

Barber Pool Conservation Area

Master Plan: Vision, Goals, and Objectives

March 31, 2022

"When we try to pick out anything by itself, we find it hitched to everything else in the Universe."

—John Muir, My First Summer in the Sierra

"We abuse land because we regard it as a commodity belonging to us.

When we see land as a community to which we belong,

we may begin to use it with love and respect."

— Aldo Leopold, A Sand County Almanac

The Barber Pool Conservation Area Master Plan recognizes and captures the vision of a "community to which we belong." This vision is shared by major landowners and stakeholders who shape the future of this ecologically critical area from high-level management strategies to daily actions.

The Master Plan describes the complexity and opportunity in this ecosystem, where we find that any one action is "hitched to everything else in the Universe." The people who crafted this Plan recognize that no one entity can safeguard the area for wildlife and habitat. Rather, this Plan is collaboratively owned. As each of the entities in the area move forward with their own important work, we recognize the need for partnership to make the area whole and functional.

The collaborators in this Master Plan seek to cultivate "love and respect" for the land, for one another, and for the broader community that the Barber Pool Conservation Area serves, whether walking on two feet or four feet (or more), or moving with fins or wings, or being rooted in place.

With Our Thanks

With sincere gratitude, we recognize the Barber Pool Campaign Committee and the Idaho Foundation for Parks and Lands for convening the Master Plan Working Group and funding Master Plan development. We thank Executive Director Jan Johns for managing the details and assuring that Partners and Friends were welcomed. We appreciate and recognize the scientific contributions of Randy Mandel and Lis Nelis of Ramboll, Inc., during Phase 1 of Master Plan development; and Sally Goodell Oberlindacher, who guided us through Phase 2 with humor, deep listening, understanding, and keen insights. We thank Forsgren Associates for creating the maps throughout, and Ada County for providing meeting space and support. Our deep, heartfelt gratitude goes to the Partners and Friends who made this journey with us, and to the organizations and agencies who committed to their participation and engagement.

- Brandy Wilson and Stephani Hilding, Master Plan Co-Managers

Master Plan Acknowledgement

We the undersigned, representing landowners that participated in the collaborative development of the Barber Pool Conservation Area Master Plan, hereby acknowledge our support for the vision, goals, and objectives embodied in this plan and support the joint pursuit of its implementation.

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ACRONYMS, ABBREVIATIONS, AND KEY TERMS

BLM	Bureau of Land Management		
BPCA	Barber Pool Conservation Area		
BSU	Boise State University		
Council	Barber Pool Advisory Council, an organization sponsored by the IFPL		
FERC	Federal Energy Regulatory Commission		
Friends	People and organizations who operate within or nearby the BPCA, or who have a specific expertise that is pertinent to Master Plan development (see Appendix A).		
HFLP	Harris Family Limited Partnership		
HRWMA	Harris Ranch Wildlife Management Association		
IBO	Intermountain Bird Observatory, Boise State University		
IDFG	Idaho Department of Fish and Game		
IDPR	Idaho Department of Parks and Recreation		
IFPL	Idaho Foundation for Parks and Lands		
ISF	Idaho Shakespeare Festival		
ITD	Idaho Transportation Department		
Master Plan	BPCA Master Plan Vision, Goals, and Objectives: this document. Although the Master Plan is conducted in three phases (this is Phase 2), we refer to this document as the "Master Plan" or "Plan" throughout for brevity.		
Partners	Landowners within the BPCA, or entities that have a significant management footprint and directly influence existing and potential land uses. Members of the Council were a part of this group (see Appendix A).		
Plan	BPCA Master Plan Vision, Goals, and Objectives. See Master Plan.		
RIS	Riverstone International School		
USACE	US Army Corps of Engineers		
Working Group	A sub-set of the Council who undertook the task to manage the Master Planning process and work together throughout all three phases.		

EXECUTIVE SUMMARY

The Barber Pool Conservation Area (BPCA), a wildlife haven about 6 miles from the Idaho State Capitol, is home to more than 300 native species of plants and animals. It covers more than 700 acres along the Boise River, roughly between Diversion Dam and Barber Dam. Increasing population, coupled with a long-term, downward trend in the cottonwood forest, signals that management action is needed to safeguard this gem for future generations of people and wildlife. To respond to this need, major landowners and stakeholders within the BPCA convened to create this Master Plan. The purpose of the Master Plan follows:

Create a common, aligned blueprint for collectively managing the movement of people across and throughout the various ownerships in the Barber Pool area while preserving and enhancing the area's ecological functions and values.

Through a series of planning steps, from inventory through stakeholder workshops, the collaborators reached **a shared vision for the BPCA**, as follows:

Create an ecologically functional, sustainable, and communitysupported Barber Pool Conservation Area that will maximize protection for native plants and wildlife by inviting people to act as stewards for generations to come.

To achieve this vision, this Master Plan is built upon three main goals that provide a framework for future management:

- 1. Protect and enhance wildlife and fish habitat
- 2. Manage human use to minimize disturbance
- 3. Provide public outreach and education

Table 1, *Goals, Objectives, and Key Management Strategies*, lists the four objectives associated with each goal, as well as providing an overview of management strategies. These strategies and actions would be prioritized based on need (such as time-critical ecological work), cost-effectiveness, ability to achieve multiple objectives, and benefit to the landowners and the broader community.

This Master Plan is collaboratively owned by the key landowners and significant stakeholders in the community. This group, sponsored by the Idaho Foundation for Parks and Lands, will convene to determine its charter, membership, and approach to implementing this Master Plan.

Table 1: Goals, Objectives, and Key Management Strategies

Goals and Objectives	Key Management Strategies	
Goal 1: Protect and enhance wildlife and fish		
habitat	Focus habitat improvement based on surface or groundwater availability.	
Use native species in restoration projects.	Consider these types of projects:	
 Address the needs of both migratory and 	1. Woody riparian planting	
resident species.	2. Woody riparian restoration	
Develop and implement plans and projects	3. Side channel restoration	
to improve habitat.	4. Irrigation	
Prioritize projects that get the most benefit	5. Bank restoration	
for the cost or are time critical to preserve	6. Upland vegetation rehabilitation	
ecological function.	7. Aquatic habitat and fisheries	
	improvement	
Goal 2: Manage human use to minimize	The overall strategy is to:	
disturbance	Construct trails	
Manage access and protect natural areas	 Install wildlife-friendly fencing or 	
by providing infrastructure that	vegetative buffers	
concentrates and encourages use in	Design habitat improvements to	
designated areas, discouraging use in	manage human use	
sensitive areas.	For Boise River use:	
Develop governance strategies to continue	Convey that the "Diversion to Barber"	
to promote cooperation among the	reach is "a quiet experience"	
Partners and advance the goals of the plan.	Formalize river access points	
Develop funding sources to implement the	 Create designated "take a break" 	
plan and create ongoing funding	areas away from critical habitat	
mechanisms for sustainable management.	For pedestrian use:	
Embrace adaptive management to adjust to	Improve trail and Greenbelt network	
the evolving needs of natural resources,	with wayfinding and messaging	
wildlife, and the community.	Provide overlooks and interpretation	
Goal 3: Provide public outreach and education	Several avenues are possible for reaching	
Educate the public about the exceptional	the public. This Plan focuses on the	
values of the area to create a stewardship	following approaches:	
ethic among the public and visitors.	1. Signage	
Improve understanding of and expectations	2. Nature trails and overlooks	
for limitations on human use to support	3. Educational programming and	
preservation. Concentrate education at	partnerships	
trailheads and river access points.	4. Education center	
Change perceptions and choices of existing	5. Web-based tools	
users, especially for those who use the area	6. Volunteer and direct engagement	
today in ways that are not consistent with		
the Master Plan goals.		
Seek partners for educational outreach,		
such as the neighborhood association and		
other non-profits with similar objectives.		

Introduction

There's a hidden treasure in the Barber Valley located in Southeast Boise. The Barber Pool Conservation Area (BPCA) is a wildlife magnet, teeming with more than 300 native species of plants and animals. It covers more than 700 acres along the Boise River, roughly between Diversion Dam and Barber Dam. The BPCA includes a large amount of rare and ecologically valuable riparian habitat, representative of the native landscapes in the arid intermountain West. However, that valuable habitat is in a long-term, downward trend.

Today, the BPCA isn't quite as hidden as it once was. Among the remnants of its industrial heritage are education centers, arts organizations, government offices, as well as many new private dwellings, bringing new life, new opportunities for stewardship, and new challenges.

Guided by the conservation initiatives of the majority landowner in the area, the Idaho Foundation for Parks and Lands (IFPL), several non-profit organizations, businesses, local government agencies, and numerous volunteers have worked together over the years to safeguard and improve this critical home for wildlife. It is time to take our combined efforts to the next level by creating this unifying Master Plan, before the BPCA is overwhelmed by competing priorities.

HISTORY AND DESCRIPTION

The BPCA was defined and evaluated in 2002 by the US Army Corps of Engineers (USACE, 2002). The USACE concluded that, because the area "contains one of the last intact cottonwood stands in the rapidly urbanizing Boise area," and because it is "heavily utilized" by hundreds of species of animals and birds, "the BPCA is a place of tremendous significance to wildlife, conservationists and the scientific community." The BPCA is a broad area, over 700 acres, encompassing multiple uses and landowners. The IFPL portion, consisting of about 350 acres, began with a donation from Boise Cascade in 1978. Additional acquisitions by IFPL, including the recent purchase of the Gregerson property, has created the area that the IFPL designated as the "Barber Pool Wildlife Preserve" in January 2019.

With rapid growth in the Treasure Valley, use of the area is steadily increasing. The Boise River Greenbelt is noted as the number-one attraction on Trip Advisor for visitors to Boise. The Greenbelt is a well-loved asset throughout its 42 miles of trail and pathway, with consistent and increasing use by residents and visitors alike. A 2.5-mile segment of the Greenbelt pathway forms much of the northern boundary of the BPCA, and the adjacent lands are a mix of public and private, with loosely managed public use and access to the Barber Pool between the

Greenbelt and the Boise River. Much of this existing public use of the uplands, riparian areas and streambanks is not compatible with the goal of protecting habitat and wildlife. Similarly, use of the Boise River by anglers and non-motorized water craft is increasing steadily. As upstream use in the segment from Discovery Park to Diversion Dam has become very popular for stand-up paddle board users and other non-motorized water craft, so too will human use of the Boise River continue to increase through the BPCA.

In 2018, IFPL created the Barber Pool Advisory Council (the Council) to actively assist with "conservation and protection...[and] broaden the base of support for the Barber Pool." The Council includes neighboring landowners, organizations, and agencies; scientists (biologists, ecologists and botanists), engineers, recreation managers, public engagement specialists, and representatives from municipal and state agencies. The Council completed a vegetation study and map in 2019 and is currently implementing a number of targeted projects for habitat improvement, signage, and public education. With rapid growth and increasing use, and the vision of protecting the BPCA, the multi-stakeholder Council advised IFPL to undertake development of a Master Plan.

PURPOSE OF THE MASTER PLAN

This Master Plan is intended to help IFPL and adjacent landowners plan for and guide management of future human use and ecological enhancement of the Barber Pool area. The purpose of the Master Plan is to:

Create a common, aligned blueprint for collectively managing the movement of people across and throughout the various ownerships in the Barber Pool area while preserving and enhancing the area's ecological functions and values.

PLANNING PROCESS

The starting point for this Master Plan was the USACE 2002 baseline document. Over time, IFPL has implemented some of those objectives, and the Council prioritized and added to the objectives, accounting for the passage of time. This new Master Plan builds on the work of the past and provides goals, objectives, and management strategies to take action in the future. The overall process for Master Plan development consists of three major phases, as follows:

Phase 1: Issues Inventory and Gap Analysis. A Working Group was
established, consisting of a sub-set of the Council, to manage the Master
Planning process and work together throughout all three phases (see
Appendix A for membership). The Working Group gathered all existing
scientific and public outreach work conducted to date, and a consulting

firm assisted with assembling the work and interviewing key stakeholders. The consulting firm then issued a gap analysis report indicating where additional information and work would be needed to construct a plan.

- Phase 2: Master Plan Vision, Goals, Objectives, and Strategies. The product of this phase is the document in your hands, and it represents the most important phase for assembling the big picture and identifying the overall vision and direction for the area. This Master Plan document enables all of the landowners in the BPCA to understand how their management and future development contributes to the area holistically. This phase is described in more detail below.
- Phase 3: Ecological Restoration, Public Engagement, and Stewardship. In a future phase or phases, it is anticipated that more specific planning will be done to identify, scope, and gain funding for projects for habitat enhancement, public engagement, and community education that will support the realization of this Master Plan.

To complete Phase 2 and develop the heart of the Master Plan, the Working Group engaged stakeholders in a meaningful way to develop a map and guidance document that capture the shared vision for the area. To do this, the Working Group created two groups of stakeholders from the community, broadly characterized as follows:

- **Partners** are landowners within the BPCA, or entities that have a significant management footprint and directly influence existing and potential land uses. Members of the Council were a part of this group.
- **Friends** are people and organizations who operate within or nearby the BPCA, or who have a specific expertise that is pertinent to Master Plan development.

These two groups, each with about 25 to 30 members identified in Appendix A, were invited to engage in specific planning activities during Phase 2 that would make the best use of everyone's time and talents. The process, which led to the creation of this document, included three steps:

• **Step 1**. Identified opportunities and constraints for managing the BPCA from the perspective of the Partners group. Partners were interviewed to identify challenges, goals, opportunities and constraints, and then participated in a day long workshop on September 15, 2021, to develop the first draft of the map and policies. This draft plan captured the Partners'

intent to manage the area as a whole while respecting the needs and constraints of individual landowners.

- **Step 2**. Engaged the Friends group to review and provide input on the draft plan prepared in the first phase. Friends attended an online meeting on October 20, 2021, to get an introduction to the draft plan. They then participated in one of two half-day workshops on November 9, 2021, to provide input and suggestions to help further develop and refine the plan.
- **Step 3.** Engaged the Partners to finalize the Master Plan, determine next steps, and decide how they will work together going forward to advance their shared vision and management strategy. The Partners participated in a half-day workshop on December 14, 2021, to resolve outstanding issues, consider additional input, and agree on how they intend to proceed with plan adoption and implementation.

The Partners group had another review period following the December 2021 workshop. Then, the document was formatted, finalized, and routed to all those who chose to sign the acknowledgement page. As property ownerships evolve or other changes occur, addendums will be made to this document. It may also be the case that the Phase 3 studies simply use this as a launching point.

PLANNING AREA SCOPE AND FEATURES

The starting point for determining the planning area for the Master Plan was the BPCA boundary defined as part of the 2002 USACE plan, which included "the entire BPCA as well as adjacent lands that may influence the environmental quality of the BPCA." This area was used by the Council in its initial planning work. The BPCA was also adopted in the City of Boise's comprehensive plan.

The BPCA, as described in the USACE plan, was envisioned as a multiple use area managed to preserve wildlife resources for future generations. The original BPCA boundary included a variety of properties with different types of uses, from arts and theater to education and water facilities. Within the broader BPCA, the IFPL-owned property is considered a Wildlife Preserve and managed as a protected natural area primarily for the benefit of wildlife.

Keeping this original intent for multiple uses in mind, the BPCA boundary was adjusted for this Master Plan by the Partners in their initial workshop on September 15, 2021, based on the principles outlined below. The intent of the Partners was to recognize significant changes in landownership and use that have evolved over the past 20 years. Both the 2002 boundary and the current, adjusted BPCA boundary are shown on Map 1, *Planning Area Boundaries*.

- Higher density, recent residential development along Warm Springs was removed from the BPCA to recognize that the land use has changed significantly. Residential properties along the southwest corner of the area were also withdrawn from the BPCA. While neighbors certainly have an important role to play in stewardship and care of the area, individual ownership can change quickly and residential parcels do not contribute in a meaningful way to wildlife conservation nor education (unless at the discretion of a particular homeowner). The remaining residential land use in the BPCA consists of the Gregerson life estate.
- Barber Dam and the lands associated with it were added at the request of the Boise Pool Hydro partners because the historic elements and water and energy management are viewed as an essential part of the BPCA. In particular, it has been noted that the portage around Barber Dam is a significant contributor to recreational use of the Barber Pool.
- Inclusion in the BPCA is not intended to control or constrain the uses of any properties, although the Partners hope that property owners will work cooperatively to realize the vision for the area. For example, key educational parcels in the immediate vicinity, such as Riverstone School (currently identified as being within the BPCA boundary) and East Junior High (outside of the boundary) could each contribute educational programming to support future land stewardship, but there is no requirement to do so.

LANDOWNER CHALLENGES, OPPORTUNITIES, AND CONSTRAINTS

Each landowner has individual purposes and goals, which are summarized in Table 2, *Opportunities and Constraints Associated with Properties*. The mission and goals of each landowner drive their management strategies and actions.

Generally, many of the landowners experience similar challenges, usually resulting from the undesirable or unlawful use of their property by others. These include the following:

- Trespassing, including boaters stopping on private land
- Development and use of numerous informal/social trails
- Dispersed river access leading to bank erosion
- Walking unleashed dogs that can disturb wildlife and habitat
- Camping and fires
- Fencing and signage removal
- Vandalism

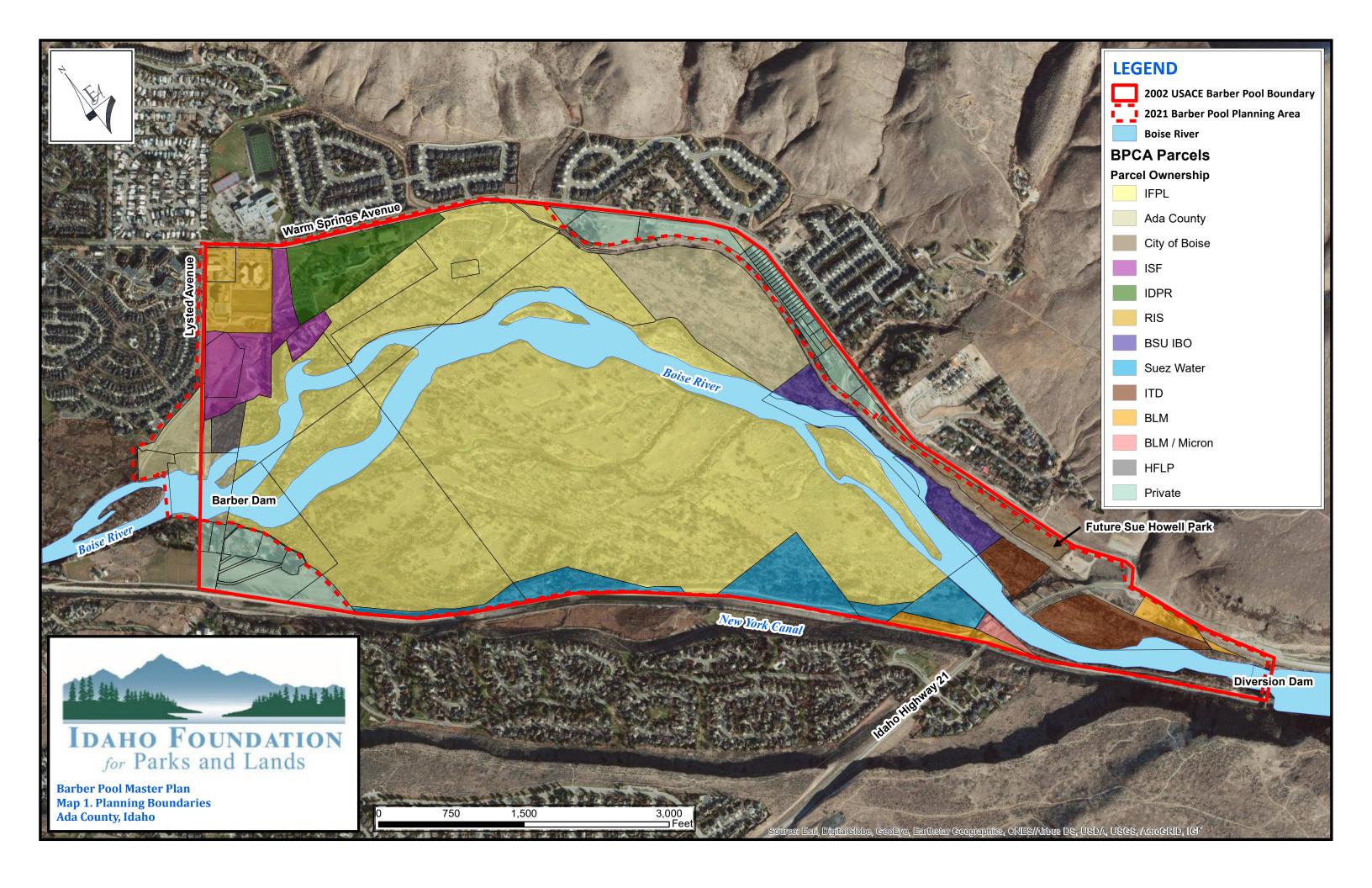


Table 2. Opportunities and Constraints Associated with Properties

Property/Owner	Purpose	Constraints	Opportunities
Barber Dam and associated parcels	Power generation	 FERC licensing Protect dam integrity for operations Safety for river users Any civic amenities secondary to dam operations 	 Relocate river access upstream further from structure Higher river level may help side channel/habitat restoration by raising ground water level Highlight historic features Improve land along Lysted Ave – plant trees, etc.
Idaho Shakespeare Festival (ISF)	Theater production	 Easement for fill portion of dam on Gateway property No build requirement for Gateway property Theater production entails noise, lights and traffic 	 Secure the future for theater production Maintain a buffer around the property to minimize impacts to neighbors Develop a secondary access from the west Provide education to the public about the purpose and appropriate use of Barber Pool Parking during off hours for river/greenbelt access Use Gateway property to connect City's planned greenbelt from the west to greenbelt along Warm Springs Avenue
Idaho Foundation for Parks and Lands (IFPL)	Preserve property for open space and wildlife	 Private property preserved for open space and wildlife South side has only one privately owned access Gregerson life estate Bald eagles are sensitive to use within 330 feet of their nest; the US Fish and Wildlife Service has identified restrictions from May to June, as well as January to April and July to August. 	 Habitat restoration including cottonwood forest Have and acquiring water rights to help with restoration, especially on the south side Many submerged logs in the river could be a resource "Braid and shade" river channels to provide more habitat variety and lower water temperatures Vegetative screening for bald eagle tree and enhancing roost sites

Property/Owner	Purpose	Constraints	Opportunities
City of Boise/Sue Howell Park	Public park	 Donor's vision for park will guide planning Unlikely to be developed in the next 10 years 	 City can design and develop consistent with Barber Pool Master Plan City can offer expertise in riparian/foothills restoration and sustainable train design Parking and public restrooms when developed
Intermountain Bird Observatory (IBO)	Research, education and habitat restoration	 Management agreement with ITD authorizes use for research, education and habitat restoration Eastern parcel provides only vehicle access to Ada County property Western parcel is wetland mitigation for ITD permitted by the USACE The side channel restoration will be subject to an USACE permit and requirement from the City including a river system permit and environmental monitoring 	 Public education (K-12, college and public) Volunteerism Restored side channel will improve habitat and help manage access Side channel restoration provides a template for how to accomplish similar projects Designated river access could reduce bank erosion Create designated trails and close informal trails Focusing access in two or three places provides places to educate, sign, and close as needed Western parcel use has not been determined, can support overall plan
Idaho Department of Parks and Recreation (IDPR)	Parks administration	- IDPR operates under the direction of the Governor and legislature	- Continue cooperative access and use with ISF and provide parking access for greenbelt use

Property/Owner	Purpose	Constraints	Opportunities
Ada County (parcel along Warm Spring Avenue)	Open space and conservation	 Ada County Commission resolution designated open space and conservation area Must be open to the public Resolution specified passive use Managed for recreation and upland riparian habitat Cannot be converted to any use other than public outdoor recreation unless the National Park Service approves replacement land of equal value, location and usefulness 	 Future improvements to manage use are possible. Designated trails could help reduce informal trail use May be suitable for a designated public recreation trail with interpretive and education components
Micron/BLM	Pump station for river water	 Maintain the integrity of the pump house and associated infrastructure Only access is via private road from the west 	- Continue current use and maintenance
Harris Family Limited Partnership (HFLP)		 Designated as nature preserve in Special Planning Area ordinance Inundation easement for dam, expires in 2023 	 Coordinate education around protecting wildlife preserve areas Coordinated/integrated wildlife management with Harris Ranch Wildlife Management Area.
Suez	Pump station for river water	 Maintain the integrity of the pump house and associated infrastructure Life estate on parcel along canal Only access is via private road from the west 	 Explore/consider habitat and other environmental improvements. Improved stewardship of the land (passively managed at this time)

Complicating all of these issues further is the fact that at times, private property lines are not currently signed, fenced, or otherwise made obvious within the BPCA. Vandalism of signs, fencing, and fixtures is commonplace; and old signs, fencing, and fixtures have fallen into disrepair.

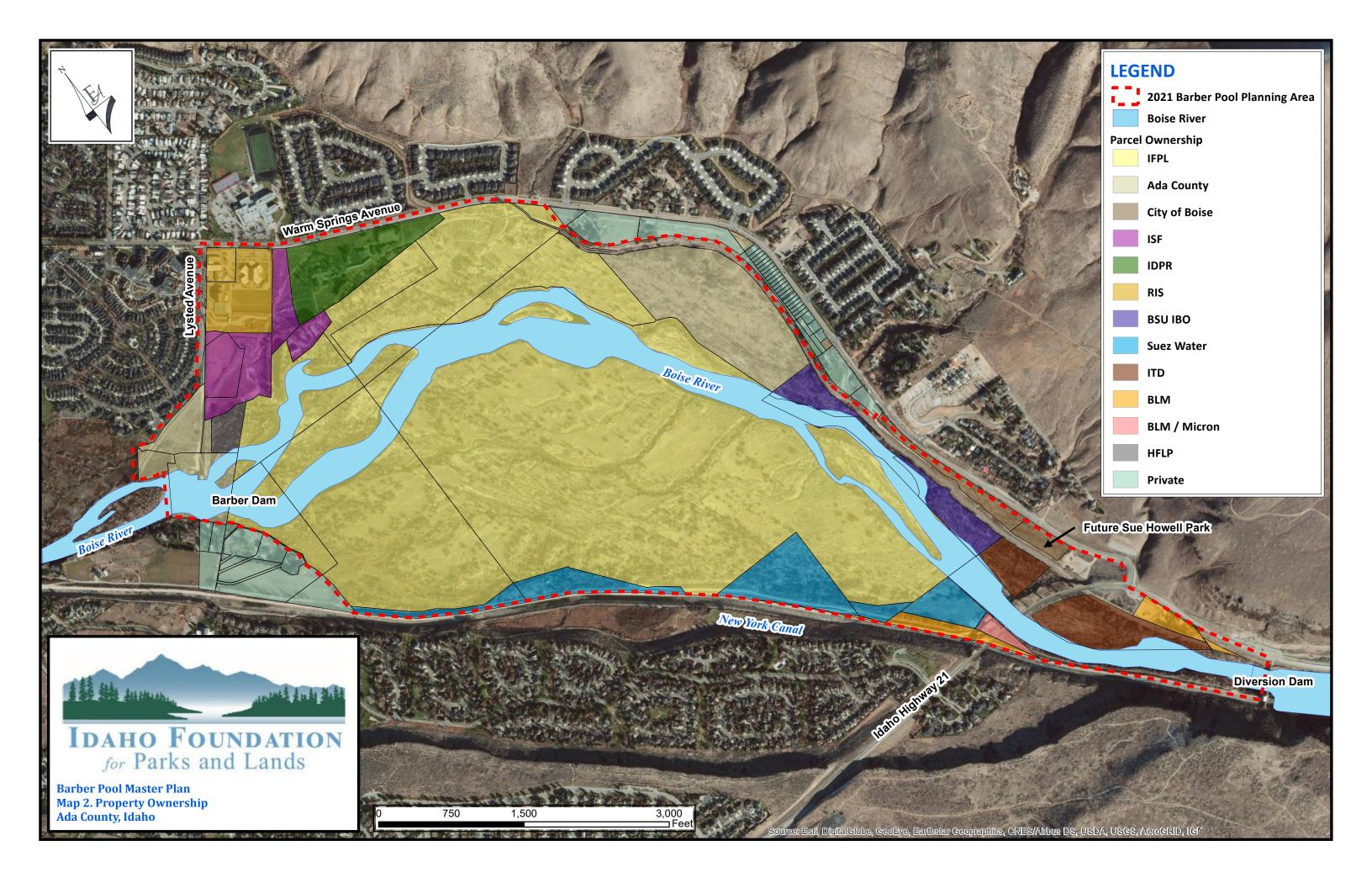
Currently, users access the river from informal parking areas and many social trails originating from the Greenbelt corridor. This type of access can result in trampling of native vegetation and contributes to erosion of the steep slope adjacent to the Greenbelt path, as well as stream bank erosion along the Boise River. River users also enter and exit the river by parking along S. Lysted Ave. and in the public roads in the Mill District neighborhood to the west. Users access the river from the designated portage sites upstream and downstream of Barber Dam.

STATUS OF PROPERTIES

Properties in the BPCA are identified on Map 2, *Property Ownership*, and described below. Mapping was current per Ada County Assessor Land Use/GIS mapping in December 2021.

Barber Dam and associated parcels are currently owned by Ada County and operated by Central Power and Fulcrum to produce power. Barber Pool Hydro has entered into a purchase and sale agreement to acquire the dam and adjacent properties from the County. The transfer is subject to Federal Energy Regulatory Commission (FERC) approval. Barber Pool Hydro would like to provide a mechanism to maintain river flows when the hydro power plant experiences power outages, which would also raise the dam height. The current FERC license to operate the hydropower facility at Barber Dam expires in 2023. Portage facilities around the dam are required by law, and include steps on the upstream side and a trail to a put in on the downstream side. Several of the features of the dam have historic value, including the dam itself and the power plant.

Ada County owns the Greenbelt in this area and a 35-acre parcel south of the Greenbelt. The Greenbelt is a heavily used amenity for the community. The parcel is managed for pedestrian use and as upland riparian habitat. In December 2020, the Ada County Commission adopted a resolution designating the parcel as an Open Space and Conservation Area to protect for future generations. The land is open to the public for passive recreation. It also served as part of the development of the Greenbelt in this area and is thus bound by Land and Water Conservation Fund constraints. The parcel cannot be converted to any use other than public outdoor recreation unless the National Park Service approves replacement land of equivalent value, location and usefulness.



The Idaho Shakespeare Festival (ISF) property has been assembled over a number of years. The initial property was acquired from IFPL for the purpose of building and operating a theater, with subsequent acquisition of other parcels. The theater is accessed from Warm Springs Avenue via a driveway shared with Idaho Department of Parks and Recreation (IDPR) with a use permit in perpetuity. The access and parking areas are operated and maintained under an agreement between IDPR and ISF. The recently acquired "Gateway" property to the west of the theater has a deed restriction allowing only non-commercial, nonprofit uses limited to undeveloped, natural open space and limited accessory support facilities consistent with ISF activities. The deed restriction allows a pathway through the property.

Harris Family Limited Partnership (HFLP) owns a parcel between the ISF "Gateway Reserve" property and the river. They also own a sliver of land along Lysted Ave. When the City of Boise adopted Special Planning Area 1, Harris Ranch, as a development plan, the parcel adjacent to the Gateway Reserve was designated as a nature preserve. In addition to setting this and other land in the foothills aside for wildlife and natural areas, the Harris Ranch development Special Plan created the Harris Ranch Wildlife Management Association (HRWMA). The purpose of the of the HRWMA is to provide education to homeowners about living with wildlife and to enhance habitat through restoration and planting projects in the Harris Ranch development area. HRWMA is funded through annual contributions from homeowners and businesses, and complements the goals of the BPCA.

IFPL Barber Pool Wildlife Preserve property was initially acquired as a gift from Boise Cascade and by purchase of the adjoining Pullman Brick land. IFPL has recently purchased the Gregerson property with a life estate for its long-time resident. IFPL is currently gathering data and conducting planning to help determine the best opportunities for wildlife habitat enhancement and ecological restoration. The area is important habitat for deer, elk, bobcats, coyotes, foxes, bald eagles, and numerous other bird species, both resident and migratory. The Wildlife Preserve also has a significant but declining cottonwood forest, with new trees dominated by suckers. There is currently more wildlife use on the west end of the Gregerson property than on the east end, near the Ada County parcel. The south side is better protected from human activity due to limited access via a privately owned road on the north side of the New York Canal.

Sue Howell Park was donated to the City of Boise for a public park. The donor's vision is for an active park. The original master plan was deemed too ambitious, so the city will redesign the park before development. The park is unlikely to be developed for at least 10 years.

Intermountain Bird Observatory (IBO) manages property owned by Boise State University (BSU) and Idaho Department of Transportation (ITD) under a management agreement between ITD and BSU/IBO. The management agreement authorizes research, education, and habitat restoration. IBO has a master plan for the property that envisions stream channel and habitat restoration, pathways and overlooks, and a significant education component. IBO is currently constructing a side channel restoration project that will improve habitat as the first step in implementing their master plan. Construction is anticipated in winter 2021/2022. BSU/IBO also owns a triangular parcel to the west that is not included in the current plan, yet offers opportunities to address Master Plan goals.

Idaho Department of Parks and Recreation headquarters office is owned by the State of Idaho and used for parks administration. The eastern end of the property is used for all-terrain vehicle safety training for several state agencies. The site shares access with ISF under an agreement for theater parking, Greenbelt use parking, and maintenance and operations. There are no plans to change or expand use. IDPR also operates the restrooms on the Greenbelt.

Micron/Bureau of Land Management (BLM) property is owned by the BLM and is accessed and operated by Micron, who owns the pump house and associated materials. The pump station withdraws Boise River water for manufacturing and ground water recharge. There is no plan to change use at this time. Micron's use includes parking and access to the pump house. Access is via a gated and locked private road from the west.

Suez Water owns about 500 feet of river front property and land along the canal in the south western part of the planning area. The land was purchased from the Smith family anticipating expansion of water treatment facilities, with one parcel along the canal limited by a current life estate. However, Suez is now expanding the Columbia Water Treatment plant, doubling its capacity due to technology improvements. There is no current plan to expand on this property, but Suez intends to keep it. Access is via a gated and locked private road from the west.

BPCA MASTER PLAN VISION, GOALS, AND OBJECTIVES

The vision for the BPCA is to "Create an ecologically functional, sustainable, and community-supported Barber Pool Conservation Area that will maximize protection for native plants and wildlife by inviting people to act as stewards for generations to come."

To achieve this vision, this Master Plan is built upon three main goals that provide a framework for future management:

- 1. Protect and enhance wildlife and fish habitat
- 2. Manage human use to minimize disturbance
- 3. Provide public outreach and education



Goal 1: Protect and enhance wildlife and fish habitat throughout the BPCA.

- Use native species in restoration projects
- Address the needs of both migratory and resident species
- Develop and implement plans and projects to improve habitat
- Prioritize projects that get the most benefit for the cost or are time critical to preserve ecological function

Goal 2: Manage human use to minimize disturbance to conserve and protect open space, riparian and upland habitat, and wildlife in perpetuity.

- Manage access and protect natural areas by providing infrastructure that
 concentrates and encourages appropriate use in designated areas while
 discouraging use in sensitive areas. Design habitat improvements to help
 manage human use where possible.
- Develop governance strategies to continue to promote cooperation among the Partners and advance the goals of the plan.
- Develop funding sources to implement the plan and create ongoing funding mechanisms for sustainable management.
- Embrace an adaptive management approach to adjust to the evolving needs of natural resources, wildlife, and the community at large.

Goal 3: Provide public outreach and education to build knowledge, stewardship, and advocacy for the BPCA.

- Educate the public about the exceptional values of the area to create a stewardship ethic among the public, visitors, and landowners.
- Improve public understanding of and expectations for limitations on human use intended to preserve the area. Concentrate education at trail heads, river access points, and other high-use areas.
- Change perceptions and choices of existing users, especially for people
 who use the area today in ways that are not consistent with the Master
 Plan goals.
- Seek partners for educational outreach, such as the neighborhood association and other community non-profits with similar objectives.

MANAGEMENT STRATEGIES FOR THE BPCA MASTER PLAN

To implement the vision, goals, and objectives outlined above, a management strategy is necessary. The management strategy is based on two land use zones, and includes actions and approaches to achieve goals and objectives. Additional ideas that could be undertaken in the future are also provided.

LAND USE ZONES

BPCA will be jointly managed across land ownerships by using zones that indicate intensity and types of use that are intended. The two zones are shown on Map 3 and are described as follows:

- **No Public Use:** Use is limited to scientific work and habitat restoration. This Zone is located on the south side of the river, on islands within the river, and in sensitive areas north of the river on IFPL-owned land or other privately-held land designated no trespassing.
- **Public Use:** The public may use this land in accordance with the guidance provided by the landowner. For example, the Greenbelt is public use and has limitations regarding motorized vehicle use. The Idaho Shakespeare Festival, likewise, is a theater for public use, but has restrictions to protect the stage and other infrastructure.



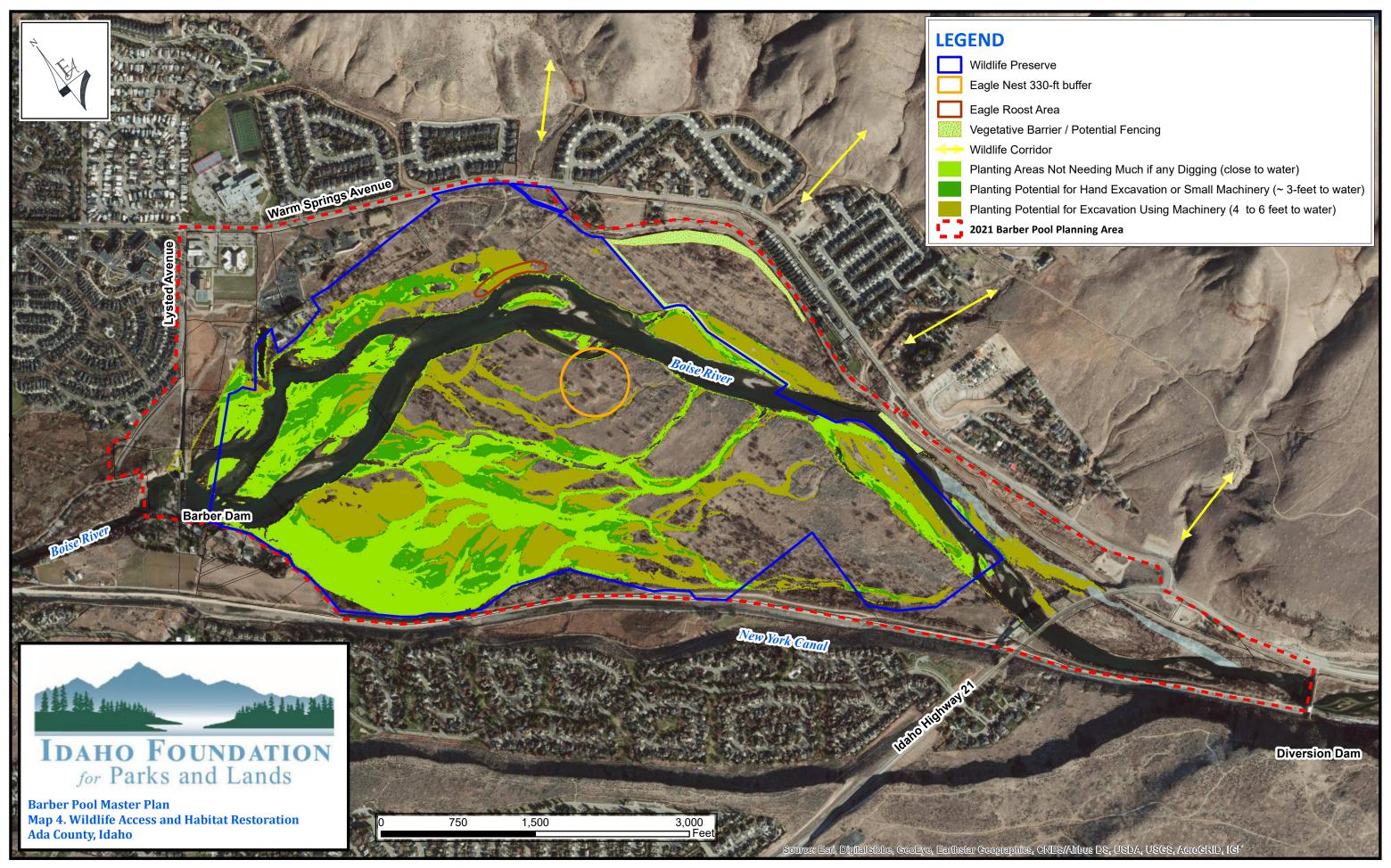
Any area in the Public Use zone may close seasonally as needed to protect sensitive wildlife and manage human use during particularly sensitive periods. Also, habitat restoration may occur in either of the zones depending on opportunity, need, and area-wide priorities. Displaying maps of the zones at education sites will help communicate intended uses to the public.

GOAL 1: PROTECT AND ENHANCE WILDLIFE AND FISH HABITAT

Improving habitat conditions is an important component of preserving the area for wildlife. Opportunities range from simple tree wrapping to protect trees from beaver damage, to more complex channel and habitat restoration projects that involve land excavation, providing irrigation water and vegetation plantings. Based on the estimated depth to stable groundwater, some of the areas more suitable for possible habitat restoration projects are shown on Map 4, *Wildlife Access and Habitat Restoration*. Unpredictable stream flows and groundwater levels may impact the design and even feasibility of some habitat improvements; adaptive management should be considered with each project. The boundary of the Wildlife Preserve, as well as key wildlife corridors, are also shown on Map 4.

Habitat improvement is a priority on the south side of the river where activity is limited to research and wildlife use, and habitat restoration opportunities exist on the north side of the river as well. The best opportunities for habitat enhancement take advantage of areas where groundwater is close to the surface, allowing a longer-term natural water source once vegetation is established. Successful projects also require physical access and often a short-term water source to get plants established. IFPL has and continues to acquire water rights to support habitat improvement projects. Below are the main types of habitat improvement that can be considered, with additional information about each type included in Appendix B.

- 1. Woody Riparian Planting Introduce cuttings, poles, transplants of cottonwood, willow, and other woody species in areas that have stable water within 1.5 feet of the existing surface, occasional flooding preferred. No excavation required.
- 2. Woody Riparian Restoration Areas having stable water less than 3 feet deep, occasional flooding preferred. Some of these areas are in the bottom of existing channels and are higher ground with poor woody vegetation probably caused by coarse sediment deposition and where banks have failed. High ground would be lowered and planted using cuttings, poles, transplants of cottonwood, willow, and other woody species in the area.



Date: 1/24/2022

- 3. Side Channel Restoration Remove material that restricts flow from entering side channels or blocks flow within the channel to increase flow frequency to side channels. Evaluate depth to stable water to determine if deepening of channels is needed to get the desired effect. There are several opportunities to do this on the south side of the river.
- 4. Irrigation Water would be delivered to target restoration sites to create or restore habitat. Irrigation would make it possible to have more diversity in areas that currently cannot support a variety of vegetation. Irrigation water could be used to slow and possibly reverse the loss of existing cottonwood trees by providing supplemental water.
- 5. Bank Restoration Stabilize or regrade failing streambanks. Resulting work would provide new or improved riparian surfaces and associated habitats, reduce sediment load to the river, and help narrow the channels.
- 6. Upland Vegetation Rehabilitation Upland areas disturbed by construction or clean-up activities must be actively rehabilitated with an emphasis on weed control and establishing native upland shrubs, perennial bunchgrasses, and forbs. Uplands on the BPCA support a few species of native shrubs but the understory vegetation is dominated by invasive annual grasses that accumulate fine fuels and significantly increase the threat of wildfire. Most of the ground layer vegetation consists of exotic invasive grasses and forbs that pose a very high fire danger. Native perennial bunchgrasses actively compete with invasive annual grasses, increase fire resistance and resilience on the landscape, and provide wildlife food and cover.
- 7. Aquatic Habitat and Fisheries Improvement Side channel restoration, bank stabilization, and improving vegetation communities on riparian and upland areas are expected to directly or indirectly benefit aquatic habitat and fisheries. Although no specific instream projects are anticipated at this time, such projects could be considered in the future.

Additional examples of possible habitat protection and improvement projects include but are not limited to:

- Use wildlife friendly fencing where ever possible, relying on recommendations from the Idaho Department of Fish and Game (IDFG).
- Continue to wrap trees with protective materials to protect trees from beaver activity. Focus on trees that are critical to bird roosting and nesting.

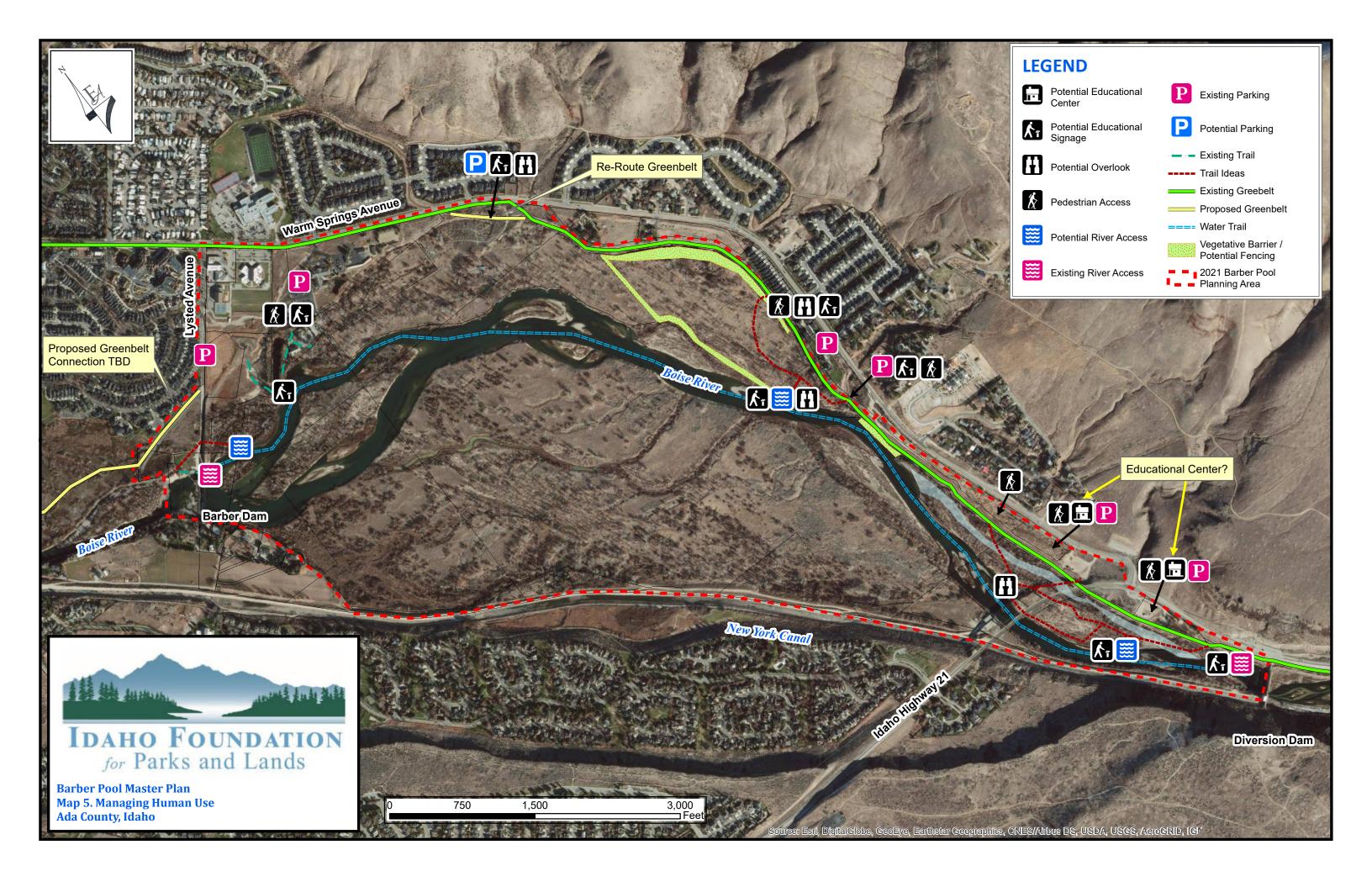
- Propagate cottonwood trees. Except along a few low-lying areas near the dam, virtually all of the younger cottonwoods in the BPCA are suckers from older trees. Cottonwood suckers are subject to being eaten by beavers, deer, or both. Therefore, few, if any, of the suckers would grow past the sapling stage. They may live for many years but most will be forced into a shrubby growth form by repeated browsing. Restoring cottonwood forest will require planting new trees and nurturing them for at least 2 years after the roots reach groundwater. Woody plantings will also need to be protected from beavers and deer for many years.
- Provide an alternative water source to vegetation along the toe of the slope of the Greenbelt. Vegetation in this area formerly received water from the Penitentiary Canal subsurface leakage that also impaired the safety of the Greenbelt Pathway and steep slope. To address public safety concerns, the canal was piped during pathway reconstruction in 2018. The quality of the experience on the pathway, as well as the stability of the slope, depends upon healthy vegetation. Maintaining this cover is important for people and wildlife, but a solution is currently elusive.
- Reduce the presence of invasive species.
- Develop a fire management plan to preserve and protect habitat.

GOAL 2: MANAGE HUMAN USE

The primary tool for managing human use will be providing infrastructure that concentrates and encourages uses in appropriate areas and discourages use in sensitive areas, coupled with public education to increase understanding of the values and conditions in the area. If people understand the reasons for managed use, they can be enlisted as partners in stewardship of the area. Map 5, *Managing Human Use*, shows the locations of proposed improvements to accomplish these multiple goals.

A few of the proposed improvements shown in Map 5 could occur without much additional analysis, for example:

- Improved signage or education regarding management zones, property boundaries, and informational kiosks.
- Construction of trails or other facilities that are already on lands in the Public Use zone, or that are already anticipated in existing plans (for example, at IBO).



 Fencing or vegetative buffers to prevent trespass onto private land or areas deemed critical for wildlife habitat. For example, a well-designed habitat improvement can discourage access to sensitive areas. Habitat improvements may include thorny plants to help direct human use away from sensitive areas.

Several of the proposed improvements shown in Map 5 would need to undergo additional analysis and development to create funding or management proposals. Funding strategies would need to be developed for many of these improvements.

As stated in the objectives for managing human use, this Master Plan recognizes that human use is dynamic, evolving, and changing and increasing, likely to the detriment of wildlife in the BPCA. For example, the advent of stand-up paddle boards has dramatically changed the recreation landscape on the Boise River, radically changing use at Discovery Park near Lucky Peak Reservoir. Also, the COVID-19 pandemic drove unprecedented demand for local access to the outdoors. The way people recreate and experience the outdoors may change in the future, and the Master Plan may need to change with it.

River Use

Under current planning for the Sue Howell Park and IBO, river users will be provided with improved access points that allow ingress and egress, improve the user experience, and include parking and education about appropriate activities. As shown on Map 5, these designated, improved access points are intended to concentrate use and discourage entering, exiting and stopping along the river at other locations. Intrusion into protected areas from the river, especially on the south side and on islands, would be discouraged by education, signage and development of natural barriers along river banks to prevent wandering.

One education goal will be to convey the idea that "this reach is different." River use is intense both upstream and downstream of the Barber Pool reach. The Partners seek to create an expectation for what it's like to float "Diversion to Barber." This is the "quiet" part of the river as opposed to the more active downstream portion from Barber Park to Ann Morrison Park, so that people arrive with a preconceived notion of what to expect. Various education tools at the access points, such as signage, a river map, and QR codes that link to information about the BPCA, would help inform river users and cultivate a quiet atmosphere for this reach that respects the wildlife in our midst. A River Trail map for this reach, educating users about features along the way, may be developed to further encourage quieter river use. Signage can be used to discourage river users from accessing the islands, which are sensitive habitat.

Possible river access points identified on Map 5 are all on the north bank and from east to west include:

- Below Diversion Dam. Improve existing parking and develop a designated river launch and access site.
- Upstream of the Highway 21 bridge on the IBO/ITD property. Provide parking, education about this stretch of the Boise River, and improved river launch facilities.
- On the westernmost IBO property, immediately east of the Ada County parcel. This access would serve as a place to enter or exit the river or as an attractive, designated break spot for people floating the full length of the Barber Pool reach. The access may be surrounded with a planted vegetation buffer to encourage use of the designated trail and discourage roaming the wider area. Access to or from the Greenbelt would be via a designated trail across the Ada County parcel. Education and an overlook are proposed for this location. Access to this location is expected to be only on foot or via bicycle, as private property is adjacent to the Greenbelt in this area.
- Upstream of Barber Dam. The existing exit that provides portage around Barber Dam could be improved if it were relocated further upstream with a trail to parking that could be approached from S. Lysted Ave. The specific locations of the river access, parking and the alignment of an access trail would be determined in future project design.

Outside of this Master Planning process, some Partners are considering a larger Boise River user management approach to distribute use among various reaches. The BPCA Partners would monitor and participate as appropriate in this important discussion.

Pedestrian Use

Pedestrian use will be limited to designated trails and coupled with education about the BPCA. Similarly, pedestrian use will be discouraged in sensitive areas by closing social trails, educating the public about why the area is protected, and creating barriers to access in select locations. Where possible, such barriers will consist of vegetation and natural materials that are undesirable to people but that allow wildlife passage, or wildlife-friendly fencing. Similarly, parking can be managed to encourage human use in desired locations and discourage use in sensitive areas.

Infrastructure features that are proposed on Map 5 are described below.

1. Trails and Greenbelt

- 1.1. Construct the network of trails currently planned on the IBO property. Improved trails can provide wayfinding and messaging about appropriate use of the BPCA. The side channel under development on the eastern IBO property will help limit access along this trail.
- 1.2. Construct a trail on the Ada County parcel that encourages passive recreation and serves the mid-reach river access across IBO property. This trail may include ADA accessibility and interpretive elements.
- 1.3. Reroute the existing Greenbelt from the east end of IDPR land to a point further east. The Greenbelt in this area needs to be improved. The rerouted Greenbelt could pass on the south side of the proposed overlook on the IFPL/Gregerson property.
- 1.4. Develop trails in the William Shakespeare Park on the river side of the ISF property. Trails on the ISF property should be day use only. A year-round site manager may be needed to ensure appropriate use.
- 1.5. Develop a trail or Greenbelt connection between Alta Harris Park and the Greenbelt along Warm Springs Avenue; route to be determined in future planning.

2. Overlooks or interpretive areas

- 2.1. Provide overlooks at trailheads and along the Greenbelt on the IFPL/Gregerson property where the land is high enough to enable a good view of the BPCA. The overlook on the IFPL/Gregerson property may be ADA accessible and may include a small, handicapped-only parking area off Warm Springs Avenue, location to be determined.
- 2.2. Parking, Greenbelt access, and education at Sue Howell Park.
- 2.3. Bird blinds in locations to be determined, to allow quiet bird observation.
- 3. Buffers between the Public Use and No Public Use zones
 - 3.1. A vegetated riparian buffer along the property line between the Ada County parcel and the IFPL land to the immediate south to discourage pedestrian access to the Wildlife Preserve (see Map 4), coupled with closure of informal trails. A bridge over the riparian buffer would lead to the river access point on the IBO property. Vegetative buffers could include thorny plants to further discourage access to sensitive areas.

3.2. A barrier along the south side of the Greenbelt between the IBO eastern and the western parcels to discourage pedestrian travel to the Boise River in this area. The slope here is steep and pedestrian activity damages vegetation and erodes soils.

GOAL 3: PROVIDE PUBLIC OUTREACH AND EDUCATION

As stated in the objectives for education and outreach, several avenues are possible for reaching the public, including signage, educational facilities (buildings, kiosks, benches), educational programming, partnerships with likeminded organizations, and community meetings. Some of these are low-cost and could be implemented right away, while others are more involved and would take more effort to develop.

Signage, including signage sites with educational elements, is an important outreach tool for educating the public about the values of the area and appropriate use. Some signage may simply indicate private property boundaries. Education sites may include maps, photos, and written information. Locations for educational sites and a possible education center are shown on Map 5 and described below, along with other outreach tools that should be considered.

1. Signage

- 1.1. Position signage where the public already interacts with the area, such as the Greenbelt, ISF, and existing publicly used parking areas.
- 1.2. Enhance existing Greenbelt signage to inform and engage users regarding the primary purpose of the BPCA and their important role in protecting the unique values of the area for current and future generations.
- 1.3. Reference existing ordinances and laws limiting trespass to enable enforcement.
- 1.4. Notify users where dogs are not allowed, or only allowed on-leash, and explain why off-leash dogs are detrimental to wildlife.
- 1.5. Consider informing users of other places to pursue desired activities. For example, dogs must be on-leash in the BPCA, but an off-leash open-space trail network, the Oregon Trail Recreation Area off Highway 21, is managed for public recreation by Ada County Parks & Waterways.

2. Nature trails and overlooks

2.1. The trail network on the IBO property will include education about habitat and wildlife in the area.

- 2.2. Overlooks may be equipped with educational signage, viewing scopes, and furniture such as benches.
- 3. Educational programming and partnerships
 - 3.1. William Shakespeare Park on the ISF property is a target for education about the BPCA because of the relatively large number of people that visit the site in the summer.
 - 3.2. Identify speaking opportunities with nearby community centers and the neighborhood association.
 - 3.3. Coordinate with the Harris Ranch Wildlife Mitigation Association and other like-minded organizations.

4. Education Center

- 4.1. Determine the best location via a collaborative process among the Partners. Options include the US Bureau of Reclamation property at the east end of the area or the Sue Howell Park.
- 4.2. Identify if docents or volunteers could staff the education center.
- Web-based tools
 - 5.1. Codes on signage that lead to more information.
 - 5.2. Information on property owner web sites and social media sites regarding the BPCA.
 - 5.3. Online access to virtual overflights in different seasons.
 - 5.4. Web cams to experience the site remotely.
- 6. Volunteer and direct educational engagement
 - 6.1. Clean-up projects, planting and protecting vegetation, trail construction, and other such projects help build personal investment in the area.
 - 6.2. Educational tours, bio-blitz studies, and student engagement are all potential avenues.

ADDITIONAL ACTIONS FOR SUPPORTING THE BPCA

This section identifies additional actions that are outside the scope of the Plan but could support the vision of preserving and protecting the BPCA. These actions may either be outside the planning area, under the jurisdiction of entities other than or in addition to the Partners, or may require additional study to support effective implementation. Future partnerships to pursue these actions would promote the long-term health of the BPCA.

Issues that may require additional study include:

- Given restrictions such as the 330-foot zone around bald eagle nesting areas for much of the year, it is important to determine how much and what kind of river and land use the area can handle and still protect open space, wildlife, and habitat. An environmental impact study may be necessary before recreation is significantly expanded or enhanced.
- Determining the appropriate amount and locations for parking will
 directly influence the impact on adjacent neighbors, as well as the ease
 with which people may access properties and the river and the public's
 expectation for doing so. A recreation management study may be
 necessary to understand this dynamic and how to create stewardship
 without allowing the area to become "loved to death" or adversely
 impacting the broader community.

Potential actions that are outside the planning area or involve jurisdictions beyond the Partners include:

- Protect the corridors that provide essential wildlife access to the BPCA. The corridors depicted on Map 4, *Wildlife Access and Habitat Restoration*, are identified in *Blueprint Boise*, the Boise City Comprehensive Plan, Chapter 4, Figure 15 (City of Boise, 2011).
- Encourage others to conduct water quality monitoring to establish baseline conditions and determine appropriate ongoing monitoring for protecting and improvement of aquatic habitat.
- Installing signage to educate the public about the BPCA select locations outside the planning area such as:
 - The overlook at Surprise Way and State Highway 21
 - Peace Valley overlook

- Wildlife passage under Warm Springs Road at Maynard Gulch could reduce wildlife/vehicle conflicts and permanently protect an important access point.
- Including information about the BPCA in packets provided to new homeowners could help educate people living in the immediate area.
- Support enforcement of the code that prohibits motorized vessels on the Boise River through the Barber Pool reach.

MASTER PLAN IMPLEMENTATION

The BPCA Master Plan is a product of the collaborative efforts of all the planning Partners. In their meeting on December 14, 2021, the Partners agreed that going forward, the Master Plan needs to be "collaboratively owned" by all the Partners, together. Collectively, the Partners share how people and wildlife move across boundaries. A collaborative approach is the best strategy for successful protection and enhancement of the BPCA for wildlife and the community, as shown on Figure 1, *Master Plan Implementation*, and described below.

By signing this Plan, representatives of each landowner organization are acknowledging their shared support of the values, goals, and objectives of the Plan and shared commitment to implementation. Each organization will develop its own implementation approach based on their organization's mission and authority. Individual organizations may choose to adopt the Plan in some manner, whether that be adoption by a governing board, incorporation into a planning document, or other action, but doing so is up to the organization.

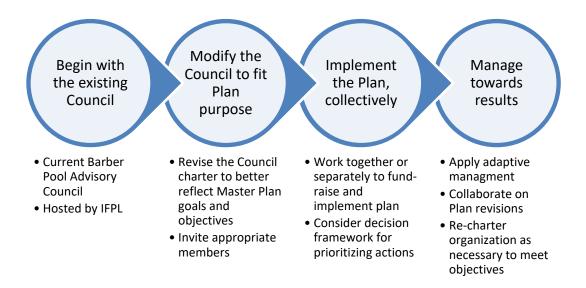
To assure continued coordination, the Partners will initially convene under the auspices of the Barber Pool Advisory Council (the Council), sponsored by IFPL. The Partners anticipate amending the Council charter and changing the name, reflecting that the organization would no longer be strictly be "Advisory" to IFPL, but would seek to undertake actions identified in this Master Plan. The group will certainly continue to provide advisory input to the IFPL Board and the other organizations and entities represented, and will seek the support of those organizations to move actions forward on the various ownerships. The Partners anticipate adding members to the group to fully represent the landowners and important interests who joined together to develop the Plan.

As the re-chartered Council sponsor, IFPL will initially serve as the convener and facilitator of the group, retaining the current leadership. During the first quarter of 2022, members of this group will collectively determine how to function as an independent, unbiased organization that is not beholden to any particular

member organization and honors the shared ownership of the Plan. Some Partners indicated that a separate non-profit organization may be necessary to collectively steward the shared vision of this Plan. However, the Partners decided to begin with what exists currently, and then allow the members of the re-chartered Council to determine the future structure of the organization.

Securing funding towards implementation will be critical. Today, it is anticipated that funding will follow the model of each organization, advancing Plan elements on individual properties consistent with mission and authority. For example, IBO will continue with the Diane Moore Nature Center, and the City of Boise will continue with Sue Howell Park, using their existing funding models for these projects. Given the management strategies adopted in this Plan, a few projects may entail shared funding, but many of the projects will be specific to a particular ownership. Despite this, the Partners recognize that seeking funding collaboratively may create more opportunities, demonstrating a broader interest in the area to potential donors. Through the re-chartered Council, the Partners commit to working together on such efforts as appropriate.

Figure 1: Master Plan Implementation



FRAMEWORK FOR PRIORITIZING MANAGEMENT ACTIONS

The re-chartered Council will be responsible for prioritizing Master Plan management strategies and actions. The re-chartered Council will create a prioritization process that minimizes additional study to only what is necessary, ensuring that effort and funding are directed towards projects and action. If studies are needed, they will be structured to address multiple objectives. The following guidelines were developed by the Partners to initially guide the re-chartered Council in Master Plan prioritization:

- 1. Need: Is the problem to be addressed urgent or time critical?
- 2. Cost Effectiveness: Is the work productive and effective in relation to its cost?
- 3. Achieve Multiple Objectives: Does the work achieve either multiple objectives of the Plan or one or more objectives of the Plan in addition to objectives of a Partner?
- 4. Benefit to Partners and the Community:
 - 4.1. Does the work align with and advance the mission of individual Partners?
 - 4.2. Does the work meet larger community goals and priorities?

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US Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines.

APPENDIX A: BPCA MASTER PLAN WORKING GROUP, PARTNERS, AND FRIENDS

The stakeholders listed for the groups were all invited to participate in the Master Planning process. People participated to the level of their availability, and their perspectives were considered in the Master Plan.

Working Group

Stephani Hilding Co-Project Manager, IFPL
Brandy Wilson Co-Project Manager, IFPL
Vernon Banks Past President, ISF Board

Chuck Blair Wildlife Ecologist, Boise River Subject Matter Expert

Mark Hofflund Managing Director, ISF
Sharon Hubler Past President, IFPL Board
Raleigh Jensen Neighbor, major donor
Jan Johns Executive Director, IFPL

Greg Kaltenecker Executive Director, Intermountain Bird Observatory,

Boise State University

Trevor Kesner Planner, Boise City Parks and Recreation

Scott Koberg Director, Ada County Parks and Waterways

Larry Leasure Co-chair for Barber Pool Campaign Committee

Brian McDevitt IFPL President

Judy Peavy-Derr IFPL Vice-President; Co-chair for Barber Pool Campaign Committee

Patrick Wickman ISF Consulting Board Member, Forsgren Associates, Inc.

Lis Nelis Phase 1, Consultant, Ramboll, Inc.
Randy Mandel Phase 1, Consultant, Ramboll, Inc.

Sally Goodell Phase 2, Planning and Organizational Strategy Consultant (Independent)

Partners

Jill/Sonny Andrick Neighbor on Sawmill Way, leads neighborhood fundraising effort

Vernon Banks Past President, ISF Board

Chuck Blair Wildlife Ecologist, Boise River Subject Matter Expert

Doug Fowler Developer Harris Ranch; Founder of LeNir, Ltd.

Karl Gebhardt Volunteer for IFPL, business owner, engineer, hydrologist

Gina Gregerson Lifetime resident; life estate on Gregerson parcel

Stephani Hilding IFPL Secretary-Treasurer

Mark Hofflund Managing Director, Idaho Shakespeare Festival (ISF)

Sharon Hubler Past President, IFPL Board

Raleigh Jensen Neighbor, major donor

Jan Johns Executive Director

Greg Kaltenecker Executive Director, Intermountain Bird Observatory,

Boise State University

Trevor Kesner Planner, Boise City Parks and Recreation

Scott Koberg Director, Ada County Parks and Waterways

Jane Kreller Outreach Manager, Suez Water

Larry Leasure Co-chair for Barber Pool Campaign Committee
Travis Lightbody Compliance Manager, Micron Environmental

Brian McDevitt IFPL President

Judy Peavy-Derr IFPL Vice-President; Co-chair for Barber Pool Campaign Committee

Casey Pozzanghera Boise Front Wildlife Manager, IDFG

Craig Quintana Public Information Officer, Idaho Department of Parks and Recreation

Angela Rossmann Executive Director, Harris Ranch Wildlife Mitigation Association

Karen Sander Public Outreach Specialist, ISF Board,

Rob Stark Neighbor Barber Valley Neighborhood Association (BVNA) Board

Steve Sweet Volunteer for IFPL, business owner, engineer, beekeeper Patrick Wickman ISF Consulting Board Member, Forsgren Associates, Inc.

Brandy Wilson Chair, Master Plan Working Group and Barber Pool Advisory Council

Adam Zaragoza Development Bureau Chief, Idaho Department of Parks and Recreation

Friends

Sara Arkle Director, Boise City Open Space and Foothills

Erik Berg Member, Southeast Neighborhood Association (SENA)

Darren Board ISF Board, SVP and Commercial Banking Manager at Bright Bank

Andy Brunelle Member, Trout Unlimited

David Eberle Board Chair, Harris Ranch Wildlife Mitigation Association

Hilarie Engle Director, Idaho Fish and Wildlife Foundation

Sean Finn Past President, Golden Eagle Audubon Society Boise Chapter

Ric Gale ISF Trustee, Idaho Power (retired), Past President BSU Foundation

Darryl Gerber Principal, East Jr. High School

Eric Grace Director, Land Trust of Treasure Valley

Julia Grant Natural Capitalist Strategist

Bas Hargrove Senior Policy Representative, The Nature Conservancy

Dean Johnson Resource Supervisor, Idaho Department of Lands, Southwest Area Office

Marie Kellner Program Coordinator, Idaho Conservation League

Kendra Kenyon Commissioner, Ada County

Steve King Member, Surprise Valley Homeowners Association

Allison Korte Board Member, IFPL
Trevor Kramer Board Member, IFPL

Tom Mahoney Board Member, Riverstone School

Kay Nice Board Member, Barber Valley Neighborhood Association (BVNA)

Liz Paul Volunteer, Boise River Enhancement Network

Jeff Paulson Headmaster, Riverstone School

Michael Popa Neighbor, applicant to be a Director for Idaho Foundation for Parks and

Lands

Andy Scoggin Past President, ISF

Dick Stauber Resident, The Terraces

Dawn Templeton Owner, Templeton Real Estate

Eric Traynor Brownsfield Program Coordinator, Idaho Department of Environmental

Quality

Will Whelan Past Executive Director, Idaho Coalition of Land Trusts

APPENDIX B: HABITAT IMPROVEMENT OPPORTUNITIES AND RIPARIAN CONDITIONS IN THE BPCA

Woody Riparian Planting

Description: Introduce cuttings, poles, transplants of cottonwood, willow, and other woody species in areas that have stable water within 1.5 feet of the existing surface, occasional flooding preferred. No excavation required.

Target Habitat: Wood riparian

Size: Small to large 0.01-acres to 0.5-acres (400 to 25,000 sf)

Effort: Minimal using volunteers

Materials and Equipment: Plant material may be available near the sites or can be obtained nearby and through cooperators. Shovels, hand augers.

Cost: Low

Woody Riparian Restoration

Description: Areas having stable water less than 3-feet deep, occasional flooding preferred. Some of these areas are in the bottom of existing channels and are higher ground with poor woody vegetation probably caused by coarse sediment deposition and where banks have failed. High ground would be lowered and planting using cuttings, poles, transplants of cottonwood, willow, and other woody species in area.

Target Habitat: Woody Riparian

Size: Small to large 0.01-acres to several acres.

Effort: Moderate to high. Very small areas could be done manually. Larger areas would require removal of soil using small or large equipment depending on size. Soil removed would need to be placed in areas that would not be transported by flooding. May require 404 permitting from Corps of Engineers and others, however, such restoration activities are generally encouraged and permitting should be relatively easy.

Materials and Equipment: Plant material may be available near the sites or can be obtained nearby and through cooperators. Shovels. Small or large equipment such as bobcats, hydraulic excavators, front-end loaders, etc.

Cost: \$30,000/acre, mostly dependent on equipment costs and hauling distance.

Restore Side Channels

Description: Remove material that restricts flow from entering side channels or blocks flow within the channel. Goal is to increase flow frequency to side channels. Depth to stable water needs to be evaluated and could requiring deepening of channels to get the desired effect.

Target Habitat: Resulting habitats would be emergent wetland and woody riparian depending on the frequency, magnitude, and duration of flow.

Size: Moderate, 0.1 – 0.5-acres

Effort: Moderate to high. Grading equipment is necessary. Permitting may be easy to complex depending on where the projects are located. Permits would generally include Clean Water Act Section 404, floodplain development, stream channel alteration (part of 404) and grading permits. Aggressiveness of grading may be limited by perceived impacts to water rights (i.e., is the project creating a diversion).

Materials and Equipment: Typical excavation equipment.

Cost: \$30,000/acre, mostly dependent on equipment costs and hauling distance. Cost may increase if permitting cannot be done in-house.

Irrigation

Description: Water would be delivered to target restoration sites to create or restore habitats. Irrigation would make it possible to have more diversity in areas that currently cannot support a variety of vegetation because of moisture limitations. A team of 5 retired wildlife ecologists and botanists initially identified the types of areas that would benefit most from supplemental irrigation water. They identified sites with the best opportunities to slow or reverse the decline of existing cottonwood trees by using irrigation water.

Target Habitat: Riparian and upland shrub, tree.

Size: Moderate, 0.1 – 0.5-acres

Effort: High. May involve the need for ditch or pipe systems. Engineering would be needed for design. Contractors would probably be needed for installation. Operation and maintenance are a concern depending on how the systems are designed. Sites with the highest potential for the greatest benefit in terms of cottonwood habitat are located more than 1,500 feet from the irrigation diversion point. If these high priority sites are to be irrigated it will require a water conveyance system capable of delivering water across over 1,500 feet of coarse sandy soil without substantial losses to seepage.

Materials and Equipment: Varies depending on design but typically would involve excavation equipment, pipe, sprinklers, controls, head box, valves, etc.

Cost: High, but depends a lot on design and how much of the projects can be completed by IFPL volunteers versus needing consultant assistance.

Bank Restoration

Description: This activity involves stabilization or regrading of banks that are failing. Resulting bank work would provide new or improved riparian surfaces and associated habitats, reduce sediment load to the river, and could help narrow the channels.

Target Habitat: Riparian and emergent wetland

Size: Moderate, 0.1 – 0.5-acres

Effort: High. Grading equipment is necessary. Permitting may be easy to complex depending on where the projects are located. Permits would generally include 404, floodplain development, stream channel alteration (part of 404), grading permits.

Materials and Equipment: Typical excavation equipment and plant materials used in riparian projects.

Cost: High. While some projects may be relatively easy if just planting can achieve the effect, most likely meaningful bank restoration will involve shaping, removal and relocating existing bank material, and aggressive planting. Some project could simply move bank materials towards the river thereby reducing or eliminating significant hauling, but each project would need to be designed and permitted. A reasonable cost estimate is \$3,000 to \$10,000 per 100 linear feet assuming a 50-foot footprint. A reasonable approach would be to develop some designs that could be used in many locations to limit the up-front design costs.

Riparian Habitat Conditions in the Barber Pool

The four photos below represent a range of conditions of the riparian vegetation in the BPCA south of the Boise River and show one type of site that would benefit from application of irrigation water.

The first two show two locations along an existing high flow side channel with flowing or standing water, depending on the river height. These channels are 12 to 15 feet below the surrounding upland ground surface.

The third photo shows a former high flow side channel likely formed when Barber Dam was 8 to 10 feet higher than it is today. These former side channels range from about 4 to 6 feet below the surrounding upland ground surface. The condition observed in this photo with mostly dead trees is common throughout much of the Barber Pool area because the groundwater is too deep to support cottonwoods and willows and there is no cottonwood regeneration.

The fourth photo shows another shallow swale with riparian vegetation in variable condition that could benefit from irrigation water and supplemental planting.

Photo B-1:

Healthy, reproducing riparian vegetation growing in an existing high flow side channel with flowing or standing water, depending on the river height. These channels are 10 to 15 feet below the surrounding upland ground surface. There are places where these channels could be widened to increase the channel width, thereby increasing the area suitable for wetland and riparian vegetation.



Photo B-2: This is a different location on the same side channel as above, when the river level is lower. As noted above, this channel is 10 to 15 feet below the surrounding upland ground surface, allowing cottonwoods and willows to thrive.



Photo B-3:

Former high flow side channel likely formed when Barber Dam was 8 to 10 feet higher than it is today. Note that only a few viable trees remain. The bottom of the "channel" is about 6 feet lower than the left bank and 2 feet lower than the right bank. However, growing season groundwater levels here are too deep to support the few remaining trees and these too will eventually succumb to the dry conditions. The condition observed in this photo with mostly dead trees is common throughout much of the Barber Pool area because the groundwater is too deep to support cottonwoods and willows and there is no cottonwood regeneration. Note rabbit brush growing on the sandy swale bottom.



Photo B-4:

Shallow swale with viable, though declining, riparian vegetation that would benefit from irrigation water and supplemental planting. Irrigation via a piped delivery and distribution system would slow or prevent further loss of cottonwoods in areas such as this. Actions such as this would buy time for longer term, more "natural" habitat development to be implemented. Water delivery and distribution via unlined ditches is not feasible because of the coarse sandy substrate.



APPENDIX C: SLOPE MAP IN DEGREES

