

Appendix E. CBFWA Ten Year Fish and Wildlife Budget (FY1998 – FY2006)

Introduction

Over the last fifteen years, considerable Pacific Northwest electric rate payer funds have been spent to mitigate hydropower caused fish and wildlife losses and to restore these resources. The regional effort has resulted in some successes but due to a great number of factors some fish and wildlife resources continue to decline. The mitigation needs out-strip available funds. Endangered Species Act (ESA) listings continue and an effort is underway to develop a multi-species recovery plan for the Columbia River Basin.

Fish and wildlife managers developed the Ten Year Budget to provide the Bonneville Power Administration (BPA), Northwest Power Planning Council (NPPC), and the public with a planning estimate of future costs of the recovery effort. While it covers the direct portion of the BPA Fish and Wildlife budget, it is intended to be used in conjunction with estimates of the capital investment and reimbursable portions of the budget developed by the senior staff of the Northwest Indian Tribes, State Governors, and Federal agencies (Three Sovereigns).

With this goal in mind, members of Columbia Basin Fish and Wildlife Authority (CBFWA) committed to developing a Multi-Year Plan which sets goals and principles for the management of Columbia River Basin fish and wildlife. These goals and principles are based on those developed by the Independent Scientific Group in the “Return to the River” and are similar to those being used by the Independent Scientific Review Panel (ISRP) and the NPPC.

Goal

Restore sustainable, naturally-producing fish and wildlife populations to support tribal and non-tribal harvest and cultural and economic practices by restoring the biological integrity and genetic diversity of the Columbia River ecosystem and through other measures that are compatible with naturally-producing fish and wildlife populations. (Draft FY1998 Annual Implementation Workplan [AIWP], Appendix A, 6/4/97)

Principles

Fish and wildlife managers have adopted a set of principles to guide their efforts toward the goal (paraphrased from Draft Multi-Year Plan, 2/7/98):

- Ecosystems are a complex group of inter-connected habitats supporting diverse assemblages of species;
- Natural processes govern ecosystems; residents of the Columbia Basin will have more success managing human activities than trying to manipulate ecosystem processes;
- Fish and wildlife exist as complex groups of metapopulations and life history forms, with associated genetic diversity;

- Salmon and other species such as Kootenai sturgeon, bull trout and bald eagles are keystone species with a key role in nutrient cycling and ecosystem structure and can indicate the “health” or “normative” condition of the ecosystem; and,
- The priority is to re-establish “co-evolved native fish and wildlife species assemblages” (biodiversity).

Resident fish managers adopted additional principles for resident fish (paraphrased from Draft Multi-Year Implementation Plan [MYIP], Chapter 6, 6/4/97):

- protect and enhance native populations and habitats and non-native populations consistent with native species needs; and,
- establish and enhance resident fish populations (native and non-native) to maximize productivity and stability and provide fisheries, including replacement for those lost.

Challenges Facing Fish and Wildlife

Fish and wildlife face numerous threats in the Columbia River Basin:

- The mainstem hydropower system blocked the passage of salmonids to many areas and inundated important wildlife and resident fish habitat;
- The current operations of the hydropower system dramatically reduce survival of remaining salmon populations and impact resident fish and wildlife; and,
- The management of public and private lands for grazing, logging, mining, agriculture, urbanization, and industrial and municipal uses has destroyed and continues to degrade fish and wildlife habitat.

The Multi-Year Plan

The Multi-Year Plan (draft completed 2/7/98; Draft MYIP, 6/4/97) outlines subbasin conditions and limiting factors, and defines objectives and strategies to achieve these goals and principles, to address problems faced by fish and wildlife. Specific actions are detailed in each year’s AIWP and the NPPC’s Fish and Wildlife Program, Columbia River Inter-Tribal Fish Commission’s (CRITFC) “Spirit of the Salmon” Tribal Recovery Plan (TRP), Draft Recovery Plan for Snake River Salmon, Tribal and State Subbasin Plans, etc.

There are only a limited number of strategies or “tools” available to meet the subbasin objectives of rebuilding fish and wildlife populations:

- Populations need habitat. Tools include 1) protecting existing habitat through improved land and water management, purchase of land and easements, and regulation, and 2) restoring habitat through fencing, vegetation planting, road rehabilitation, instream structures, etc.
- Most naturally-spawning salmon populations, and numerous resident fish populations, are critically low and need assistance to rebuild. Tools include using hatcheries to maintain or increase populations until they can be returned to the habitat for natural spawning (i.e., supplementation and captive brood stock).

- Adequate tributary passage facilities (i.e., screens and ladders) are needed to ensure survival of juvenile and adult migrant salmon and resident fish;
- The configuration and operation of the mainstem hydropower system is critical to the survival of anadromous fish and many populations of resident fish and wildlife. Some mainstem monitoring and research, providing information needed for near-term operational decisions and long-term planning, is included in the direct budget.
- Research and monitoring is needed to address management questions and to better direct implementation.
- Administration, coordination and information services for the regional effort are needed.

Ten Year Budget Recommendations

The Ten Year Budget is summarized in Table 2 and presented in detail in Table 3 at the end of this document.

This estimate of the future direct budget is based on the assumption the 1999 Decision, which is required under the 1995 Federal Columbia River Power System Biological Opinion, will lead to a system configuration that allows Snake River salmon to recover. Columbia Basin fish and wildlife managers “endorse natural river drawdowns at the Lower Snake River dams and natural river or spillway crest drawdown at John Day Dam as the presumptive path that is consistent with the biological needs of Snake River and Columbia River fish and wildlife and also consistent with the Independent Scientific Group concept of a normative river” (CBFWA Members meeting, April 15, 1997). If the region chooses some other path, this budget would not be applicable.

- The BPA direct Fish and Wildlife budget for FY2002 through FY2006 should range between \$198 and \$223 million annually.
- Anadromous fish costs should range from \$133 to \$150 million annually, resident fish costs from \$24 to \$32 million, and \$31 to \$35 million for wildlife costs.
- The budget increase is driven by increasing O & M, more rapid habitat restoration, greater numbers of ESA-listed species, hatchery system changes to “conserve” salmon populations and inflation.
- Resident fish and wildlife increases will allow mitigation to proceed in a more timely fashion and will accommodate increased costs associated with the listing of resident fish species under the ESA.
- BPA administrative costs and the costs of the Independent Scientific Review Panel will increase from \$9.2 million to \$10.7 million because of inflation.
- This estimate is based on numerous assumptions and subject to considerable uncertainty. Future budget needs could increase if assumptions are not met or decisions are delayed.

Assumptions in Fish and Wildlife Cost Projections

- Under the BPA Budget Memorandum of Agreement, available funds are limited to \$127 million in the direct budget through FY2001 and inflation is included at 3 percent annually from FY2002 through FY2006.

- The “Evolutionarily Significant Unit” (ESU) concept will be applied to salmon management and the region will decide to use artificial production techniques to rebuild salmon runs, including captive brood stock, supplementation, and conservation hatchery methods.
- The region will decide to pursue an aggressive effort to protect and restore habitat necessary to rebuild anadromous and resident fish populations.
- The most accurate estimates available for the anadromous fish costs of these habitat and supplementation programs are those developed for the CRITFC “Spirit of the Salmon” TRP.
- The costs of BPA administration (\$8 million annually) and the ISRP’s activities (\$1.2 million annually) will continue.
- New capital investments in the direct budget will require at least a three year lead time for planning and permitting;
- The estimated outyear budgets from FY1999 to FY2003 are based on the budgets submitted with the FY1999 proposals, with inflation removed; from FY2004 to FY 2006 based on no increase in budgets.
- Some additional funding is included to cover the costs of complying with the ESA requirements for anadromous fish (estimated at \$5 million per year) and resident fish (\$5 million per year).
- Resident Fish budgets include re-scheduling work in excess of MOA budget levels (\$15 million) to FY2002 - FY2006, and include the costs of additional resident fish ESA listings (e.g., bull trout and west slope cutthroat trout), and \$2 million annually to mitigate additional damage caused by deep drawdowns in the large hydrosystem storage reservoirs.
- Wildlife budget (FY2002- FY2006) includes an additional \$15 million per year based a projections showing the remaining Habitat Unit mitigation debt for construction losses, including inflation and O&M, cannot be achieved with \$15 million or \$25 million per year, but is achieved in 20 years with \$30 million per year.
- Additional O & M for anadromous fish work is estimated by adding 5 percent of the previous years’ implementation cost to the previous years’ O & M.
- Coordination/Data Management includes additional fish and wildlife managers’ travel/coordination (\$1 million above the \$500,000 in FY1999) and StreamNet costs (\$1 million).
- Habitat Implementation for FY2004 to FY2006 used the TRP estimate of additional costs of current projects (\$2.2 million per year) and included TRP estimated costs (averaging \$900,000 per subbasin annually). At \$3000 per mile, this represents about 300 miles of fence along almost 8,500 miles of anadromous fish streams in fair or poor condition in the Columbia Basin.
- Habitat Law Enforcement for FY2002 to FY2006 includes an additional \$500,000 per year above FY2000 level of \$1.5 million.
- Habitat Assessment and Monitoring for FY2002 to FY2006 includes \$9 million annually estimated in TRP (including aerial photo interpretation), averaging \$450,000 per subbasin annually.
- Habitat Coordination includes an additional \$3 million for Watershed Councils in 20 subbasins, averaging \$150,000 per subbasin per year.
- Mainstem Direct budget does not include additional funds above current estimated needs for Predator Control, Passive Integrated Transponder (PIT) Tags, or Smolt Monitoring.

Additional funds beyond those included are assumed to come from cost-sharing or the re-programming of other funds.

- Budgets for FY2002 and beyond include an additional \$3 million annually for Ocean Plume and Estuary Research and \$2 million for other Mainstem Research. These are the initial portions of research efforts which are anticipated to grow in the future. Additional funds beyond those included are assumed to come from Appropriations, cost-sharing or the re-programming of other research funds.
- Anadromous Fish Production Construction for FY2004 to FY2006 includes the TRP estimate of construction needs for current projects and \$5 million annually to retro-fit existing facilities to operate as “Conservation” hatcheries, either for captive brood stock management or supplementation of ESUs. The budget also includes the TRP estimates of additional acclimation facilities and tank trucks, etc. (averaging \$250,000 per subbasin per year) required for supplementation.
- Production Research & Monitoring does not include additional funds above estimated current needs for hatchery tagging, hatchery research and monitoring, supplementation research or natural production research, monitoring and evaluation. Additional funds beyond those included are assumed to come from cost-sharing or the re-programming of other funds.
- Tributary Passage Construction for FY2003 and beyond includes current project costs from the TRP. For FY2002 and beyond the budget includes the TRP estimates for additional screens and ladders needed in subbasins (averaging \$500,000 per subbasin per year).

Conclusion

These past efforts have been helpful to fish and wildlife in the Columbia Basin. Over the last fifteen years, we have improved salmon survival in the Columbia Basin and improved conditions for resident fish and wildlife. However, salmon runs continue to decline and additional ESA listings are anticipated. Does this mean the BPA Fish and Wildlife Program is a failure?

No, because:

- Recovery takes a long time. Erosion of fish and wildlife populations has been occurring for 150 years and cannot be expected to turn around in fifteen years. Only three or four generations of chinook have returned since the Northwest Power Planning Act was passed. Habitat recovery may take 25 years or more after the land use is changed.
- The effort has been limited relative to the need. For example, we have only fenced or done instream work on a small percentage of the more than 8000 miles of streams in fair or poor condition.
- Some things have not changed. The dams are still “harvesting” out-migrants and weather and ocean conditions still reduce survival.
- The chances of success are modest. The best available estimates (from PATH modeling) show low probabilities of meeting salmon survival standards even with aggressive improvements in the hydropower system. Delay in mainstem improvements further reduces the chances of success.
- The status of many fish and wildlife populations is precarious. This will require heroic efforts, equivalent to putting the patient in the I.C.U., and life support is expensive.

Therefore, the region should push forward with salmon recovery and resident fish and wildlife mitigation and increase the effort. The CBFWA Ten Year Fish and Wildlife Budget (Tables 2 and 3) provides a reasonable estimate of what the recovery and mitigation effort might cost.

Table 2. Ten year budget summary (millions of dollars)

| Budget Category | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Anadromous Fish | 97.3 | 90.7 | 97.1 | 90.7 | 133.0 | 141.0 | 142.0 | 147.0 | 150.0 |
| Resident Fish | 15.9 | 16.2 | 15.0 | 15.0 | 24.3 | 31.7 | 30.6 | 28.2 | 27.3 |
| Wildlife | 15.0 | 15.0 | 15.0 | 15.0 | 30.9 | 31.8 | 32.8 | 33.8 | 34.8 |
| BPA/ISRP | 9.0 | 9.2 | 9.2 | 9.2 | 9.5 | 9.8 | 10.1 | 10.4 | 10.7 |
| Total F & W | 137.2 | 131.1 | 136.3 | 129.9 | 197.7 | 214.3 | 215.5 | 219.4 | 222.8 |

Table 3. Ten year budget (thousands of dollars)

| Budget Category | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| ANADROMOUS FISH | | | | | | | | | | |
| Coordin./Data Mgmt -Current | 4,197 | 4,711 | 4,760 | 4,760 | 4,760 | 4,760 | 4,760 | 4,760 | 4,760 | 42,229 |
| Coordin./Data Mgmt - Additional | | | | | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 10,000 |
| <i>Coordin./Data Mgmt Total</i> | 4,197 | 4,711 | 4,760 | 4,760 | 6,760 | 6,760 | 6,760 | 6,760 | 6,760 | 52,229 |
| <i>Model/PATH</i> | 2,103 | 1,693 | 1,983 | 1,815 | 1,703 | 1,408 | 1,408 | 1,408 | 1,408 | 14,930 |
| Basinwide Total | 6,300 | 6,404 | 6,743 | 6,575 | 8,463 | 8,168 | 8,168 | 8,168 | 8,168 | 67,159 |
| TRP-Additional Implementation | | | | | 14,060 | 18,819 | 20,269 | 21,239 | 18,394 | 92,781 |
| TRP-Addition to Current Proj. | | | | | | | 2,200 | 2,200 | 2,200 | 6,600 |
| Current Projects-99Prop's | 7,036 | 9,316 | 7,685 | 6,586 | 5,148 | 5,181 | | | | 40,952 |
| <i>Implementation Total</i> | 7,036 | 9,316 | 7,685 | 6,586 | 19,208 | 24,000 | 22,469 | 23,439 | 20,594 | 140,333 |
| Implement. Total- Capital | | | 1,000 | 1,500 | 6,000 | 10,000 | 10,000 | 10,000 | 10,000 | 48,500 |
| Implement. Total - Expense | 7,036 | 9,316 | 6,685 | 5,086 | 13,208 | 14,000 | 12,469 | 13,439 | 10,594 | 91,833 |
| O & M - Current Prop's | 1,626 | 1,697 | 1,506 | 1,506 | 1,506 | 1,506 | 1,506 | 1,506 | 1,506 | 13,865 |
| O & M - Additional | | | | | | 960 | 2,160 | 3,284 | 4,456 | 10,860 |
| <i>O & M Total</i> | 1,626 | 1,697 | 1,506 | 1,506 | 1,506 | 2,466 | 3,666 | 4,790 | 5,962 | 24,725 |
| Law Enforcement Current | 500 | 1,548 | 1,523 | 1,523 | 1,523 | 1,523 | 1,523 | 1,523 | 1,523 | 12,706 |
| Law Enforcement - Additional | | | | | 500 | 500 | 500 | 500 | 500 | 2,500 |
| <i>Law Enforcement Total</i> | 500 | 1,548 | 1,523 | 1,523 | 2,023 | 2,023 | 2,023 | 2,023 | 2,023 | 15,206 |
| Monitor/Assess - Current | 2,103 | 2,121 | 2,739 | 3,092 | 2,036 | 1,498 | 1,498 | 1,498 | 1,498 | 18,082 |
| Monitor/Assess -Additional | | | | | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 45,000 |
| <i>Monitor/Assess Total</i> | 2,103 | 2,121 | 2,739 | 3,092 | 11,036 | 10,498 | 10,498 | 10,498 | 10,498 | 63,082 |
| Coordin./Education - Current | 1,026 | 1,119 | 1,144 | 1,139 | 838 | 843 | 843 | 843 | 843 | 8,637 |
| Coordin./Education - Additional | | | | | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 15,000 |
| <i>Coordin./Education Total</i> | 1,026 | 1,119 | 1,144 | 1,139 | 3,838 | 3,843 | 3,843 | 3,843 | 3,843 | 23,637 |
| Habitat Total | 12,290 | 15,801 | 14,597 | 13,845 | 37,610 | 42,830 | 42,499 | 44,592 | 42,919 | 266,982 |

| Budget Category | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Monitor Smolts Current | 4,011 | 5,084 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 45,878 |
| Monitor Smolts - Additional | | | | | | | | | | 0 |
| <i>Monitor Smolts Total</i> | 4,011 | 5,084 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 5,255 | 45,878 |
| <i>PIT Tags</i> | 5,596 | 3,044 | 2,744 | 2,244 | 2,241 | 1,971 | 1,971 | 1,971 | 1,971 | 23,753 |
| <i>Predator Control</i> | 3,626 | 3,626 | 3,696 | 3,546 | 3,306 | 3,306 | 3,306 | 3,306 | 3,306 | 31,024 |
| Research - Current | 1,757 | 1,509 | 425 | 10 | 10 | 10 | 10 | 10 | 10 | 3,750 |
| Research - Additional | | | | | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 10,000 |
| <i>Research Total</i> | 1,757 | 1,509 | 425 | 10 | 2,010 | 2,010 | 2,010 | 2,010 | 2,010 | 13,750 |
| Research O & E - Current | 150 | 0 | 990 | 800 | 700 | 600 | 600 | 600 | 600 | 5,040 |
| Research O & E - Additional | | | | | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 15,000 |
| <i>Research O&E Total</i> | 150 | 0 | 990 | 800 | 3,700 | 3,600 | 3,600 | 3,600 | 3,600 | 20,040 |
| Mainstem Total | 15,139 | 13,262 | 13,109 | 11,854 | 16,512 | 16,142 | 16,142 | 16,142 | 16,142 | 134,445 |
| Construct/Design - Current | 27,735 | 14,918 | 19,700 | 11,700 | 6,900 | 3,900 | | | | |
| Construction - Retro Fit Existing | | | | | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 25,000 |
| Construction-TRP Acclimation | | | | | 5,058 | 4,653 | 3,652 | 981 | 600 | 14,944 |
| Construct/Design - TRP Ongo | | | | | | | 2,200 | 2,200 | 2,200 | 6,600 |
| <i>Construction Total</i> | 27,735 | 14,918 | 19,700 | 11,700 | 16,958 | 13,553 | 10,852 | 8,181 | 7,800 | 131,397 |
| O & M -Current | 7,882 | 9,219 | 13,093 | 13,653 | 13,058 | 13,043 | 13,043 | 13,043 | 13,043 | 109,074 |
| O & M - Additional | | | | | | 500 | 1,178 | 1,720 | 2,129 | 5,527 |
| <i>O & M Total</i> | 7,882 | 9,219 | 13,093 | 13,653 | 13,058 | 13,543 | 14,220 | 14,763 | 15,172 | 114,601 |
| Monitor, Tags, Research-Current | 9,085 | 8,927 | 9,015 | 8,933 | 8,837 | 8,822 | 8,822 | 8,822 | 8,822 | 80,088 |
| Monitor, Tags, Research-Additional | | | | | | | | | | |
| <i>Monitor, Tags, Research Total</i> | 9,085 | 8,927 | 9,015 | 8,933 | 8,837 | 8,822 | 8,822 | 8,822 | 8,822 | 80,088 |
| Nat. Prod. Res./M & E - Current | 3,249 | 4,686 | 4,528 | 4,431 | 3,552 | 3,331 | 3,331 | 3,331 | 3,331 | 33,769 |
| Nat. Prod. Res./M & E - Additional | | | | | | | | | | |
| <i>Nat. Prod. Res./M & E Total</i> | 3,249 | 4,686 | 4,528 | 4,431 | 3,552 | 3,331 | 3,331 | 3,331 | 3,331 | 33,769 |
| Supplementation Research-Current. | 5,471 | 5,761 | 5,991 | 5,702 | 5,293 | 5,043 | 5,043 | 5,043 | 5,043 | 48,389 |
| Supplementation Research-Additional | | | | | | | | | | |
| <i>Supplementation Research Total</i> | 5,471 | 5,761 | 5,991 | 5,702 | 5,293 | 5,043 | 5,043 | 5,043 | 5,043 | 48,389 |
| <i>Coordination</i> | 1,820 | 1,132 | 1,142 | 1,142 | 1,142 | 1,142 | 1,142 | 1,142 | 1,142 | 10,946 |
| Production Total | 55,241 | 44,643 | 53,468 | 45,561 | 48,840 | 45,434 | 43,410 | 41,282 | 41,310 | 419,189 |
| Construction - Current | 6,092 | 6,968 | 5,817 | 5,481 | 3,057 | 1,701 | | | | 29,115 |
| Construction-On-going Additional | | | | | | 655 | 1,523 | 1,542 | 1,561 | 5,281 |
| Construction - Additional | | | | | 7,706 | 10,209 | 10,410 | 10,475 | 10,125 | 48,925 |
| <i>Construction Total</i> | 6,092 | 6,968 | 5,817 | 5,481 | 10,763 | 12,565 | 11,933 | 12,017 | 11,686 | 83,321 |
| O & M _ Current | 1,580 | 1,720 | 1,672 | 1,672 | 1,673 | 1,673 | 1,673 | 1,673 | 1,673 | 15,009 |
| O & M _ Additional | | | | | | 385 | 896 | 1,492 | 2,093 | 4,867 |
| <i>O & M Total</i> | 1,580 | 1,720 | 1,672 | 1,672 | 1,673 | 2,058 | 2,569 | 3,165 | 3,766 | 19,875 |
| <i>M & E</i> | 676 | 914 | 674 | 674 | 674 | 674 | 674 | 674 | 674 | 6,308 |
| Tributary Passage Total | 8,348 | 9,602 | 8,163 | 7,827 | 13,110 | 15,297 | 15,176 | 15,856 | 16,126 | 109,505 |

| Budget Category | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|
| ESA Additional | | 1,000 | 1,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 32,000 |
| Anadromous Total (w/o inflation) | 97,318 | 90,711 | 97,081 | 90,662 | 129,535 | 132,871 | 130,395 | 131,041 | 129,665 | 1,029,279 |
| ANADROMOUS FISH | 97,318 | 90,711 | 97,081 | 90,662 | 133,421 | 140,963 | 142,486 | 147,487 | 150,317 | 1,090,447 |
| (Inflated @3%, post-MOA) | | | | | | | | | | |
| Resident Fish - Current Levels | 15,887 | 16,206 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 137,093 |
| Resident Fish - Reschedule Excess | 0 | 0 | 0 | 0 | 1,612 | 7,860 | 6,009 | 3,057 | 1,515 | |
| Resident Fish - Additional ESA | 0 | 0 | 0 | 0 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 25,000 |
| Resident Fish-Deep Drawdown Mitigation | | | | | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 10,000 |
| Resident Fish Total (w/o inflation) | 15,887 | 16,206 | 15,000 | 15,000 | 23,612 | 29,860 | 28,009 | 25,057 | 23,515 | 192,146 |
| RESIDENT FISH | 15,887 | 16,206 | 15,000 | 15,000 | 24,320 | 31,678 | 30,606 | 28,202 | 27,260 | 204,160 |
| (Inflated @3%, post-MOA) | | | | | | | | | | |
| Wildlife – Current | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 135,000 |
| Wildlife – Additional | | | | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 75,000 |
| Wildlife Total (w/o inflation) | 15,000 | 15,000 | 15,000 | 15,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 210,000 |
| WILDLIFE | 15,000 | 15,000 | 15,000 | 15,000 | 30,900 | 31,827 | 32,782 | 33,765 | 34,778 | 224,052 |
| (Inflated @3%, post-MOA) | | | | | | | | | | |
| BPA Admin./ISRP Total | 9,000 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 9,200 | 82,600 |
| BPA ADMINISTRATION/ISRP | 9,000 | 9,200 | 9,200 | 9,200 | 9,476 | 9,760 | 10,053 | 10,355 | 10,665 | 86,909 |
| (Inflated @3%, post-MOA) | | | | | | | | | | |
| Recommended F&W Budget | 137,206 | 131,117 | 136,281 | 129,862 | 192,347 | 201,930 | 197,604 | 195,298 | 192,381 | 1,514,025 |
| TOTAL F&W BUDGET | 137,206 | 131,117 | 136,281 | 129,862 | 198,117 | 214,228 | 215,928 | 219,810 | 223,021 | 1,605,569 |
| (Inflated @3%, post-MOA) | | | | | | | | | | |
| Estimated Capital Needs | 33,827 | 21,886 | 26,517 | 18,681 | 33,721 | 36,118 | 32,785 | 30,198 | 29,486 | 263,218 |
| Inflated @3% (post-MOA) | 33,827 | 21,886 | 26,517 | 18,681 | 34,732 | 38,317 | 35,825 | 33,988 | 34,182 | 277,956 |