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MEMORANDUM

TO: Wildlife Crediting Subcommittee

FROM: Peter Paquet, Manager, Wildlife and Resident Fish

SUBJECT: May 6th Meeting

The wildlife crediting subcommittee will be meeting in Walla Walla prior to the Fish and Wildlife Committee meeting. The purpose of the meeting is threefold: 1) to review the comments received on Bonneville's estimates of the status of wildlife mitigation presented at the last subcommittee meeting. As per Council instructions, staff circulated the aforementioned document to the wildlife managers and other interested parties for review and comment (Attachments 1&2); 2) to discuss possible methods for determining of future wildlife costs, and 3) to discuss issues that might be considered in trying to develop a long term plan for wildlife mitigation. Bonneville has provided an enhanced summary of the issues it presented to the subcommittee at its last meeting (Attachment 3).

Attachment 3

WILDLIFE MITIGATION Cost Uncertainties

- Enhancement benefits have not been assessed for approximately 90% of the lands protected under the Council's F&W Program. As land is protected and competing land uses eliminated, habitat regenerates naturally. In addition, BPA has funded extensive habitat improvement measures. Wildlife Mitigation MOAs with BPA typically include a provision calling for subsequent HEPs to measure habitat improvements.
- Wildlife habitat is often a component of fish habitat projects, yet few HEPs have been completed on fish projects. Fish habitat projects with direct wildlife benefit:
 - John Day – 15,000 acres
 - Satus Watershed – 100,000 acres protected by a grazing lease
 - Elk Creek Allotment, Central Idaho – 48,000 acres
 - Riparian fencing projects - 400 miles of stream protection
 - Zumwalt Prairie Conservation Easement – 27,000 acres
- When the Burns Paiute Tribe acquired the Denny Jones property, BLM and State grazing leases of approximately 40,000 acres were attached to the base property. A methodology to credit the benefits has not been developed for these lands.
- Some hydro projects have been over-mitigated for some target species and under-mitigated for others. HEP provides alternatives regarding species and HU trade-offs. Over mitigation by species:
 - Bonneville, WA – Mink 208%
 - John Day, WA – Mink 199%
 - Grand Coulee – Sage Grouse 270%
 - John Day, OR – Western Meadowlark 318%
- Lower Snake – As of 1994 the COE estimated that it has over mitigated for some target species by approximately 16,000 HUs. These HUs have not been credited against BPA's obligation.
- Out of kind mitigation, i.e., HUs protected for species that were not impacted:
 - Albeni Falls – Yellow Warbler
 - Grand Coulee – Blue Grouse, Bobcat, Pygmy Rabbit
 - John Day, OR – Mule Deer
 - Lower Snake – Mallard, Mink, Mule Deer, Western Meadowlark

- Loss assessments for many of the dams included habitat gains. HU gains are significant (53,000 HUs or approximately 13% of the losses) and involve 12 different species, many of which the F&W Program is mitigating for:
 - Willamette - Bald Eagle
 - McNary – Mallard (wintering)
 - Minidoka – Mallard, Redhead
 - Albeni Falls – Yellow Warbler
- Willamette Basin included multiple target species as indicators for the same habitat cover type, a practice known as “stacking”. In addition, Willamette used a unique definition of “affected area” of impact that resulted in a proportionately larger study area (37%) than other dams that assessed construction and inundation impacts.
 - Lookout Point: Reservoir at full pool – 4,255 acres
Affected area – 6,790 acres
- The Corps of Engineers and the Bureau of Reclamation have also mitigated and continue to mitigate wildlife on behalf of the FCRPS. BPA funds the power share of this mitigation but has not yet included credit for it in accounting for completed mitigation.
- Should BPA provide ongoing O&M funding at current levels? BPA’s O&M commitments vary by mitigation project. In addition, BPA is asked to fund O&M at higher levels than land managers seek or provide for comparable mitigation sites with no access to BPA funding.
- The F&W Program provides for alternatives to land acquisition as a method to mitigate, and in the past has recommended that wildlife managers consider first those proposals that use publicly owned lands or management agreements on private land, in preference to acquisition of private land. Currently, 95% of the wildlife project proposals are to acquire land, yet enhancing habitat appears to be the least cost means of securing HUs.

Agreement Issues

- Inclusion of enhancement costs
- Process to encourage least cost proposals

WILDLIFE MITIGATION

Preliminary Draft Estimate

Dam	Acres	HUs	HUs	Protection					Enhancement			Total	Average	HUs	Est. Cost
	Inundated	Lost	Gained	HUs	Acres	Cost	Cost/Ac	Cost/HU	HUs	Cost	Cost/HU	HUs	Cost/HU	Remaining	Remaining
Albeni Falls	6,617	28,658	171	3,921	4,235	\$5,360,678	\$1,266	\$1,367	617	\$500,000	\$810	4,538	\$1,089	24,566	\$26,746,772
Anderson Ranch	4,740	9,619	0	1,063	1,364	\$1,078,029	\$790	\$1,014				1,063	\$1,014	8,556	\$8,676,967
Black Canyon	1,100	2,170	76	57	166	\$332,500	\$2,003	\$5,833				57	\$5,833	2,037	\$11,882,500
Lower Columbia, OR	0	0	0	0	33,475	\$7,203,601	\$215	#DIV/0!				0	#DIV/0!	0	
Lower Columbia, WA	0	0	0	36,545	21,749	\$12,303,859	\$566	\$337	9,694	\$3,797,660	\$392	46,239	\$364	-46,239	
Grand Coulee/Chief	0	0	0	41,043	60,610	\$17,137,765	\$283	\$418	21,943	\$3,107,177	\$142	62,986	\$280	-62,986	-\$17,609,580
Lower Snake		26,775	0	14,007	24,350	\$8,215,524	\$337	\$587				14,007	\$587	12,768	\$7,488,813
Palisades/Minidoka	0	0	0	17,427	11,577	10,282,150	\$888	\$590				17,427	\$590	-17,427	-\$10,282,150
Sub-total															\$26,903,323
Willamette Basin	0	0	0	0	956	\$3,548,528	\$3,712	#DIV/0!				0	#DIV/0!	0	-\$3,548,672
Totals	12,457	67,222	247	114,063	158,482	\$65,462,634			32,254	\$7,404,837		146,317		-78,725	\$23,354,651

Enhancement benefits have not been assessed for approximately 140k acres protected under the F&W Program.

Willamette Mitigation HEPs do not account for the "stacking" of multiple species consistent with the Losses Assessment. BPA is working with ODFW and NPPC staff to correct.

As of 1994 the COE estimated that it had over mitigated for some target species by approximately 16k HUs. These HUs have not been credited against BPA's obligation.

Willamette calculated using cost per acre data.

Dam	FY03		Est. Annual O&M for Remaining Mitigation
	O&M	\$/Ac	
Albeni Falls	\$554,900	\$99	
Anderson Ranch	\$60,000	\$44	
Black Canyon	\$3,000	\$18	
Lower Columbia, OR	\$577,725	\$14	
Lower Columbia, WA	\$1,388,597	\$41	
Grand Coulee/Chief	\$1,746,728	\$10	
Lower Snake	\$813,150	\$34	
Palisades/Minidoka	\$218,252	\$21	
Willamette Basin	\$90,289	\$67	
Total	\$5,452,641		6,543,169

Based on the assumption that 55% of the HU obligation remains to be accomplished

Acres Inundated - Dam construction and reservoir inundation

HUs Lost - Habitat Units lost by dam construction/inundation as determined by Losses Assessment

HUs Gained - Habitat Units gained by dam construction/inundation as determined by Losses Assessment

Protection HUs - Habitat Units protection via fee title acquisition and grazing lease agreements

Protected Acres - Acres protected via fee title acquisition and grazing lease agreements

Enhancement HUs - Habitat Unit improvements as a result of funding enhancement measures on WDFW lands, and Pend Oreille Wetlands.

Total HUs - Protection and enhancement HUs

Average Cost/HU - Average of protection and enhancement cost expressed in \$/Habitat Unit. Does not include coordination costs.

HUs Remaining - HUs Lost minus **HUs gained**, protection HUs, and enhancement HUs

Estimated Cost Remaining - HUs Remaining multiplied by Average Cost/HU. **Exception:** Willamette Basin calculated using Cost/Ac

Attachment 2

Wildlife Mitigation Operation and Maintenance

Project	Dam	Acres	FY03 O&M	\$/Ac
Pend Oreille Wetlands	Albeni Falls	600	\$63,400	\$106
Pend Oreille WMA	Albeni Falls	942	\$110,000	\$117
Boundary Creek WMA	Albeni Falls	1,045	\$100,000	\$96
Albeni Falls - Kalispel	Albeni Falls	1,780	\$110,000	\$62
Albeni Falls - Kootenai	Albeni Falls	200	\$44,500	\$223
Albeni Falls - Coeur d' Alen	Albeni Falls	1,058	\$127,000	\$120
sub-total		5,625	\$554,900	\$99
Rice	Anderson Ranch	1,364	\$60,000	\$44
Krueger	Black Canyon	166	\$3,000	\$18
Wenas	Grand Coulee/Chief Joe	104,799	\$291,581	\$3
Scotch Creek	Grand Coulee/Chief Joe	15,872	\$255,507	\$16
Sagebrush Flats	Grand Coulee/Chief Joe	8,775	\$146,832	\$17
Desert	Grand Coulee/Chief Joe	1,744	\$149,296	\$86
Swanson Lakes	Grand Coulee/Chief Joe	20,065	\$195,050	\$10
Blue Creek/McCoy Lake	Grand Coulee/Chief Joe	1,828	\$195,000	\$107
Hellsgate	Grand Coulee/Chief Joe	25,454	\$450,462	\$18
sub-total		180,067	\$1,746,728	\$10
Pine Creek/Wagner Ranch	Lower Columbia-OR	34,000	\$146,985	\$4
Iskuulpa	Lower Columbia-OR	5,937	\$212,164	\$36
Wanaket	Lower Columbia-OR	2,817	\$218,576	\$78
sub-total		42,754	\$577,725	\$14
Shillapoo	Lower Columbia-WA	2,371	\$200,770	\$85
Sunnyside	Lower Columbia-WA	10,538	\$249,514	\$24
Rainwater	Lower Columbia-WA	8,678	\$178,351	\$21
Lower Yakima Wetlands	Lower Columbia -WA	12,303	\$759,962	\$62
sub-total		33,890	\$1,388,597	\$41
Percious Lands	Lower Snake	15,325	\$358,038	\$23
Ladd Marsh	Lower Snake	844	\$33,000	\$39
Logan Valley	Lower Snake	1,700	\$140,000	\$82
Denny Jones	Lower Snake	6,385	\$282,112	\$44
sub-total		24,254	\$813,150	\$34
Deer Parks	Palisades	3,006	\$132,000	\$44
Allen	Palisades	81	\$10,000	\$123
Horkley	Palisades	128	\$8,000	\$63
Rudeen	Palisades/Minidoka	2,450	\$25,000	\$10
Soda Hills	Palisades	2,563	\$21,968	\$9
Tex Creek	Palisades	2,135	\$21,284	\$10
sub-total		10,363	\$218,252	\$21
Willow Creek	Willamette Basin	329	\$18,000	\$55
Tualatin River NWR	Willamette Basin	232	\$25,000	\$108
Burlington Bottoms	Willamette Basin	417	\$6,539	\$16
Willamette Projects	Willamette Basin	372	\$40,750	\$110
sub-total		1,350	\$90,289	\$67
TOTAL		299,833	\$5,452,641	