Low	High	Low	High	High

Data Source

The data used here is an updated version of the Ledger from the wildlife mitigation data in Pisces and in the Program. Updates include new information from managers and the regional HEP team. This data includes some parcels not included in Pisces and will differ from reports generated out of Pisces.

To conduct the analysis for each region parcel level data was necessary. In some cases HEP data is available at the parcel level. However, many follow-up HEP surveys have only been recorded in Pisces at the Wildlife Management Area (WMA) level. In this case, the WMA data was apportioned to parcels based on the acreage ratio of the parcel to area. In some cases the minimum HU letter was the only source for HU data, or the minimum HU amount was greater than subsequent HEP surveys. In these cases the minimum HU was used as the parcel’s value.

A. Federal Lands

There are no remaining issues on the use of federal lands for wildlife mitigation projects in this sub-region.

B. Credits for Fish Mitigation

Of the 24 fish projects reviewed by Forum, 5 are within this sub-region. The projects are all in tier 2, meaning there are several issues that must be reviewed before these can be included in the Ledger.

Table B-1: Candidate Fish Projects for Wildlife Credits

Parcel Name	Proponent	Sub-Basin	Acres	Tier
Colville Fish Habitat Projects	Colville Tribes	Okonogan	176	2
Cottonwood Farms / Witte Place	NFWF, Methow Conservancy	Methow	54	2
Hancock Springs	NFWF, Methow Conservancy	Methow	122	2
Heath	NFWF, Methow Conservancy	Methow	140	2
Mid-Methow / Lehman	NFWF, Methow Conservancy	Methow	93	2

These projects are expected to meet the following requirements before inclusion in the Ledger:

- Specific wildlife management plans for the project area need to be completed, approved and implemented.
- Long-term operations and maintenance funding for wildlife species/habitats must be in place and “adequate”.
- Appropriate permanent land protections (easements) should be applied, in perpetuity and with adequate protection language.
- The protected wildlife species/populations/habitats should be “priority” and so defined by in-place Federal, state or tribal management or sub-basin plans.

C. HEP Application Variations

The variation of HEP models at facilities and at mitigation projects sites is not considered a challenge aside from some individual cases. In general the loss assessment and projects in this sub-region have applied HEP more uniformly when compared with other sub-regions in the Basin.

Table C-1: Acres and HU by Manager*

Manager	Acres	Current	Protected	Enhancement	Minimum
Colville Confederated Tribes	59,257	37,731	37,812	0	2,639
Spokane Tribe	4,233	4,487	4,476	0	38
USFWS	906	421	421	0	0
WDFW	141,345	81,079	63,541	15,720	1,014
Grand Total	205,741	123,718	106,250	15,720	3,691

* Note: In general, the Current total is a sum of the Protected, Enhanced and where applicable Minimum HU totals by WMA. Minimum values are summed only when they are greater than the results of HEP surveys or no HEP survey has been entered into Pisces. Colville parcels Brim, Jacobson, and Redthunder have Minimum's greater than HEP results. But the HEP results are presented here for reference.

I. Ratio Application

The application of any ratios in the WCP are not agreed on by all Forum members, but are documented in the Forum Summary Report. Table I-1 below documents how projects in this sub-region break out based on the year they were booked to the Ledger.

The percentage column measures the proportion of projects which the 2:1 ration would apply to, based on the 2009 Program. Multiple opinions were expressed on how to handle the results of this ratio analysis, and further analysis should be completed manager-by-manager as needed. Table J-2 below provides the losses for this sub-region and those losses can be compared to Table I-4 to determine the level of mitigation. If 2:1 is the adopted policy, the 1978-2001 total can be subtracted 1:1 from the losses. The remainder then can be doubled to compare to the 2001-Present data.

Table I-1: Dates of Project Credits

Fiscal Years	Parcel Current HU	Percent of Total
1978-2001	77,074	62.3%
2001-Present	40,274	32.6%
No data	6,370	5.1%
Grand Total	123,718	100%

J. Facility Assignment

Assignment of habitat units to facilities is most clear for this sub-region. Please note that in Table J-1, a number of projects are combined together and it is not clear how to separate out the portion of HU's assigned. This creates composite projects with multiple facilities listed.

Table J-1: Habitat Unit Assignment to Facilities

Projects	Current	Protected	Enhanced	Minimum
Chief Joseph	3,941	3,941	0	0
Chief Joseph, Grand Coulee	41,884	40,145	1,637	2,570
Chief Joseph, John Day WA, McNary WA	1,193	776	417	0
Grand Coulee	76,700	61,388	13,666	1,121
Grand Total	123,718	106,250	15,720	3,691

Table J-2: Loss Assessment by Facilities

Facility	Habitat Units (Exc. Gains)
Chief Joseph	-8,833
Grand Coulee	-111,515
Total	-120,348

L. Inundation Gains

The 2009 Program includes totals for species gains from inundation, but does not specify the role of these gains in evaluating mitigation. The data is presented here as additional issue to be addressed at the sub-region. One species is included in the adopted 2009 *Program Table C-4* for this sub-region. It is:

Table L-1: Inundation Gains by Species

Species	HU
Lesser Scaup	1,440
Total	1,440

M. Pre-Act Mitigation

Pre-Act mitigation does not apply to this sub-region.

Parcel Accounting Concerns

Parcel data has been updated with assistance from managers and the HEP regional team leader. This is reflected in the parcel data attached to this report. WDFW data is one area that may require extra review. Colville parcels Brim, Jacobson, and Redthunder have Minimum's greater than HEP results. These parcels may need to be reviewed.

Parcel Data for the Sub-Region

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Agency Butte	Agency Butte (Colville Tribal Land)	Colville Confederated Tribes	948	948	0		No purchase (enhancement only)	1999	2,388	Grand Coulee
Agency Butte	Hinman	Colville Confederated Tribes	368	368	0		Fee Title	1998	770	Grand Coulee
Asotin Creek - BPA	Schlee (BPA portion)	WDFW	7,642	7,642	0	7,000	Fee Title	2004	8,459	Grand Coulee
Asotin Creek - WDFW	Schlee (WDFW portion)	WDFW	496	259	237	0	Fee Title	2004	1,218	Grand Coulee
Asotin Creek - WDFW	Bickford	WDFW	670	349	321		No purchase (enhancement only)	2006	1,646	Grand Coulee
Berg	Berg 20%	Colville Confederated Tribes	1,524	1,524	0	0		Pre 1997	1,927	Chief Joseph, Grand Coulee
Berg	Berg Brothers	Colville Confederated Tribes	3,564	3,564	0		Easement	1995	5,672	Chief Joseph, Grand Coulee
Berg	Nespelem Bend	Colville Confederated Tribes	263	263	0		Fee Title	1997	516	Chief Joseph, Grand Coulee
Blue Creek Winter Range	Allotment 322	Spokane Tribe	140	140	0		Fee Title	1991	78	Grand Coulee
Blue Creek Winter Range	Blue Creek (Land Swap)	Spokane Tribe	1,121	1,121	0		Exchange	1997	701	Grand Coulee
Blue Creek Winter Range	Blue Creek (Tribal Contribution)	Spokane Tribe	60	60	0		None/unknown	1999	36	Grand Coulee
Bridge Creek	Henry Kuehne	Colville Confederated Tribes	41	41	0	0			74	Grand Coulee
Bridge Creek	William Kuehne	Colville Confederated Tribes	41	41	0	0			63	Grand Coulee
Brim	Brim	Colville Confederated Tribes	138	338	0	138	Fee Title	2009	324	Grand Coulee
Cottonwood	Allotment 13-B	Spokane Tribe	31	31	0	21	Fee Title	2006	60	Grand Coulee
Cottonwood	Allotment 314	Spokane Tribe	60	60	0	36	Fee Title	2006	80	Grand Coulee
Cottonwood	Allotment 599	Spokane Tribe	89	89	0	40	Fee Title	2006	100	Grand Coulee
Cottonwood	Allotment 1074-Mercer	Spokane Tribe	119	119	0	55	Fee Title	2006	100	Grand Coulee
Cottonwood	Allotment 1074-Hill	Spokane Tribe	234	234	0	56	Fee Title	2006	120	Grand Coulee

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Desert - WDFW	Desert - WDFW	WDFW	1,193	776	417	0	No purchase (enhancement only)	2006	1,000	Chief Joseph, John Day WA, McNary WA
Eder	Eder	WDFW	3,857	3,857	0	3,857	Fee Title	2007	3,337	Chief Joseph
Fox Creek	Kieffer	Spokane Tribe	38	38	0		Fee Title	1997	40	Grand Coulee
Fox Creek	Smith	Spokane Tribe	141	141	0		Fee Title	1998	160	Grand Coulee
Hellgate Winter Range	Rattlesnake	Colville Confederated Tribes	7,421	7,421	0	7,421	Fee Title	2006	10,293	Grand Coulee
Hellgate Winter Range	Covington	Colville Confederated Tribes	69	52	0	69	Fee Title	2000	129	Grand Coulee
Hellgate Winter Range	Bill Kuenhe	Colville Confederated Tribes	4,089	4,089	0		Fee Title	1993	4,805	Chief Joseph, Grand Coulee
Hellgate Winter Range	Friedlander	Colville Confederated Tribes	12	12	0		Fee Title		60	Grand Coulee
Hellgate Winter Range	Henry Kuehne	Colville Confederated Tribes	3,795	3,795	0		Fee Title	1994	4,800	Chief Joseph, Grand Coulee
Hellgate Winter Range	Redford Canyon	Colville Confederated Tribes	118	118	0		Fee Title	1997	215	Chief Joseph, Grand Coulee
Hellgate Winter Range	Sand Hills	Colville Confederated Tribes	613	613	0		Fee Title	1995	1,400	Grand Coulee
Jacobson	Jacobson	Colville Confederated Tribes	1,313	1,280	0	1,313	Fee Title	2007	1,457	Chief Joseph, Grand Coulee
Little Pend Oreille NWR	Kaniksu Addition	USFWS	315	315	0	0	Fee Title	2000	706	Grand Coulee
Little Pend Oreille NWR	Weir	USFWS	106	106	0	0	Fee Title	1998	200	Grand Coulee
McCoy Lake	Lantzy West	Spokane Tribe	38	27	0	38	Fee Title	2004	124	Grand Coulee
McCoy Lake	Yepa	Spokane Tribe	36	36	0	13	Fee Title	2006	35	Grand Coulee
McCoy Lake	Gribner Swap	Spokane Tribe	60	60	0	28	Fee Title	2006	80	Grand Coulee
McCoy Lake	Lantzy East	Spokane Tribe	88	88	0	33	Fee Title	2004	81	Grand Coulee
McCoy Lake	Parson East	Spokane Tribe	163	163	0	83	Fee Title	2004	201	Grand Coulee
McCoy Lake	Parson West	Spokane Tribe	112	112	0	93	Fee Title	2004	301	Grand Coulee
McCoy Lake	Sampson	Spokane Tribe	238	238	0	188	Fee Title	2004	566	Grand Coulee
McCoy Lake	Allotment 401-A	Spokane Tribe	57	57	0		Fee Title	1996	35	Grand Coulee
McCoy Lake	Etue	Spokane Tribe	123	123	0		Fee Title	1999	74	Grand Coulee
McCoy Lake	Harris	Spokane Tribe	291	291	0		Fee Title	1997	180	Grand Coulee
McCoy Lake	Kenworthy	Spokane Tribe	78	78	0		Fee Title	1998	40	Grand Coulee
McCoy Lake	People	Spokane Tribe	528	528	0		Fee Title	1999	317	Grand Coulee
McCoy Lake	People (Tribal)	Spokane Tribe	204	204	0		Fee Title	1999	123	Grand Coulee
North Omak Lake	Jacobson 1 and 3	Colville Confederated Tribes	1,320	1,320	0	689	Fee Title	2009	1,387	Chief Joseph, Grand Coulee

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Redthunder	Redthunder	Colville Confederated Tribes	1,257	1,188	0	1,257	Easement	2007	1,355	Chief Joseph, Grand Coulee
Sage Flat - BPA	Chester Butte (MJM Ranch)	WDFW	3,144	2,018	1,126		Fee Title	1978	2,206	Grand Coulee
Sage Flat - BPA	Dormaier	WDFW	456	293	163		Fee Title	1978	320	Grand Coulee
Sage Flat - BPA	West Foster (Smith)	WDFW	2,814	1,806	1,008		Fee Title	1978	1,974	Grand Coulee
Sage Flat - WDFW	Pygmy Rabbit CRMP - DNR	WDFW	1,750	1,750	0	0	Fee Title	1978	3,500	Grand Coulee
Sage Flat - WDFW	West Foster Creek Expansion	WDFW	4,902	4,902	0	4,000	No purchase (enhancement only)	2005	3,756	Chief Joseph, Grand Coulee
Sage Flat - WDFW	Sagebrush Flat (Douglas County Pygmy Rabbit)	WDFW	146	146	0		None/unknown	1978	240	Grand Coulee
Scotch Creek - BPA	Happy Hill (Brown)	WDFW	33	13	21		Fee Title	1978	61	Grand Coulee
Scotch Creek - BPA	Tunk (Fisher, Crawfish Lake, and A&M Northland)	WDFW	176	67	108		None/unknown	1978	320	Grand Coulee
Scotch Creek - WDFW	Scotch Creek - WDFW	WDFW	6,919	5,282	1,637	0	No purchase (enhancement only)	1996	15,084	Chief Joseph, Grand Coulee
South Omak Lake	Boot Mountain	Colville Confederated Tribes	4,779	4,779	0	0			7,532	Chief Joseph, Grand Coulee
South Omak Lake	Colville Allotments	Colville Confederated Tribes	30	30		22	No purchase (enhancement only)	2000	80	Grand Coulee
South Omak Lake	Graves	Colville Confederated Tribes	1,453	1,453	0		Fee Title	2000	2,730	Grand Coulee
Swanson Lakes - BPA	Swanson Lakes - BPA	WDFW	17,570	12,031	5,539	12,031	None/unknown	1978	14,840	Grand Coulee
Swanson Lakes - WDFW	Swanson Lakes - WDFW	WDFW	4,602	1,197	3,406	3,108	None/unknown	1978	5,225	Grand Coulee
Tshimikain	Allotment 283-A	Spokane Tribe	55	55	0	20	Fee Title	2006	73	Grand Coulee
Tumwater Basin	Tumwater (Joy)	Colville Confederated Tribes	3,078	3,078	0	0	Easement	2005	6,809	Chief Joseph, Grand Coulee
Wellpinit Mtn WA	Allotment 86	Spokane Tribe	17	17	0	12	Fee Title	2006	40	Grand Coulee
Wellpinit Mtn WA	A-75	Spokane Tribe	44	44	0	18	None/unknown	2006	70	Grand Coulee
Wellpinit Mtn WA	483-B	Spokane Tribe	42	42	0	20	Fee Title	2006	70	Grand Coulee
Wellpinit Mtn WA	Allotment 65-C	Spokane Tribe	25	25	0	21	Fee Title	2004	40	Grand Coulee
Wellpinit Mtn WA	Allotment 1052	Spokane Tribe	93	93	0	48	Easement	2006	79	Grand Coulee
Wellpinit Mtn WA	Allotment 154	Spokane Tribe	73	73	0	69	Fee Title	2005	149	Grand Coulee
Wellpinit Mtn WA	Allotment 67-B	Spokane Tribe	89	89	0		Fee Title	1996	80	Grand Coulee
Wenas - BPA	Roza Creek	WDFW	1,020	1,020	0	0	Lease	1978	2,111	Grand Coulee
Wenas - BPA	S. Umtanum Ridge	WDFW	2,452	5,181	-2,729	0	Lease	1978	9,962	Grand Coulee

Wildlife Crediting Form

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Wenas - BPA	Umtanum Creek	WDFW	5,181	4,552	629	0	Lease	1978	4,326	Grand Coulee
Wenas - WDFW	Roza Creek	WDFW	2,018	1,306	712	0	No purchase (enhancement only)	1978	10,738	Grand Coulee
Wenas - WDFW	S. Umtanum Ridge	WDFW	4,057	1,535	1,521	0	No purchase (enhancement only)	1978	25,224	Grand Coulee
Wenas - WDFW	Umtanum Creek	WDFW	4,527	2,923	1,604	0	No purchase (enhancement only)	1978	21,659	Grand Coulee
West Foster Creek/Dezelle Lake	JoJaCo - Smith 2	WDFW	3,466	3,466	0	3,466	Fee Title	2004	2,638	Chief Joseph, Grand Coulee
West Foster Creek/Dezelle Lake	Dezelle Lake	WDFW	665	196		665	Fee Title	2004	469	Grand Coulee
West Foster Creek/Dezelle Lake	North Bridgeport	WDFW	349			349	Fee Title	2004	321	Grand Coulee
West Foster Creek/Dezelle Lake	SBF Middle	WDFW	223	223	0	223	Fee Title	2004	162	Grand Coulee
West Foster Creek/Dezelle Lake	McClain Lake	WDFW	667	667	0	665	Fee Title	2004	469	Grand Coulee
Western Pond Turtle	Headstart Program	WDFW	84	84	0	80	No purchase (enhancement only)	2001	80	Chief Joseph
White Lakes	White Lakes	Colville Confederated Tribes	1,497	1,497	0				4,471	Chief Joseph, Grand Coulee

Upper Snake

March, 2011

Introduction

The Wildlife Crediting Forum (**Forum**) was chartered in late 2009 by the Northwest Power and Conservation Council (**NPCC**) to provide input on the Council’s Wildlife Crediting Program (**WCP**). NPCC chartered the Forum to provide advice on the quantifying and accounting system (informally known as the **Ledger**) for the wildlife habitat mitigation credits associated with the construction and inundation impacts of the Federal Columbia River Power System (**FCRPS**) within the Columbia River Basin (**Basin**). The database that currently houses the Ledger is called **Pisces**. The WCP was initiated in 1981, and has been modified from time to time (most recently in 2009) by NPCC in updating the overarching Columbia River Basin Fish and Wildlife Program (**Program**).

The activities of the Forum are documented in a **Forum Summary Report** that is currently in review draft. As requested at the December 2, 2010 meeting of the Forum, four separate sub-regional (see the table below for sub-regions) analyses have been performed to understand the implication of various crediting choices and decisions. These four supplemental analyses reflect the heading structure of the overall Summary Report, but provide more detail to help review each sub-region’s remaining issues with respect to the WCP. *Note: The ratings in the “Level of Agreement” table below were made in consultation with NPCC staff. Although reviewed in draft form by the Forum on December 2, 2010, these ratings have not been concurred in by the Forum.*

Level of Agreement on Issues by Sub-Region

	A. Federal Lands	B. Fish Projects	C. HEP Issues	D. Loss Assessment	I. Ratios	J. Facility Assignment	K. O&M	L. Inundation Gains	M. Pre-Act Mitigation
Lower Four and Lower Snake	High	Low	Low	High	Low	Low	Low	Low	Low
Upper Columbia	High	Medium	High	High	Low	High	Low	Medium	High
Upper Snake	Low	High	Medium	Low	Low	Low	Low	Medium	High
Northern Idaho	High	High	Low	Low	Low	High	Low	High	High

Data Source

The data used here is an updated version of the Ledger from the wildlife mitigation data in Pisces and in the Program. Updates include new information from managers and the regional HEP team. This data includes some parcels not included in Pisces and will differ from reports generated out of Pisces.

To conduct the analysis for each region parcel level data was necessary. In some cases HEP data is available at the parcel level. However, many follow-up HEP surveys have only been recorded in Pisces at the Wildlife Management Area (WMA) level. In this case, the WMA data was apportioned to parcels based on the acreage ratio of the parcel to area. In some cases the minimum HU letter was the only source for HU data, or the minimum HU amount was greater than subsequent HEP surveys. In these cases the minimum HU was used as the parcel’s value.

A. Federal Lands

There are no remaining issues on the use of federal lands for wildlife mitigation projects in this sub-region.

B. Credits for Fish Mitigation

Three potential fish projects on federal land need to be further evaluated. These are Bear Valley, Deer Creek and Elk Creek. The projects were riparian fish projects completed on US Forest Service property may include some wildlife habitat benefits associated with the management actions. These projects are expected to meet the following requirements before inclusion in the credit Ledger:

- Specific wildlife management plans for the project area need to be completed, approved and implemented.
- Long-term operations and maintenance funding for wildlife species/habitats must be in place and “adequate”.
- Appropriate permanent land protections (easements) should be applied, in perpetuity and with adequate protection language.
- The protected wildlife species/populations/habitats should be “priority” and so defined by in-place Federal, state or tribal management or sub-basin plans.

C. HEP Application Variations

The primary source of concern for HEP application is in the loss assessments. The Shoshone-Bannock, Shoshone-Paiute, Idaho Department of Fish and Game (IDFG) and CBWFA staff are re-examining the Anderson Ranch, Palisades, Black Canyon, Minadoka, and Deadwood loss assessments for accuracy and consistency relative to other loss assessments across the Basin.

Table C-1: Acres and HU by Manager*

Manager	Acres	Current	Protected	Enhancement	Minimum
IDFG	10,193	14,886	13,059	459	1,368

Shoshone-Bannock Tribes	5,160	8,028	5,898	1,904	226
Shoshone-Paiute Tribes	938	557			557
Grand Total	16,291	23,471	18,957	2,363	2,151

* Note: In general, the Current total is a sum of the Protected, Enhanced and where applicable Minimum HU totals by WMA. Minimum values are summed only when they are greater than the results of HEP surveys or no HEP survey has been entered into Pisces.

I. Ratio Application

The application of any ratios in the WCP are not agreed on by all Forum members, but are documented in the Forum Summary Report. Table I-1 below documents how projects in this sub-region break out based on the year they were booked to the Ledger.

The percentage column measures the proportion of projects which the 2:1 ration would apply to, based on the 2009 Program. Multiple opinions were expressed on how to handle the results of this ratio analysis, and further analysis should be completed manager-by-manager as needed. Table J-2 below provides the losses for this sub-region and those losses can be compared to Table I-4 to determine the level of mitigation. If 2:1 is the adopted policy, the 1978-2001 total can be subtracted 1:1 from the losses. The remainder then can be doubled to compare to the 2001-Present data.

Table I-1: Dates of Project Credits

Fiscal Years	Parcel Current HU	Percent of Total
1978-2001	19,703	84%
2001-Present	3,768	16%
Grand Total	23,471	100%

J. Facility Assignment

Please note that in Table J-1, a number of projects are combined together and it is not clear how to separate out the portion of HU's assigned. This creates a series of composite projects with multiple facilities listed.

Table J-1: Habitat Unit Assignment to Facilities

Projects	Current	Protected	Enhanced	Minimum
Anderson Ranch	2,988	1,063	0	1,925
Black Canyon	57	57	0	0
Deadwood	0	0	0	0
Minidoka	338	112	0	226
Minidoka, Palisades	3,769	2,576	1,193	0
Palisades	16,319	15,149	1,170	0
Grand Total	23,471	18,957	2,363	2,151

Table J-2: Loss Assessment by Facilities

Facility	Habitat Units (Exc. Gains)
Anderson Ranch	-9,619
Black Canyon	-2,170
Deadwood	-4,787
Minidoka	-10,503
Palisades	-37,070
Grand Total	-64,149

L. Inundation Gains

The 2009 Program includes totals for species gains from inundation, but does not specify the role of these gains in evaluating mitigation. The data is presented here as additional issue to be addressed at the sub-region. Six species are included in the adopted 2009 *Program Table C-4* for this sub-region. They are:

Table L-1: Inundation Gains by Species

Species	HU
Black-capped Chickadee	68
Mallard	174
Marsh Wren	207
Redhead	4,475
Western Grebe	273
Yellow Warbler	8
Total	5,205

M. Pre-Act Mitigation

Pre-Act mitigation does not apply to this sub-region.

Parcel Accounting Concerns

Parcel data has been updated with assistance from managers and the HEP regional team leader. This is reflected in the parcel data attached to this report.

Parcel Data for the Sub-Region

WMA	Parcel	Proponent	Current HU	Protected HU	Enhancement HU	Minimum HU	Purchase Type	Purchase FY	Acres	Mitigated Dams
Bannock Creek	Bannock Creek	Shoshone-Bannock Tribes	226			226	Fee Title	2008	147	Minidoka
Big Cottonwood WMA	Big Cottonwood	IDFG	112	112	0	112	No purchase (enhancement only)	1998	230	Minidoka
Boise River WMA	Smith	IDFG	17			17	Fee Title	2008	59	Anderson Ranch
Boise River WMA	Krueger	IDFG	57	57	0		Fee Title	1999	166	Black Canyon
Camas Prairie	Rice Property	IDFG	1,063	1,063	0		Fee Title	2002	1,364	Anderson Ranch
Centennial Marsh	Bliss Point/Faulkner	IDFG	1,351			1,351	Fee Title	2008	1,802	Anderson Ranch
Deer Parks WMU	Allen	IDFG	215	222	-8		Fee Title	2002	81	Minidoka, Palisades
Deer Parks WMU	Boyle Ranch	IDFG	6,774	7,019	-245		Fee Title	1999	2,556	Palisades
Deer Parks WMU	Horkley	IDFG	339	351	-12		Fee Title	2002	128	Minidoka, Palisades
Deer Parks WMU	Menan (Kinghorn I)	IDFG	371	384	-13		Fee Title	1997	140	Palisades
Eastern Idaho	Palisades Noxious Weed	IDFG	499	499	0	0	No purchase (enhancement only)	1997		Palisades
IDFG-Beaver (Kinghorn II)	Beaver (Kinghorn II)	IDFG	1,134	901	233	901	Fee Title	1998	310	Palisades
Kruse Pine Creek Easement	Pine Creek (Kruse)	IDFG	1,317	813	504		Easement	1997	800	Palisades
Rudeen	Rudeen	Shoshone-Bannock Tribes	3,215	2,002	1,213		Fee Title	2000	2,450	Minidoka, Palisades
Soda Hills	Soda Springs Hills	Shoshone-Bannock Tribes	4,587	3,896	691		Fee Title	1998	2,563	Palisades
Tex Creek WMA	Quarter Circle	IDFG	1,254	1,254	0	1,254	Fee Title	1998	2,135	Palisades
Wilson	Wilson	Shoshone-Paiute Tribes	557			557	Fee Title	2010	938	Anderson Ranch
Winterfeld Easement	Winterfeld	IDFG	383	383	0		Easement	1997	422	Palisades