

Fish and Wildlife Asset Strategy

Executive Summary

Purpose and Scope

The Bonneville Power Administration is responsible through the Northwest Power Act for the protection, mitigation and enhancement of fish and wildlife affected by the construction, inundation, and operational impacts of the 31 federal dams of the Federal Columbia River Power System (FCRPS). We also have responsibilities under the Endangered Species Act (ESA) to avoid adverse impacts on endangered and/or threatened species of salmon, steelhead, white sturgeon, bull trout, and other listed species. BPA is guided in its program implementation by the Northwest Power and Conservation Council's Fish and Wildlife Program and biological opinions (2014 FCRPS BiOp). Proposed fish facilities and acquisition of land under the program are informed by the Council's public and scientific review process, including Council recommendations for project funding. Subsequently, through the Capital Investment Review (public cost-review process) BPA develops a capital budget to support program implementation. The funding of these projects supports our responsibilities under the program, including under ESA BiOps, to address the impacts to fish and wildlife from the construction and operation of the FCRPS through acquiring and protecting habitat for fish and wildlife, securing riparian buffers to protect streams for fish, and acquiring land for, and construction of, fish hatcheries.

Background

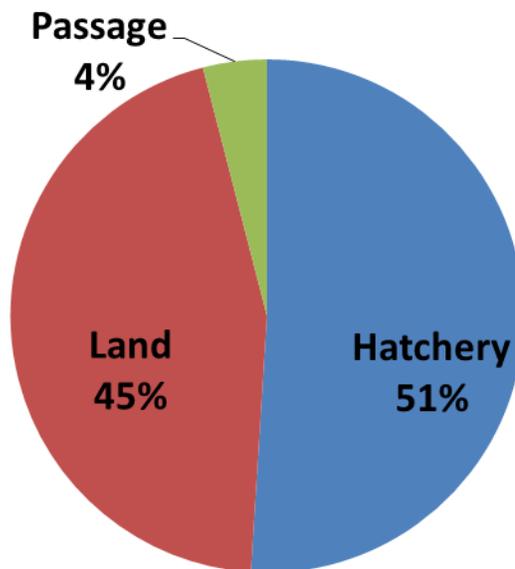
Performance objectives for wildlife mitigation were determined by loss assessments conducted in the 1980s and formalized in the Council's Fish and Wildlife Program. The acquisition of wildlife land and subsequent permanent conservation easements ensures the long-term conservation value of the asset. F&W has entered into settlement agreements with the states of Oregon and Idaho to settle wildlife obligations for the Willamette and Southern Idaho projects, respectively, including both acquisition of lands for permanent protection as well as long-term O&M. F&W is engaged in similar discussions with states and/or tribes with the goal of reaching agreements for remaining wildlife obligation in the future. A management plan is prepared for each property purchased with BPA funds that identifies the activities to sustain, restore, and enhance the value and benefit of the original investment. Funding the acquisition of land under the capital budget does not result in BPA taking title or owning the facility or land (reflects current program policy). The funded entity or sponsor (usually a tribe, state or other federal agency) takes title on a permanent basis together with ownership responsibilities (i.e. payment of property taxes). BPA's asset value in a land acquisition is secured through the use of a required conservation easement that is placed on the property. The conservation easement gives BPA enforcement rights on the property *in perpetuity* to ensure the natural resource values (wildlife benefits) are forever protected.

In 2008, BPA signed the historic Columbia Basin Fish Accords. These agreements were with Northwest tribes and the states of Washington, Idaho and Montana. These agreements set budgets for F&W restoration work, hatchery construction as well as other activities supporting the program over a 10-year period. The Accords stipulated that about a dozen hatcheries would be constructed to supplement fish returns for salmon, steelhead and sturgeon. BPA is responsible for the funding to construct the facility and the ongoing O&M, as determined in the Accords. BPA turns over ownership of the facility and operations to the state or tribe which was a party to the agreement. These Accords also included a forbearance clause that with these facilities BPA would have no further obligation for additional hatcheries for 30 years except in the case of changed circumstance.

Profile of Assets

The Fish and Wildlife organization has three major asset categories. The three categories are land acquisitions for wildlife credit, major hatchery construction, and fish passage structures. Land acquisitions have been a primary tool for addressing our wildlife obligations under the program, with associated credit for the construction and inundation of the dams. Each hydro project has had a wildlife loss assessment that has determined the obligation BPA is responsible to mitigate. Major hatchery construction projects support the program and are primarily associated with the Columbia Basin Fish Accords. Hatcheries are being built across the region to supplement salmon and steelhead, and in some cases, reintroduce extirpated populations back into the Columbia River Basin. Hatcheries range in production from a few hundred thousand to several million juveniles that are released annually into rivers, streams and reservoirs. Fish passage structures aid in the survival by reducing the impacts of water diversions and/or enabling access into habitat upstream of the structures for both anadromous and resident species. Improvements consist of culvert upgrades, installations, or removal; screening irrigation diversions; and alterations such as small dam removal that open access to additional miles of stream habitat.

Asset Category Proportions FY17 - 19



Asset Management Objectives

The BPA Fish and Wildlife program objectives are informed by biological opinions, court orders, and Council recommendations. BPA does not typically own or operate fish and wildlife facilities or land. BPA provides funding to deliver on objectives for hatchery and fish facility additions, upgrades and replacements and the acquisition of conservation land parcels and easements to satisfy our Northwest Power Act, ESA, long-term agreements, or other responsibilities.

Hatchery and Fish Facility Assets: The Council enacts a rigorous public process to review and prioritize facilities, including consideration of environmental compliance, biological benefit and independent scientific review, to address FCRPS fish and wildlife responsibilities. BPA considers the Council's recommendation and then makes its funding decisions based on capital availability and annual constraints to deliver on these program responsibilities. The objective behind the construction of these facilities is to protect, mitigate, and enhance fish and wildlife impacted by the FCRPS. A benefit of the successful implementation of our fish and wildlife responsibilities is an increase in adult fish returns to levels that support tribal and non-tribal fisheries.

Land Assets: Over the history of the program, various agreements have been reached with states and tribes to address our fish and wildlife responsibilities. In these agreements, BPA provides a set amount of funding for both the habitat acres and the long-term stewardship of those properties to extinguish the obligation for construction, inundation, and operation of

the dams and to ensure those properties are managed in perpetuity for the benefit of wildlife species. The program is increasingly turning to settlement agreements to address our responsibilities because they provide an efficient and cost-effective alternative to annual funding and provide certainty about our outstanding obligations. See Table 1 below for a list of current capital projects for land acquisition.

Fish Passage Assets: Program objectives surrounding passage improvements are part of the program's strategy to rebuild rivers and streams for fish survival and reproduction. The strategy for passage improvements is to locate areas that need improvement and provide the largest biological benefit. To date, the program has opened up thousands of miles of river habitat that had been blocked by primarily man-made structures, providing increased fish access to spawning grounds. Fish screens in heavily irrigated areas around the region have been a major focus of the program to provide safe passage for both anadromous and resident fish from destructive irrigation channels.

Key Drivers

The following are key drivers in determining the level of capital funding for the Fish and Wildlife capital projects:

- Northwest Power and Conservation Council's Fish and Wildlife Program
- Endangered Species Act Biological Opinions
- Columbia Basin Fish Accord
- Fish and wildlife agreements (e.g, Willamette; Southern Idaho)

Strategic Challenges

Many uncertainties impact the implementation of the Fish and Wildlife Program. For capital spending, annual budget planning is based on best estimates that are subject to change given issues that are outside of BPA's control. Accordingly, we focus on the flexibility of multi-year planning and shaping of available budgets on an annual basis to support work that is most likely to be ready to implement.

For resident fish and wildlife land acquisitions, there are significant uncertainties with regard to willing sellers in priority locations identified for land acquisitions. Land appraisals, permitting, terms of conservation easements, and environmental compliance are unique to each parcel and may affect the cost and/or timing of closing of land acquisitions. Additionally, stakeholder outreach can sometimes also influence the timing of closing as we strive for broad understanding and support for the acquisition relative to our fish and wildlife responsibilities.

Proposals for artificial production projects (e.g., hatcheries) typically go through the Council's 3-Step process for the development of a master plan, design, and environmental and science review, leading to a Council recommendation. Hatchery projects are complex

and may include challenges similar to those with land acquisitions, as well as consideration of design alternatives, adequacy of available water supplies, environmental permits, acclimation facilities and other hatchery-associated components, and co-manager agreements, among other issues. Once these projects are underway, the emphasis shifts from issues surrounding uncertainty to rigorous project management.

Uncertainties on fish passage projects include some of the same challenges described above, including local government and private landowner interests, permit requirements, in-water work windows, and risks associated with operational failures, including natural events like fire and weather that may compromise the effectiveness of the investment.

Strategy Direction

The Fish and Wildlife asset strategy conforms as closely as possible to the agency's policy on developing asset management strategies (BPAM 661). This strategy focuses on investments for which BPA retains discretion to influence the relative prioritization, selection, implementation, and ongoing support of investments and land acquisitions.

Wildlife responsibilities are met with current program strategies of funding land acquisitions that provide significant wildlife benefit with permanent protections and contribute toward achieving completion of our defined outstanding mitigation obligation. The program is continuing to utilize settlement agreements to fully extinguish the defined obligation through land acquisition and O&M stewardship payments for the long-term maintenance of the properties. By defining the dollars, O&M funds and outstanding acres to extinguish the obligation, the program and its sponsors have gained certainty of funding while permanently extinguishing BPA obligations.

In general, hatchery production is used to increase the numbers of juvenile that out-migrate to the ocean and increase the number of adult returns. Additionally, for some fish populations needing additional support, hatcheries have been used as a safety net program to protect the genetics of certain stocks and species. The objective is to supplement ESA-listed fish populations as guided by various BiOps. Our strategy is to continue working with sponsors through the Council's 3-Step process to develop hatchery projects for potential funding following the best available science. See Table 2 below for currently planned hatcheries.

Results to be achieved

Results to be achieved for each of the asset categories are unique to that category. Hatchery success is based on effectiveness of meeting its particular objectives: from protection and survival of captive brood stock in the case of safety net facilities, to juvenile production levels for supplementation to "reseed" habitat or to increase number of out-migrants with subsequent returning adults to contribute to harvest, brood stock for the hatchery or spawning in the wild. Rigorous planning and project management are key elements relative

to purpose, scope, design, budget, and schedule for construction, and also best management practice relative to the associated expense tail (i.e., operations and maintenance) and asset management program for cost-effective, long-term sustainability.

Fish passage structures are assessed primarily decrease in fish entrainment in water diversions and/or by the miles of habitat accessible to fish populations; also by the scope and design, schedule, and budget of the project.

Land acquisitions for resident fish or wildlife credit will be measured through two objectives. First, the acquisitions agreed to are reviewed to ensure that progress is made to extinguish the obligation within the agreed time frame. Second, lump sum stewardship funds are included to eliminate ongoing operations and maintenance costs of the acquisitions. The stewardship funds eliminate future annual O&M budget needs, providing long-term savings to ratepayers. In the case of both settlement agreements as well as land acquisitions that are outside of a settlement agreement, the program ensures that there is a defined obligation against which there is credit for the acquisitions such that we are reducing our outstanding obligation and ultimately working toward fully extinguishing the outstanding obligation.

Costs – Capital and Expense

The expected capital budgets for the program can be viewed in the chart below. Capital budgets past 2019 are uncertain at this time and based on best professional judgment of potential priority investments that provide clear biological benefit relative to the impact of the FCRPS on fish and wildlife and are cost-effective compared to deferring the work or implementing at a slower pace. Considerations that will help refine these capital budgets include future Biological Opinions, potential future Accords, and potential additional settlement agreements.

The program is currently assessing the condition of its fish and wildlife assets for which we are responsible (i.e., hatcheries and fish passage structures) to better forecast future O&M levels as a basis for a strategic, long-term strategy to protect these investments for the long-term benefit of fish and wildlife. Future hatchery construction will carry O&M costs for the facility in perpetuity. Those costs are determined by the size of the facility and the MOA agreements established between BPA and the sponsor who owns the facility. These costs typically range from \$1-2M annually per hatchery facility.

Land purchases for wildlife credit often carry O&M on the properties in perpetuity. By settling land requirements and providing upfront stewardship funding to address O&M in perpetuity, it eliminates the need for continued annual expense O&M funding on those properties. One of the key reasons for the settlement agreements is that capital spending on settlements on the front end is cost-effective compared to annual spending and also lessens the need for expense spending for O&M. As stated, the F&W strategy is to enter into settlement agreements to pay a lump sum for stewardship O&M in perpetuity to extinguish the annual expense funding for O&M on both existing and future acquired properties.

Fish & Wildlife Capital Planning Budgets FY17-30 (millions)

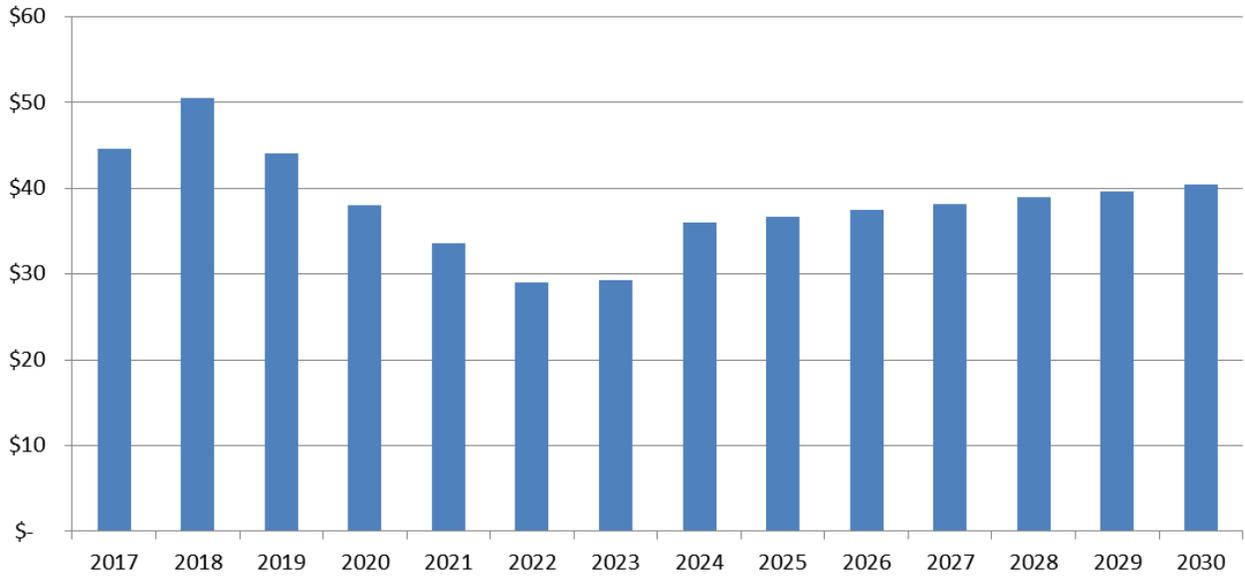


Table 1
Annual Capital Budgets for Land Acquisition Projects from FYFY17 – 19

Land Acquisition	Project Description	FY17 Budget	FY18 Budget	FY19 Budget
Montana Resident Fish	Land acquisitions with Montana Fish and Wildlife to mitigate for impacts of Hungry Horse and Libby Dams on resident fish	\$2,500,000	\$2,500,000	\$2,500,000
Kalispel MOA	MOA with the Kalispel Tribe to mitigate for impacts of the Albeni Falls Dam	\$1,600,000		
Salish and Kootenai Tribes	Acquisitions with Confederated Salish and Kootenai Tribes for impacts of Hungry Horse and Libby Dams on resident fish.	\$2,500,000	\$2,500,000	\$2,500,000
SIWM	Land acquisitions with IDFG to mitigate for impacts of Anderson Ranch, Black Canyon, Palisades, and Minidoka Dams on wildlife	\$5,000,000	\$5,000,000	\$5,000,000
Shoshone-Bannock - Accord	Acquisitions with Shoshone-Bannock Tribe to mitigate for impacts of Anderson Ranch, Black Canyon, Palisades, and Minidoka Dams	\$3,082,500	\$5,375,279	
Willamette Wildlife Fund	Land acquisitions with various partners for impacts of Willamette Valley Dams	\$8,615,125	\$8,830,503	\$9,051,266
Land Total		\$23,297,625	\$24,205,782	\$19,051,266

Table 2

Hatchery and Fish Facilities (\$ in Millions) Planned for FY17-19

Hatchery	Proponent	Funding Source	FY17 Budget	FY18 Budget	FY19 Budget
Klickitat	Yakama	Accord	\$3,288,000	\$7,672,000	
Walla Walla	Umatilla	Accord	\$14,000,000	\$5,000,000	
Crystal Springs	SBT	Accord	\$4,000,000	\$8,000,000	
Natapoc	Yakama	Accord	\$4,100,000	\$1,603,928	
CRITFC White Sturgeon	CRITFC	Accord			\$6,788,448
Hood River	Warm Springs	Accord	\$500,000		
John Day Reprogramming	CRITFC	Accord			\$4,000,000
Kelt Reconditioning	CRITFC	Accord	\$2,000,000		
MRS Coho Facility	Yakama	Accord		\$9,000,000	\$6,000,000
Hatchery Total			\$27,888,000	\$31,275,928	\$16,788,448

Financial Disclosure

This information was made publicly available on June 10, 2016 and contains information not sourced directly from BPA financial statements.