Thunderbird
Strategies

Realizing the Promise of Land and Water Restoration

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Cover Photo: Trout Unlimited Musselshell Meadows restoration project in Pierce, Idaho.

I. Introduction

A. Project Background

Ecological restoration is vital for sustaining healthy habitats supporting human and wildlife populations in the United States. With limited intact natural ecosystems remaining, restoration plays a crucial role in reversing environmental degradation by halting harmful activities and implementing proactive management strategies. Beyond benefiting wildlife, restoring degraded lands and waters provides essential services to human communities, including clean water filtration, carbon sequestration, soil erosion prevention, and building resilience to catastrophic weather events. Restoration efforts help mitigate drought, curb the spread of invasive species, and enhance wildfire resilience and flood control. In addition, land and water restoration fosters economic opportunities for local communities through sustainable land management and thriving working landscapes.

Recent financial investments from the federal government provided unprecedented support for ecological restoration; however, uncertainties in federal funding due to shifting political and budgetary priorities present challenges to sustaining these efforts at scale. Regardless of federal funding availability, the need for ecological restoration remains. The William and Flora Hewlett Foundation commissioned Thunderbird Strategies to conduct a study looking at the opportunity for philanthropy, along with state, local, and Tribal governments, private-sector partners, and conservation organizations, to ensure these crucial habitat restoration efforts are sustained and expanded where needed.

B. Report Methodology

The core methodology used for this report was in-depth interviews with individuals and organizations with expertise in public and private lands management, restoration, public policy, and conservation funding. This was supplemented by desk research and document review. The forty interviews, conducted in the Summer and Fall of 2024, spanned national and state government officials, non-profit partners of government land management agencies, other non-governmental conservation organizations working in the U.S. West, leaders in philanthropy, and public lands experts from academia and the legal community. Four key areas of inquiry guided this outreach:

- Understanding current and anticipating future public and private land and water restoration efforts.
- The role of philanthropy, non-profits, and community organizations in the ecological restoration of critical habitats and landscapes.
- The need to sustain and scale land and water restoration efforts.
- Communications that highlight the importance of restoration of our essential lands and waters that grow broad support and build a durable public will in support of a commitment to restoration in the long term.

C. Land and Water Restoration as an Ecological and Economic Opportunity

With limited public land available to preserve fish and wildlife habitats with intact natural ecosystems, restoration is an essential complementary strategy that actively reverses land degradation by halting harmful activity and implementing positive land management outcomes to rehabilitate and restore healthy habitat that connects landscapes and restores biodiversity. This is critical for wildlife to thrive and provides essential ecosystem services for human communities. Experts consider ecological restoration to be a multiple-benefit approach because it provides the aforementioned environmental conservation benefits and can also result in significant sequestration of carbon via soil conservation and recovery of grasslands, reforestation and healthy forest management practices, wetland restoration, rewilding, and protecting natural processes. “Optimal biodiversity maintenance at the landscape scale requires habitat conservation in concert with restoration activities, and the latter increasingly so in a world of changing climate.”[i]

A study conducted jointly by the National Science Foundation, the U.S. Geological Survey, and the School of Natural Resources at the University of Arizona concluded that ecological restoration provides two key management approaches: sequestering carbon through the establishment of green biomass, and the conservation and restoration of biodiversity and ecosystem services. Landscape-scale restoration is an essential tool that enhances critical habitat connectivity and fosters adaptation to changing environmental conditions, providing global, regional, and local impact.[ii]

One example of the need and opportunity for land and water restoration is 39 public-private partnerships initiated in 2023 by the Bureau of Land Management on 21 restoration landscapes across 11 states in the West that impact 80 million acres of public and private lands and waters. [See report Appendix A for a complete overview of 21 landscapes]. These landscapes exemplify the necessity of sustained investment in ecological restoration across the Western United States, where we face significant ecological challenges, including habitat degradation, wildfire threats, invasive species, and water scarcity. Addressing these issues requires a coordinated effort that brings together federal and state agencies, Tribal nations, conservation organizations, private landowners, and philanthropic institutions. Public-private partnerships have proven essential in leveraging resources and expertise to implement large-scale restoration projects. By working collaboratively, these partnerships ensure that restoration efforts are scientifically sound, financially sustainable, and locally supported.

Although restoration of land and water to optimal function is often a multi-phase approach that can take some time, it can be relatively cost-effective. The U.S. Chamber of Commerce 2024 Climate Resiliency Report highlights the economic benefits of resiliency activities, such as ecosystem restoration, estimating that each dollar invested saves $13 in the economic costs driven by climate-related catastrophes.[iii] In addition, research from the World Resources Institute shows that "every $1 invested in restoring degraded land generates an estimated $7–$30 in economic benefits, including improved food production, carbon sequestration, and water quality. Yet each year, deforestation and land degradation costs the world $6.3 trillion in lost ecosystem services like agricultural products, recreational opportunities, and clean air—equivalent to 8.3 percent of global GDP in 2016."[iv]

Additional economic benefits of land and water restoration include significant employment opportunities. A University of Oregon study found that forest and watershed restoration contracting leads to between 15.7 and 23.8 jobs per $1 million of public investment. Although in this study, researchers focused specifically on the economic and employment impacts of restoration investments in Oregon, it can inform understanding of national restoration economics, particularly noting findings that investments in restoration and resilience create more jobs per dollar because the work is labor intensive and investments generate more jobs compared to other alternatives because most of the investment goes towards labor rather than materials.[v] The National Wildlife Federation's report *Jobs, Restoration and Resilience for the 21st Century - Stewardship of America's Lands and Waters* estimates that "investing roughly $200 billion in restoring our natural systems and bolstering climate resilience over five years would put more than 3.5 million Americans to work."[vi] The location of priority public, private, and Tribal lands and waters for restoration would provide enormous opportunities for needed workforce expansion, particularly in rural and tribal communities. It could also foster increased partnerships between government and non-profits with ranchers and farmers.

The United States Forest Service also highlights job creation as a significant additional benefit of restoration projects, exhibiting growth in employment opportunities in their forest restoration programs. "Through stewardship contracting and implementation of the Collaborative Forest Landscape Restoration Program alone, the proponents of projects on national forest lands anticipate creating or maintaining 1,550 jobs. The benefits of maintaining a robust forest industry flow not only to local communities. The Forest Service relies on local forest contractors and mills to provide the workforce to undertake a variety of restoration activities. Of course, healthy forests produce jobs beyond the forest industry. A study has shown that every million dollars spent on activities like stream restoration or road

decommissioning generates from 12 to 28 jobs. Restoring the health and resilience of our forests generates important amenity values. Healthy, resilient forests and grasslands are magnets for outdoor recreation, with more than 170 million visits per year to the National Forest System. That in turn leads to jobs and economic opportunity."[vii] With the reduction in Forest Service staff in early 2025, this will be even more relevant.

Restoration activities are undertaken by state and federal agencies, Tribal governments, private land owners, public land permittees, and non-profit conservation organizations on both public and privately owned and managed lands. Public lands provide an extraordinary opportunity to deploy impactful restoration activities as 840 million acres, roughly 37%, of the 2.26 billion acres that make up the United States is publicly held land.[viii] The federal government holds 650 million acres of those public lands, approximately 29% of the United States. The bulk of this land is managed by four agencies: the National Park Service (85 million acres/3.8% of all U.S. land)[ix], the U.S. Fish and Wildlife Service (95 million acres/3.9 % of U.S. land)[x], the United States Forest Service (193 million acres/8.5% of U.S. land)[xi], and the Bureau of Land Management (245 million/10.5% of U.S. land)[xii]. By law, Bureau of Land Management (BLM) lands are designated for multiple purposes, including outdoor recreation, conservation, livestock grazing, logging, oil and gas development, and mining, as one-third of the nation's minerals are on BLM-managed lands. Given the diverse ecosystems in the agency's purview, the land overseen by BLM presents ample opportunity for increasing healthy habitat and high-functioning ecosystems through restorative land management practices and stitching together critical watersheds and lands that provide connectivity essential to thriving wildlife.

> "The pressures on our public lands – from invasive species, unprecedented wildfires, drought, and increasing use – are being exacerbated by the climate crisis, degrading landscapes and impacting public uses. If we are going to ensure America's public lands are available to everyone, we must invest in their health." [xiii]
>
> **- Deb Haaland, U.S. Secretary of the Interior, 2021-2024**

Funding for restoration activities on public lands has historically come from federal land management agencies through annual federal appropriations and private sources like the Bezos Earth Fund U.S. Restoration Initiative. The federal financial commitment to restoration over the last few years at historic levels had presented funding levels with the potential to scale efforts more rapidly and keep better pace with our rapidly changing environment. However, the recent changes in federal funding priorities are expected to substantially hinder restoration projects and progress, making it essential to secure additional funding to maintain the work and its scale.

The conservation community in the West is actively engaged in restoration efforts on both public and private lands and waters, collaborating with various partners, including federal, state, and Tribal governments, private landowners, and local communities, to implement projects focused on habitat restoration, invasive species control, wildfire risk mitigation, water resource protection, and reintroduction of at-risk species, leveraging funding from government agencies and utilizing strategies like fish passage improvements, wetland restoration, and planting native vegetation across degraded landscapes; this includes a strong emphasis on community engagement to ensure long-term sustainability. Model examples include:

- **Trout Unlimited's Priority Waters** initiative, developed in collaboration with Trout Unlimited (TU) volunteers and partners, identified a priority list of over 200 rivers, streams, lakes, and ponds where TU is directing its energies to care for and recover critical trout and salmon watersheds. Rooted in science, these shared Priority Waters are the foundation of an ambitious strategic roadmap for TU's staff and stakeholders to focus their work on the most critical waterways and lands to grow their impact on a national scale.

- **Walker Basin Conservancy (WBC)** Through collaborations with over 150 farmers and ranchers in the Walker Basin in Nevada, WBC and Walker River Irrigation District have sent a record amount of water to Walker Lake. WBC utilizes a voluntary market-based approach to work with willing sellers to acquire water rights for environmental benefits. This approach to water flow restoration has helped the Conservancy acquire 55% of the water needed to restore the Walker Lakes fishery. WBC can track water thanks to Hydro Mapper, an online tool that provides basin-wide, real-time monitoring of instream flows. The Conservancy has also acquired over 18,000 acres of land associated with water acquisitions. These retired agricultural lands are being repurposed for one of the largest salt desert habitat improvement projects in the Great Basin. This shift reduces water use while restoring native plant communities. The WBC collects data on plants, wildlife, soils, and streams. They use this information to improve habitat, guide land management decisions, evaluate the long-term success of their stewardship efforts, and refine their native seed production methods.

II. Recommendations for Philanthropy and Other Stakeholders

The increasing likelihood of the federal government reducing funding for essential land restoration calls for philanthropy and other stakeholders to step up more than they had anticipated to support the field.
Over the last few years, the elevated government focus on land restoration and historic investment of federal funding provided a unique opportunity to better keep pace with challenges impacting the health of our land and waters and better equip the U.S. to effectively steward our public lands and tackle the damaging effects of environmental changes. However, if the full potential of this one-time infusion of public funding and attention from nonprofits is to be realized, federal government efforts and resources will need to continue to be bolstered by investments from private funding and expanded efforts from additional stakeholders ranging from state and Tribal governments, non-profit and community organizations, and private landholders. In addition to the many external threats and challenges documented earlier, there are also internal barriers to government action, including bureaucratic barriers and an anticipated significant change in public land and water restoration strategy with a new administration, that presents significant opportunities for philanthropy and additional stakeholders to take the lead where land management agencies are restricted. Below is an ambitious agenda for action commensurate with the challenges we face sustaining the health of our nation's land and waters; we focus our recommendations for philanthropy and other stakeholders to help scale and maintain land and water restoration in 3 significant areas:

- Expanding private funding to meet the moment in both magnitude and pace.
- Investing in science and data-based tools shared across the field that will improve decision-making and support shared prioritization in the restoration community.
- Catalyzing engagement of and action by critical stakeholders and growing opportunities for collaboration that can exponentially expand impact.

A. Expanding Private Funding

To capitalize on the historic investments in restoring the ecological health of the U.S. West, the pressure and pace of dual biodiversity and climate crises require ongoing philanthropic commitment at a scale that meets the need and the moment. Some themes emerged from our conversations with partner organizations and grantees regarding private funding. Below is a compilation of those raised frequently that we believe can be most impactful if the philanthropic community adopts broadly and scales in their investment approach:

- Lengthen grant terms (5-year minimum) to better reflect the time it takes for effective and sustainable restoration. This will also provide the time and space required to authentically engage, build trust, and develop effective partnerships critical to landscape connectivity and impact where the whole is greater than the sum of

its parts. In addition, this allows for the retention and continuity of staff who have built expertise and relationships in these communities.

- Build flexibility into long-term grants, allowing responsiveness, adaptation, and agility during the grant term.
- Support a bottom-up approach to collaborative restoration leadership through a greater focus on investment in state, local, and Tribal governments, communities, and those organizations that provide necessary technical assistance to those entities. Acknowledging that investing in locally led collaboration takes time to build trust, the capacity framework, and skillsets.
- Invest long-term grant funding on Tribal lands where there is no consistent source of base funding they can rely on for ecological restoration. Barriers and restrictions that prevent Tribal entities from accessing federal programs and funding available to state agencies for water and land restoration work from sustainable sources provided by the Pittman-Robertson Wildlife Restoration Act and Dingell-Johnson Sport Fish Restoration Act present a significant challenge to Tribal entities to sustain and scale efforts to maintain healthy wildlife habitat.
- Continue to invest in areas where public funding is particularly limited, including communications, innovation, and capacity building, particularly engagement, partnership, and collaboration.
- Prioritize funding for projects that include engagement, outreach, and partnership development.
- Prioritize funding for initiatives with multiple benefits - habitat, community, and climate resilience. Restoration initiatives, like connectivity conservation and a large landscape approach, that also provide ecosystem services, will have the most significant long-term impact for invested dollars.
- Incentivize landowners and non-profits to partner with federal and state agencies and Tribal governments on an allotment boundary approach to landscape stewardship versus public land boundaries to support critical connectivity across these lands and waters.
- Support new voices, including nonprofits working with local and State Soil and Water Conservation Districts and the National Association of Counties, as they focus on restoration, water use, and invasive species.

We recognize that many across the philanthropic community have already integrated some of these approaches in their grant-making strategies, and believe integrating or expanding these elements into funding strategies consistently will provide tangible benefits; however, the biggest opportunity and need for restoration funding is building a long-term reliable source at the scale needed for the work to maintain the healthy ecosystems needed to thrive and keep pace with growing pressure from climate change and the proliferation of environmental threats.

The need to restore our public and private lands will remain an essential part of conservation strategy if we strive to keep pace with the urgency driven by our growing biodiversity and climate challenges. We also know the need is massive and that investments today in building resilient landscapes and communities will save us from even greater funding needs in the future to address the impact if we do not expand our efforts to build resiliency now. There is little expectation that the level of federal investment in land restoration will continue in the incoming Trump Administration, so private philanthropy investment in land and water restoration will become paramount.

Several innovative funding initiatives in the land conservation and outdoor recreation space have successfully created consistently reliable and scaled funding sources. Below is a snapshot of a few of those models that have a track record of success and impact:

- **The Land and Water Conservation Fund (LWCF) was** created over 60 years ago to provide funding for maintaining recreation areas across the United States. Established in 1964 and made permanent in 2020, the LWCF invests earnings from offshore oil and gas leasing, contributing $900 million annually to local, state, and federal outdoor spaces for public use.

- **Wyoming Wildlife and Natural Resource Trust (WWNRT)** was created by the State Legislature to support projects that aim to improve and enhance the wildlife habitat and/or the natural resource heritage of Wyoming. The trust was initiated with a foundational contribution appropriated by the legislature of $200 million. This

remains the core of this permanent fund, though they occasionally seek supplemental appropriations and donations to add to it. Projects are funded by the interest earned on this permanent account and yield approximately $8 million annually in investments that support 80 new projects on average and sustain approximately 200 open non-profit and government projects around the state focused on the highest priority need, including terrestrial and aquatic invasive mitigation, wildlife migration crossings, conifer encroachment, wetland restoration, and conservation easements. The fund is governed by a citizen board and is streamlined to be administered by two full-time staff. Match is discretionary based on the ability of projects to secure other funds. The Trust staff frequently work with initiative leaders to identify federal and additional state funds to supplement these initiatives. The model has proven to be a highly cost-effective and self-sustaining approach to stewarding state natural resources and has become a model that other states have adopted, like New Mexico's initiative highlighted below.

- **The New Mexico Land of Enchantment Legacy Fund (LOE)** was created in 2023 with a $350 million appropriation from the state to protect and restore New Mexico's lands, water, wildlife, and cultural heritage. LOE was designed to address immediate needs and provide long-term sustainable resources through the bifurcation of the foundational funding into two pools, each receiving an initial investment of $50 million. The Land of Enchantment Legacy Fund (LELF) will begin supporting relevant state agencies and conservation projects in 2025, committing 25% of its budget annually to the Natural Resources, Agriculture, Environment, Economic Development, Cultural Affairs, and Game and Fish Departments. The second pool of funding, the Conservation Legacy Permanent Fund (CLPF), was invested to begin to accrue interest payments to replenish the LELF eventually, but with the initial base funding of $50 million for LELF to immediately disburse and $50 million into CLPF it was expected that those would not be needed until 2040 when they estimated the CLPF would have reached $150 million established baseline funding level required before distribution of the investment income begins. However, the legislature appropriated an additional $300 million in 2024, which has significantly accelerated the timeline of CLPF distributions to the disbursement pool. The timeline now potentially begins as early as 2026, with incremental growth each year in distributed funds.

Recommendation for Philanthropy: Building on some of the most impactful elements of these innovative funding models, philanthropic institutions pool funds to establish a National Resiliency Fund to support land and water restoration to bolster our resilience to catastrophic impacts of climate change and ensure funding support for ongoing restoration needs for generations to come. An economic study should be commissioned to determine the optimal size of the pool, and the fund should be structured to address both the urgent need and the longer-term imperative to sustain the healthy habitat essential to support our wildlife and communities. Suggested structural elements of The National Resiliency Fund include:

- An advisory council would be responsible for governance oversight, including members bringing diverse perspectives from local to national leaders and reflecting a "locally led nationally scaled" approach. This should include Indigenous and landowner representatives.
- One-third of the initiative funds could be immediately available for distribution to restoration projects, with the remaining two-thirds invested until accruing earned interest on the initial investment at the level where the fund becomes self-sustaining, and the distribution bucket can be replenished annually.
- To increase impact, projects that unlock federal and state funding would be prioritized, but some flexibility would be built in for community and landowner-led restoration work.
- State, local, and Tribal governments, non-profit and community groups, landowners, and permittees will be eligible for funding.

B. Driving Innovation and Science

Comprehensive Inventory of Critical Lands and Prioritization Tools

Prioritization is critical in conservation planning to ensure all involved can deliver the highest possible return for wildlife and people. Governments, nonprofits, local communities, and others must work together to create lasting health for the lands in the West.

We must first have a comprehensive understanding of the current condition of the lands that federal agencies are managing. As communities develop strategies to protect the natural places they depend on, they need access to scientific information about the public lands around them. We need science-based tools and data that tell us if we are succeeding in protecting biodiversity, given the threats to nature and communities.

There needs to be a landscape-scale and engaged partnership with a science- and data-driven process for identifying potential restoration priorities for federal and state lands. Each entity should use the same protocols to establish the criteria that help us evaluate and identify the most crucial landscapes for restoration. Tracking progress needs to happen in partnership between public and private entities, and a monitoring plan needs to exist. Every state has a State Wildlife Action Plan identifying species of greatest conservation need and outlining strategies to conserve wildlife and habitats. These must be integrated with regional and national plans to fully understand how to most effectively and efficiently target and commit public and private resources.

Recommendations for Philanthropy: Invest in local and national nonprofits that can work together to develop a comprehensive inventory of critical public lands and prioritization tools. This should be developed collaboratively between federal, state, and tribal land management agencies and partners. The comprehensive inventory would be available for use by agencies, county planning departments, non-profits and communities to drive shared priorities. The inventory will provide the starting point for comprehensive conservation planning and a shared decision-making tool for restoring public lands. Emphasizing the use of science and data, the inventory should have all existing tools and data in one location for public and private land managers to have access. Potential elements for inventory inclusion and related tools identified as a need include:

- A clearinghouse for existing protocols for evaluating potential restoration treatments and measures to ensure the durability of restoration investments that provide procedures for monitoring and reporting on treatment effectiveness and for making any adjustments in future investments. This might include ongoing measurement of community and wildlife health indicators, such as clean air, stable climate, adequate water, and calculating the number of species. Resilience and productivity exist when a healthy ecosystem has a wide variety of species and is less likely to be severely harmed by natural disasters and catastrophic weather events.
- An academic assessment of the co-benefits of restoration, including an analysis of data on ecological, climate, and biodiversity outcomes, as well as sociological, cultural, and economic impacts.
- A map of existing conservation collaborative efforts overlayed the BLM's 21 landscapes, and other large-scale restoration projects will demonstrate the benefits of landscape-scale management approaches and showcase diverse approaches to working with stakeholders to identify priority areas for conservation, restoration, and management.
- Geospatial tools for identifying restoration priorities that will define landscape prioritization tools in terms of inputs, outputs, and target prioritization objectives.
- A U.S. West-wide inventory of community-driven priorities for restoration work that engages communities in the process to help lift effective models for scaling and adaption and identify gaps where new opportunities

exist to include a risk/threat analysis with a GIS overlay that would include mapping priority federal landscapes for restoration based on biodiversity.

- An assessment of the cost of restoration work across varied landscapes.

Growing Native Seed Production

There is a growing and urgent shortage of native seed supplies in the U.S., and there is an expanding need for native seeds to restore natural habitats affected by wildfires, land management activities, and other disturbances. [xiv] In 2001, the Seeds of Success program was established in partnership with the Millennium Seed Bank Project (MSB) to collect and preserve seeds. In 2015, the National Seed Strategy was formalized, a collaboration between 17 federal agencies and nonprofit partners to upscale national seed supplies and assure that the "right seed can get to the right place at the right time." While these initiatives provide a strong foundation, they urgently need to accelerate their implementation to meet the growing demand.

Scientific research strongly supports the crucial role of native seeds in land restoration. It highlights that the utilization of native seeds more effectively adapts to the local environment, leading to better plant establishment, ecosystem resilience, and biodiversity compared to non-native species, making them essential for successful restoration. A recent National Academies of Sciences, Engineering, and Medicine report emphasizes the need for robust native seed supplies to achieve effective ecological restoration. Using locally sourced seed for restoration efforts is essential to ensure restoration success and build resiliency to these challenges.[xv]

> "There's no way around it, if we're going to restore the West at the pace and scale required to boost imperiled wildlife on the edge of extinction and buffer communities from the worst of climate change, we're going to need native seeds. There is currently a bottleneck around native grass nurseries." [xvi]
>
> **- Holly Bamford, Chief Conservation Officer**
> **National Fish and Wildlife Foundation**

The Department of Interior (DOI) has an initiative to address the urgent shortage of native seed and build a sustainable supply to restore healthy and resilient habitats. In 2024, the Department of the Interior announced the establishment of a National Interagency Seed and Restoration Center to support native seed needs and ecological restoration across its bureaus and in coordination with other departments. The Center will invest in the infrastructure, research, tools, and labor needed for ecosystem restoration and resilience. Part of the Center's charge is implementing the National Seed Strategy for rehabilitation and restoration, which calls for increasing the supply and availability of native seeds by investing in seed development, storage, distribution, and ecoregional coordination and engaging Tribal partnerships in this work.[xvii]

Philanthropy has the opportunity to strengthen federal efforts to address these challenges or to support alternative entities in leading this critical work if the new administration decides not to proceed with the plan. Public agencies that purchase native seed and private funding can assist suppliers by taking steps to reduce uncertainty, share risk, increase the predictability of purchases, and help suppliers obtain stock seed. Regional programs could meet each region's specific seed needs by developing a list of priority species and monitoring, collecting, and curating stock seeds.

Legislation was introduced in the 118th Congress to establish the National Interagency Seed and Restoration Center, sponsored by Representative Mike Quigley (D-IL) and Senator Mazie K Hirono (D-HI). The viability of this legislation likely depends on gaining bi-partisan support, as well as Members of Congress in the U.S. West who could champion it given the impact it could have in restoring Western landscapes. The Center would serve as the scientific, logistical, and support center for the country's restoration and seed needs, as well as support interagency native plant programs. Specifically, the Center would:

- Research the development and use of native plants and restoration of native plant communities.
- Provide leadership, education, and coordination for native seed and plant research, native seed development, storage, and distribution, and the use of native seed in ecological restoration.
- Coordinate a national network of ecoregional seed hubs, bringing together botanists, growers, agronomists, restoration specialists, and land managers in the public, Tribal, and private sectors to plan for and develop regionally researched-specific native seed supplies and promote science-based restoration.
- Coordinate the native seed supply chain and resources.
- Promote private sector partners, including rural farms.

Recommendation for Philanthropy: Support the rapid establishment of a National Interagency Seed and Restoration Center that adheres to accepted principles and practices and incorporates monitoring, tracking, and reporting. There are several science-based entities and non-profits that could help coordinate public and private partners in the formation of the center, including but not limited to the National Fish and Wildlife Foundation or the Foundation for Public Lands, which might be well placed to support this effort. If Congress fails to pass legislation to establish a Native Seed and Restoration Center and the Trump Administration chooses not to continue the Biden Administration's investment in the nascent center, private philanthropy should assess what role they can take on to make this happen. The Seed Center is needed and will expand the availability and supply of native seeds for large-scale restoration on federal lands. Restoration of native ecosystems will make them more resilient to the worsening impacts of the climate crisis and support native biodiversity.

Philanthropic institutions supporting the Center should help establish clear guidelines for BLM and other agencies around native seed use, consistent with the Global Biodiversity Standard by the Botanic Gardens Conservation International (BGCI) and the Society for Ecological Restoration (SER) restoration principles and practices, including:

- Support advocacy efforts to establish a national interagency native seed and restoration center, continue and fund the implementation of the national seed strategy, and promote ecological restoration best practices across federal land management agencies.
- Invest in ecoregional native plant hubs by developing pilot programs, staffing, infrastructure, and risk-sharing.
- Explore opportunities for non-profits to partner with businesses to create a seed incubator program,
- Support research into elements of the native seed supply chain.
- Invest in exploring partnerships with universities and the benefits of creating economic opportunities for communities.
- Explore interest among Tribes in leading programs around native seed and what investment, including infrastructure, is needed to support this initiative.

C. Scaling Impact Through Collaboration

We know there is more significant impact and sustainability when stakeholders work together to enact a shared conservation vision, jointly tackling common priorities and developing solutions. Land management plans benefit from input and commitment from all stakeholders and ensure that local needs are addressed. Local and Indigenous land managers bring invaluable long-term experience and a deep understanding of each landscape that fosters the

implementation of the most effective management practices, the early identification of risks, and the adaptability to respond quickly and agility to adjust when necessary.

Collaborative conservation is critical to addressing the complex challenges and environmental threats of climate change and biodiversity loss at the magnitude and pace required. Coordinated partnerships also support addressing the issue of landscape connectivity needed for optimal ecological function. However, there needs to be a shift in mindset, practice, and investment in capacity to increase engagement with stakeholders on the ground, build trust, elevate local leadership, and create effective partnerships that can contribute to significant growth in restoration impact. To be able to address the urgency of these challenges and "work at the speed of trust," public and private institutions will need to commit time and resources to be effective.

The recognition of the importance of a coordinated approach by federal, state, Tribal, non-profit, and individual landowners to land management across public and private lands has driven the proliferation and implementation of proven collaborative efforts that can serve as models to build on through scaling and adaptation, including:

- **The Network for Landscape Conservation (NLC)** NLC is a community of practice that connects people and ideas to advance landscape conservation. They connect people from across sectors, cultures, and geographies to share knowledge, collaborate and learn. They work with partners to develop tools and strategies to help people safeguard landscapes and work to advance best practices and policies for landscape conservation. The NLC's Catalyst Fund was developed with support from the William and Flora Hewlett and Doris Duke Foundations, who recognized an existing gap in this critical capacity-building area that was outside the scope of what government grant programs would support. This model should be expanded upon with larger grants available to accelerate the pace and practice of collaborative conservation and stewardship across the United States.

- **The Intermountain West Joint Venture (IMJV)** and other US Fish and Wildlife Service joint ventures have proven records of creating successful vehicles for joint multi-agency cooperation and collaborative planning and implementation by federal, state, and tribal agencies with non-profits on conservation and restoration work.

- **The USDA's Working Lands for Wildlife program** (WLFW) was designed to keep agricultural working lands profitable for rural communities, productively contributing to the nation's food supply and providing healthy habitats to meet the needs of wildlife that depend on them. Incentivizing voluntary engagement of landowners through financial and technical support, this program fosters an effective locally led land conservation program on which federal, state, tribal, and non-profit partners can build. WLWF has impacted more than twelve million acres, with 8,400 ranchers participating. In addition, the program has integrated cost-sharing positions between government agencies and non-profits to build capacity for land and water restoration, management, and conservation work. Pheasants Forever jointly invests in shared field staff positions supported by federal funding through the Farm Bill and non-profit dollars. These positions work with local Natural Resources Conservation Services (NRCS) staff and landowners to implement conservation practices.

- **The Forest Service's Community Navigator program** works with partner organizations to identify resources that assist in meeting community priorities, create relationships with Forest Service staff and programs, and provide support that opens access to existing funding and technical assistance opportunities. This effort supports the ability of private forest landowners, communities, and organizations to carry out climate mitigation and forest resilience practices, reduce wildfire risk, provide timber and other forest products, supply clean and abundant drinking water, increase recreation opportunities, and restore habitat for fish and wildlife.

- **The Ranchers Stewardship Alliance (RSA**) is a rancher-led, grassroots organization that supports multi-generational and beginning ranchers to build collaborative, trusting relationships and community-based solutions as they steward healthy working landscapes and encourage vibrant rural communities throughout the

Northern Great Plains. RSA provides educational opportunities, funding, and forums for joint problem-solving to land management challenges.

- **The Interagency Fish Passage Task Force** led by the U.S. Fish and Wildlife Service has created a transformational impact across watersheds nationwide through better coordination of funding and approaches across federal agencies, creation of knowledge-sharing opportunities, capacity building, and catalyzing new partnerships to support fish passage programs. Although initially motivated with the immediate goal of distributing an unprecedented investment from the 2021 Bipartisan Infrastructure Law in a coordinated way for greater impact, one of the important outcomes is the creation of an Interagency Fish Passage Task Force composed of thirteen federal agencies that continue to meet regularly. The Task Force identified large-scale, transformational river restoration projects through a shared vision and increased efficiency, which leads to better outcomes for people and nature. Another enduring benefit of this task force has been the creation of the Interagency Fish Passage Portal to share funding information and resources in a centralized location publicly. This has increased accessibility and reduced the burden on landowners, cities, Tribes, and more when seeking public funding opportunities.

- **The National Forest Foundation's Collaborative Capacity Program for Forests and Communities,** funded by the U.S. Forest Service, supports efforts to find shared solutions and capacity to complex challenges in forest management that will lead to a greater impact on climate resiliency, including reducing biodiversity loss and catastrophic wildfires. This also led to the building of Conservation Connect, a network of Forest Service staff and community-based forest managers to foster collaborative stewardship by building peer-to-peer and community-to-agency connections, exchanging knowledge, tools, and best practices, identifying everyday challenges, and moving to team problem-solving. In addition, it promotes the development of new understandings around the ecological, social, and economic objectives of collaborative land stewardship and builds the organizational capacity of cooperative groups.

Recommendations for Philanthropy: Long-term philanthropic support is essential to support areas where federal grants are limited, including capacity-building and operational support for nonprofits to enable community engagement in conservation planning and community-driven initiatives. This is also a time when philanthropy should consider setting up a rapid response grantmaking process that supports the needs they are hearing from grantees and potential grantees to continue this work of place-based land and water restoration from gaps created by substantially reduced federal support. Now is the time to increase grantmaking to ensure we sustain gains and continue investing in solutions to meet the pace and size of our challenges. Sustain and grow investment in approaches that are working:

- Building on effective funder collaboratives, like the Biodiversity Funders Group and Native Americans in Philanthropy, convene a forum for national philanthropic institutions and community foundations, with the potential of developing a sustained entity for collaboration on climate resilience priorities such as restoration between funders with local place-based perspectives and those with a more regional and national orientation. Consider adding a complementary advisory group component with representatives from non-profit organizations for co-learning and co-creation opportunities.
- Provide support to create a "Community Navigator" program and resources at the Bureau of Land Management. Partner with community-based organizations working directly with intended communities to provide support and guidance to access programs, services, and potential funding opportunities. The program would help build capacity for BLM employees to assist the intended communities in navigating the complex array of available programs and requirements. Develop, with federal agencies doing similar work, a federal community of practice network that facilitates information sharing.
- Host a summit for federal agency staff, Tribes, and nonprofits in partnership with landowner organizations to highlight and develop recommendations on the most effective approaches and vehicles (tax breaks, insurance

programs, grants, easements, community outreach) to incentivize expanded voluntary landowner participation in land restoration programs and increase public accessibility to public programs.

- Support the creation of a resilience connect program for community-based groups involved in collaborative stewardship on the Bureau of Land Management's lands. Like the Conservation Connect Forest Service program, the design of this program should be developed by an advisory committee with a broad range of perspectives and experience, including those involved with rural capacity building and collaborative conservation, Tribal co-stewardship, outdoor recreation, and equitable access. The Foundation for Public Lands could be an entity positioned to house and coordinate this effort if they have the capacity.

III. Building an Enduring Public Support for Land Restoration

Communication that catalyzes and builds support and partnerships of diverse stakeholders will be critical in scaling and sustaining public and private resources to restore healthy habitats, protect wildlife, and fortify resilient communities. Strengthening and growing a public constituency that will support these initiatives is also needed. Strategic storytelling is necessary to leverage and grow positive public opinion about the restoration of public and private lands and waters and the active engagement of local officials and community members. Activating the right voices and validators best positioned to inform and inspire key decision-makers and audiences will be important to sustaining adequate levels of investment, durable policy solutions, and on-the-ground conservation outcomes.

A. Highlighting Public Opinion

In this fractured political climate, data suggests that conserving public lands is an issue that can unify public support across the political spectrum. Still, it hasn't yet translated into galvanizing action to influence and sustain public priorities and funding. A 2023 Pew Research Center study found that over sixty percent of U.S. adults say the federal government is doing too little to protect the quality of national waterways. Fifty-five percent believe too little is being done to protect animals and their habitats.[xviii] Colorado College's 14th annual Conservation in the West survey found that 67% of the voters polled in eight Mountain Western states were concerned about the future of land, water, and wildlife.[xix] This yearly poll highlighted the overwhelming sentiment supporting land conservation from Western state inhabitants who live in closer proximity to the public lands that are the focus of these restoration activities. However, there is also promising data showing that a broader constituency that spans the whole of the United States connects to our outdoor spaces nationwide. An estimated record 175.8 million outdoor recreation participants represent over 57.3% of the U.S. population.[xx] There is a largely untapped opportunity to activate those who enjoy public lands for fishing, hiking, hunting, and recreational endeavors in support of sustaining these spaces and harnessing this public sentiment to build an influential and durable constituency supporting activities that press for policies and funding that will continue to maintain and grow support for robust management of our natural spaces. These places are recognized as essential for both people and wildlife to thrive and necessary to maintain recreational opportunities. Mobilizing that support will also necessitate doing so strategically to mitigate some of the challenges expanding land use for recreation creates for wildlife and healthy habitats.

B. Amplifying Compelling Messengers and Messages that Resonate

Outreach conducted for this report also highlighted the importance of robust stakeholder engagement and strategic communications to mobilize public support and, just as importantly, to address opposing narratives. Landholders, leaseholders, and Tribal nations in the West often mistrust the efforts connected to the federal government, which has been instilled through generations. Efforts to build trust will require an intentional and sustained engagement strategy of local stakeholders early and often around the issues that impact them and transitioning from a top-down approach to more of a locally led, nationally scaled paradigm. It requires amplifying more local voices best positioned for successful engagement efforts, from state, Tribal, and local leaders to groups that continually work in these local

communities and with landholders and those on the ground who have benefited from public land and investments in restoration projects.

Messaging needs to recognize that local ranchers and land managers, including Tribal land managers, have extraordinary generational knowledge and can provide critical perspectives and insights if they are engaged in helping to identify solutions for the challenges faced on all our Western landscapes. Those whose livelihoods and way of life are tied to these acres have a deep understanding of how to manage the ecological health of these landscapes effectively and can be turned off by characterizations that imply that they have damaged the land paired with the perception that federal government regulations are imposing urban values from the East. Inclusion in the planning process and shifting the narrative from the government owning and controlling the land to public land agencies holding the land in trust for the public and future generations are important. Authentically engaging and partnering with landowners to collaboratively address the pervasive threats of water scarcity, cheatgrass, and wildfires that are of common concern to public and private land managers will help rebuild trust and champions amongst those whose validation can be essential in bringing other stakeholders along.

In addition, to focus on a collaborative problem-solving approach to the everyday challenges faced on Western lands, our interviews with rancher and landowner associations and non-profit groups doing on-the-ground work in the U.S. West and working with private landowners and permittees raised the following elements of effective messaging and compelling storytelling that can help activate critical support and inspire collaborative stewardship:

- Leading with the shared concerns identified by public and private land stewards, like combating drought, catastrophic wildfire, and the spread of invasives, when discussing land restoration, management practices, and projects.
- Narratives that show a clear understanding of the financial pressures and economic realities of the U.S. West and those who live there.
- Stories that spotlight outstanding and innovative stewardship by respected ranchers.
- Integrating science and data that supports land restoration and ongoing management approaches.

Recommendations for Philanthropy: Additional resources should be invested in growing a public constituency to support scaled and sustained investment in impactful land restoration. Investment should be directed toward those with the greatest potential to educate and activate key stakeholders in the U.S. West and who can serve as powerful validators. Regional, state, and local entities can bring policy solutions driven by those with the deepest understanding of the land, solutions, and stakeholders and bring a different level of credibility to efforts to engage, activate, and grow public support and policy solutions that can withstand shifts in leadership in this super-partisan and volatile political environment.

There is a need to identify opportunities to engage and amplify the leadership of entities like the Western Governors Association and conservation groups based entirely in the West. These representative voices are effective partners and message validators and are well-positioned to achieve broad-based political support for policy issues in the West and beyond. Tribal governments are also important stakeholders and key partners in these efforts and bring unique expertise, deep relationships, and influence with decision-makers across the political spectrum and at all levels.

The Foundation for Public Lands, established by Congress in 2017 and beginning operations in 2022, provides a largely unrealized opportunity to grow durable support for our public lands and restoration initiatives that will help sustain them as working lands that support our Western communities and national food supply, healthy ecosystems that sustain our nation's wildlife, and recreation areas to be enjoyed for generations. This nascent official charitable partner for the Bureau of Land Management is still unproven in this area and must exhibit proof of concept and their ability to bring significant and sustainable new resources to support public lands and waters. Still, similar to its counterpart, the National Park Foundation, it has the potential to play a role in building an influential constituency and additional

financial support for BLM-managed lands. The Foundation's “Lands to Love” Campaign is a start to that effort and aspires to build an enduring constituency that understands, values, and supports continued investment in our public lands. The Foundation presents a possible vehicle to help lead a collaborative communications strategy connecting place-based efforts and facilitating public-private partnerships.

IV. Conclusion

As expected, the early days of President Trump’s second term indicate a strong emphasis on energy dominance, shaping policies across various sectors, including the management of federally held lands and waters. However, ecological restoration offers a rare opportunity for bipartisan support as a conservation priority. It resonates particularly with conservative constituencies and influential leaders in key landscapes, who can help advance restoration efforts with this administration and the Republican-led Congress if mobilized.

The early days of the Trump Administration have also signaled reduced funding for federal land management agencies, state entities, and non-profits supporting restoration work. Yet, land and water restoration remain critical conservation strategies that should be resourced despite diminished federal funding. To sustain and expand restoration efforts essential for healthy landscapes, resilient communities, and wildlife, philanthropy must step up with scaled and sustained investments. With federal support substantially reduced, this moment presents a crucial opportunity for funders to act, leveraging resources, fostering collaboration, and securing long-term commitments to position restoration as a viable and politically effective climate adaptation strategy. Now is the time to ensure these landscapes are protected for future generations.

Exhibits

Appendix A: Overview of 21 BLM Restoration Landscapes[xxi]

The project partners identified below are with whom the Bureau of Land Management collaborates in identified Restoration Landscapes. Some entities have financial contracts or agreements with BLM to support this work. This is not a comprehensive list and does not reflect all partners and stakeholders the Bureau is working with on land restoration.

LANDSCAPE AREA	RESTORATION FOCUS
Alaska: Birch Creek and Fortymile Wild & Scenic Rivers	These landscapes in Eastern Interior Alaska contain nationally significant cultural, recreational, historical, archaeological, geological, and wildlife values that the BLM has been working to conserve for decades. Placer mining is part of the region's cultural heritage but has also left behind degraded streams, impaired water quality, and hazardous materials. Restoration investments, which contribute to a significant cross-agency initiative to restore salmon habitat in the Yukon, Kuskokwim, and Norton Sound region, will better monitor land and water conditions, improve water quality and aquatic habitat, and ensure safe access for recreation. These investments further the work of the Department of the Interior's Gravel to Gravel Keystone Initiative.
Federal funding: $5 Million *Acres:* 7,053,215 acres | 2,464,142 BLM acres *Partners Organizations:* • Salcha-Delta Soil and Water Conservation District • American Conservation Experience • Trout Unlimited • Associated of Village Council Presidents, Kuskokwim River Inter-Tribal Fish Commission, Yukon River Inter-Tribal Fish Commission, Kawerak Inc., Tanana Chiefs Conference, Eskimo Community, and Native Village of Eagle • Alaska Department of Fish and Game • Alaska Department of Environmental Conservation • Alaska Department of Environmental Conservation/ University of Alaska, Anchorage Center for Conservation Sciences (ACCS)	
Arizona: Yanawant	The Yanawant landscape includes lands directly north of the Grand Canyon, rich with diverse habitat, from desert scrub to ponderosa forests. Restoration investments will build a more resilient landscape by restoring habitat for threatened and endangered species, improving drought resilience and ecosystem health, and reducing fuel loads and wildfire risk by removing noxious and invasive species and eliminating encroaching conifers. Restoring native grasses will create cover and connectivity for wildlife and stabilize soils, helping to improve and sustain the watershed's overall function.
Federal funding: $5.59 million *Acres:* 3,040,446 acres | 1,592,087 BLM acres *Partner Organizations:*	

- Arizona State University
- Kaibab Band of Paiute Indians, Moapa Band of Paiute Indians, Las Vegas Paiute Tribe, the Hopi Tribe, Navajo Nation, and San Juan Southern Paiute
- Conservation Legacy
- Arizona Association of Conservation

Arizona: Sky Islands	Often rising more than 6,000 feet above the desert floor, Arizona's mountainous Sky Islands support levels of biodiversity rarely seen elsewhere in the West. This pocket of isolated mountains is home to a unique assemblage of over 30 federally listed species living in both desert and alpine ecosystems. The landscape, also known for its vast heritage and recreational opportunities, is under threat from unprecedented drought and catastrophic wildfire. Restoration investments will reduce fuel loads, improve groundwater management in the San Pedro River drainage, protect critical wildlife migration corridors, and support recovery of threatened and endangered wildlife. Investments in fencing will also help protect the critical desert riparian ecosystem of the San Pedro Riparian National Conservation Area.

Federal funding: $9.59 million
Acres: 3,986,671 acres | 657,994 BLM acres
Partner Organizations:
- Arizona Association of Conservation
- Arizona Department of Game and Fish
- Tohono O'odham Nation; Mescalero Apache Tribe, San Carlos Apache Tribe, White Mountain Apache Tribe, Pascua Yaqui Nation, and Hopi Tribe
- Arizona Association of Conservation

California: Cosumnes Watershed	The Consumnes is the last free-flowing river from the Sierra Nevada Mountains into California's Great Central Valley, where it joins with the Mokelumne to form a matrix of wetlands, riparian forest, and natural floodplains, with upland oak woodlands, savannas, and vernal pools. These lands form critical habitat for migrating and wintering birds, essential waterways for native fish, and important social and economic benefits for Valley communities. The BLM manages crucial acreage in the Cosumnes River Preserve in cooperation with 11 partner organizations. It is home to the state's largest remaining riparian oak forest. Restoration investments will improve hydrologic function and landscape connectivity, control invasive species, and reduce hazardous fuels, ensuring this remarkable preserve is protected for future generations.

Federal funding: $7.6 million
Acres: 1,416,876 acres | 29,914 BLM acres
Partner Organizations:
- Sacramento County Parks and Recreation
- Ducks Unlimited
- Freshwater Trust
- California Department of Water Resources
- Sacramento Valley Conservancy

- Wilton Rancheria
- California Department of Fish and Wildlife
- Gault Joint Union Elementary School
- The Nature Conservancy
- American Conservation Experience
- Xerces Society

Colorado: North Park	North Park is one of the best places to visit and experience core sagebrush habitat and one of the largest wetland complexes in Colorado. At high elevations, these sagebrush communities are more resilient to impacts from a changing climate. The landscape boasts critical winter range and migration corridors for big game and numerous culturally significant sites, including the Northern Ute Trail. Investment in aquatic, riparian, wetland and terrestrial habitat improvements, fuels reduction and invasive species management will preserve historic and cultural sites and enhance recreational opportunities.

Federal funding: $5 million
Acres: 911,664 acres | 169,708 BLM acres
Partner Organizations:

- Ducks Unlimited
- Wildlands Restoration Volunteers
- Colorado Open Lands
- Colorado Youth Corps Association

Colorado: San Luis Valley	Ecologically critical wetlands and riparian areas provide habitat for numerous birds and federally listed species, and the area is sacred to a number of Tribes. Investments in this landscape provide a unique opportunity for the BLM to conserve and restore wildlife habitat and fisheries, improve hunting and fishing opportunities, and foster climate resilience while benefiting historically underserved, disproportionately impacted communities. Projects will protect cultural and historic resources, expand recreational uses, and manage fuels and water resources at the headwaters of one of America's great rivers, the Rio Grande.

Federal funding: $6.1 million
Acres: 2,637,529 acres | 323,053 BLM acres
Partner Organizations:

- Colorado Parks and Wildlife
- Ducks Unlimited
- San Luis Valley Water Conservancy
- Rocky Mountain Bird Observatory
- Trout Unlimited
- Colorado Youth Corps Association
- Volunteers for Outdoor Colorado
- San Luis Valley Great Outdoors

Idaho: East Rivers and Plains	The South Fork, Henry's Fork, Main Stem of the Snake River, and surrounding uplands are home to diverse native vegetation, from resilient mountain big sagebrush communities to large riparian cottonwood galleries. The BLM has a long history of working with private landowners in this area to protect valuable habitat and resources through conservation easements and acquisition of private lands. Restoring native plant communities on public land will build on that success, providing habitat for threatened and special status species such as monarch butterflies, greater sage-grouse, and the western yellow-billed cuckoo, connectivity for big game, and enhanced recreation opportunities. Seeking opportunities to collaborate with the Shoshone-Bannock Tribe may restore additional riparian areas on public lands and the Fort Hall Indian Reservation.
Federal funding: $7.85 million *Acres:* 3,944,590 acres | 291,092 BLM acres *Partner Organizations:* • The Student Conservation Association • Shoshone-Bannock Tribes • Trout Unlimited • Pheasants Forever • American Conservation Experience	
Idaho: Snake River Plain	The Snake River plain of southwest Idaho is a diverse, arid landscape in the most populous part of the state. Greater sage-grouse, the highest concentration of breeding raptors in North America, important winter range for mule deer, elk and antelope, and critical habitat for the threatened slickspot peppergrass are all at risk from the effects of a changing climate and increasing urbanization. Repeated cycles of fire and invasive annual grasses threaten the unique assemblage of plants and wildlife and pose a great risk to the human communities that live there. Restoring native grasses, perennial forbs, sagebrush, and other shrubs is critical to the health of the region. The BLM will also work to expand fuel breaks, aiming to protect these investments in restoration.
Federal funding: $10 million *Acres:* 5,498,581 acres | 2,599,905 BLM acres *Partner Organizations:* • Pheasants Forever • Shoshone Paiute Tribes • University of Idaho • Birds of Prey Partnership • The Nature Conservancy • Idaho Department of Fish and Game • US Forest Service	
Idaho: Upper Salmon River	This is Idaho's core cold water refugia, where the BLM manages over 3,000 miles of streams that connect headwaters to river corridors. These aquatic systems are critical habitat for salmon, steelhead and bull trout. Lynx, wolverine, grizzly bear

	and greater sage-grouse inhabit the uplands. The ecological services these lands provide are central to the health and well-being of local communities and Tribal partners. Projects will replace culverts to improve stream connectivity, restore riparian habitat, treat invasive annual grasses, reduce fuels, increase the diversity of grasses and forbs, and enhance the health and resiliency of whitebark pine stands. Improving aquatic connectivity, water-saving practices, and upgrading water conveyance systems will benefit all – residents, recreators, fish, and wildlife.
Federal funding: $9.1 million *Acres:* 4,056,461 acres | 1,034,116 BLM acres *Partner Organizations:* • Trout Unlimited • University of Idaho • The Nature Conservancy • Student Conservation Association	
Montana: Blackfoot-Clark Fork	Forest watersheds, lands with associated treaty rights and aboriginal connections, and places for outdoor recreation come together where two storied rivers merge. Big game, grizzly bears, Canada lynx and bull trout habitat have felt effects of past industrial logging and the growing pressures of climate change. Restoration here, in young to medium-age forests, decommissioning legacy roads, and repairing perennial streams will put people to work creating healthy forestland and wildlife habitat on the edge of one of the state's largest cities, and ensure that the Blackfoot's tributaries deliver clear, cold water to one of the state's most beloved rivers.
Federal funding: $9.54 million *Acres:* 2,643,875 acres | 164,904 BLM acres *Partner Organizations:* • Confederated Salish and Kootenai Tribes • Clark Fork Coalition • Big Blackfoot Chapter of Trout • The Blackfoot Challenge • University of Montana • The Nature Conservancy • Powell County • Montana Conservation Corps • Montana Department of Natural Resources and Conservation	
Montana: The Hi-line Sage Brush Anchor	Some of the largest intact grasslands left in North America support numerous at-risk bird species and hold priority habitat for greater sage-grouse and critical winter and migration habitat for elk, deer, and pronghorn. The shortgrass prairie of north central Montana is an extremely popular destination for hunting, fishing, and bird watching. As drought continues, restoration investments will improve mesic and woody-draw habitats, increase native plant diversity, and remove encroaching conifers and anthropogenic features that threaten sage-grouse survival.

Federal funding: $6.76 million *Acres:* 2,558,386 acres | 1,176,321 BLM acres *Partner Organizations:* • Montana Department of Natural Resources and Conservation • Rancher Stewardship Alliance • The Nature Conservancy • Winnett ACES • Montana Grassland Partnership • Intermountain West Joint Venture • Fort Belknap	
Montana: Missouri Headwaters	Bridging two of the West's iconic landscapes – the Greater Yellowstone and the Crown of the Continent – this area encompasses high-elevation mountain ranges, expansive sage-steppe, and large, productive valleys that serve as a stronghold for wildlife that have disappeared from much of their historic range. This unique ecosystem is home to grizzly bears, west slope cutthroat, Arctic grayling, pronghorn, greater sage-grouse, and whitebark pine. Sagebrush grasslands anchor ecological systems, and multi-generational family ranches intermixed with public land that support vital recreational economies. Investments in restoration today will ensure these systems support people and wildlife alike into the future.
Federal funding: $9.98 million *Acres:* 6,482,401 acres | 937,644 BLM acres *Partner Organizations:* • Shoshone Bannock Tribes • National Park Service • American Forests • Intermountain Joint Venture • Heart of Rockies • The Nature Conservancy • SW Montana Sagebrush Partnership • Montana Conservation Corps • Youth Employment Program • Big Hole Watershed Committee • County of Beaverhead • National Wildlife Federation	
New Mexico: Lower Pecos Restoration	Investments here will help the BLM build on nearly 20 years of experience restoring the Pecos River drainage. Landscape-scale treatments protect fragile soils, increase native grasses, reverse fragmentation, improve water filtration and groundwater recharge, reduce sediment loads in the Pecos and its tributaries, and restore habitat for a multitude of species – pronghorn, lesser prairie chicken, bluntnose shiner, gambusia, aplomado falcon, Pecos sunflower, Noel's amphipod, wild buckwheat, Texas hornshell mussel, Kuenzler's hedgehog cactus and dunes sagebrush lizard. Restoring the landscape will enhance free public land recreation

	and hunting opportunities for rural communities in southeast New Mexico and west Texas.
Federal funding: $7.6 million *Acres:* 7,544,640 acres | 2,289,912 BLM acres *Partner Organizations:* • National Fish and Wildlife Foundation • New Mexico Game and Fish • Playa Lakes Joint Venture • Carlsbad Soil and Water Conservation	
Nevada: Humboldt/O'Neil Basin	Investment in partnerships has revealed the value and potential of this landscape to support people and nature. The presence of perennial water favors the threatened Lahontan cutthroat trout and supports critical habitat and movement corridors for big game. Upland sage-steppe hosts the highest densities of breeding sage-grouse, which share habitat with pygmy rabbits and other sagebrush-obligate species. Restoration investment will build on and continue the success of collaborative efforts that have taken root in this landscape.
Federal funding: $6 million *Acres:* 3,808,545 acres | 2,134,931 BLM acres *Partner Organizations:* • Nevada Department of Wildlife	
Nevada: Montana Mountains	In northwest Nevada, fire and drought exacerbated by climate change threaten the landscape. Public lands in the Montana Mountains surround and provide access to the Sheldon National Wildlife Refuge, an oasis in this high desert. A core sage-steppe habitat in Nevada, this landscape is home to antelope, mule deer, greater sage-grouse, pygmy rabbit, and other species that rely on sagebrush. Here, aquatic restoration and protection go a long way, as life is dependent on the area's many perennial springs. Restored riparian areas – bands of green in the desert – will be key to the future of this critical ecosystem.
Federal funding: $6 million *Acres:* 4,300,448 acres | 3,682,910 BLM acres *Partner Organizations:* • Nevada Department of Wildlife	
Oregon: Southwest Oregon	Like many forest watersheds, the timberland ecosystems of southwest Oregon have been greatly simplified and stream channels degraded over time, with fish and other aquatic life declining as a result. Restoration here will focus on the threatened Oregon Coast coho salmon, using aquatic and upland restoration projects that also support the recovery of other fish, amphibians, birds and plants. Projects will build resilience of the wildland-urban interface forest.

Federal funding: $5 million *Acres:* 6,319,390 acres | 1,400,061 BLM acres *Partner Organizations:* • Oregon Watershed Enhancement Board • Smith River Watershed Council • Northwest Youth Corps	
Oregon: Southwest Oregon Sagebrush	Conservation of habitat for greater sage-grouse is the priority for this landscape. Planting sagebrush, treating invasive or encroaching vegetation, promoting growth of native vegetation, and creating fuel breaks in uplands will restore habitat for hundreds of species. Restoration in the Warner sub-basin will focus on aquatic systems that the threatened Warner sucker and Lahontan cutthroat trout require. Restoring floodplains and riparian areas and improving instream habitat also enhance the value of the Warner wetlands as a migratory bird flyway.
Federal funding: $5 million *Acres:* 5,738,908 acres | 3,729,409 BLM acres *Partner Organizations:* • Tri Corner Collaborative • Burns Paiute Tribe • Northwest Youth Corps • High Desert Partnership • American Conservation Experience • Northwest Youth Corps	
Utah: Upper Bear River	The waters of the Bear River and Bear Lake are the primary input for the Great Salt Lake, which is drying and shrinking at an alarming rate. Uplands are a key habitat for big game and the largest, most contiguous intact sagebrush/sage-grouse habitat in Utah. Riparian restoration and maintenance, planting and managing diverse native vegetation, improving stream crossings, and restoring habitat for greater sage-grouse, migratory birds, and big game will contribute to resilience across northern Utah. Innovative and collaborative systems for managing grazing in the Three Creeks area has laid the groundwork for ongoing conservation collaboration.
Federal funding: $9.6 million *Acres:* 1,285,621 acres | 404,916 BLM acres *Partner Organizations:* • State of Utah Division of Wildlife • Utah Conservation Corps • Working Lands Conservation • Rich County • Colorado Natural Heritage Program • Trout Unlimited • Grazing Improvement Program State of Utah	

Utah: Color Country Converging	Stretches of the Mojave Desert, Central Basin, and Range, and the Colorado Plateau – each immense ecoregions that help define the West – converge in this landscape, with many plants and wildlife at the edges of their ranges. Plants exist here that are found nowhere else on earth. The scenery and experience invite outdoor adventures, and communities in this part of the state have grown significantly. The BLM, in turn, is investing in recreational services and restoration projects that increase water availability, address habitat fragmentation, and restore riparian systems. In addition, work will restore greater sage grouse habitat at the southernmost edge of its range.

Federal funding: $9.73 million
Acres: 3,472,199 acres | 1,448,298 BLM acres
Partner Organizations:

- Virgin River Program
- Intermountain Bicycling Association to Color County
- State of Utah Division of Wildlife
- Washington County
- Southern Utah University
- Iron County
- American Conservation Experience
- International Mountain Bicycling

Wyoming: LaBarge	Conservation success in this landscape rests on significant collaboration and cross-fence-line partnerships. Here, people are working together to manage for wildlife habitat and migration corridors and conserving and restoring priority habitat for the greater sage-grouse. BLM investment will reinforce these partnerships and work to remove invasive species, control erosion, and protect water sources.

Federal funding: $10 million
Acres: 2,685,208 acres | 1,003,882 BLM acres
Partner Organizations:

- Northern Arapaho Tribe
- American Conservation Experience
- Montana Conservation Corps
- Rocky Mountain Youth Corps
- American Conservation Experience
- Sublette County Conservation District

Wyoming: Muddy Creek	Muddy Creek, an important tributary of the Little Snake River, supports a rare community of native fish – Colorado River cutthroat, bluehead and flannelmouth suckers and roundtail chub. Flanked by important winter range and migratory corridors to the east, the landscape also holds core sagebrush habitat. Restoration investments will include fuel reduction, riparian and wetland enhancement, fence conversion, and erosion control, all aimed at restoring natural ecological function in the headwaters of the Colorado River basin.

Federal funding: $10 million
Acres: 644,311 acres | 440,015 BLM acres
Partner Organizations:

- Trout Unlimited
- US Geological Survey
- Little Snake River Conservation District
- Wyoming Game and Fish Department
- Saratoga-Encampment-Rawlins Conservation District

Appendix B: Project Outreach

Affiliation	Interviewee/Title
Back Country Hunters and Anglers	Patrick Berry, Chief of Executive Officer
	Kaden McArthur, Government Relations Manager
	Trey Curtiss, Manager Strategic Partnerships and Conservation Programs
Bureau of Land Management	Jonathon Gale, Program Executive for Intergovernmental and External Affairs, Western Office
	Tomer Hasson, Senior Policy Advisor
	Kit Muller, Former National Landscape Initiatives Coordinator
Center for Large Landscape Restoration	Deborah Davidson, Chief Strategy Officer
Doris Duke Foundation	Sacha Spector, Program Director for the Environment
Department of the Interior	Lynn Scarlett, Environmental Policy Expert and Analyst/Former US Deputy Secretary of the Interior
	Rachel Brown, Senior Advisor to the Assistant Secretary, Policy, Management, and Budget
Defenders of Wildlife	Vera Smith, Senior Federal Lands Policy Analyst
Edgerton Foundation/Biodiversity Funders Group	David Secord, Conservation Advisor/Board Member
Foundation for Public Lands	I Ling Thompson, Chief Executive Officer
Greater Yellowstone Coalition	Craig Benjamin, Chief Conservation Officer
The William and Flora Hewlett Foundation	Andrea Keller Helsel, Program Officer in Environment
Margaret A. Cargill Philanthropies	Shelley Shreffler, Program Officer, Environment
Mule Deer Foundation	Seve Belinda, Chief Conservation Officer
Native American Fish and Wildlife Society	Julie Thorstenson, Executive Director
National Fish and Wildlife Foundation	Holly Bamford, Chief Conservation Officer
National Wildlife Federation	Davis Willms, Senior Director of Western Wildlife and Conservation
Natural Resources Law Center, University of Colorado School of Law	Mark Squillace, Professor of Law and Director
The Nature Conservancy	Brian Martin, Grassland Conservation Director
Network for Landscape Conservation	Jon Peterson, Director
	Ernest Cook, Senior Advisor
Rocky Mountain Elk Foundation	Blake Henning, Chief Conservation Officer
Theodore Roosevelt Conservation Partnership	Christy Plumer, Chief Conservation Officer
Trout Unlimited	Kira Finkler, Idaho State Director
	Aaron Penvose, Idaho Restoration Director

U.S. Fish and Wildlife Service	Siva Sundaresan, Deputy Director
	Tim Purinton, Senior Advisor to the Deputy Director
University of California, College of Law/*Our Common Ground: A History of American's Public Lands*	John Leshy, Professor Emeritus University of California, College of the Law/Author
Walton Family Foundation	Moira McDonald, Environmental Program Director
Western Landowners Alliance	Lesli Allison, Chief Executive Officer
Wyoming Wildlife and Natural Resource Trust	Bob Bud, Executive Director
Yurok Tribe	Michael Belchik, Senior Fisheries Biologist

Who We Are

Thunderbird Strategies specializes in empowering mission-driven organizations and philanthropic institutions to maximize their impact and help build lasting success. We fearlessly navigate through complexity to tackle challenges head-on with innovative and actionable solutions. We collaborate closely with you to design bold blueprints for success, guiding you toward achieving your strategic priorities. From comprehensive organizational assessments to strategy development and alliance building, we help you align your resources and pave the way for growth.

What We Do

We support organizations and philanthropic institutions through strategy design, alliance building and outreach, organizational assessment, resource alignment, and growth planning. Crafting tailored strategic frameworks for clients to achieve their priority goals and advance their mission through in-depth issue research, landscape analysis, and stakeholder engagement. Facilitating strategic partnerships and outreach efforts that expand your network and enhance your organization's reach, results, and impact. Evaluating your organization's strengths, areas of opportunity, and resources to develop a clear, actionable plan for sustainable growth and success.

About Us

Suzanne Dixon has 25 years of experience as a nonprofit executive leader in conservation. She has worked extensively on public land stewardship policy and has excelled at coalition-building, federal advocacy, individual-donor fundraising, and public communications. Before co-founding Thunderbird Strategies, she served as Senior Vice President at the National Audubon Society, where she co-led the unification and transformation of Audubon's Center Network from a nature center model into conservation action centers that inspire action and build local community partnerships. Previous leadership positions included President and CEO of the Appalachian Trail Conservancy, and senior leadership roles with the National Parks Conservation Association.
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Amy Sobel has over 25 years of executive leadership experience in international non-profit organizations, domestic political organizations, the Executive and Legislative branches of the U.S. Government, and educational institutions. Amy brings expertise in setting strategic vision, developing effective implementation plans, and building partnerships. She has led policy initiatives that have successfully advanced Executive Branch action and legislative victories throughout her career. Amy most recently served as Senior Vice President at the National Audubon Society, leading national field operations in strategic conservation and advocacy goals and overseeing implementation plans nationwide. Amy also brings experience from senior leadership roles at Human Rights First and the Women's Campaign and government service at the U.S. Department of State and on Capitol Hill earlier in her career.
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