

# 2022 EFW LANDS STRATEGIC ASSET MANAGEMENT PLAN

This Strategic Asset Management Plan for EFW Lands provides alignment between the Agency strategy, stakeholder requirements, organizational objectives and resulting asset management objectives to ensure assets are managed and satisfy BPA's fish and wildlife mitigation obligations.

*For "EFW Lands"*

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## 1.0 EXECUTIVE SUMMARY

The actions of the Lands Program help satisfy BPA's legal obligations under the Northwest Power Act, Endangered Species Act, and other laws to protect, mitigate, and enhance fish and wildlife affected by the construction and operation of the federal dams. The scope of this Strategic Asset Management Plan (SAMP) includes lands acquired specifically for wildlife and fish habitat.

This Strategic Asset Management Plan covers fish and wildlife acquisition of approximately 344,000 acres of land throughout Oregon, Washington, Idaho and Montana. BPA secures its assets in this category through the right to enforce conservation and mitigation in conservation easements and land management plans.

The BPA Lands Program assumes fulfillment of all Memorandum of Agreements (MOA) signed by BPA, including the Columbia Basin Fish Accords, Willamette Wildlife Mitigation and Southern Idaho Wildlife Mitigation agreements. The maturity of the program has developed since the last plan. Particularly, the program has been able to significantly improve the tracking of the inventory of acquired lands by incorporating it into the Pisces database with readily retrievable metrics. The team continues to work on long-term objectives to improve sponsor compliance for new and updated land management plans.

Future expense and capital funding levels are expected to be in line with present levels at approximately \$19M for capital and approximately \$16M in expense funds until current obligations are met. Fiscal year execution of those budgets will depend on the availability of land parcels and the willingness of land owners. Population influx throughout the region has increased land costs, and market influences continue to affect the project partners' ability to purchase mitigation property at the appraised, fair market value. These are some of the main risks that affect the strategy execution.

Where feasible, BPA is pursuing settlement agreements with stakeholders. The settlements are intended to permanently extinguish BPA's mitigation obligations to acquire lands for fish and wildlife mitigation, within defined geographic areas, or pertaining to specific dams, in exchange for the provision of funds to accountable entities. Other transactions involve the purchase of specific parcels of land to establish conservation easements. BPA views all of these land acquisitions as permanent assets that will provide habitat mitigation value indefinitely.

## 2.0 ACKNOWLEDGEMENTS

### 2.1 Senior ownership

The responsibility for operational ownership, coordination, and updating of this strategy is assigned by the Fish and Wildlife (EW) Executive Manager.

Jason Sweet, Acting Executive Manager, Fish and Wildlife	<b>JASON SWEET</b> Digitally signed by JASON SWEET Date: 2022.02.16 09:42:11 -08'00'
Dorie Welch, Deputy Vice President, Environment, Fish and Wildlife	<b>DOROTHY WELCH</b> Digitally signed by DOROTHY WELCH Date: 2022.02.16 09:49:44 -08'00'
Scott Armentrout, Vice President, Environment, Fish and Wildlife	<b>SCOTT ARMENTROUT</b> Digitally signed by SCOTT ARMENTROUT Date: 2022.02.16 09:58:31 -08'00'

### 2.2 Strategy Development Approach

#### 2.2.1 Key Contributors

EF&W’s asset management team facilitated the development of this plan, with primary input from members of the Fish & Wildlife program implementation organizations (EWL, EWM, and EWU) and Policy (EWP), and with support from the Business Operations organization (EWB). EWB represents EFW within BPA’s Asset Management Committee (AMC) and provides coordination support to the asset management effort, and analytical support to the land acquisition program.

BPA intends for this plan to be complementary to, and compliant with the purposes, mandates, and directives found in the 1980 Northwest Power Act, applicable biological opinions, and various judicial rulings. Per the terms of the Northwest Power Act, the Northwest Power and Conservation Council’s current Columbia River Basin Fish and Wildlife Program provides ongoing and comprehensive guidance for regional fish and wildlife mitigation objectives and initiatives, and significantly influences BPA’s strategy.

#### 2.2.2 Key Activities

Activity	Description
<b>Asset Management Maturity Assessment</b>	<ul style="list-style-type: none"> <li>Conduct Asset Management maturity assessment by surveying EFW employees of various disciplines</li> </ul>
<b>Develop SAMP</b>	<ul style="list-style-type: none"> <li>Update the new 2022 Lands SAMP version with new program and process information</li> <li>Review and Update Goals, Objectives and Initiatives with reviews by SMEs and leadership, incorporating results from the maturity assessment</li> <li>Update SWOT analysis</li> <li>Review criteria for asset criticality, and assess asset condition and trends</li> <li>Produce charts, tables and analysis describing historical and future program costs</li> <li>Perform risk assessment to Lands program with program SME input</li> <li>Develop strategy and planned future investments and spend levels</li> </ul>

<b>Review SAMP</b>	<ul style="list-style-type: none"> <li>• Review SAMP with SMEs, EFW front office and OGC</li> <li>• Communicate SAMP updates to NPCC</li> </ul>
<b>Publish SAMP</b>	<ul style="list-style-type: none"> <li>• Incorporate changes from peer reviews and finalize document</li> <li>• Provide SAMP to Asset Planning team for input into Asset Plan</li> </ul>

### 3.0 STRATEGIC BUSINESS CONTEXT

#### 3.1 Alignment of SAMP with Agency Strategic Plan

The Fish and Wildlife program, including this Lands Strategic Asset Management Plan (SAMP), aligns with BPA’s strategic objective 1a, to improve cost management discipline, and objective 2a, to administer an industry-leading asset management program. It also meets objective 3c, to prioritize fish and wildlife investments based on biological effectiveness and mitigation for FCRPS impacts; and manage fish and wildlife program costs at or below inflation, inclusive of new obligations and commitments.

#### 3.2 Scope

This Strategic Asset Management Plan covers land acquisitions that BPA is committed to funding through the Fish and Wildlife Program in order to sustain the mitigation value that accrues from the real property (although not generally owned by BPA). This helps satisfy BPA’s legal obligations under the Northwest Power Act, Endangered Species Act, and other laws to protect, mitigate, and enhance fish and wildlife affected by the construction and operation of the federal dams. The scope of this SAMP includes lands acquired specifically for wildlife and fish habitat. Land acquired for other purposes (e.g., hatcheries) are addressed in separate asset management plans, as appropriate.

#### 3.3 Asset Description and Delivered Services

Lands, which meet certain criteria to satisfy BPA’s fish and wildlife mitigation obligations, may be acquired (partially or wholly) with BPA funds. This includes funding for fee-title acquisitions, leases and purchases of conservation easements. BPA may also commit to providing funds in future timeframes to maintain or enhance – aka operate and maintain (O&M)-- the habitat values of specific properties. BPA typically does not take title to these properties, engage in direct management, or take on responsibilities or liabilities associated with ownership of the properties.

The acquisition of specific properties is generally accomplished through sponsors who identify the property in question, recognize its habitat value, propose acquisition, complete all federal due diligence requirements, and take final ownership of the property or conservation easement. Sponsors include public agencies (e.g., Idaho Fish & Game), sovereigns (e.g., the Yakama Nation), or private entities (e.g., The Nature Conservancy).

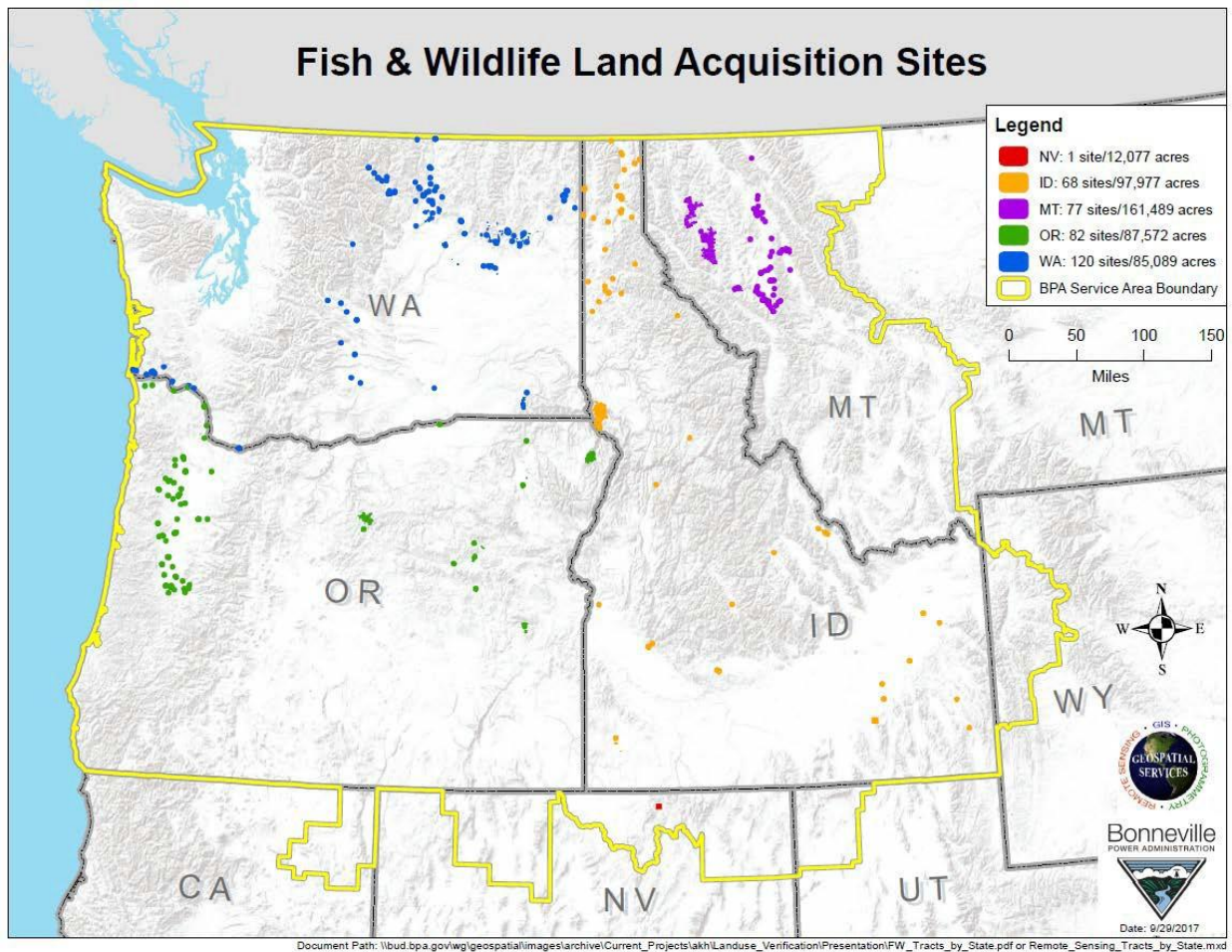
Acquired lands for the purposes of this SAMP fall into one or more of the following mitigation program categories:

- wildlife habitat
- fish habitat

Lands have been purchased for the purpose of wildlife habitat mitigation since the late 1980s. Such acquisitions address mitigation of the hydroelectric system, usually in accordance with provisions of the Northwest Power Act. Lands have been also purchased to meet fish habitat mitigation objectives, to meet Northwest Power Act obligations, as well as to fulfill commitments to comply with the Endangered Species Act (as deployed primarily via applicable biological opinions).

**3.3.1 Table 3.3-1, Summary of Assets**

state	# sites	acreage
Nevada	1	937
Idaho	97	47,247
Montana	93	35,004
Oregon	129	130,107
Washington	222	130,195
<b>TOTAL</b>	<b>542</b>	<b>343,494</b>



**Figure 3.3-2, Asset Locations**

The BPA asset is not ownership of the land, but rather, a right to enforce conservation and mitigation secured through a conservation easement, a third party right of enforcement on a conservation easement, or through a management plan. With regard to life expectancy, all land acquisitions are viewed as permanent assets, with the intended purpose of providing habitat and mitigation value indefinitely -- with the rare exceptions of leases and conservation easements with a term of year duration. However, the maintenance of that value is unique to each specific property.

**Note:** Mitigation Settlements have been executed in some areas, and have potential application elsewhere – these are settlements in which stakeholders in a given geographic area agree to accept a one-time distribution of funds, in exchange for the permanent extinguishment of future BPA obligations to fund further land acquisition, stewardship and restoration in the area. Conversations regarding mitigation settlements with the Washington Department of Fish and Wildlife, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Colville Reservation are ongoing.

### 3.4 Demand Forecast for Services

Land acquisitions, leases, and conservation easements all provide important habitat for fish and wildlife and mitigate for the impacts of the hydroelectric system in accordance with the Northwest Power Act and other commitments defined by the Endangered Species Act. Over the next 5-10 years, BPA expects to maintain the program at its current levels.

As cost of land increases, the quality and amount of land BPA can acquire, especially if budgets remain flat as they are expected to in accordance with the Agency’s strategic plan, will be impacted. This may require EFW to consider more unconventional solutions to land acquisitions.

### 3.5 Strategy Duration

The duration of this strategy is 10 years except when impacted by future legislation, judicial decisions, or initiatives of the Northwest Power and Conservation Council. The strategy will be reviewed annually and published every 2 years unless there is a significant change in strategy at the annual review.

## 4.0 STAKEHOLDERS

### 4.1 Asset Owner and Operators

#### Property owners

The legal title to most lands purchased with BPA funds, and intended to meet fish and wildlife mitigation purposes, is held by entities referred to as “sponsors.” Sponsors typically initiate the proposal to identify and acquire specific properties and develop much of the site-specific documentation -- in effect, sponsoring the local implementation of BPA’s share of the Council’s fish and wildlife program. The property title may also remain in the hands of a non-sponsor owner if BPA funds are only used to acquire a lease or conservation easement for the property in question. Rarely, however, is the property title held permanently by BPA.

Sponsors generally fall into the following categories:

- state agencies, such as Oregon Department of Fish and Wildlife
- Indian tribes, such as the Yakama Confederated Tribes
- private entities, such as Trout Unlimited



## 4.2 Stakeholders and Expectations

*Table 4.2-1, Stakeholders*

Stakeholders	Expectations	Current Data Sources	Measures
Tribes	collaboration	BPA Tribal Affairs organization Power and Trans. account executives Project manager	<ul style="list-style-type: none"> <li>• survey results</li> <li>• annual reports (engagements)</li> </ul>
	project management	Pisces WE#5, Land Purchase and/or Conservation Easement Realty (LIS) documents	<ul style="list-style-type: none"> <li>• milestones</li> <li>• acquisition closing (Realty)</li> </ul>
	funding	Pisces, Asset Suite contracts module	<ul style="list-style-type: none"> <li>• invoices</li> <li>• escrow payment</li> <li>• due diligence</li> </ul>
	communications	initial intake call, project manager, site visits	<ul style="list-style-type: none"> <li>• Pisces WE #5 milestones</li> <li>• WE reports</li> <li>• PM, land acquisition team communications</li> </ul>
	compliance monitoring	remote sensing (aerial photos), and on-site visits	<ul style="list-style-type: none"> <li>• periodic reporting</li> <li>• sponsor’s annual report</li> </ul>
Non-Tribal Partners	project management	Pisces WE#5, Land Purchase and/or Conservation Easement Realty (LIS) documents	<ul style="list-style-type: none"> <li>• milestones</li> <li>• acquisition closing (Realty)</li> <li>•</li> </ul>
	funding	Pisces, Asset Suite contracts module (see Work Element 200, stewardship)	<ul style="list-style-type: none"> <li>• invoices</li> <li>• escrow payment</li> <li>• due diligence</li> </ul>
	communications	initial intake call, project manager, site visits	<ul style="list-style-type: none"> <li>• Pisces WE #5 milestones</li> <li>• WE reports</li> <li>• PM, land acquisition team communications</li> </ul>
	compliance monitoring	remote sensing (aerial photos), and on-site visits	<ul style="list-style-type: none"> <li>• periodic reporting</li> <li>• sponsor’s annual report</li> </ul>
Northwest Power and Conservation Council	collaboration	Council meetings and agendas, sub-committees	<ul style="list-style-type: none"> <li>• F&amp;W Program reports</li> <li>• Council reports; NPCC categorical reviews of F&amp;W Program</li> <li>• sub-committee participation</li> <li>• analyses and recommendations</li> </ul>
	program implementation	Council meetings, agendas, reports; BPA F&W reports	<ul style="list-style-type: none"> <li>• periodic reports</li> <li>• program metrics</li> </ul>

Stakeholders	Expectations	Current Data Sources	Measures
	funding	Pisces, Council financial statements	<ul style="list-style-type: none"> <li>annual financial reports</li> <li>BPA financial reports (4h10c)</li> </ul>
State Agencies (+ Sponsors role)	collaboration	Project manager Power and Trans. account executives	<ul style="list-style-type: none"> <li>survey results</li> <li>annual reports (engagements)</li> </ul>
Local Governments	collaboration	Project manager Power and Trans. account executives	<ul style="list-style-type: none"> <li>survey results</li> <li>annual reports (engagements)</li> </ul>
Other Federal Agencies (+ Sponsors role)	collaboration	Project manager	<ul style="list-style-type: none"> <li>survey results</li> <li>annual reports (engagements)</li> </ul>
EF&W Staff	Program direction	asset strategy budget	<ul style="list-style-type: none"> <li>contracts, contract performance</li> <li>project budgets</li> <li>sponsor contacts, initiatives</li> <li>settlements</li> <li>land acquisition team meetings</li> </ul>
	tools to do the job	Land Acquisition process documentation; IT systems, data	<ul style="list-style-type: none"> <li>Land Handbook</li> <li>Pisces, project reports</li> <li>sponsor reports</li> <li>support docs (TERR, EC, EP, OGC)</li> <li>Support functions (Finance, etc.)</li> </ul>
BPA Finance	timely and accurate information	Land Acquisition process; project manager, Realty (TERR), EWB (budget); capitalization policy	<ul style="list-style-type: none"> <li>budget tracking, forecasts</li> <li>invoicing</li> <li>land acquisition tracking (CR)</li> </ul>
BPA OGC	timely and accurate information	Land Acquisition process; project manager, sponsor, Realty (TERR)	<ul style="list-style-type: none"> <li>MOA</li> <li>conservation easement</li> <li>945 Review documentation</li> </ul>
BPA Realty	timely and accurate information	Land Acquisition process; project manager, sponsor, OGC	<ul style="list-style-type: none"> <li>property title transfer, closing</li> <li>LIS documents (SOR)</li> </ul>
BPA Tribal Affairs	collaboration	Land Acquisition process; project manager, Tribal sponsors opinion surveys	<ul style="list-style-type: none"> <li>survey results</li> <li>PMs engagement</li> <li>Govt-to-govt visits, engagements</li> </ul>
BPA Communications	timely and accurate information	Land Acquisition process; project manager and sponsor	<ul style="list-style-type: none"> <li>Public Notice deliverables (developed and executed)</li> <li>land acquisition tracking (CR)</li> </ul>
Property Owners	timely and accurate information	Land Acquisition process; sponsor and Realty (TERR)	<ul style="list-style-type: none"> <li>PM/sponsor engagement</li> <li>property title transfer, closing</li> </ul>

## 5.0 EXTERNAL AND INTERNAL INFLUENCES

*Table 5.0-1, External and Internal Influences*

External Influences	Affects and Actions
Federal laws/regulations specific to BPA	<p>The 1937 Bonneville Project Act and other specific laws, executive orders, and Federal energy regulations (FERC) directly govern BPA's actions and obligations. The 1980 Northwest Power Act specifies the strategic role of the Northwest Power and Conservation Council and the obligation of BPA to fund fish and wildlife mitigation programs.</p> <p>Long-term program strategies, funding levels, project planning and analyses are all subject to periodic evaluation and adjustment as an inherent aspect of the relationship between BPA and the Council. While the relationship is defined by statute, a key aspect of funding levels and project emphasis is the determination of a broad consensus by the stakeholders; that consensus view is facilitated by ongoing engagement between BPA and the Council.</p>
Federal environmental laws	<p>The effects of general environmental laws (e.g., Endangered Species Act, Clean Water Act, NEPA, etc.) are to place specific requirements on BPA's actions, accountability, and procedural compliance. This includes due diligence with regard to land purchases.</p> <p>Actions by BPA are primarily focused on ongoing implementation of applicable environmental laws, executive orders, and departmental directives. The EC (Environmental Planning and Analysis) organization will continue to provide regulatory expertise and site analysis for the land acquisition process.</p>
Climate change	<p>Effects are uncertain, particularly at specific localities; in general, however, it is anticipated that environmental changes will result in changes to existing habitats (including acquired lands) and will stress the ability of fish and wildlife to adapt.</p> <p>Actions to address the impacts of climate change may include changes to the strategic emphasis of land acquisitions (to protect "cold water refuges", for example); increased direct efforts to maintain existing habitat values; or redirection of habitat value to newly threatened species, etc. Such actions might be considered, as necessary, in attempting to maintain the mitigation value of acquired lands.</p>
Land use patterns	<p>Land use patterns and history affect current and future land acquisition decisions by (1) incurring costs due to remediation of negative features (e.g., dikes or hazardous waste), and/or (2) limiting the habitat value of the parcel in question (sometimes, simply by proximity to a compromised property).</p> <p>Actions to address land use issues will primarily consist of site-specific determinations of the net value and benefit of a property – evaluating the habitat benefits (both at the site and as a contribution to the larger program) versus the limitations or costs imposed by past or current land use.</p>
Population growth	<p>Expected population growth in the region, with increased resource demands, is likely to negatively impact natural ecosystems and thus increase the need for protecting critical habitat. In some locales, population increase may also spur significant increases in property values and the cost of acquiring new parcels.</p> <p>Determination of strategic priorities will be informed by evaluations of risk, availability of suitable properties, and best use of available funding.</p>

External Influences	Affects and Actions
<p>Tax and property/zoning laws</p>	<p>Local and state laws on taxes, property, and zoning affect the desirability of specific parcels due to costs, regulatory hurdles, and (occasionally) adverse local reaction to removal of property from the tax rolls or development potential.</p> <p>BPA accounts for these variables through a defined land acquisition process that vets legal, financial, and public relations issues through collaboration with project sponsors, Legal Affairs (OGC), Realty (TERR), Communications, and other key internal and external partners.</p>
Internal Influences	Affects and Actions
<p>Finance, budget and cost management</p>	<p>Finance takes the lead role in defining the budget development cycle, budgeting rules, and financial policy. Finance also leads agency efforts to control costs and build budget forecasts. Fish &amp; Wildlife (EWB) compile land acquisition budgets in coordination with the Finance budget cycle. Execution of land budgets is challenging, however, due to the uncertain completion and timing of land purchases, which in turn makes allocation of funds and forecasts less reliable. In addition, land law, acquisitions processes and landowner complexities also makes it difficult to forecast expenditures. Cost management initiatives are increasing the need for F&amp;W to provide comprehensive forecasts of land acquisition spending and mitigation obligations (and their potential permanent extinction).</p>
<p>FTE resource availability and skills</p>	<p>Workforce staffing shortages, FTE hiring constraints, long lead-times, and increasing retirement rates all negatively impact the ability to implement the program and provide proper oversight. F&amp;W will continue to prioritize critical activities, defer lower priorities, look for process efficiencies, and employ IT tools where available and appropriate.</p>
<p>Support resources and skills (Realty, IT)</p>	<p>Execution of the land acquisition program is dependent on skills and resources from supporting organizations, such as IT, Realty, Legal, etc. Efficient access to those resources depends on clear procedures and handoffs, regular communication, and tracking capabilities. F&amp;W will continue to employ standardized processes, documentation, regular team meetings, and automation tools as appropriate.</p>
<p>Settlements</p>	<p>Settlements, in which BPA's mitigation obligations are extinguished in exchange for a memorandum of agreement and monetary payment, have been established with various sponsors in a limited number of sub-basins. The effect of these settlements is to define and limit the future financial liability of BPA and future land acquisitions within those areas. Where feasible, F&amp;W is pursuing settlements in order to provide greater certainty of future costs.</p>

## 5.1 SWOT Analysis

Favorable	Unfavorable
<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Alignment with agency’s strategic plan</li> <li>• Identified scope of asset inventory</li> <li>• Engaged and collaborative regional stakeholders, partners, and sponsors</li> </ul>	<ul style="list-style-type: none"> <li>• BPA is working with sponsors to improve timely submittal of land management plans and annual reports, as necessary.</li> <li>• BPA’s O&amp;M responsibility for properties varies across the Program</li> <li>• Staff turnover in EFW, realty and legal presents challenges with implementing a consistent, sustainable strategy</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Improved coordination with sponsors and stakeholders in developing better asset data (annual reporting) and land management plans</li> </ul>	<ul style="list-style-type: none"> <li>• External influences (e.g. climate change or natural disasters) have the potential to have a large impact on the habitat value of land acquisitions.</li> <li>• Population influx throughout the region may also drive up land costs.</li> <li>• Limited financial resources to support ongoing management of existing land acquisitions.</li> <li>• Market influences continue to affect sponsors ability to purchase mitigation property at the allowable appraised value.</li> </ul>

*Table 5.1-1: SWOT*

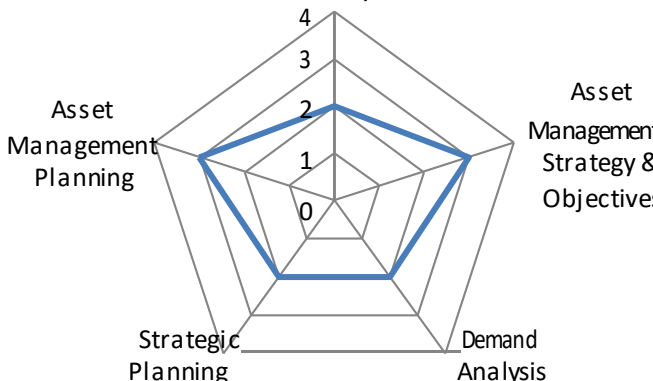
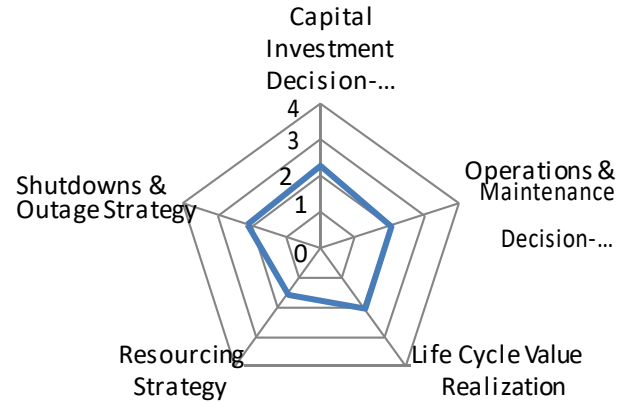
## 6.0 ASSET MANAGEMENT CAPABILITIES AND SYSTEM

Using the IAM maturity model, Fish and Wildlife staff evaluated the maturity of the Lands Asset Management program in six different categories. While sponsors share involvement in the asset management of lands, this maturity survey was completed from a BPA perspective. The following section identifies strengths and weaknesses of the program to achieve these objectives.

### 6.1 Current Maturity level

Using the IAM maturity model, Fish and Wildlife staff evaluated the maturity of the Lands Asset Management program in six different categories. On average, the maturity level across all categories (Strategy and Planning, Decision Making, Life Cycle Delivery, Asset Information, Organization and People and Risk and Review) is 1.8 on a scale of 0-4. For the most part, the program has identified the means of systematically and consistently achieving competency in this subject, and can demonstrate that these are being progressed with credible and resourced plans. However, processes are often done in a reactive mode though able to achieve expected results on a repeatable basis. Moreover, the processes are insufficiently integrated, with limited consistency or coordination across the organization.

Table 6.1-1 Maturity Level

Subject Area	Maturity Level
<p>Strategy &amp; Planning</p>	<p style="text-align: center;"><b>Strategy and Planning</b></p>  <p><b>Strength:</b> The current structure represents concepts encoded in the Northwest Power Act and serves to reinforce a distributed, regional, collaborative process.</p> <p><b>Weakness:</b> The connecting thread from regional strategy to individual acquisitions represented in the current information systems is based on availability and opportunity within the current structure and criteria.</p>
<p>Decision Making</p>	<p style="text-align: center;"><b>Decision Making</b></p>  <p><b>Strength:</b> Decision-making processes are well defined for the acquisition and management of specific properties.</p> <p><b>Weakness:</b> Collaborative strategy development, complex ecosystems, and BPA review process contribute to a decision-making process that can be slow and constrained by the need to obtain consensus among diverse stakeholders, and various governmental and BPA approvals.</p>

Subject Area	Maturity Level
<p>Life Cycle Delivery</p>	<div data-bbox="446 184 1209 793" data-label="Figure"> <h3 style="text-align: center;">Life Cycle Delivery</h3> <p>The radar chart for Life Cycle Delivery shows maturity levels across ten categories. The scale ranges from 0 to 4. The current maturity levels are approximately: Technical Standards &amp; Legislation (2.5), Asset Creation &amp; Acquisition (1.5), Systems Engineering (1.5), Configuration Management (1.5), Maintenance Delivery (1.5), Reliability Engineering (1.5), Asset Operation (1.5), Resource Management (1.5), Shutdown &amp; Outage... (1.5), and Fault &amp; Incident Response (1.5).</p> </div> <p><b>Strength:</b> The requirements for long-term maintenance of the mitigation values of each property are defined and relatively low cost.</p> <p><b>Weakness:</b> External factors largely beyond BPA’s or the sponsor’s control, such as invasive species (from Himalayan blackberries and Reeds canary grass to feral horses and burros), fire, or the long- term effect of climate change, present potential threats to, and may reduce the mitigation values of, the acquired lands.</p>
<p>Asset Information</p>	<div data-bbox="389 1186 1023 1795" data-label="Figure"> <h3 style="text-align: center;">Asset Information</h3> <p>The radar chart for Asset Information shows maturity levels across four categories. The scale ranges from 0 to 4. The current maturity levels are approximately: Asset Information Strategy (2.5), Asset Information Standards (1.5), Asset Information Systems (1.5), and Data &amp; Information (1.5).</p> </div> <p><b>Strength:</b> Individual stakeholders (such as Realty) have clear accountability for specific records and standardized processes for managing those records; the Fish &amp; Wildlife Lands Deskbook lists key steps and records in the acquisition process.</p>

Subject Area	Maturity Level
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**Weakness:** Records are in formats, systems, and locations that do not easily generate metadata, summaries, or status reports. However, comprehensive lists and information about the lands inventory have been developed in the last seven years, and EFW regularly updates summary reports on resident fish and wildlife mitigation progress compared to the end state.

**Organization & People**

### Organization and People

Category	Score
Procurement and supply chain management	1.5
Asset Management Leadership	1.5
Organizational Structure	1.5
Organizational Culture	1.5
Competence Management	1.5

**Strength:** Acquisition of specific parcels within projects can be long and uncertain processes, and may ultimately end with a determination to not purchase the property; project managers and other BPA staff have considerable engagement and commitment with respect to overseeing long-term and complex land acquisitions.

**Weakness:** Staff tends to be spread thin and have limited bandwidth for addressing long-term program needs.

**Risk & Review**

### Risk and Review

Category	Score
Risk Assessment and Management	1.5
Contingency Planning & Resilience...	1.5
Sustainable Development	1.5
Management of Change	1.5
Assets Performance & Health...	1.5
Asset Management System...	1.5
Management Review, Audit and Assurance	1.5
Asset Costing and Valuation	1.5

**Strength:** Analysis and oversight for individual acquisitions is well defined, and includes



Subject Area	Maturity Level
	<p>significant participation from Realty and the Office of General Counsel; processes for acquisition and management of acquired properties are documented and standardized.</p> <p><b>Weakness:</b> The primary risk associated with the land acquisition program in general is that the drivers (e.g., the requirement by the Northwest Power Act for wildlife mitigation) are subject to interpretation and litigation over time.</p>

## 6.2 Long Term Objectives

The following long term objectives are meant to improve the transparency, responsiveness, and accountability of the Lands Program so it can strategically manage its assets, effectively and efficiently mitigate for the hydro system, as well as provide biological benefits to fish and wildlife throughout the region. Through this plan, the goal is to ensure the longevity and integrity of BPA’s and the Council’s Fish and Wildlife Programs’ past investments made for the benefit of fish and wildlife.

1. **Funding obligations:**
  - a) Assess the feasibility of permanently extinguishing BPA O&M expense obligations through the pursuit of settlements by 2027.
2. **Asset Management:**
  - a) Improve sponsor compliance to 100% for submitting new and updated land management plans post acquisition or expiration by FY 2027.
3. **Asset Condition:**
  - a) Develop a system to provide regular reporting on the condition of acquired lands with comprehensive characteristics and ability to measure the status of the program and progress relative to mitigation obligations by 2027.

## 6.3 Current Strategies and Initiatives

### Stewardship Settlements

Where feasible, BPA is pursuing settlement agreements with stakeholders. The settlements are intended to permanently extinguish further obligation by BPA to acquire lands for fish and wildlife mitigation, within defined geographic areas, or pertaining to specific dams, in exchange for upfront distribution of funding to accountable entities. Such funds provide the entities with the resources to maintain the original mitigation value of the acquired lands.

Settlement agreements are dependent on successfully negotiating terms with stakeholders, the near-term availability of funding, and analysis of the financial impact on BPA’s power rates. Currently, settlement agreements are also only primarily in place to address wildlife mitigation obligations. Settlement could also provide a potential tool to address fish mitigation obligations and the ongoing habitat losses arising from hydro-system operations.

By Q4 of FY23, conversations regarding mitigation settlements with the Washington Department of Fish and Wildlife, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Colville Reservation should be concluded in order to inform scale and feasibility of stewardship settlements.

The pursuit of settlements has the effect of defining permanent clear boundaries to BPA’s land acquisition funding obligations within specific areas (defined both geographically as well as by key stakeholders). As settlements are negotiated and

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N  
implemented, a more definitive and comprehensive view of scope and program status (with regard to completion of acquisition obligations) will be realized. Foresight (and forecasts) into the long-term financial impact and timing of future acquisitions, O&M commitments, and settlements, can be developed (particularly for O&M obligations) and need to be a priority for long-term budget analysis.

### **Inventory & Land Management Plans**

The inventory of acquired lands is officially held with the Realty Services group. The F&W group has incorporated the majority of the inventory into Pisces web. Land Management Plans for individual properties, or groups of related properties, provide a reference standard to identify goals and objectives related to managing the terms and conditions for which the property or easement was purchased, to validate that common concerns have been identified, and that a plan is in place to address them. In addition, these plans ensure that the conditions to be monitored are customized and specific for a given property. The Fish & Wildlife Lands Deskbook describes the purpose of, and recommended structure and components for Management Plans Site Assessment Cycle.

There is an on-going effort to track land management plans, annual reporting and monitoring activities in Pisces Web. The goal is develop a system to provide regular reporting on the condition of acquired lands with comprehensive characteristics and the ability to measure progress and status of the program relative to mitigation obligations by 2027.

### **Remote Monitoring**

Properties are examined via remote sensing tools (e.g., aerial photos) on a cycle of every 5 years, and scheduled for on-site visits if conditions warrant. The current processes and procedures for assessment are standardized in the Fish & Wildlife Lands Deskbook. By Q4 of FY23, the Lands program will assess opportunities for improvement of these processes and contract management workflow.

## **6.4 Resource Requirements**

The EFW Lands Program currently operates and requires utilization of the following BPA resource functions:

- Lead Manager Sponsor
- EFW Lands Lead (EWM)
- Budget Analyst (EWM)
- Fish and Wildlife Project Administrators (EWM, EWL, EWU)
- Legal Counsel (LN)
- Realty Specialist and Realty Tech (TERR)
- Land Surveyor (TERG)
- Appraiser (TERO)
- Environmental Protection Specialists (ECF)
- Cartographer for Remote Analysis (TERG)
- Public Affairs Specialists (DKS)
- [www.cbfish.org](http://www.cbfish.org)

The current capital and expense budgets for land acquisitions are currently sufficient to meet program requirements documented within existing agreements. The difficulty of managing the program and implementing budgets within specific fiscal years are primarily driven by willingness of land owners and availability of land.

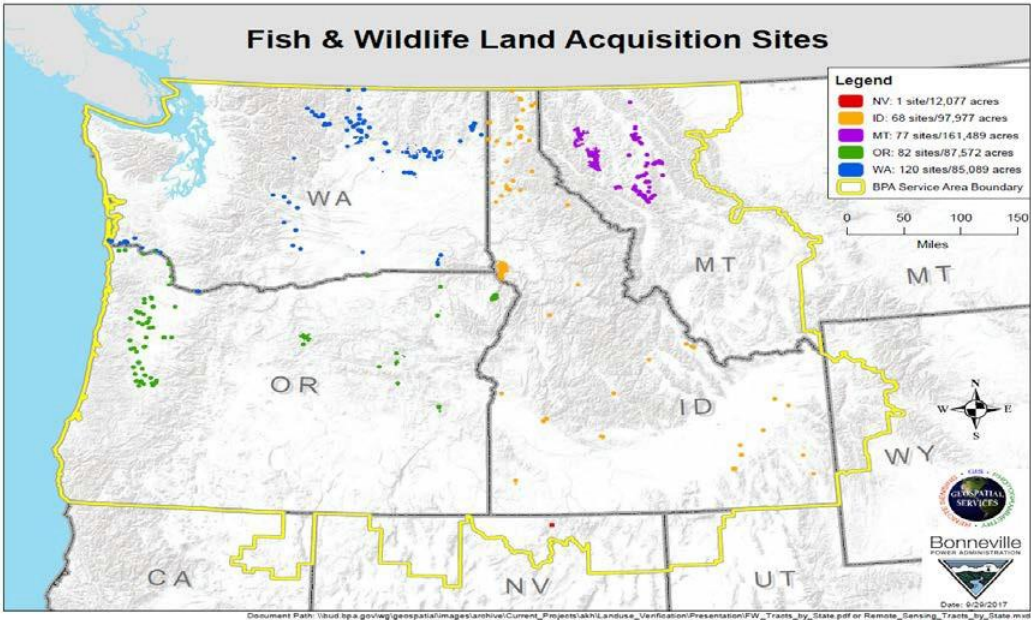
In some locales, population growth in the region may spur significant increases in property values and the cost of acquiring new parcels. These potential increased costs have not been modeled or forecasted in the tables listed and are based on funding commitments made within agreements. In addition, the current budget levels do not include the ability to fund new agreements for stewardship and/or settlements that permanently extinguish BPA’s long term obligation to fund O&M of acquired lands that mitigate for the impact of the construction of the Federal hydro system.

**7.0 ASSET CRITICALITY**

**7.1 Criteria**

Land acquisition activities tend to be localized within sub-basins of the Columbia River drainage basin. Within those sub-basins, one or more long-term projects will be active and will include a variety of fish and wildlife mitigation actions --- either planned, in-process, or completed. Projects within a sub-basin will be coordinated in terms of objectives and actions, and *may* include land acquisitions (one or more) as part of the suite of mitigation actions within the given geographic scope of the sub-basin.

Operational areas are broadly represented by the geographic divisions and basins of the Pacific Northwest; e.g., the Willamette Valley, upper Columbia River, lower Snake River. These units, however, are not static with regard to project operations nor are they exclusive with regard to land acquisitions (which are driven more directly by availability, suitability, sponsorship, and costs).



**7.1.1 Figure 7.1-1, Service Area**

**7.2 Usage of Criticality Model**

Properties are typically acquired to meet one (or both) of two primary objectives:

- Mitigate for wildlife and resident fish habitats lost due to the development of the hydroelectric system (driven primarily by the loss assessments for each hydro project and by the Council programs)
- To gain property rights to restore and permanently protect anadromous fish habitat (driven primarily by the

Properties are not, however, managed differently based on this distinction. Management plans and data are specific to the unique characteristics and/or purpose of each property.

Currently, priorities and deployment are influenced and limited by the interactions of:

- the long-term agreements, such as the Columbia Basin Fish Accords (and commitments to fund land acquisitions) with various sponsors;
- BPA’s rate case and fiscal forecasts and BPA’s Fish and Wildlife Program budget;
- the Northwest Power and Conservation Council’s Fish and Wildlife Program (including Program goals and objectives);
- stakeholder engagement, particularly with major project sponsors;
- the availability of suitable properties;
- regulatory requirements under laws such as the Endangered Species Act;
- Execution of settlements in particular areas of the region in meeting goals for extinguishing mitigation obligations.

## 8.0 CURRENT STATE

### 8.1 Historical Costs

The following table provides historical costs for the land acquisition category, for both expense costs and capital. The costs are also represented relative to the overall Fish & Wildlife expense and capital expenditures for those timeframes in the graphs below.

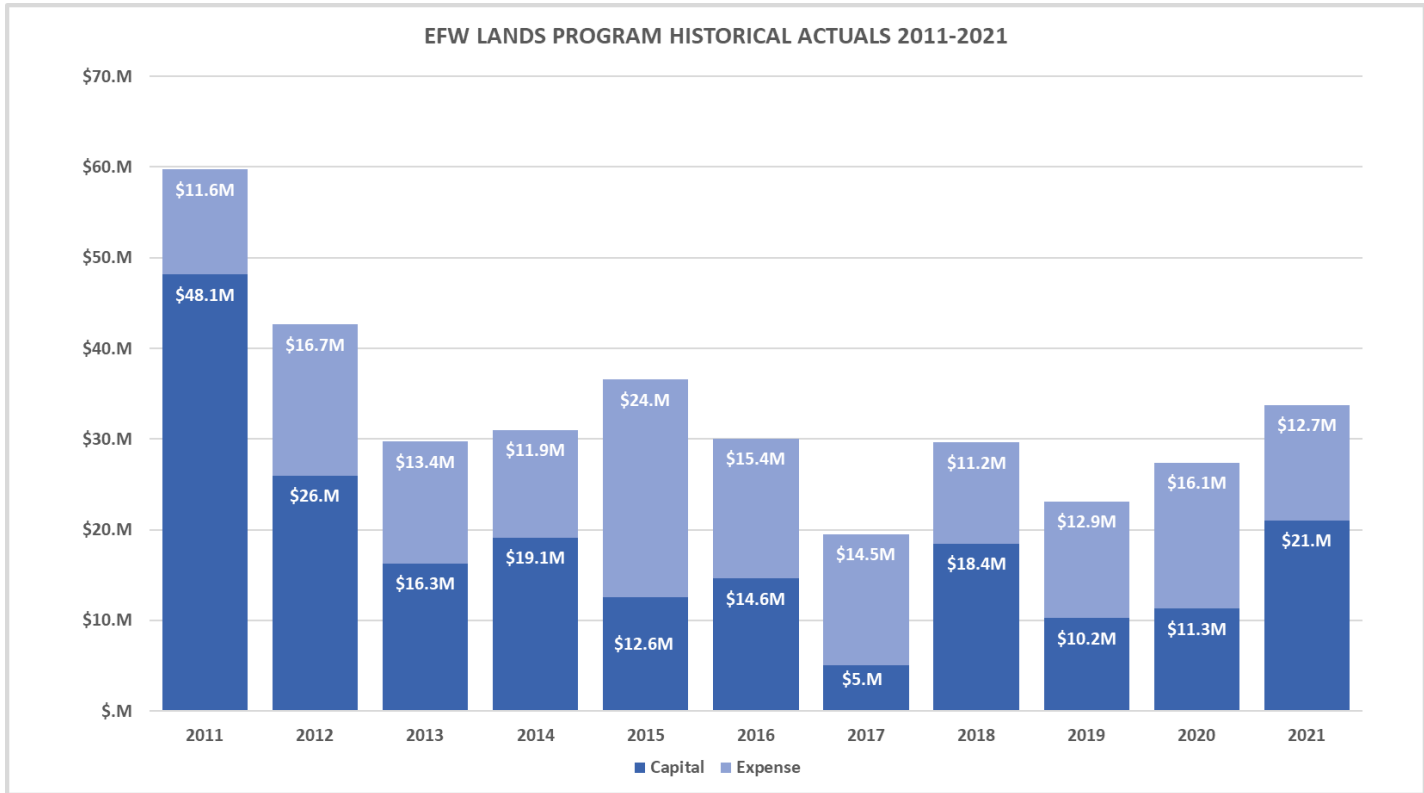
*Table 8.1-1 Historical Spend*

Program	Historical Spend (in thousands) With Current Rate Case						
Capital Expand (CapEx)	2017	2018	2019	2020	2021	2022	2023
Lands	\$5,039	\$18,439	\$10,236	\$11,301	\$21,028	\$19,000	\$20,000
<b>Total Capital Expand</b>	<b>\$5,039</b>	<b>\$18,439</b>	<b>\$10,236</b>	<b>\$11,301</b>	<b>\$21,028</b>	<b>\$19,000</b>	<b>\$20,000</b>
Expense (OpEx)	2017	2018	2019	2020	2021	2022	2023
Lands <sup>1</sup>	\$3,953	\$887	\$2,526	\$908	\$525	\$4,200	\$4,200
O&M <sup>2</sup>	\$11,311	\$11,203	\$12,343	\$15,185	\$12,180	\$12,500	\$12,500
<b>Total Expense</b>	<b>\$14,460</b>	<b>\$11,184</b>	<b>\$12,885</b>	<b>\$16,093</b>	<b>\$12,705</b>	<b>\$16,700</b>	<b>\$16,700</b>

<sup>1</sup> Lands: includes all costs associated with acquisition, fees and stewardship

<sup>2</sup> O&M: FY spending based on projects included in 2017 Council Wildlife Review

*Figure 8.1-2 Historical Expenditures*



## 8.2 Asset Condition and Trends

Characterization of acquired lands by their effective age, as typically applied to structural assets, is generally neither appropriate nor feasible given the intended purpose of the properties. Land assets are difficult to characterize in terms of condition. Under Fish and Wildlife Program criteria, properties need to provide either fish or wildlife habitat but do not need to be in a certain condition (degraded, functioning, or restored). Some geographical areas and agreements base the purchase of a property interest in its potential connection to restoration if the conditions are less than ideal for the resource, but this is not a requirement.

In order to ensure that the conservation values for which properties were purchased are protected in perpetuity, the Fish and Wildlife Program has the following requirements:

- 1) **Baseline Reports**- at the time of closing each property has a Baseline Report acknowledged by the sponsor and Bonneville that describes all existing conditions on the property. Based on the easements that Bonneville receives, property conditions are not allowed to degrade beyond baseline. If significant restoration occurs to benefit fish or wildlife habitat, the Baseline Report may be updated.
- 2) **Annual reporting** – Most properties require an annual report. These describe activities that have occurred on the properties, and describe any changes in realproperty, or any changes to the conservation values.

3) **Remote Monitoring**- all properties that Bonneville has a legal interest in go through a conditions assessment every five years, starting five years after acquisition. The analysis reviews any changes on the property that have occurred that may have an effect on the conservation values.

However, EW monitors properties for condition relative to habitat value and other factors. When EW observes sub-standard or negative conditions, they develop a response and/or correction per the terms of the management plan and/or MOA.

### 8.3 Asset Performance

EFW developed a system for monitoring compliance with conservation objectives and management plans around 2009. Working with Realty Service and OGC, EFW improved its inventory, benchmarked, and piloted its current approach.

Acquired lands are evaluated periodically (the target cycle is once every 5 years) to verify that they are being managed as required by applicable agreements or grants of real property interests -- such as contracts or easements. Remote sensing and on-site inspections, in coordination with the property owners, provides verification of proper asset management.

The corresponding documents (MOA, contract, or easement) for the specific property define the standards and objectives for individual properties, and reflect the unique qualities that made the property a good candidate for conservation. While the monitoring program has been in place for several years, the emphasis has been on bringing inventory data on the existing and newly acquired properties up to a common and complete state. Currently, analytical and reporting abilities, for the entire system of acquired properties lack many useful comprehensive characterizations. Analysis to provide a comprehensive measure of progress toward meeting broad wildlife mitigation targets, collective O&M obligations, etc., are currently completed manually.

The three-step protocol for monitoring real property interests include self-reporting, supplemental observation, and adaptive management. Many projects already include a requirement for annual reporting and self-reporting largely incorporates that same information. Supplemental observation entails remote monitoring at least once every 5 years through free satellite and aerial imagery available in the public domain to observe program properties and changes that occur on them over time. Internal BPA experts in the Geospatial Services group use ArcGIS tools to analyze changes on program properties. BPA tries to remotely monitor 50 properties annually, and staff may also visit the sites. Depending on the nature of issues discovered in the remote sensing analysis and site visits, projects will continue to be visited annually to follow-up on compliance issues, ownership changes, or large or unusual restoration efforts.

During each visit, the field team will:

- Review easement, management plan, and contract requirements for site management.
- Compare current conditions to those established in baseline documentation.
- Ground truth annual reports.
- Reaffirm or establish project manager and stakeholder communication about site purposes and goals.

The Lands team will identify measures to track that can be included as a performance measures for the program to be reported in future plans. An example is shown in the table below.

**8.3.1 Table 8.3-1, Historical Asset Performance Summary**

Strategic Goal	Objective	Measure	Units	Year – 1	Year – 2	Year – 3	Year – 4	Year – 5
Improve condition monitoring of properties	Compliance	% of properties monitored	%	10%	20%	30%	40%	50%

**8.4 Performance and Practices Benchmarking**

The value of the property is to provide quality habitat for fish and/or wildlife and to continue to satisfy BPA’s mitigation obligations. Collectively, the performance standards for the land acquisition program will continue to reflect the obligation to (1) mitigate for the impact of the hydro system through meeting biological commitments outlined in the BiOp and other regulatory requirements, (2) remain in compliance with applicable environmental laws, (3) support and be consistent with the Council’s Northwest Fish and Wildlife Program, and (4) reflect the environmental stewardship aspects of BPA’s strategic plan.

Currently, the lands program relies on the sponsor to outline performance metrics in the Land Management Plans of each property. These metrics are specific to that property and reviewed by BPA staff for approval. As this SAMP matures it will be updated and revised to include, as much as possible, more generic and broad performance measures that would allow for a high level, quick evaluation on the health of the program. BPA expects to learn from this experience and improve its practices for site management and effective monitoring. In addition, enforcement actions, if they need to be taken, will likely inform the nature, extent, and frequency of the monitoring needed to assure that fish and wildlife program assets continue to provide the value that ratepayers expected when BPA agreed to fund the acquisition. In the next review of the SAMP, further research and evaluation will determine if there are also more appropriate organizations that could provide a benchmarking baseline or example of how the lands program could track performance.

## 9.0 RISK ASSESSMENT

### 9.1 Risk Identification

Risk Category	Risk Name, Description and Assessment	Likelihood	Impact
Safety	<b>Liability:</b> As the acquired properties are not in BPA ownership, liability associated with personal safety remains the responsibility of the property owner, not BPA. The same is true when only a conservation easement has been acquired.	Low	None
Reliability	<b>Loss of habitat value:</b> The reliability of a property in meeting its long-term purpose is a function of the protection and maintenance of its desirable characteristics. The degree of risk will be unique to each property, as will be the preventive or corrective maintenance actions, but impact would generally be realized over very long time periods. The current processes and procedures for monitoring properties are intended to address such risks.	Low	Low
Financial	<b>Financial costs:</b> Financial risks associated with acquired lands are represented by the initial investment and by commitments to long-term O&M funding. These risks are mitigated by BPA policies and procedures that limit acquisition costs to market value, availability of suitable properties, and the deployment of stewardship and settlement agreements. The Realty and Legal organizations have key roles with regard to the applicable procedures and controls (see the Lands Deskbook).	Possible	Major
Environment/ Stewardship	<b>Environment hazards:</b> Environmental risks associated with a given property are evaluated by BPA personnel as part of the pre- acquisition process (see the Lands Deskbook). Significant environmental hazards, degradation, and/or potential costs will typically eliminate a property from acquisition candidacy.	Low	High
Compliance	<b>Regulatory assets:</b> The primary purpose of the acquired properties is to meet compliance requirements for fish habitat and wildlife mitigation. The acquisition process and monitoring procedures (see the Lands Handbook) are designed to screen, select, and maintain properties that meet those requirements. There is some risk in properties losing their valued characteristics over time, or in changing criteria with regard to mitigation values. Given the regional and integrated aspects of the Council’s Fish & Wildlife Program, the risk of near-term loss of compliance value is low.	Low	Moderate

Due to the range of land properties, each asset may have its own risk profile. For this plan, Fish and Wildlife evaluated the risk of lands as a whole on its program.



## 9.2 Risk Score

SCORE	PROBABILITY	IMPACT
5	Almost Certain	Extreme
4	Likely	Major
3	Possible	Moderate
2	Unlikely	Minor
1	Rare	Insignificant

### Probability

Risk Event Probability Scoring	Rare = .05	Unlikely = .10	Possible = .20	Likely = .40	Almost Certain = .80
<b>Occurrence</b>	0 - 10% Very unlikely to occur  This event could occur within the next 100 years	11 – 40% Unlikely to occur  This event could occur within the next 50 years	41 - 60% May occur about half of the time  This event could occur within the next 13 years	61 - 90% Likely to occur  This event could occur within the next 5 years	91 - 100% Very likely to occur  This event could occur within the next 2 years

### Impact

Risk Event Impact Scoring	Insignificant = .05	Minor = .10	Moderate = .20	Major = .40	Extreme = .80
<b>Safety</b> The potential impact of a risk event and liability with worker safety issue	No injuries or illness	Minor injuries or illness to few employees, public members or contractors requiring first aid	Minor injuries or illness to several employees, public members or contractors requiring first aid	Serious injuries or illness to few employees, public members or contractors hospitalization, disability or loss of work	Fatality, permanent disability, serious injuries or illness to many employees, public members or requiring hospitalization, disability or loss of work
<b>Reliability</b> The potential impact of a risk event due to equipment failure	No loss of desirable property characteristics that impact the habitat value of the property	Minor loss of desirable property characteristics that impact the habitat value of the property	Moderate loss of desirable property characteristics that impact the habitat value of the property	Major loss of desirable property characteristics that impact the habitat value of the property	Extreme loss of desirable property characteristics that impact the habitat value of the property
<b>Financial</b> The potential risk event resulting financial costs to program measured in incremental dollar impact	Market value and availability of suitable properties for protection and maintenance impact less than \$30k in costs or 0.2% increase from forecasted	Market value and availability of suitable properties for protection and maintenance impact between \$30k - \$300k in costs; or up to 2.1% increase from forecasted	Market value and availability of suitable properties for protection and maintenance impact between \$300k - \$1M in costs; or up to 7.3% increase from forecasted	Market value and availability of suitable properties for protection and maintenance impact between \$1M-\$5M in costs; or up to 36.5% increase from forecasted	Market value and availability of suitable properties for protection and maintenance impact above \$5M in costs; or up to 36.5% increase from forecasted
<b>Environmental</b> The potential impact on natural resources such as air, soil, water, plant or animal life	Resulting in negligible or no damage	Immediately correctible damage to surrounding environment	Resulting in moderate short term damage of a few months, reversible damage to surrounding environment with no secondary consequences	Resulting in significant medium term damage greater than a few months, damage to surrounding environment	Irreversible and immediate damage to surrounding environment (e.g. extinction of species)
<b>Compliance</b> The potential impact of noncompliance with federal, state, local, industrial or operational standards or requirements	No compliance impact up to an administrative impact	Noncompliance impact: self-reported or regulator identified violations	Violations that result in minor changes to operations/administration without additional oversight from regulators	Significant new and updated regulations are enacted as a result of an event, with changes to operations/administration and increased oversight from regulators	Regulators force the demand changes to operations/administration, cease and desist orders, and potential closure of site/facility

*Risk Score Matrix*

Probability	IMPACT				
(5) = .90	0.05	0.09	0.18	0.36	0.72
(4) = .70	0.04	0.07	0.14	0.28	0.56
(3) = .50	0.03	0.05	0.10	0.20	0.40
(2) = .30	0.02	0.03	0.06	0.12	0.24
(1) = .10	0.01	0.01	0.02	0.04	0.08
	(1) = .05	(2) = .10	(3) = .20	(4) = .40	(5) = .80

● Low Risk      ● Balanced      ● High Risk

*Risk Assessment*

Probability	IMPACT				
(5) = .90					
(4) = .70					
(3) = .50				Financial	
(2) = .30		Reliability	Compliance	Environmental	
(1) = .10	Safety N/A				
	(1) = .05	(2) = .10	(3) = .20	(4) = .40	(5) = .80

*Risk Ranking and Response*

Identified Risks	Probability	Impact	Quantitative Score	Priority	Rank	Risk Response
1) SAFETY: Failure of land manager to maintain safety standards within property	1	0	0			
2) RELIABILITY: Failure to maintain property maintenance of its desirable characteristics	2	2	.03	●	4	Near-term planning
3) FINANCIAL: Failure to maintain Fish and Wildlife 1085 Program expenditures for lands Program within capital and expense budgets.	3	4	.20	●	1	Immediate attention
4) ENVIRONMENTAL HAZARD: Failure to prevent environmental hazards from impacting the property and the surrounding ecosystems	2	4	.12	●	2	Near-term monitoring
3) COMPLIANCE: Failure to meet the legal obligation of BPA (Endangered Species Act, Northwest Power Act) to mitigate for the impacts of the Federal Columbia River Power System.	2	3	.06	●	3	Mid-term monitoring

## 10.0 STRATEGY AND FUTURE STATE

BPA Lands program assumes fulfillment of all Memorandum of Agreements (MOA) signed by BPA, including the Columbia Basin Fish Accords, Willamette Wildlife Mitigation and Southern Idaho Wildlife Mitigation agreements. Future expense and capital funding levels are expected to be in line with present levels, and fiscal year execution of those budgets will depend on the availability of lands and willingness of land owners.

As identified in Section 9, financial risks are driven by market values and availability of suitable properties capable of meeting compliance requirements for fish habitat and wildlife mitigation. Loss of habitat value through significant environmental hazards and degradation may eliminate properties from acquisition candidacy, thus restricting the pool and potentially increasing market values for available lands. Though financial risks have been identified as possible risks with major impacts, the financial implications of market variations have not been modeled or forecasted into out year budgets. The program assumes fulfillment of budgets committed and documented within MOAs.

The initiatives described in Section 6 will help the EFW Lands Program continue to manage the inventory of acquired lands, but the program is not sufficiently staffed to track all land management plans, annual reporting and monitoring activities. We will continue to rely on remote monitoring to examine properties over fixed intervals.

Under present funding levels, however, there is not sufficient resources for the pursuit of settlements that permanently extinguish BPA’s obligation to maintain O&M for lands acquired through expense funding.

### 10.1 Future State Asset Performance

Fish and Wildlife will continue to fund the implementation of land acquisitions and the land program to ensure the properties are meeting mitigation objectives including mitigation for lost habitat and reduced population sizes and to assist in the conservation of endangered and threatened salmon and steelhead populations. Through monitoring of acquired lands and better data management and sharing, BPA can continually improve the program and its benefit to fish and wildlife. Below are examples of possible performance objectives to measure these improvements.

**10.1.1 Table 10.1-1, Future Asset Performance Objectives**

Objective	This Year	Year +1	+2	+3	+4	+5	+6	+7	+8	+9	+10
Improve Condition Monitoring of Properties	20%	25%	30%	35%	40%	45%	50%	55%	55%	60%	60%
Improve Land Management Plan Compliance	40%	50%	55%	60%	65%	70%	75%	75%	80%	80%	80%
Improve Annual Report Compliance	20%	25%	30%	35%	40%	45%	50%	55%	55%	60%	60%

## 10.2 Strategy

### 10.2.1 Sustainment Strategy

Planning for individual projects and acquisitions will remain as described in the practices and procedures of the Lands Deskbook. Programmatic planning will remain focused on maintaining consistency with the Council's Fish and Wildlife Program.

O&M priorities will continue to focus on negotiating stewardship agreements to provide certainty and sustainable levels in funding for future O&M, where the Fish and Wildlife Program and project sponsors are able and willing to engage in such agreements. Actual O&M methods will remain as described in individual management plans, contracts, or MOAs, and are specific and unique to each property.

Information systems will continue to rely on the current platform and tools. Opportunities for improved reporting capabilities and database content (i.e., property-specific information and attributes) will be identified and incorporated into asset work plans.

### 10.2.2 Growth (Expand) Strategy

The Land Program will prioritize projects based on ongoing evaluation for the feasibility and likelihood of proposed acquisitions, progress toward meeting obligations defined within Accords or other agreements, and the opportunity to engage in settlements with willing stakeholders. Settlement agreements are a priority for BPA but are dependent on the availability of funding and time.

Practices and procedures, defined in the Lands Deskbook, provide management with criteria for the cost of new acquisitions. The Fish & Wildlife department budget targets, which call for flat spending levels and by rate case projections, are constraining overall land acquisition program costs.

Currently, the implementation of settlements and stewardship agreements for new acquisitions are reducing O&M costs in out-years, where feasible. However, projections of current O&M obligations still have not been developed. Fish & Wildlife will develop this capability into asset work plans.

### 10.2.3 Strategy for Managing Technological Change and Resiliency

The Lands team keeps informed on emerging technology and shares learning of best practices that could benefit land management, conservation, or remote monitoring of current and potential properties. The team uses this information to advise their work and strategy for the program. Through our annual contracts we are able to support sponsors in training and management of emerging technologies such as improved databases or in field monitoring tools. The Program continuously works with developers of [www.cbfish.org](http://www.cbfish.org) to improve our ability for tracking and managing properties within that system.

## 10.3 Planned Future Investments/Spend Levels

In order to satisfy BPA's legal obligations under the Northwest Power Act and Endangered Species Act, the Fish and Wildlife program has made commitments with tribes and states to acquire and maintain lands that mitigate for wildlife and fish habitats lost due to the development of the hydroelectric system. Currently, BPA holds the following Memorandum of Agreements (MOAs) that include commitment to land acquisitions:

- Columbia Basin Fish Accords 2018 Extension MOA
  - Confederated Colville Tribe (CCT)
  - Idaho Department of Fish and Wildlife (IDFG)
  - Confederated Tribe of the Umatilla Indian Reservation (CTUIR)
  - Shoshone Bannock Tribe (SBT)
  - Montana Fish, Wildlife and Parks (MFWP)
- Southern Idaho Wildlife Mitigation MOA
  - State of Idaho - Idaho Department of Fish and Wildlife (IDFG)
- Willamette Wildlife Mitigation MOA
  - Oregon Department of Fish and Wildlife (ODFW)

Below are the expense and capital remaining balances as of October 1<sup>st</sup>, 2021:

Agreement	Account Type	Analysis Timeframe	Budget Total	Payments (Land, Realty, Contracts)	Remaining Balance (Budget - Payments)
Colville	Expense	2008-2022	<b>\$29,097,684</b>	\$9,920,123	\$19,177,561
Idaho	Expense	2008-2022	<b>\$17,569,303</b>	\$15,288,853	\$2,280,450
Umatilla	Expense	2008-2022	<b>\$17,542,321</b>	\$4,389,765	\$13,152,556
<b>Expense subtotal</b>			<b>\$64,209,308</b>	<b>\$29,598,741</b>	<b>\$34,610,567</b>
Sho-Ban	Capital	2009-2022	<b>20,717,070</b>	\$5,663,111	\$15,053,959
Montana	Capital	2008-2022	<b>\$10,000,000</b>	\$0	\$10,000,000
SIWM-Idaho	Capital	2014-2024	<b>\$36,163,750</b>	\$28,217,599	\$7,946,151
Willamette	Capital	2011-2025	<b>\$115,811,141</b>	\$66,023,098	\$49,788,042
<b>Capital subtotal</b>			<b>\$182,691,961</b>	<b>\$99,903,808</b>	<b>\$82,788,152</b>
<b>TOTAL</b>			<b>\$246,901,269</b>	<b>\$129,502,549</b>	<b>\$117,398,719</b>

*Table 10.3-1 Future Expenditures (in thousands)*

Program	Rate Case FY's		Future Fiscal Years							
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<b>Capital Expand (CapEx)</b>										
Hatcheries	\$22,635	\$22,600	\$10,300	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Land Acquisition	\$13,700	\$13,700	\$13,700	\$5,700	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Fish Passage	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<b>Total Capital Expand (UPPER)</b>	<b>\$41,335</b>	<b>\$41,300</b>	<b>\$29,000</b>	<b>\$15,700</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$15,000</b>
<b>Expense (OpEx)</b>										
Hatcheries O&M	\$48,967	\$50,436	\$51,949	\$53,507	\$55,112	\$56,766	\$58,469	\$60,223	\$62,030	\$63,890
Land Acquisition EXP	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$1,000	\$0	\$0	\$0
Land O&M	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500
Fish Screens	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677
<b>Total Expense</b>	<b>\$70,344</b>	<b>\$70,344</b>	<b>\$70,344</b>	<b>\$70,344</b>	<b>\$70,344</b>	<b>\$70,344</b>	<b>\$67,144</b>	<b>\$66,144</b>	<b>\$66,144</b>	<b>\$66,144</b>

- The estimated yearly budgets for capital land acquisitions have been based on the average expenditures for the last 5 years (2017-2021) and have been spread out through future years.
- Expense land acquisitions budgets are based on IPR level budgets for FY22/23, and have been spread out through 2030.
- The O&M expense budgets have been based on the average expenditures for the last 5 years (2017-2021) and remain a BPA obligation unless BPA permanently extinguishes those obligations through stewardship settlement agreements, as discussed in section 3.3 and throughout the document.
- All out year values are based on the original amounts documented within the agreements or historic contracts, and have not been adjusted for inflation.

Due to the unpredictability of land acquisition availability, it is difficult to forecast far into the future, therefore capital budgets in years 2026 – 2030 are placeholder amounts. Lands expense budgets are forecasted to stay

constant over the next 5-10 years, although may be adjusted as annual planning efforts further clarify project needs. Fish and Wildlife does not do true expense budget forecasts and are based on the previous years' costs. The expense budget forecasts are an average of the previous years' expense expenditures and used as a guideline for expense budget forecasts.

## 10.4 Implementation Risks

*Table 10.4-1, Implementation Risks*

<b>Risk</b>	<b>Impact</b>	<b>Mitigation Plan</b>
Factors beyond BPA’s control	Potentially high	Factors such as climate change, invasive species, and others are beyond BPA’s control with regard to land acquisitions and their function in meeting BPA’s habitat mitigation obligations. BPA will monitor and evaluate the impacts on individual properties on a case- by-case basis, and respond to as appropriate and feasible.
Inability to fund agreements for stewardship and/or settlements	Moderate	The long-term savings and stable funding levels obtained by pursuing stewardship and permanent settlement agreements warrant their elevation to high priorities within the overall F&W program budget. F&W will continue to develop budgets plans with the objective of balancing program components with consistency and predictability, including stewardship and settlement funding.
Uncertainty regarding long-term financial obligations	Moderate	BPA will improve the databases and information system tools employed by the land acquisition program to provide comprehensive reports on the current and out-year commitments to funding purchases and O&M. This will be a multi-year effort, and may be modified by parallel efforts in Pisces Web and the Asset Management KSI.

## 10.5 Asset Conditions and Trends

Acquisitions have Baseline Reports developed a time a property is purchased that documents existing property conditions at the time of acquisition. This includes natural and man-made features and uses and relevant biological conditions on the acquisition. Land Management Plans are forward thinking. They reflect the purposes for which the property was being acquired, and whether, or to what extent, the property currently exhibits the desired conservation values.

Management Plans should identify any existing limiting factors that may adversely affect the potential to maximize or retain its conservation values. Both of these tools can be used with the self-reporting by the sponsors and remote monitoring by BPA to evaluate condition and trends of properties and the effectiveness of the land management plans over time.

## 10.6 Performance and Risk Impact

The strategy for the lands program is to maintain current planning and implementation practices, therefore there is expected to be little impact to performance or risk of the asset in the near-term. However, it may become necessary for the program to develop a strategy for addressing climate change impacts that could affect performance or value of lands that are critical to mitigation obligations. This could raise risk levels for reliability, financial, environment, and compliance of the asset management program in future years, though not drastically. This will be re-evaluated during the next biennial review of the SAMP to determine the need to incorporate this effort into the next strategic plan.



## 11.0 Addressing Barriers to Achieving Optimal Performance

### *Acquired Lands*

The performance of the assets (i.e., the acquired lands) is sustained by adherence to the processes and procedures standardized in the Fish & Wildlife Lands Deskbook, development and implementation of individual property management plans, and monitoring practices. The Lands Team and F&W management will continue to be accountable for maintaining those processes, procedures, and practices. Monitoring will need to recognize the risks noted in the previous section and the potential for degradation of the lands' mitigation values.

### *Information management*

Updating and standardizing the lands inventory, including the ability to efficiently produce desired metrics and reports, as well as cost forecasts will be an ongoing initiative. The Asset Plan for Lands will specify responsibility and actions to be taken regarding potential utilization of Pisces functionality; potential enhancement of the current excel spreadsheet trackers; and other areas where efficiencies in reporting might be evaluated. Because resource constraints are likely to continue, finding and deploying process and reporting efficiencies will be a high priority.

### *Program resources*

Budget constraints on the Fish and Wildlife program could limit adequate resourcing to optimally implement this asset management strategy. Fish and Wildlife plans to improve asset management competencies across its staff by encouraging staff to take the IAM training offered by the agency. This will improve the confidence of its employees to adopt and continually improve their strategic asset management plans.

### *Internal/external relationships*

A critical element of achieving optimal performance of this strategy is establishing and maintaining strong internal and external relationships. The Fish and Wildlife program works closely with other agency organizations as well as external entities throughout the region. Developing and maintaining trust, shared learning efforts, and approaches towards common goals will help to gather consensus around this strategy and improve the likelihood it will be implemented successfully.

### *Program alignment with broader Fish and Wildlife program*

Optimal performance of this asset is contingent on its alignment with the broader BPA Fish and Wildlife program, including any future Biological Opinions. A change in lands strategy away from the current/status quo approach would need to be considered in terms of this broader program, and a modification of the broader program may modify the approach to this asset. Lands are one component of many that address the broader mitigation requirements BPA addresses.

## 12.0 DEFINITIONS

**Compliance:** Must be an executive order/directive requiring the specific investment must be made and that the project as proposed includes only the minimum required to comply with the directive. For example Cyber Security, Highway Relocations, BiOp

**Northwest Power and Conservation Council (NPCC)** <sup>1</sup>: An eight-member council, established by the Pacific Northwest Electric Power Planning and Conservation Act. Comprised of two voting members from the four Northwestern states: Washington, Oregon, Idaho, and Montana. Helps guide BPA and the region with planning for conservation and generation resources and for protection, mitigation, and enhancement of fish and wildlife in the Columbia River Basin.

**Project Sponsor:** The entity proposing a land acquisition project for the Fish and Wildlife Program.

**Biological Opinion:** A document that is the product of formal consultation, stating the opinion of the Service on whether or not a Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat

