BPA Fish and Wildlife Program: Twenty-six Years of Funding (1978-2003)

[Draft July 1, 2004]

Introduction

The purpose of this paper is to describe the Bonneville Power Administration's (BPA) historic funding for fish and wildlife. The Fiscal Year (FY) 2003 budget is the twenty-sixth since BPA started to include fish and wildlife costs in their operations budget. This paper is intended to provide a comprehensive review of past spending and be useful for discussing future fish and wildlife budget needs. Generally, the paper relies on financial information provided by BPA with references presented to specific sources.

A Brief History

In 1978, BPA hired its first fish and wildlife staff and started directly funding fish and wildlife activities. Prior to 1978, BPA paid for fish-related facilities at Federal Columbia River Power System (FCRPS) dams, such as fish ladders, screens and bypass facilities, and mitigation facilities, such as fish hatcheries. These payments were to the U.S. Treasury for fish facility expenditures by the Army Corps of Engineers (COE), the Bureau of Reclamation (BOR), and the Fish and Wildlife Service (USFWS) for the portion of the costs attributed to hydroelectric generation. BPA budgets are subject to annual Congressional review[1].

In December of 1980, Congress passed the Pacific Northwest Electric Power Planning and Conservation Act[2] (NW Power Act) that established the Northwest Power Planning Council (later called the Northwest Power and Conservation Council or NPCC) and required fish and wildlife mitigation for development and operation of the Federal Columbia River Power System (FCRPS). It also authorized the BPA Administrator to use the BPA Fund to pay for fish and wildlife mitigation. The NW Power Act directed the NPCC to adopt a fish and wildlife program to guide BPA fish and wildlife mitigation spending. Since adoption of the Council's first Fish and Wildlife Program in November 1982, the budget has increased from about $28.5 million to $256.3 million in 2003. Over time, as the budget grew and became more complex, BPA began to separate their Fish and Wildlife Program costs into four categories:

1) Capital Investments;
2) Reimbursed Expenses of Other Agencies;
3) Integrated (Direct) Program Expenses; and,
4) River Operations.

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[1] See BPA's congressional budgets at www.efw.bpa.gov/EW/FISCAL/congressional.budgets.1978-95.pdf.
[2] For specific language in the Northwest Power Planning and Electric Conservation Act see http://www.nwcouncil.org/library/poweract/.

On March 2, 1995, the National Oceanic and Atmospheric Administration (NOAA Fisheries) issued the 1995 FCRPS Biological Opinion. In that opinion, NOAA Fisheries determined that the proposed operation of the FCRPS would jeopardize the continued existence of threatened and endangered Snake River spring/summer chinook, fall chinook, and sockeye salmon and would adversely affect their critical habitat. The 1995 FCRPS Biological Opinion, therefore, established a set of Reasonable and Prudent Alternatives (RPA) for the operation and configuration of the hydrosystem to satisfy ESA Section 7(a)(2) requirements. The RPA prescribes measures to increase the survival of listed salmonids and initiated the development of a long-term system configuration plan.[3]

Faced with increasing fish and wildlife costs and the prospect of further increases resulting from the implementation of the 1995 Biological Opinion, BPA and its federal partners entered into a Memorandum of Agreement (MOA) governing BPA's fish and wildlife budgets[4]. The MOA set targets for the four BPA budget categories identified above, for Fiscal Years 1996 through 2001. The MOA also set procedures for managing the budget in a more publicly accessible process. The MOA specified rules that provided for any unspent funds within the MOA to be carried forward each year and made available for fish and wildlife projects, even after the MOA expired, stating: "*Any funds remaining in these accounts after the close of Fiscal Year 2001 will not be re-programmed for any non-fish and wildlife use, but will remain available for expenditure for the benefit of fish and wildlife*" (MOA Section VIII(h)[4]).

In addition to threatened and endangered salmon species, in September 1996 Kootenai River white sturgeon was listed as endangered. In June 1998 bull trout were listed as threatened in Montana, Idaho, Nevada, Oregon and Washington. The development and operation of the FCRPS contributed to the peril of these resident fish species.

On May 14, 1998, NOAA Fisheries issued the 1998 Supplemental FCRPS Biological Opinion. That ESA Section 7 consultation evaluated the effects of configuration and operations of the FCRPS on newly listed threatened and endangered steelhead in the Upper Columbia River, Snake River, and Lower Columbia River ESUs *(Evolutionary Significant Units).*[3]

In the 1998 Supplemental FCRPS Biological Opinion, NOAA Fisheries determined that operating the FCRPS in accordance with the Action Agencies' proposed plan, including the measures specified in the RPA of the 1995 FCRPS Biological Opinion (the 1995 RPA), would not jeopardize the continued existence of the newly listed steelhead. The 1998 Supplemental FCRPS Biological Opinion established spring flow objectives at Priest Rapids Dam to protect juvenile fish and expanded the spill program at many

[3] Biological Opinion, Reinitiation of Consultation on Operation of the Federal Columbia River Power System, Including the Juvenile Fish Transportation Program, and 19 Bureau of Reclamation Projects in the Columbia Basin, National Marine Fisheries Service, December 21, 2000.
[4] For specific language in the 1996-2001 Memorandum of Agreement see http://www.efw.bpa.gov/EW/FISCAL/moa.html.

mainstem hydro projects, but otherwise left the decision-making process and timing for the long-term as described in the 1995 FCRPS Biological Opinion (2000 FCRPS Biological Opinion).[3]

The NOAA Fisheries issued a last supplemental biological opinion on February 4, 2000. That opinion considered the effects of the FCRPS operations on the six species that NOAA Fisheries listed as threatened or endangered in March 1999. The NOAA Fisheries determined that implementation of the 1995 RPA, as modified by the 1998 proposed action and combined with a few additional interim measures, would not jeopardize the continued existence of any of the newly listed species for the rest of the interim period. The decision-making process and timing for the long-term, again, remained consistent with the 1995 FCRPS Biological Opinion (2000 FCRPS Biological Opinion).[3]

The NOAA Fisheries based its 2000 FCRPS Biological Opinion on the premise that the operation of the hydroelectric dams jeopardized the listed anadromous salmonids and recommended a strategy of "aggressive offsite mitigation" to avoid a jeopardy finding and to defer a decision on breaching the lower four Snake River dams pending further study. Under this biological opinion, it was determined that adequate survival improvements could not be achieved through additional spill and flow for fish (excluding breaching); therefore, offsite habitat improvement projects were identified as the primary alternative for increased production.

In 2001, BPA set new rates for power sales in FY 2002-2006 that increased funding available for fish and wildlife from $252 million under the MOA to $333 million annually. This included $175 million for the Integrated Program (combining $139 million in Expense and $36 million for Capital or borrowing authority), $52 million for Reimbursed Expenses, and $106 for mainstem capital repayment. However, BPA staff's own estimate of funding necessary under the 2000 Biological Opinion was $19 million higher than the average presented in the rate case agreement (Table 1).

Table 1. BPA fish and wildlife costs estimated for the 2002-2006 Rate Case and for implementation of the 2000 FCRPS Biological Opinions. [5]

	2000 Biological Opinion Cost Comparison		
Cost Category	**Fish Funding MOA 1996-2001 Average**	**2002-06 Rate Case Annual Average (Range)**	**2000 BO Estimate Annual Average (December 2000)**
Integrated Program	$100	$139 ($109 - $179)	$150
BPA Direct Funded O&M And 50% NWPPC overhead	$40	$52 ($39 - $54)	$62
Capital	$112	$142 ($124 - $184)	$140
USCOE and USBOR	*$85*	*$106*	*$104*
Direct Program	*$27*	*$36*	*$36*
Total	**$252**	**$333**	**$352**

The information provided in this table was not intended for use in future proceedings.

Figure 1 and Table 2 summarize the amounts that BPA has spent on its fish and wildlife program expenses from FY 1978 through FY 2003. (Table 2 is located at the end of this document.)

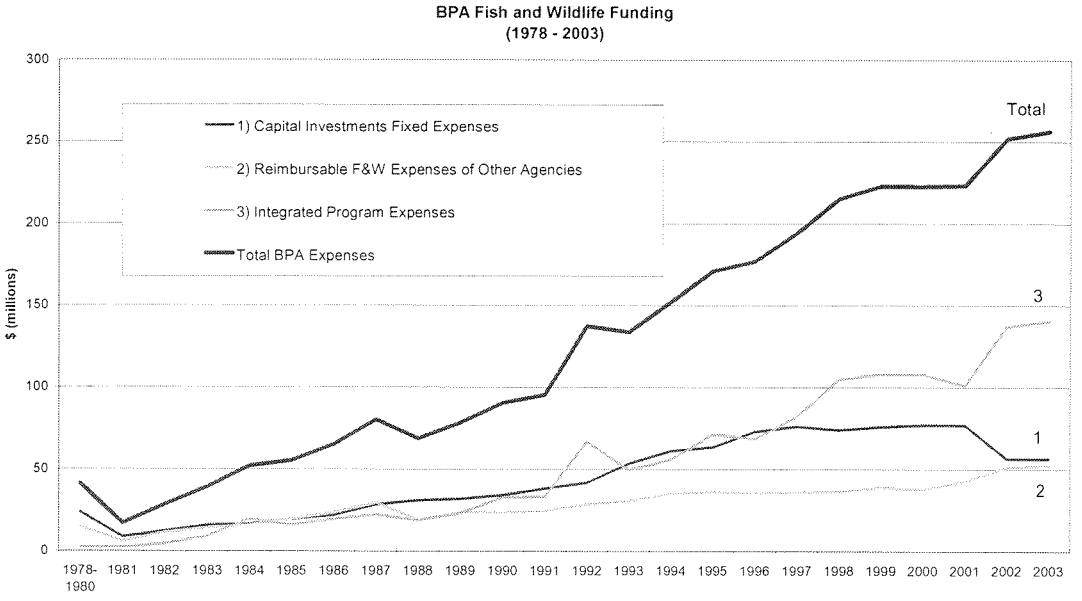

Figure 1. BPA fish and wildlife spending from 1978-2003 (in nominal dollars).

[5] This table was presented during BPA's "Financial Choices" meetings and is available at http://www.bpa.gov/power/pl/financialchoices/09-17-2002_Workshop_Handout1.pdf.

BPA Annual Expenditures

1) Capital Investments

BPA is obligated to repay to the U.S. Treasury amortization costs of funds borrowed by the COE and BOR for capital investments in fish facilities at dams built and operated by them, including interest. BPA's capital budget also repays funds borrowed to construct numerous hatcheries built as partial mitigation for the FCRPS. Other investments include salmon transport barges and improvements at the FCRPS dams for fish collection and passage, as well as planning, design, monitoring and research studies. The amount that Congress authorized the COE and BOR to spend each year (Federal appropriated dollars) is shown in Table 2 as is BPA's annual repayment toward that debt.

Note that there is a distinction, often obscured, between the amount authorized and borrowed from the U.S. Treasury (analogous to the "mortgage") and the actual repayment cost (analogous to an annual "mortgage payment"). The amount borrowed is usually "booked" in the year construction starts, while repayment does not start until the facility is completed. As a general rule-of-thumb, the fixed costs of repayment are about one-tenth of the amount capitalized and is amortized over the expected life of the project. BPA's annual cost covers the cumulative total of all previous debts incurred as capital expenses. The operation and maintenance costs of these facilities are generally included in Category 2 in Table 2, Reimbursed Expenses of Other Agencies.

The actual costs (repayment) for capital investments have remained steady since the adoption of the 1996-2001 Memorandum of Agreement[6]. The MOA set targets for capital investment of $112 million annual average[4]. However, BPA's investments in this area under-spent the targets significantly, averaging $76 million annually, for a total under-investment of more than $216 million over the term of the MOA. For the past eight years, the annual authorization for facility improvements at mainstem dams has averaged approximately $83.5 million (Table 2). Since the adoption of the 2000 Biological Opinions, average BPA annual spending has remained fairly constant with only a slight decrease.

In 1985, BPA began capitalizing projects in the Integrated (Direct) Fish and Wildlife Program. The 1996-2001 MOA set $27 million as the annual target for capitalized projects in the Integrated Program. The line "Integrated Program" under Capital Investments in Table 2 shows the trend in this amount. Under the MOA, BPA capitalized an average of $20.2 million annually, under-spending the target by about $40.8 million over the term of the MOA (Figure 2).

[6] For reporting of planned versus actual spending in the 1996-2001 Memorandum of Agreement see http://www.efw.bpa.gov/EW/FISCAL/MOAFinal2001.pdf.

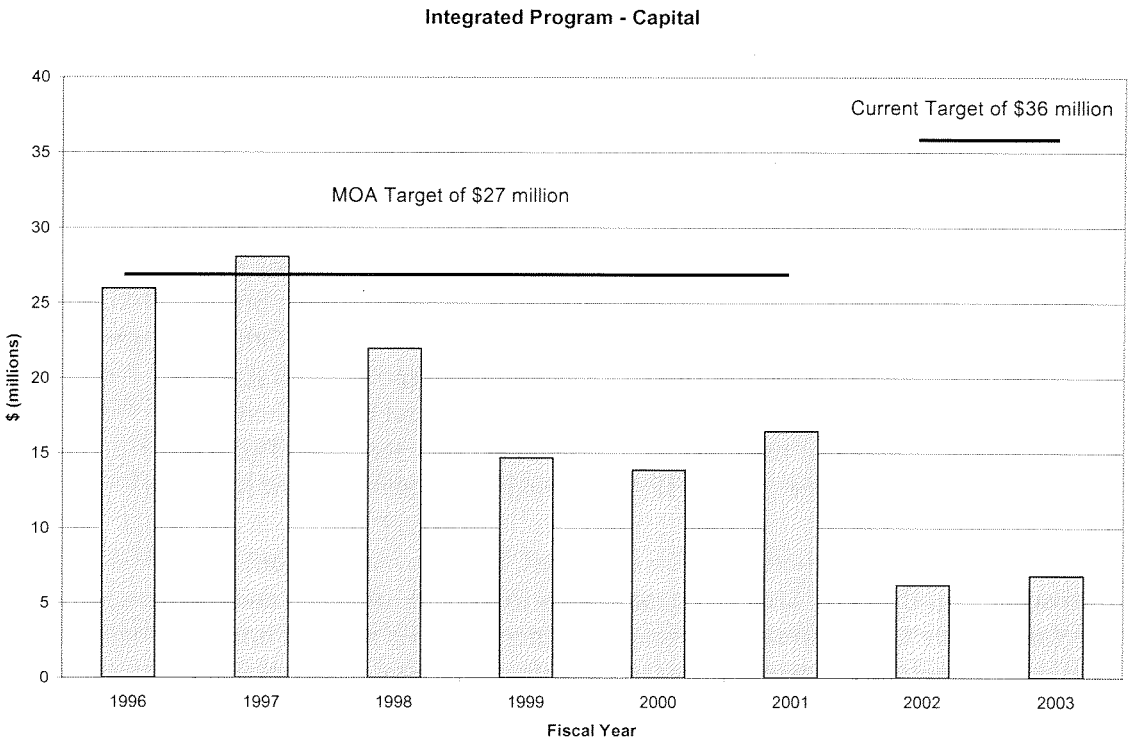

Figure 2. Capital Investment in the Integrated Program from 1996-2003.

Capitalized amounts for the Integrated Program generally increased through 1997 when they reached $28.1 million. Since then, however, capital investment in the Integrated Program has declined. Furthermore, after Congress granted BPA an additional $770 million in borrowing authority in 2001, BPA has capitalized an average of $6.5 million (Figure 2), even though its annual budget target had reportedly increased to $36 million. This represents a $59 million shortfall in the two years since the expiration of the MOA. A major contributing factor to the decline in use of borrowing authority for fish and wildlife projects has been the interpretation and application of accounting rules since the recent accounting scandals with major corporations. In FY 2003, the NPCC recommended over $60 million in projects that they believed met BPA's capitalization requirements. Less than $10 million in projects were eventually capitalized in that year.

Since adoption of the 2000 Biological Opinions, there has been an average decrease in capital investment for the Integrated Program of almost $15 million per year (Figure 2). Also, BPA's actual repayment costs have dropped significantly since the end of the MOA (Table 2).

2) Reimbursed Expenses of Other Agencies

BPA repays the U.S. Treasury for the hydroelectric share of operation and maintenance budgets and other authorized non-capital expenditures for fish and wildlife activities by the COE, BOR and USFWS. These costs include those of the Lower Snake River Compensation Plan implementation and the operations of numerous hatcheries built to

mitigate for the FCRPS. These facilities are often operated by the state fisheries management agencies. BPA has relatively little control over these expenses, reimbursing the U.S. Treasury directly. Also, half of the NPCC's budget (approximately $4.5 million annually) is attributable to fish and wildlife and is included by BPA under this portion of its budget. The NPCC does not receive an appropriation by Congress as this cost is paid directly by BPA.

The Reimbursable category of the budget averaged $37.8 million annually under the MOA, close to the MOA budget target of $40 million. The operation and maintenance budgets have increased by more than one-third since the end of the MOA. Most of the increase is related to an increase in COE and BOR operating budgets (Figure 3, Table 2). These increases are mostly due to increased BiOp demands and increased security needs.

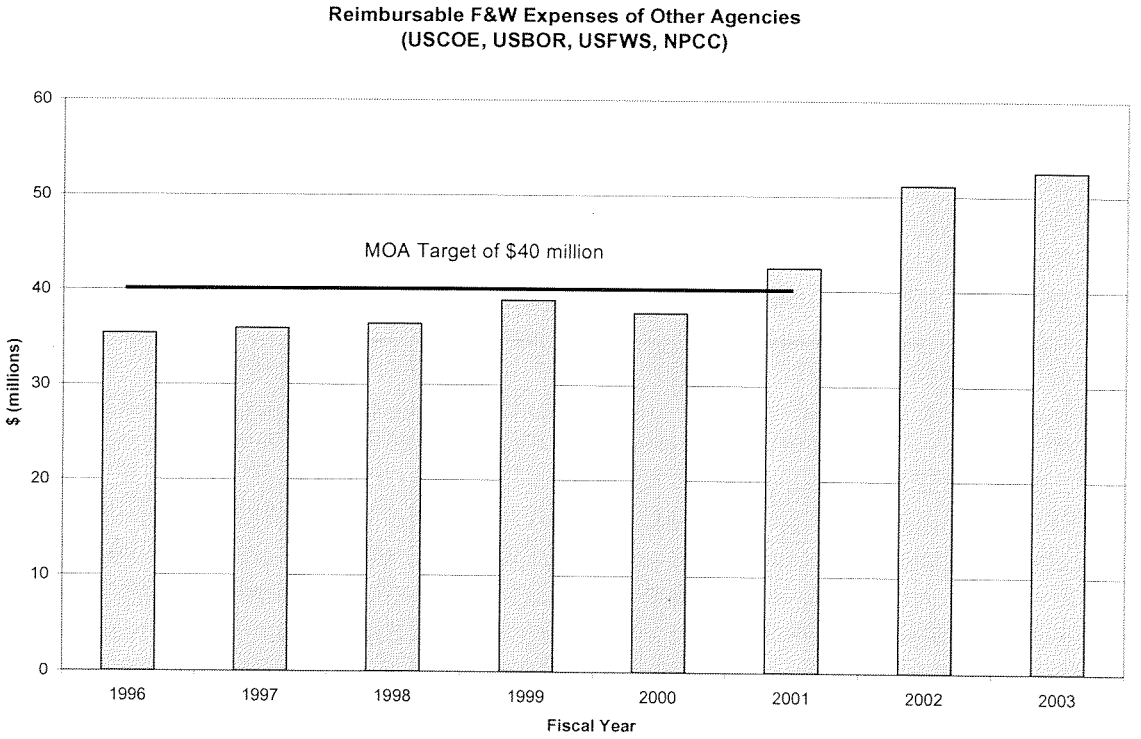

Figure 3. Reimbursable fish and wildlife expenses of other federal agencies.

3) Integrated (Direct) Program

The Integrated Program budget has two categories: Capital (discussed above) and Expense. The Expense portion of the Integrated Program has increased steadily since 1978 (Figure 1 and Table 2). The MOA set an annual budget target of $100 million for fiscal years 1996 through 2001, with BPA spending averaging $95.5 million annually, a shortfall of $26.9 million during the term of the MOA. During the current rate period, the target for the Expense portion of the Integrated Program was set at $139 million

annually. Actual spending during the current rate period has averaged $139 million per year.

Although this appears to be an increase in funding of $39 million annually since the conclusion of the MOA, the program funding has not been adjusted for inflation for eight years, exaggerating the true benefit of the additional funding. Further, BPA has rolled contracted obligations forward each year without shifting the associated funding, creating a "bow-wave" of unfunded obligations. A change in accounting practices in FY 2003 required elimination of $40 million worth of these carry-over obligations. In essence, BPA reduced the FY 2003 Integrated Program budget by $40 million to accommodate these prior-year obligations. BPA is now considering cutting an additional $15 million from the Integrated Program over the period FY 2005-2006. Finally, BPA fish and wildlife division costs have increased more than 50 percent since 1999 and are paid from the Integrated Program.

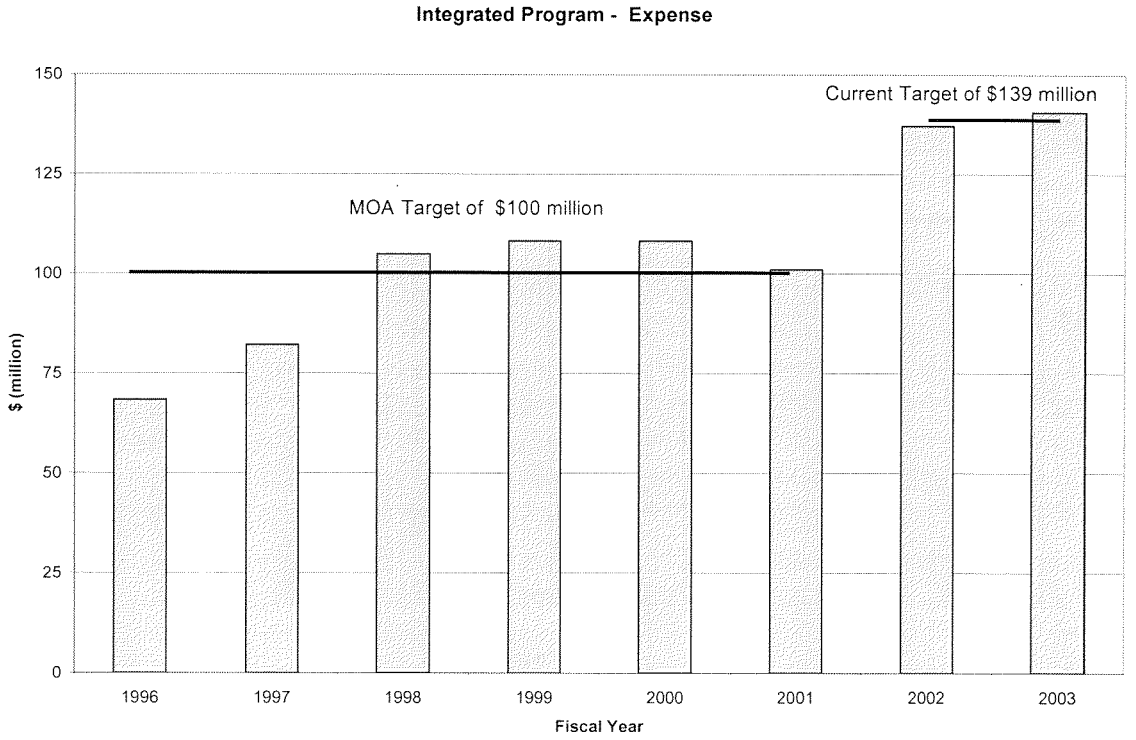

Figure 4. BPA expenses in the Integrated Program from 1996-2003.

4) High Priority/Action Plan Funding

In addition to the regular funding of the Integrated Fish and Wildlife Program, BPA announced that it would augment its budget in 2001 by $10-20 million to partially offset the impacts from BPA's elimination of summer spill during the drought and to provide a boost in funding for projects that met immediate needs identified in the 2000 biological

opinions[7]. BPA held two separate solicitations, titled "High Priority" and "Action Plan" and received about 108 project proposals. The fish and wildlife managers (CBFWA), the Independent Science Review Panel (ISRP), NOAA Fisheries, and the public reviewed the proposals and the NPCC recommended funding approximately 35 proposals for a total of nearly $43 million. BPA intended these projects as short-term actions that would occur in 2001 to help fish affected by the power system emergency and/or address immediate ESA needs. However, while BPA committed to a budget in 2001, it was 2002 before contracts were written with project sponsors and the work was under way. BPA spent $15.1 million, over three years, to fund 25 projects in this category of funding (Table 2).

River Operations

The fish and wildlife costs associated with operating the hydropower system and marketing its power are of a fundamentally different nature than those discussed above. Operational costs represent the value of electricity that might have been generated by water provided as spill or the cost of power purchased to replace or provide flows for fish. This is very different from actual cash outlays to pay for fish and wildlife investments or expenses. The operational "costs" are derived in two ways, depending on the circumstances: revenue forgone and power purchases. BPA calculates revenue forgone by estimating the difference between a base-case value of power that might have been generated absent operational changes to benefit fish, and that which was actually generated. Power purchases are required when BPA has contracted to sell more power than can be provided while also providing operations for fish.

BPA estimates power purchases as the cost of power purchased to meet BPA contracts when hydro-operations are reduced by fish requirements and the system is not able to meet contract needs. Power purchases result from BPA contracting to sell more power than the hydro-system can reliably provide. This is apparently standard industry practice designed to maximize power production and revenues from the system over the long term. BPA does not de-rate the hydropower system to fully account for required fish constraints, as they do for other operational constraints such as irrigation, navigation, municipal water supplies and recreation. When river flows are not adequate to meet all of the demands, BPA in essence "charges" the salmon for power purchases necessary to meet its hydro-electricity contracts.

Table 3 and Figure 5 detail BPA's estimates of these "lost opportunity" costs and shows that over the last 26 years they total more than $3.7 billion with almost 40 percent of the total occurring during the drought year of 2001 (Table 3 is located at the end of this document). The details of the analysis that generate these estimates are not readily available from BPA and it is difficult to understand the complex calculations used to generate the estimates. During the MOA, BPA promised to provide a transparent

[7] For details regarding the High Priority and Action Plan project solicitations, see the Third Annual Report to the Northwest Governors on Expenditures of the Bonneville Power Administration located at http://www.nwcouncil.org/library/2004/2004-3/Default.htm.

accounting mechanism for river operation costs (see MOA Section V.(d.)), but has yet to do so.

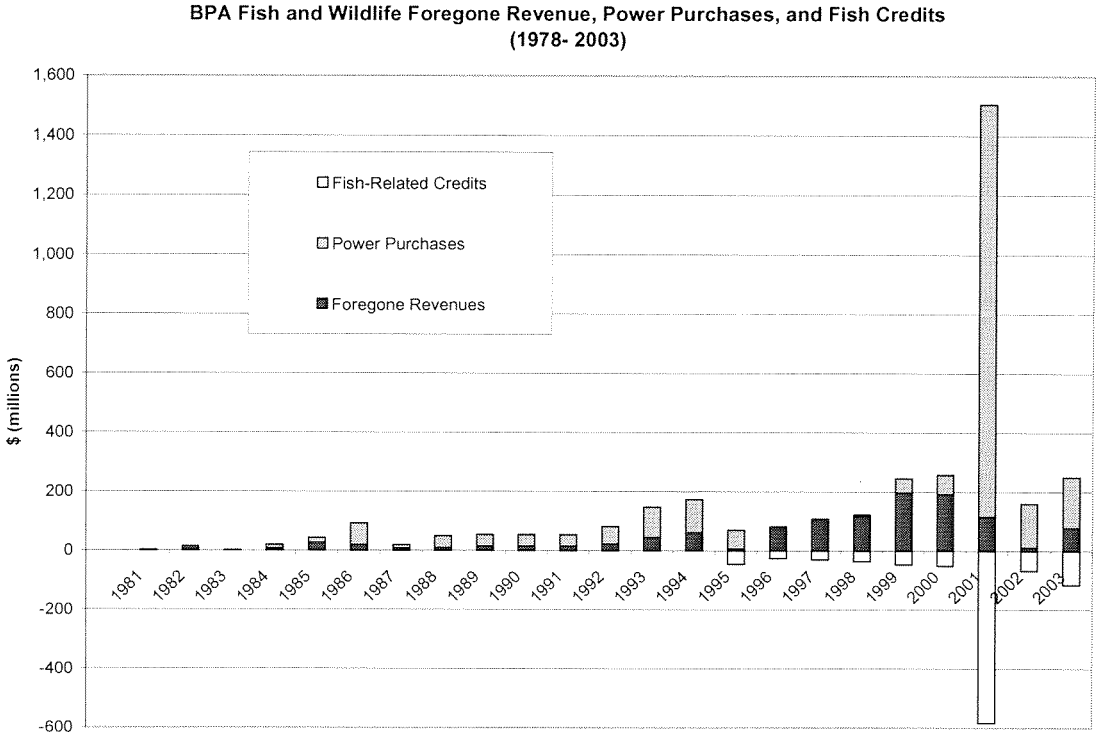

Figure 5. BPA estimated cost of river operations and benefits of fish credits from 1978 – 2003.

In Figure 5 and Table 3, fiscal year 2001 calculations appear as an anomaly. Most of the river operations costs in 2001 were derived from power purchase calculations. The power purchase estimates were based on reduced reservoir levels at the start of the 2001 water year combined with wildly inflated electricity prices in the second quarter of fiscal year 2001 during the West Coast energy crisis. The high cost of power purchases calculated for 2001 was due to an estimated storage reservoir level at the end of the 2000 water year assuming no fish operations occurred during that year. Because the calculation for power purchases is cumulative, the estimated reduced reservoir level due to fish operations in 2000 then carried through the West Coast energy crisis as an accounting deficit and the estimated cost expanded as spot market prices hit record highs early in FY 2001.

Essentially, only minimal river operations for fish occurred during 2001. BPA declared a financial emergency and shut down spill, opting to generate power valued at approximately $500 million, to help pay for agency costs during its financial crisis. Yet in BPA's reporting the costs of meeting its fish and wildlife obligations, it does not credit the revenue benefits back to the fish and wildlife program that were generated by eliminating BiOp spill for fish in 2001.

Two aspects of these lost (power) opportunity costs should be kept in mind. First, other mandated uses of the river also limit hydropower generation. For example, BPA recently estimated in their "Power Net Revenue Improvement Sounding Board" discussions that irrigation depletions cost BPA about $180 million annually in revenue forgone[8]. Similar calculations could be performed for the costs of lost opportunities to generate power as a result of flood control, navigation, or operations to benefit the annual Richland, Washington hydroplane races; although these estimates would likely be far less significant. The spill and flow requirements for salmon were set by the 1994 Fish and Wildlife Program and the 1995 and 2000 biological opinions and agreed to by the three Federal operating agencies. BPA does not manage BiOp requirements for fish flows and spill as a hard constraint on the system, as they do for other uses that constrain generation. For example, irrigation needs are met as a priority to meeting generation capacity and no calculations are performed to determine the incremental loss of generation capability for delivering water and power to the irrigators.

Second, it is argued that these other uses of the river provide real (monetary) benefits that outweigh the costs of lost generation. Fish and wildlife provide real (and monetary) benefits, as well. Recently, the Idaho Fish and Wildlife Foundation and the USFWS have conducted separate surveys that document the economic benefits of fish in the Pacific Northwest. The economic impact of salmon fishing in Idaho alone was nearly $90 million in 2001[9].

Finally, although the BiOp calls for specific river operations for the protection of listed fish populations, those river operations are not always met. A recent analysis by the Fish Passage Center, established under the NPCC's Fish and Wildlife Program, demonstrated that although spill was mostly provided in accordance with the prevailing spill program in any specific year, there was considerable variation in spill among years for a variety of reasons (excess generation spill, excess hydraulic capacity, maintenance issues, and test schedules)[10]. Flow objectives for salmon, steelhead, and sturgeon were established under the biological opinions based on the needs of these fish. It was known at the time that fulfillment of biological opinion flow objectives could not be met in many years. Since 1995, flow objectives have been met 59 percent of the time; over the last three years flow objectives have been met only 33 percent of the time. Summer flow objectives have only been met 39 percent of the time in the past nine years.

[8] See handout from the March 16, 2004 Sounding Board meeting at http://www.bpa.gov/Power/PL/pnrisb/03-16-2004_Mtg_Handout1.pdf.

[9] The Idaho Fish and Wildlife Foundation report titled "The Economic Impact of the 2001 Salmon Fishing Season in Idaho" is available on their website at www.ifwf.org.

[10] Memo from Fish Passage Center Staff to Rod Sando, Columbia Basin Fish and Wildlife Authority, on April 29, 2004 regarding 1995-2003 Biological Opinion Operations.

Fish Credits

BPA estimates the costs of salmon operations in detail because the NW Power Act allows BPA to take credits towards their annual U.S. Treasury repayment[11] (currently equal to 27 percent of the calculated power generation impacts) for power purchases and fish and wildlife mitigation costs. When Congress passed the NW Power Act, they realized that "equitable treatment" of fish and wildlife would reduce generation capability and established two crediting mechanisms to reduce the anticipated impacts on the region's ratepayers. Table 3 and Figure 5 provide the fish credits that BPA has used to partially off set its operational costs each year. Since BPA started taking these credits in 1994, it has reduced its U.S. Treasury repayments by more than $1 billion, more than half of it in 2001 to offset the impacts of the chaotic Western energy market and the drought. These offsetting credits to the Treasury, attributed to BPA due to fish and wildlife mitigation spending, are rarely reported when BPA and the NPCC report expenditures on fish and wildlife.

Conclusions

- Over the last 26 years, BPA has spent about $2 billion ($79 million per year or 2.4 percent of BPA's annual budget) to meet fish and wildlife obligations (Table 2). This includes:
    - $1,071 million in repayment to the U.S. Treasury for funds borrowed to build fish passage facilities at the FCRPS and tributary dams and numerous salmon hatcheries to partially mitigate for the dams;
    - $687 million to reimburse the U.S. Treasury for the operation of these facilities;
    - $1,314 million expenses of the Integrated (Direct) F&W Program; and
    - $996 million in Treasury payment credits.

- Since adopting the 2000 FCRPS biological opinions, BPA's spending for fish and wildlife has increased from an annual average of $207 million during the preceding five years to an annual average of $244 million.
    - This apparent 18 percent increase is tempered by unaccounted-for inflation, a $12 million per year increase in COE and BOR operations costs at existing facilities, a 50% increase in BPA's fish and wildlife division overhead, and an accounting write-off of about $40 million in Integrated Program obligations.
    - While BPA's spending for Integrated Program expenses has increased almost 34 percent since the adoption of the 2000 Biological Opinion, this is partially offset by a 53 percent decline in capital investments.

[11] BPA White Paper, Fish and Wildlife Funding for the 2002-2006 Rate Period, available on BPA website at http://www.efw.bpa.gov/EW/FISCAL/POST2001/980723.hmoore.html.

- BPA has estimated the opportunity costs of system operations to meet fish and wildlife mitigation obligations at about $3.7 billion over the last 26 years. Forty percent of this lost opportunity occurred as a result of the extraordinary conditions in 2001.
    - These opportunity costs have been offset by $1 billion in fish credits against its Treasury repayments effectively shifting 27 percent of this "cost" to the U.S. taxpayers. Further, during 2001, BPA generated about $500 million in power instead of providing spill required by the 2000 Biological Opinion. This should be credited as a forgone spill offset to its opportunity costs. Thus, using the above assumptions, BPA's net opportunity costs from fish and wildlife obligations is about $2.25 billion over the last 26 years, or less than $90 million annually.

- When the MOA expired, BPA failed to carry forward or continue to make available more than $300 million of unspent funds, including $216 million in the Capital category, $37.6 million from the Integrated (Direct) Program Expenses, and $44 million in interest on unexpended funds.

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Table 2. Bonneville Power Adminstration (BPA) Fish and Wildlife Expenditures from 1978-2003[1] ($ in millions).

Fiscal Year	Actual 1978-1980	Actual 1981	Actual 1982	Actual 1983	Actual 1984	Actual 1985	Actual 1986	Actual 1987	Actual 1988	Actual 1989	Actual 1990	Actual 1991	Actual 1992	Actual 1993	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Actual 1999	Actual 2000	Actual 2001	Actual 2002	Actual 2003	Total 1978-2003
1) Capital Investments Fixed Expenses																									
Federal appropriated dollars	*30.0*	*17.9*	*61.7*	*55.1*	*9.0*	*46.4*	*9.1*	*78.6*	*7.6*	*5.3*	*4.5*	*12.0*	*4.7*	*162.0*	*63.0*	*48.0*	*86.9*	*82.4*	*102.2*	*72.3*	*74.9*	*94.1*	*73.2*	*82.3*	*1,283.2*
Integrated Program	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*10.2*	*8.0*	*4.7*	*7.7*	*8.3*	*16.2*	*17.7*	*11.2*	*17.3*	*20.5*	*32.5*	*26.0*	*28.1*	*22.0*	*14.7*	*13.9*	*16.5*	*6.2*	*6.8*	*288.5*
Actual	**24.0**	**8.8**	**12.4**	**15.9**	**16.6**	**19.7**	**22.1**	**28.5**	**31.0**	**31.9**	**34.3**	**38.2**	**41.9**	**53.6**	**61.3**	**63.6**	**73.1**	**76.3**	**74.1**	**76.1**	**77.2**	**77.1**	**56.6**	**56.7**	**1,071.0**
2) Reimbursable F&W Expenses of Other Agencies																									
Actual	**15.0**	**6.1**	**11.5**	**14.2**	**16.0**	**19.9**	**23.7**	**29.7**	**19.0**	**23.6**	**23.4**	**24.3**	**28.4**	**30.5**	**34.9**	**36.1**	**35.4**	**35.9**	**36.4**	**38.9**	**37.6**	**42.4**	**51.1**	**52.5**	**686.5**
3) Integrated Program Expenses																									
Actual	**2.3**	**2.3**	**4.6**	**9.1**	**19.6**	**15.9**	**19.6**	**22.2**	**18.8**	**23.0**	**32.8**	**33.0**	**67.0**	**49.6**	**55.9**	**71.4**	**68.5**	**82.2**	**104.9**	**108.2**	**108.2**	**101.1**	**137.1**	**140.6**	**1,297.9**
4) High Priority/Action Plan Expenses																									
Actual																						**2.9**	**7.1**	**6.5**	**16.5**
Total BPA Expenses	**41.3**	**17.2**	**28.5**	**39.2**	**52.2**	**55.5**	**65.4**	**80.4**	**68.8**	**78.5**	**90.5**	**95.5**	**137.3**	**133.7**	**152.1**	**171.1**	**177.0**	**194.4**	**215.4**	**223.2**	**223.0**	**223.5**	**251.9**	**256.3**	**3,071.9**

Table 3. Bonneville Power Adminstration (BPA) River Operations and Fish Credits from 1978-2003[1] ($ in millions).

Fiscal Year	Actual 1978-1980	Actual 1981	Actual 1982	Actual 1983	Actual 1984	Actual 1985	Actual 1986	Actual 1987	Actual 1988	Actual 1989	Actual 1990	Actual 1991	Actual 1992	Actual 1993	Actual 1994	Actual 1995	Actual 1996	Actual 1997	Actual 1998	Actual 1999	Actual 2000	Actual 2001	Actual 2002	Actual 2003	Total 1978-2003
River Operations																									
Power Purchases	0.0	0.0	0.0	0.0	12.0	17.0	74.0	11.0	40.0	40.0	40.0	40.0	59.0	104.0	111.7	63.3	0.0	0.0	5.4	47.6	64.8	1,389.6	147.8	171.1	2,438.3
Foregone Revenues	0.0	3.0	14.0	1.0	8.0	27.0	19.0	9.0	10.0	15.0	15.0	15.0	23.0	45.0	62.0	7.1	81.7	107.8	116.5	197.8	193.1	115.9	12.6	79.2	1,177.7
Idaho Power shaping agreement																	1.6	2.4	-1.9	5.9	79.1				
Actual	**0.0**	**3.0**	**14.0**	**1.0**	**20.0**	**44.0**	**93.0**	**20.0**	**50.0**	**55.0**	**55.0**	**55.0**	**82.0**	**149.0**	**173.7**	**70.4**	**83.3**	**110.2**	**120.0**	**251.3**	**337.0**	**1,505.5**	**160.4**	**250.3**	**3,703.1**
Fish-Related Credits																									
NPA 4(h)(10)(C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-45.2	-25.5	-29.7	-35.7	-46.0	-50.4	-336.6	-66.4	-35.4	-670.9
Fish Cost Contingency Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-246.5	0.0	-78.7	-325.2
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-45.2**	**-25.5**	**-29.7**	**-35.7**	**-46.0**	**-50.4**	**-583.1**	**-66.4**	**-114.1**	**-996.1**

1 - Data for these tables was obtained from the following web links and from Val Lefler, BPA, and John Kranda, USCOE, personal communications: (http://www.efw.bpa.gov/EW/FISCAL/congressional.budgets.1978-95.pdf and http://www.efw.bpa.gov/EW/FISCAL/MOAFinal2001.pdf).