

All Projects Received in the Fall 2021 OCRF Grant Round (deadline October 22, 2021)

Project #	Lead Organization	Project Title	Funding Amount Requested
4	Oregon Boating Foundation	Youth Programs & Kayak Tours	\$12,250.00
5	Oregon Department of Fish and Wildlife - Klamath District Office	Continuing the Upper Klamath Basin Juvenile Chinook Salmon Release Study	\$20,000.00
6	Sandy River Watershed Council	Sandy River Delta Rare Turtle Surveys & Conservation	\$ 6,000.00
7	Yamhill Carlton High Scholl	2021 - YC Trap Team	\$ 2,500.00
8	The Klamath Tribes Aquatics Department	Habitat Restoration for Beaver Reintroduction in the Klamath Marsh National Wildlife Refuge	\$20,000.00
9	Oregon Department Fish and Wildlife	Northwestern Pond Turtle (NWPT) Life History and Habitat Study in Mosier, OR	\$20,000.00
10	Oregon Wildlife Foundation	Southern Oregon Wildlife Crossings Mitigation and Alternatives Analysis	\$20,000.00
11	Oregon Cooperative Fish and Wildlife Research Unit	Assessment of native fish population status and species distribution in Goose Lake Valley	\$19,807.00
12	Cascadia Wild	Wolverine Tracking Project: Monitoring rare carnivores on the Mt Hood National Forest	\$10,000.00
13	Rogue Valley Mountain Bike Association	Bull Gap Jump Line	\$20,000.00
14	Oregon Hunters Association	Restoring Hope & Habitat	\$20,000.00
15	Oregon Wildlife Foundation	Employing community science and photography to study the diets of tufted puffins and other at-risk coastal birds at Haystack Rock, Oregon	\$20,000.00
16	Oregon State University	New Monitoring Technique for Yellow Rail in East Cascades Ecoregion	\$19,997.00
17	United States Geological Survey (USGS)	Colonial waterbird predation on the salmonids and suckers of the Upper Klamath Basin	\$20,000.00
18	Oregon Hunters Association	"EFM Road Retirement in Ponderosa Pine Woodland and Terrestrial Animal Movement Habitats."	\$20,000.00
19	The Beaver Coalition	Update the Beaver Restoration Guidebook	\$19,880.00
20	Southern Oregon Land Conservancy	Pompadour Bluff Access Infrastructure Phase I	\$20,000.00
21	Source One Serenity	Boulder Creek Wilderness Trails Project	\$ 5,018.00
22	Klamath Bird Observatory	Using GPS technology to track Oregon Vesper Sparrows from multiple breeding populations throughout their full annual cycle	\$19,998.32

23	Oregon State University-Cascades	Adventurers for audible bats! A community-supported scientific survey of Oregon's rarest desert bats	\$18,542.00
24	Hike it Baby	Bring it Outside	\$20,000.00
25	Asian Pacific American Network of Oregon (APANO)	APANO's BIPOC Youth Nature Series 2021	\$20,000.00
26	Conservation InSight	Assessing Effects of Habitat Restoration on Grassland Birds at Powell Butte Nature Park	\$16,000.00
27	Wallowa Land Trust	East Moraine Community Forest Carrying Capacity Study	\$20,000.00
28	Salem Audubon Society	Motus Receiving Site at Ankeny National Wildlife Refuge	\$10,000.00
29	Powder Basin Watershed Council	Camp Creek Ecosystem Resiliency	\$20,000.00
30	Oswego Lake Watershed Council	Westlank Oak Woodland Restoration Project	\$20,000.00
31	North Coast Land Conservancy	Recreational management plan for the Rainforest Reserve and Arch Cape Forest	\$16,000.00
32	Deschutes Land Trust	Diverse Stakeholder Engagement for Skyline Forest	\$ 8,000.00
33	Sisters Ranger Station, Deschutes National Forest, US Forest Service	Restoring Fire to Remote, At-Risk, and Fire-Dependent Landscapes of Strategy Habitats and Strategy Species on the Sisters Ranger District	\$19,728.85
34	The Levi Lab at Oregon State University	Coastal Marten Genetics: Creating tools for population level monitoring and addressing information gaps	\$19,948.00
35	Institute for Applied Ecology	Evaluating the effectiveness of prairie restoration for Streaked Horned Lark in the Willamette Valley	\$18,643.00
36	The Trumpeter Swan Society	Oregon Trumpeter Swan Research and Education	\$20,000.00
37	People of Color Outdoors	People of Color Outdoors Guardians at Whitaker Ponds	\$15,010.00
38	Northwest Ecological Research Institute (NERI)	Harborton Frog Mortality Assessment	\$ 6,449.00
39	Wayfinding Academy	Wayfinding Ambassadors Program	\$20,000.00
40	Wallowa Resources	White-headed Woodpecker Monitoring, Demographics, and Space Use in Managed Forests of the Blue Mountains	\$10,709.00

Project Overview for All Projects Received in the Fall 2021 OCRF Grant Round (deadline October 22, 2021)

Fall 2021 RFP - Project #	Lead Organization	Project Title	Project Overview
4	Oregon Boating Foundation	Youth Programs & Kayak Tours	We provide youth kayaking and sailing programs aimed at getting young people out on the water safely. In addition, we also provide guided kayak tours in Yaquina Bay that allow anyone to experience and engage with the wildlife, natural history, and community of Newport, Oregon.
5	Oregon Department of Fish and Wildlife - Klamath District Office	Continuing the Upper Klamath Basin Juvenile Chinook Salmon Release Study	Four dams on the mainstem Klamath River are expected to be removed in 2023. Following Dam removal fish passage will be restored to the Upper Klamath Basin allowing Chinook Salmon to access hundreds of miles of habitat in Oregon that has been blocked for over 100 years. Historically, Chinook Salmon in the Oregon portion of the Klamath Basin were a significant part of the food source and culture of The Klamath Tribes in Oregon (TKT). ODFW is working with TKT to find the most appropriate strategy to repopulate historic Chinook Salmon habitat to harvestable levels following dam removal. Additionally, ODFW and The Klamath Tribes' Reintroduction Implementation Plan recommends that spring-run Chinook Salmon be actively reintroduced into tributaries above Upper Klamath Lake (UKL) due to the uncertainty of a source population immediately downstream of the dams that could naturally recolonize newly available habitat. The Reintroduction Implementation Plan recommends the use of juveniles from in-basin stocks to be released into suitable habitat above Upper Klamath Lake. A team of State (ODFW and CDFW), Federal (NMFS/NOAA), and Tribal (TKT) biologists intend to continue to learn how juvenile Chinook Salmon move through the Upper Klamath Basin during a hypothetical outmigration event. By releasing tagged fish in tributaries of UKL, the team hopes to use telemetry receivers in addition to existing (passive integrated transponder) PIT tag antenna arrays throughout the Basin to detect tagged individuals as they migrate out of the upper basin. The intent of the requested funding is to continue this study for another year building on what was learned after the initial release study, which will occur in the spring of 2022. Extending this study another year will increase the ability to make better decisions when it comes to reintroducing spring-run Chinook Salmon to the Upper Klamath Basin following dam removal.
6	Sandy River Watershed Council	Sandy River Delta Rare Turtle Surveys & Conservation	Conducting native turtle species surveys with Wisdom of the Elders Workforce crew to establish baseline population figures for existing western painted turtles and western pond turtles. Creating turtle basking habitat for western painted turtles and (in the future) western pond turtles. Monitoring and maintaining enhanced turtle habitat sites and monitoring of turtle populations.
7	Yamhill Carlton High Scholl	2021 - YC Trap Team	encouraging youth at Yamhill Carlton and the surrounding areas to get outside, and try something new

8	The Klamath Tribes Aquatics Department	Habitat Restoration for Beaver Reintroduction in the Klamath Marsh National Wildlife Refuge	<p>The Klamath Tribes, with technical assistance and coordination from the U.S. Fish and Wildlife Service, are encouraging North American Beaver (<i>Castor canadensis</i>) reintroduction in the southern portion of the Klamath Marsh National Wildlife Refuge (KMNWR). Since the decline of the beaver population in the KMNWR, the refuge's water retention, biodiversity, and overall ecological productivity has also declined. This project will aim at translocating nuisance beavers once the habitat has been restored to suitable conditions for beaver retention. Project actions will include beaver dam analog (BDA) installations along the outlet of the KMNWR, habitat restoration, beaver reintroduction, and continued monitoring. The project location currently consists of a homogeneous level landscape with little plant diversity or structural complexity, which is an artifact of many decades of intense cattle grazing. There are currently no woody materials within a mile of the project area that beavers would use to construct lodges or build water retention structures. Work is needed to reestablish native vegetation and restore the historic structural complexity of the ecosystem. In 2020, the first main stem BDA was installed by the Klamath Tribes on the Williamson River. Composed of local raw materials such as pine and willow trees and native soil. Local native willow cuttings will be collected, potted, and stored in a greenhouse. The live willows will then be tended to as needed and planted in the spring along the river at the site of the BDA. While the plants begin to establish, construction of an artificial beaver lodge will begin. The artificial lodge will consist of a variety of raw materials, such as aspens and willows, and be built prior to beaver reintroduction to ensure they have both a food and shelter source. The plant establishment and artificial lodge will be monitored thereafter, with the intention to introduce a family of beavers when habitat conditions are suitable.</p>
9	Oregon Department Fish and Wildlife	Northwestern Pond Turtle (NWPT) Life History and Habitat Study in Mosier, OR	<p>Northwestern pond turtle (<i>Actinemys marmorata</i>; NWPT) populations are in decline across their geographic range, however little information is known about the habitat requirements and basic life history needs for the species; therefore, our aim is to provide a baseline for which to build conservation strategies. This project expands upon an ongoing, multi-year northwestern pond turtle monitoring project in Mosier, OR to fill an existing data gap on areas of utilization across the terrestrial habitat and engage members of the community to help collect this data. This population is of particular interest since it is one of the farthest east in the Columbia Gorge and appears to be healthy both in terms of disease and number of individuals. Through our previous work marking turtles in their aquatic habitat in this area, we have been able to estimate population sizes and collect demographic data on NWPT within a network of ponds, primarily on private land. From past monitoring efforts, we know that NWPT are moving between the network of ponds we are surveying; however, we lack data on terrestrial habitats used for overwintering and nesting. This research will enable us to identify and conserve movement corridors between aquatic and terrestrial habitat and to gather basic life history information on the timing of nesting, overwintering, and movement between ponds. This information will help to inform and prioritize habitat enhancements on private land both locally and statewide. Additionally, because the pond sites exist primarily on private land, the current project has been particularly effective in engaging the Mosier community. We would like to continue this engagement by inviting students to help with our spring capture and marking events through formalized partnerships with local school districts. Understanding how NWPT use upland habitats</p>

			will help us capitalize on and provide funding opportunities for private landowners to enhance these areas.
10	Oregon Wildlife Foundation	Southern Oregon Wildlife Crossings Mitigation and Alternatives Analysis	This proposal is submitted by the Oregon Wildlife Foundation on behalf of the Southern Oregon Wildlife Crossings Coalition (SOWCC), a partnership of individuals and organizations dedicated to improving habitat connectivity and safe passage for wildlife across I-5 in the Klamath Mountains ecoregion. We propose to conduct a preferred mitigation alternative analysis of six wildlife crossing locations on I-5 between Ashland and the California border in southwestern Oregon. These sites were identified by the SOWCC as potential opportunities for wildlife passage in this stretch of I-5. I-5 bisects this region of rich biodiversity known to provide critical linkages among coastal mountains, the Siskiyou ecological province, the Cascade Range, and High Desert. Highly significant migratory fish and wildlife populations occur on both sides of the interstate, which is bordered by large areas of intact habitat on a mix of public and private lands. Among these public lands is the Cascade-Siskiyou National Monument, which was designated to protect the high levels of biodiversity in the region and is itself bisected by I-5. Various species and large populations of ungulates attempt to cross I-5 with mixed success or are deflected away from the highway. ODOT carcass-collection data show that this 14-mile stretch of interstate is an area of high wildlife-vehicle collision density creating a safety hazard for both motorists and wildlife. There are currently no dedicated wildlife crossings in this area. We have evaluated existing highway infrastructure for its potential to be improved for safe wildlife passage across I-5. The six sites we've identified represent the best known of these opportunities and include locations where minor retrofitting could benefit crossing success, as well as sites that would require substantial reconstruction or new structures. The SOWCC includes representatives from State and Federal agencies, local and statewide nonprofit conservation organizations.
11	Oregon Cooperative Fish and Wildlife Research Unit	Assessment of native fish population status and species distribution in Goose Lake Valley	The Goose Lake Valley is an endorheic desert valley that runs north-to-south on the border of Oregon and California. The Valley's watersheds drain into Goose Lake — a slightly alkaline system that has historically dried up during severe drought years, and drains into the Pit River to the south during very high-flow years. There are several endemic fish species that occupy Goose Lake and its adjacent rivers, wetlands, and riparian areas: the Goose Lake redband trout, Goose Lake lamprey, Goose Lake tui chub, and Goose Lake sucker. These endemic species coexist with a variety of native and non-native species. Goose Lake and its surrounding watersheds are highly sensitive to climate-mediated disturbances such as drought. An increased frequency of disturbance events in the region may limit the accessibility, quantity, and quality of available habitat for native fishes, while increasing range expansion of non-native fishes may put undue stress on vulnerable species. The goal of this project is to aid agency partners in conducting a population status assessment for at-risk native species in the Goose Lake ecosystem and to determine which areas are most at risk of declining populations due to disturbances such as drought and invasive species. This research is timely because consistent surveys have not been conducted in many of Oregon's high desert basins for more than a decade. Updated abundance and distribution estimates will inform state and federal managers as to the population status of at-risk native fish species, while an assessment of habitat quality will support actionable management outcomes.

12	Cascadia Wild	Wolverine Tracking Project: Monitoring rare carnivores on the Mt Hood National Forest	<p>The Wolverine Tracking Project is a community science project designed to address two critical needs: to conduct long-term monitoring of rare carnivores that supports and informs better wildlife conservation and management practices, and to connect Oregonians to the wildlife and wild places that make Oregon such a special place to live. The project uses volunteers to collect data on four Oregon Conservation Strategy species, Sierra Nevada red fox, wolves, wolverine, and fisher, as well as other carnivores, in the Mt Hood National Forest. Over the years, the project's success has been significant. Trail cameras documented gray wolves before the White River pack was officially established and provided the only recorded evidence of Sierra Nevada red fox in the area. Genetic samples have established the distribution of Sierra Nevada red fox in the northern Oregon Cascades. Through findings such as these, the project provides critical information to wildlife decision makers. As a community science initiative, the project also serves as a tool to educate people on the importance of wildlife in an ecosystem, the needs of wildlife, and the role of healthy ecosystems in supporting healthy human communities. Volunteers come from various backgrounds and help out in many different capacities. Pre-covid, 2019-20 saw 225 volunteers, over 4225 volunteer hours, 18 trail cameras, and 298 miles of track and scat surveys. We hope to be able to reach similar numbers this coming year. Long term volunteers serve as trip leaders, helping mentor new participants. Special workshops and trips will also be conducted for groups that don't usually have access to the outdoors, such as students of RISE (Refugee and Immigrant Student Empowerment) and Upward Bound (a program for students who are first in their family's history to go to college). With support from OCRF, Cascadia Wild would like in the coming year to make the program even more accessible to traditionally underserved communities.</p>
13	Rogue Valley Mountain Bike Association	Bull Gap Jump Line	<p>The Bull Gap Jump Line (BGJL) would convert one mile of rutted, rocky, run-off prone Forest Service road into a flowing, fun draw for mountain bikers of all abilities while also improving water quality in the Ashland Watershed. A mountain bike "jump line" is a smooth, rolling trail consisting of jumps, berms, whoops and other features. Many mountain bikers seek out these trails for their unique experience. The Ashland Watershed currently has just one such trail: Lizard, and it is by far the most popular trail in Southern Oregon. Adding another jump trail higher up on the mountain would provide mountain bikers an ideal flowing "bookend" experience. The Bull Gap Jump Line would serve a host of trail users, not just mountain bikers. In its current state, uphill hikers, joggers and equestrians must share the rock-strewn, blown out road with downhill mountain bikers. The conversion of the road into two, separated trails would provide uphill hikers, runners and equestrians a safe, enjoyable, ankle-friendly route while providing mountain bikers an improved downhill experience on a separate purpose-built trail. Just as important, this road to trail conversion would be an environmental win. By converting the current wide dirt road into two narrower, sustainable trails, runoff and sediment would be greatly reduced. The Bull Gap Jump line would also draw riders away from less sustainable, user-created trails for additional environmental benefit. The jump line build would be followed by the decommissioning of these unsanctioned "skid trails" to further reduce runoff.</p>

14	Oregon Hunters Association	Restoring Hope & Habitat	Oregon Hunters Association, Institute for Applied Ecology, and partners are working to restore sagebrush steppe habitat and bitterbrush communities recently impacted by wildfires in the Interstate Wildlife Management Unit (WMU). Over a half-million acres burned in the Interstate WMU in 2021, including the colossal 400,000+ acre Bootleg Fire. As a result, Oregon Conservation Strategy species and habitats are in need of habitat restoration. An extensive amount of two key plant species, antelope bitterbrush and mountain big sagebrush burned in these fires. Though they are a vital component of these ecosystems, these plants are tremendously slow to regenerate naturally. However, planting, and caging seedlings will considerably expedite their reestablishment. This project is set to provide Adults in Custody (AICs) at Warner Creek Correctional Facility (WCCF) sagebrush and bitterbrush seed in Fall 2021 and those seeds will be cleaned and sowed in Spring 2022. In Fall 2022, WCCF AICs along with a strong force of volunteers and OHA staff, will plant seedlings into previously burned areas for the benefit of wildlife. Together, we will plant a minimum combined total of 14,000 sagebrush and bitterbush plugs in critical areas identified by local wildlife biologists. This project will benefit the WCCF Sagebrush in Prison's Project to ensure its longevity and increase its capacity to assist in habitat restoration projects in Oregon. This unique program improves habitat for wildlife and offers horticulture training, ecological education, and nature connection to highly disadvantaged incarcerated AICs at WCCF. Training programs are some of the best ways to reduce recidivism and increase chances of employment upon release. This project offers AICs ongoing scientific curriculum, education lectures, workshops, and vocational training, while propagating thousands of native plants used to restore habitat.
15	Oregon Wildlife Foundation	Employing community science and photography to study the diets of tufted puffins and other at-risk coastal birds at Haystack Rock, Oregon	One of the major hurdles to increasing our ecological knowledge of coastal birds in Oregon is a lack of specific diet information. Understanding the dietary composition of these species has important management ramifications as marine bird populations are linked to the prey that they forage on, but quantifying diets of marine birds is challenging. To address this knowledge gap, we have developed a wide-ranging, inclusive and public-focused community science effort to improve our understanding of the diets of Oregon's tufted puffins (<i>Fratercula cirrhata</i>) and other coastal Oregon birds. Our project is designed to both address an ecological question and provide accessible information, education and engagement opportunities to a diverse group of Oregonians and visitors. To do this, we have built Birds with Fish which is a community science initiative aimed at engaging nature photographers to submit photographs of birds on the Oregon coast carrying fish, crabs or other marine invertebrates in their bills and talons. In 2020 the U.S. Fish and Wildlife Service decided not to list the tufted puffin under the protections of the Endangered Species Act. In doing so, there were a handful of data gaps identified. One of which was what are tufted puffins feeding their chicks during breeding season on the Oregon coast? This question inspired us to develop Birds with Fish. However, building a contextual understanding of what other coastal birds are eating can provide important hints to better interpret the diets of tufted puffins thus we extended this question to what are all coastal Oregon birds eating? By simultaneously engaging the nature photography community, building awareness about avian conservation in coastal communities, and collecting data on bird diets along the coast we can begin to better understand populations of marine birds along the Oregon coast.

16	Oregon State University	New Monitoring Technique for Yellow Rail in East Cascades Ecoregion	Yellow Rails are a species of conservation concern because of their specialized habitat needs within shallow wetland systems. In particular, the core of the western Yellow Rail population resides in Klamath Marsh National Wildlife Refuge and its persistence is reliant on consistent wetland conditions. Little is known about Yellow Rail ecology and distribution outside of the Klamath Marsh and a few surrounding wetlands. To reduce the uncertainty about the species future, considerable work is needed to survey similar wetland habitats across a broader landscape to determine site occupancy and abundance. Such efforts will create a reference point and accurate distribution map from which to begin to understand how global stressors maybe affecting Yellow Rail and its habitat in western North America. Our goal is to design a survey methodology using Automated Recording Units (ARUs) that could be deployed across a broader region in the near future.
17	United States Geological Survey (USGS)	Colonial waterbird predation on the salmonids and suckers of the Upper Klamath Basin	The recovery of endangered fish can be impaired by predation impactions. In the Klamath Basin, large nesting colonies of piscivorous waterbirds such as American white pelicans, Caspian terns, and double-crested cormorants are known to consume endangered Lost River and shortnose suckers, redband trout, bull trout, and could consume newly released Chinook salmon. Many of these fish are PIT tagged and the consumption of birds can be quantified by scanning bird colonies for these tags. We propose to continue a long-term dataset that was started in 2009, whereby colonies are scanned annually and the PIT tag information is archived. The information gathered will help researchers in future years to understand how avian predation changes in differing climactic (e.g., temperature and water levels) and biological regimes (e.g., new species) in the Klamath Basin.
18	Oregon Hunters Association	"EFM Road Retirement in Ponderosa Pine Woodland and Terrestrial Animal Movement Habitats."	The following proposal is submitted by Oregon Hunters Association (OHA). The project, titled "EFM Road Retirement in Ponderosa Pine Woodland and Terrestrial Animal Movement Habitats," goal is to enhance ponderosa pine forest within and adjacent to an Oregon Department of Fish and Wildlife (ODFW) identified high use mule deer migration corridor. The project is in the East Cascade ecoregion on Ecotrust Forest Management (EFM) land just Northwest of Fort Rock, and Northeast of Chemult, and lies between U.S. Hwy 97 and OR Route 31. The project proposal is to close 36 miles of roads by falling all tree species ≤10" DBH 25 feet from center line (50 feet total) into the roadbed along the entire length of the roads. The project will reduce road densities from 13.33 miles/sq mile to 4.5 miles/sq mile across the 2590-acres. The project will provide habitat connectivity between U.S. Hwy 97 and OR Route 31 within an ODFW identified high use mule deer migration corridor. By reducing road densities and discontinuing motorized traffic wildlife will benefit from increased habitat security. Reducing closed canopy conditions along roads will create 220 acres of forest openings within ponderosa pine forests improving health and fire resilience. Reduced canopy closure will increase quality and quantity of understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife and is an important forage component for migrating mule deer. Discontinuing motorized travel on vegetated roads will reduce the risk of unintentional fire starts, the spread of invasive plants, soil compaction, and surface erosion. The proposal will improve the quality of hunting and other recreation opportunity on the Fort Rock property while reducing the negative impact of recreational activity on wildlife and their habitat.

19	The Beaver Coalition	Update the Beaver Restoration Guidebook	<p>The Beaver Restoration Guidebook is a free, open-source guide to the best available science, restoration techniques, and management practices for partnering with beavers in stream restoration. This guidebook was first developed in 2015 with funding from Great Northern Landscape Conservation Collaborative, and housed by the Oregon office of US Fish and Wildlife Service. Since that time, new science has emerged, on beaver and wildfire for example, and interest in coexistence solutions like pond levelers and culvert protection systems has ballooned across Oregon. This project is a timely revision that will provide an updated summary of the science, while also working to empower Oregonians—from landowners to municipalities and public works departments—with a robust beaver coexistence toolkit. The Beaver Coalition has partnered with the original authors to facilitate this update, and will work closely with relevant state and federal agencies to publish this update. This project is motivated by the need to share the benefits that beaver provide to the full suite of riparian associated terrestrial species and complex floodplain aquatic species. Through this update, The Beaver Coalition is working to empower humans with the best available tools for partnering with beaver—either to simply protect human infrastructure or to help facilitate restoration of an ecologically resilient and more water-rich Oregon. New material has been strategically targeted with this goal in mind, and will include a set of standard designs and best management practices for coexistence solutions, and a clarified regulatory framework around beaver and beaver-based restoration and coexistence in Oregon.</p>
20	Southern Oregon Land Conservancy	Pompador Bluff Access Infrastructure Phase I	<p>Replacing a degraded bridge on the access road to Pompador Bluff, an iconic, newly conserved 55-acre natural area preserve in the upper Bear Creek valley east of Ashland, is the first step toward safe access to the preserve for future habitat restoration, recreation, trail development and fire prevention. Pompador Bluff and its 55 acres of dramatic rock outcrops and diverse wildlife habitat were gifted to Southern Oregon Land Conservancy in July 2021 after being isolated by private ownership for the past 50 years. Pompador Bluff itself is an iconic geologic formation visible from the I-5 corridor and Ashland’s viewscape, surrounded by intact oak woodland, native grasslands, shrubland, and habitat for multiple native, sensitive plants and animals. Donated to form a preserve with public access, Pompador Bluff is in designated deer and elk winter range (Grizzly Unit) and is closely adjacent two Conservation Opportunity Areas and the Cascade-Siskiyou National Monument. With its prominent place on the eastern horizon of the upper Bear Creek valley and history of inaccessibility as a private property, Pompador Bluff has already begun to stir community interest for visits to see the 360-degree views from the summit and fulfill previously distant appreciation of the bluff’s beauty. A bridge across an irrigation ditch on the access road to Pompador Bluff is eroded on one footing, rated unsafe for service and fire safety vehicles. To support planned conservation and recreational activities, the access bridge must be replaced with to meet code (60,000-pound capacity) to permit safe access to Pompador Bluff for equipment to develop recreation facilities, school buses to bring students, fire trucks to prevent possible wildfire, and for long term conservation management to sustain the natural habitats, and initiate recreational use. Requested funds will support approximately one third of the cost of replacing the degraded bridge on the access road to Pompador Bluff.</p>

21	Source One Serenity	Boulder Creek Wilderness Trails Project	<p>Source One Serenity, a local grassroots non-profit, creates opportunities for veterans to be introduced to the healing power of nature in a meaningful way by performing trail work and other volunteer projects. The proposed project will complete logcut and tread work to reopen 10.6 miles of the Boulder Creek Trail (#1552) in the Boulder Creek Wilderness on the Umpqua National Forest. This project will expand recreational opportunities to local residents and visitors despite recent disturbance events that damaged 43% of the most popular trail in the Umpqua National Forest, the 79-mile North Umpqua Trail (NUT). The Boulder Creek Wilderness is unique because of its prominent ridge-top rock features. After the 2008 Rattle Fire, this area beautifully showcases the successional renewal of habitat including wildflowers and early seral species, providing rich habitat for deer and other game species. In 2021, veterans together with community members have accomplished phase 1 of the Boulder Creek Trail by clearing more than 5 miles of the southern section of the trail. The remaining 5 miles (phase 2) are expected to be even harder due to steepness and higher elevation. Although the trail is not cleared completely, it already provides renewed access to recreation. These trails were not accessible due to downed trees from the 2008 Rattle Fire and a backlog of deferred maintenance. After the completion of phase 1 in 2021, Source One Serenity is excited to finish the remaining trail work next year and be able to open not only the trail but also create opportunities in future years to reopen other feeder trails. Source One Serenity will also host educational camping for community members led by a biologist to educate them on natural fauna, forest rehabilitation, and conservation goals for such areas. This educational outing will cultivate stewardship among local residents to carry it over in the future years to maintain and preserve this area in conformity with Wilderness Act.</p>
22	Klamath Bird Observatory	Using GPS technology to track Oregon Vesper Sparrows from multiple breeding populations throughout their full annual cycle	<p>Oregon Vesper Sparrow is one of the most imperiled birds in North America, and is an Oregon Conservation Strategy Species. Current research is focused on breeding habitat needs, nest success, annual survival, and recruitment; more information is needed about the non-breeding season to complete a full assessment of conservation issues. Disentangling the potential causes of population decline requires understanding what threats Oregon Vesper Sparrows face in different parts of their annual cycle – and thus, the first step is understanding where those locations are. To address this critical knowledge gap, we deployed miniaturized, archival GPS tags on 10 Oregon Vesper Sparrows at our Rogue Basin study site in 2020; results from 3 birds recaptured in 2021 have provided the very first precise information about where Oregon Vesper Sparrows spend the non-breeding season, and a proof-of-concept for using GPS technology with this subspecies. Here, we propose to expand this study and deploy GPS tags on 20 Oregon Vesper Sparrows (10 in the Willamette Valley region, and 10 in the Rogue Basin region) in 2022 to further uncover migratory routes and wintering locations, and describe the degree of migratory connectivity (i.e., overlap in winter geography) between these two populations. This work will importantly double our sample size for the Rogue Basin breeding population, and provide the first GPS data identifying migratory stopover and wintering sites used by birds breeding in the Willamette Valley. We will use this novel spatial information to identify potential threats originating on the non-breeding grounds, and develop appropriate conservation strategies.</p>

23	Oregon State University-Cascades	Adventurers for audible bats! A community-supported scientific survey of Oregon's rarest desert bats	Two of Oregon's rarest and most striking bats, the spotted bat and pallid bat, produce echolocation calls audible to the unaided human ear. These are desert-dwelling bats that can be heard during summer evenings as they fly from their cliff-face homes in pursuit of a dinner menu that consists of large moths, crickets, and even an occasional scorpion. Adventurers for the audible bats is a community-supported scientific survey of these unique Oregonian wildlife that informs our understanding of where and when these species occur and how we can help them persist in an era of rapid environmental change. Our adventurers are a dedicated cadre of Oregonian humans from all kinds of communities that stroll through urban parks, hike along mountain meadows, and scramble up desert canyons in search of the sounds of spotted bats and pallid bats. At sunset we settle in for some focused listening time – nature sounds sometimes include owls and nighthawks, a coyote in the distance, and of course the bats themselves. We record our findings with our phone app and head home, grateful for the opportunity to pitch in and contribute to Oregon wildlife conservation and to have had another outdoor adventure. We coordinate ourselves and tap into the North American Bat Monitoring Program's scientific survey architecture for maximum impact. Along the way we train and practice our listening skills and learn about all 15 of the bat species that live in Oregon. Most of these bats, including our targeted species, are high priority species of concern to the Oregon Conservation Strategy and are in great need of more help. Come join us in our adventures!
24	Hike it Baby	Bring it Outside	The Bring it Outside Family Hiking program partners with community organizations that directly support Spanish-speaking families, providing children and their caregivers outdoor experiences through facilitated programming and materials in their native language, as well as gear and physical resources. We consider the program to be a first touch in building a lifetime relationship with nature for these families. With the support of OCRF, Hike it Baby will launch a Bring it Outside Program in the diverse Rockwood Community in the Portland Metro. We will build the infrastructure to extend the programming to include an online resources hub, an interactive trails and hiking map fully in Spanish, and ongoing opportunities and community-led hikes to continue to support these families after the initial 6-week in-person program ends. Through this Bring it Outside Program, we will introduce and connect LatinX families to the public greenspaces near where they live, providing that first step out hiking as a family in a supportive group environment, with the larger goal of continuing outdoor exploration and increased diversity of those who enjoy Oregon's recreational spaces.
25	Asian Pacific American Network of Oregon (APANO)	APANO's BIPOC Youth Nature Series 2021	APANO's BIPOC Youth Nature Series is a cohort-based program designed to support about 12 BIPOC youth that we engage with in accessing environmental education and recreational activities in nature. The project will provide an accessible way for young BIPOC community members to see and experience Oregon's beauty, and learn from partner organizations on various environmental topics such as indigenous approaches to farming, plant and tree identification, water quality and processing, exploring the hiking trail networks around the Portland Metro region, and deepening their relationships to nature through a series of 5 workshops in the summer of 2022.

26	Conservation InSight	Assessing Effects of Habitat Restoration on Grassland Birds at Powell Butte Nature Park	Our scientific research project examines the impacts on bird populations of habitat restoration at Powell Butte Nature Park located in Portland, OR. We initiated this research project in 2019 and have already collected three years of pre-restoration data on breeding and migratory birds using the site in anticipation of a major construction and grassland habitat restoration project that began in 2021. Our goal is to continue our monitoring of bird populations at the site post-restoration to provide valuable information that can inform agencies and land managers about the response of bird populations to restoration actions and also conduct monitoring that can help assess the overall success of habitat restoration projects. Our scientific research project has two main components: 1) demographic monitoring of breeding grassland birds found at the site and 2) Community Science surveys to collect data on the overall landbird community using the site. The demographic monitoring component will allow us to monitor changes in site usage by breeding grassland birds and changes in demographic rates (e.g., nest success, survivorship) following habitat restoration. The Community Science component will allow us to examine changes in landbird diversity and abundance following restoration, while also having the added benefit of engaging the community in scientific research and helping them understand the benefits of such restoration projects.
27	Wallowa Land Trust	East Moraine Community Forest Carrying Capacity Study	The East Moraine Community Forest is a newly acquired publically-owned property near Wallowa Lake State Park outside Joseph, Oregon. This 1,835-acre property is comprised of forest and grassland. It was secured from future development in January 2020 and is to be managed as a mixed-use community asset – providing public access while protecting habitat and cultural resources, and supporting the local economy. This project would allow the East Moraine Community Forest Management Committee to conduct a carrying capacity study for the property to determine acceptable levels and areas for recreational uses. The goal is to ensure public access that is carefully planned and managed to provide the best possible visitor experience while protecting and enhancing the diversity of native plants, animals, and their habitats on this iconic landscape.
28	Salem Audubon Society	MOTUS RECEIVING SITE AT ANKENY NATIONAL WILDLIFE REFUGE	Willamette Valley has been identified by Motus Initiative partners as an critical location for inclusion into the Motus Network. We propose to install a Motus receiving station at Ankeny National Wildlife Refuge to track tagged birds, bats, and insects that come within 10 miles of the Motus Tower. Tagged individuals that use the refuge or fly by the tower send a signal to the receiver station, that data is automatically uploaded to the Motus database, and is shared with site and network partners. Joan Hager of U.S. Geological Survey, Corvallis, wrote this, “Great that you are applying for this grant to install a station at Ankeny! In the interest of taking a strategic approach to developing the western Motus network as a whole, the Pacific Northwest Motus Coordination group is in the process of identifying 5 top priority sites for Motus stations by ecoregion in Oregon and Washington. I am taking the lead on identifying 5 sites for the Willamette Valley. My list so far consists of Ankeny NWR, Finley NWR, and Fern Ridge (Army Corp HQ).” Vanessa Loverti, with the USFWS Migratory Bird and Habitat Programs who oversees one Motus station in Oregon, also supports a station at Ankeny NWR. “A Motus station at Ankeny would link coastal Motus sites and fill an important gap in Oregon along the Pacific Flyway, in addition to answering local questions on how species like geese and shorebirds use this site. So far the only Motus receiving stations

			in Oregon are at Bandon (1,USFWS) and Jackson County (2, Klamath Bird Observatory). The Willamette Valley is a major migration route for birds from hummingbird to Sandhill Cranes. Some dozens of species pass through., Many dozens breed here and leave in spring. Most compelling, perhaps, are the many thousands of Cackling Geese who arrive here from Alaska for the cold months plus many other waterfowl, shorebirds, and montane species that come down to the lowlands to escape deep snow and cold.
29	Powder Basin Watershed Council	Camp Creek Ecosystem Resiliency	This project is on Camp Creek in the North Fork Burnt River watershed, approximately 45 miles southwest of Baker City, north of Whitney Valley on lands administered by the Whitman Ranger District of the Wallowa Whitman National Forest. Watershed issues addressed are: 1) degraded groundwater recharge and water storage functions, yet abundant unconfined and wide valleys are present, 2) limited water table maintenance supporting narrower riparian vegetation communities than the abundant willow valleys than could be present, 3) limited zones for water quality filtering, 4) excessive bank erosion resulting in streambeds with abundant fine silts, and a resulting limited fish and wildlife riparian and aquatic habitat. Throughout the 2.5-mile project reach, the creek is incised, not connected with broad historic floodplain, and beaver are not present. The result is a stream with an altered potential riparian vegetation community of sagebrush or lodgepole pine, instead of multiple species of willow, simplified aquatic habitat and one that is more efficient at routing water out of the system. Both Camp Creek and the North Fork Burnt River experience very low summer base flows and water temperature that exceed state water quality standards (303d water quality impaired for water temperature). We propose to utilize low-tech process-based restoration techniques (beaver dam analogues – BDAs) to reconnect Camp Creek with its historic floodplain and facilitate restoration of the native willow community by fencing to exclude ungulates from seven protection areas averaging 0.80 acres in size. This is a collaborative project between the Powder Basin Watershed Council, Oregon Department of Fish and Wildlife, and the Wallowa Whitman National Forest.
30	Oswego Lake Watershed Council	Westlank Oak Woodland Restoration Project	The Westlake Oak Woodland Restoration and Interpretation Project restores 21.4 acres of suburban Oregon White Oak woodland and creates a plan to ensure the continued stewardship of the area through community education and citizen science monitoring. Westlake Home Owners Association (HOA) contains 200+ homes surrounded by twenty acres of Oregon white oak woodland habitat. These twenty acres are divided into three ‘tracts’ A (17 acres), B (2.7 acres), and C (1.7 acres). The Oswego Lake Watershed Council has partnered with the Westlake HOA, City of Lake Oswego, Clackamas Soil and Water Conservation District and Wisdom of the Elders to fund an the restoration of Tract A by removing invasive plants (predominantly ivy and blackberry) and invasive trees (mainly hawthorne) from the 17 acres. We have also designed and implemented an oak release project by removing trees (mainly ash, big leaf maple, cherry, and Douglas fir) that compete with oak development. The native sub canopy has been replanted to develop a healthy understory of cascara, vine maple, Indian plum, hazelnut, and other appropriate natives. Oak-associated species have been observed including sweet trilliums, camas, white breasted nuthatches, and western gray squirrels, all noteworthy oak obligate species. OLWC is requesting funding to complete this restoration work on Tracts B and C using the approach used on Tract A. We will also develop an education program through signage, web based information and school curriculum that

			helps community members understand the importance of oak woodland habitat with emphasis of future stewardship of the oaks. The educational materials will include an emphasis on how this land and the associated oaks were used by the original inhabitants. Indigenous residents actively maintained these areas to promote healthy Oregon White Oak populations. Monitoring protocols will also be implemented by volunteer citizen science volunteers to support continued conservation efforts.
31	North Coast Land Conservancy	Recreational management plan for the Rainforest Reserve and Arch Cape Forest	The North Coast Land Conservancy (NCLC) and our partners request funding support for creating a Recreational Management plan for Oregon’s newest conservation area. The defining mountain range of the North Coast, slashing northeasterly to southwesterly from Saddle Mountain to Neahkahnie Mountain, is a relic of an ancient volcanic event. These peaks— islands in the sky— were once isolated by an oceanic moat. That isolation gave rise to a unique landscape of incredible diversity in ecology and geology. An effort underway for more than a decade to conserve this area through two acquisition projects is nearly complete, The Arch Cape Forest and the Rainforest Reserve. NCLC and Arch Cape Water and Sanitary District (ACWSD) have worked closely to secure these properties. The combined area is 5000 acres adjacent to both Oswald West State Park and Cape Falcon Marine Reserve. As future landowners, we will collaborate on protection of these natural resources and management of recreation. Our team has secured technical assistance support from National Parks Services Recreational Trails and Conservation Assistance (RTCA) program, and seeks additional support from OCRF in order to create a Recreational Management Plan for our project area. Funds from OCRF will support the staff time needed for NCLC to engage deeply in a public process over the next 12 months to support our team as we make decisions about: <ul style="list-style-type: none"> • recreation opportunities that will be provided or encouraged in the project area; what and where. • management of the project area’s current and future recreation resources and activities • integration of recreational use with environmental and cultural values and other land uses such as water protection and forestry operations.
32	Deschutes Land Trust	Diverse Stakeholder Engagement for Skyline Forest	Deschutes Land Trust has been working for years to conserve a 33,000 acre block of land near Bend and Sisters, Oregon called Skyline Forest. Surrounded by state and federal lands, Skyline Forest contains important wildlife corridors and habitat, provides tremendous recreation opportunities, is a critical wildfire safety buffer for local communities, and protects the scenic green foothills that set off the Central Oregon Cascades. This area is currently on the market for \$127 million and being advertised as a prime location for a destination resort or cluster development. The current price prevents immediate acquisition of the property for conservation. Deschutes Land Trust is seeking to lead a Stakeholder Engagement process beginning in 2022 to develop a new community vision for Skyline Forest. Our goal will be a robust, community-wide effort that engages local organizations, leaders and community members around creating a shared vision for Skyline’s future conservation and management. Once completed this vision will serve as an essential tool as we continue down the path toward acquisition and permanent conservation of Skyline Forest. We are asking for support from OCRF to help us realize our commitment to Diverse Stakeholder Engagement. If funded, we will work with a DEI professional to host special engagement sessions focused on how we can approach conservation in Skyline Forest using an equity lens. Our goal will be to adopt a set of DEI principles that will underly and inform all future

			management decisions in Skyline Forest. We want to ask the questions: What does an equitable outdoor experience look like? How can we avoid the pitfalls of the past in recreation and conservation? We have a blank slate, what do we want to create? Using these as our guiding questions, we believe that Skyline Forest can serve as a model and a catalyst to apply this thinking to all our managed lands.
33	Sisters Ranger Station, Deschutes National Forest, US Forest Service	Restoring Fire to Remote, At-Risk, and Fire-Dependent Landscapes of Strategy Habitats and Strategy Species on the Sisters Ranger District	The Sisters Ranger District of the Deschutes National Forest aims to increase the pace, scale, innovation and growth based on adaptive management (as in , of its prescribed fire program, with a primary focus on restoration of Strategy Habitats, including ponderosa pine woodlands, aspen woodlands, late successional mixed conifer forests, and grasslands. Acquisition of a portable Remote Automated Weather Station (RAWS), and OCRF funding would help the district achieve this goal that will only become increasingly important as the climate continues to warm and dry on the public lands of central Oregon.
34	The Levi Lab at Oregon State University	Coastal Marten Genetics: Creating tools for population level monitoring and addressing information gaps	Marten are a strategy species in the Oregon Conservation Strategy with important data gaps on population densities, habitat requirements, distribution, general ecology, and connectivity of populations. Humboldt or coastal martens (<i>Martes caurina humboldtensis</i>) are a unique subspecies of the Pacific marten found on Oregon and California coasts. Coastal martens were recently designated as federally threatened and persist only in fragmented subpopulations. Much of the information on coastal martens in Oregon comes from ongoing scat detection dog surveys, with information gained from these scats currently limited to species identification and diet due to methodological limitations. We propose to develop a novel genetic tool for reliably and affordably genotyping marten scats to identify individuals and sex. By providing for individual identification of scats, our tool will allow researchers and managers to estimate population density, gene flow, and inbreeding depression using current survey methods. We will apply this new tool to hundreds of banked coastal marten scat samples to estimate population genetics and preliminary landscape genetics, as well as make the tool publicly available for other researchers and managers to access. As additional samples and populations are analyzed, we will be able to gain more information not only on population genetics and connectivity of populations, but also on relationships between habitat and marten density and possibly even survival and fecundity estimates if multi-year samples become available.
35	Institute for Applied Ecology	Evaluating the effectiveness of prairie restoration for Streaked Horned Lark in the Willamette Valley	The Streaked Horned Lark (hereafter lark) is an Oregon Conservation Strategy sensitive species and listed as Threatened under the U.S. Endangered Species Act. The majority of extant populations (<2,000 birds) are in the southern Willamette Valley – the location of our two study sites. Larks require a large, open landscape of low-statured herbaceous vegetation with patches of sparsely vegetated ground. Agricultural practices and prairie succession in the absence of natural or cultural fire reduce available habitat for larks. Prairie restoration practices have been developed to specifically address this need, which is promulgated in both the lark recovery plan and recent Federal listing of the bird. However, the effectiveness of these treatments to contribute to lark recovery has not been verified. We propose to monitor the effectiveness

			of these treatments over 2 years at 2 sites where vernal pools and habitat swales have recently been created specifically for lark conservation.
36	The Trumpeter Swan Society	Oregon Trumpeter Swan Research and Education	This project will help expand on Oregon Dept. of Fish and Wildlife's (ODFW) Waterfowl Program's research on origins and migration paths of Trumpeter Swans that winter and migrate through eastern Oregon. It will include marking 6 adult Trumpeter Swans with GPS-GSM radio collars (purchased with this grant funding) during winter at Summer Lake Wildlife Area and Malheur National Wildlife Refuge with the purpose of determining their origins (breeding grounds) and migration pathways. A second objective of this proposal involves education and public awareness. The data from the marked swans will be documented and developed into a presentation that is available the public and to be presented at our 26th TTSS Swan Conference/7th International Swan Symposium and will also be used to develop an educational product, targeting grade school children where they can learn about Trumpeter Swans in Oregon, their life history, conservation needs and will include development of lesson plans for teachers, to include lessons in science, math and geography using the swan locations derived from the study.
37	People of Color Outdoors	People of Color Outdoors Guardians at Whitaker Ponds	People of Color Outdoors will host a series of week long nature education classes for children and their parents. The program is called "People of Color Outdoors Guardians at Whitaker Ponds. Each day, they will learn about a different set of animals/plants/birds, etc. Each night they will get some easy homework meant to keep the parents engaged and excite the children about returning the next day to share. There are lots of little incentives and prizes like bubbles, books, pencils, erasers, and other school supplies to keep the level of excitement high. Each day, the children and their parents will learn something about Whitaker Ponds. At the end of the week, the children graduate as Guardians!
38	Northwest Ecological Research Institute (NERI)	Harborton Frog Mortality Assessment	Harborton Wetland is a 74-acre parcel located along Multnomah Channel within the historic Willamette River Delta and owned by Portland General Electric (PGE). Since the city was founded, most of the wetlands and riparian habitats of the Lower Willamette River Basin have been destroyed. Annually, hundreds to thousands of Northern red-legged frogs (<i>Rana aurora</i> , RAAU) migrate from terrestrial uplands in Portland's Forest Park across Highway 30 to the Harborton Wetland to breed. During this migration, passing cars kill an unknown number of animals. Conservative estimates put amphibian road crossing deaths in the hundreds at this site, but the number could be substantially higher with evidence of soft frog carcasses disappearing rapidly on this busy highway. In 2014, the Harborton Frog Shuttle was established to assist the frog migration and reduce the effects of anthropogenically inflated mortality. While the shuttle is a great tool for community involvement, a more sustainable and permanent solution is called for. A wildlife undercrossing and/or creating improved wetland spaces that do not require road crossings are the primary proposed solutions. These are expensive, infrastructure-based solutions and more data is required to find the most appropriate path forward. Specifically, increased data on the rate and location of frogs being killed at road crossings will inform timing and movement patterns to find the best solution. The Northwest Ecological Research Institute (NERI) has performed amphibian surveys and restoration for decades throughout the Pacific Northwest.

39	Wayfinding Academy	Wayfinding Ambassadors Program	Wayfinding Academy (WFA), a 501(c)3 nonprofit community college, will enhance educational, personal and professional outcomes for historically underrepresented students through a new “Wayfinding Ambassadors” program that advances outdoor equity and conservation priorities. High-level elements of this program include: 1. Curriculum and labs developed by the college with a central focus on the Oregon Conservation Strategy and Oregon’s nine ecoregions; 2. Service as a convener and academic resource for the broader community on outdoor equity and conservation, including the Oregon Conservation Strategy and Oregon’s nine ecoregions; 3. Equity-centered learning and development that fosters diverse representation in the outdoors and associated careers; 4. Stewardship projects that inspire lasting engagement, build practical skills, and benefit recreation infrastructure and natural areas in multiple ecoregions; and 5. Student projects that raise awareness and spur action in the broader community on outdoor issues, including priorities in the Oregon Conservation Strategy. Centering equity, the Wayfinding Ambassadors program will be developed in partnership with Self Enhancement, Inc. (SEI), a nonprofit serving youth and families, primarily African Americans and other communities of color, with culturally-responsible academic and wraparound services. Trailkeepers of Oregon (TKO), a statewide nonprofit trail stewardship organization, will serve as the inaugural community partner providing hands-on experience, training and mentorship for students in the field. The Wayfinding Ambassadors program’s unique combination of college curriculum, professional training, and community outreach will connect students with the natural world in new and memorable ways. With adequate funding, the program is easily scalable to serve broader populations, school sites, and community partners -- aiming to inspire, educate, and empower the next generation of leaders in a more equitable outdoors.
40	Wallowa Resources	White-headed Woodpecker Monitoring, Demographics, and Space Use in Managed Forests of the Blue Mountains	White-headed woodpecker are a focal species for late-successional dry forest, a priority species for the U.S. Forest Service, and an Oregon Conservation Strategy species due to the steep decline in their habitat and population trend. However, Blue Mountain Forests do not currently have a monitoring program in place for this species. Data from this study will determine whether fuels reduction treatments are affecting white-headed woodpecker occupancy, reproduction, and space use. Data will be used to develop a protocol that will form the basis of a long-term monitoring program. Results of this study will improve our understanding of foraging needs of White-headed Woodpecker to inform stand-scale silviculture prescriptions and better understand tradeoffs associated with space use and nest success. By integrating home range data with occupancy estimates, land managers will have the ability to estimate White-headed Woodpecker abundance across a wide range of habitat conditions. Home range estimates will allow for estimation of carrying capacity across the landscape in relation to forest management. Knowing the carrying capacity that treated and untreated stands can support will enable us to prioritize treatment areas to increase the size and quality of suitable habitat patches and improve connectivity between them.

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

brian@oregonboatingfoundation.org

Project Information

Project Title *

Youth Programs & Kayak Tours

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

We provide youth kayaking and sailing programs aimed at getting young people out on the water safely. In addition, we also provide guided kayak tours in Yaquina Bay that allow anyone to experience and engage with the wildlife, natural history, and community of Newport, Oregon.

Primary Contact Person *

Brian Getting

Primary Contact Email Address *

brian@oregonboatingfoundation.org

Primary Contact Phone number *

800-806-4882

Lead Organization *

Oregon Boating Foundation

Mailing address *

PO Box 701, Newport, OR 97365

Lead Organization Federal Tax ID *

26-2469712

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Newport, OR

Project Location (County) *

Lincoln County

Project Start Date

MM DD YYYY

06 / 20 / 2022

Project End Date

MM DD YYYY

09 / 05 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

12250

Total Project Cost *

30000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Our youth programs are designed to get kids out on the water, teach them the skills that they need to kayak and sail safely, and instill a love of outdoor recreation in them. Our hope is that they create lifelong memories and are encouraged to continue enjoying the outdoors for the rest of their lives. We believe that the same skills that let them enjoy the outdoors safely and responsibly also translate to other areas in their lives. Many of our former youth camp participants have gone on to become assistants, instructors and guides for us.

Our guided kayak tours in Yaquina Bay provide a unique platform for participants to experience the wildlife, natural history, landmarks, and fishing community of the area. The sit-on-top kayaks that we use provide a safe platform for a two-hour tour along the Newport bay front that focuses on educating our guests about the fisheries that operate in Newport, the wildlife that inhabits Yaquina Bay, the natural history of the area, and the importance of environmental stewardship.

Guests are introduced to the boats that catch much of the seafood that comes into the port including Salmon, Black Cod, Dungeness Crab, Squid, Shrimp, Hagfish, Albacore Tuna, and more. They learn about how different species are caught, the economic impact those fisheries have on our area, and the challenges being faced by those species from fisheries and threats to their environment.

We also provide guests with the opportunity to observe the wildlife that inhabits Yaquina Bay, and educate them about those species. Examples of the plant and animal species that we regularly encounter include California Sea Lions, Harbor Seals, Ochre Sea Stars, Bull Kelp, Native Eelgrass, Pelicans, Black Brants, Oystercatchers, Harlequin Ducks, Ospreys, Bald Eagles, Murrelets, Grebes, and more.

We focus in on a few species in more depth. For example, we teach our guests about the wasting disease that the Sea Stars are just now recovering from, and how that helped the Urchin population in our area explode, which is now threatening the Bull Kelp. It's a great opportunity to showcase the interconnectedness of different species. Another example is how we teach guests about Native Eelgrass, its importance as a nursery for young fish and other species, and the threats to its habitat in a dredged environment such as Yaquina Bay.

Our goal is to get people out on the water in a fun, educational way. The feedback that we have gotten so far suggests that most guests are surprised at how much they learn while out on the water. And, of course, we manage to pick up quite a bit of trash from the bay over the course of the season.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our primary goal is to provide a safe experience to encourage people get out on the water.

One of our objectives is to provide boating education for young people to instill a love of outdoor recreation in them. We want them to create lifelong memories and learn the skills required to enjoy the outdoors safely and responsibly. We believe many of these same skills translate to other areas of life as well.

Another objective is to introduce visitors to the fisheries that are important to our area, to let them experience the wildlife of Yaquina Bay first-hand, and to educate them about the wildlife and ecosystem of the area.

A final objective of the guided kayak tours is to provide employment opportunities for young people in our area. Most of our staff is comprised of former youth campers that went on to become assistants, instructors, and guides.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The expected outcomes of this project is to provide an outdoor experiences that are memorable and educational.

We measure the success of our youth programs by the number of kids that participate each year, as well as the number that return year after year to continue learning.

We measure the success of our kayak tours by the total number of people that participate in the tours each year, and by the feedback we get from participants. We frequently get feedback about how much people learned from our guides.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our youth programs provide opportunities for young people to engage in sailing and kayaking. Our donor supported scholarship fund allows us to ensure that anyone can participate in our programs, regardless of their financial standing. To date we have covered away more than \$5,000 in program fees to ensure every kid has an opportunity to get outside, get on the water, and learn to sail or kayak.

Our tours provide a safe, affordable opportunity for people to kayak on Yaquina Bay. A majority of our guests are visitors to the area, and do not have this opportunity at home. Most are unfamiliar with the fisheries and wildlife that they encounter on our tour, and we hope that they leave with a better understanding of the coastal estuary ecosystem. The diversity of our guest matches the diversity of those that visit the Oregon Coast, and we see guests from all ages, economic backgrounds, and ethnic/racial backgrounds.

Our experience has been that kayaks are a unique platform to view wildlife and experience the bay - particularly when it comes to viewing marine mammals and birds. We are able to view them in their natural surroundings without disturbing or bothering them.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administrative Costs: \$2,000.00

Equipment Costs: \$250.00

Personnel Costs: \$10,000.00

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

We have partnered with a number of organizations to ensure that we can continue to provide our programs. The Port of Toledo provides us with a venue to run our sailing and kayaking camps, as well as storage for our boats. We have recently partnered with the Oregon State University and Portland State University sailing teams to ensure a pipeline of staff for our sailing camps, and to help us expand those programs. The Oregon Youth Sailing Foundation helps us with securing equipment. We have also recently connected with the Oregon Coast Community College to run a community education kayak class in an effort to expand our kayak program.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Hiring an Executive Director by May 2022. Expanding our sailing program to offer an Intermediate Sailing Camp by June 2022. Hiring and training guides for our kayak tours by June 2022. Securing and training instructors for our youth programs by June 2022.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

You can explore the programs that we offer at <https://oregonboatingfoundation.org>. Our kayak tours, which are marketed primarily to visitors and tourists, can be seen at <http://paddlenewport.com>.

We have seen great success in the last 5 years solidifying our programs, providing an endpoint for our kayaking program (employment as a guide), and establishing our scholarship fund. We are currently at a point where we know our programs are in demand, our business model has been proven, but we need to ensure that these programs will stay around forever.

Part of this effort involves expanding our sailing program, hiring an Executive Director (the position has been volunteer up until this point), and ensuring that our board provides a strong backbone of support. Each of these items is being addressed this year, but additional capital is necessary for us to ensure that our organization and the programs it provides will continue to serve our community for decades to come.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Guided Kayak Tours in Yaquina Bay: Our guided kayak tours were introduced in 2019 due to some incredible work by our former youth campers. The idea they came up with in 2017 was an endpoint to our kayak program. After years of attending camps, and then becoming volunteer assistants, they came up with the idea to run guided tours.

Our youth camps provide the skills and training required for someone to be a kayak guide anywhere. Our mission is to get people on the water. At the time our funding sources were primarily donor and grant based, and varied from year to year. Their idea was perfect for us.

We worked with donors and grantors to secure funding to purchase six tandem sit-on-top kayaks, paddles, life jackets, and other gear required for running tours. We purchased a kayak launch dock for our boathouse. We secured permission and blessing from the Port of Newport and the commercial fishing industry in Newport. We ran countless test tours to determine the best route, and make sure the customer experience was as good as it could be.

In 2019 we launched the tours to the public, and were able to employ 8 staff members to help us. In 2020 Covid-19 happened, and our organization was shut down for the entire year. Many of the same young people returned in 2021 to help us get the tours back up and running, and we had a great season. We took nearly 1,000 out on the water this year, and hope to continue doing so in the future.

Project 2

1500 maximum characters

Free Family Boating: In 2015 one of our volunteers began running a program at our boathouse called "Free Family Boating". The idea was that one afternoon each week anyone in the community could come down, sign a waiver, put on a life jacket, and go boating. At the time it was limited to kayaks and sailboats. People showed up, and it was clear that the program was a good idea, but the venue at Port Dock 7 in Newport (where our boathouse is located) was not the right place for it.

The program was subsequently moved to the Port of Toledo and, for insurance reasons, transferred to them. We still provide material support (life jackets, boats, and volunteers) and over the last few years the program has become wildly successful. Now offering sailboats, row boats, kayaks, paddle boards, and even tours on a motor boat, the Free Family Boating program is a staple in our community.

It is so popular, in fact, that we are looking at how we can expand it to other areas. During the summer of 2019 more than 1,000 people turned out to go boating for free. We have been surprised at how many people want to go boating, but are either intimidated by the equipment, cost, and education required, or simply don't have the resources to overcome these barriers.

While Covid-19 has impacted the program in 2020 and 2021, we anticipate continuing our plans to expand the program to other locations in the near future (2022 or 2023). You can learn more at <http://freefamilyboating.com>

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

mark.e.hereford@odfw.oregon.gov

Project Information

Project Title *

Continuing the Upper Klamath Basin Juvenile Chinook Salmon Release Study

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Four dams on the mainstem Klamath River are expected to be removed in 2023. Following Dam removal fish passage will be restored to the Upper Klamath Basin allowing Chinook Salmon to access hundreds of miles of habitat in Oregon that has been blocked for over 100 years. Historically, Chinook Salmon in the Oregon portion of the Klamath Basin were a significant part of the food source and culture of The Klamath Tribes in Oregon (TKT). ODFW is working with TKT to find the most appropriate strategy to repopulate historic Chinook Salmon habitat to harvestable levels following dam removal. Additionally, ODFW and The Klamath Tribes' Reintroduction Implementation Plan recommends that spring-run Chinook Salmon be actively reintroduced into tributaries above Upper Klamath Lake (UKL) due to the uncertainty of a source population immediately downstream of the dams that could naturally recolonize newly available habitat. The Reintroduction Implementation Plan recommends the use of juveniles from in-basin stocks to be released into suitable habitat above Upper Klamath Lake. A team of State (ODFW and CDFW), Federal (NMFS/NOAA), and Tribal (TKT) biologists intend to continue to learn how juvenile Chinook Salmon move through the Upper Klamath Basin during a hypothetical outmigration event. By releasing tagged fish in tributaries of UKL, the team hopes to use telemetry receivers in addition to existing (passive integrated transponder) PIT tag antenna arrays throughout the Basin to detect tagged individuals as they migrate out of the upper basin. The intent of the requested funding is to continue this study for another year building on what was learned after the initial release study, which will occur in the spring of 2022. Extending this study another year will increase the ability to make better decisions when it comes to reintroducing spring-run Chinook Salmon to the Upper Klamath Basin following dam removal.

Primary Contact Person *

Mark Hereford

Primary Contact Email Address *

mark.e.hereford@odfw.oregon.gov

Primary Contact Phone number *

541-883-5732

Lead Organization *

Oregon Department of Fish and Wildlife - Klamath District Office

Mailing address *

1850 Miller Island Rd., Klamath Falls, OR 97601

Lead Organization Federal Tax ID *

na

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Klamath Falls

Project Location (County) *

Klamath

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

100000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Prior to the construction of the Klamath hydroelectric dams located in California and Oregon in the early 1900's the Upper Klamath Basin in Oregon provided hundreds of miles of habitat for Chinook Salmon. Populations of Chinook Salmon were so robust that the Klamath River Basin was the third largest producer of salmon on the West Coast, behind the Sacramento and Columbia Rivers. The cold, groundwater sourced streams of the upper basin provided habitat to some of the largest populations of spring-run Chinook Salmon, which require cool water temperatures as adults, within the entire Klamath River Basin. The exclusion of this habitat which resulted in the extirpation of Chinook Salmon in the upper basin, along with other incompatible land use practices in the Lower Klamath River Basin has resulted in extremely low numbers of spring-run Chinook Salmon in the basin as a whole. The current downward population trends of Chinook Salmon threaten the tribal substance fishing, which has sustained First Peoples of the basin since time immemorial. The Upper Klamath Basin in Oregon consists of many large groundwater sourced tributaries which are more resilient to climate change than tributaries in the lower basin. Allowing salmon access to this habitat will greatly increase the ability for salmon and steelhead to persist in the Klamath River Basin into the future in the face of climate change.

The four hydroelectric dams on the Klamath River are scheduled to be removed in 2023. Removing the dams will open up hundreds of miles of historic salmon and steelhead habitat in Oregon as well as improve water quality and a more natural flow regime downstream of the dams, with the overall goal of increasing salmon and steelhead populations throughout the basin. Oregon Department of Fish and Wildlife in collaboration with The Klamath Tribes have developed an Implementation Plan for the Reintroduction of Anadromous Fishes into the Upper Klamath Basin. While the plan is to let the majority of fish anadromous fish species repopulate habitat on their own, it has been determined that spring-run Chinook Salmon will need some assistance due to the remaining populations in the lower basin existing in habitat a long distance downstream from the dams to be removed and the available habitat in the upper basin. The plan is to first conduct release studies in the upper basin with a relatively small number of fish to better understand how well juvenile Chinook Salmon can navigate a system that has been altered since they last existed in this habitat, including two dams with fish ladders that will remain in place after the four hydroelectric dams are removed. A successful way to determine the ability of juvenile outmigration is to tag them prior to release and to subsequently detect them at key locations such as the mouths of tributaries, above and below dams, and points of diversions. ODFW and The Klamath Tribe's Reintroduction Plan specifically recommends a tag and detect study of juvenile spring-run Chinook Salmon to occur to help inform reintroduction efforts.

A team of state (ODFW and CDFW), Tribal (The Klamath Tribes), and federal (NMFS/NOAA) biologists intend to continue to learn how juvenile Chinook Salmon move through the Upper Klamath Basin during a hypothetical outmigration event. Funding has already been secured to conduct the initial release study which will occur in the spring of 2022. This initial study will help answer multiple questions about the movement behavior and survival of juvenile spring-run Chinook Salmon as they migrate out of upper basin habitat and head for the Pacific Ocean. We are requesting additional funds to continue this program for an additional year with a new batch of juvenile spring-run Chinook Salmon which will be released in late 2022 or early 2023. Building on the previous year's release study will allow biologists to include multiple years in the survival model creating a more robust estimate that includes the year-to-year variability of precipitation and other environmental factors that are known to occur and are becoming more frequent and extreme in the Klamath Basin.

The funds we are requesting will be used to help purchase Passive Integrated Transponder (PIT) tags and telemetry tags, PIT detection antenna equipment, telemetry receivers, and hatchery equipment used to feed an additional cohort of spring-run Chinook Salmon at the ODFW Klamath Hatchery. These tagged fish will be released in tributaries of Upper Klamath Lake in late 2022 or early 2023. The results and analysis of detections of these fish at key locations will help inform how to best reintroduce Chinook Salmon into the Upper Klamath Basin and will help inform where possible restoration may need to occur to help increase survival.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The goal of this project is to continue a juvenile spring-run Chinook Salmon release with an additional batch of fish to study an additional year of data. Biologists will PIT tag up to 10,000 juvenile spring-run Chinook Salmon, of which, up to 2,000 will be tagged with telemetry tags (acoustic and/or radio). Fish will be released in tributaries to Upper Klamath Lake (Williamson River and Wood River) in late 2022 or early 2023, depending on what is learned during the initial study that will take place in early 2022. The source of the fish will be from spring-run Chinook Salmon collected at Trinity River Hatchery. ODFW has already obtained approval for the egg take request. Juveniles will be hatched and reared at ODFW's Klamath Hatchery up to the time of release.

The objective of this project is to detect tagged fish at key locations throughout the Upper Klamath Basin. We plan on utilizing already in place PIT tag detection arrays operated by the US Geological Survey located on the Williamson River, Wood River, Link River Dam Ladder, and Link River (outlet of Upper Klamath Lake). Ideally, depending on funding, additional telemetry stations would be located at the outlets of the Williamson River, Wood River, Link River, and Klamath River. Data collected from detections will be analyzed to determine movement behavior, outmigration timing, and survival as fish migrate through the Upper Klamath Basin. Results will help inform the best strategy to repopulate the Upper Klamath Basin with spring-run Chinook Salmon to harvestable levels following the removal of the Klamath River Dams.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The expected outcome of this project will be an additional years' worth of data associated with the movement behavior, outmigration timing, and survival of released juvenile spring-run Chinook Salmon in the Upper Klamath Basin. Results will be published in a graduate student Dissertation, report and/or peer-reviewed article in a scientific journal. The results of this project will inform decisions on how to best move forward with repopulating the upper basin with spring-run Chinook Salmon. Following the removal of the four Klamath River Dams, uncertainties will still exist as to whether or not juvenile spring-run Chinook Salmon can successfully outmigrate from tributaries of Upper Klamath Lake, through the lake itself, and through two dams that will remain in place (Link River Dam; outlet of Upper Klamath Lake, and Keno Dam; a dam on the Klamath River that regulates levels for irrigation diversions).

The success of this project will be measured by how well the results inform the following questions:

1. Following the release of juvenile spring-run Chinook Salmon in tributaries of Upper Klamath Lake, what proportion of individuals successfully migrate through Upper Klamath Lake, through Link River Dam, and through Keno Dam.
 2. If released juveniles do not successfully outmigrate through the Upper Klamath Basin, what impediments are preventing them from doing so, and can the impediments be rehabilitated through restoration actions?
 3. What is the timing of outmigration from tributaries of Upper Klamath Lake, and what habitats are or are not being utilized by juveniles throughout the system?
-

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project addresses two of the Conservation and Recreation Advisory Committee Program Priorities and is connected to many of the priorities identified in the Oregon Conservation Strategy (Strategy). This project aims to understand how reintroduced spring-run Chinook Salmon navigate the complexities of the Upper Klamath Basin habitat. Doing so, will allow fish managers, habitat restoration practitioners, and others to make decisions on how to best improve habitat and connectivity for the benefit of not only Chinook Salmon, but other Oregon Strategy Species such as Redband Trout, steelhead trout, and suckers and the overall ecosystem as a whole. This project will involve collecting data using a scientific approach to identify key limiting factors relating to aquatic habitat connectivity in the Upper Klamath Basin. The geographic scope of this project aligns with two of the Conservation Opportunity Areas identified in the Strategy, the Upper Klamath Lake Area and the Klamath River Canyon; and involves monitoring of fish movements through two Strategy Habitats (Flowing water and riparian habitats, and Natural Lakes). The Strategy identifies Barriers to Animal Movement as a Key Conservation Issue. The proposed project is directly tied to the removal of four dams on the Klamath River that have blocked fish passage to Oregon for over 100 years. The proposed project is the first step in ensuring a successful repopulation of Chinook Salmon in the Klamath Basin.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

We are requesting funds for the purchase of equipment from the OCRFB to help pay for the costs of telemetry and/or PIT tags that will be inserted into released juvenile spring-run Chinook Salmon, and for telemetry receivers that will be placed at key locations throughout the Upper Klamath Basin for the purpose of detecting tagged fish.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Oregon Department of Fish and Wildlife

- Coordination, data collection/monitoring, study design, tagging, egg request, juvenile Chinook Salmon rearing, boots on the ground, data analysis, reporting

The Klamath Tribes

- Data collection/monitoring

NOAA Fisheries

- Study design, data analysis, reporting

California Department of Fish and Wildlife

- Collection and fertilization of Chinook Salmon, juvenile Chinook Salmon rearing

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Fall 2021, California Department of Fish and Wildlife (CDFW) collects and spawns adult spring-run Chinook Salmon. Fall 2021 to fall/winter 2022/2023, Juvenile spring-run Chinook Salmon are hatched and reared at ODFW Klamath Hatchery. Summer 2022 to Spring 2023, Deploy and test telemetry receivers. Fall 2022 or spring 2023, Juvenile Spring-run Chinook Salmon tagged and released in tributaries of Upper Klamath Lake (Williamson River, Wood River). Fall 2022 to Summer 2023, Monitor fish movements through Upper Klamath Basin. Summer 2023 to Winter 2024, Analyze data, present findings (presentations, reports, published articles).

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Staff at the Klamath ODFW District Office have led and completed multiple telemetry projects to assess fish movement. Most recently, staff completed a project, in which adult Redband Trout were tagged with telemetry tags to investigate their habitat use in Upper Klamath Lake and its tributaries. The results of this study indicate that adult Redband Trout are utilizing Upper Klamath Lake for forage when water temperatures are suitable and utilize the tributaries for spawning in the winter months and as cold-water refuge in the summer. The results of this study highlight the importance of cold water refuge for these lake fish in the summer, but also shows the importance of the lake habitat as a food source where they optimize their growth. Current and future habitat restoration efforts will be guided by the results of this study because tagged fish were documented in habitat that was previously not known to be important for these fish. This study demonstrates how the use of telemetry can inform management and restoration decisions and has led us to conclude that telemetry is a viable tool to assess the movement and habitat use of tagged juvenile spring-run Chinook Salmon.

Project 2

1500 maximum characters

Staff at the Klamath ODFW District Office have led and completed a project to assess the movement of juvenile Redband Trout tagged with Passive Integrated Transponder (PIT) tags in tributaries of Upper Klamath Lake. Juvenile Redband Trout were caught in tributaries of Upper Klamath Lake and implanted with PIT tags and released. The question was, would tagged juveniles get detected at stationary PIT tag detection arrays already in place for the detection of adult ESA-listed suckers? The results of this study demonstrate that while the targeted species for detection at the stationary arrays were not juvenile salmonids, tagged juvenile Redband Trout were readily detected. This study concluded that PIT tag detection arrays, which are located throughout the Upper Klamath Basin for the purpose of monitoring ESA-listed suckers can also be utilized to detect juvenile salmonids.

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OCRF Project Proposal Form

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Email *

bill@sandyriver.org

Project Information

Project Title *

Sandy River Delta Rare Turtle Surveys & Conservation

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Conducting native turtle species surveys with Wisdom of the Elders Workforce crew to establish baseline population figures for existing western painted turtles and western pond turtles. Creating turtle basking habitat for western painted turtles and (in the future) western pond turtles. Monitoring and maintaining enhanced turtle habitat sites and monitoring of turtle populations.

Primary Contact Person *

Bill Weiler

Primary Contact Email Address *

bill@sandyriver.org

Primary Contact Phone number *

15092810344

Lead Organization *

Sandy River Watershed Council

Mailing address *

17405 NE Glisan St., Portland, OR 97230

Lead Organization Federal Tax ID *

93-1294148

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Troutdale, Oregon

Project Location (County) *

Multnomah

Project Start Date

MM DD YYYY

12 / 01 / 2021

Project End Date

MM DD YYYY

11 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

6000

Total Project Cost *

39500

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Located on the eastern edge of the Portland Metropolitan area, the US Forest Service (USFS) managed Sandy River Delta comprises 1,500 acres of deciduous forest, upland meadows, oak woodlands, wetlands, and riparian areas. USFS purchased the Sandy River Delta in the 1990s. The site had been extensively grazed with much of the existing wetlands damaged from years of agricultural use. According to the 1995 USFS Delta Plan, "Restoration of the landscape to support and enhance fish and wildlife use of the site is a key goal," including, "habitat to support herptiles. There should be, at least, three down logs per acre (in all wetland areas) to provide, nutrients, cover, and basking sites." The SRWC strategy for restoring habitat for "Sensitive-Critical western painted turtles and "Sensitive-Critical" western pond turtles includes: Conducting turtle surveys to establish baseline population figures for existing western painted turtles and western pond turtles. Creating turtle basking habitat for western painted turtles and (in the future) western pond turtles. Monitoring and maintaining enhanced turtle habitat sites and monitoring of turtle populations. The Sandy River Delta is within the Willamette Valley Eco-region and located in Conservation Opportunity Area COA-057 Lower Sandy River. Wetlands are a priority Strategy Habitat in the Oregon Conservation Strategy (OCS; ODFW 2016). The western painted turtle and western pond turtle are two of five reptiles identified as Strategy Species in the OCS. Additionally, ODFW released a comprehensive guide focused on conserving Oregon's native turtle species and their habitats. This guide includes Best Management Practices to "protect and conserve these species, including help with planning projects in or near permanent or seasonal wetlands, ponds, and other water bodies that are within the known range of native turtles." (Turtle BMPs; ODFW 2015). Additionally, the western painted turtle is classified by the USFS as a "Sensitive Species" and The Oregon Natural Heritage Program ranks the western painted turtle as "S2" and the Center for Biological Diversity listed the western pond turtle as one of the "10 most vulnerable, least protected reptiles in the United States" in 2013. No western pond turtles have been found at the Delta to date. Our project addresses three Recommended Conservation Actions highlighted in the ODFW Turtle BMPs: Improving the quality of aquatic and terrestrial habitats. Improving and creating nesting habitat, hatchling habitat, and basking structures. Developing and implementing a larger-scale research and survey strategy to assess and monitor turtle populations. Recommended Conservation Action #1: This project will improve the quality of aquatic and terrestrial habitats for existing populations of both western pond turtles and western painted turtles by planting climate-adapted native trees in turtle habitat areas throughout the Sandy River Delta Recommended Conservation Action #2: This project will improve and create nesting habitat and hatchling habitat throughout the delta by removing overhead, competing vegetation in ODFW-identified suitable turtle nesting habitat. The project will also create basking structures in turtle habitat areas through basking log creation and installation in wetland areas across the delta. Recommended Conservation Action #3: This project will develop and implement a western pond turtle and western painted turtle survey strategy to establish baseline populations of both species in the delta. We will use this baseline data to measure population growth and decline over the project and monitoring periods. We believe that existing populations of western painted turtles and western pond turtles at the Sandy River delta are worthy of conservation and study in keeping with the CSP outlined goals and best management practices. We will continue our effort to restore currently degraded areas and establish and maintain additional turtle nesting habitat and hatchling habitat.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal: 1. Fulfill Oregon Conservation Strategies for the Sandy River Delta through rare turtle surveys and habitat protective measures:

- A. Surveys will occur during the 2022 spring-summer-fall seasons and the results will assist in Delta management; assess rare turtle populations; increase suitable habitat through the creation of basking log habitat.
- B. Bullfrog eradication through removal of egg masses will take place concurrently with the survey time period.

Goal: 2. Train Wisdom of the Elders Workforce Crew and Portland State University graduate students in survey methodology, turtle ecology and identification.

- A. Portland State University Graduate student Emma Scott, who successfully led our OCRF Sandy - Salmon Amphibian Survey, will train 10 -15 Wisdom of the Elders and 15 PSU volunteers.

Goal: 3. Educate the Delta visiting public about rare turtles.

- A. We will place 1 - 2 signs in strategic location informing the 250,000 annual Sandy River Delta visitors about turtle ecology and conservation.
- b. We will distribute ODFW - Sandy River Watershed Council turtle cards to 1,000 local students who will be visiting the Delta in 2022.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

We will train up to 25 Wisdom of the Elders interns and PSU volunteers in turtle survey techniques.

Measuring success: All 25 of the surveyors will receive turtle survey protocol training and will participate in the survey work.

We will continue to restore suitable turtle nesting habitat with the Wisdom of the Elders crew. We have cordoned off 5 sites and vegetation will be removed at all sites in 2022.

We will fall 3 trees into a major turtle pond area to create basking log habitat. We expect the 10 western pond turtles that utilize the area to increase in number with the addition of the basking logs.

Up to 1,000 elementary students will participate in our 2022 Delta Environmental Education Program. Pre and post tests will include turtle questions and we expect our students to pass with flying colors!

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Habitat Restoration: Removing invasive weeds in ODFW identified suitable turtle nesting areas, and placing basking logs in ponds.

Science and research are the foundation of our turtle survey work and community science will be achieved through the training of Wisdom of the Elders Workforce Team and PSU student volunteers.

Recreation: We are expanding the number and diversity of Oregon's outdoor users through the participation of NAYA youth and families as well as hundreds of local students who will visit the Delta in 2022 to plant First Foods and participate in environmental and cultural education activities..

Recreation: The Sandy River Delta offers diverse wildlife habitats and viewing of a wide array of wildlife species. Previous student Delta Field Trips have included sightings of bald eagle, black bear, beaver, and over 50 species of native birds.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRIF Funds *

Please select the categories of work that will be supported by the OCRIF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Contract Services

Emma Scott, PSU Graduate Student Lead Surveyor: \$3,000

Wisdom of the Elders Workforce Crew: \$1,200

Administration:

Sandy River Watershed Council: \$1,800

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

US Forest Service: Landowner, technical assistance and funding

Portland State University: Project contractor is PSU Graduate student and her volunteer class members.

Oregon Department of Fish & Wildlife: Technical assistance (Susan Barnes)

Wisdom of the Elders: Will be trained to conduct rare turtle surveys.

Oregon Wildlife Federation: Project funding

Charlotte Martin Foundation: Project funding

Timeline *

Please identify the key milestones towards completing the project and achieving results.

August - October, 2021 Project Planning with partners. November, 2021: Train Wisdom of the Elders Workforce Crew; Train PSU Graduate volunteers; Initiate surveys in March, 2022 - September, 2022

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

The Sandy River Delta has become a priority First Foods survey, cultural education, and restoration area for a number of Native American-led organizations including: Wisdom of the Elders, Native Youth Association (NAYA), PSU Indigenous Students, and Tributaries Networks. 2022 will bring NAYA youth and families to the Delta to learn about First Foods and to plant species such as camas, Oregon white oak, and Wapato.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Four major salmon habitat restoration projects along the mainstem Sandy River all re-connected former side channels to allow for expansion of salmon habitat, reduced downstream flooding, and major community input and participation, such as the post-construction planting of native trees and shrubs. ODFW considers the Sandy River as the "most productive salmon stream" in Oregon and we know our projects have contributed to salmon and steelhead conservation.

Project 2

1500 maximum characters

At the Sandy River Delta, we continue our goal of planting 2,000,000 native trees and shrubs with contract crews and thousands of local volunteers. We now have planted 1,600,000 plants. We have seen an uptick in avian diversity and numbers as measured through our Bird Counts, as 1,000 acres of former blackberry thickets have been re-placed by native trees and shrubs.

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OCRf Project Proposal Form

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Email *

yctrapteam@gmail.com

Project Information

Project Title *

2021 - YC Trap Team

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

encouraging youth at Yamhill Carlton and the surrounding areas to get outside, and try something new

Primary Contact Person *

Shavaghn Petraitis

Primary Contact Email Address *

yctrapteam@gmail.com

Primary Contact Phone number *

503-267-3059

Lead Organization *

Yamhill Carlton High Scholl

Mailing address *

120 N Larch Place, Yamhill, Oregon 97148

Lead Organization Federal Tax ID *

93-6001098

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Dundee

Project Location (County) *

Yamhill

Project Start Date

MM DD YYYY

09 / 01 / 2021

Project End Date

MM DD YYYY

07 / 31 / 2021

Funding Amount Requested *

The maximum request is \$20,000.

2500.00

Total Project Cost *

8400.00

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Our goal for the trap team, Safe and responsible handling and storage of firearms and ammunition is the first priority.

Everyone should have fun.

Participation is a privilege and not a right.

Sportsmanship needs to have a constant presence.

Students should have an equal opportunity to participate.

Ethical behavior, dignity and respect are expected.

Participants will be chemically free.

Collaborative relationships with schools and students create a positive experience.

Academic priorities must come before participation.

Adults must serve as a positive role model to students.

The success of the team is more important than individual honors.

Gun clubs are critical to the success of the League and are positive business leaders in their community.

Compliance with school, community, gun club and League rules are essential for all participants.

Shooting sports strengthens connections within families and communities for life.

Everything the League does will always be in the best interest of the students.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

to encourage youth to try something new in a safe environment

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Our team collects weekly progress scores

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

I don't believe it does

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

With the fundraising the team will be able to significantly reduce the cost for each shooter and guarantee our team will have enough ammo to practice and compete all year long

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

NRA, and First Federal Savings

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Purchase a pallet of 12g and 20g.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

<http://orclaytarget.com/>, <https://www.usaclaytarget.com/>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

This will be Yamhill Carltons 4th year having a competitive team. Our team is combined of Gaston, Sherwood, McMinnville and YC shooters. Each ear we have increased our shooters. from 1st year we had 5 shooters, this season we are looking at 25.

Project 2

1500 maximum characters

Nationals: our goal is to send a team each year. The first year we sent a team was 2019, we sent 5 shooters, and in 2021 we sent 8 shooter. for the 2022 spring season we are expecting to send 10 shooters.

This content is neither created nor endorsed by Google.

Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

shahnie.rich@klamathtribes.com

Project Information

Project Title *

Habitat Restoration for Beaver Reintroduction in the Klamath Marsh National Wildlife Refuge

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The Klamath Tribes, with technical assistance and coordination from the U.S. Fish and Wildlife Service, are encouraging North American Beaver (*Castor canadensis*) reintroduction in the southern portion of the Klamath Marsh National Wildlife Refuge (KMNWR). Since the decline of the beaver population in the KMNWR, the refuge's water retention, biodiversity, and overall ecological productivity has also declined. This project will aim at translocating nuisance beavers once the habitat has been restored to suitable conditions for beaver retention. Project actions will include beaver dam analog (BDA) installations along the outlet of the KMNWR, habitat restoration, beaver reintroduction, and continued monitoring. The project location currently consists of a homogeneous level landscape with little plant diversity or structural complexity, which is an artifact of many decades of intense cattle grazing. There are currently no woody materials within a mile of the project area that beavers would use to construct lodges or build water retention structures. Work is needed to reestablish native vegetation and restore the historic structural complexity of the ecosystem. In 2020, the first main stem BDA was installed by the Klamath Tribes on the Williamson River. Composed of local raw materials such as pine and willow trees and native soil. Local native willow cuttings will be collected, potted, and stored in a greenhouse. The live willows will then be tended to as needed and planted in the spring along the river at the site of the BDA. While the plants begin to establish, construction of an artificial beaver lodge will begin. The artificial lodge will consist of a variety of raw materials, such as aspens and willows, and be built prior to beaver reintroduction to ensure they have both a food and shelter source. The plant establishment and artificial lodge will be monitored thereafter, with the intention to introduce a family of beavers when habitat conditions are suitable.

Primary Contact Person *

Shahnie Rich

Primary Contact Email Address *

shahnie.rich@klamathtribes.com

Primary Contact Phone number *

541-827-5230

Lead Organization *

The Klamath Tribes Aquatics Department

Mailing address *

5671 Sprague River Rd, Chiloquin OR 97624

Lead Organization Federal Tax ID *

DUNS: 161155288 EIN:93-0801542 Indirect: 31.57%

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Chiloquin

Project Location (County) *

Klamath

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

10 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

40000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Klamath Marsh National Wildlife Refuge (KMNWR) in Southern Oregon, 15 miles east of Crater Lake and on the eastern slopes of the Cascades, was established in 1958. Prior to this establishment early explorers had described the marsh as “a strip of half-submerged land, about twelve miles long and seven miles wide” with thousands of waterfowl and an abundance of biodiversity (USFWS, 2010:P.5). This widespread wetland and marsh habitat can be partly attributed to the large population of beaver that thrived before extensive trapping (1700-1800’s). Not long after trapping regulations were implemented in 1899, the Williamson River which flows through the refuge, was diverted into multiple ditches and levee systems in the early 1900’s. The channelization and diversion systems put in place drained large portions of wetlands, altering the habitat to favor upland cattle grazing and further contributing to the decline of the beaver population (USFWS, 2014).

These diversions have led to dramatic changes to the surrounding hydrology by altering the river's natural flows and morphology, creating a feedback effect on the entire system. With lowered water surface elevations and groundwater tables the marsh’s water storage has declined, resulting in a reduction of areas that are seasonally or permanently flooded. Reductions in surface water, both temporally and spatially, in turn impacts aquatic, amphibious, avian, and terrestrial species. The refuge serves as habitat for over 250 species of wildlife and migratory birds, and a wide diversity of invertebrate life. The impacts are not isolated to the immediate area. The KMNWR plays a vital role as a migratory stopover, and nesting ground for many species of migratory passerine and non-passerine bird species (USFWS, 2014); restoration of historic habitat complexity is expected to have wide-reaching positive effects.

The damage from agricultural development reaches farther than just the ecological impacts. The culture and livelihood of the Klamath peoples are directly related to the wellbeing of their lands. The decline in biodiversity has included a decline in culturally important plant and wildlife species. Historically, the marsh provided the Klamath people with an abundance of food, medicinal, and material resources. These resources include (but are not limited to) wocus (waterlily), tule, various wildlife species, cattail, mint, wapato (Indian potato), and others. Wocus was vital as a staple of the Klamath peoples’ diet.

The Klamath Tribes retained the right to hunt, gather, and fish within the boundaries of the former 1954 reservation, which includes the KMNWR. The KMNWR is a profoundly culturally significant place to the Klamath Tribes and remains one of the few places that continues to successfully grow wocus. The KMNWR is habitat for several large game species that are vital food and treaty resources for Klamath tribal members. If hydrologic conditions decline further, it will directly impact tribal members’ abilities to exercise their hunting and gathering treaty rights. This project is expected to result in increased water storage and retention, creating more suitable habitat for culturally important plant and wildlife species (A. Gonyaw, personal communication, September 2021). According to the Klamath Marsh National Wildlife Refuge Comprehensive Conservation Plan, an increase in the population of beavers “could significantly increase the diversity of wetland and riparian habitats” (USFWS, 2010: P.50).

Currently the KMNWR is in dire need of natural water storage features and water retention. To achieve the desired water retention and wetland habitat conditions, this project includes a combination of actions including beaver dam analog (BDA) installations, habitat restoration practices, and beaver reintroduction. Beavers will be translocated ideally from an Oregon watershed that is similar in composition to the project location. Currently there are a few options available, but final decisions will be made closer to project completion.

The focus of this project takes place at a BDA located on the southern portion of the marsh near Little Wocus Bay, which was installed in the fall of 2020 and has since taken root and is well established. The BDA slows the movement of water out of the marsh. The increased retention time allows for greater infiltration

and groundwater recharge while also providing added niche complexity for wildlife. In one year after construction the live materials used to construct the BDA have taken root, and are now established and continuing to grow. Having demonstrated a proof of concept, the next part of the project, which is crucial to ensure successful beaver retention, is vegetation and habitat restoration to provide food and shelter for introduced groups of beavers. This process includes collecting wild willow cuttings, rooting, caring for, and planting the willows near the BDA.

To achieve the desired habitat conditions and restoration needed for successful beaver reintroduction, while also minimizing anthropogenic impacts, native willow cuttings will be hand collected and planted. The establishment of the willows is critical, as any introduced beavers will need a readily available food and shelter source. According to the Beaver Restoration Guidebook, successful beaver reintroduction often includes ensuring that beavers are released in an area with a readily available food, shelter, and building source. In addition, it is recommended that beavers be “grouped as families or compatible units with both male and females” (Pollock et al. 2017:P.67).

References

A. Gonyaw, The Klamath Tribes Aquatics Department, Personal Communication. September 2021.

Pollock, M.M., G.M. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Editors) 2017. The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 2.0. United States Fish and Wildlife Service, Portland, Oregon. 219 pp. Online at: <https://www.fws.gov/oregonfwo/promo.cfm?id=177175812>

USFWS (U.S. Fish and Wildlife Service). 2010. Klamath Marsh National Wildlife Refuge Final Comprehensive Conservation Plan, Tulelake, California. Online at: [https://www.fws.gov/uploadedFiles/Klamath_Marsh_CCP_Final\[1\]\(1\).pdf](https://www.fws.gov/uploadedFiles/Klamath_Marsh_CCP_Final1.pdf)

USFWS (U.S. Fish and Wildlife Service). 2014. Restoring the hydrology of the Williamson River and adjacent wetlands on Klamath Marsh National Wildlife Refuge, Final Environmental Assessment, Chiloquin, OR. <https://www.fws.gov/uploadedFiles/FinalEA26JanKMNWR.pdf>

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal 1: Establish suitable habitat for beaver reintroduction

Obj 1: Plant propagated and collected native willow (during spring)

Obj 2: Monitor plant establishment and make necessary adjustments to locations and timing through adaptive management

Goal 2: Improve water retention

Obj 1: Design and install BDAs to delay water movement and provide standing water habitat for longer periods of time and encourage groundwater recharge.

Goal 3: Improve river hydrology and morphology

Obj 1: Begin to approximate historical hydrological cycles where water flowed from the KMNWR nearly year round during an average water year.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The intended outcomes of this project include habitat restoration, establishment of habitat suitable for beaver, beaver reintroduction and retention, and improved water retention and river hydrology. These outcomes will all come at various stages and the success of one step will determine the success of the next. To ensure that all steps of the project are achieved, each outcome will be monitored closely and project actions will only continue once each step is successful.

The first projected outcome is the establishment and growth of the planted willow cuttings, with a desired success rate of 50% or more successful plant establishment. Once planted in the spring of 2022, plant establishment will be measured bi-weekly with monitoring the cuttings overall growth (height and foliage), wildlife utilization, and water availability. Once the project area has reached the desired plant establishment and habitat suitability, beavers will be introduced to the area.

Beavers will be released to the area with an ample source of food and shelter, with an abundance of established willows and an artificial beaver lodge created with raw materials. After release, beaver retention will be monitored closely using a combination of field surveys and camera trap footage. Factors to consider for beaver retention include predation, availability of food/building materials, and availability of existing aquatic cover. Field surveys will be conducted monthly and consist of visual observations for any sign of beaver or beaver activity, such as use of the artificial lodge or addition of materials or modifications to the existing BDA. Camera traps will be set at locations in which beaver will likely traverse. A combination of field surveys and camera traps will help us determine the success of beaver retention and aid us in making any necessary changes to ensure future retention.

With successful beaver reintroduction, the species itself will help reach our next outcome of an increase in localized water retention, soil stabilization, and vegetation establishment. There are ongoing monthly water measurement surveys being conducted at the site which will continue with the addition of vegetation monitoring. Vegetation establishment will be measured using drone cameras to measure the proportion of the project area covered by woody vegetation. A continuing positive trend in woody vegetation coverage will indicate project success.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
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Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project is congruent with several of the Key Conservation Issues (KCI) identified in the Oregon Conservation Strategy (OCS), including climate change, land use changes, disruption of disturbance regimes, and water quality and quantity. The Klamath Tribes will utilize the KCI "Goals and Actions" section of the OCS where applicable. It is located within the "Klamath Marsh-Williamson River" Conservation Opportunity Area (COA 134). One of our goals is to achieve the following Recommended Conservation Actions for COA 134 from the OCS:

- Maintain or enhance in-channel watershed function, flow and hydrology
- Maintain or restore riparian habitat; provide complex habitat for wildlife
- Maintain, enhance, and restore wetland habitat

By completing the recommended conservation actions, the area should also act as a natural fire break and potential habitat for a variety of wildlife species. This conservation opportunity area has a total of 32 strategy species listed in the OCS, with this project likely to benefit most, if not all. Some examples of the primary species to be impacted include the American White Pelican, Great Basin Redband Trout, Caspian Tern, Greater Sandhill Crane, Oregon Spotted Frog, and the Yellow Rail.

References

Oregon Conservation Strategy. 2016. Oregon Department of Fish and Wildlife, Salem, Oregon.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

The funds from this grant will be used to propagate native willow species as well as help pay the employees who will be doing the labor portion of the project (collecting wild willow cuttings, rooting, caring for, and planting willows, and inspecting plant establishment success). The current tribal indirect rate is 31.57%, or \$6,314 of the requested funding. The remaining funds of \$13,686 will be used to propagate native Geyer Willow plants from cuttings using established greenhouse infrastructure at the Klamath Tribes' Aquatics facility. Funding will be used to purchase 4,320 one-gallon reusable nursery pots for \$2,106 and supply 772 hours of labor at \$15 per hour for youth employment for tribal members 25 years and under.

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The U.S. Fish and Wildlife Service will provide technical assistance, logistical support, and access to the worksite.

.....

Timeline *

Please identify the key milestones towards completing the project and achieving results.

- a. Fall 2021: Collect willow cuttings and propagate in greenhouse b. Winter 2021/2022: Tend to willow cuttings and monitor BDA c. Spring 2022: Plant willow cuttings and begin construction of artificial lodge d. Summer 2022: Monitor plant establishment and BDA activity e. Fall 2022: Evaluate suitability of site for introduction of a family of beavers f. TBD: Introduce beavers when habitat is deemed suitable g. Ongoing: Continued semi-annual monitoring

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

This project is ongoing through The Klamath Tribes staff and funding, having initially started in the fall of 2021 with the installation of the first BDA. Project work will be completed by employed tribal members, including full time staff and tribal youth internships. The local raw materials used to construct this BDA have since began to successfully grow and establish roots. This is a large part of the project and with an established BDA in place, our chances of success with the remaining effort is much greater.

By using the best available science and adaptive management, the expected outcomes of this project are complimentary with the goals of the KMNWR, state and federal agencies, and the Klamath Marsh National Wildlife Refuge Comprehensive Conservation Plan Strategy 2.1.5 (2010:127), which states:

“Study the role of beaver in maintaining and creating additional riparian and wetland habitats within the Refuge marsh ecosystem. Evaluate the potential to re-introduce beaver and muskrats into the marsh to enhance and/or increase riparian, sedge, and other wetland habitats.”

References

USFWS (U.S. Fish and Wildlife Service). 2010. Klamath Marsh National Wildlife Refuge Final Comprehensive Conservation Plan, Tulelake, California. Online at:
[https://www.fws.gov/uploadedFiles/Klamath_Marsh_CCP_Final\[1\]\(1\).pdf](https://www.fws.gov/uploadedFiles/Klamath_Marsh_CCP_Final1.pdf)

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In 2019, the Klamath Tribes Aquatics Department completed the KingFisher Ranch Project which included non-native vegetation control, riparian fencing, and an off-stream water facility. The 11-acre ranch, which is managed primarily for cattle grazing and adjacent to the Williamson River, received non-native noxious weed removal from the riparian zone, approximately 4,800 feet of riparian fencing, and off-stream cattle watering facilities. Results from project actions include improved riparian habitat conditions and an increase in native willow and riparian plant species. The intended long term results include bank stabilization, a decrease in bank erosion and undercutting, and continued riparian zone health.

Project 2

1500 maximum characters

In 2018, the Gnesa Lower Williamson River Instream Habitat Restoration Project was completed by the Klamath Tribes Aquatics Department. This project consisted of creating instream habitat for redband trout, Lost River Suckers, and Shortnose Suckers for a section of the lower Williamson River that was devoid of instream cover and habitat. Numerous trees were placed along the stream bank and have since shown to provide cover/habitat.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

Andrew.R.Meyers@odfw.oregon.gov

Project Information

Project Title *

Northwestern Pond Turtle (NWPT) Life History and Habitat Study in Mosier, OR

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Northwestern ponds turtle (*Actinemys marmorata*; NWPT) populations are in decline across their geographic range, however little information is known about the habitat requirements and basic life history needs for the species; therefore, our aim is to provide a baseline for which to build conservation strategies. This project expands upon an ongoing, multi-year northwestern pond turtle monitoring project in Mosier, OR to fill an existing data gap on areas of utilization across the terrestrial habitat and engage members of the community to help collect this data. This population is of particular interest since it is one of the farthest east in the Columbia Gorge and appears to be healthy both in terms of disease and number of individuals. Through our previous work marking turtles in their aquatic habitat in this area, we have been able to estimate population sizes and collect demographic data on NWPT within a network of ponds, primarily on private land. From past monitoring efforts, we know that NWPT are moving between the network of ponds we are surveying; however, we lack data on terrestrial habitats used for overwintering and nesting. This research will enable us to identify and conserve movement corridors between aquatic and terrestrial habitat and to gather basic life history information on the timing of nesting, overwintering, and movement between ponds. This information will help to inform and prioritize habitat enhancements on private land both locally and statewide. Additionally, because the pond sites exist primarily on private land, the current project has been particularly effective in engaging the Mosier community. We would like to continue this engagement by inviting students to help with our spring capture and marking events through formalized partnerships with local school districts. Understanding how NWPT use upland habitats will help us capitalize on and provide funding opportunities for private landowners to enhance these areas.

Primary Contact Person *

Andrew Meyers

Primary Contact Email Address *

Andrew.R.Meyers@odfw.oregon.gov

Primary Contact Phone number *

5417050664

Lead Organization *

Oregon Department Fish and Wildlife

Mailing address *

3701 W 13th St, The Dalles, OR 97058

Lead Organization Federal Tax ID *

ODFW

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Mosier, Oregon

Project Location (County) *

Wasco

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

07 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

24000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The northwestern pond turtle (NWPT) is a conservation strategy species with a population center in the East Cascades ecoregion in Mosier, OR. This population has been monitored by ODFW using various methods since 2009. The current survey methodology includes using passive integrated transponder (PIT) tags to uniquely mark turtles upon capture in ephemeral ponds between May-July each year. Since 2018 we have been able to mark 230 unique turtles and estimate population sizes at 10 ponds (added two new ponds in 2020), as well as collect morphometric data. From past monitoring efforts, we know that NWPT are moving between the network of ponds we are surveying, but we are lacking data on timing of dispersal. Although the current project fills information gaps on abundance and population dynamics over time, we are still missing the necessary information to reach important conservation goals outlined in OCS that are largely based around management of terrestrial habitat. We are proposing to use money from this grant to purchase transmitter equipment that will build upon our current survey methodology and enable us to identify and protect safe movement corridors between aquatic and terrestrial habitat, gather basic life history information, protect adjacent upland habitat, and establish priority areas for enhancement. Specifically, we will place an additional 10 VHF radio transmitters on turtles in two ponds to pick up fine-scale terrestrial movement information for the ponds that we have the most robust population estimates for. We will also use these transmitters to locate overwintering and nesting areas and complete nest surveys at these sites. Additionally, we will use GPS transmitters to passively track terrestrial movements, as well as locate nesting and overwintering locations at one pond. We are also proposing to pilot a novel PIT tag array which would capture turtle movement events into and out of a pond that we currently have 70 individuals PIT tagged. This would help inform a multitude of information on nesting and terrestrial habitat use. If successful, this would not only provide valuable information in locating nesting events and passively recording the timing of those events but would also cut monitoring efforts to a fraction of the time. Due to its location within the Columbia River Gorge, a recreation hot-spot within the state, this population is vulnerable to fragmentation due to residential and recreational development pressures. With the information that this grant could help us collect, we can ensure that if recreation is expanded, conservation efforts can focus on the terrestrial habitats NWPT need. By protecting and enhancing these areas, NWPT will continue to be able to access terrestrial corridors within the Mosier area crucial to conserve its population.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The goal of this project is to better understand the movement behavior and habitat needs for an Oregon Conservation Strategy Species. This project addresses the following objectives: 1) identify and conserve NWPT movement corridors between aquatic and terrestrial habitat, 2) collect basic life history information on the timing of nesting, overwintering, and dispersal, 3) protect adjacent upland habitat, and 4) establish priority areas for habitat enhancement. This will provide not only critical information for the conservation of the Mosier NWPT population, but also NWPT populations statewide. By using data from radio-marking individuals, we will be able to track and collect life history information that is fundamental in helping conserve and protect the species. This project will also provide the agency an opportunity for outreach with the public by arranging volunteer experiences with local community and schools during capture events. The outcomes from this study will also assist in informing landowners on the importance of their property for NWPT conservation and create a program to provide technical and financial assistance through the NRCS to enhance upland habitats.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The goal of this project is to better understand the movement behavior and habitat needs for an Oregon Conservation Strategy Species. This project addresses the following objectives: 1) identify and conserve NWPT movement corridors between aquatic and terrestrial habitat, 2) collect basic life history information on the timing of nesting, overwintering, and dispersal, 3) protect adjacent upland habitat, and 4) establish priority areas for habitat enhancement. This will provide not only critical information for the conservation of the Mosier NWPT population, but also NWPT populations statewide. By using data from radio-marking individuals, we will be able to track and collect life history information that is fundamental in helping conserve and protect the species. This project will also provide the agency an opportunity for outreach with the public by arranging volunteer experiences with local community and schools during capture events. The outcomes from this study will also assist in informing landowners on the importance of their property for NWPT conservation and create a program to provide technical and financial assistance through the NRCS to enhance upland habitats.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
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- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project meets priorities for conservation and engaging Oregonians. It also has multiple connections to the Oregon Conservation Strategy (OCS). First, this project meets priorities for conservation by addressing the need to identify and protect safe movement corridors between aquatic and terrestrial habitat, gathering basic life history information relating to terrestrial habitats, protecting adjacent upland habitat, and establishing priority areas for protection and management. These are all called out as goals for the species management within OCS. Second, the northwestern pond turtle is a strategy species in the OCS and have been identified as a top 5 priority species by the conservation program within the East Cascades ecoregion. From information on movement corridors between ponds collected in this project, we can inform additional landowners on the importance of their property for NWPT conservation and provide technical and monetary assistance through the NRCS if applicable. Finally, the existing project in Mosier provides a successful example of engaging private landowners in conservation, by providing opportunity for engagement at their ponds and with students who are interested in biology, this will be enhanced with work done in this project. We will engage students from nearby communities through a more formalized agreement to help with much of the on-the-ground work throughout the year.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

OCRF money will be spent on necessary equipment to mark and monitor animals to allow staff to collect data on movements via VHF and GPS technology. Specifically, the costs will total \$23,500 for VHF transmitters for 10 additional turtles (\$3,000), 4 GPS transmitters to mount on turtles (\$4,400), GPS programming and base station (\$1,100), 4 PIT tag antennas (\$4,000) and receiver stations (\$6,000), and epoxy and plaster to mount (\$100). This project will need a dedicated employee to work with volunteers and to run the transmitters and traps. We plan to hire an intern, through Oregon State University which offers a valuable learning opportunity while also being cost-effective. Their salary will approximately (\$6,000) for 3 months.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

This work will mostly be conducted by ODFW. However, we plan to actively engage the local landowners and school districts during capture events.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

We captured and placed radio transmitters on 9 turtles in the summer of 2021. We plan to hire an intern in April 2022 to allow time for training and for them to become familiar with the study area. During April 2022 we would also install the PIT tag readers and array around our pilot pond. We will capture 11 additional turtles to place transmitters on in May 2022 prior to their dispersal to nest sites. Based on past success trapping and marking turtles, we expect to finish trapping in May 2022. As soon as turtles are radio-marked, the full-time intern will locate each radio-marked turtle daily. This daily monitoring will continue to track each turtle through July. Daily monitoring is required as the nesting window for turtles is very short. Once a turtle is located on a nest, we will take several habitat measurements. The intern will also collect dispersal data from early June through July, when we have noticed the density of turtles decreasing in ephemeral ponds and believe that nesting is taking place. The GPS transmitters will also give us timing of movement to overwintering habitat, which will then trigger another tracking effort for the VHF transmitters. This can be repeated multiple years at multiple locations where pit tagged turtles exist to better understand and protect movement corridors. We would like to have at least 1 year of movement data before completing our spatially explicit map. We would like to complete at least 2 years of nesting data before submitting our finding to a peer-reviewed journal to account for annual variability.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

We surveyed the White River data analysis unit (DAU) to estimate the wintering mule deer population using a novel technique that combines sightability and quadrat surveying approach (i.e. sighthat). Surveys were conducted on Feb 2-5, 2021 and took ~35 hours to complete. We estimate the population in the White River DAU to be 8,511 mule deer (SE=808.2; 95% CI= 10,095 – 6,927) and population in just the Whiter River wildlife management unit (WMU) to be 5,435 (SE=714.4; 95% CI= 6,836 – 4,035). The represents a 53% decrease since the last sighthat survey in the White River WMU that was conducted in 2016. The last survey in the White River WMU was conducted in Feb 2016 and estimated that the population size was 11,675 mule deer. This most recent estimate of 5,435 indicates a decrease of approximately half (53%) in 5 years (Fig. 2). The 2021 sighthat population estimate lines up with the predicted population decrease from the most recent modeled population estimate for the White River WMU.

Project 2

1500 maximum characters

Mule deer population estimates within the White River Wildlife Management Unit (WMU) have traditionally been generated from counts on aerial surveys. In forested landscapes aerial counts are difficult because canopy cover obstructs the observers' view. Newer camera-based sampling methods show great promise as a solution in generating population estimates within these forested landscapes. In February 2021 we conducted a SightRat survey as part of ODFW's 5-year cycle of population estimation for the White River Data Analysis Unit. We used this pre-planned aerial population survey to compare that count with the accuracy of camera trap survey methodologies. Our results show that camera trap methodology provides estimates that are similar to those generated from aerial counts. In this instance it appears that the IS method of estimating abundance was the most similar to aerial counts. The point estimate for the IS method underestimated the deer count but confidence intervals overlapped all but the aerial count with a correction factor applied for 88% sightability. Based on this small-scale study, our results show that camera traps to estimate population size are a promising technique. They provide a methodology for estimating population that is still time consuming but overall cheaper to implement than aerial survey methods

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

tim@myowf.org

Project Information

Project Title *

Southern Oregon Wildlife Crossings Mitigation and Alternatives Analysis

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

This proposal is submitted by the Oregon Wildlife Foundation on behalf of the Southern Oregon Wildlife Crossings Coalition (SOWCC), a partnership of individuals and organizations dedicated to improving habitat connectivity and safe passage for wildlife across I-5 in the Klamath Mountains ecoregion. We propose to conduct a preferred mitigation alternative analysis of six wildlife crossing locations on I-5 between Ashland and the California border in southwestern Oregon. These sites were identified by the SOWCC as potential opportunities for wildlife passage in this stretch of I-5. I-5 bisects this region of rich biodiversity known to provide critical linkages among coastal mountains, the Siskiyou ecological province, the Cascade Range, and High Desert. Highly significant migratory fish and wildlife populations occur on both sides of the interstate, which is bordered by large areas of intact habitat on a mix of public and private lands. Among these public lands is the Cascade-Siskiyou National Monument, which was designated to protect the high levels of biodiversity in the region and is itself bisected by I-5. Various species and large populations of ungulates attempt to cross I-5 with mixed success or are deflected away from the highway. ODOT carcass-collection data show that this 14-mile stretch of interstate is an area of high wildlife-vehicle collision density creating a safety hazard for both motorists and wildlife. There are currently no dedicated wildlife crossings in this area. We have evaluated existing highway infrastructure for its potential to be improved for safe wildlife passage across I-5. The six sites we've identified represent the best known of these opportunities and include locations where minor retrofitting could benefit crossing success, as well as sites that would require substantial reconstruction or new structures. The SOWCC includes representatives from State and Federal agencies, local and statewide nonprofit conservation organizations.

Primary Contact Person *

Tim Greseth

Primary Contact Email Address *

tim@myowf.org

Primary Contact Phone number *

5039392257

Lead Organization *

Oregon Wildlife Foundation

Mailing address *

901 SE Oak Street, Suite 103, Portland, Oregon 97214

Lead Organization Federal Tax ID *

93-0797904

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Ashland

Project Location (County) *

Jackson

Project Start Date

MM DD YYYY

03 / 15 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

125000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Interstate 5 runs in a north-south line through the project area across the Siskiyou Summit, which divides the Rogue River and Klamath watersheds. This area harbors large populations of deer and elk and a rich biodiversity owing to connections among several ecoregions. Interstate-5 poses a narrow but significant barrier that fragments important habitats, severs wildlife connectivity corridors, and lacks dedicated elements to facilitate safe wildlife passage. Data from ODFW scientists (Coe et al. 2015; Wildlife Soc. Bull. 39:256-267) indicate that wildlife vehicle collisions (WVCs) peak as annual average daily traffic approaches 8,000 vehicles and that fewer deer attempt crossing above that level. I-5 in this region currently carries more than 17,000 vehicles daily, indicating a high likelihood that this stretch of highway is a severe barrier for migratory wildlife. Improved wildlife crossings across I-5 in southern Oregon are badly needed to address the following critical issues:

1. Public safety danger and economic losses from wildlife-vehicle collisions,
2. Loss of interregional ecological connectivity, and
3. Loss of biodiversity.

1. **Public Safety Danger and Economic Losses from Wildlife-Vehicle Collisions (WVCs).** The Oregon Department of Transportation (ODOT) reports that the average WVC involving deer costs \$6,617 for emergency response, towing, repairs, and medical expenses, while a WVC involving elk average \$17,483 in costs. According to ODOT data, there are approximately 7,000 WVCs annually in Oregon involving deer and elk. Between January 2016 and December 2020, ODOT collected 157 deer, 5 bear, and 1 cougar carcasses from along I-5 between Mile Post 0 and 14 (i.e., project area; data from ODOT GIS Unit GIS No. 23-97, June 2021). This is likely only a small fraction of the wildlife that were involved in WVCs, as many injured animals escape the highway and die in adjacent habitat or are removed prior to ODOT staff reaching the area. The number of smaller animals involved in WVCs is unknown but likely much higher.

2. **Loss of Interregional Ecological Connectivity.** The Cascade-Siskiyou National Monument (CSNM) lies in an ecological transition zone of renown biodiversity at the intersection of several major ecoregions, including the Klamath-Siskiyou to the south and west, Coast Range to the north and west, Cascades to the east, and High Desert arid-land basins to the southeast. Interstate-5 is a very narrow yet intense linear source of disturbance that bisects these connections from north to south, and is the greatest source of ecological fragmentation in the region. Federal land management agencies and numerous non-profit organizations, including the Southern Oregon Land Conservancy, Pacific Forest Trust, and Selberg Institute, have devoted significant resources to protecting the public and private lands of this vital ecological crossroads. The value of these investments is undermined by the barrier posed by I-5 in its current condition. Connectivity across I-5 must be restored to retain the ecological values of these significant conservation investments.

3. **Loss of Biodiversity.** Interstate-5 bisects and fragments the CSNM, which is the only national monument in the country established because of its high biodiversity values. No dedicated wildlife crossings exist in the project area. ODOT carcass collection data document large animals involved in WVCs in the project area, including mule deer, bear, and cougar. Elk are also common near the Oregon-California border and likely also die from collisions in the project area. While some animals manage to cross I-5 despite the hazards, unknown numbers of large and small mammals, reptiles and amphibians are deterred from attempting to cross the busy interstate because of highway noise, lights, vibrations, and fast vehicle movement. Scientists within the SOWCC have identified the following special status species that could

benefit from improved fish and wildlife crossings in the project area: Fisher West Coast Population (federal "Species of Concern" and "Oregon Conservation Strategy Species"); Gray Wolf (currently delisted but of high conservation interest); American Marten (Oregon sensitive species); Ringtail ("Oregon Conservation Strategy Species"); Mountain Quail ("Oregon Conservation Strategy Species"); Coastal Tailed Frog ("Oregon Conservation Strategy Species"); California Mountain Kingsnake ("Oregon Conservation Strategy Species"); Klamath Black Salamander (rare); Western Pond Turtle ("Oregon Conservation Strategy Species"); Foothill Yellow-Legged Frog ("Oregon Conservation Strategy Species") and Southern Oregon Northern California Coho Salmon (federal "Threatened"). Connectivity is especially critical to the recovery of wide-ranging imperiled species, such as gray wolf, fisher, and marten, that need vast areas for population persistence.

Our six feasibility sites range from Mile Post 1.5 to 11.5 along I-5 and include a variety of existing culverts and bridges that may currently facilitate wildlife crossings but could be significantly improved by engineering changes identified through this grant application, or through development of completely new facilities. In some areas, new bridges, culverts, or wildlife overpasses may be required. Directional fencing also would be needed to funnel wildlife to these crossings structures to significantly reduce WVCs and improve prospects for biodiversity persistence and ecological connectivity.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The project goal for the SOWCC is a carefully designed array of wildlife under- and overcrossings in the target stretch of I-5 to facilitate safe passage for wildlife and improve safety for interstate travelers. These crossings will support safe east-to-west movement and migration of numerous species, reconnecting previously fragmented lands, promoting biodiversity, and increasing public safety for over 6.2 million annual travelers. Wildlife fencing and habitat improvements will orient an array of wildlife species to a variety of crossing structures for safe passage across the interstate. Students from local schools and universities will assist agency scientists in monitoring wildlife use, identifying solutions, and demonstrate the effectiveness of wildlife crossing improvements. Digital and print communication will raise awareness about the problem of wildlife-vehicle collisions and solutions that benefit people and wildlife while preserving the ecological connections for which this region is world-famous.

Our immediate objective is to determine mitigation needs and conceptual design alternatives for six potential crossing locations on I-5 between Ashland and the California border. These sites and their current situation, according to ODOT and BLM 2021 GIS data and site inspections, are:

1. Neil Creek, Mile Post (MP) 10.4, an 8-ft wide box culvert and Neil Creek Road which passes under I-5.
2. Wall Creek, MP 8, small, gated culvert with an adjacent railroad overcrossing bridge.
3. Steinman Creek, MP 6.5. Intermittent stream crosses under I-5 in small culvert.
4. Mt. Ashland Exit, MP 6. Two bridges provide undercrossing at I-5.
5. Near Siskiyou Summit, MP 5. Somewhat larger culvert crosses under I-5.
6. Mariposa Preserve, MP1.5. 5-ft diameter culvert under I-5.

The proposed study, to be conducted by Samara Group, will provide site-specific analyses, and identify alternatives that include small and large culverts, bridge overcrossings, bridge undercrossings, wildlife fencing, and habitat improvements. The study will consider habitat and movement needs of a wide range of species and provide for a variety of crossing options that benefit the high biological diversity in the region. Results of the study will provide the context for final engineering designs and facilitate the ability to pursue private, state, and federal funds for what will one day become a network of linked wildlife crossings from Ashland to the California border.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

We expect to contract with Samara Group for the proposed wildlife crossings mitigation and alternative analysis. Samara Group has considerable expertise in the science of wildlife crossing needs and development, and we have worked with them successfully in previous wildlife crossing projects. We expect that the contract will yield the following results for each of our six feasibility sites in the project area: 1) assessment of current habitat conditions that lead to current wildlife-vehicle collisions, 2) alternatives for these crossings to correct or mitigate existing conditions, and 3) feasibility and benefits analysis for alternatives. These results are expected by the end of 2022 (12/31/2022). This information will help identify top priority crossing projects for which engineering designs will be developed during the next phase of this initiative. Those engineering plans are expected by mid-2023. In the meantime, Coalition members are actively working with state and federal representatives to educate Oregonians on the value of safe wildlife crossings along I-5 in southern Oregon and to better understand and respond to upcoming funding opportunities. For example, the federal infrastructure bill currently being considered in Congress has a new USDOT wildlife crossing program with authorized funding.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project supports the Oregon Conservation Strategy by laying the necessary foundation to develop wildlife crossings and increase habitat connectivity along the I-5 corridor in the Klamath Mountains. This ecoregion is characterized by some of the most diverse wildlife habitats and species in Oregon. In fact, the World Wildlife Fund ranks the Klamath-Siskiyou region among the top areas of biodiversity in the world. I-5 is a narrow but significant barrier to fish and wildlife movement in the region, effectively separating the Cascades and High Desert regions from the Siskiyou and Coast Range. There are currently no dedicated wildlife crossings across I-5 in this region. Safe wildlife crossings in this area are possible by retrofitting existing infrastructure or by constructing new over- or undercrossings. Restoring habitat connectivity will become increasingly important as our rapidly changing climate forces more animals and a greater diversity of species to move to find suitable habitat conditions.

This project also supports the Oregon Conservation Strategy by developing scientific data and mitigation strategies for wildlife crossings along I-5. This information can be used to help model effective wildlife passage solutions on other parts of I-5 as well. Additionally, long-term plans of the SOWCC call for student-based effectiveness monitoring through our partners at Southern Oregon University and the Bureau of Land Management.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

All requested OCRFB funds will be used to contract for a mitigation and alternative analysis for six potential wildlife crossing sites in the project area along I-5 between Ashland and the California border. Total contract amount is estimated at between \$115,000 and \$125,000 to complete the analysis, which will identify existing habitat conditions, evaluate likely mitigation measures, and help identify the highest priority projects for the Coalition to pursue. Additional funds for the difference between OCRFB funds and the contract amount have been applied for or secured from OWEB, Mace Watchable Wildlife Fund, Wildlands Network, Oregon Wildlife Foundation, Rogue Valley Audubon, Oregon Hunters Association, KS Wild, and private donors (see notes below in Partners for secured matching funds).

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The following agencies and organizations are members of the Southern Oregon Wildlife Crossing Coalition. Their primary roles for this project are noted in parentheses. ODOT (expertise in wildlife crossings, GIS support, project right-of-way), BLM (Cascade-Siskiyou National Monument expertise, trail camera monitoring, cartography support), ODFW (wildlife expertise), Trout Unlimited (fisheries expertise, grant application development), Southern Oregon University (fisheries and wildlife ecology), Oregon Hunters Association (community outreach, matching funds for this grant), KS Wild (community outreach, matching funds for this grant), Pacific Forest Trust (coordination with private landowners, conservation easements at multiple feasibility sites), Southern Oregon Land Conservancy (coordination with private landowners, conservation easements on nearby private lands), Oregon Wildlife Foundation (primary non-profit applicant for the Coalition, experience with contractor on prior wildlife crossing projects, matching funds for this grant, grant application development), Rogue Valley Audubon Society (ornithological expertise, grant application development, matching funds for this grant), Selberg Institute (matching funds for this grant), SC Wildlands (connectivity expertise, grant application development), Mace Watchable Wildlife Fund (matching funds for this grant), and Soda Mountain Wilderness Council (coordination with other conservation groups, providing vehicles for site visits).

Timeline *

Please identify the key milestones towards completing the project and achieving results.

OWF has initiated conversations with our preferred contractor, Samara Group, to confirm that project expectations are properly aligned with expected funding and to expedite project undertaking and completion once funding is secured. March 15, 2022: contract signed with Samara Group. December 31, 2022: final report expected from contractor. December 2022: proceed with fundraising for detailed engineering designs for highest priority sites.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Many conservation investments have been made along both sides of the I-5 corridor in the Klamath Mountains ecoregion, including numerous conservation easements on private lands and special protective designations on public lands. For the value of these investments to be fully realized, biological connectivity must be restored from east-west across I-5. This project provides a critical step in that direction. Pacific Forest Trust and Southern Oregon Land Conservancy, both SOWCC partner organizations, have multiple easements in the project area.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The Sturgeon Lake Restoration Project replaced failing culverts under Reeder Road with a bridge and revived the Dairy Creek channel connection between the Columbia River and Sturgeon Lake. The sediment plugging the creek was deposited by the 1996 Columbia River flood. The fully reconstructed channel is designed to provide a tidal connection from the Columbia into Sturgeon Lake long into the low flow summer months; maximizing juvenile salmon access to the lake for rearing through most months of the year and helping reverse the accumulation of sediment. Oregon Wildlife Foundation was the fiscal sponsor for private gifts in support of this project. The Foundation raised just over \$500,000 to leverage additional public funding for this \$6.5 million dollar initiative.

Project 2

1500 maximum characters

In 2019, ODOT built a dedicated wildlife underpass on HWY 97 near the town of Gilchrist as part of a passing lane project. This part of 97, in central Oregon, is a red zone for wildlife-vehicle collisions (WVCs) as it cuts across historic mule deer migration routes. Unfortunately, ODOT didn't have enough money in their budget for funnel fencing, deer guards (at roads intersecting the project area), or jump-outs; critical elements in all successful wildlife passage projects. The estimated cost for the add-ons was \$959,000

Oregon Wildlife Foundation, in partnership with ODFW, ODOT, and other wildlife conservation nonprofits, jumped in to raise the necessary funds. The Foundation and partners have raised \$856,000 to-date and construction of the fencing and other elements is currently underway.

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

melanie.davis@oregonstate.edu

Project Information

Project Title *

Assessment of native fish population status and species distribution in Goose Lake Valley

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The Goose Lake Valley is an endorheic desert valley that runs north-to-south on the border of Oregon and California. The Valley's watersheds drain into Goose Lake – a slightly alkaline system that has historically dried up during severe drought years, and drains into the Pit River to the south during very high-flow years. There are several endemic fish species that occupy Goose Lake and its adjacent rivers, wetlands, and riparian areas: the Goose Lake redband trout, Goose Lake lamprey, Goose Lake tui chub, and Goose Lake sucker. These endemic species coexist with a variety of native and non-native species. Goose Lake and its surrounding watersheds are highly sensitive to climate-mediated disturbances such as drought. An increased frequency of disturbance events in the region may limit the accessibility, quantity, and quality of available habitat for native fishes, while increasing range expansion of non-native fishes may put undue stress on vulnerable species. The goal of this project is to aid agency partners in conducting a population status assessment for at-risk native species in the Goose Lake ecosystem and to determine which areas are most at risk of declining populations due to disturbances such as drought and invasive species. This research is timely because consistent surveys have not been conducted in many of Oregon's high desert basins for more than a decade. Updated abundance and distribution estimates will inform state and federal managers as to the population status of at-risk native fish species, while an assessment of habitat quality will support actionable management outcomes.

Primary Contact Person *

Melanie Davis

Primary Contact Email Address *

melanie.davis@oregonstate.edu

Primary Contact Phone number *

541-737-1961 (office)

Lead Organization *

Oregon Cooperative Fish and Wildlife Research Unit

Mailing address *

104 Nash Hall, Oregon State University, Corvallis, OR 97331

Lead Organization Federal Tax ID *

61-1730890

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Lakeview, OR

Project Location (County) *

Lake County, OR

Project Start Date

MM DD YYYY

09 / 30 / 2021

Project End Date

MM DD YYYY

09 / 30 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

19807

Total Project Cost *

186000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Background and Objectives: Oregon's closed lakes basin is a unique, high desert ecosystem encompassing numerous rivers, wetlands, and riparian areas that are critical habitat for native fishes and resident and migratory waterfowl. These aquatic systems are highly sensitive to climate-mediated disturbances, especially warming temperatures and drought. As disturbance events increase in frequency and intensity, the accessibility, quantity, and quality of available habitat for native fishes may decline. Meanwhile, range expansion of non-native fishes may put undue stress on vulnerable species via predation and/or competition for resources. The goal of this project is to aid agency partners (Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service) in conducting a population status assessment for at-risk native species in the Goose Lake Valley, and to determine which areas are most at risk of declining habitat quality due to invasive species and climate-mediated disturbances such as drought. We will accomplish this goal by satisfying the following research objectives: 1) Create a database of water bodies in the Goose Lake Valley and their associated habitat characteristics, 2) Conduct updated surveys in the area using traditional (minnow traps, seines, electrofishing) and novel (eDNA) methods, and 3) Assess potential changes in population status and habitat quality in the face of invasive species and climate-mediated disturbance.

Study System: The Goose Lake Valley is an endorheic desert valley approximately 75 km long by 19 km wide that runs north-to-south on the border of Oregon and California. It is bound by the Fremont Mountains to the north and west and the Warner Mountains to the east. Goose Lake itself is a large, slightly alkali lake with a surface elevation of 1,434 m above sea level. The lake has historically dried up during severe droughts, while during very high-flow years the normally closed system overflows into the Pit River to the south. There are several endemic fish species that occupy Goose Lake and its adjacent rivers, marshes, and riparian areas: the Goose Lake redband trout, Goose Lake lamprey, Goose Lake tui chub, and Goose Lake sucker. These endemic species coexist with a variety of native (Modoc sucker, speckled dace, Pit roach, Pit sculpin) and non-native species (fathead minnow, brown bullhead, white crappie, yellow perch, pumpkinseed, brook trout). Goose Lake is part of the Thomas Creek-Goose Lake Conservation Opportunity Area, where the maintenance and restoration of riparian and wetland habitats for dependent fish and bird species has been identified as a priority need.

Methods: For Objective 1, we will create a spatial database of permanent and ephemeral water bodies in the Goose Lake Valley, including sites that have or have not been historically sampled. We will use GIS to characterize habitat characteristics for each site using publicly available land cover, land use, and remote sensing data. Specific characteristics may include elevation, slope, vegetative cover, land use type, snow coverage, accessibility, and burn intensity (especially with respect to the 2021 Cougar Peak Fire). Continuous data loggers and publicly available datasets will be used to assess water temperature and desiccation cycles in relation to seasonal and interannual drought conditions.

For Objective 2, we will assess fish species abundance in the Goose Lake Watershed using three methods: electrofishing to depletion in stream segments, mark-recapture methods using minnow traps or seines, and eDNA. We expect to sample roughly 30 sites using traditional survey methods and up to 100 sites using eDNA. During electrofishing efforts, we will isolate a 100 m stream segment using block nets. Biologists will conduct downstream-to-upstream passes along the stream segment until no further fish can be captured or are detected. Mark-recapture methods will be used to determine the efficacy of electrofishing efforts and to estimate abundance in areas where electrofishing would not be logistically possible (e.g., ponds or lakes). For the abundant species such as redband trout and speckled dace, we will set aside up to 20 individuals to

mark using fin clips or tags. Following sufficient time for recovery, we will re-sample the area using electrofishing or nets/traps (whichever is applicable), and use the re-capture rates of marked individuals to estimate abundance. eDNA will involve the collection of water samples at each site, which will then be processed by the Levi Lab at OSU. eDNA output will be compared with traditional survey data to evaluate its utility for system and basin-wide monitoring efforts.

For Objective 3, will use historical and project datasets to analyze population trends, community structure, and to relate native and invasive species distributions and abundances to specific habitat features. We will then use a decision support tool (e.g., species distribution model) to determine which species are most at risk for range contraction and declines in abundance due to increased drought, invasive species, and other disturbances. We will use the model in conjunction with the database from Objective 1 to assess habitat quality and to identify high-risk habitats that may benefit from targeted management actions.

Expected Deliverables: 1) A spatial database of aquatic habitats in the Goose Lake Valley, 2) An eDNA assay for several target species, 3) Decision support tool and habitat quality maps, 4) Raw survey data, 5) A final report in the form of a graduate student thesis, 6) At least one peer-reviewed publication.

Broader Impacts: This research is timely because monitoring efforts have declined in many of Oregon's high desert basins despite management recommendations, and consistent surveys have not been conducted in some areas (including the Goose Lake Valley) for more than a decade. Updated abundance and distribution estimates would inform state and federal managers as to the population status of at-risk native species (including several OCRf strategy species), while the proposed deliverables—a spatial database of aquatic habitats, an eDNA assay for target species, and habitat quality maps—would support actionable management outcomes. Furthermore, this project provides an opportunity to foster inter-agency collaboration. We have leveraged in-kind and monetary support from Oregon Department of Fish and Wildlife, U.S. Geological Survey, and U.S. Fish and Wildlife Service, with the potential for involvement with California Department of Fish and Wildlife, Bureau of Land Management, and U.S. Forest Service.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The goal of this project is to aid agency partners (Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service) in conducting a population status assessment for at-risk native species in the Goose Lake Valley, and to determine which areas are most at risk of declining habitat quality due to disturbances such as drought and invasive species. We will accomplish this goal by satisfying the following research objectives:

Objective 1) Generate a spatial database of permanent and ephemeral riparian and wetland systems, including sites that have been previously surveyed and those that have not yet been surveyed. A graduate student will use GIS to characterize habitat features for each site, and, if possible, assess desiccation cycles in relation to seasonal and interannual drought conditions using continuous data loggers and publicly available datasets. Impacts from wildfire (e.g., the 2021 Cougar Peak Fire) may also be assessed.

Objective 2) Revisit sites with known populations of sensitive native species and conduct updated surveys. The graduate student will estimate target native and non-native fish abundance using mark-recapture techniques and will survey for the presence or absence of other aquatic species using traditional field methods like electrofishing and minnow traps. They will work with the Levi lab at OSU to develop an eDNA assay for rapid assessment and will test the effectiveness of this assay using abundance estimates from the field.

Objective 3) Assess population status and habitat quality using survey and remote sensing data. The graduate student will analyze current and forecasted native fish population abundance and distribution using field and remote sensing data. They will determine which systems are most at risk of declining populations due to disturbances such as drought and invasive species and assess habitat quality to identify high-risk habitats that may benefit from targeted management actions.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

If successful, this project will provide information on how native and non-native species distributions have shifted over time and how they might change given future climactic conditions. It will serve as a pilot program for a broader, coordinated monitoring effort using eDNA, with the goal of informing management actions for the conservation of desert fish species and their habitat. The success of the project is dependent upon the utility of the data and associated deliverables for conservation and management agencies in the region. The project will be considered fully successful if our partner agencies can use the resultant deliverables to make management decisions for species and habitats, and/or to develop and implement a long-term monitoring plan.

Additional support from OCRf will improve project outcomes and increase the likelihood of success by providing resources for continuous data loggers, thereby allowing us to better characterize seasonal habitat conditions for native and non-native fish in several riparian areas. Such equipment will provide added value to the project because publicly available information on water level, temperature, and general water quality are sparse. OCRf funds will allow researchers to double their eDNA sampling capacity, thereby extending the scope of the project, especially in areas that may be unsafe to sample using traditional survey techniques due to the 2021 Cougar Peak Fire. Additionally, this project has an educational component in that funds will support travel and stipend for one undergraduate technician to assist with the project. The PI and the Department of Fisheries, Wildlife, and Conservation Sciences at OSU are fully committed to the recruitment and retention of students from historically excluded and underserved communities, and there are many existing programs at OSU to support such students.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our project advances Conservation & Recreation Advisory Committee Program priorities by conducting research and monitoring efforts that are directly relevant to the recommendations in the Oregon Conservation Strategy. It touches upon several Key Conservation Issues, including Climate Change, Invasive Species, Shifting Disturbance Regimes, and Water Quality and Quantity. In addition to advancing our knowledge of these conservation issues, funding from OCRF will support the conservation and management of native fish species (including recreationally important game and non-game species) in an imperiled, drought-sensitive landscape by testing the efficacy of low-effort monitoring techniques (eDNA) and providing an updated estimate of population status and trends. This research will be conducted in the alkaline wetlands and riparian habitats of the Thomas Creek-Goose Lake Conservation Opportunity Area, and will revisit monitoring efforts for several strategy species (redband trout, Goose Lake sucker, Pit sculpin, and the recently delisted Modoc sucker). It will promote opportunities for outreach, education, and engagement by recruiting students from historically excluded and underserved communities through established programs at Oregon State University and by working with local conservation groups like the Goose Lake Native Fish Working Group.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Specific expenditures that will be covered by OCRf funds include: Equipment – six continuous water temperature and level loggers at \$350 each (\$2,100) plus materials to build protective logger housing in the field (\$150). Personnel – ten weeks of salary for one undergraduate student field technician (\$15/hour), including estimated 12% OPE (\$6,750). Services – funding for processing 100 eDNA samples at \$50 each (\$5,000). Travel – one ten-day trip to the field site including gas (800 miles at \$4/gallon), lodging (\$96 per-night for ten nights), and per-diem (\$60 per-day for ten days) totaling \$1,720. Subtotal of requested funds amounts to \$15,720 plus indirect costs of 26% to Oregon State University (\$4,087) for a total requested amount of \$19,807.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

This project is partially funded by the U.S. Geological Survey and U.S. Fish and Wildlife Service. U.S. Fish and Wildlife Service is assisting with site access, volunteer labor, and landowner and stakeholder relations. Oregon Department of Fish and Wildlife's Native Fish Investigations Program will be actively involved in the project by serving on the graduate student's committee, providing in-kind support in the field, and equipment. Oregon State University Department of Fisheries, Wildlife, and Conservation Sciences is providing in-kind support for one Master's student and at least one undergraduate student field technician through graduate teaching assistantships and programs that support students from historically excluded and underserved communities (Vanguarding an Inclusive Ecological Workforce; VIEW, Beginning Undergraduate Researchers; BEU). The Levi Lab at OSU will be advising the collection, handling, and processing of all eDNA samples. California Department of Fish and Wildlife is conducting complementary sampling efforts at the southern end of the basin, with opportunities for direct collaboration.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Fall & Winter 2021 – site visit, assess accessibility of previously-surveyed sites, reach out to collaborators and stakeholders, examine historical data sets, develop eDNA sampling protocol; Winter & Spring 2022 – select survey sites, GIS analysis of historical conditions, deploy water loggers, conduct preliminary sampling efforts; Summer & Fall 2022 – intensive field sampling (fish capture, eDNA); Fall & Winter 2022 – collect water loggers, process samples, analyze data; Spring & Summer 2023 – present findings to collaborators and stakeholders, publish in peer-reviewed venue, graduate student defends thesis.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

PI Melanie Davis is an early career scientist and new faculty with the Oregon Cooperative Fish and Wildlife Research Unit. Her previous work (Project #1 and #2 below) was completed during her tenure as Biologist and Project Coordinator for the U.S. Geological Survey's Western Ecological Research Center.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

A mosaic of estuarine habitats can bolster the growth and survival of juvenile salmon by diversifying the availability and configuration of prey and refugia. Consequently, efforts are underway to restore modified coastal ecosystems to historical or near-historical conditions in much of the Pacific Northwest. Monitoring programs have allowed managers to assess the initial benefits of management efforts (including restoration) for juvenile salmon, but at present they have limited options for predicting the concurrent effects of climate change. We addressed this gap in knowledge using a comprehensive monitoring dataset from the Nisqually River Delta in southern Puget Sound, Washington. We designed and calibrated a marsh accretion model and decision support tool (called MOSAICS) using post-restoration monitoring data sets and spatial coverages. We then used output from MOSAICS, a hydrological model, and measurements of prey availability in a spatially explicit bioenergetics model to assess the habitat quality and growth rate potential of the estuarine habitat mosaic under different sea-level rise and management scenarios. Model output indicated that loss of low and high salt marsh reduced the amount of prey available for juvenile salmon, thus decreasing growth rate potential. Results from this project are being used to inform future management decisions by the U.S. Fish and Wildlife Service, Nisqually Indian Tribe, Tacoma Power, and Washington Department of Transportation.

Project 2

1500 maximum characters

Coastal estuaries are critical ecosystems for a variety of migratory waterbirds, serving as important stopover locations and providing essential roosting and foraging habitat. With the looming threat of habitat loss through development and global sea level rise, these ecosystems are expected to disappear at an alarming rate worldwide. Consequently, estuary-dependent avian species may be increasingly constrained in terms of optimal habitat if mitigation measures are not put into place. The goal of this project was to pinpoint habitat types in Willapa National Wildlife Refuge that promote greater avian biodiversity and optimal opportunities for foraging at different times throughout the migration season. We used monthly bird surveys in conjunction with high resolution biophysical datasets to determine which habitat types were most likely to be utilized by a variety of waterfowl and shorebird species. Because much of Willapa Bay is inaccessible by foot, we incorporated these analyses into a spatially-explicit predictive model, which was used to assess habitat utility in areas of Willapa NWR that cannot be surveyed on a regular basis. This predictive model will be used to inform adaptive management in areas that may be less suitable for migratory waterbirds, such as border habitat that is densely covered by invasive reed canarygrass, or slowly-revegetating mudflat habitat in restored marshes at the southern end of the Bay.

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

info@cascadiawild.org

Project Information

Project Title *

Wolverine Tracking Project: Monitoring rare carnivores on the Mt Hood National Forest

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The Wolverine Tracking Project is a community science project designed to address two critical needs: to conduct long-term monitoring of rare carnivores that supports and informs better wildlife conservation and management practices, and to connect Oregonians to the wildlife and wild places that make Oregon such a special place to live. The project uses volunteers to collect data on four Oregon Conservation Strategy species, Sierra Nevada red fox, wolves, wolverine, and fisher, as well as other carnivores, in the Mt Hood National Forest. Over the years, the project's success has been significant. Trail cameras documented gray wolves before the White River pack was officially established and provided the only recorded evidence of Sierra Nevada red fox in the area. Genetic samples have established the distribution of Sierra Nevada red fox in the northern Oregon Cascades. Through findings such as these, the project provides critical information to wildlife decision makers. As a community science initiative, the project also serves as a tool to educate people on the importance of wildlife in an ecosystem, the needs of wildlife, and the role of healthy ecosystems in supporting healthy human communities. Volunteers come from various backgrounds and help out in many different capacities. Pre-covid, 2019-20 saw 225 volunteers, over 4225 volunteer hours, 18 trail cameras, and 298 miles of track and scat surveys. We hope to be able to reach similar numbers this coming year. Long term volunteers serve as trip leaders, helping mentor new participants. Special workshops and trips will also be conducted for groups that don't usually have access to the outdoors, such as students of RISE (Refugee and Immigrant Student Empowerment) and Upward Bound (a program for students who are first in their family's history to go to college). With support from OCRF, Cascadia Wild would like in the coming year to make the program even more accessible to traditionally underserved communities.

Primary Contact Person *

Teri Lysak

Primary Contact Email Address *

info@cascadiawild.org

Primary Contact Phone number *

503-235-9533

Lead Organization *

Cascadia Wild

Mailing address *

5431 NE 20th Ave, Portland, OR 97211

Lead Organization Federal Tax ID *

93-1263285

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland, OR

Project Location (County) *

Multnomah, Clackamas, Hood River, and Wasco Counties

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

03 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

10000

Total Project Cost *

36500

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Cascadia Wild

Cascadia Wild is a local, Portland-based nonprofit whose mission is to connect people of all ages with the natural world, through teaching naturalist skills, creating meaningful interactions with local natural areas, and providing stewardship opportunities for serving the wildlife and wildlands of the Pacific Northwest. We were founded in 1998 to help alleviate the “nature deficit disorder” that is increasingly common today. Cascadia Wild's flagship program is the Wolverine Tracking Project, a community science initiative to collect critical wildlife data, increase access to wild places, and engage people in wildlife conservation. Cascadia Wild also offers classes and outings in nature-related skills -- animal tracking, botany, wild plant foraging, and wilderness survival -- combining modern ecology with ancient practices of living with the earth. It is our vision that people and communities will act with care and respect for the natural world, motivated by their understanding of their place in our interconnected ecosystems.

Project Background:

Cascadia Wild launched the Wolverine Tracking Project in 2000, and in 2003, entered a formal partnership with the Mt. Hood National Forest to take over their volunteer monitoring efforts for rare carnivores. As a community science initiative, the Wolverine Tracking Project is designed to address two critical needs -- to conduct long-term monitoring of rare carnivores that supports and informs better wildlife conservation and management practices, and to connect Oregonians to the wildlife and wild places that make Oregon such a special place to live. In 2016, we began an ongoing partnership with Defenders of Wildlife, whose support and funding has allowed us to expand the project.

Our work is focused in the Mt. Hood National Forest, an urban forest providing vital habitat for a diverse array of species and recreational opportunities for the public. It is one of the most-visited National Forests in the United States, with over four million visitors annually. By engaging the community, this project will build support for rare carnivore and habitat conservation, which is critical to preserving a healthy and balanced forest ecosystem, provide opportunities for wildlife viewing, and help protecting our state's natural heritage for future generations.

We have identified five target species at special risk in Oregon -- Sierra Nevada red fox, wolverine, wolves, fisher, and Pacific marten. Four of these target species have been identified as Oregon Conservation Strategy Species, which are Oregon's species of greatest conservation need. The last target species, Pacific marten, is considered by the Mt. Hood National Forest to be a species of concern. This project will provide a monitoring system to help fill data gaps on these species.

With increased information on the presence, distribution, and behavior of these rare carnivores, wildlife biologists can make more informed decisions regarding their management, and land managers can make better decisions about USFS travel management plans, Forest Plan revisions, and specific timber management and restoration projects. Defenders of Wildlife additionally uses the data collected to advocate for better wildlife policy at both the state and federal level.

Action Plan and Timeline:

We use three survey methods -- camera monitoring, tracking, and scat surveys. These methods provide effective and non-invasive ways to gather occurrence data on multiple species at the same time. All survey protocols were designed with input from agency biologists and conform to standards put out by the US

Forest Service PNW Research Lab.

Cameras are baited with scent and have hair snaggers placed by the bait to collect hair for genetic samples, and this year we will have 19 cameras operating. Each camera is checked and rebaited every four weeks. Camera volunteers are split into teams of six to eight people per camera station. Camera surveys will run October to April, and again from May to October, with training for volunteers taking place in April /May and November, at the beginning of each season. Snow tracking surveys (searching for footprints in the snow) will be carried out by teams of up to eight volunteers, including one to two volunteer tracking leaders. Tracking leaders must have two-years of experience and pass a written exam demonstrating their tracking knowledge prior to leading trips. They are responsible for the accuracy of the data, safety of the group, and teaching newer volunteers. This two-tiered volunteer base allows us to mentor new participants. Snow tracking surveys will take place almost every weekend from mid-December to the end of March, with trainings for volunteers in November. In scat surveys, volunteers hike trails searching for scat and go out on their own initiative. Surveys targeting Sierra Nevada red fox are open to everyone; surveys targeting wolves will be limited to returning volunteers to help maintain the sensitivity of the data collected. Fox scat surveys will take place May to October, when the high country is free from snow, and two sets of volunteer trainings will take place in May and June. Wolf scat surveys will take place year round, with a training in March to start off the new year. We are requesting funds from April 2022 through March 2023.

In the last year, our trainings moved online, for COVID-19 safety, and videos of survey procedures were made to show volunteers. This fall, optional field trainings will be added. In the future we hope to continue a hybrid of virtual and in-person trainings, to be able to offer volunteers the option that works best for them. Camera Crew volunteers will receive training on target species, camera protocols, and optional navigation practice training. Tracking Team volunteers receive a solid introduction to wildlife tracking (two to three sessions), as well as training in survey protocol. This year we have also formalized a Tracking Apprentice program for people who want to expand their tracking skills and become Tracking Leaders. Tracking Leaders, as well, receive ongoing training to further their tracking and leadership skills. Scat Team volunteers will also receive training on scat identification, target species biology, and survey procedures.

Other COVID-19 safety protocols will also be in place. This winter, group size will be limited to eight people, carpools will not be organized, and social distancing and wearing masks will be required in the field. Although these measures will impact the number of people who can participate as well as make it harder for some people to participate, appropriate protocols will continue to be followed as long as the situation warrants.

Cascadia Wild is committed to making our programs accessible to as a diverse an audience as possible. To further this goal, our board attended a diversity training last spring and is working to develop recommendations for volunteer tracking leaders on how to be more inclusive during trips. Cascadia Wild has been the recipient of pro bono consulting from the firm Pepper Foster Consulting to develop a new strategic 5-year plan this winter. One of the purposes of this effort is to develop a strategy for reaching out to and involving communities that don't traditionally have as much access to the outdoors.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The project serves a dual purpose of education/research, as well as outdoor recreation and providing access to the outdoors. Within these two defining visions, the project has the following goals and objectives:

Social Goal: Build a constituency for rare carnivore and habitat conservation, increase community involvement in the Mt. Hood National Forest, and increase participants' understanding and awareness of wildlife and wildlife issues.

Social Objectives:

- Provide opportunities for community members to participate in research to encourage their involvement and investment in protecting their local wildlife and forest habitats.
- Teach participants about wildlife and conservation issues, animal tracking, and the natural history of the Mt. Hood National Forest area.
- Increase diversity of volunteer base by expanding outreach and education to local high schools, environmental justice organizations, and low income and communities of color.

Research Goal: Increase knowledge of rare carnivores and their habitats in the Mt. Hood National Forest.

Research Objectives:

- Collect information on target carnivore species, as driven by the needs of the Mt. Hood National Forest, Oregon Department of Fish and Wildlife, Cascade Carnivore Project, and other interested parties.
- Stay in regular contact with agencies managing or studying these animals to provide data and make sure we collect data that is relevant.

Wildlife Policy Goal: Influence creation of better wildlife management policy by providing crucial data.

Wildlife Policy Objectives:

- Provide data to the US Forest Service, Oregon Department of Fish and Wildlife and other state and federal agencies to allow for more informed management decisions that better address rare carnivore biology.
 - Collaborate with Defenders of Wildlife to provide data to support better policy and advocacy to protect rare carnivores and habitats.
 - Expand engagement with agencies, organizations, researchers, and the public to make our data collection as useful as possible and encourage the use of a citizen science approach.
-

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The desired outcomes of this project lies within three broader categories:

Education and outreach outcome:

Volunteers, as participants in the project, enhance their understanding and aware of wildlife, wildlife issues, and rare carnivore and habitat conservation; communities that historically or otherwise do not have access to outdoors have an opportunity to engage in outdoor recreation.

Measurable outcomes:

- Engage at least 150 volunteers
- Provide trainings and ongoing support for volunteers
- Lead at least 4 trips for non-regular volunteer groups such as students or specially target groups
- Engage volunteers and the general public by posting findings in weekly newsletters and social media

Research outcome: Data collected from the surveys can reveal more information and increase knowledge of rare carnivores in the Mt. Hood National Forest, including their habitat needs and threats.

Measurable outcomes:

- Maintain 19 cameras, carry out 35 miles of snow tracking surveys, and carry out 175 miles of scat surveys
- Distribute research report with the year's survey findings in April 2022.

Policy outcome: Crucial data collected and shared by this project will inform decision makers and wildlife managers such as US Forest Service, Oregon Department of Fish and Wildlife and other state and federal agencies.

Measurable outcome:

Share all data with the Mt Hood National Forest, Oregon Dept. of Fish and Wildlife, Defenders of Wildlife, Cascade Carnivore Project, and other interested parties.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This is a volunteer driven project that focuses on engaging local communities in wildlife watching and learning to spot evidence of wildlife in nature. As a community science project, it engages individuals with no background in science or wildlife conservation and, as such, is a great tool to educate people on the importance of wildlife in an ecosystem, the needs of wildlife, and the role of healthy ecosystems in supporting healthy human communities. The project also actively tries to engage with underserved communities and communities that have been historically excluded from interacting and recreating in nature.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

The project will incur the following expenses:

Program coordinator salary \$22,000

Volunteer and outreach coordinator salary \$7000

Survey supplies \$2500

Volunteer events \$500 (assuming in-person events will be happening again)

Overhead (rent and insurance) \$4500

We would like to request \$10,000 from the Oregon Conservation and Recreation Fund. \$9,500 of this money will go towards personnel expenses, for the Program Coordinator and Volunteer and Outreach Coordinator's salaries. \$500 of this money will go towards project supplies, such as batteries, scent lure, and parking permits for volunteers.

Additional money for this project will come from the following sources:

Mt Hood National Forest: \$5000 (secured)

Grant from Sweetgrass Foundation: \$9000 (secured)

Defenders of Wildlife: \$8000 (secured)

Donations from individuals: \$4500 (anticipated)

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Mt. Hood National Forest: Help set research objectives and serve in an scientific advisory capacity.

Oregon Dept. of Fish and Wildlife: Help set research objectives and serve in an scientific advisory capacity.

Defenders of Wildlife: Play a critical role in outreach and funding, as well as provide expertise.

Each of the above partners are also the main recipients of the data that is collected.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Mar-Jun 2022: Volunteer trainings for summer season
 Apr-Oct 2022: Carry out surveys
 Oct-Nov 2022: Volunteer trainings for winter season
 Nov 2022-April 2023: Carry out surveys
 Apr 2023: End of year report and volunteer appreciation event

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Project website: <https://www.cascadiawild.org/wolverine-tracking-project.html>

Facebook: <https://www.facebook.com/CascadiaWild/>

Instagram: <https://www.instagram.com/cascadiawild/>

Twitter: https://twitter.com/cascadia_wild

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Cascadia Wild is an educational organization and as such, the Wolverine Tracking Project is our only project besides educational classes. The project is seasonal in nature, and successful completion of two survey seasons marks the annual completion of the project. The project has run for over two decades, including being successfully completed each year in the last five years. In 2019-20, before COVID-19 restrictions reduced the number of volunteers we could take, the project had 225 volunteers, over 4225 volunteer hours, 18 trail cameras, and completed 250 miles of scat surveys and 48 miles of tracking surveys. In addition to the Wolverine Tracking Project, the following efforts are worth mentioning.

In 2016, Cascadia Wild finished a series of 4 3-day events with the theme of connecting people with the natural world, in partnership with 8Shields PDX. This event series supported our class philosophy of providing hands on, experiential learning; combining modern ecological knowledge with ancient ways of living with nature; and demonstrating how the natural world is something we participate in, not just observe. The events were held at a remote retreat center, with participants staying on-site for the duration. Topics included animal tracking, story telling, bird language, awareness activities, and mentoring. As a result, people were enabled to deepen their connection to the natural world, to their community, and to each other. Each event had 75-100 people attending

Project 2

1500 maximum characters

Cascadia Wild has completed many short classes and outings that enhance participants' naturalist skills, geared towards a wide range of experience levels. In the last 5 years, we have completed 15 classes geared towards participants with little to no naturalist skills. These include 4 free 1 ½ hour plant identification classes in local natural areas, 2 free day-long wild plant foraging outings, and, when Covid-19 hit, 3 innovative on-line plant identification classes that lead participants on a virtual walk through different local natural areas. We have also completed 4 short introductory animal tracking classes, 2 of which were sponsored by Clean Water Services and free to participants, and 2 introductory bird language classes.

In addition to basic level skill building, we have also offered advanced classes and class series to help people deepen their knowledge. We completed 2 years of a 9-month Tracking Intensive series, designed to give participants advanced tracking knowledge and prepare for a professional certification. Five other day-long advanced tracking classes were also completed, as well as 2 years of a Naturalist Training Program, that met once a month for 8 months, teaching participants a wide range of skills to make them well rounded naturalists.

These classes helped participants deepen their connection to the natural world. Class size for the most the above classes was capped at 10-12 participants, and the majority of the classes filled to capacity.

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

martinizer@me.com

Project Information

Project Title *

Bull Gap Jump Line

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The Bull Gap Jump Line (BGJL) would convert one mile of rutted, rocky, run-off prone Forest Service road into a flowing, fun draw for mountain bikers of all abilities while also improving water quality in the Ashland Watershed. A mountain bike "jump line" is a smooth, rolling trail consisting of jumps, berms, whoops and other features. Many mountain bikers seek out these trails for their unique experience. The Ashland Watershed currently has just one such trail: Lizard, and it is by far the most popular trail in Southern Oregon. Adding another jump trail higher up on the mountain would provide mountain bikers an ideal flowing "bookend" experience. The Bull Gap Jump Line would serve a host of trail users, not just mountain bikers. In its current state, uphill hikers, joggers and equestrians must share the rock-strewn, blown out road with downhill mountain bikers. The conversion of the road into two, separated trails would provide uphill hikers, runners and equestrians a safe, enjoyable, ankle-friendly route while providing mountain bikers an improved downhill experience on a separate purpose-built trail. Just as important, this road to trail conversion would be an environmental win. By converting the current wide dirt road into two narrower, sustainable trails, runoff and sediment would be greatly reduced. The Bull Gap Jump line would also draw riders away from less sustainable, user-created trails for additional environmental benefit. The jump line build would be followed by the decommissioning of these unsanctioned "skid trails" to further reduce runoff.

Primary Contact Person *

Martin Stadtmueller

Primary Contact Email Address *

marrtinizer@me.com

Primary Contact Phone number *

617 510-0502

Lead Organization *

Rogue Valley Mountain Bike Association

Mailing address *

2305 Ashland Street, Ste. C, PO Box 202

Lead Organization Federal Tax ID *

46-5209569

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Ashland

Project Location (County) *

Ashland Watershed

Project Start Date

MM DD YYYY

09 / 01 / 2020

Project End Date

MM DD YYYY

10 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

110000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Bull Gap Jump Line (BGJL) would convert one mile of rutted, rocky, run-off prone Forest Service road into a flowing, fun draw for mountain bikers of all abilities while also improving water quality in the Ashland Watershed

A mountain bike "jump line" is a smooth, rolling trail consisting of jumps, berms, whoops and other features. Many mountain bikers seek out these trails for their unique experience. The Ashland Watershed currently has just one such trail: Lizard, and it is by far the most popular trail in Southern Oregon. Adding another jump trail higher up on the mountain would provide mountain bikers an ideal flowing "bookend" experience.

The project would be completed by a professional trail building company. RVMBA has been working with Trail Labs, Co out of Mt. Shasta, CA to develop a plan for trail construction. Trail Labs, Co is best known regionally for their work in Redding, CA. In partnering with the BLM, they created two iconic trails that now are a tourism draw for an area not normally known for tourism. In fact, the area played host to a NICA race in 2020 (the last before COVID) bringing in an estimated \$750,000 to the region over a three day weekend event.

Trail Labs Co would work closely with USFS land managers, geologists, and archaeologists to ensure building specifications were met. Several on-site and office meetings have taken place already, allowing RVMBA and Trail Labs Co to address questions and concerns from land managers. The project would draw on existing resources such as the trail itself, and utilizing soils from the hillside that would be mined in an environmentally conscious way to keep natural resources as the base for the trail, and cut down on the amount of outside resources needed to supplement.

BGJL is a similar project to the Redding examples in that it is a road to trail conversion. The project would employ a simultaneous building of trail and decommissioning of road, restoring over half of the road bed to a natural state. By reducing road footprint, impactful sediment collection in waterways can be mitigated. Creating sustainable trails and protecting the Ashland Watershed with net-positive impacts like road to trail conversions is paramount in keeping Ashland and the Rogue Valley a sustainable mountain bike destination.

Included in the project is the creation of a separate multi-user climb trail that would serve uphill mountain bikers, as well as hikers, runners and even equestrians. This component of the project would allow riders to complete more than one lap on the trail at a time, as well as drive or ride to the Mt. Ashland Ski Area parking lot with the intent of spending more time on the upper mountain. With Mt. Ashland Ski Resort looking into how it can best supply summer recreation, this project would bolster the number of visitors to the area. If Mt. Ashland decided to open their lodge or host summer events, showcasing a brand new trail would be an amazing selling point.

Outdoor recreation in general and mountain biking in particular have experienced a meteoric rise during the COVID-19 pandemic, due to the fact that the outdoors provide a COVID-safe experience. Mountain biking is an inherently socially-distanced activity. Providing people safe places to spread out while enjoying the mental and physical benefits of nature has proven to be an important outlet during these pandemic times. However, this can sometimes come with added traffic and social contacts when users congregate at the same trail heads and ride the same routes. Adding the Bull Gap Jump line would actually draw more

mountain bikers to new experiences in the upper watershed, helping to spread riders out for added COVID safety.

The Bull Gap Jump Line would serve a host of trail users, not just mountain bikers. In its current state, uphill hikers, joggers and equestrians must share the rock-strewn, blown out road with downhill mountain bikers. The conversion of the road into two, separated trails would provide uphill hikers, runners and equestrians a safe, enjoyable, ankle-friendly route while providing mountain bikers an improved downhill experience on a separate purpose-built trail.

Just as important, this road to trail conversion would also be an environmental win. By converting the current wide dirt road into two narrower, sustainable trails, runoff and sediment would be greatly reduced. The Bull Gap Jump line would also draw riders away from less sustainable, user-created trails for additional environmental benefit. The jump line build would be followed by the decommissioning of these unsanctioned "skid trails" to further reduce runoff.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The Bull Gap Jump Line would have two sets of complementary goals; one recreational, the other environmental.

Recreationally, the Bull Gap Jump Line would deliver an improved user experience for all trail users. Mountain bikers would have a safer, more inclusive and far more enjoyable downhill experience that would appeal to riders of all abilities. And thanks to its separate uphill trail, hikers, runners and equestrians would have their own trail devoid of the ankle twisting rocks strewn throughout the existing trail. What's more, by providing two separate trails, the Bull Gap Jump Line would also reduce user conflicts and greatly improve safety for all users.

Environmentally, the Bull Gap Jump Line would be a huge win for the Ashland Watershed. Converting the current runoff-prone fire road into two considerably smaller trails with properly managed drainage would greatly reduce the sediment making its way down through the watershed.

In addition, the Bull Gap Jump Line would allow for the successful decommissioning of several user-created skid trails, further reducing sediment runoff. Without an appealing alternative such as the Bull Gap Jump Line, any attempts to decommission these trails would likely be short-lived and futile. By providing a better, more enjoyable alternative trail, the Bull Gap Jump Line would draw mountain bikers away from these skid trails to ensure the long-term sustainability of any trail decommissioning efforts.

These goals all factored into the Rogue Siskiyou National Forest Service District's recent approval of the Bull Gap Jump Line project.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The Bull Gap Jump Line will deliver a host of positive results. For trail users of the upper watershed, whether hiker, runner, equestrian or mountain biker, the BGJL will provide a greatly improved user experience.

The current Bull Gap fire road doesn't work well for any of its trail users. For downhill mountain bikers, this one mile stretch of rock strewn fire road is where riders are most likely to suffer wheel & tire damage. It is also where riders, particularly those who are inexperienced, are most likely to be injured by crashing on the uneven rocky, rutted road. The Bull Gap Jump Line will provide a safer, more enjoyable downhill experience for mountain bikers of all abilities.

For hikers, runners and equestrians, the BGJL's separate climb trail will be a huge improvement over the current situation of picking one's way up between the rocks while also dodging downhill mountain bike traffic.

The Bull Gap Jump Line promises to become an area highlight, drawing mountain bikers and other trail users from around the Pacific Northwest to experience the local trail system. This in turn will help boost the local Ashland economy, which is currently reeling from the effects of covid and the closure of the Oregon Shakespeare Festival.

Environmentally, the Bull Gap Jump Line will be a significant win, reducing sediment runoff in two important ways. The first will result from converting the existing runoff-prone rutted fire road into two separate, smaller trails.

Secondarily, creation of the Bull Gap Jump Line will allow for the successful decommissioning of several existing unsanctioned "skid trails" that contribute to sediment runoff.

Metrics for measurement could range from trail counters demonstrating the number of riders NOT using skid trails, to water quality meters demonstrating the reduction in sediment, to local economic data demonstrating the uptick in tourist spending.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The Bull Gap Jump Line will be a win for both recreational trail users, including hikers, runners, equestrians and mountain bikers, as well as the full range of flora and fauna that occupy the Ashland watershed, thanks to reduced sediment runoff and the narrowing of a fire road into two, much smaller trails. This road-to-trail conversion promises to improve habitat through improved water quality and enhance connectivity thanks to the elimination of the current wide fire road.

Recreationally, the creation of a separate hiker/runner/equestrian trail will likely bring more users to the upper watershed to enjoy the spectacular views and old growth forest habitat.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

All funds will be used to pay our selected trail building specialist. As a fully volunteer led, 501(c) 3 organization, Rogue Valley Mountain Bike Association will be managing the project, in partnership with the Forest Service, but not drawing any funds.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Rogue Valley Mountain Bike is partnering with the Rogue River Siskiyou National Forest Service. The Forest Service completed the NEPA process and will be in charge of ensuring that all construction complies with their NEPA standards and meets agreed upon goals.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

December 2016 - Project idea proposed to USFS by RVMBA 2017 - Project added to list of Rogue River/Siskiyou NF (RR/SNF) projects 2019 - With no progress, RVMBA reignites discussion around the project in meetings with USFS Recreation Manager. Fall 2019 - RVMBA walks project with USFS and Trail Labs, Co 2020 - Project enters RR/SNF steering committee discussion and gains momentum June 2020 - RVMBA walks project with additional USFS personnel and Trail Labs, Co. Project receives green light for NEPA work Fall 2020 - RVMBA receives Bull Gap Planning Package from Trail Labs, CO to support project and USFS inquiries. January 2021 - RVMBA meets with USFS to discuss progress and funding avenues for a targeted spring 2021 build date. March 2021 - RVMBA and USFS discuss Travel Oregon grant as funding source. Meeting takes place with Brian White creating a memo giving USFS full support. Future Timeline: March 2021-June 2022 - Secure funding for project. USFS and RVMBA will contract with a trail building company to begin the building process. June 2022 - Begin construction. Estimated build time is 6-8 weeks.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Rogue Valley Mountain Bike Association designed, raised funds for, and built the Jabberwocky II trail in the lower Ashland Watershed. Like the Bull Gap Jump Line, Jabberwocky II was one element of the Forest Service Ashland Trails Project. Jabberwocky II replaced the original Jabberwocky trails due to it being unsustainable (too steep) and passing through Riparian Reserves.

The Jabberwocky II trail has been an undeniable success. It replaced a slide and runoff prone, seldom ridden trail with arguably the most popular trail in Southern Oregon. Much like the Bull Gap Jump Line, Jabberwocky II increased recreational enjoyment while reducing runoff and improving environmental conditions for local flora and fauna. Win. Win.

Project 2

1500 maximum characters

Rogue Valley Mountain Bike Association designed, raised funds for, and built the Lizard jump and flow line in the Ashland Watershed. Another key piece of the Forest Service Ashland Trails Project, Lizard trail was created to separate hiker/runner users from downhill mountain bikers. The goal in separating users is to decrease conflict, improve safety and also improve the trail experience for all users.

The Lizard trail is a clear success on all fronts. Not only is the Lizard trail itself a hit with mountain bikers from all over southern Oregon, by pulling mountain bikers off the old, shared use trail, the hiking and running experience has been greatly improved for those trail users as well.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

td@oregonhunters.org

Project Information

Project Title *

Restoring Hope & Habitat

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Oregon Hunters Association, Institute for Applied Ecology, and partners are working to restore sagebrush steppe habitat and bitterbrush communities recently impacted by wildfires in the Interstate Wildlife Management Unit (WMU). Over a half-million acres burned in the Interstate WMU in 2021, including the colossal 400,000+ acre Bootleg Fire. As a result, Oregon Conservation Strategy species and habitats are in need of habitat restoration. An extensive amount of two key plant species, antelope bitterbrush and mountain big sagebrush burned in these fires. Though they are a vital component of these ecosystems, these plants are tremendously slow to regenerate naturally. However, planting, and caging seedlings will considerably expedite their reestablishment. This project is set to provide Adults in Custody (AICs) at Warner Creek Correctional Facility (WCCF) sagebrush and bitterbrush seed in Fall 2021 and those seeds will be cleaned and sowed in Spring 2022. In Fall 2022, WCCF AICs along with a strong force of volunteers and OHA staff, will plant seedlings into previously burned areas for the benefit of wildlife. Together, we will plant a minimum combined total of 14,000 sagebrush and bitterbush plugs in critical areas identified by local wildlife biologists. This project will benefit the WCCF Sagebrush in Prison's Project to ensure its longevity and increase its capacity to assist in habitat restoration projects in Oregon. This unique program improves habitat for wildlife and offers horticulture training, ecological education, and nature connection to highly disadvantaged incarcerated AICs at WCCF. Training programs are some of the best ways to reduce recidivism and increase chances of employment upon release. This project offers AICs ongoing scientific curriculum, education lectures, workshops, and vocational training, while propagating thousands of native plants used to restore habitat.

Primary Contact Person *

Tyler Dungannon, Oregon Hunters Association, Conservation Coordinator

Primary Contact Email Address *

TD@Oregonhunters.org

Primary Contact Phone number *

5417781976

Lead Organization *

Oregon Hunters Association

Mailing address *

OHA Office, P.O. Box 1706, Medford, OR 97501

Lead Organization Federal Tax ID *

93-0834195

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Note from ODFW Staff -- Applicant called to indicate they accidentally selected Northern Basin & Range. This project is in the East Cascades.

Project Location (City) *

Klamath Falls, Paisley, Lakeview, OR

Project Location (County) *

Klamath and Lake Counties

Project Start Date

MM DD YYYY

11 / 01 / 2021

Project End Date

MM DD YYYY

12 / 01 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

40000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

INTRODUCTION: Oregon Hunters Association (OHA) conservation staff recently visited employees of the Institute for Applied Ecology (IAE) and gave a talk to adults in custody (AICs) at Warner Creek Correctional Facility (WCCF) located in Lakeview, OR in hopes of building a relationship with their native plant nursery program for future habitat projects. Since 2014, the IAE Sagebrush in Prisons Project (SPP) has provided means to restore hope to incarcerated people and Oregon's iconic wildlife and their habitat. The SPP is a win-win; its proven outcomes include large-scale restoration for species that inhabit sagebrush ecosystems, and it provides a powerful way for inmates to change their lives through education, inspiration, and job skills.

The SPP is designed to empower the incarcerated population which is made up of people from disproportionately large numbers of minority and disadvantaged backgrounds. Growing native plants allows AICs an opportunity to contribute positively to society and has therapeutic value resulting in a safer prison environment. The decline in human connection with nature is especially high in underserved communities including incarcerated people who number over 15,000 in Oregon. Quality, hands-on vocational programming is rare at prisons, especially during the Covid pandemic. We are increasing human connection with nature by engaging AICs in horticulture training and propagating native plants. Through this program, AICs are able to learn about conservation, botany, wildlife, horticulture and careers in natural resources while caring for native plants.

The Interstate Wildlife Management Unit (WMU) was subjected to extensive wildfire in 2021. Specifically, the Bootleg (413,717 ac), Cougar Peak (86,170 ac), and Patton Meadow (8,930 ac) fires have burned a total of 508,817 ac. Each of these areas are within the East Cascades Ecoregion and encompass sagebrush-steppe ecosystems, bitterbrush communities, and habitat for Oregon Conservation Strategy (OCS) species such as greater sage-grouse, brewer's sparrow, sagebrush sparrow, Swainson's hawk and pigmy rabbit among others. Bitterbrush communities (i.e., OCS specialized and local habitat) are vital because they provide cover and nesting habitat for various wildlife. Further, these plants provide important forage for mule deer and other species that migrate through the area from their summer range (i.e., OCS terrestrial animal movement strategy habitat). The need for restoration of these areas cannot be overstated.

METHODS / IMPLEMENTATION: OHA will purchase sagebrush (*Artemisia tridentata vaseyana*) and bitterbrush (*Purshia tridentata*) seed this fall and those seeds will be transported to the WCCF. Prior to the winter, IAE will clean and prep the seed for sowing for the upcoming spring. During the first week in May, IAE staff and contractors work directly with AICs to sow the sagebrush and bitterbrush seed. Plants are then watered and monitored daily with direct input from IAE contractors. The plants are thinned once they reach one inch tall followed by weekly fertilizing starting in June. Plants are then boxed up for restoration planting in October. We plan on AICs assisting with the restoration planting offering them the opportunity to participate in direct conservation programming outside the prison walls. During the propagation season, the AICs receive hands-on vocational training, horticulture curriculum lessons and professionals from outside the prison environment come inside to give presentations on conservation and ecology. We anticipate 40 inmates to be involved in the program during the season.

Next fall, OHA and IAE will deliver 7,000 sagebrush and 7,000 bitterbrush seedlings to several project locations within the Bootleg, Cougar Peak and Patton Meadow fire perimeters. Though specific planting locations are yet to-be-determined due to current post-fire closures, Oregon Department of Fish and Wildlife

(ODFW) Klamath and Lakeview District offices have outlined several areas in need of sagebrush and bitterbrush restoration including: Yaden Flat, Yaden Creek, Demming Creek, Round Butte, Obenchain Reservoir, Preacher Flat, and Clover Flat. These areas can be broadly described as relatively low elevation habitats that may be susceptible to poor natural regeneration of native flora and invasion of non-native vegetation due to limited moisture and other factors. Therefore, it is imperative that we give sagebrush and bitterbrush plants the upper hand and allow optimal succession of native species to occur. We have begun discussion with the United States Forest Service and Bureau of Land Management to ensure they have completed necessary National Environmental Policy Act assessments for these previously mentioned areas on federal land. Additionally, we will coordinate with these agencies to potentially apply herbicide to reduce competition with non-native vegetation in the planting areas.

Approximately 50 volunteers from OHA and partners, 4 officers, IAE staff and 10 AICs will be used for 2 days in order to plant and cage the 14,000 seedlings, which will amount to roughly 150 seedlings planted by each volunteer/AIC per day. We will plant approximately 128 ac of sagebrush and bitterbush seedlings using 20 x 20' spacing between plants (109 plants/acre). We chose this specific spacing to maximize our restored footprint and allow interspaces to naturally seed which will result in increased shrub density. It is expected that we will encounter some level of annual grass invasion post fire while planting, so care will be taken to remove competing non-native, invasive vegetation prior to planting.

Due to the extensive acreage impacted by wildfire in the Interstate WMU, this project is scalable and there is potential for this project to expand as greater support is received from agencies, non-government organizations and individuals. Additional project funds provided by Rocky Mountain Elk Foundation (tentative, up to \$10,000), Mule Deer Foundation (tentative, up to \$5,000), OHA State Board (\$3,000) and OHA Klamath (\$3,000) and Lake County Chapters (\$ TBD, up to \$2,000), may be used to purchase additional materials, and/or bitterbrush and sagebrush seed that will be spread directly on the ground to complement our seedlings. Further use of additional funds could be used to purchase more seedlings from the IAE SPP and potentially, supply water to seedlings where feasible.

This project is wide in scope and offers multiple gains to AICs as well as flow-on effects within the prison facility. Growing plants that help restore habitat offers AICs increased feelings of self-worth, a sense of giving back to the community and refuge from the chaos and limitations of prison life. Testimonials from AICs:

“When you are locked up you have no control over your life. There are currently not enough jobs in prison and when guys are idle, they get in trouble, and they dwell on their thoughts and have negative attitudes. This program gives us an opportunity to do something that will make a difference while incarcerated. It brings together a diversity of inmates to form a bond and learn trust. It creates positive attitudes in our prison community. You feel satisfaction from being involved and giving back to society. We learn that things aren't always so dismal in here—this program gives us hope.”

Prison Program Manager - “For the inmates, contact with people coming in from the outside to do nature programs, connects them with reality on the outside of prison, which in turn impacts the culture that we have in here. I see education as a culture within the prison culture. It has a very positive effect. When someone has been incarcerated, they need help preparing for reentry into society. This opportunity for inmates to have contact and exchange with people from the outside is a really critical part of that adjustment. It's positive and it's going to help prepare them for going out that door.”

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The sites for the project were selected in collaboration with the ODFW Klamath and Lake District staff. The habitat uplift from this project will be realized with use by Oregon Conservation Strategy species, and restoration of specialized habitats (i.e., bitterbrush communities). Additionally, these areas are critical winter range for mule deer and pronghorn. These large blocks of habitat are largely intact and have avoided fragmentation which has increasingly become a threat to sagebrush-obligate species. Vesper sparrow, savanna sparrow, short-eared owl, prairie falcon, and long-billed curlew have been documented on these sites prior to the wildfire. Seven of Oregon's 15 bat species have been documented in or adjacent to the project sites including OCS strategy species California myotis, long-legged myotis, pallid bat, silver-haired bat, and Townsend's big-eared bat. Additional efforts by the BLM on adjacent lands to control annual invasive grasses can provide a synergistic effect to this important habitat.

The crucial goal of this project will be to catalyze regeneration of sagebrush and bitterbrush stands to ensure these important species persist and outcompete invasive plants species that provide little to no benefit to native wildlife. In order to accomplish this goal, we will plant a minimum of 14,000 seedlings, and plant approximately 128 ac of disturbed habitat. The goals support primary objectives of ODFW, OHA, and Oregon Conservation Strategy.

As a group, AICs are among the most underserved communities in the US, with few resources for education or personal improvement. Providing this opportunity for AICs to grow plants for conservation and participate in a curriculum of natural science has three main outcomes for the population and the prison system. First, participating in growing and caring for native plants has therapeutic value, resulting in a safer prison environment and a higher sense of well-being for the inmates. Second, producing plants for habitat restoration results in a chance to "give back," through which inmates can contribute positively to society. And third, the educational opportunities they will be offered will give them valuable work skills (e.g., horticulture techniques) as well as information about the importance of habitat conservation. Previous sustainability work at prison facilities has shown increased positive attitudes toward environmental conservation.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Volunteers and AICs will plant a minimum of 14,000 seedlings covering a minimum footprint of 128 acres. We will consider this project a success if that feat is accomplished and the plants establish, providing quality habitat for wildlife.

OHA along with its partners and wildlife/land management agencies will monitor the success of this restoration, and this project will be beneficial via informing agency personnel of expected success elsewhere within the Interstate fire perimeters.

This project will allow AICs to grow plants for conservation and participate in educational programming. The programs and certificates provide valuable work skills and a higher sense of well-being as well as increasing post-release job opportunities. The outcomes and success of the program at WCCF will be measured through:

- At least 40 AICs will be involved in the program through educational programming, plant propagation, vocational training and outplanting.
 - Five horticulture workshops, 4 speakers and 6 curriculum lessons.
 - AICs will deliver 14,000 native plants which will be used to restore habitat for wildlife species.
 - 1789 contact hours for sowing, daily care of plants, outplanting, educational lectures/ workshops, curriculum and contractor and corrections staff supervision.
 - Inmates receive certificates of accomplishment for conservation science and vocational nursery skills.
-

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project will improve habitat connectivity for wildlife that use and migrate through areas affected by wildfire in the Interstate WMU. Fire scars, if large enough (e.g., the Bootleg Fire), can result in habitat fragmentation for species that depend on specific factors such as forage throughout their intraday and seasonal movements.

AICs at WCCF will have the opportunity to enjoy the outdoors. Engaging in safe outdoor programs gives these men a feeling of empowerment and helps them find their own voice. They often express their wish to be a positive role model for their families and others. "Doing good while doing time" encourages participants to set an example for peers and family by sharing their newfound appreciation and understanding of conservation and the outdoors as they return to society.

This program connects people to create a collaborative environment in which incarcerated individuals contribute to conservation. At the root of the expanding gap between people and nature is a lack of knowledge, comfort, and access to the outdoors. As this program creates regular opportunities for incarcerated individuals to get outside and propagate native plants, it addresses this challenge by establishing accessible and safe spaces for AICs to explore nature and develop an appreciation for conservation. In addition, this project gives natural resource partners an opportunity to expand their effort and creative positive energy for AICs at WCCF.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

OHA and its partners are seeking funds via the OCRf for purchase of 7,000 sagebrush (*Artemisia tridentata vaseyana*) and 7,000 bitterbrush (*Purshia tridentata*) seedlings, while concurrently supporting the Institute for Applied Ecology's Sagebrush in Prisons Project. All expenses below are supplies/materials/services and Travel (Please see attached budget/expenditure spreadsheet sent to odfw@ocrf@odfw.oregon.gov).

- Sowing: \$9,788
- Propagation: \$5,357
- Boxing up and planting out: \$4,246
- Funds toward seed to begin project: \$608
- Total: 20,000

Additional project expenditures that will be covered by OHA and project partners (list not exhaustive):

- Bitterbrush Seed ~ (\$400)
- Sagebrush Seed ~ (\$550)
- (7,000) Ridged Mesh Seedling Protector Tubes, 4" x 24" - 28packs/250tubes = (\$3,359)
- (14,000) Bamboo Stakes, 3/8" x 3' - 28packs/500stakes = (\$2,002)
- (14,000) 8" zip ties 14 packs/1000ties (\$476)

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Institute for Applied Ecology
Warner Creek Correctional Facility AICs
Rocky Mountain Elk Foundation
Mule Deer Foundation
Bureau of Land Management
United States Forest Service
Oregon Department of Fish and Wildlife

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Fall 2021: Seed purchase and cleaning, Transport seed to WCCF. Spring 2022: IAE and Inmates will sow and nurse seedlings. Fall 2022: OHA, AICs, and partners will plant seedlings.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

OHA utilizes our award-winning print and electronic magazine, "Oregon Hunter" as well as our social media platforms to inform the public of our projects and partners. OHA has publicly supported the OCRF via these platforms and included videos/photos along with supportive information.

www.oregonhunters.org

Instagram [@oregonhuntersassociation](https://www.instagram.com/oregonhuntersassociation)

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

All Hands, All Brands for Public Lands

All Hands, All Brands for Public Lands is an annual OHA project in Oregon's Ochoco Mountains, where forage meadows and recovering aspen stands are protected from damage by livestock and motorized vehicles but remain accessible to native wildlife. This summer, 70 people participated at the event, which resulted in a mile of wildlife-friendly buck and pole fence being constructed, a mile of hazardous old wire fence removed, maintenance on nine water guzzlers and several past habitat projects being checked. In all, 1,095 hours were invested on the fence, and 40 hours on water guzzlers. Those who participated were OHA members from our Bend, Capitol, Emerald Valley, Tualatin Valley, Mid-Willamette and Redmond chapters, along with folks from Rocky Mountain Elk Foundation, Backcountry Hunters & Anglers, National Wild Turkey Federation, USFS and ODFW.

Project 2

1500 maximum characters

OHA Priest Hole Project

More than 25 OHA volunteers invested 354 volunteer hours in habitat work this spring at Priest Hole on the John Day River. The area is critical winter range for wildlife. The OHA crew planted 400 two-year-old 4-wings saltbush, golden currant, wild roses and elderberry bushes, caged 100 cottonwood trees planted over the last 3 years to prevent beaver damage, hauled and set over 300 sprinkler pipes to water new shrubs and native grass seed plantings, rewired a new pump at the river diversion site and removed 30 yards of weed slash from a fenced planting site. Then the rain came with perfect timing! OHA has worked hard for many years to convert this old farm field into a diverse winter range wildlife area for upland bird and big game species.

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Google Forms



Oregon

Kate Brown, Governor

Department of Corrections
Warner Creek Correctional Institution
PO Box 1500
20654 Rabbit Hill Rd.
Lakeview, OR 97630
(541) 947-8200



November 5, 2021

Oregon Conservation and Recreation Fund
4034 Fairview Industrial Dr. SE
Salem, Oregon 97302

To whom it may concern:

Warner Creek Correctional Facility (WCCF), located in Lakeview, Oregon is thrilled to continue our strong partnership with Institute for Applied Ecology (IAE) and join forces with the Oregon Hunters Association. The "Restoring Hope and Habitat" project will continue to expand the strong ties that have been made between WCCF, IAE and our rural community. The Sustainability in Prisons Program with IAE has been a therapeutic and rehabilitative influence on the lives of many men serving their sentence at WCCF for the past five years. The program brings local community members inside the prison to share educational lectures with adults in custody to learn about conservation, to help promote thinking outside of oneself, and to encourage making a positive difference for our communities and local environment.

The hands-on germination, nurturing and planting of bitterbrush and sagebrush provides meaningful work for the men selected to participate in the program. These men will be returning to our communities in five years or less. Participation in meaningful work while incarcerated is known to contribute to greater success upon release. The native plants propagated at WCCF will be planted on nearby wildfire burns to help restore the landscape for wildlife such as deer, elk, and grouse.

Warner Creek Correctional Facility supports this program by providing safe facilities, coordination of activities and crew supervision. Support for Oregon Conservation and Recreation Fund will go towards propagation supplies, supervision and plant out. The program, however, would not be possible without IAE's technical expertise, network of educational instructors and coordination with Oregon Hunters Association.

We are hopeful that this grant proposal will be fully funded as we are excited to propagate native plants at WCCF for habitat restoration for wildlife. Thank you for considering supporting our joint mission.

Warmest regards,

Brad Cain, Superintendent



OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

dolinajn@oregonstate.edu

Project Information

Project Title *

Employing community science and photography to study the diets of tufted puffins and other at-risk coastal birds at Haystack Rock, Oregon

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

One of the major hurdles to increasing our ecological knowledge of coastal birds in Oregon is a lack of specific diet information. Understanding the dietary composition of these species has important management ramifications as marine bird populations are linked to the prey that they forage on, but quantifying diets of marine birds is challenging. To address this knowledge gap, we have developed a wide-ranging, inclusive and public-focused community science effort to improve our understanding of the diets of Oregon's tufted puffins (*Fratercula cirrhata*) and other coastal Oregon birds. Our project is designed to both address an ecological question and provide accessible information, education and engagement opportunities to a diverse group of Oregonians and visitors. To do this, we have built Birds with Fish which is a community science initiative aimed at engaging nature photographers to submit photographs of birds on the Oregon coast carrying fish, crabs or other marine invertebrates in their bills and talons. In 2020 the U.S. Fish and Wildlife Service decided not to list the tufted puffin under the protections of the Endangered Species Act. In doing so, there were a handful of data gaps identified. One of which was what are tufted puffins feeding their chicks during breeding season on the Oregon coast? This question inspired us to develop Birds with Fish. However, building a contextual understanding of what other coastal birds are eating can provide important hints to better interpret the diets of tufted puffins thus we extended this question to what are all coastal Oregon birds eating? By simultaneously engaging the nature photography community, building awareness about avian conservation in coastal communities, and collecting data on bird diets along the coast we can begin to better understand populations of marine birds along the Oregon coast.

Primary Contact Person *

Dr. Rachael Orben

Primary Contact Email Address *

rachael.orben@oregonstate.edu

Primary Contact Phone number *

541-264-5626

Lead Organization *

Oregon Wildlife Foundation

Mailing address *

901 SE Oak Street, Suite 103, Portland, Oregon 97214

Lead Organization Federal Tax ID *

93-0797904

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Cannon Beach, Oregon (and rest of Oregon coast)

Project Location (County) *

Clatsop, Tillamook, Lincoln, Lane, Douglas, Coos, Curry

Project Start Date

MM DD YYYY

01 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

40000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Oregon coast supports a diverse collection of avian species that rely on marine and estuarine prey such as fish, crabs, squid, clams and more. Populations of tufted puffins, pigeon guillemots, and common murre, among many others, are linked to the forage fishes of coastal Oregon waters. Changing oceanic conditions along the California Current Large Marine Ecosystem, extreme events such as the 'the blob', stress from commercial fishing and reductions in suitable habitat due to coastal erosion and vegetation changes have placed increased pressure on coastal Oregon birds. These shifts in oceanic conditions and extreme events like 'the blob' have had quantifiable impacts on Oregon's coastal ecosystems (Petersen et al. 2017). To better understand impacts on coastal Oregon birds, studying the diet composition of a variety of coastal species is necessary.

However, currently bird diet composition on the Oregon coast is greatly understudied – particularly in species such as the tufted puffin which have seen marked population declines along the Oregon coast of up to 90% (Stephensen 2021). Understanding how the diets of tufted puffins and other bird species may be changing over time can provide us with vital ecological information necessary to make management and conservation recommendations moving forward. However, collecting this information can be a challenging task as many of Oregon's coastal bird species nest on inaccessible offshore islands or difficult to observe headlands. For species like tufted puffins which have unique breeding characteristics, minimizing disturbances while maximizing diet data collection is of the utmost importance.

Community science presents an interesting alternative tool to address questions like diet composition for birds like tufted puffins while minimizing such disturbances. Our project, Birds with Fish, is a coast-wide effort to engage photographers to submit old and new pictures of birds carrying fish, squid, crabs or other marine and estuarine invertebrates along the Oregon coast. In doing so, we hope to collect temporally robust photographic data of a variety of birds along the Oregon coast with prey in their bills or talons.

Birds with Fish ran its pilot season in 2021. In the first season the project proved to be popular among participating coastal communities including Cannon Beach and Bandon. In addition, there were >50 submissions from >12 photographers. The project intern was also able to collect ~8,000 photographs from Haystack Rock of tufted puffins and common murre with fish. These photos are currently being reviewed to identify prey items when possible. The initiative garnered considerable interest from a long list of coastal collaborators and has been a featured lecture topic for Friends of Haystack Rock and Shoreline Education for Awareness. In addition, Birds with Fish will be giving talks to Oregon Shores Conservation Coalition, the Oregon Birding Association and the Cape Perpetua Collaborative. In addition, the project received financial and administrative support from the Oregon Wildlife Foundation and the Oregon Birding Association. More information on the project can be found at the project's website (blogs.oregonstate.edu/coastaloregonbirds). Financial support from the OCRF will allow us to continue Birds with Fish and tufted puffin diet photos into a second summer season.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

To address this question of “what fish and other aquatic invertebrates do our coastal Oregon birds eat?” while protecting the integrity of coastal bird habitats, we have built a coast-wide community science initiative called “Birds with Fish” which is focused on encouraging local and traveling nature photographers to submit pictures of birds carrying fish, crabs, squid or other marine and estuarine invertebrates in their bills and talons. By sourcing photographs from experienced nature photographers along the Oregon coast we are building a data set of what our coastal birds are eating, when and where, while simultaneously engaging coastal communities and Oregon birders in a collective effort to increase our knowledge of Oregon’s coastal birds.

Objective 1: Maintain interest and awareness of Birds with Fish. To do this we will work with the Oregon Wildlife Foundation and other coastal groups to continue to share Birds with Fish. Birds with Fish has already been featured in numerous social media posts, newsletters and fundraisers and is supported by a diverse group of organizations committed to 1) increasing public engagement and opportunities for involvement in coastal conservation and 2) increasing our ecological knowledge of coastal Oregon birds. The future of Birds with Fish could provide more opportunities for involvement, volunteering and diverse cross-demographic engagement in coastal Oregon birding, bird photography and ecological research. Some current supporting and collaborating groups include the U.S. Fish and Wildlife Service, Friends of Haystack Rock, Haystack Rock Awareness Program, Oregon Wildlife Foundation, Shoreline Education for Awareness, Kalmiopsis Audubon Society, Lane County Audubon Society and Portland Audubon, and the Bureau of Land Management.

Objective 2: Continue a targeted effort to photograph tufted puffins with prey at Haystack Rock, Oregon. To do this we will have an intern in Cannon Beach, Oregon for the months of July and August. This intern focuses on capturing photographs of Haystack Rock’s tufted puffins carrying fish back to their burrows. Additionally, we plan to upgrade our current photographic equipment to increase our ability to capture photos where prey can be identified.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Birds with Fish has four main outcomes:

1. Highlight the value of photography as a method to study the diets of coastal birds in Oregon.
2. Engage coastal Oregon communities to raise awareness about the importance of coastal avian conservation through community science.
3. Increase our ecological understanding of the diets of Oregon's coastal piscivorous birds, particularly the Oregon Conservation Strategy species, the tufted puffin.
4. Contribute to conservation and management recommendations for coastal bird and fish species.

The main measurable outcome desired is to maximize the collection of photographs of tufted puffins with bill loads on the Oregon coast. This is done through the combination of a project intern focused on photograph collection at Haystack Rock and activation of volunteer photographers during July and August, the prime months for tufted puffins to carry food back to their burrows.

Secondly, the project attempts to engage with the Oregon coast community through a series of public seminars and talks that provide project descriptions, updates and information on how to get involved – including important photographic specs and expectations.

The development of a photographic processing methods and protocol and resulting dataset will be a measurable outcome of this work. This will allow future prey identification and photo processing to be more efficient.

The tufted puffin diet data will form the basis of a scientific publication submitted to the open access journal Marine Ornithology.

The outcomes of this project will be summarized in a blog for the public and in a final report.

Lastly, close collaborations with a variety of coastal conservation groups and the U.S. Fish and Wildlife Service give the results of this project a unique platform to be used in recommendations to coastal wildlife managers.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The tufted puffins in the California Current Large Marine Ecosystem (CCLME) saw large declines in population numbers from the 1980's to 2008. In 1988, the U.S. Fish and Wildlife Service (USFWS) conducted a survey of the Oregon islands and recorded 4,858 birds nesting on 49 distinct islands. In 2008, the next survey found just 142 birds observed on 15 islands (Kocourek et al. 2009). Furthermore, habitat modeling has identified that populations reliant on suitable rocky island habitats in northern California, Oregon and Washington are at risk of complete extirpation by 2050 under climate change scenarios (Hart et al. 2018). In addition to climate change, oil spills, fisheries bycatch, predation, invasive species and anthropogenic disturbances can all negatively contribute to tufted puffin populations (USFWS 2020). Tufted puffins can provide important information about the availability of forage fish in the marine system (Schoen et al. 2018). These indicators, along with diet information about coastal bird species, can illustrate a map of what fish species birds are consuming, when, and where. Understanding the diets of coastal birds can be challenging. The engagement, collaboration and inclusion of coastal communities in this initiative is the underlying principle of the project. Birds with Fish is an Oregon coast community science initiative designed to engage photographers and beachgoers to submit data and coastal communities to raise awareness about avian conservation.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administration – 5% fee to fiscal managers Oregon Wildlife Foundation (\$952). Birds with Fish Project Manager (\$24/hr, 36hr/month, 10 months, \$8640). Tufted Puffin Intern (2 months, \$4,400). Local field travel (\$300). Intern housing (\$1000). Camera and lens (\$4500) and associated equipment (\$208).

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Oregon Wildlife Foundation:

Oregon Wildlife Foundation partners as our fiscal and fundraising managers.

U.S. Fish and Wildlife Service:

The U.S. Fish and Wildlife Service has been conducting periodic surveys of coastal birds in Oregon for many decades. The Oregon Coast National Wildlife Refuge Complex has partnered with our project to offer equipment and consultation support for the project.

Friends of Haystack Rock:

Friends of Haystack Rock is a small non-profit based in Cannon Beach with a heavy focus on tufted puffin education and awareness. In the pilot season of the project Friends of Haystack Rock offered housing support for the summer intern.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

January 1, 2022-Dec 30, 2023. January-May 2022, Process photos collected in 2021, identify prey items, and summarize results. April 2022, Hire intern. May 2022, Renew social media campaign to advertise Birds with Fish, including Instagram and blog posts. July-August 2022: Tufted puffin and common murre prey load photography at Haystack Rock. Sept-October 2022: Identify prey items from photos collected in summer 2022 and summarize results. December 2022: Final report and scientific manuscript prepared for submission to Marine Ornithology.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

The project's updates can currently be found at blogs.oregonstate.edu/coastaloregonbirds

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The Sturgeon Lake Restoration Project replaced failing culverts under Reeder Road with a bridge and revived the Dairy Creek channel connection between the Columbia River and Sturgeon Lake. The sediment plugging the creek was deposited by the 1996 Columbia River flood. The fully reconstructed channel is designed to provide a tidal connection from the Columbia into Sturgeon Lake long into the low flow summer months; maximizing juvenile salmon access to the lake for rearing through most months of the year and helping reverse the accumulation of sediment. Oregon Wildlife Foundation was the fiscal sponsor for private gifts in support of this project. The Foundation raised just over \$500,000 to leverage additional public funding for this \$6.5 million dollar initiative.

Project 2

1500 maximum characters

In 2019, ODOT built a dedicated wildlife underpass on HWY 97 near the town of Gilchrist as part of a passing lane project. This portion of 97, in central Oregon, is a red zone for wildlife-vehicle collisions (WVCs) as the highway cuts across historic mule deer migration routes. Unfortunately, ODOT didn't have enough money in their budget for funnel fencing, deer guards (at roads intersecting the project area), or jump-outs; critical elements in all successful wildlife passage projects. The estimated cost for the add-ons was \$959,000. Oregon Wildlife Foundation, in partnership with ODFW, ODOT, and other wildlife conservation nonprofits, jumped in to raise the necessary funds. The Foundation and partners have raised \$856,000 so far and construction of the fencing and other elements is currently underway. Once fully-built, this project is expected to significantly reduce WVCs in this area of hwy 97. The dedicated wildlife underpasses near Sun River on hwy 97, have reduced WVCs by 86% over the last 10 years.

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

christian.hagen@oregonstate.edu

Project Information

Project Title *

New Monitoring Technique for Yellow Rail in East Cascades Ecoregion

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Yellow Rails are a species of conservation concern because of their specialized habitat needs within shallow wetland systems. In particular, the core of the western Yellow Rail population resides in Klamath Marsh National Wildlife Refuge and its persistence is reliant on consistent wetland conditions. Little is known about Yellow Rail ecology and distribution outside of the Klamath Marsh and a few surrounding wetlands. To reduce the uncertainty about the species future, considerable work is needed to survey similar wetland habitats across a broader landscape to determine site occupancy and abundance. Such efforts will create a reference point and accurate distribution map from which to begin to understand how global stressors maybe affecting Yellow Rail and its habitat in western North America. Our goal is to design a survey methodology using Automated Recording Units (ARUs) that could be deployed across a broader region in the near future.

Primary Contact Person *

christian hagen

Primary Contact Email Address *

christian.hagen@oregonstate.edu

Primary Contact Phone number *

15414100238

Lead Organization *

Oregon State University

Mailing address *

Dept. Fisheries, Wildlife & Conservation Sciences

Lead Organization Federal Tax ID *

61-1730890

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Chemult (Klamath Marsh National Wildlife Refuge)

Project Location (County) *

Klamath

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

19997

Total Project Cost *

19997

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Background

The upper Klamath Basin once had an extensive shallow lake and marsh system, but much of that system has been lost due to drainage and conversion to agriculture and changes in land use. These changes have contributed to the complex issues surrounding water use and species conservation in the Basin. The remaining wetlands in the Klamath Basin support one of the largest concentrations of waterfowl in North America, and the area is a critical migratory staging area for 80 percent of all Pacific Flyway waterfowl. The Klamath Basin provides Oregon's primary permanent nesting areas for Yellow Rails (*Coturnicops noveboracensis*).

Yellow Rails are primarily found breeding in Central and Eastern North America in shallow wetlands during the breeding season from Alberta to Quebec in Canada, and in the adjacent US from northeast Montana through Michigan. A disjunct western population breeds in southcentral Oregon, with smaller numbers of birds found in northeastern California and British Columbia. In Oregon, Yellow Rails were rediscovered in the Wood River Valley near Fort Klamath in the early 1980s, after not being noted since the late 1920s. During the late 1980s and early 1990s, nighttime surveys identified additional breeding areas outside the Wood River Valley, including Sycan Marsh and Klamath Marsh National Wildlife Refuge. In the late 1990s and 2000s, two additional consistently occupied sites outside the Klamath Basin were identified - Big Marsh and Summer Lake SWA.

Coordinated breeding season (June) surveys in 2000-2002 found a total of 184, 199, and 235 male Yellow Rails calling at known sites in Oregon, with 72-74% of those birds located on Klamath Marsh NWR. In 2021, most of the main sites were re-surveyed, with a total of 125 males heard (78% on Klamath Marsh NWR). It is likely that a main reason for the decline in numbers is due to the ongoing drought in the Klamath Basin, although management of some areas including grazing (which decreases senescent nesting cover) and other areas where water is channelized (decreasing shallow wetlands) is of concern.

Yellow Rails are known to utilize shallow marsh and wet meadow habitat averaging 6-7cm in depth at male calling sites, and slightly shallower at nest sites, which were almost always concealed by senescent vegetation. As breeding sites begin to dry up in the late spring and early summer, telemetry work in 1995-1996 showed that males move within a site and sometimes from one site to another to stay in areas with shallow water that also provide vegetative cover. Movements of at least 57 km during the breeding season have been noted during those capture and banding efforts (from Sycan to Klamath Marsh), though the other handful of movements documented between sites were much smaller (4-10 km). Over 10 years of banding information showed that about 11% of the adult males return to the same site in the following year.

Research Needs

With increased drought and fire, gaining a better understanding of the distribution of Yellow Rail in Oregon and the Western US is critical if this disjunct population is to survive ongoing habitat changes. In the Upper Klamath Basin, 85-90% of their original shallow marsh habitat was lost by the 1980s, and while recent restoration projects focused on other species may create or restore wetland habitats, more attention and research is needed on how this species utilizes shallow marsh habitat, as well as their ability to find new breeding areas.

It is possible that some of the Yellow Rails normally breeding in the Klamath Basin are migrating further north, east, or west in search of suitable breeding habitat into other parts of Oregon or adjacent states or

BC. But extensive surveys have not been done outside the Klamath Basin, and efforts to track migrating birds using radio tags have not yet succeeded.

Without a better understanding of how hydrology affects Yellow Rails, and documenting their migration routes and wintering locations future management of the species and their habitat is uncertain.

There is a need to establish a more definitive distribution map to serve as a foundation or reference point for future conservation efforts. Thus, expanding survey effort and monitoring of Yellow Rail occupancy and abundance in known and potential habitat is needed. Current survey methods are time intensive and require substantial human capital to complete even for small areas. The use of automated recording units (ARUs) is becoming more commonplace and recognized as valid tool for determining species occupancy and even abundance, and often with less human resources.

Our goal is to conduct field trials of AudioMoth ARUs to assess their effectiveness in detecting Yellow Rails. Specifically, our objectives are 1) to determine detection distance of Yellow Rail calls by the AudioMoth, 2) using the established detection distance design transects or plots that can be deployed in both occupied and potential habitats, 3) trials comparing ARU transects to human surveys, and 4) from this work provide a protocol for the use ARUs in monitoring occupancy and abundance of Yellow Rail over much broader landscapes.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our goal is to conduct field trials of AudioMoth ARUs to assess their effectiveness in detecting Yellow Rails. Specifically, our objectives are 1) to determine detection distance of Yellow Rail calls by the AudioMoth, 2) using the established detection distance design transects or plots that can be deployed in both occupied and potential habitats, 3) trials comparing ARU transects to human surveys, and 4) from this work provide a protocol for the use ARUs in monitoring occupancy and abundance of Yellow Rail over much broader landscapes.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

We will provide, in form of a scientific publication, a methodological description on best use of ARUs (Audiomoth in particular) in surveying and monitoring of Yellow Rails across broad landscapes.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Wetland habitats of the Klamath Basin are identified as a high priority for conservation in the East Cascades Ecoregion. Moreover, Yellow Rail are a Strategy Species in the OCS. Our work will support the filling in one of the Data Gaps identified for the species in the OCS, "Complete an inventory of potential breeding habitat in south-central Oregon..." Deployment of ARUs across broad landscape both in the Klamath Basin and in portions of the Northern Basin and Range (e.g., Summer Lake, Malheur National Wildlife Refuge) will directly inform a map of Yellow Rail occupancy and potential habitat. First we must develop the methodology and that is what our work aims to accomplish.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

OCRFB funds will be used primarily (\$11,700) to hire a technician to conduct the field trial and experiment. Seasonal technicians are typically hired through Bluesun Employment services and falls under "contract" services per OSUs budgeting. Principal investigator (C. Hagen) is requesting 1 week of salary (\$2548) + OPE (\$1027) towards managing the technician over the course of the field season. We are requesting \$595 towards miscellaneous supplies, which might include playback speakers, posts to hold ARUs, waders, memory cards, batteries. OSU requires 26% (\$4126) of direct costs (\$15,871) to go towards administration of the grant.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Klamath Marsh National Wildlife Refuge, housing vehicles, volunteer time

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Apr-May – field trials (Obj 1,2) May-June transect comparisons (Obj 3), July-Dec Analyze data write manuscript (Obj 4)

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

We view this small grant opportunity as a way to fund a pilot year, as we seek full funding for a graduate student to complete 2 more years (2023-24) of field research and development of a rangewide distribution map (i.e., occupancy model).

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

I have recently completed the evaluation of juniper removal on greater sage-grouse demography and space use in the Warner Mountains of Lake County, Oregon. The study began in 2009, and used a Before and After Control Impact (BACI) design. Academically, this project successfully graduated 2 Ph.D. students and currently has 2 Masters students in final stages of their theses. There have been roughly a dozen scientific publications resulting from this work, which has lead directly to management agencies in understanding how best to implement juniper removal projects such that they minimize disturbance to the landscape and maximize habitat benefit to sage-grouse and other sagebrush obligate species. Please see <https://www.sagegrouseinitiative.com/category/events/conifer/> for excellent examples of outreach and extension materials derived from this work that have supported field staff and informed the public at large.

Project 2

1500 maximum characters

I am currently engaged in a research project on the effects of mega-wildfire (187,000 ha/ 722 square miles) and greater sage-grouse space use and demography that began in 2012. We anticipate field work completion in 2023 and final analyses written up by early 2024. However, along the way we have successfully graduated 1 masters student and a Ph.D. student, currently we have a postdoctoral scholar managing the project and beginning to analyze some of the longer term data. So far we have generated 6 scientific publications on this work, that have directly related to management recommendations of the species in a post megafire landscape. Our final products we hope to be able to inform land managers of specific landscape configurations of sagebrush that are most beneficial to the species after fire. However, a few more years of research are needed. Please see my website for more information on these projects and others, <https://agsci-labs.oregonstate.edu/hagen/>.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

jrkrause@usgs.gov

Project Information

Project Title *

Colonial waterbird predation on the salmonids and suckers of the Upper Klamath Basin

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The recovery of endangered fish can be impaired by predation impactions. In the Klamath Basin, large nesting colonies of piscivorous waterbirds such as American white pelicans, Caspian terns, and double-crested cormorants are known to consume endangered Lost River and shortnose suckers, redband trout, bull trout, and could consume newly released Chinook salmon. Many of these fish are PIT tagged and the consumption of birds can be quantified by scanning bird colonies for these tags. We propose to continue a long-term dataset that was started in 2009, whereby colonies are scanned annually and the PIT tag information is archived. The information gathered will help researchers in future years to understand how avian predation changes in differing climactic (e.g., temperature and water levels) and biological regimes (e.g., new species) in the Klamath Basin.

Primary Contact Person *

Dr. Jacob Krause

Primary Contact Email Address *

jrkrause@usgs.gov

Primary Contact Phone number *

(605) 691-4376

Lead Organization *

United States Geological Survey (USGS)

Mailing address *

USGS
Klamath Falls Field Station
2795 Anderson Ave, Suite 106
Klamath Falls, OR 97603-9572

Lead Organization Federal Tax ID *

140001849

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Klamath Falls

Project Location (County) *

Klamath County

Project Start Date

MM DD YYYY

06 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

20000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Klamath Basin is home to many Oregon Strategy fish species including the federally endangered Lost River Suckers and Shortnose Suckers, one of the most southerly extant populations of Bull Trout (i.e., Klamath Lake SMU), Great Basin Redband Trout (i.e., Upper Klamath Basin SMU), and soon to be spring-run Chinook salmon with the prospective removal of dams on the lower Klamath River. The recovery and expansion of these populations can be impaired by avian predation. The Klamath Basin has large breeding colonies of American white pelicans (largest on the U.S. west coast) and double-crested cormorants, both piscivorous species. The Oregon Strategy species of Caspian terns is also present in the Basin. In 2009, nesting ground habitat was constructed on the Lower Klamath National Wildlife Refuge to help disperse growing populations of Caspian terns and their negative impacts on salmonid recovery on the mid-Columbia River.

Many of the Oregon Strategy fish species have been tagged with Passive Integrated Transponder (PIT) tags to track their movement and survival. The recovery of PIT tags from colonial waterbird breeding grounds can quantify the impact of predation on these sensitive fish species. The PIT tags found on bird colonies can also measure the relative susceptibility of different fish species, spawning populations, and life histories to bird predation; as well as which bird colonies pose the greatest threat. In the Klamath Basin, multiple nesting colonies are located on islands in Upper Klamath Lake in Oregon, and Sheepy Lake, Tule Lake, and Clear Lake Reservoir in California. Birds commute around the entire Basin and beyond to feed, as suckers tagged in Upper Klamath Lake were found deposited on Clear Lake breeding colonies, as well as salmonids from the Columbia River Basin and the Lower Klamath.

Predation rates on fish are dynamic and require a long-term datasets to understand biological, climactic, and anthropogenic effects. Annual predation is dependent on bird colony size and may be reduced when previously established colonies are not utilized or colony failure occurs mid-way through the breeding season. Predation rates also depend on the abundance and availability of different fish species as well as their size and condition (e.g., disease, injury, and stress levels). Environmental conditions such as turbidity and water level can affect predation success of birds. Anthropogenic effects such as the proposed dam removals on the lower Klamath River, may change the current predator and prey dynamics in the Basin with the addition of Chinook Salmon. In addition, this dataset has the ability to answer how climate change manifested by droughts, extreme rainfall events, and high-water temperatures may affect bird predation on Oregon Strategy fish species.

In 2009, Real Time Research, Inc. and the United State Geological Survey (USGS) started scanning bird colonies and building a long-term dataset with the ability to quantify annual bird predation in the Klamath Basin. Although the work has been funded for many years in the time-series, other years such as 2021 do not have directed funding and are only possible with researchers volunteering time and equipment to cover these gap years in funding. We propose to continue the long-term dataset and use the grant award to cover expenses and equipment for the 2022 field season.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our goal is to recover PIT tags on bird colonies in 2022 so researchers can quantify avian predation on Oregon Strategy Fish Species in future years. Our first objective is to analyze aerial imagery to identify utilized nesting habitat (i.e., colonies) by bird species in 2022. Secondly, field crews will be sent to various colonies to scan the area for PIT tags. In addition, the crews sow PIT tags and scan for these tags to quantify the probability that a deposited PIT tag is detected by researchers following the nesting season, a key number to robustly estimating predation rates. Thirdly, recovered PIT tags will be archived into the USGS PIT tag database. Fourthly, all the information associated with a recovered PIT tag will be shared with the researchers (e.g., Klamath Tribes, U. S. Fish and Wildlife Service, Bureau of Reclamation, USGS, Oregon State University, Oregon Department of Fish and Wildlife) that released the tagged fish. If no record of the PIT tag exists in our database, we will contact researchers that work in the Basin and surrounding watersheds to find the owners of the PIT tag.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The outcome of this project will be to have 2022 data available for researchers in future years to quantify avian predation on Oregon Strategy fish species.

Success will be measured when researchers understand the fate of their released fish and can use that information to better manage Oregon Strategy Fish Species.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our project advances many of the priorities laid out in the Oregon conservation strategy. The long-term dataset can help inform managers on how Key Conservation Issues affect the interaction between birds and fish. Climate Change may change predation rates based on water temperatures and levels caused by extreme rainfall events and droughts. Invasive species or even re-introductions of native fish may alter predator-prey dynamics. The removal of Barriers to Animal Movement, in the form of dam removals may also change food chain dynamics. The study encompasses a key Strategy Habitat of Wetlands in the Ecoregion of the East Cascades. The project provides information on 7 Strategy Species across multiple fauna. This includes Lost River Suckers, Shortnose Suckers, Bull Trout (i.e., Klamath Lake SMU), Great Basin Redband Trout (i.e., Upper Klamath Basin SMU); as well as, American white pelicans and Caspian terns. Although the project is geared at quantifying predation, it also provides important information on identifying important breeding grounds for migratory birds such as American white pelicans and the success and failure of colonies based on annual climactic and hydrological conditions.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

For Equipment, we will use ~\$4,000 to purchase a Biomark PIT tag reader and antenna for exclusive use on this project, as well as PIT tags to sow on the colonies. We will use ~\$7,750 to cover the salaries of field crew and our IT specialist who will archive the data and share the information with fellow researchers. The remaining ~7,250 will be for Administration (i.e., maintenance of trucks, computers, and sampling equipment).

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Real Time Researchers, Inc. have provided equipment and expertise to continue the long-term monitoring. Upper Klamath National Wildlife Refuge have provided transportation and personnel to reach remote colonies in Upper Klamath Lake Marsh.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

June 2022: Buy equipment (tag reader, antenna, PIT tags). August 2022: Analyze aerial imagery to target colonies with breeding birds and plan upcoming field season. September- November 2022: Scan colonies for PIT tags after breeding birds have left for the season. December 2022: Archive recovered PIT tags and share information with fellow researchers.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

If we are awarded the grant, the money will help to fund data collection for 2022. To show the potential of this data, the paper by Evans et al. 2016 (<https://afspubs.onlinelibrary.wiley.com/doi/10.1080/02755947.2016.1208123>) illustrates how a collaboration between Real Time Research, Inc. and USGS quantified the impact of colonial waterbird predation on Lost River and Shortnose Suckers using the long-term dataset from 2009-2014. Unfortunately, the current funding level of this grant does not provide sufficient funds to analyze the data to estimate predation rates for more recent years. We believe our currently proposed project strongly aligns with the Oregon Conservation Strategy, and an expansion of the project to include the data analysis would be a great benefit to multiple Oregon Strategy Species. We are unsure if the committee has the ability to increase the funding limit in this cycle, but we are willing to provide additional details on the cost and effort needed to produce predation estimates across the time-series.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The USGS Klamath Falls Field Station has experience collecting long-term datasets that inform species management. Since 1999, we have monitored the populations of Lost River and Shortnose Suckers in Upper Klamath Lake. Fish are PIT tagged as they migrate to or reside on spawning grounds. Fish that are tagged can then be redetected on multiple PIT tag arrays that are maintained by USGS across the Klamath Basin. The detection data is then archived into a database that stores the unique detection histories from tagged fish dating back to 1999. From this information, we can estimate the abundance, survival, and recruitment for these endangered fish. Peer-reviewed reports of our findings are regularly published and are used by U.S. Fish and Wildlife Service and the Bureau of Reclamation to help in the recovery of these species (e.g., <https://pubs.usgs.gov/of/2018/1064/ofr20181064.pdf>).

Project 2

1500 maximum characters

The USGS Klamath Falls Field Station conducts rigorous scientific experiments. The recovery of Lost River Suckers and Shortnose Suckers may be dependent on the release of hatchery reared fish. Maximizing their survival depends on finding suitable release or in-lake rearing sites. We constructed multiple mesocosms or underwater experimental net pens to hold fish in Upper Klamath Lake. Water quality parameters such as dissolved-oxygen, temperature, and pH were tracked hourly. Fish were deemed dead after their movement stopped (determined by passive detection of PIT tagged fish on remote antennas). At one site, all the fish died from a hypoxia event, whereas the remaining sites showed high survival. Our results informed the U. S. Fish and Wildlife Service Sucker Assisted Rearing Program (SARP) on the suitability of potential release sites. The findings of this experiment were peer-reviewed and published (i.e., <https://pubs.er.usgs.gov/publication/ofr20211036>).

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OCRf Project Proposal Form

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Email *

wildbio59@gmail.com

Project Information

Project Title *

"EFM Road Retirement in Ponderosa Pine Woodland and Terrestrial Animal Movement Habitats."

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The following proposal is submitted by Oregon Hunters Association (OHA). The project, titled "EFM Road Retirement in Ponderosa Pine Woodland and Terrestrial Animal Movement Habitats," goal is to enhance ponderosa pine forest within and adjacent to an Oregon Department of Fish and Wildlife (ODFW) identified high use mule deer migration corridor. The project is in the East Cascade ecoregion on Ecotrust Forest Management (EFM) land just Northwest of Fort Rock, and Northeast of Chemult, and lies between U.S. Hwy 97 and OR Route 31. The project proposal is to close 36 miles of roads by falling all tree species ≤ 10 " DBH 25 feet from center line (50 feet total) into the roadbed along the entire length of the roads. The project will reduce road densities from 13.33 miles/sq mile to 4.5 miles/sq mile across the 2590-acres. The project will provide habitat connectivity between U.S. Hwy 97 and OR Route 31 within an ODFW identified high use mule deer migration corridor. By reducing road densities and discontinuing motorized traffic wildlife will benefit from increased habitat security. Reducing closed canopy conditions along roads will create 220 acres of forest openings within ponderosa pine forests improving health and fire resilience. Reduced canopy closure will increase quality and quantity of understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife and is an important forage component for migrating mule deer. Discontinuing motorized travel on vegetated roads will reduce the risk of unintentional fire starts, the spread of invasive plants, soil compaction, and surface erosion. The proposal will improve the quality of hunting and other recreation opportunity on the Fort Rock property while reducing the negative impact of recreational activity on wildlife and their habitat.

Primary Contact Person *

Mary Jo Hedrick, Oregon Hunters Association, State Secretary

Primary Contact Email Address *

wildbio59@gmail.com

Primary Contact Phone number *

(541) 576-4006

Lead Organization *

Oregon Hunters Association

Mailing address *

P. O. Box 1706 Medford, Oregon 97501

Lead Organization Federal Tax ID *

93-0834195

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Northwest of Fort Rock, Oregon

Project Location (County) *

Lake County, Oregon

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

06 / 30 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

100000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Wildlife migration corridors are receiving increasing awareness with new research suggesting that factors associated with migration corridors may be limiting fitness of several species, including mule deer, for which many populations have been declining since the mid to late 1990s. Oregon Department of Transportation (ODOT) completed the Lava Butte underpass on US Hwy 97 south of Bend in 2012. OHA Bend Chapter has inspected and maintained the directional fencing since completion of the passage structure. ODOT has completed the Gilchrist wildlife underpass but did not have funding to complete the directional fencing. The Gilchrist Underpass Wildlife Directional Fencing project has received immense support from wildlife advocacy and hunter conservation groups to allow wildlife to safely pass under US Hwy 97. The EFM proposed project area is Northwest of Fort Rock and Northeast of Chemult between US Hwy 97 and OR Route 31 connecting the East Cascade and Northern Basin and Range ecoregions. The property contains numerous ODFW identified mule deer migration corridors with the project area encompassing a high use mule deer migration corridor.

The EFM Fort Rock 25,680-acre property is located within the ODFW OCS East Cascade Ecoregion and has numerous volcanic buttes and ash and pumice surface soils derived from the 77,000-year-old Mt Mazama eruption. These topsoil layers are thin and poorly developed and extremely susceptible to displacement by motor vehicles. While we have not surveyed the project area for the rare plant pumice moonwort (*Botrychium pumicola*) (BOPU) there are several documented populations immediately to the north on Forest Service lands. The project area contains habitat types, landforms and soils that may support BOPU populations. Historical timber harvest practices, grazing and fire suppression has altered the structure of the ponderosa pine forests throughout the property. Dense mixed species stands with high canopy closure have increased the risk of high intensity fires, disease and damage by insects and has negatively impacting ponderosa pine woodland habitat. Dense conifer stands with high canopy closure have reduced the quality and quantity of the understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife and an important forage component for migratory mule deer. Conifer encroachment and canopy closure has negatively impacted meadow, riparian and spring vegetation reducing habitat diversity. Recent drought conditions have increased these negative effects on vegetation quantity and quality and water availability. The property has a long history of timber and chip removal and is heavily roaded. Most of the current road system was built in the early 1960's. Recent operations have created skid trails during mechanical removal. There are currently ~351 miles of roads (9 miles of road/sq mile) on the property. EFM has identified approximately 204 miles of roads to be closed. Increased use of off highway vehicles (OHV) has increased the negative effects of OHV use on wildlife and their habitats. The potential impact of disturbance to wildlife caused by motorized vehicle travel, and negative effects to wildlife habitat are well documented. EFM received an ODFW Access & Habitat Open Fields grant to provide "welcome to hunt" on the Fort Rock property, inventory the road network in advance of closing approximately half of the existing roads and create a map identifying roads open to the public. The EFM Fort Rock Access Area map is currently available on ODFW's website.

EFM is a cooperator in ODFW's Cabin Lake/Silver Lake Road Closure to protect wintering wildlife from disturbance and reduce negative impacts to wildlife habitat. The property is closed to motor vehicles access annually from Dec 1st to March 31st.

EFM is a cooperator in the Bear Wallow Timber Stand and Wildlife Habitat Improvement Good Neighbor Authority all lands project on the Fremont-Winema NF Silver Lake RD and DOF Gilchrist State Forest. Thereby supporting community-based forest health collaborative to increase the pace and scale of forest restoration. EFM and OHA will continue to improve cooperative relationships with multiple partners to

create landscape level wildlife habitat improvement projects and contribute to landscape restoration of forest health and fire resilience.

EFM has received ODFW Mule Deer Initiative, OHA, USFWS Partners for Fish & Wildlife Program and Oregon Watershed Enhancement Board grant funds to complete habitat improvement projects on the Fort Rock property. EFM has removed encroaching conifers from ~52.5 acres of meadow, aspen, spring, and riparian habitats associated with Mush, Smoke, Road and Pothole springs and Smoke Creek enhancing the quality and quantity of meadow, aspen, riparian, and spring habitats. EFM has had ~3 miles of buck and pole wildlife friendly fence constructed at Mush, Smoke, Road and Pothole springs and Smoke Creek protecting ~50.8 acres of meadow, aspen, riparian, and spring habitats. OHA volunteers constructed ~ 0.8 miles of the buck and pole fencing at Pothole Spring and along Smoke Creek.

With OHA and Mule Deer Foundation grant funding EFM will close by obstruction ~60 roads impacting meadow, aspen, riparian, and spring habitats at Smoke, Mush and Road springs and along Smoke Creek this fall. Protecting these habitats from OHV use will enhance their quality and quantity and improve wildlife habitat. By reducing motorized traffic wildlife will benefit from increased habitat security. By discontinuing motorized travel on vegetated roads, the risk of unintentional fire starts, soil compaction and erosion will be reduced. The proposal will improve the quality of hunting and other recreational opportunity on the Fort Rock property while reducing the impact of recreational and OHV activity on wildlife and their habitat. EFM is proposing to close 36 miles of roads by falling all tree species $\leq 10"$ DBH 25 feet from center line (50 feet total) into the roadbed along the entire length of the roads of ponderosa pine forest habitat within and adjacent to an ODFW identified high use migration corridor improving habitat connectivity on EFM Fort Rock property (T25S R12E Secs: SW 1/4 of 20, S 1/2 of 21, 28, 29, 30).

The proposal will reduce road densities from 13.33 miles/sq mile to 4.5 miles/sq mile within the project area. By reducing road densities and motorized traffic on 2590 acres wildlife will benefit from increased habitat security. The proposal will improve the quality of hunting and other recreational opportunity on the Fort Rock property while reducing the impact of recreational activity on wildlife. See emailed maps: MuleDeerMigrationCorridor.png and FortRockRoadRetirement.pdf

The proposal will create 220 acres of forest openings within ponderosa pine woodland habitat and create edge habitat. Reducing closed canopy forest conditions will improve the quality and quantity of understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife and is an important forage component for migrating mule deer improving wildlife habitat. Reducing closed canopy forest conditions along 36 miles of road across 2590 acres will reduce the spread of disease and insect infections and reduce contiguous fuels decreasing fire risk and spread. Dropping trees into the roadbed will increase deficient down wood and reduce surface erosion. Discontinuing motorized travel on vegetated roads will reduce the risk of unintentional fire starts, the spread of invasive plants, soil compaction, and surface erosion.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal 1: Enhancement of ponderosa pine woodland strategy habitat:

Create 220 acres of forest openings within 2590 acres of ponderosa pine woodland habitat.

Improve ponderosa pine understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife.

Reduce fire risk and spread by reducing contiguous fuels along 36 miles of road across 2590 acres of ponderosa pine forest improving fire resilience.

Reduce risk of unintentional fire starts by discontinuing vehicle travel on 36 miles of vegetated roads.

Reduce the spread of disease and insect infections by creating 220 acres of forest openings along 36 miles of roads across 2590 acres improving forest health.

Reduce soil compaction and surface erosion of fragile ash and pumice soils by discontinuing motorized vehicle access on 36 miles of roads.

Increase deficient small to mid-size down wood component on 220 acres across 2590 acres.

Reduce the spread of invasive plant species by discontinuing motorized vehicle access on 36 miles of roads.

Continue cooperative relationships with multiple partners to create landscape level wildlife habitat improvement projects reducing habitat fragmentation.

Goal 2: Protection and enhancement of terrestrial wildlife movement strategy habitat:

Maintain habitat connectivity for wildlife between the East Cascades and the Northern Basin and Range ecoregions between US Hwy 97 and OR Route 31.

Reduce road densities from 13.33 miles/sq mile to 4.5 miles/sq mile across 2590 acres increasing habitat security reducing the impact of recreation and OHV activities on wildlife and their habitats.

Discontinue motorized traffic on 36 miles of road across 2590 acres of wildlife habitat including a high use migration corridor reducing the negative impacts of OHV use on wildlife and their habitats.

Create 220 acres of forest openings and edge habitat along 36 miles of road across 2590 acres.

Improve forage quality and quantity of grasses, forbs, and shrubs particularly bitterbrush, an important forage component for migratory mule deer on 220 acres within and adjacent to a high use mule deer migration corridor.

Reduce the spread of invasive plant species by discontinuing motorized vehicle access on 36 miles of roads.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Goal 1: Enhancement of ponderosa pine woodland strategy habitat:

The project will create 220 acres of forest openings within 2590 acres of ponderosa pine woodland habitat. The project will increase small to mid-size down wood component on 220 acres. Photo plots will be established to monitor ponderosa pine understory vegetation of grasses, forbs, and shrubs particularly bitterbrush response to reduced canopy closure.

Reducing contiguous fuels across 2590 acres of ponderosa pine will reduce fire risk and spread improving the forests fire resilience. Reducing closed canopy conditions along 36 miles of roads across 2590 of ponderosa pine woodland habitat will decrease the potential spread of disease and insect infections improving forest health.

Patrols and monitoring will be conducted to assess the success of discontinued motorized vehicle access on 36 miles of closed roads. Site observation of soil compaction, surface erosion and the spread of invasive plant species will be checked during patrols of the project area. The risk of unintentional fire starts will be reduced by discontinuing motorized travel on 36 miles of vegetated roads. Examine the project area habitat types, landforms and soils that may support BOPU populations with Forest Service personnel.

OHA and EFM will continue to foster cooperative relationships with multiple partners to create landscape level wildlife habitat improvement projects reducing habitat fragmentation.

Goal 2: Protection and enhancement of terrestrial wildlife movement strategy habitat:

The project will protect and maintain habitat connectivity for wildlife between the East Cascades and the Northern Basin and Range ecoregions between US Hwy 97 and OR Route 31. Patrols and monitoring will be conducted to assess the success of discontinued motorized vehicle access on 36 miles of closed roads.

Reducing road densities from 13.33 miles/sq mile to 4.5 miles/sq mile across 2590 acres will increase habitat security reducing the impact of recreation and OHV activities on wildlife and their habitats.

Photo plots will be established to monitor response of ponderosa pine woodland understory vegetation of grasses, forbs, and shrubs particularly bitterbrush, an important forage component for migratory mule deer on the 220 acres of forest openings within and adjacent to the high use mule deer migration corridor.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The project will enhance and protect ponderosa pine woodland habitat within the East Cascade ecoregion. The project will create forest openings that will decrease fire risk and spread, disease and insect damage improving forest health and fire resilience. Reduced canopy closure will improve the quality and quantity of grass, forbs, and shrubs particularly bitterbrush, an important habitat component that provides forage, cover, and nesting habitat for a variety of wildlife and an important forage component for migratory mule deer. By falling trees into the roadbeds small to mid-size down wood habitat will be created. Reduced vehicle access will decrease the spread of invasive plants. Reduced canopy closure will improve the quality and quantity of grass, forb, and shrub diversity and will enhance songbird and small mammal habitats. Discontinued vehicle access will reduce soil compaction and surface erosion protecting the fragile ash and pumice soils.

The project will enhance and protect terrestrial animal movement habitat within and adjacent to a high use mule deer migration corridor. The project will maintain habitat connectivity for wildlife between the East Cascades and the Northern Basin and Range ecoregions between US Hwy 97 and OR Route 31. Reduced road densities will increase habitat security. Discontinue motorized traffic and decreased road densities will reduce the negative impacts of recreation activities and OHV use on wildlife and their habitats.

For projects that address a conservation priority, what are the primary taxa that will affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

Administration

Contract services

Equipment

Personnel

Supplies/materials/services

Travel

Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

The proposed project to close 36 miles of roads is estimated to cost \$100,000.00. EFM has received \$25,000.00 USFWS PR funding through the ODFW Mule Deer Initiative program which will close approximately 9 miles of roads within the proposed project area. OHA is requesting \$20,000.00 OCRF funding to close an additional 9 miles of roads. The final project scope will be determined by the success of acquiring additional funding sources for the additional 18 miles of proposed road closure.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Oregon Hunters Association - Funding

Ecotrust Forest Management - landowner project administration, implementation and monitoring.

ODFW - Funding and monitoring of hunter activity and wildlife population monitoring.

Partners for Fish and Wildlife - Funding pending

Rocky Mountain Elk Foundation - Funding pending

Timeline *

Please identify the key milestones towards completing the project and achieving results.

EFM has received \$25,000.00 in funding to close approximately 9 miles of road within the proposed project area from ODFW through the Mule Deer Initiative with funding available fall 2021. The OCRF funding request of \$20,000.00 will enable an additional 9 miles of roads to be closed. Partners for Fish and Wildlife and Rocky Mountain Elk Foundation funding will be applied for as funding cycles and funds become available. The project will be implemented in the spring of 2022 when weather and fire conditions allow with the final project scope determined by the success of acquiring additional funding sources.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

OHA volunteers from the Bend chapter have completed regular patrols and maintenance of the directional fencing at the Lava Butte underpass south of Bend on highway 97 since the ODOT completion of the passage structure in 2012.

Project 2

1500 maximum characters

In the fall of 2019 OHA and Oregon Youth Challenge Program cadets provided of 531.5 volunteer hours to construct 1,600 feet (~0.30 miles) of wildlife friendly buck and pole fence around the 1.3-acre meadow below Pothole Spring on EFM Fort Rock property. The fence maintains wildlife access to the meadow while excluding livestock and OHV use improving the quality and quantity of grasses, forbs and shrubs over time which will further benefit a variety of wildlife species. In addition, in the spring of 2021, 21 OHA volunteers put in a total of 393 hours and 3,681 miles to build 2,978 feet (~0.56 miles) of wildlife friendly buck and pole fence along the zone of influence of Smoke Creek. A total of 30.8 acres of Smoke Creek riparian zone of influence was fenced on EFM Fort Rock property. The fence maintains wildlife access to the riparian zone of influence while excluding livestock and OHV use improving aspen and riparian vegetation quality and quantity over time which will further benefit many species.

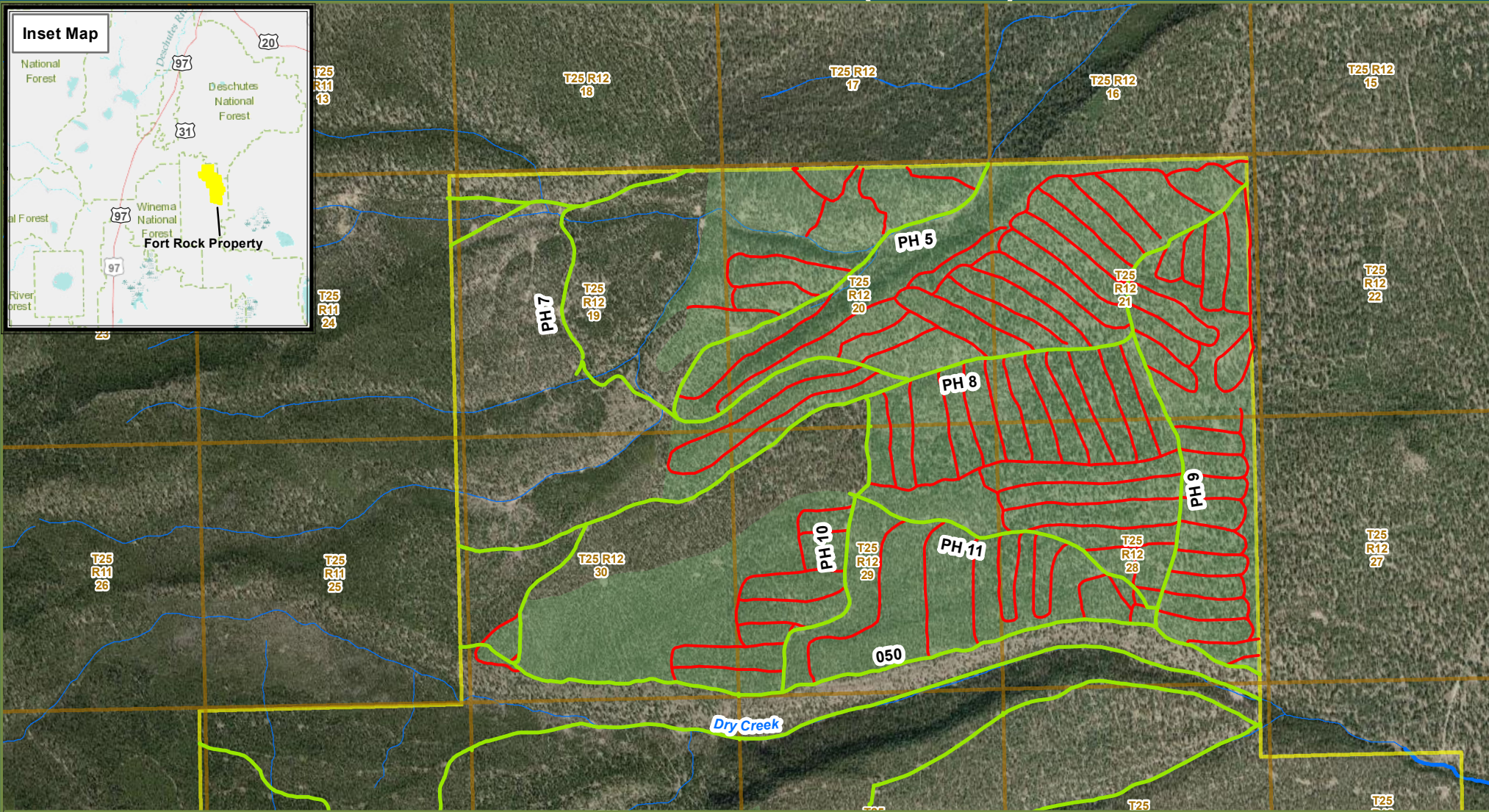
This content is neither created nor endorsed by Google.

Google Forms

Fort Rock Property Road Retirement (PHZ 1)

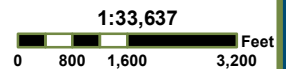


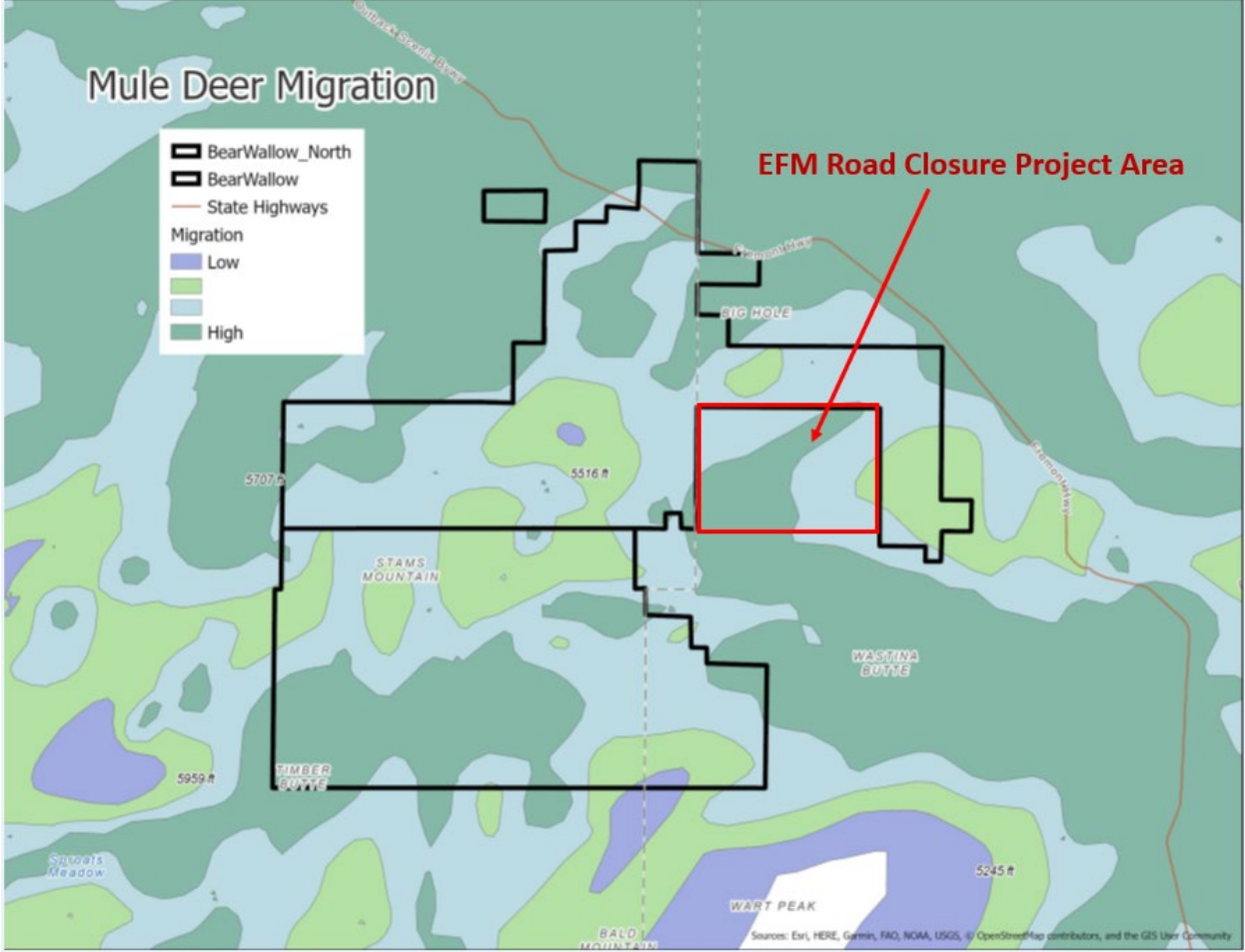
Map Updated 9/16/21 by A. Geritz for EFM



- Target Retirement Roads (36.8 Mi)
- A&H Open Roads
- Project Area (2,590 Acres)
- Fort Rock Property Boundary
- Sections

Assuming 1 mile of road treated will encompass 6 acres of area:
 36.8 mi of road identified for retirement = 220 ac available for treatment





OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

jakob@beavercoalition.org

Project Information

Project Title *

Update the Beaver Restoration Guidebook

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The Beaver Restoration Guidebook is a free, open-source guide to the best available science, restoration techniques, and management practices for partnering with beavers in stream restoration. This guidebook was first developed in 2015 with funding from Great Northern Landscape Conservation Collaborative, and housed by the Oregon office of US Fish and Wildlife Service. Since that time, new science has emerged, on beaver and wildfire for example, and interest in coexistence solutions like pond levelers and culvert protection systems has ballooned across Oregon. This project is a timely revision that will provide an updated summary of the science, while also working to empower Oregonians—from landowners to municipalities and public works departments—with a robust beaver coexistence toolkit. The Beaver Coalition has partnered with the original authors to facilitate this update, and will work closely with relevant state and federal agencies to publish this update. This project is motivated by the need to share the benefits that beaver provide to the full suite of riparian associated terrestrial species and complex floodplain aquatic species. Through this update, The Beaver Coalition is working to empower humans with the best available tools for partnering with beaver—either to simply protect human infrastructure or to help facilitate restoration of an ecologically resilient and more water-rich Oregon. New material has been strategically targeted with this goal in mind, and will include a set of standard designs and best management practices for coexistence solutions, and a clarified regulatory framework around beaver and beaver-based restoration and coexistence in Oregon.

Primary Contact Person *

Jakob Shockey

Primary Contact Email Address *

jakob@beavercoalition.org

Primary Contact Phone number *

(541) 761-3312

Lead Organization *

The Beaver Coalition

Mailing address *

PO Box 193
Jacksonville OR, 97530

Lead Organization Federal Tax ID *

84-5076273

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Statewide

Project Location (County) *

Statewide

Project Start Date

MM DD YYYY

01 / 01 / 2022

Project End Date

MM DD YYYY

10 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

19880

Total Project Cost *

62898.25

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

For millions of years, the North American Beaver has actively shaped the form and function of aquatic ecosystems in North America. More than glaciers or plate tectonics, beavers have shaped our landscape. Through their predictable construction of dams, ponds, burrows, and channels, beavers have slowed water and sediment, pushing it up and out, building the valley floors that are the floodplains we, and a myriad other species, call home. Beavers have provided a stable habitat niche within which the rest of our aquatic ecosystems have evolved “since time immemorial.” It shouldn’t be surprising then, that as we have removed these ecosystem engineers from the system they built and maintained, the structure of our streams, rivers, wetlands, and floodplains has started to crumble.

Beavers are the quintessential “keystone species” for our landscape. They have formed the riverscapes that our fish and wildlife resources depend on, and these riverscapes naturally clean and cool streams, recharge aquifers, and buffer forests and grasslands into a fire resilient landscape. Beavers will actively maintain all of these functions in a robust and dynamic fashion, but quite obviously, only if they are present. Only when beavers are living and working in all of the streams and rivers and floodplains of North America will these riverscapes deliver the “ecosystem services” we have come to depend upon.

When beaver are removed from streams and rivers, or prevented from becoming re-established in watersheds, the maintenance contract is broken and the system falls into disrepair. Down-cut, incised streams disconnect from their floodplain and become trapped within the walls of a trench, more like a ditch constrained between tight walls than a free-flowing, meandering, beautifully complex stream. Sediment and carbon are exported from long-term storage, water warms and becomes eutrophic, the landscape dries out, and fires run for miles across a uniform expanse of fuel. Little is left in terms of healthy habitat for fish and wildlife. Beaver-managed floodplains are salmon, trout, and lamprey habitat. Beaver ponds and wetlands are sinks for carbon and processing domains for nitrogen and phosphorus. Beaver floodplains are water-cooling, water-storing, and flood-dissipating places we would all benefit from fostering.

The North American Beaver was once abundant and wide-spread across the continent, but it is now struggling. It is struggling to recover from trapping to near extinction for its fur, from continued lethal removal for its perceived threat to the human built environment, and from the pervasive human-driven degradation to the stream and river habitats that are its home. If we are serious about restoring the underlying natural processes that lead to functional and resilient habitat, we must partner with beavers. While beavers can be seen as a “tool” for restoration, or an “indicator” of ecological health—they are more than these too. Beavers are the foundation ecological process behind the form and function of habitat in the waterways of North America. In order to have robust water security and habitat resiliency, we must return the control of our riverine systems to the professionals.

Does the population status of the North American Beaver warrant protection? No, not in the sense of it being a threatened species. There are robust populations scattered across the continent and at least some beaver in most of its historic range. However, we can act to amplify the natural landscape engineering that beavers do through planning, regulation and practices that support persistent populations. We must push past the people problems, and partner with beaver for the real heavy lifting—bringing our water tables back up, reconnecting our floodplains, restoring the natural process that results in habitat. In areas that are initially too degraded for beaver, we must start the restoration process—often simply through the low-tech, process-based, human emulation of beaver activity. We can then magnify and protect our investment in stream restoration actions by entering into partnerships with beaver. We need to take these actions for the health and resilience of our aquatic resources.

This connection between beaver activity and the function of habitat was recognized by the planners behind the Oregon Conservation Strategy. Partnering with beaver was highlighted as a recommended approach for multiple limiting factors in both the Wetlands, and Flowing Water and Riparian Habitats ecoregions. For example, under the recommended approach to habitat loss in wetlands, the Oregon Conservation Strategy states “Manage beaver populations to contribute to wetland creation and maintenance, when compatible with existing land uses.” This is exactly the type of action we will help facilitate with this project to update the Beaver Restoration Guidebook. While at first blush, updating an open-source guidebook may not seem as impactful as say, an on-the-ground restoration action; however we feel that it is a critical step for humans to coexist and partner with beaver in our state as the Oregon Conservation Strategy suggests.

The Beaver Restoration Guidebook is a free, open-source guide to the best available science, restoration techniques, and management practices for partnering with beavers in stream restoration. A project initially funded by the North Pacific Landscape Conservation Cooperative, and housed since release with the Oregon office of US Fish and Wildlife, the BRG was envisioned as a living document. The original authors, Janine Castro, Michael Pollock, Chris Jordan, Gregory Lewallen and Kent Woodruff, have agreed to partner with The Beaver Coalition (TBC) to maintain the guidebook as a reliable, up-to-date, credible source of information on beaver-based restoration, with TBC serving as the lead entity for this project. The Beaver Restoration Guidebook was originally published in June 2015, it was last revised in 2017.

Since that time, new science has emerged, such as on beaver and wildfire, for example, and interest in coexistence solutions like pond levelers and culvert protection systems has ballooned across Oregon. This resource must continue to be updated must as the collective knowledge base evolves and grows. This timely revision will update the science, while also working to empower Oregonians—from landowners to municipalities and public works departments—with a robust beaver coexistence toolkit. In addition to the original authors, will also work closely with relevant state and federal agencies to publish this update so that these actions are in alignment with state and federal regulations (like fish passage laws) and the permitting process is clear.

This project is motivated by the benefits that beaver provide to the full suite of riparian associated terrestrial species and complex floodplain aquatic species. Through this update, The Beaver Coalition is working with Oregon Department of Fish and Wildlife, National Oceanic and Atmospheric Administration, the US Fish and Wildlife Service, and others to empower humans with the best available tools for partnering with beaver—whether to simply protect human infrastructure, or to help facilitate restoration of an ecologically resilient and a more water-rich Oregon. New material has been strategically targeted with this goal in mind, and will include a set of standard designs and best management practices for coexistence solutions, and a clarified regulatory framework around beaver and beaver-based restoration and coexistence in Oregon.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

It is in our interest to maintain The Beaver Restoration Guidebook (BRG) as a relevant, up-to-date and scientifically robust guidebook for those engaging in beaver management and beaver-based restoration.

Guiding objectives of this project include:

- A. Ensure the BRG continues to be an accessible, useful resource for those involved in using beaver to restore streams, floodplains, wetlands, and riparian ecosystems
- B. Establish a transparent, periodic process for BRG revision and the solicitation of academic and practitioner input.
- C. Maintain high standards for data inclusion in the BRG through review by TBC's Science and Technical Information Committee and the original authors.
- D. Partner with federal and state agencies to maintain agency support and buy-in.

In the short-term, we plan to revise the document to a version 3.0 and our specific objectives for this project phase are as follows:

1. Update the Beaver Restoration Guidebook for release by Fall 2022 (pending funding timelines).
 2. Add a section on the regulatory framework for beaver management by state statute in the PNW (Oregon, Washington, Idaho), ideally expanding to the entire Mountain West (California, Montana, Wyoming, Colorado, and Utah).
 3. Add new best management practices (BMPs) for flow devices and culvert protection for Oregon, approved by ODFW, for use in streams with protected, migratory fishes.
 4. Add new content to address relationships between beaver and wildfire behavior.
 5. Update the BRG library of references to include new literature, with in-text citation within the BRG as applicable
 6. Publish the guidebook free online (Via the TBC website) and provide easy print-order solution for those wishing to receive a hard copy for a nominal fee. Facilitate expedited permitting process in Oregon in collaboration with state and federal agencies
-

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Our success will be measured by progress on our objectives as stated above. Did we achieve these results?

1. Establish a transparent, periodic process for BRG revision, and the collection and solicitation of academic and practitioner input
2. Clarify regulatory framework for beaver management and beaver-based restoration in Mountain West
3. Generate best management practices (BMPs) in the form of detailed site evaluation, design options and considerations, and construction details for two forms of beaver/human conflict mitigation devices – pond levelers and culvert protection. Work with ODFW and federal agencies to evaluate concerns and workshop design alternatives. Publish BMPs standards with support from ODFW, NOAA and USFWS.
4. Update specific topics, including developing new content where necessary to address relationship between beaver and wildfire resilience
5. Update the BRG library of references to include new literature, with in-text citation within the BRG as applicable
6. Publish revision 3.0
7. Facilitate expedited permitting process in Oregon in collaboration with state and federal agencies

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our project advances conservation through empowering Oregonians (from rural landowners to municipalities) to partner with beaver for habitat restoration and improved habitat connectivity in our state's aquatic systems. This project directly communicates, and makes accessible, the evolving science. It also facilitates beaver-based restoration and coexistence through directly addressing the limiting factors for this work in Oregon; a lack of best management practices (BMPs) for coexistence solutions, and an ambiguous regulatory framework. The connection between beaver activity and habitat function was recognized by the planners behind the Oregon Conservation Strategy, and our project works to empower people with the toolkit to directly advance those recommendations.

Partnering with beaver was highlighted as a recommended approach for multiple limiting factors in both the Wetlands, and Flowing Water and Riparian Habitats ecoregions. For example, under the recommended approach to habitat loss in wetlands, the Oregon Conservation Strategy states "Manage beaver populations to contribute to wetland creation and maintenance, when compatible with existing land uses." This is exactly the type of action we will help facilitate with this project to update the Beaver Restoration Guidebook (BRG).

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Personnel time: \$14,000

\$4,800 – Project management of revision process (task 1.1)

\$2,800 – Coexistence BMPs development for pond levelers (task 3.1)

\$2,800 – Coexistence BMPs development for culvert protection (task 3.2)

\$3,600 – Facilitating permitting process collaboration (tasks 7.1, 7.2 & 7.3)

Contracted Services: \$4,600

\$700 – Confirmation and archiving (task 2.2)

\$1,500 – Tech writer (task 6.1)

\$2,400 – Document layout for publishing (task 6.2)

Administration: \$1,280

\$1,280 – Fiscal administration

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

ODFW – \$5,018.25 in-kind staff time toward tasks 2 and 3.

NOAA – \$8,000.00 in-kind staff time toward tasks 1, 4, and 5.

City of Portland – \$3,000.00 in-kind staff time toward tasks 2 and 3.

Clean Water Services – \$20,000.00 toward tasks 2, 3, 6, and 7.

The Beaver Coalition is also contributing \$15,000 cash to this project from a private donor donation.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Long term BRG Update/Maintain Plan – 4/30/2022 Dataset for Mountain West beaver management

regulatory framework – 4/30/2022 New wildland fire and Beaver and updated relocation content –

6/30/2022 BMPs for pond levelers and culvert protection – 4/30/2022 Updated beaver science literature

bibliography – 8/30/2022 Updated BRG v3.0 – 10/31/2022 Facilitating permitting process – 8/30/2022

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Beaver provide an accessible connection to the outdoors and its wildlife. Unlike many charismatic wild mammals, beaver live in a diversity of environments—from our most remote wilderness to loud urban centers. Further, beaver create the same functional wetlands teeming with birds, other mammals, reptiles and amphibians, and fish—as they would in a landscape with less human habitat. These beaver-maintained wetlands, like Errol Heights Park in Portland, provide accessible opportunities for Oregonians to engage with watchable wildlife, and introduce school children to the ecology of wetlands and riparian systems. These natural spaces can only exist with beaver as a functional element if the municipal ecologists and park managers charged also with protecting human infrastructure have access to the beaver coexistence toolkit and best available science.

There is precedent for the BRG as a reference point for BMPs that facilitate an expedited permitting process through ODFW for those who would like to implement low-tech, process-based restoration. Link: <https://www.dfw.state.or.us/fish/passage/docs/Instream%20Restoration%20ODFW%20Fish%20Passage%20Policy%20Bulletin.pdf>

Here's the link to the current Beaver Restoration Guidebook: <https://www.beavercoalition.org/guidebook>

The Beaver Coalition is a new Oregon nonprofit organization, formed in April 2020 formed in April 2020. As we are in our first year of operations, we have many in-progress projects, several of which are slated for completion in spring to summer of 2022. The projects highlighted in 28 and 29 are two of our oldest ongoing projects.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Cascade-Siskiyou National Monument, Restoring Riparian Habitat for Aquatic Resource Biodiversity in collaboration with the Bureau of Land Management.

As the western U.S. struggles with changing rain and snow patterns, seasonal droughts, and catastrophic wildfire, there is a clear need for restoration work that will build ecological resiliency and restore natural processes in riparian and aquatic ecosystems. As documented by the US Fish and Wildlife Service, over 80% of listed special concern species (plants and animals) are wetland-dependent at some point in their life cycle.

This project is developing a beaver-based restoration plan to implement identified activities to restore riparian and aquatic habitat within the Cascade-Siskiyou National Monument (CSNM)—an area with a history of exploitation that has been specifically set aside for protecting plant and animal species, ecosystems, and biodiversity.

This project began with a strategic framework for planning beaver-based restoration, and specifically employs proven low-tech, process-based restoration techniques. These techniques include improving habitat through tools like Post Assisted Log Structures (PALS) and Beaver Dam Analogues (BDAs), planting native vegetation, and eventually translocating beavers to areas in the monument where they have been extirpated.

Project 2

1500 maximum characters

Empowering Nonlethal Solutions to Human/Beaver Conflicts through Case Study Vignettes with support from Natural Resource Conservation Service.

In spite of their ecological benefits, beavers and their damming can cause a multitude of headaches and financial woes for human property, crops, and infrastructure. However, many of these problems can be solved with long-term, cost-effective beaver coexistence solutions. This project facilitates the transfer of knowledge of these tools by producing high quality, story-driven outreach materials which will highlight the firsthand experiences of our partnering landowners and their authentic journeys of transitioning from beaver conflict to beaver co-existence.

We are midway through producing these two case-study vignettes, emphasizing coexistence on working agricultural lands in both Forest Grove and Lake Oswego. These vignettes are the first two in what will be an ongoing series of a dozen or so 2-3 minute documentary-style short films that collectively will highlight a diversity of scenarios where humans opt to partner with, rather than battle, their beaver neighbors. Our producer is the filmmaker behind the award winning film *The Beaver Believers*. We will also be building out an online "co-existence hub" within our website through which to showcase our films, testimonials, character vignettes, photos, and essays, such that it will grow to be recognized as a trusted resource of value to cross-section of Oregonians.

This content is neither created nor endorsed by Google.

Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

steve@landconserve.org

Project Information

Project Title *

Pompadour Bluff Access Infrastructure Phase I

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Replacing a degraded bridge on the access road to Pompadour Bluff, an iconic, newly conserved 55-acre natural area preserve in the upper Bear Creek valley east of Ashland, is the first step toward safe access to the preserve for future habitat restoration, recreation, trail development and fire prevention. Pompadour Bluff and its 55 acres of dramatic rock outcrops and diverse wildlife habitat were gifted to Southern Oregon Land Conservancy in July 2021 after being isolated by private ownership for the past 50 years. Pompadour Bluff itself is an iconic geologic formation visible from the I-5 corridor and Ashland's viewscape, surrounded by intact oak woodland, native grasslands, shrubland, and habitat for multiple native, sensitive plants and animals. Donated to form a preserve with public access, Pompadour Bluff is in designated deer and elk winter range (Grizzly Unit) and is closely adjacent two Conservation Opportunity Areas and the Cascade-Siskiyou National Monument. With its prominent place on the eastern horizon of the upper Bear Creek valley and history of inaccessibility as a private property, Pompadour Bluff has already begun to stir community interest for visits to see the 360-degree views from the summit and fulfill previously distant appreciation of the bluff's beauty. A bridge across an irrigation ditch on the access road to Pompadour Bluff is eroded on one footing, rated unsafe for service and fire safety vehicles. To support planned conservation and recreational activities, the access bridge must be replaced with to meet code (60,000-pound capacity) to permit safe access to Pompadour Bluff for equipment to develop recreation facilities, school buses to bring students, fire trucks to prevent possible wildfire, and for long term conservation management to sustain the natural habitats, and initiate recreational use. Requested funds will support approximately one third of the cost of replacing the degraded bridge on the access road to Pompadour Bluff.

Primary Contact Person *

Steve Wise, Executive Director

Primary Contact Email Address *

steve@landconserve.org

Primary Contact Phone number *

541-482-3069 x 102

Lead Organization *

Southern Oregon Land Conservancy

Mailing address *

PO Box954, Ashland, OR 97520

Lead Organization Federal Tax ID *

93-0724691

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Ashland

Project Location (County) *

Jackson

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

06 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

60000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Southern Oregon Land Conservancy (SOLC) acquired the 55-acre Harry and Marilyn Fisher Preserve at Pompadour Bluff in July 2021, creating the opportunity to conserve the area's unique, intact ecology and to share an inspiring, iconic landscape with the surrounding community for the first time in recent history. The previous owner of the 55-acre property donated the area to become a nature preserve that includes public access. Requested funds will support the first key infrastructure improvement: replacing a failing bridge with one that can safely provide access for stewardship, education and fire safety.

Funding of \$20,000 from the Oregon Conservation and Recreation Fund will support approximately one third of the bridge replacement cost. SOLC has secured the remainder of funding from a grant (Gardner Grout Foundation, pledged) and from individual donations. Costs are based on a design approved for irrigation ditch crossings and that will meet local code for service vehicle access, whether school buses for student visits, equipment for trail or visitor facility development, or fire fighting equipment.

Southern Oregon Land Conservancy is Oregon's first and oldest regional non-profit land conservancy. Founded in 1978, SOLC now manages 73 conservation properties, 70 under voluntary, permanent conservation easements, and three including Pompadour Bluff as fee-owned properties. SOLC's mission is to protect and enhance precious land in the Rogue River region to benefit our human and natural communities. We envision a vast network of conserved lands spanning the region, connecting people to nature, and enhancing the quality of life for all who live in or visit this special corner of the Pacific Northwest. SOLC is accredited by the Land Trust Alliance, with a staff of 10 based in Ashland.

Pompadour Bluff represents an outstanding, intact remnant of a broader geologic formation with cliffs and rock outcrops (Payne Cliff Formation) that until now was only found on private lands without public access. The habitats support many species including rare plants, ungulates, raptors and reptiles. The area includes Pompadour Bluff, a scenic cliff formation (3 acres), 12.5 acres of oak woodland, 9.6 acres of chaparral/shrubland, and about 25 acres of relatively intact to degraded upland grassland. It is in deer and elk Very Sensitive Winter Range (Grizzly Unit). In the cliffs, Barn Owl, Common Raven, Violet-green Swallow, and Turkey Vulture nest. The mature oak savanna is in excellent condition with a relatively rare intact understory of native bunchgrasses and forbs. SOLC has secured an initial stewardship endowment to fund the habitat restoration, but needs support to secure safe access and implement recreational programs on the site.

Along with its intact habitats, the top of Pompadour Bluff also offers a commanding 360-degree view of the Upper Bear Creek Valley, including nearby Grizzly Peak, Pilot Rock, and portions of the Cascade and Siskiyou Mountains. SOLC commissioned a recreation plan analysis to explore Pompadour Bluff's outreach potential. The plan envisions a series of trails, including some with universal access, to facilitate safe recreational visitation while preserving the area's ecology. A bridge replacement and associated parking area are the first step toward implementing the recreational development needed to support recreation and outreach. SOLC is in the process of developing the long-term management plan for the preserve, which will include invasive species management, wildlife friendly fence replacement, trail and visitor facilities development, and programs for volunteers, students, researchers and visitors. Future management may also include prescribed fire, which would require heavy vehicle access for safety.

Initially focused on the Rogue River Preserve about an hour north, SOLC has developed a series of

community education initiatives to bring people to our conserved lands. Our volunteer site steward program trains individuals to assist with hands-on conservation and monitoring activities, particularly invasive weed management, seed collection, and habitat surveys. A docent training program educates volunteers to lead interpretive hikes and to provide general information for small groups of visitors to learn about the natural history and significance of conservation. An elementary school education program facilitates site-based learning, nature journaling, and conservation awareness for youth. Organized nature hikes and exploration days led by area naturalists highlight the diversity of wildlife for interested visitors. With appropriate infrastructure to safely allow access, SOLC anticipates organizing the same range of activities at Pompadour Bluff, at levels and group sizes that will protect the area's sensitive ecology.

SOLC partners with schools, other conservation organizations, and community groups in organizing stewardship and education activities. Collaborations include the Klamath Bird Observatory, Understory Initiative, Rogue Valley Audubon Society, Southern Oregon University classes and the graduate environmental education program, Pollinator Project Rogue Valley, and Southern Oregon Regional Environmental Education Leaders Network, all of whom will be part of stewardship and education at Pompadour Bluff. SOLC is also a partner in the Indigenous Garden Network (IGN), a collaboration between conservation groups, Southern Oregon University and the Confederated Tribes of Grand Ronde and Confederated Tribes of Siletz Indians to explore access to conserved areas for traditional cultural harvest and practices. Although site visits planned in 2021 were canceled due to pandemic risk, we anticipate working with Tribes and other partners to integrate Pompadour Bluff into IGN cultural programs.

All conservation and recreation activities require safe access, and all safe access must cross the bridge over the irrigation ditch to reach the property. A professional inspection of the current bridge in 2020 indicated that erosion was undercutting the support structure on one side. The existing timber bridge is located near the southwest boundary of the property and is used to traverse Talent Irrigation District canal. The bridge spans approximately 16 feet between concrete supports. The inspection concluded that while safe for occasional use by passenger vehicles, the current bridge would not meet public code standards for safe passage of service vehicles or buses that could bring students to experience Pompadour Bluff's wonders. The proposed replacement bridge would be a 25' long, 12.5' wide precast concrete span with abutment footings that would be secure for long-term usage and sufficient to meet county code for larger vehicle access.

Upper Bear Creek is part of the Cascade Foothills Focus Area for the Southern Oregon Land Conservancy's conservation efforts. In 2020-21, SOLC analyzed undeveloped lands in the Upper Bear Creek area, which includes salmon-bearing streams, migratory habitat for elk, deer and other mammals, and diverse habitats for other native plants and animals. Bear Creek also provides numerous recreation areas, the Greenway trail, and natural features that are key to the region's character. The project site is part of the greater Klamath-Siskiyou ecosystem, a region that supports the most concentrated biological diversity in temperate North America, and is part of a vibrant year-round recreation culture at the south end of Oregon's I-5 corridor.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The goal of the Pompadour Bluff Access Infrastructure Phase I is to secure safe access to the Harry and Marilyn Fisher Preserve for its long-term conservation and recreational use. Safe, code compliant vehicle passage across the irrigation ditch is a prerequisite to conserving the area's extraordinary value as multi-species habitat, and leveraging its potential as an inspiring place to experience nature in the upper Bear Creek Valley.

Objectives are to dispose of the existing bridge, and to manufacture and install a code compliant replacement span at the current location of the failing bridge.

The long-term objective is to facilitate future conservation, recreational facility development and access, including an accessible recreational trail system and interpretive facilities.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The primary outcome will be to replace the current failing bridge with one that is code compliant for safety vehicles, school buses, and equipment needed to create visitor infrastructure for future conservation and recreation experiences. Success will be measured by manufacturing and installing a new, code-compliant bridge, removing and disposing of current bridge materials, and creating safe access for future site stewardship, trail and infrastructure improvements, and future volunteer stewardship and education programs.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Replacing the bridge to provide safe access to the Pompadour Bluff Preserve will achieve several OCRP priorities.

SOLC plans for long-term conservation and restoration of habitat for, as well as science and monitoring of, numerous priority species in the Oregon Conservation Strategy at Pompadour Bluff. Early surveys found that the site is home to rare or disjunct plants, lichen, and bird species not typically found in the Rogue Valley (or in the large numbers identified at the site), including Purple Martin, Peregrine Falcon, and Lewis's Woodpecker. Partner organizations and community science collaborations will add to this body of research.

SOLC's recreation and education programs at Pompadour Bluff will engage and expand the number and diversity of Oregon's outdoor users through safe, accessible trails and programming: we have begun translating interpretive materials into Spanish and recruiting multilingual education program assistants, and recreation plans for the site include a universal-access trail. The site is rich in wildlife-associated recreation opportunities, with Acorn Woodpecker, Western Bluebird, Western Meadowlark, and Whitebreast Nuthatch common sights. Integration of planned, supervised small group visitation will allow the broader community to experience the area's sensitive habitats while limiting adverse ecological impacts, while eliminating informal trespass as the primary public access.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other: Rare lichens

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

Administration

Contract services

Equipment

Personnel

Supplies/materials/services

Travel

Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Funds will cover a portion of the approximately \$33,000 materials/services cost of manufacturing a pre-cast concrete bridge (Pacific Bridge), materials including gravel and riprap for fill around bridge abutments, and contract services (\$27,000) to remove the current bridge and install its replacement.
.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

M+M construction services -- construction contractor; Knife River Materials -- gravel supplier
.....

Timeline *

Please identify the key milestones towards completing the project and achieving results.

SOLC plans to remove the existing bridge and install its replacement between March 1 and June 1, 2022. Implementation of conservation and stewardship activities to improve recreation and conservation access would follow.
.....

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Project web page:

<https://www.landconserve.org/news/2021/10/11/introducing-the-harry-and-marilyn-fisher-preserve-at-pompadour-bluff>

Site locator map:

<https://drive.google.com/file/d/1BCSW3GapPkSOddTBVXFhiWccrAmDULr3/view?usp=sharing>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

SOLC acquired and conserved the 352 acre Rogue River Preserve (RRP) in 2017, including 2 miles of riparian forest, as well as a 17 acre island supporting elk calving, near Eagle Point. The RRP includes several distinct habitats that support remarkable biodiversity, including at least 32 rare, declining and uncommon plant and animal species.

The RRP's conservation values include:

- Riparian habitat for spawning and juvenile coho and Chinook salmon
- The second largest gallery floodplain forest (140 acres) upstream of Galice with towering black cottonwoods and pines, home for animals like chorus frog, breeding Bald Eagles and Great-horned Owl, and black bear
- Quiet waters on a backwater slough providing a haven for western pond turtle, Green Heron, Wood Duck, and mink
- A mosaic of valley-floor oak woodland, meadow, and chaparral supplying food and shelter for common kingsnake, Blue-gray Gnatcatcher, Purple Martin, Western Bluebird, black-tailed deer, Roosevelt elk, and under shrubs, the rare white fairypoppy flower
- The northern edge of a rare landscape called the Agate Desert with vernal pools and mounded prairie with a unique plant community, including the federally endangered large-flowered woolly meadowfoam

Since acquiring the preserve, SOLC has led habitat restoration efforts to remove invasive species, monitoring for migratory birds and nesting raptors, as well as trail building and educational events for adults and school groups.

Project 2

1500 maximum characters

In 2020, SOLC initiated a site-based conservation education program at Rogue River Preserve. When the pandemic prevented planned field programs for elementary schools, SOLC adapted by formulating on-line resources that allowed virtual visits. Education staff also conducted teacher training to prepare for eventual field programs, and piloted curriculum with a handful of schools that were operating small Covid-safe student pods. By spring of 2021, elementary schools from nearby Central Point began field education, focused on nature journaling to observe and reflect on biodiversity while maintaining social distance.

To engage volunteers, SOLC trained site stewards on invasive species removal fence removal, and other stewardship. Other volunteers trained as docents to lead interpretive hikes for visitors, particularly during open lands days. As a further adaptation to social distancing requirements, open lands days limited group sizes and welcomed visitors in shifts, also limiting disturbance of natural areas.

Success of the initial education programs, including school field studies, volunteer steward and docent trainings, has led to replication of the effort at other publicly accessible properties where SOLC has easements. In 2022, we anticipate beginning comparable education programs for students of all ages at Jacksonville woodlands, a collection of forest properties along the edge of Jacksonville, and at Ashland's Oredson Todd Woods.

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OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

elena@sourceoneserenity.org

Project Information

Project Title *

Boulder Creek Wilderness Trails Project

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Source One Serenity, a local grassroots non-profit, creates opportunities for veterans to be introduced to the healing power of nature in a meaningful way by performing trail work and other volunteer projects. The proposed project will complete log-out and tread work to reopen 10.6 miles of the Boulder Creek Trail (#1552) in the Boulder Creek Wilderness on the Umpqua National Forest. This project will expand recreational opportunities to local residents and visitors despite recent disturbance events that damaged 43% of the most popular trail in the Umpqua National Forest, the 79-mile North Umpqua Trail (NUT). The Boulder Creek Wilderness is unique because of its prominent ridge-top rock features. After the 2008 Rattle Fire, this area beautifully showcases the successional renewal of habitat including wildflowers and early seral species, providing rich habitat for deer and other game species. In 2021, veterans together with community members have accomplished phase 1 of the Boulder Creek Trail by clearing more than 5 miles of the southern section of the trail. The remaining 5 miles (phase 2) are expected to be even harder due to steepness and higher elevation. Although the trail is not cleared completely, it already provides renewed access to recreation. These trails were not accessible due to downed trees from the 2008 Rattle Fire and a backlog of deferred maintenance. After the completion of phase 1 in 2021, Source One Serenity is excited to finish the remaining trail work next year and be able to open not only the trail but also create opportunities in future years to reopen other feeder trails. Source One Serenity will also host educational camping for community members led by a biologist to educate them on natural fauna, forest rehabilitation, and conservation goals for such areas. This educational outing will cultivate stewardship among local residents to carry it over in the future years to maintain and preserve this area in conformity with Wilderness Act.

Primary Contact Person *

Elena Lininger

Primary Contact Email Address *

elena@sourceoneserenity.org

Primary Contact Phone number *

541-580-5655

Lead Organization *

Source One Serenity

Mailing address *

PO Box 274, Roseburg, OR 97470

Lead Organization Federal Tax ID *

81-2293906

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Idleyld Park, OR

Project Location (County) *

Douglas County

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

10 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

5018

Total Project Cost *

22388

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Source One Serenity is a grassroots 501(c)(3) non-profit organization that was formed with a mandate to empower veterans to reclaim their sense of purpose through outdoor activities and land stewardship. Source One Serenity is proud to have served more than 400 veterans since 2016 through outdoor retreats, fly fishing, hiking, and equine-assisted activities. Source One Serenity has also seen an immense impact on the lives of veterans by implementing stewardship projects on public lands. Land stewardship is mission-driven, and veterans are more likely to respond by serving the community rather than asking for help. This is how this work provides struggling veterans with an opportunity to reclaim their sense of purpose and to find a supportive community while being out in nature. In partnerships with the Umpqua National Forest, the Roseburg Bureau of Land Management, and Roseburg Field Office of the U.S. Fish & Wildlife Service, Source One Serenity has already accomplished several volunteer projects including trail work, renovating info-kiosks, clearing the fish ladder and trapping salmon for the fish hatchery.

In 2021, Source One Serenity started a collaborative effort with the Umpqua National Forest to eliminate the deferred maintenance backlog on the 10.6 miles of Boulder Creek Trail #1552 in the Boulder Creek Wilderness. The Boulder Creek Wilderness is a 19,886-acre wilderness area with numerous small waterfalls and rapids that connect the series of quiet pools that make up Boulder Creek, a tributary of the North Umpqua River. The wilderness is unique because of its prominent ridge-top rock features, some of which are off-the-beaten-path climbing areas. Boulder Creek is popular in the summer with backpackers and in the fall with hunters. However, due to a series of wildfires over the past 25 years, many trails have not been maintained in the Boulder Creek Wilderness, making safe travel difficult and in some areas impossible. For example, in July 2018, a hiker was lost in Boulder Creek for nine days, and then ultimately rescued by helicopter.

This work is of importance because the most popular trail in the Umpqua National Forest, the 79-mile North Umpqua Trail (NUT), has sustained major damage over 43% of it caused by the massive wildfires in 2020 and 2021. A severe winter snowstorm in 2019 also greatly affected many trails in the area. The lower part of the Umpqua National Forest will remain hazardous in the next several years, and many trails may not reopen for some time. These events have diminished recreational opportunities in Douglas County for local residents and visitors to this rural community. The wildfires and 2019 winter storm have required an unexpectedly heavy volume of work for the Umpqua National Forest, and so providing additional capacity through volunteers was necessary. This meaningful community work became important for veterans as an opportunity to heal outdoors, continue service to their country and connect with the community.

In June-October 2021, the veterans from Source One Serenity with community volunteers have cleared more than 8 miles of trail in the Boulder Creek Wilderness: Bradley Trail #1491 (2.4 mi), Soda Springs Trail #1493 (0.4 mi), and Boulder Creek Trail #1552 (more than 5 mi). They have cut 45 fallen trees and opened Bradley Trail and Soda Springs Trail that intersect Boulder Creek Trail at Pine Bench. The work in this area is arduous due to steepness, big, downed trees, and no mechanized equipment allowed. A great amount of effort is expended to hike in and use cross-cut saws to clear downed trees. Although the Boulder Creek Trail is not cleared completely, it already provides renewed access to the Boulder Creek Wilderness for hikers and equestrians.

Source One Serenity intends to fully clear and reopen the Boulder Creek Trail in 2022 (approximately 5 more miles from 2,000-5,000 feet elevation). This will also allow for reopening connector trails in future years, and

thus creating loop opportunities in the wilderness for hikers, backpackers, and equestrians. We are focused on reducing the deferred maintenance in the Boulder Creek Wilderness to help shift use and offer recreational opportunities to visitors despite recent disturbance events. Source One Serenity performs this trail work according to the Forest Service's trail development scale and under supervision of the Umpqua National Forest Recreation Program. The trails are intended to preserve the Boulder Creek Wilderness and its wildlife habitat as near as possible to the primitive environment, and "where man himself is a visitor who does not remain."

After finishing the trail work in Boulder Creek, Source One Serenity will host educational camping of a small group of community members with a biologist to educate them on natural fauna, forest rehabilitation, and conservational goals for such areas. This educational outing will cultivate stewardship among local residents to carry it over in the future years to maintain and preserve this area in conformity with Wilderness Act which is necessary because higher traffic in this area is expected after it is cleared and open to the public.

As Source One Serenity serves veterans, it is meaningful for the non-profit to work on publicly owned and federally managed land to create a sense of ownership of public lands among our volunteers. In the proposed project, Source One Serenity also addresses the issues and struggles our veterans experience during the difficult transitional period from their military careers into civilian life. Peer support among veterans plays a crucial role in easing these difficulties. The work during this project creates a haven for social camaraderie and breaks the bonds of isolation. We also introduce them to our local abundant ecosystem and world-renowned gem, the North Umpqua Wild and Scenic River which runs along the southern edge of the Boulder Creek Wilderness. This project will show veterans the importance of stewardship of our natural resources. What a great opportunity to reclaim their sense of purpose, which is the desire of every military veteran who has honorably served their country!

Ben H., a post-9/11 combat veteran who spent a weekend in the Boulder Creek Wilderness said: "Trail work in the wilderness with fellow veterans [...] can refresh the soul and rekindle a sense of meaning. For me contributing to trails work allows veterans and other members of our society to get out and experience the healing power of nature in ways that might not be possible if these trails did not exist. I find meaning in sweating and straining in manual labor across from other veterans who find purpose in hard work that ultimately benefits the greater good of our community."

To be able to complete the trail work, we plan four to six camping stays in 2022. Due to a minimum 5-mile hike to start the trail work, it is more efficient for volunteers to camp overnight in that area during the work. Volunteers from Oregon Equestrian Trails will assist Source One Serenity's crew in packing in hand tools due to a longer hike. The Project Lead for trail maintenance in the proposed trail work in the Boulder Creek Wilderness is Rusty Lininger, who is also the Co-Founder of Source One Serenity. He was trained by the International Mountain Bicycling Association to build sustainable multi-use single track, and since 2009 he has been building single-track trails in Germany. Since 2016, he has continued working on trails in the Umpqua National Forest. He also worked with volunteers from the Oregon Equestrian Trails on trail clearance in the county parks.

In addition to trail maintenance, Source One Serenity will install new trail signs throughout the wilderness area. Many trail signs have been damaged or destroyed in past fires, which is a safety risk for wilderness users. The Umpqua National Forest will provide Source One Serenity with the signs.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The main project goals include:

1. Provide healing opportunities for veterans in wilderness areas with a meaningful purpose and introduce them to the recreational opportunities in the Umpqua National Forest.
 2. Expand recreational opportunities in the Umpqua National Forest despite the massive damage of existing trails due to the recent fires and the 2019 winter storm.
Source One Serenity will achieve both goals by scheduling dates for volunteers in coordination with the Umpqua National Forest, outreach efforts to recruit veterans, and by organizing camping stays and trail work (providing dehydrated food, camping gear, equipment, and tools for trail work).
 3. Cultivate stewardship in the local community and increase understanding of rules of conduct in wilderness areas, as well as natural fauna, forest rehabilitation, and conservation goals. We will do this by hosting an educational camping event in the Boulder Creek Wilderness led by a biologist and social media outreach.
-

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

1. Our first expected outcome is to clear and reopen the complete Boulder Creek Trail in 2022, and thus expand recreational opportunities by a total of 13.4 miles of trails in the Umpqua National Forest. Success will be measured in miles of trail reopened.
 2. Our second expected outcome is to reach more than 2,000 local residents through social media outreach and educational camping on inspiring stewardship and educating on the rules of conduct in wilderness areas. Success will be measured by implementing the educational event and through the number of community members engaged on social media.
-

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Source One Serenity's trail work and educational event in the Boulder Creek Wilderness create an opportunity for veterans to be introduced to the outdoors in a meaningful way and to tap into the healing power of nature. Source One Serenity connects veterans with the community and educates them on land stewardship and ownership of public lands with an opportunity to continue serving their country. It expands the diversity of Oregon's recreational users through community service. By reopening the trails in the Boulder Creek Wilderness, it provides recreational access to Oregonians for hunting, scenic hiking and wildlife viewing in a safe manner. Moderate development of the trail according to Trail Class 2 standards and hosting an educational event led by a biologist fall under the conservation action of the Oregon Conservation Strategy to manage for recreational impact in this wilderness area.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCR Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Personnel (\$2,800):

- Allowance for three veterans in the total amount of \$2,400 (40hrs x \$20/hr x 3 veterans)
- Allowance for marketing staff (outreach) in the total amount of \$400 (20hrs x \$20)

Equipment (\$300):

- Tools (crosscut saw and saw sharpening) in total amount of \$300

Supplies/materials/services (\$1,170):

- Food (mostly dehydrated) in the total amount of \$1,050
- Food for horses in the total amount of \$120 (estimated 6 days x \$20/day)

Travel expenditures (\$748)

- Gas mileage from Roseburg in the total amount of \$605 (2 cars x 5 trips x 108 miles x \$0.56/mile)
- Gas mileage from Oakland, 2 trips with horses in the total amount of \$143 (2 x 128 miles x \$0.56)

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

1. Collaboration with the Umpqua National Forest:

- Supervision, coordination on scope of work, and regular communication on the progress:

USFS Trail Lead (2 days)

USFS 2 Trail Crew Workers (3 days)

USFS Recreation Manager (1 day)

- In-kind contributions (USFS provides the following tools for trail work):

Bucking/undercut saw (2*\$300)

Axes (3*\$100)

Limb trimmer (2*\$40)

Machetes (2*\$30)

2. National Forest Foundation Coordinator will assist Source One Serenity's crew with coordinating trail work and outreach efforts on stewardship.

3. Volunteers from Oregon Equestrian Trail will assist Source One Serenity's crew in packing in hand tools due to a longer hike.

4. Roseburg office of ODFW will assist Source One Serenity with outreach efforts concerning education on natural fauna and forest rehabilitation.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Source One Serenity will plan four to six camping stays from April till August 2022. It is estimated that in September or October 2022, Source One Serenity will implement an educational event during one weekend.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Two Letters of Support written by the Roseburg Office of ODFW and Douglas County's Sheriff John Hanlin will be sent per email to odfw.ocrf@odfw.oregon.gov to accompany the current proposal.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In August 2020, Source One Serenity's volunteers completed the work of renovating five wooden interpretive kiosks along the Wild & Scenic North Umpqua River. This was a rewarding project as these information kiosks supply information to thousands of visitors from all over the world for many years to come. It was also a great opportunity for veterans in our community to be able to connect. But the 2020 Archie Creek Fire brought fiery destruction upon the land, leaving behind a devastating landscape that has affected many of us in this community. We were saddened that one of the kiosks we renovated was destroyed by the fire. The area around the Bogus Creek Campground and Boat Launch was burnt beyond recognition. But thankfully, the others remained intact and untouched by the fiery wrath that raged through. As we enjoy our time along the Wild & Scenic North Umpqua River, we remember life is as fleeting as the water that flows bringing life into this valley, and that we must all do our part to preserve nature's bounty.

Project 2

1500 maximum characters

During Source One Serenity's fly fishing schools in 2017-2019, veterans implemented four surveys of electro-fish sampling at Lemolo Reservoir under the supervision of the Roseburg office of the Oregon Department of Fish and Wildlife. The goal of the surveys included catching, measuring, weighing, and recording the number of fish in a region of the North Umpqua River. A concern for the past few years was the absence of spawning kokanee (land-locked sockeye). Capturing one and spotting many others spawning brought comfort, and it promised a bright future for this fishery. They also monitored tui chub populations. It was an inspiring opportunity for the participants to successfully implement these surveys and deliver results to the local office of ODFW.

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Google Forms



From the desk of

SHERIFF JOHN W. HANLIN
DOUGLAS COUNTY, OREGON

Justice Building
Roseburg, Oregon 97470
(541) 957-8140
www.dcsso.com

October 21, 2021

RE: Oregon Conservation and Recreation Fund

Dear Grant Committee Members,

I am writing this letter in support of the grant proposal submitted to you from Source One Serenity for trail maintenance and improvement in the Boulder Creek Wilderness area of the Umpqua National Forest. Residents and visitors of Douglas County visit this area to hunt, day hike, birdwatch, backpack, camp, horseback ride, and rock climb. Amateur photographers are also drawn to this area for the rocky monoliths, spring wildflowers, and wildlife who make their home in the successional forest growth since the 2008 Rattle Fire.

Unfortunately, the area has been affected by fire on numerous occasions. The Spring Fire in 1996 and the Rattle Fire in 2008 burned most of this wilderness area. These fires have resulted in rapid brush growth and persistent blowdown of timber on trails such as the Bradley Trail #1491, the Boulder Creek Trail #1552, and the Soda Springs Trail #1493. Trees, thick brush, and washouts on these trails restrict access and make certain activities nearly impossible. Portions of these trails that have been wiped out and unmaintained trail junctions can become very confusing. People recreating in these areas can easily get lost resulting in the need for the Douglas County Sheriff's Office Search and Rescue to respond and locate or assist them. The work offered by Source One Serenity to clear and improve these trails would likely reduce the probability that people recreating would become lost or injured while out in the Boulder Creek Wilderness.

I believe this labor intensive work of hand sawing downed trees blocking the trails, manually clearing brush, and restoring trail surfaces by Source One Serenity to be a great service to the citizens and visitors of Douglas County.

Please give serious consideration and approval for this much needed service and repair to our public use trails and forest lands.

Respectfully,

A handwritten signature in blue ink that reads "John Hanlin".

John Hanlin
Douglas County Sheriff

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

smr@klamathbird.org

Project Information

Project Title *

Using GPS technology to track Oregon Vesper Sparrows from multiple breeding populations throughout their full annual cycle

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Oregon Vesper Sparrow is one of the most imperiled birds in North America, and is an Oregon Conservation Strategy Species. Current research is focused on breeding habitat needs, nest success, annual survival, and recruitment; more information is needed about the non-breeding season to complete a full assessment of conservation issues. Disentangling the potential causes of population decline requires understanding what threats Oregon Vesper Sparrows face in different parts of their annual cycle – and thus, the first step is understanding where those locations are. To address this critical knowledge gap, we deployed miniaturized, archival GPS tags on 10 Oregon Vesper Sparrows at our Rogue Basin study site in 2020; results from 3 birds recaptured in 2021 have provided the very first precise information about where Oregon Vesper Sparrows spend the non-breeding season, and a proof-of-concept for using GPS technology with this subspecies. Here, we propose to expand this study and deploy GPS tags on 20 Oregon Vesper Sparrows (10 in the Willamette Valley region, and 10 in the Rogue Basin region) in 2022 to further uncover migratory routes and wintering locations, and describe the degree of migratory connectivity (i.e., overlap in winter geography) between these two populations. This work will importantly double our sample size for the Rogue Basin breeding population, and provide the first GPS data identifying migratory stopover and wintering sites used by birds breeding in the Willamette Valley. We will use this novel spatial information to identify potential threats originating on the non-breeding grounds, and develop appropriate conservation strategies.

Primary Contact Person *

Sarah Rockwell

Primary Contact Email Address *

smr@klamathbird.org

Primary Contact Phone number *

541-201-0866 ext.6

Lead Organization *

Klamath Bird Observatory

Mailing address *

PO Box 758, Ashland OR 97520

Lead Organization Federal Tax ID *

93-1297400

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Ashland, OR, and Corvallis, OR

Project Location (County) *

Benton, Jackson, and Polk counties

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

19998.32

Total Project Cost *

28500.00

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Oregon Vesper Sparrow is one of the most imperiled birds in North America. Breeding Bird Survey data indicate a statistically significant declining population trend of 5.01% per year (Sauer et al. 2014). The 2010 estimated range-wide population size was <3,000 birds (Altman 2011), and more recent information suggests that number is closer to 2,000 birds (B. Altman unpubl. data). Wintering range contractions have also been reported in Baja and southern California. The Oregon Vesper Sparrow is an Oregon Conservation Strategy Species (ODFW 2016) and is considered of high conservation concern by all natural resources entities within its breeding and wintering range. It is a Bird of Conservation Concern for the U.S. Fish and Wildlife Service (USFWS 2021), and a Species of Greatest Conservation Need in the Oregon State Wildlife Action Plans (ODFW 2016). It is a candidate for listing as Endangered or Threatened in Washington State (WDFW 2015), and is under review for listing under the federal Endangered Species Act (ABC 2016). Oregon Vesper Sparrow is one of 22 subspecies recognized as a “distinct population of high conservation concern and extremely high vulnerability” (Rosenberg et al. 2016).

Beginning in 2013, extensive work on Oregon Vesper Sparrow ecology was initiated by Bob Altman, then of the American Bird Conservancy. In 2013 and 2014, Klamath Bird Observatory (KBO) contributed to a range-wide survey to determine the distribution, population status, and habitat relationships of populations of Oregon Vesper Sparrows (Altman 2015). Point counts, transects, and area searches were conducted to locate populations of Oregon Vesper Sparrows. Results from these surveys revealed populations located in the Puget Lowlands, Willamette Valley, Umpqua Valley, Rogue Basin, and Coast Range. Based on the low number of detections, there is high conservation concern for this bird (Altman 2015). Baseline information on range-wide abundance, distribution, and habitat relationships were gathered for Oregon Vesper Sparrow at that time (Altman 2015).

A five-year, range-wide study (2017 – 2021) led by the American Bird Conservancy, in partnership with KBO and EcoStudies Institute, is currently underway to look at how survival, productivity, and recruitment may underlie observed population declines and extirpations. The goal of this study is to develop range-wide strategies to counter the causative factors and improve wildlife management for this declining species. Current work is focused on breeding habitat needs, nest success, annual survival, and recruitment, and more information is needed to complete a full assessment of conservation issues that may occur in different parts of this bird’s annual life cycle.

In a migratory bird, population trends may be influenced by factors on their breeding grounds, wintering grounds, or migration stopover areas. Preliminary results for the Rogue Basin and Willamette Valley study regions suggest that nest success is not concerning, and that there seem to be areas of unoccupied suitable breeding habitat, even where nearby breeding populations occur. If breeding season factors are not the cause of declines in this subspecies, they could be the result of challenges encountered during migration or on the wintering grounds. Thus, this important breeding season work could be hindered by lack of knowledge of other aspects of the full annual life cycle of this subspecies. Based on these preliminary findings, we have begun parallel research to advance our knowledge of migratory stopover and overwintering sites. Disentangling the potential causes of population decline requires understanding what threats Oregon Vesper Sparrows face in different parts of their annual cycle – and thus, the first step is understanding where those locations are. Because different subspecies of Vesper Sparrow mix on the wintering grounds in California, and are not visually distinguishable, we currently have only a rough idea of where Oregon Vesper Sparrows spend the winter. We also have no information about migratory connectivity;

i.e., whether the breeding populations overwinter at the same or different locations.

Recent advances in technology are available to help overcome the logistical challenges of monitoring small songbirds year-round. To address this knowledge gap, we deployed miniaturized GPS tags on 10 Oregon Vesper Sparrows at the Rogue Basin study site in 2020; early results from three recaptured birds (a 4th bird was recaptured but with an apparent tag failure) have provided the very first precise information about where Oregon Vesper Sparrows spend the non-breeding season. The sample size of returning birds from this pilot effort was small, and did not include individuals breeding in the Willamette Valley, which may or may not use the same non-breeding locations. Now that we have proof-of-concept data in hand, we know it is feasible to capture 10-20 adults within each study region, and recapture a reasonable percentage of them the following year. Here, we propose to expand our sample size for the Rogue Basin population, and add novel information from the Willamette Valley population, by deploying GPS tags on an additional 20 individuals in 2022 (10 from each study region).

In the future, additional technologies such as the Motus Wildlife Tracking System (www.motus-wts.org) could also improve our understanding of population connectivity across the range of the Oregon Vesper Sparrow. Motus, a collaborative research network using automated radio-telemetry arrays to study the movements of small organisms (Taylor et al. 2017), would allow automated 'resighting' of tagged individuals. If Motus stations are located on both breeding and wintering grounds, it would help us to break survival rates down into their seasonal components: breeding, fall migration, overwinter, and spring migration. This would allow us to identify whether survival is unexpectedly low during a particular phase of the annual cycle and target appropriate conservation actions. To do this, we need the best available information on where to place Motus stations to maximize probability of detecting migrating or overwintering birds. In addition to filling a critical information gap for Oregon Vesper Sparrow ecology, GPS data will be used to plan optimal sites for future Motus station locations, to continue to build on our knowledge of factors limiting their population size.

The Rogue Basin population of Oregon Vesper Sparrows is centered at Lily Glen County Park (~20 miles east of Ashland, OR). An ongoing study is taking place there, as well as at six sites in the Willamette Valley region (see map). With funding from this proposal, we will deploy miniaturized archival GPS tags on 20 Oregon Vesper Sparrow adults (10 in each study region). Lotek PinPoint10 GPS tags weigh ~1 g, which will allow us to place them on most Oregon Vesper Sparrow adults (range in mass: 21-27g), while remaining under the permitted 4% of body weight for bird safety. These units can capture ~80 GPS fixes over a maximum of about a year, and they can be programmed to record points on a pre-determined schedule. Birds will be captured using mist-nets and song playback, given an aluminum band and three color bands, fitted with a GPS tag attached via a leg-loop harness, and released. Care will be taken to minimize handling time and stress on birds. Because of the ongoing study at these sites, other color-banded individuals and past return rates will serve as controls to continue to examine any potential negative effects that the tags may have (none were noted after the pilot year). Birds tagged in 2022 will need to be located and recaptured in 2023 after a round-trip migration to retrieve the tags and data; this will be achieved with either matching funds or in-kind staff time. Retrieved GPS data will contribute to full life cycle conservation of this imperiled bird.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our goal is to use recently available technology to discover the migratory routes and overwintering areas used by multiple breeding populations of the imperiled Oregon Vesper Sparrow, thus filling critical gaps in our knowledge of this subspecies' ecology that may hinder current conservation efforts, which focus on the breeding grounds. Our ultimate goal is to use this information to develop strategies for stabilizing and recovering the Oregon Vesper Sparrow population, to both prevent the need for listing and to enhance recreational opportunities for bird enthusiasts. To work towards achieving this overarching goal, the objectives of the project described here are to:

- 1) Capture and place GPS tags on 20 Oregon Vesper Sparrows (10 from each study region) in 2022.
- 2) Locate ~5-6 tagged adults returning to each breeding region (10-12 total), and recapture and retrieve tags with GPS data from ~3-4 birds in each region (6-8 total) in 2023; outside of the scope of this proposal.
- 3) Use the new spatial information to identify potential threats originating at migratory stopover sites and/or wintering grounds, and develop conservation partnerships with organizations working in those locations to address them; outside of the scope of this proposal.
- 4) Begin to examine migratory connectivity of populations in the two study regions (Rogue Basin and Willamette Valley); outside of the scope of this proposal.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

A battery size that is light enough to be carried by a small songbird is not able to transmit GPS locations, and can only store them in the tag. Researchers must rely on a portion of tagged birds surviving the round-trip migratory journey, and returning to field sites where they can be recaptured to retrieve the stored data. Due to this challenge, most studies of this type have relatively small sample sizes; nevertheless, they have revolutionized our understanding of bird migration in recent years. If we deploy archival GPS tags on 10 Oregon Vesper Sparrows in each region, we expect about 5-6 of these to survive and return to the same breeding site (based on past return rates of this subspecies measured at the Rogue Basin and Willamette Valley study sites). Of each 5-6, we estimate that we will be able to find and recapture 3-4 with functioning tags (it is possible we will be unable to recapture a small percentage of returning tagged birds, and it is possible that a small percentage of GPS tags will fail). The project will be considered successful if we obtain fall migratory stopover and winter location data from at least 3 individuals per study region. While that may seem small, a retrieval rate around one-third is considered standard for this type of tracking study with migrant birds. Precise data on the non-breeding sites used by an additional three birds from the Rogue Basin study region will double our current sample size – and GPS data on the migratory stopover and wintering grounds of birds that breed in the Willamette Valley will be completely novel – these data are very rare and extremely valuable for conservation. If we receive additional support from other grant sources, we will increase this sample size to a maximum of 20 birds in each study region (and aim to recapture 6-7 at each).

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The Oregon Vesper Sparrow is a Strategy Species, considered sensitive in the Willamette Valley and Rogue Basin regions. Our research directly relates to the Oregon Conservation Strategy goal to prevent declines of at-risk species. Prioritizing conservation actions is not possible without understanding the cause(s) of population decline, and we currently lack information about their needs outside of the breeding season. The outcome of our work will provide the direction for the next phase of conservation actions - to identify and address threats that originate on the non-breeding grounds - which will bolster current recovery efforts.

We have successfully engaged 25 community scientists, who spent over 400 hours helping us resight color-banded birds in 2018-2020. While not part of our funding request here, we plan to engage community scientists in our research in 2022-2023. In 2022, volunteers will continue the color-band resighting effort, and also use a handheld CTT antenna to detect Motus-tagged birds that may have dispersed to nearby meadows (we deployed 12 Motus tags in 2021). In 2023, the volunteer resighting effort will help us locate any GPS-tagged birds that return to these other meadows. This both increases the area we can cover, and engages the community in outdoor activities that contribute to the conservation of this local bird. We anticipate continued support from our community scientist volunteer base as well as increased participation as the program grows.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

The budget includes staff time for KBO's Science Director and Research Biologist to spend time purchasing and programming GPS tags, and capturing and tagging Oregon Vesper Sparrows in the field. Costs for staff time include 15% employee benefit and 11% OPE. Field mileage costs include several trips to KBO's Lily Glen study site, and one round-trip to Corvallis, OR, to provide leg-loop harness and GPS attachment training to the Willamette Valley researchers. Lodging costs are for two nights in a hotel near Corvallis for this training trip. Supply costs are primarily for the 20 Lotek PinPoint10 GPS tags (plus international shipping), with a smaller amount for harness material and other general banding supplies (color bands, replacement mist-nets, etc.). KBO has a negotiated indirect cost rate of 35%, which is included in our administration costs.

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

This project is part of a robust collaboration between two organizations with extensive experience in avian field research and delivering scientific results to broad audiences. We have established a collaborative process for discussing results and planning next steps together in a working group setting. This project will benefit from each of our regional expertise with Oregon Vesper Sparrow, and will bring together knowledge of the migratory connectivity of this at-risk subspecies by tagging birds at multiple sites through much of their current breeding range.

Our primary partner in the Willamette Valley region is Bob Altman (retired American Bird Conservancy). Bob has been leading diverse bird conservation efforts in the Pacific Northwest for approximately 25 years. His broad focus of research, monitoring, outreach, conservation planning, and especially working with private landowners has included many habitat types and several landbird species. He conducted the initial research on Oregon Vesper Sparrow in the mid-1990s, led a range-wide inventory and multiple projects on Oregon Vesper Sparrow habitat associations in the mid-2000s, prepared the petition to list it under the Endangered Species Act in 2017, led the preparation of the WDFW Status Review that resulted in a listing as Endangered in the State of Washington in 2020, and conducted six years of metapopulation research (the broader range-wide project of which this GPS-tagging effort is a part). Bob continues to lead the Oregon Vesper Sparrow research program in the Willamette Valley, and he will lead the GPS-tagging and recapture efforts in that region.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Winter/spring 2022 – purchase and program GPS tags, plan field season. May-June 2022 – deploy GPS tags on Oregon Vesper Sparrows. May-June 2023 – recapture returning tagged birds (outside of the scope of this proposal). Fall/winter 2023 and beyond – analyze GPS results, incorporate into conservation planning (outside of the scope of this proposal).

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

KBO maintains an Oregon Vesper Sparrow project website, found here:

<https://klamathbird.org/science/projects/range-wide-oregon-vesper-sparrow-project/>. We have written articles for our blog, the Klamath Call Note, about the earlier phases of this project, found here:

<https://klamathbird.org/callnote/the-life-of-a-kbo-nest-searcher/> and here:

<https://klamathbird.org/callnote/how-to-track-an-oregon-vesper-sparrow/>. We also regularly post project updates on our social media throughout the field season.

There has been some local news coverage of this project, including our collaborative work with the Vesper Meadow Education Program, which neighbors our Lily Glen field site in the Rogue Basin:

<https://www.mailtribune.com/top-stories/2019/06/26/saving-the-sparrows-and-skipppers/>. Our project has also been mentioned in a national birding magazine, specifically our breeding site Motus station at Vesper Meadow: <https://www.birdwatchingdaily.com/news/science/new-tracking-tools-reveal-bird-migration-secrets/>.

We have given outreach talks for the public about the Oregon Vesper Sparrow and our research program – including this Pub Talk sponsored by the Southern Oregon Land Conservancy

(<https://klamathbird.org/callnote/nature-pub-talk-wings/>) - and will continue to seek other opportunities to do so. Our partners at Vesper Meadow Education Program created a three-part series of educational (K-12) videos regarding Oregon Vesper Sparrow ecology and conservation, which we assisted with, found here:

<https://www.youtube.com/watch?v=cYhaNG-gbD4&t=2s>, <https://www.youtube.com/watch?v=90aWTNOmlpc&t=390s>, and <https://www.youtube.com/watch?v=57u25NROabE&t=126s>.

References cited in this proposal are available upon request. I have been unable to find a way to upload our study site maps to this application portal; please email me if you would like to see those.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

We collaborate with a diverse group of partners - including federal and state agencies, Tribal agencies, other NGOs, and private landowners - through the Klamath-Siskiyou Oak Network (KSON) to use birds as ecological indicators to monitor and improve oak restoration on private lands in southern Oregon and northern California. We designed and implemented a study to better understand bird-habitat relationships and the response of birds to restoration actions in oak woodlands. Point counts were conducted and data were analyzed to identify whether 1) relative abundance of common species and oak woodland focal species, and 2) bird community composition, differed before and after restoration treatments or on treated vs. untreated oak woodland sites. Results from this project have been disseminated via Decision Support Tools (KBO 2017) and a management guide for private landowners (KBO and Lomakatsi 2020), and will directly inform future restoration efforts. A recent analysis of birds occupying oak-chaparral habitats has already changed treatment prescriptions for KSON oak woodland restoration sites (Stephens and Gillespie 2016, Gillespie et al. 2017).

Project 2

1500 maximum characters

KBO has contributed to continental-scale studies of migratory connectivity of birds using novel technology such as light-level geolocators and GPS transmitters to track birds' locations throughout the annual cycle. Since 2015, we have worked with partners at University of British Columbia to describe migratory routes, stopover sites, and overwintering grounds of Yellow-breasted Chats that breed along the Trinity River, CA, and in the Okanagan Valley, BC (Mancuso et al. 2021). We found that chats from British Columbia and California followed the Pacific Flyway and spent the non-breeding period in Sinaloa and Nayarit, Mexico. The most common landcover type used was tropical or subtropical broadleaf deciduous forest. These results will be applied in habitat conservation efforts. In 2016, we conducted Pacific Northwest region field work for a study of Common Nighthawks, placing miniaturized GPS transmitters on individuals throughout their North American breeding range to determine patterns of migratory connectivity among populations (Knight et al. 2021). Nighthawks showed low connectivity on the non-breeding grounds due to the use of a single route for much of their spring and fall migrations, and mixing of overwintering populations in Brazil. There was a spring migration peak in spatial migratory connectivity in the northern Amazon region, which could create population-specific pressures through threats like habitat loss and pesticide use, that warrant further investigation.

This content is neither created nor endorsed by Google.

Google Forms

From: [Sarah Rockwell](#)
To: [Conservation & Recreation Advisory Committee * ODFW](#)
Subject: OCRF proposal edits
Date: Friday, October 22, 2021 1:34:42 PM

Hello,

I just spoke with Davia Palmeri about an issue I'm having with the online submission form - when I try to make edits it's telling me that my responses are too long without highlighting any sections in red (even though I've double-checked them all in Word and they're under the character limit). I tried closing and reopening the form, and then restarting my computer but I'm still having the same issue.

Davia suggested that I just email in my requested edits and that you could add to these to the proposal on the back end. The proposal title is "Using GPS technology to track Oregon Vesper Sparrows from multiple breeding populations throughout their full annual cycle." The Total Project Cost should read \$39,850 (the Funding Amount Requested is correct, and should remain \$19,998.32).

I also wanted to update the OCRF Funds section. At first I did not realize there would be no place to upload a budget spreadsheet, so I wanted to edit it to include more budget details as follows:

"Personnel costs for KBO include 15% employee benefit and 11% OPE (Science Director: 0.2 months at \$9100.23/mo. = \$1820.05; Research Biologist: 0.8 months at \$5342.90/mo. = \$4274.32). Personnel costs = \$6094.37. Mileage includes several trips to KBO's Lily Glen study site, and one round-trip to Corvallis, OR, to provide training to the Willamette Valley team (820 mi. at \$0.56/mi. = \$459.20). Lodging will be needed near Corvallis (2 nights at \$150/nt. = \$300). Travel costs = \$759.20. We also need GPS tags (20 tags at \$390 each, plus shipping = \$7860), harness material and other general banding supplies (\$100). Supply costs = \$7960. KBO has a negotiated indirect cost rate of 35% (i.e., administration costs; \$5184.75). Total funding request = \$19,998.32.

We are seeking matching funds for the remaining \$8550 of KBO costs for 2022 (funding sources identified, but not secured). The Willamette Valley research team will contribute \$11,300 in match to support their field work and mileage."

I very much appreciate it!
Sarah

--

Sarah Rockwell, PhD
Research Biologist
Klamath Bird Observatory
PO Box 758
Ashland, OR 97520

phone: 541-201-0866 ext. 6#
fax: 541-201-1009
email: smr@klamathbird.org

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

matt.shinderman@osucascades.edu

Project Information

Project Title *

Adventurers for audible bats! A community-supported scientific survey of Oregon's rarest desert bats

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Two of Oregon's rarest and most striking bats, the spotted bat and pallid bat, produce echolocation calls audible to the unaided human ear. These are desert-dwelling bats that can be heard during summer evenings as they fly from their cliff-face homes in pursuit of a dinner menu that consists of large moths, crickets, and even an occasional scorpion. Adventurers for the Audible Bats is a community-supported scientific survey of these unique Oregonian wildlife that informs our understanding of where and when these species occur and how we can help them persist in an era of rapid environmental change. Our adventurers are a dedicated cadre of Oregonian humans from all kinds of communities that stroll through urban parks, hike along mountain meadows, and scramble up desert canyons in search of the sounds of spotted bats and pallid bats. At sunset we settle in for some focused listening time – nature sounds sometimes include owls and nighthawks, a coyote in the distance, and of course the bats themselves. We record our findings with our phone app and head home, grateful for the opportunity to pitch in and contribute to Oregon wildlife conservation and to have had another outdoor adventure. We coordinate ourselves and tap into the North American Bat Monitoring Program's scientific survey architecture for maximum impact. Along the way we train and practice our listening skills and learn about all 15 of the bat species that live in Oregon. Most of these bats, including our targeted species, are high priority species of concern to the Oregon Conservation Strategy and are in great need of more help. Come join us in our adventures!

Primary Contact Person *

Sara Rose

Primary Contact Email Address *

sara.rose@osucascades.edu

Primary Contact Phone number *

541-322-3159

Lead Organization *

Oregon State University-Cascades

Mailing address *

OSU-Cascades, Human & Ecosystem Resilience and Sustainability Lab, 1500 SW Chandler Ave. Bend, OR 97702

Lead Organization Federal Tax ID *

61-1730890

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Bend

Project Location (County) *

Deschutes

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

18542

Total Project Cost *

18542

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Adventurers for Audible Bats is a program of volunteerism in service of bat conservation across the arid regions of Oregon and beyond. By capitalizing on the low-frequency audible echolocation calls of the rare desert bats, pallid bat (*Antrozous pallidus*) and spotted bat (*Euderma maculatum*), the program offers a unique opportunity for public engagement and community-supported science. In a time of accelerating environmental changes, with increasingly widespread eco-anxiety, Oregonians urgently need positive ways to connect to nature and feel empowered to help make a contribution to our future. Adventurers for Audible Bats provides this by harnessing the energy of community activism to a structured scientific survey provided by the North American Bat Monitoring Program (NABat).

As a taxon, bats (Chiroptera) are one of the most threatened and under-studied groups of mammals in Oregon and broadly across the globe. Eight species of bats are listed as priority species of concern by the Oregon Conservation Strategy. This list includes the two striking desert bats that produce echolocation calls audible to the unaided human ear and that can be surveyed simply by listening for them. These two species occur across the five arid and semi-arid ecoregions of Oregon.

Historically, bats have been maligned by human societies, and recent global pandemic events have exacerbated the latent antagonism towards bats. Few opportunities exist for positive engagement with bats. Bats are cryptic and hard to watch and enjoy in the same way that birds can be, for example. Our Adventurers for Audible Bats Program offers a very unique and much needed way to build positive engagement between Oregonians and their bats.

Adventurers for Audible Bats emerged out of a long-running fascination with these species by participants of the interagency "Bat Grid" program that was coordinated by the US Forest Service to survey bats across Oregon and Washington during the early 2000s. In 2005, a paper was published that highlighted the opportunities for using aural (listening) surveys to document the occurrence of the spotted bat, a radical departure from traditional survey methods. This study more than quadrupled the number of known occurrence localities of spotted bats in Oregon. With support from the National Park Service, a proof-of-concept study was undertaken by Oregon State University-Cascades in 2019-2020 to build on this nascent aspiration. Results of the study were published in 2021 in the journal *Conservation Science and Practice*. This recent effort successfully expanded the aural survey approach to include volunteers and also to seek out pallid bats, which make distinctive echolocation calls in the vicinity of their summertime maternity (pup-rearing) roosts. Serendipitously, both the spotted bat and pallid bat are found in similar arid cliffs and canyons habitats such that both species can be effectively surveyed simultaneously.

The aural survey method is supported by a suite of tools including smartphone applications from CitSci.org and iNaturalist, an OSU web portal to engage, recruit, and coordinate volunteers, a project database, and a simple-to-follow survey protocol that involves spending a quiet hour after sunset listening for spotted and pallid bats. In-person and virtual volunteer trainings are provided. The trainings provide a fantastic opportunity to also teach volunteers about all 15 of the bat species in Oregon, to impart more general information about the importance of bats (e.g., ecosystem services provided by bats to Oregon farmers and foresters), the threats they face, and the exciting opportunities for bat conservation in spite of these threats.

A key feature of Adventurers for Audible Bats is its use of the North American Bat Monitoring Program grid-based master sample architecture. The program is embedded within the NABat grid such that all aural survey data collected by volunteers are co-located in the mapped grid cells and formally included within the statistically-valid master sample. The NABat master sample provides a spatially-balanced randomization and helps guide grid cell sample unit selection and assignment of survey locations to volunteers. Such data can then be used to develop statistically-robust species distribution models and maps. A full demonstration

of this process was provided in the 2021 Conservation Science & Practice article. Adventurers for Audible Bats, referred to colloquially as “the spotted bat project”, has been applied across Central Oregon but is now ready to be scaled up across all five arid ecoregions of Oregon. There will be opportunities to expand this effort into neighboring states – already our colleagues from Nevada have asked to participate. The request for support from the Oregon Conservation and Recreation Fund will provide much-needed encouragement to continue the process of scaling up and to move this aspirational program from pilot to “prime time”!

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our long-term fundamental objective is to build a conservation information system for spotted and pallid bats through a sustained community science program. Our strategic objectives within the 9-month project window are to 1) re-engage with the existing volunteer momentum in the Bend area; 2) double the participation from the 2019-2020 pilot survey to include participation from each of the five targeted ecoregions so that a true representative sample of these species can be obtained; and 3) increase the diversity of participating community organizations and volunteers, including Tribal and Spanish-speaking communities.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

We will increase the sample size of the survey into all five target ecoregions, with 6 NABat grid cell sample units to be surveyed in each of the five ecoregions, for a total sample of 30 grid cell sample units. We will double the number of supporting community conservation organizations (currently Deschutes Land Trust and Oregon Natural Desert Association) that support volunteer recruitment. We will triple the number of participating community science volunteers from 12 to at least 36 across the five ecoregions. At the end of the 9-month project window we will provide a quantitative update to the number of known localities where spotted bats are known to occur in Oregon, and the location of pallid bat roosts based on aural encounters. We will provide a protocol, including a volunteer training manual, to allow long-term consistency in the program and maximize the potential for program growth over time.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Adventurers for audible bats generates new scientific data about the distribution and habitat associations of the spotted bat and pallid bat, two at-risk and under-studied Oregon strategy species. This project is embedded within the North American Bat Monitoring Program grid-based master sample architecture. The program is built upon recruitment and training of a diverse cadre of Oregonians from many different communities and therefore expands the diversity of Oregon's outdoor users, specifically increasing non-consumptive wildlife-associated recreation opportunities across five rural ecoregions where such opportunities are rare. A set of Spanish language outreach and training materials will be developed.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

\$3,578.31 (19%) will be spent on University administration (indirect costs at the State of Oregon rate of 26%). \$13,762 (74%) will be spent on University staff salary and OPE for volunteer coordination. \$1,200 (6%) will be spent on OSU motor pool vehicle lease for travel to recruitment events.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Current partners include the Oregon Natural Desert Association and their Tribal Stewards program which provides engagement opportunities with students and early-career natural resources professionals from indigenous backgrounds; The Deschutes Land Trust which maintains an active volunteer pool for wildlife and habitat-related projects; The Bureau of Land Management, from which both professional staff engagement and volunteer recruitment will be contributed; The National Park Service (John Day Fossil Beds National Monument) which provides a spectacular way to both host training and education events and conduct surveys along the John Day River canyon. New partners will be sought out as an outcome of this project, particularly in areas outside of Central Oregon where new engagement is needed.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Timeline: Project initiation on April 1, 2022; Recruitment, trainings, and surveys completed on October 15, 2022; Project wrap-up and completion December 1, 2022.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Proof-of-concept article by Rodhouse et al. 2021 in Conservation Science & Practice; Project website can be found here <https://osucascades.edu/HERS/northwestern-bat-hub/spotted-bat-project>. A recent discussion about the project with Oregon Wildlife Foundation is here <https://myowf.brand.live/c/whats-up-side-down-with-oregons-bats>. The North American Bat Monitoring Program master sample is described here <https://www.sciencebase.gov/catalog/item/5b731476e4b0f5d5787c5d9c>. A general overview of the North American Bat Monitoring Program within which this project is embedded can be found here <https://www.nabatmonitoring.org/>.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

A 2-year proof of concept of the proposed project was completed in 2021, published in Conservation Science & Practice. Multiple outreach and training events were held in person and on-line; a dozen community members assisted the volunteer coordinator to conduct surveys in the Central Oregon study area, a modest but meaningful number, especially during the Covid-19 pandemic. The survey design and sample unit selection and assignment of survey locations to volunteers was guided by the North American Bat Monitoring Program grid-based master sample. Sufficient data were obtained to generate an improved distribution model and map for the spotted bat within the Central Oregon study area. Media coverage of the project can be found in Bend Bulletin articles (2019 and 2021) and a recent podcast conversation hosted by Oregon Wildlife Foundation can be found here <https://myowf.brand.live/c/whats-up-side-down-with-oregons-bats>.

Project 2

1500 maximum characters

Development and implementation of the Northwestern Hub for Bat Population Research & Monitoring formally began in 2018 and continues to operate (<https://osucascades.edu/HERS/northwestern-bat-hub>). This "bat hub" was the first of its kind but was so successful that it has become the core operational model for the North American Bat Monitoring Program and many bat hubs are now operational across North America. This success is described in a 2021 article by Reichert et al. published in the journal Ambio. Multiple accomplishments have been achieved by the Northwestern Bat Hub including coordination of NABat monitoring across Oregon, Washington, and Idaho and region-wide species trend assessments.

This content is neither created nor endorsed by Google.

Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

kklein@hikeitbaby.com

Project Information

Project Title *

Bring it Outside

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The Bring it Outside Family Hiking program partners with community organizations that directly support Spanish-speaking families, providing children and their caregivers outdoor experiences through facilitated programming and materials in their native language, as well as gear and physical resources. We consider the program to be a first touch in building a lifetime relationship with nature for these families. With the support of OCRf, Hike it Baby will launch a Bring it Outside Program in the diverse Rockwood Community in the Portland Metro. We will build the infrastructure to extend the programming to include an online resources hub, an interactive trails and hiking map fully in Spanish, and ongoing opportunities and community-led hikes to continue to support these families after the initial 6-week in-person program ends. Through this Bring it Outside Program, we will introduce and connect LatinX families to the public greenspaces near where they live, providing that first step out hiking as a family in a supportive group environment, with the larger goal of continuing outdoor exploration and increased diversity of those who enjoy Oregon's recreational spaces.

Primary Contact Person *

Jessica Carrillo Alatorre

Primary Contact Email Address *

jessica@hikeitbaby.com

Primary Contact Phone number *

7148566396

Lead Organization *

Hike it Baby

Mailing address *

422 NW 13th St. Suite 755 Portland, OR 97209

Lead Organization Federal Tax ID *

81-0969124

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland Metro Area

Project Location (County) *

Clackamas, Washington, and Multnomah Counties

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

35000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

In the summer of 2021, Hike it Baby was awarded an Oregon Community Foundation Grant to launch a Bring it Outside series, a nature-based family-hiking program that nurtures the family bond while introducing key concepts such as the benefits of spending time outside as a family, environmental stewardship for families with young children and simple ways to play and have fun in nature. By working in partnership with Northwest Family Services and Familias en Accion, we were able to help 60 participants and their families connect to nearby natural spaces and their communities across Oregon. Each family received gear to support their journey outside, as well as resources in both English and Spanish, guides to support them in continuing to get outside, and regular, structured programming to help them build a habit of spending time outside. We learned so many lessons from this experience based on our participants' direct feedback. Both our participants and our facilitators have eagerly expressed a desire to continue exploring nature with their children. It is our hope that through the OCRF grant we can offer additional programming to engage new families AND begin to build a pipeline that will continue to support families beyond our initial outreach.

We know that families who have the opportunity and support to spend time outside on a regular basis are healthier, happier, and more connected to their community and the natural world around them. The OCRF grant will allow us to ensure that there are ongoing resources in Spanish available to help Portland Metro families build a lifelong love of nature, which will result in an increase of families who are engaged in protecting, restoring, caring for, and enjoying the beautiful and unique natural resources of Oregon for generations to come.

We know that participants of our recent Bring it Outside series are hungry for more support, both in structured events and in self-led resources such as a list of places they can explore as a family. These resources need to consider their needs around language, transportation, ability and other potential barriers they may face. Additionally, our partner organizations, (Familias en Accion and Northwest Family Services,) have expressed interest in continuing to provide similar programming options to the families they serve. We are seeking ways to ensure an ongoing relationship with these nonprofits and a continuous connection to offer support to their families. We intend to both expand and deepen the support we are currently offering to the communities we have recently been introduced to through our partnerships with Northwest Family Services and Familias en Accion. We will offer new opportunities for facilitated, regular scheduled experiences as well as building out a suite of tools to support ongoing independent, self led family exploration.

These tools will be available in Spanish and English and they will include a customized GIS based map with local trails and parks that are accessible by public transportation and are family-friendly. We will work closely with our partner organizations and the families we already have a relationship with to ensure the resources they need most are readily available and easily accessible so they are empowered to continue their exploration of the natural spaces in the Portland Metro area they call home.

We also intend to incorporate key elements that will support an educational and fun peek into the concepts and importance of conservation, introduce some of Oregon's native species and habitats - especially those identified as priority species in the conservation strategy and that are local to the region we are serving and highlight our role as protectors of these resources in a way that is developmentally appropriate and engaging for families with children under 5. At Hike it Baby we believe that you cannot start this conversation too early, but we know caregivers need supportive and fun ways to introduce these concepts.

Our plan is to continue facilitating and supporting the Bring it Outside program and we intend to create a pipeline from local support entities to Hike it Baby programming. As we facilitate the program in the Rockwood Community, we intend to create resources such as a GIS based map in Spanish to further connect the participants to both our existing Hike it Baby community and resources, as well as build impactful resources and connections for participants based off of their direct expressed needs and interest.

Hike it Baby plans to begin working on the resources, and the mapping of the Bring it Outside materials as soon as funding becomes available. These resources will be available in participants native language and will focus on connecting young children to nature, with age appropriate activities, land concepts, and materials. We will also partner with community support entities in the Portland Metro area to enroll 30 participants and their families in the Bring it Outside program. We will, in turn, facilitate a program that focuses on first touches and early stage conservation practices outside, in Urban areas in the Portland area. At the conclusion of the Bring it Outside program is when the real work will begin, as we support all 30 participants into next steps in the continuance of connections, interactions in native languages, and the ability to listen to what each family needs, while feeling supported in their journey outside.

As each participant learns about nature through their parents, their senses, and conservation, we want them to feel empowered outside and continue to seek out nature. People take care of the things they love. We believe that if we can support and empower families in their outdoor recreation, we can ultimately help them build a legacy of conservation as a positive experience and foster a lifelong love of nature. This project will focus on the parent/child relationship, and how they can build and motivate each other in taking steps outside and build a relationship focused on a love for their community and the green spaces available to them. In our experience, this time in a family's life cycle (when children are young) is ideal because many parents are looking to teach lasting behaviors and are flexible in their willingness to learn, grow, and adapt to help create a better, healthier life for their children.

We need your help. We know that this program will connect families to outdoor recreation spaces in Oregon. We are confident it will work because we have done it before through the support of the Oregon Community Foundation. While it's become a personal goal of Hike it Baby to implement this programming and, more importantly, continue to connect families outside to the green spaces in their communities, we know that with the support of the Oregon Community Recreation Fund, we can do it now and support the many families isolated in our community. Together we can give invitations and support, breaking down barriers of access and providing materials in Spanish to give families an authentic experience and the tools and support they need to make nature their space while building an ongoing opportunity to continue touching, inspiring, and motivating young families to go outside.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The objective of the Bring it Outside program is to support families that face barriers to getting outside in locations that are considered high-equity areas with a high proportion of families that experience barriers in access to nature. We will partner with organizations that serve families with limited resources and access to programming, such as the Department of Human Services and WIC offices, as well as culturally-specific organizations like Familias en Acción that serve underrepresented communities. We will create and support first touches into nature for these families, and in extension create a pipeline for families seeking assistance unique to Hike it Baby's mission.

- Introductory programming for 30 families
 - Facilitated family-hiking events with developmentally appropriate curriculum
 - Provide all necessary gear, supplies, and snacks
 - Introduce conservation concepts and native species of the local area in fun and engaging ways
 - Pipeline of resources to support ongoing independent exploration
 - Development of an online resource hub that will include:
 - Bilingual Spanish-English map of family-friendly parks and trails that can be easily accessed by public transportation and are within the Portland-metro area
 - Activity sheets & learning resources that can be accessed independently for ongoing exploration and engagement
 - Partnership development for long term community support
-

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Through this project, we hope to support 30 families in experiencing nature together in a safe, fun, and engaging manner. By offering introductory events, gear, and regular, facilitated programming, we will provide exposure to new activities using methods that build confidence, comfort, and a sense of community so that long lasting, positive impressions can be made. In building a pipeline of relationships with community partners, easily accessed, free resources in Spanish, and an ongoing community platform, we will support independent and ongoing development of new habits and exploration to grow lifelong connections to the natural resources of Oregon.

The outcomes we hope to achieve include:

Outcome: Families who have traditionally been isolated by language, access, ability, and other barriers are exposed to nearby natural spaces and fellow families within their community.

Measure: Gather information on participants' backgrounds and current levels of outdoor activity as they start programming.

Outcome: Families build confidence and feel comfortable getting outside.

Measure: Families continue to join programming and are self motivated to explore - tracked on our community platform and event scheduling tools.

Outcome: Families are introduced to Oregon's natural resources and native species, and their role in conservation efforts and feel empowered to take action.

Measure: Families will be surveyed about their experience throughout the program and share their stories of success, feedback for future improvement, and ways we can continue to help them get outside. As the community grows, cleanup and restoration activities will be shared.

Outcome: Participants find value in the Bring it Outside program and continue getting outside with their community and as individual family units.

Measure: Track downloads/site visits to resources. Monitor community platform for conversation and ongoing self-led activities.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our project is strongly centered around recreation priorities. While there will be first touches in conservation practices and theory, we know the best way to support conservation for new families is to introduce them to spaces that are easily accessible and ensure they feel welcome, and supported in these spaces. Once families build a relationship, and are comfortable getting outside with their small children, they are more inclined to protect these spaces for themselves and their children.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administration -

\$500 for reporting & tracking

Contract services -

\$3,000 for graphic design, web development of GIS map, and translation

Personnel -

\$6,600 to contract facilitators and assistants

\$2,400 for facilitator training and family resource development

Supplies/materials/services -

\$7,000 gear, snacks, printing, activity kits, survey incentives, and other supplies

Travel -

\$500 transportation vouchers (as needed)

Based on our past implementation of the Bring it Outside program and our estimates of staff time, this project will require an additional \$15,000 in staff time to support, which Hike it Baby will cover as part of our general operating budget.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

City of Gresham - Green spaces to connect families and information to support building programs on public lands.

Familias en Accion- Families that can benefit and reach the targeted demographic.

Northwest Family Services- Families and connections to communities in need of Bring it Outside programming.

NW Family Daycation- Connecting families to outdoor spaces in their communities through interactive bilingual mapping and adventures in your neighborhood.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

February- April 2022- Hike it Baby will build resources, website, workbooks, facilitator guides, surveys and any other relevant materials for the Bring it Outside program. All materials (to include website resources), and communications will be available in participants' in English and Spanish. March-April 2022- Hike it Baby will connect with listed community partners to open registration for the 6 week Bring it Outside Program. April -June 2022- Hike it Baby will immerse participants in the Bring it Outside Program July- December 2022- Hike it Baby will provide follow up resources, connection, and community building in participants preferred language beyond the program.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

<https://hikeitbaby.com/on-the-subject-of-footprints/>

<https://hikeitbaby.com/bring-it-outside-resources/>

https://drive.google.com/file/d/1Q5_o00ebwac-EWBQSLtO_3yLEE-u7mWE/view?usp=sharing

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In the summer of 2021 Hike it Baby led family hiking programming for families with children in 3 age groups (babies under 1, toddlers 1-3 years old, and preschoolers 3-5 years old) in 2 different locations in Oregon. Each track served about 10 families and each family received over \$250 worth of items like baby carriers, hip packs, kids backpacks, hats, water bottles, kids shoes, activity kits, snacks, and more. Families also received resources that shared why getting outside is good for them and their babies and how they can engage their little ones in healthy, developmentally appropriate activities outdoors on a regular basis. All materials were translated into Spanish and in Clackamas county, the majority of families that attended were Spanish-only speaking. Both locations have started their own ongoing Hike it Baby communities and want to keep getting outside together.

Project 2

1500 maximum characters

Our Footprints Initiative gives parents and caregivers a starting point to learn and share about environmental awareness and conservation with their family. We've made it easy and fun with options for kids of different ages, because we believe it's never too early to start having important conversations. It includes a workbook (translated into Spanish), video, conversation tips, and recommendations for ongoing learning. We have used this content directly within our Bring it Outside Series to introduce early concepts of environmental awareness and conservation.

This content is neither created nor endorsed by Google.

Google Forms

OCRf Project Proposal Form

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Email *

richa.poudyal@apano.org

Project Information

Project Title *

APANO's BIPOC Youth Nature Series 2021

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

APANO's BIPOC Youth Nature Series is a cohort-based program designed to support about 12 BIPOC youth that we engage with in accessing environmental education and recreational activities in nature. The project will provide an accessible way for young BIPOC community members to see and experience Oregon's beauty, and learn from partner organizations on various environmental topics such as indigenous approaches to farming, plant and tree identification, water quality and processing, exploring the hiking trail networks around the Portland Metro region, and deepening their relationships to nature through a series of 5 workshops in the summer of 2022.

Primary Contact Person *

Richa Poudyal, Policy Director

Primary Contact Email Address *

richa.poudyal@apano.org

Primary Contact Phone number *

3032617813

Lead Organization *

Asian Pacific American Network of Oregon (APANO)

Mailing address *

8188 SE Division St.

Lead Organization Federal Tax ID *

80-0252850

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland, OR and surrounding national forests/parks

Project Location (County) *

Multnomah County and surrounding national forests/parks

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

10 / 01 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

40000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

APANO's 2021 BIPOC Youth Nature Series will be a project that aims to create an accessible and supported space for BIPOC youth to engage with environmental education and access opportunities to recreate in parks and forests in ways they may not otherwise be able to. Cost barriers and/or access barriers for families often keep BIPOC youth isolated from environmental exploration and relationships, which the nature series aims to alleviate. This project provides an educational but also healing experience so that participating youth have a chance to develop their own relationships with nature in a way that is true to them, that takes into account what they've learned from their lineage and ancestry, and exposes them to folks in Oregon doing work in the conservation, recreation, and environmental justice spaces.

The programming will be carried out in Spring - Summer of 2022, supported mostly by APANO's Asian Youth Organizer, with support from our Pacific Islander Youth Organizer as well as our Environmental Justice Manager and Climate Policy Director. The personnel portion of this grant request will primarily support the Asian Youth Organizer Position.

The series will include 5 sessions throughout the summer months, each with a different focus/learning module. We will partner with several local organizations to deliver some of the programming, which will also allow youth to also build relationships with other organizations and people doing work in conservation, local food, and access to our forests and natural environment.

The curriculum is currently being finalized, but includes the following potential sessions:

Urban Habitat Restoration: Tree planting with partner organization Friends of Trees

Indigenous Approaches to Farming & Food: Tour and day of working with the land at Wapato Island Farm on Sauvie's Island

Water: Visiting a local watershed and learning about water sources, contaminants, and sacred sites

Recreation: Day hike in Mt. Hood National Forest, including plant identification education

BIPOC Farmers/Food Access: Attending and learning with BIPOC vendors at a BIPOC Farmers Market

Each day-long session will be organized by APANO but in partnership with various organizations, and will be paired with 1:1s with the youth so that we can support them in further pursuing learning or direct restoration/habitat conservation work they are most interested in.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The BIPOC Youth Nature Series was designed with the following goals/objectives in mind:

Increasing exposure and opportunities for BIPOC youth to engage in outdoor activities, and to understand and connect with the ecosystems in our region

To engage youth in at least one restoration/conservation activity as a way to connect with land and to have a chance to do hands-on healing work for our surrounding habitats

To prepare a cohort of conservation and environmental stewards to feel equipped in continuing onto further learning and activities in the environmental justice space with a foundation in land-based experiential learning

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Youth will leave the nature series rich in community and knowledge, and move forward with a better understanding of intersectional sustainability, as well as experience and exposure to conservation, habitat restoration, and increased appreciation/comfort in natural places.

Through exposure to indigenous worldview, land, and practical application of sustainable farming practices, youth will better understand the inherent interconnectedness between land and people. This nature series will provide BIPOC youth with tangible experiences and intimate relationships to land and community that transcend beyond our industrial understandings.

To measure the success of these outcomes, organizers will continually and intentionally create space for youth to share their learnings and developments through 1:1 check-ins, community conversations, and a final follow up survey. The check-ins and surveys will assess comfort levels in nature and natural spaces, what participants feel they learned in the program, and whether the program has encouraged future outdoor recreation/learning and/or interest in restoration and conservation.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project addresses three of the above priorities:

Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science

APANO will be leading activities for the BIPOC youth cohort around watershed and water habitat restoration education, as well as a day of tree planting in partnership with Friends of Trees to support urban habitat restoration as well as prioritizing East Portland in receiving more trees.

Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users

Youth in the cohort will have the chance to go on day hikes, spend time out on a farm, and recreational time in surrounding parks and forests. As an all BIPOC group, we hope to give youth an opportunity to be outside and recreate in Oregon's beautiful forests, rivers and mountains, and in turn support development of a lifelong outdoor user.

Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages

Recreational outdoor activities will be paired with education and activities to support connection to the earth. These will include: tree and native plant identification, native/indigenous approaches to farming and tending land, and an understanding of our local watersheds and how they operate.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other: Stipends and admission costs

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administrative Costs - \$3,000

Overhead and administrative costs

Personnel - \$10,000

The personnel costs for this program will go towards supporting staff time of our Asian Youth Organizer, though other staff will also be involved in delivering programming.

Supplies/Materials/Services - \$3,000

Food and meeting supplies/equipment rentals for the 5 sessions for 12 youth.

Travel Expenditures - \$2,000

Gas and vehicle rentals for each session for the 12 participating youth.

Other - \$2,000

Stipends for participating youth and admission costs to learning centers, tours, day use passes.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Wapato Island Farm and Black Futures Farm

Wapato Island Farm is an indigenous-owned farm on Sauvie's Island -- they offer tours and workshops for the public and we plan to spend a day learning and also helping plant/harvest. Black Futures Farm is another farm, Black-owned, that the youth might spend a day learning from and actively planting/harvesting as well.

Friends of Trees

Friends of Trees is a long time partner of APANO's, and we plan to coordinate a day of tree planting in East Portland as a part of the BIPOC Youth Nature Series. Friends of Trees also offers education around best tree species for the particular environment they will be planting in.

Come Thru Market

Come Thru Market is a BIPOC-vendor farmers market that runs through each summer. We plan to take the youth to one of these markets, and there is potential for workshops from some of the vendors.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

March - April 2022 - Planning & Develop ; May 2022 - Applications for cohort open/ Recruitment; June 2022 - September 2022 - Nature Series Program; September - October - Evaluation Survey/ Reflection

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In 2019, APANO's Chinese and Vietnamese immigrant organizers partnered with the Oregon Zoo Urban Nature Overnights (UNO) program to provide a two-day camping experience for Chinese and Vietnamese youth and their families who live in East Portland. The camping trip was a part of engagement our organizers were doing with a group of 40 Chinese and Vietnamese immigrant parentsthrough twice a month workshops discussing a wide range of topics, including education, health equity, air pollution, LGBTQ issues, nutrition, etc.

Through targeted outreach, several other families who had not engaged with APANO before also expressed interest in the camping trip. Our organizers worked with parents one-on-one to explain the program activities and help them feel comfortable with enrolling their kids.

Over 30 youth participated in the program, which included a half day orientation and an overnight camping trip. The youth learned camping skills like building tents and preparing and cleaning meals. They also went swimming in the river and on guided hikes where they learned some plant identification. They were able to spend an extended period of time out in nature to learn and play, and we received feedback from many that they had a great experience, and that they got to be outside in a way they don't often get to do. Following the event, several parents reached out to our organizer expressing interest in planning other small hikes or outings into nature for families.

Project 2

1500 maximum characters

In Summer 2019, APANO led a Summer Youth Nature Series to engage with the different environments in the Portland area. In collaboration with a summer volunteer, the Youth Organizer provided three events visiting Oxbow Park, the Columbia Gorge, and the Portland Waterfront with a group of 15 young Pasifika folks.

Each trip, the group engaged in icebreaker activities which allowed participants to connect more and supported the group to grow in attendance until the last event. The participants shared their positive experiences getting to hike and swim with their friends and expressed interest in going back to the sites in the future. For one of the days, youth participated in a community park clean up at Lents Park with other local partners. Folks shared back how it made them feel good to support their community in this way.

As staff, it created opportunities to build relationships with young folks around issues like environmental justice and continuing to expand connections with student clubs and individuals.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

tvirzi@conservationinsight.org

Project Information

Project Title *

Assessing Effects of Habitat Restoration on Grassland Birds at Powell Butte Nature Park

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Our scientific research project examines the impacts on bird populations of habitat restoration at Powell Butte Nature Park located in Portland, OR. We initiated this research project in 2019 and have already collected three years of pre-restoration data on breeding and migratory birds using the site in anticipation of a major construction and grassland habitat restoration project that began in 2021. Our goal is to continue our monitoring of bird populations at the site post-restoration to provide valuable information that can inform agencies and land managers about the response of bird populations to restoration actions and also conduct monitoring that can help assess the overall success of habitat restoration projects. Our scientific research project has two main components: 1) demographic monitoring of breeding grassland birds found at the site and 2) Community Science surveys to collect data on the overall landbird community using the site. The demographic monitoring component will allow us to monitor changes in site usage by breeding grassland birds and changes in demographic rates (e.g., nest success, survivorship) following habitat restoration. The Community Science component will allow us to examine changes in landbird diversity and abundance following restoration, while also having the added benefit of engaging the community in scientific research and helping them understand the benefits of such restoration projects.

Primary Contact Person *

Dr. Thomas Virzi, Executive Director and Research Ecologist, Conservation InSight

Primary Contact Email Address *

tvirzi@conservationinsight.org

Primary Contact Phone number *

(503) 607-7587

Lead Organization *

Conservation InSight

Mailing address *

13946 SE Taralon Drive, Happy Valley, OR 97015

Lead Organization Federal Tax ID *

82-2385234

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland

Project Location (County) *

Multnomah

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

16000

Total Project Cost *

48000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Our scientific research project will examine the impacts on bird populations of grassland habitat restoration following a construction project currently being conducted by Portland Water Bureau on an underground reservoir located at Powell Butte Nature Park. Powell Butte Nature Park is a former homestead and dairy farm purchased by the City of Portland in 1925 and later converted into a nature park by Portland Parks & Recreation in 1987. Sitting atop two 50-million-gallon underground reservoirs managed by the Portland Water Bureau, the 611-acre nature park includes a variety of upland forest and grassland habitats. One of the underground reservoirs at the site is currently being excavated to replace the roof on the reservoir; excavation began in summer 2021 and construction is planned to be completed in 2022. Upon completion of construction, Portland Water Bureau and Portland Parks & Recreation intend to plant native grasses to restore the site to open prairie habitat. The second underground reservoir was installed in 2015, and at this time Portland Parks began to conduct significant habitat improvements in the Nature Park including the creation and/or restoration of approximately 210 acres of open prairie and oak-savannah habitat. The current restoration project will approximately double the amount of restored prairie habitat at the Nature Park. Our research will focus on grassland bird populations in restored prairie habitat and thus will provide valuable information on the success of past and current restoration efforts over time and their impact on this guild of threatened birds.

Many grassland bird species are of high conservation concern due to the extensive loss and/or degradation of prairie habitat in the United States and worldwide. Of 46 grassland-breeding birds found in the United States, almost half are of conservation concern and report significantly declining populations. In the Willamette Valley it is estimated that less than one percent of the original prairie habitat extent remains with most converted for farming or development. Most of the remaining prairie habitat in the Willamette Valley occurs in small, fragmented patches such as the restored prairie at Powell Butte Nature Park, and such isolated patches are known to be important for the persistence of many grassland bird communities (along with many grassland-dependent plants and invertebrates).

Long-term monitoring of the impacts of restoration projects on wildlife populations is often not included in habitat restoration plans. However, monitoring of physical and biological response variables to restoration treatments is important to: 1) document and measure the effects of restoration actions, 2) evaluate responses with respect to expected outcomes, and 3) contribute to the science and practice of restoration ecology. Our research will focus on the response of grassland bird populations; however, we will also collect data on the overall landbird community at Powell Butte in order to provide additional information regarding the overall success of restoration efforts. To achieve our goals, we will conduct demographic monitoring of grassland birds breeding at Powell Butte and coordinate Community Science surveys for all landbirds utilizing the site – continuing our research studies initiated in 2019 and continued in 2020 and 2021.

As a single restoration site, experimental design options for Powell Butte may be limited because the site may not be large enough to allow spatially replicated treatment sites or randomized controls. However, over the previous three years we have worked with Portland Parks to select study plots in other areas at the Nature Park where future restoration actions are planned to allow for eventual replication, and establishment of control sites. During 2019, we conducted bird surveys over most of the then available prairie habitat at Powell Butte using several methods (as described below) and more intensive demographic monitoring of focal species at the main areas of existing prairie located above the reservoirs. As more prairie restoration projects are initiated at Powell Butte, options for a more rigorous study design will

improve. Presently, we can adopt a time-series approach, which can evaluate changes over time through repeated observations before and after treatments (i.e., restoration).

Bird monitoring methods suited for restoration monitoring include area surveys, line transects, and point counts. One important issue to consider with bird monitoring is estimating species detection probability during survey efforts. Bird detectability can vary for variety of reasons, in particular changing habitat structure and composition as would be expected to occur with habitat restoration or habitat succession. Without correcting for detectability, comparisons of species abundance or density among sites (or over time) are likely to be inappropriate. For analyses of breeding and migratory bird populations using Powell Butte Nature Park we will restrict our analysis to distance sampling. We will also conduct concurrent Community Science surveys (see below); however, detection probability will not be estimated during these volunteer surveys to reduce barriers for participation by less-experienced individuals.

Demographic monitoring is often not included as part of post-restoration monitoring because it requires an intensive amount of effort to collect such data. During 2019, we initiated a demographic monitoring program at Powell Butte collecting data on grassland birds breeding at the Nature Park. At present, the only grassland species breeding at Powell Butte is the Savannah sparrow. Our demographic monitoring included locating and monitoring Savannah sparrow nest attempts and color-banding sparrows to enable identification of individuals, which is necessary to track their movements on territories during the breeding season, gain an understanding breeding site fidelity and estimate annual survivorship. Between 2019 and 2021, we color-banded 100 Savannah sparrows at Powell Butte Nature Park and conducted band resight surveys each year for returning individuals. We have observed strong breeding site fidelity, and thus, we expect to have a substantial marked population at Powell Butte available for future research studies. This will enable us to study the impacts of current restoration efforts on individuals; for example, we will be able to document changes in individual's breeding site selection and fitness over time in response to habitat improvements.

The second major component of our research project at Powell Butte Nature Park is a Community Science project that engages the Portland metro area community in local wildlife conservation and habitat restoration projects. In 2019, we developed a study protocol to be used by volunteer surveyors collecting count data on breeding and migrating landbirds using the site. We wanted to include a Community Science component to our study plan to engage the community and help individuals understand the importance of habitat restoration projects for the health of local wildlife populations living in the Portland metro area. Volunteer surveyors walked pre-determined line transects and counted all birds encountered during fixed-time surveys. Volunteers were organized by our project partner, Johnson Creek Watershed Council, and all training and data management was conducted by Conservation InSight. During our initial year of surveys in 2019, 24 volunteers conducted 92 surveys, detected 77 species, and counted over 4,000 birds. Surveys were continued in 2020 (COVID-19 limited effort) and 2021 (data currently being analyzed). Our goal is to increase survey effort in 2022 and expand our reach to try to engage local underserved communities which were not adequately represented in the first three years of the Community Science project.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

This proposal includes three main monitoring objectives to measure the response of grassland birds and other landbird communities to habitat restoration actions at Powell Butte Nature Park. The three objectives include: 1) quantify the numerical response in species abundance by breeding landbirds (passerines and raptors); 2) quantify changes in demographic rates of focal grassland bird species breeding in restored prairie habitat over time as restoration advances; and 3) develop a species list and characterize bird community composition and abundance at Powell Butte using Community Science. We expect that the grassland bird community should become more diverse over time as restoration advances, and that the abundance of grassland obligate species should increase. We also expect that demographic rates for grassland birds already breeding at Powell Butte (e.g., Savannah sparrows) should increase as prairie habitat is expanded and improved further via removal of woody vegetation and control of invasive plants. Finally, we expect that the overall landbird community at the Powell Butte should become more diverse and that the Nature Park should support a greater abundance of many landbird species.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

All demographic data collected will be recorded in a Microsoft Access database which will be shared with Portland Parks & Recreation and Portland Water Bureau upon completion of the study. Conservation InSight will also share all geospatial data collected, including nest locations, banding locations, and territory points with Portland Parks and Portland Water Bureau in the form of an ArcGIS geodatabase upon completion of the study. Community Science data will be available to all project partners and volunteer participants on eBird, and a consolidated species list will be made publicly available on our website. We anticipate that this study will be conducted annually, and all data will be updated and made available upon completion of our annual reports. Thus, our proposed research will provide long-term data for project partners to enable them to assess future habitat restoration actions at this site and inform other similar restoration projects in Oregon.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our project focuses on scientific research and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy. Through our research, we will provide valuable information that can be used by agencies and land managers to address key conservation issues including land use issues, habitat fragmentation and habitat restoration in urban areas. We will continue our established monitoring program studying the impacts of Willamette Valley prairie habitat restoration on breeding grassland birds. We are currently surveying for Savannah sparrows and other obligate, threatened grassland bird species (e.g., Western meadowlarks, Oregon vesper sparrows) and hope to provide information about these strategy species at this restoration site that could inform other habitat restoration projects in the Willamette Valley.

Our scientific research project already includes a strong education and outreach element through our Community Science component of the project. Part of our non-profit's mission statement is to inform the public about scientific research and find relatable ways to encourage community involvement. We plan to build on our existing efforts to engage a broader representation of the Portland metro area community. Specifically, we are currently exploring ways to reach underserved youth in the area by providing opportunities to work on our project, either as volunteers or as paid field technicians to assist in data collection.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Funds will be used primarily to pay personnel to conduct fieldwork associated with the project; personnel time (for principal investigator and one field technician) = \$15,000. Additional funds will be used for travel (mileage reimbursement to field site) = \$700, and field supplies = \$300. No overhead will be taken on funds provided. All overhead costs and any additional principal investigator salary will be funded with matching funds from private donations (anticipated) and/or out of Conservation InSight overhead (2:1 match expected).

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Portland Parks & Recreation (PPR) will be our main partner on this project. PPR will provide the necessary permits to access the site, and we will coordinate all monitoring with them. PPR staff will participate in bird surveys and provide vegetation monitoring data collected at the site to be included in data analyses. Portland Water Bureau will also allow access to the site and contribute information pertaining to the ongoing construction project on the underground reservoirs and eventual restoration of grassland habitat above the reservoirs. We will also be partnering with Johnson Creek Watershed Council (JCWC) on the Community Science component of the research project. JCWC will organize all volunteers needed for the project; Conservation InSight will provide training for volunteers to conduct surveys following our established protocols and manage all data.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Fieldwork for the 2021 breeding season will begin in March 2022. During the initial month of fieldwork, we will hire and train field technicians who will collect data for the demographic monitoring component of the project, and we will offer training to volunteers participating in the Community Science component. Community Science surveys will begin on or about April 01 and continue until June 30, 2022. Demographic monitoring will continue until all grassland birds at the site complete their annual breeding cycle, which is expected to be by sometime in July or August. Data will be made available to partners by September 30 and summarized in an annual report by the end of the year.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Conservation InSight is a nonprofit scientific research organization focused on providing sound solutions to avian conservation issues. Our mission is to provide evidence-based scientific findings that may be used by federal and state agencies, conservation managers, and communities to inform decision making. Our work is divided into two main programs: 1) scientific research and 2) education outreach. If funded, this project will help us fulfill our mission while providing invaluable information about restoration success at Powell Butte Nature Park that may also benefit similar grassland restoration projects in the Willamette Valley. We have already engaged the community and collected three years of pre-restoration data on grassland birds breeding at the Nature Park; this funding will allow us to continue our monitoring into the post-restoration period. Please visit our website (<https://conservationinsight.org/research-program>) to see the results from our first year of demographic monitoring and Community Science surveys at Powell Butte. Results from our monitoring through 2021 are being analyzed and written up at this time and will be available on our website in the near future.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

We have already completed three years of pre-restoration monitoring at Powell Butte Nature Park as part of our continuing project examining the impacts of a major habitat restoration project on birds using the site during the spring migration and breeding periods. Our research focus has been studying breeding grassland passerines using the site, however we have also collected data on the overall landbird community using the site during these periods by developing and coordinating a community science bird monitoring project conducted in partnership with Portland Parks & Recreation and Johnson Creek Watershed Council. We have already shared our monitoring data with our partners and have conducted several talks at public events to share our results with the community at large. Perhaps most importantly, data collected from 2019-2021 helped inform Portland Water Bureau on their construction project initiated at the site in summer 2021 to reduce negative impacts on bird populations at the site – specifically breeding grassland birds found in the construction impact zone.

Project 2

1500 maximum characters

Since the inception of our non-profit organization in 2017, we have been conducting demographic research on the federally-endangered Cape Sable seaside sparrow (CSSS) in the Florida Everglades. We have worked closely with local partners including Everglades National Park, U.S. Fish & Wildlife Service, and the South Florida Water Management Service to provide annual monitoring data on the CSSS to help inform land managers on the impacts of large-scale habitat restoration currently being conducted in the Everglades ecosystem. Our findings and recommendations (as provided in our annual reports and regular presentations for partners) have aided our partners in their adaptive management of the system to minimize impacts to the CSSS, which is an important indicator species for marl prairie habitat found only in the Everglades ecosystem.

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OCRf Project Proposal Form

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Email *

kathleen@wallowalandtrust.org

Project Information

Project Title *

East Moraine Community Forest Carrying Capacity Study

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The East Moraine Community Forest is a newly acquired publically-owned property near Wallowa Lake State Park outside Joseph, Oregon. This 1,835-acre property is comprised of forest and grassland. It was secured from future development in January 2020 and is to be managed as a mixed-use community asset – providing public access while protecting habitat and cultural resources, and supporting the local economy. This project would allow the East Moraine Community Forest Management Committee to conduct a carrying capacity study for the property to determine acceptable levels and areas for recreational uses. The goal is to ensure public access that is carefully planned and managed to provide the best possible visitor experience while protecting and enhancing the diversity of native plants, animals, and their habitats on this iconic landscape.

Primary Contact Person *

Kathleen Ackley

Primary Contact Email Address *

kathleen@wallowalandtrust.org

Primary Contact Phone number *

541-426-2042

Lead Organization *

Wallowa Land Trust

Mailing address *

PO Box 516, Enterprise, OR 97828

Lead Organization Federal Tax ID *

20-1037078

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Joseph

Project Location (County) *

Wallowa

Project Start Date

MM DD YYYY

01 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

29900

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Located just outside the town of Joseph and at the base of the Wallowa Mountain Range, the Wallowa Lake Moraines are among the most classic and complete examples of Pleistocene (Ice Age) moraines found in North America, offering unparalleled education on geology, ecology, glacial history and climate change. Often referred to as "textbook perfect," these moraines are between 300,000 and 19,000 years old and are featured in geology lessons across the US. An array of native plants and animals are dependent on the unique habitats found here. The 3,000-acre East Moraine is the largest undeveloped moraine of the Wallowa Lake assemblage and was entirely privately owned until January of 2020.

In 2011, the largest private landowner on the East Moraine announced their intention to sell or develop their 1,791-acre property. Comprising 60% of the landscape, the development potential of this property was significant. A conference center with a private dock on Wallowa Lake and at least 15 homes could have been built. In response, the Wallowa Lake Moraines Partnership was formed by Wallowa Land Trust, Wallowa Resources, Wallowa County and Oregon Parks and Recreation Department to secure the East Moraine. The goals of the Partnership are to:

- provide public access respectful of the landscape and its scenic beauty;
- protect open space for wildlife, recreation, and natural resources; and,
- maintain sustainable working landscapes of farms, forests and rangeland to contribute to the local economy and rural ways of life.

After years of effort, the Partnership was able to successfully purchase the property in January 2020 and convey it into public ownership, after raising more than \$6.5 million in a capital campaign. All development and sub-division rights are now extinguished and the property is referred to as the East Moraine Community Forest.

Once the property was acquired, a multi-disciplinary team came together to create a management plan that would guide Wallowa County in their stewardship and management of the property. The team is made up of: Wallowa Land Trust, Wallowa Resources, Wallowa County, Oregon Parks and Recreation Department, Oregon Department of Fish and Wildlife, the Oregon Department of Forestry, Oregon State University Extension Service and the Nez Perce Tribe. In June of 2021, additional property was donated to the Community Forest, increasing the acreage to 1,835.

A draft Management Plan was released for public input in August 2021. After a 90-day comment period closed, the management committee is now tasked with digesting the input and making recommendations for changes to the Plan.

One thing is clear in drafting the plan and in the input we received: concern over the impact that increased recreation will have on this sensitive landscape.

The East Moraine Community Forest is not just a visually arresting landform, it is a key connector between the Wallowa-Whitman National Forest, which contains Oregon's largest wilderness area, and the Wallowa Valley floor. The property has multiple habitat types, including ponderosa pine woodlands and native bunchgrass prairie. Found within the grassland portion of the property, technically the southernmost extent of the Zumwalt Prairie, can be found a shy wildflower known as Spalding's Catchfly (*silene spaldingii*). This

perennial plant is native to grassland prairies of the inland Pacific Northwest and in Oregon can only be found in Wallowa County. Spalding's catchfly is an ESA-listed threatened species and an Oregon-listed endangered species. The East Moraine Community Forest is within the US Fish and Wildlife Service's Wallowa Lake Key Conservation Area for this plant, making conservation and careful management – especially as it relates to recreational impacts -- critical to maintaining this population.

Another unique aspect of the East Moraine Community Forest is that it is a significant transitional area in terms of forest habitat - marking the end of a steep transition from the high alpine white bark pine / limber pine on Mt Howard in the Wallowa-Whitman National Forest, down through sub-alpine fir, lodgepole pine, cool moist mixed conifer and then transitioned into the warm dry mixed conifer and dry ponderosa pine habitat on the East Moraine Community Forest. All of this occurs in the space of less than one mile and about 3,500 feet of elevation change.

One of the most important species dependent on the habitat provided by the East Moraine Community Forest is mule deer. During the winter the East Moraine has among the highest populations of mule deer in the County. As in other western states, Oregon's mule deer populations are in decline. The Oregon Dept. of Fish & Wildlife's Mule Deer initiative identifies habitat protection as one of the keys to their recovery. Not only is the East Moraine Community Forest a favorite spot for mule deer in the winter, it is also an important migration corridor.

Until January 2020, the East Moraine was entirely privately owned with limited opportunity for public access. Now that has changed. The East Moraine Community Forest offers recreational opportunities previously not available on this geological wonder. The property contains some nine miles of trails that traverse multiple habitat types and elevations. The stunning 360o views from the ridge line are unparalleled. Standing from a single vantage point, one can view Wallowa Lake, the Wallowa Mountains, the Wallowa Valley, the Zumwalt Prairie, the Wenaha Mountains, and the Seven Devils in Idaho. Eventually, the Partnership envisions a permanent trail corridor along the entire crest of the East Moraine, connecting Joseph, Iwetemlaykin State Heritage Site, Wallowa Lake State Park and the Wallowa-Whitman National Forest, which contains Oregon's largest wilderness area, the Eagle Cap Wilderness, with 535 miles of trails.

However, with this change in access comes concern for overuse and damage to this ancient and fragile landscape. How will species like mule deer and Spalding's catchfly fare under increased recreational use?

Touted as one of the Seven Wonders of Oregon by Travel Oregon, the Wallows each year attract up to ten times our population – up to a million people. Drawn by the spectacular Wallowa Lake Moraines and surrounding Wallowa Mountains, these visitors bring millions of dollars into our economy. During the pandemic we have seen visitor trips increase dramatically, despite stay-at-home orders. Oregonians are hungry to get out and are spending more time than ever at state parks, national forests and other natural areas. The result is that some areas are being loved to death, with the Columbia Gorge being an example. Outside Bend, the Forest Service has made the unprecedented decision to institute a permit system to limit public access in the Three Sisters Wilderness Area to protect habitat and the wilderness experience.

Wallowa County is keenly aware of the potential impacts of increased tourism and more people crowding popular recreational spots in our area. With a significant portion of the East Moraine now open to the public, use most certainly will grow. Locals and East Moraine Community Forest land managers are concerned about potential impacts this increased recreation will bring to the landscape. An ecological and social carrying capacity study is essential to guide recreational planning efforts. This funding request would support a collaboration with the Environmental Studies Program and the University of Colorado to

undertake a study to measure carrying capacity on the East Moraine Community Forest and make recreation management recommendations based on that information.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The goal of this project is to better understand how public access will affect the sensitive habitat and natural resources found on the East Moraine Community Forest, guiding the development of a Recreation Plan. We want to answer the question: what is the capacity for providing respectful access on this geological wonder, connecting people to a world-renowned landform, while maintaining the ecological integrity of the landscape?

Objectives:

Partnering with an entity such as the Environmental Studies Program at the University of Colorado, this project will examine methodologies used for defining, measuring and establishing carrying capacity of publicly accessible properties with unique habitats such as the East Moraine Community Forest. This project will be modeled after such efforts as the "Measuring & Managing Park Carrying Capacity" Final Report by Hyeone Park, UBC Sustainability Scholar 2020 for Metro Vancouver.

The project will address concerns voiced by ecologists and the public regarding negative impacts to wildlife and habitat resulting from increased access, by:

- Collecting user data such as:
 - How many people access the moraine
 - When are they accessing the moraine
 - How are they accessing the moraine (ie: by foot, bike or horse)
 - Where they go when accessing the moraine
 - What their primary activity on the moraine? (ie: exercise, bird watching, mushroom hunting, etc)
- Initiating community conversations around user impacts;
- Developing desired conditions and acceptable ranges of change over time; and,
- Providing management recommendations.

The project will define what we mean by "carrying capacity" and how this definition relates to the conservation values of the East Moraine Community Forest. What are the desired habitat conditions and what are acceptable ranges of change over time? What ecological indicators will we use to assess habitat condition? How will public access impact those habitat conditions and what actions can managers take to minimize that impact?

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The Wallowa Lake Moraines Partnership has taken on the responsibility of ensuring this landscape is protected in perpetuity, but without more information and guidance we run the risk of doing more harm than good. This project will provide us with vital information to guide decision making and help us address valid concerns over impacts to the landscape by allowing recreational access. The project will result in a comprehensive report on the ecological and social carrying capacity of the East Moraine Community Forest, with specific recreation management recommendations that will be used to manage visitor experience and impact on the sensitive habitat and wildlife dependent on this iconic landscape. Ecological indicators will be identified (such as mule deer numbers and Spalding's catchfly population) and a plan for monitoring these indicators over time will be created. Desired conditions, acceptable ranges of change and actions to be taken when certain thresholds are reached will be identified.

Success will be the creation of a robust, scientifically sound framework for managing the landscape in a way that offers quality visitor experiences while minimizing negative impacts to the resource.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Beyond the spectacular visual beauty of the East Moraine Community Forest, there are a diversity of native plants and wildlife that call the Moraine home. The property is located within the Blue Mountains Ecoregion and connects Oregon’s largest wilderness area, the Eagle Cap Wilderness, to the Wallowa Valley floor. Its location makes it a connecting landscape between Conservation Opportunity Area 22, Wallowa River, and Conservation Opportunity Area 23, the Eagle Cap – Wallowa Mountains. The property contains Ponderosa pine woodlands and native bunchgrass prairie, both Strategy Habitats as defined by the Oregon Conservation Strategy.

This project directly supports a key recommended conservation action for Conservation Opportunity Area 23, which is to “manage recreational uses to minimize impacts on sensitive habitats.” It will do so by:

- improving habitat connectivity by ensuring this connector landscape retains its ecological integrity and continues to provide winter range and be a key migration corridor for wildlife;
- ensuring land management decisions are informed by current and evolving science around habitat and recreational use management;
- providing research and planning that supports responsible recreational opportunities; and,
- using research to implement recommendations in the Oregon Conservation Strategy (specifically to manage recreational uses to minimize impacts on sensitive habitats).

For projects that address a conservation priority, what are the primary taxa that will affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

Administration

Contract services

Equipment

Personnel

Supplies/materials/services

Travel

Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administration: \$0

Contract Services: \$15,000

Equipment: \$0

Personnel: \$5,000

Supplies/materials/services: \$0

Travel Expenditures: \$0

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Oregon Parks and Recreation Department: OPRD will be a part of drafting the RFP, selecting the contractor, providing expert consultation and support to the contractor, and will lead integration of the report recommendations into the management plan.

Wallowa Resources: WR will be a part of drafting the RFP, selecting the contractor, providing expert consultation and support to the contractor, and will participate in integrating report recommendations into the management plan.

Wallowa County: WC will be a part of drafting the RFP, selecting the contractor and will participate in integrating report recommendations into the management plan.

Oregon Department of Fish & Wildlife: ODFW will provide expert consultation for the contractor and will participate in integrating report recommendations into the management plan.

Nez Perce Tribe: NPT will provide expert consultation for the contractor and will participate in integrating report recommendations into the management plan.

Oregon State University Extension Service: OSU Extension will provide expert consultation for the contractor and will participate in integrating report recommendations into the management plan.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Jan – Feb 2022: Draft project RFP Mar 2022: Release project RFP April 2022: Select contractor May – Sept 2022: research and data collection Oct – Nov 2022: report writing Dec 2022: final report and recommendations Jan – Mar 2023: integrating recommendations into the Recreation Plan April 2023 forward: implementation

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

While the capital campaign portion of the project is over, detail about the project including maps, images, videos and more can be found on Wallowa Land Trust's website: www.wallowalandtrust.org and at www.morainecampaign.org.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Since our founding in 2004, Wallowa Land Trust has worked to mitigate the impacts of development and to sustain the lands our community depends on for its resilience and well-being. In that time, we have partnered with landowners in Wallowa County to protect the extraordinary geography and exceptional beauty central to our identity, our history, and our economy. We engage a wide cross-section of collaborators to deliver our mission, including private landowners, community members, government agencies, Native American tribes, foundations, and other nonprofits. Through these collaborations we permanently protect open space, wildlife habitat, working farms and ranches, culturally important areas and the diverse natural lands unique to Wallowa County.

Acquisition of the East Moraine Community Forest, as described above, was a significant undertaking for Wallowa Land Trust, taking over a decade of effort. We served in a leadership role, driving the planning and fundraising for the campaign, successfully raising \$6.5 million to purchase the property. We have lead the management planning process and will hold a conservation easement over the property together with Oregon Department of Forestry.

The success of this project demonstrates Wallowa Land Trust's ability to build and maintain partnerships, to carry out complex transactions and to lead thoughtful, informed stewardship of the landscape. We are able to bring diverse groups together over a common cause - land conservation.

Project 2

1500 maximum characters

The Wallowa Lake's East Moraine encompasses approximately 3,000 acres. The East Moraine Community Forest comprises about 60% of the landscape. Over the past decade, while working to protect this property, we have simultaneously worked with other private landowners on the East Moraine. Our efforts have resulted in another four adjoining properties being permanently protected by conservation easements, so that now over 80% (2,573 acres) of the East Moraine is under conservation. These permanent deed restrictions keep lands privately owned but prohibit sub-division and development while protecting habitat. Properties protected include Ponderosa pine forestland and native grasslands. At the same time, we also acquired two properties on the west side of the lake, protecting Wallowa Lake shoreline and forested habitat on the West Moraine. This work, on both sides of Wallowa Lake, has resulted in significant habitat protection, creating a mosaic of conserved lands on one of Oregon's most well-known and beloved landscapes.

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OCRF Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRF/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

atowhee@gmail.com

Project Information

Project Title *

MOTUS RECEIVING SITE AT ANKENY NATIONAL WILDLIFE REFUGE

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Willamette Valley has been identified by Motus Initiative partners as an critical location for inclusion into the Motus Network. We propose to install a Motus receiving station at Ankeny National Wildlife Refuge to track tagged birds, bats, and insects that come within 10 miles of the Motus Tower. Tagged individuals that use the refuge or fly by the tower send a signal to the receiver station, that data is automatically uploaded to the Motus database, and is shared with site and network partners. Joan Hager of U.S. Geological Survey, Corvallis, wrote this, "Great that you are applying for this grant to install a station at Ankeny! In the interest of taking a strategic approach to developing the western Motus network as a whole, the Pacific Northwest Motus Coordination group is in the process of identifying 5 top priority sites for Motus stations by ecoregion in Oregon and Washington. I am taking the lead on identifying 5 sites for the Willamette Valley. My list so far consists of Ankeny NWR, Finley NWR, and Fern Ridge (Army Corp HQ)." Vanessa Loverti, with the USFWS Migratory Bird and Habitat Programs who oversees one Motus station in Oregon, also supports a station at Ankeny NWR. "A Motus station at Ankeny would link coastal Motus sites and fill an important gap in Oregon along the Pacific Flyway, in addition to answering local questions on how species like geese and shorebirds use this site. So far the only Motus receiving stations in Oregon are at Bandon (1,USFWS) and Jackson County (2, Klamath Bird Observatory). The Willamette Valley is a major migration route for birds from hummingbird to Sandhill Cranes. Some dozens of species pass through., Many dozens breed here and leave in spring. Most compelling, perhaps, are the many thousands of Cackling Geese who arrive here from Alaska for the cold months plus many other waterfowl, shorebirds, and montane species that come down to the lowlands to escape deep snow and cold.

Primary Contact Person *

Harry Fuller

Primary Contact Email Address *

atowhee@gmail.com

Primary Contact Phone number *

9713121735

Lead Organization *

Salem Audubon Society

Mailing address *

PO Box 2084 Salem, Oregon 97308

Lead Organization Federal Tax ID *

Employer ID: 23-7098433

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Lebanon

Project Location (County) *

Marion

Project Start Date

MM DD YYYY

01 / 15 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

10000

Total Project Cost *

10000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Motus tracking system to inform full life-cycle conservation of Birds

Prepared by Dr. Joan Hagar, USGS Forest & Rangeland Ecosystem Science Center, Corvallis

The Motus Wildlife Tracking System (Motus, motus-wts.org) is an international collaborative research network of automated radio-telemetry receiving stations. Motus facilitates landscape-scale research and education on the ecology and conservation of migratory animals. To enable meaningful migration research, researchers depend on cooperators within the Motus system to erect and maintain stations across spatial scales that encompass the movements of the animals being studied. The current Motus network comprises more than 800 sites from the Canadian Arctic to South America, and has been successful in monitoring more than 200 species, including birds, bats, and insects. Since 2013, more than 10,000 individuals of more than 100 species have been monitored using the system. Motus has been successfully used to answer research questions such as identifying important stopover sites, migratory routes, and pathways of post-fledging dispersal. Data collected from these stations feed into a master database managed by Birds Canada where it is archived, visualized, and distributed to researchers and the general public. Wildlife movement data is shared within the system under a set of rules that benefits all collaborators. By utilizing this coordinated, collaborative, and international approach to automated radio-telemetry, Motus has broadened the spatial and temporal scale over which birds can be tracked.

Despite the successes of Motus research throughout the existing network, critical gaps in the network across western North America limit the questions that can be addressed for western species that are a high priority for conservation. The lack of Motus stations in the west further exacerbates the knowledge gap around migration ecology between eastern and western populations of small birds. This may lead some land managers to misapply information gained from eastern migration studies to western migrants. For example, most western migrants (unlike their eastern counterparts), typically do not make large overwater flights, often navigate through drier and lightly vegetated terrain, and may face more anthropogenic and natural obstacles compared to eastern migrants. Obtaining post-breeding movement and migration information, especially identifying important stopover sites, is critical to the conservation of many species in western North America.

The Willamette Valley supports important riparian and wetland habitats that provide critical stop-over resources, as well as breeding and wintering habitat, for many species of migratory waterfowl, shorebirds, raptors, and songbirds. Furthermore, the north-south orientation of the Willamette River corridor may facilitate movements of many migratory species. However, for most species, little is currently known about the use of the River and Valley for stop-over and migration. The location of a Motus station at Ankeny NWR would contribute significantly to the ability of researchers to investigate avian use of the Willamette River corridor for breeding, migration, and stopover habitat. Such information is critical for informing restoration efforts aimed at full life-cycle conservation of songbirds in the Willamette Valley and throughout the western U.S. . A station in the Willamette Valley would provide the necessary infrastructure for researchers that are already tagging species that occur here, or that want to tag those species.

The Headquarters building on Ankeny Hill in the Refuge makes an ideal location for a motus station because of 1) the heart-of-the-valley location adjacent to the Willamette River corridor 2) a clear line of sight for detecting birds at the maximum range of motus antennae (~15 km); 3) the availability of power; and 4) the abundance and diversity of bird species in the vicinity, many of which are being tagged in projects to the north and south of the Willamette Valley. A Motus station at Ankeny would be the first such station in the Willamette Valley, and would provide a strategic "seed" to further develop the network across

Western Oregon.

Here is description of the Motus network from its website (motus.org):

About Automated Radio Telemetry

Automated radio telemetry uses receivers that automatically record signals from radio transmitters. It is used in a wide variety of ecological applications particularly for tracking migration of small animals, or determining fine scale temporal information about movement or behavior. It is particularly well suited for studies of aquatic organisms and small flying animals.

Motus is the world's largest collaborative automated radio telemetry array. Motus is the central hub for detection data from more than 750 receiving stations as well as metadata from stations (e.g. location, deployment dates, height, antenna bearing) and tags (e.g. species, location and date deployed). Data from across the network is then provided to researchers and a condensed version shared with the public.

Each tag emits a unique signature so we can determine where specific animals go, how fast they transit between points (migration ecology), and how long they stay in an area (stop-over ecology), among many aspects about their behavior and conservation.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The project would establish an on-going, year-round receiver station to monitor many mobile species that carry transmitting chips. Species that are being tagged in research projects in the region include Vesper sparrow (KBO), Lewis' woodpecker (KBO), Swainson's thrush (Kira Delmore, British Columbia), and several species of shorebirds (Vanessa Loveri, USFWS). A station at Ankeny could potentially detect these species, and could facilitate collection of real time and continuous data on local species, such as slender-billed nuthatch and horned lark. Also, the Ankeny station would be ideally situated to provide seasonal information on the movements and locations of many species that migrate through or spend part of each year in the Willamette Valley. This method of data collecting is far more inclusive, conclusive and wide-ranging than either bird-banding, which depends on recaptures of individuals to infer movement, or mere field observations. A passing Vaux's Swift at 2000 feet elevation would not be missed. It would be the first such station in the Willamette Valley with its many wildlife refuges, nature preserves, parks and other open spaces.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Some immediate outcomes and measure of success are expected. Once the Motus station is operational, any tagged species crossing the radius of the receiver (up to 12 miles) will be immediately recorded. Conservation partners have tagged species north and south of us. The data recorded by our station would be immediately available both the owner of the station and owner of the tags. This would lead to an increase in knowledge for those species migrating through the Refuge. The information could be incorporated in data and mapping analysis for research and land management.

On the short term (1-2 years), the presence of a Motus station will provide the perfect opportunity for biologists and scientists to start tagging animals locally. It would increase the amount and type of research possible at the Refuge and in surrounding landscapes.

Measures of success will include the number of data points and tagged animals detected regionally, the number of research studies that can now benefit from our Motus Station, and an increase in partnership with other conservation and science organizations locally and across borders. Success of the project will be measured by the number of tagged individuals registered at the station and by the new tagging projects that are facilitated by the establishment of a receiving station in this strategic location.

Species that are already being tagged in projects within the Pacific flyway include Vanessa Loveri's shorebirds, Kira Delmore's (BC) Swainson's Thrushes, and KBO's Lewis's Woodpeckers.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

There are 4 Oregon Conservation Strategy bird species that are regular visitors on and around the 26-

Ankeny Hill Nature Center site: dusky Canada Goose, Western Meadowlark, Western Bluebird and Slender billed White-breasted Nuthatch.

The refuge was created specifically to provide wintering grounds for the dusky Canada Goose, a subspecies of Canada Goose that breeds only in the Far North. They winter primarily in the Willamette Valley. .

Western Meadowlark, Western Bluebird and Slender-billed White-breasted Nuthatch are year-round visitors to the Nature Center site and probable site breeders. The Motus monitoring system has the potential to help us understand the range these special-status species cover throughout the year.

The ODFW website for the Strategy says: "Monitoring is key to determining the status of Strategy Species and Strategy Habitats, and evaluating effectiveness of conservation actions over time".

(https://www.dfw.state.or.us/conservationstrategy/read_the_strategy.asp)

In addition there would be educational open houses, field trips and presentations of the data collected from this Motus station. All would be based at the visitors center where the station will stand.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Equipment would include six antenna, support tower, cables to anchor the tower, cables to connect antenna to digital equipment to collect and transmit data to Motus network.

William Blake of MPG Ranch in Montana is a Motus station expert and is currently overseeing the location of two new Motus stations at Malheur NWR in eastern Oregon. He says there are two transmitter chip frequencies—each requires three antenna for best reception. The tower holding the antenna should be ten feet above the roofline.

Contract services would include expert evaluation of exact location for antenna placement, moving equipment to site, installation and testing of equipment, training of local volunteers and NWR staff (if appropriate). There may also be some electrical work required to bring power to secure indoor location for the Motus gear.

Supplies & materials would likely include cement pad for tower to stand on.

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Ankeny National Wildlife Refuge administered by U.S. Fish & Wildlife Service.

The MOTUS station would be located at the visitors center at Ankeny NWR. There it's physical presence and condition would be regularly monitored by staff and Audubon volunteers working at the visitors center.

Electrical outages would thus be noted and fixed.

MOTUS Wildlife Tracking System.

This international science and conservation consortium already manages the data collection, tabulation and analytical databases that are the purpose of the many MOTUS receiver stations around the world. This data is thus available to naturalists and scientists globally. It is especially useful in tracking migratory birds and bats.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

First step is ordering the equipment and arranging for installation upon delivery. After it is installed the data would begin to flow. Salem Audubon and local scientists like Joan Hagar of USFWS would offer free training classes for interested biologists and students of natural history. Then there would be training of local volunteers and Ankeny NWR staff about how to monitor its operation and what do to if a problem is found. Once the receiver station is collecting data Salem Audubon would reach out to state and local media to bring reporters together with local involved scientists to tell the public how this state grant is contributing to science, knowledge and conservation.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Contact at Ankeny NWR that will host this Motus station:

Graham Evans-Peters

Refuge Manager, Ankeny and Baskett Slough NWR

U.S. Fish and Wildlife Service

10995 Hwy. 22, Dallas, OR 97338

Websites:

In Southern Oregon Klamath Bird Observatory is already using Motus in its field research. On the coast Vanessa Loverti with USFWS has a Motus station in Bandon. Two stations are soon to be built at Malheur NWR. At present there are several more Motus stations in planning or under construction in Oregon. One is planned for Eugene, another near McKenzie Bridge in the Cascades foothills, one at Summer Lake in eastern Klamath County, two more coastal sites—Newport and Cape Meares (overseen by Vanessa Loverti). Here is a master spreadsheet of planned or functioning Motus stations in western North America (does not show Malheur stations):

https://docs.google.com/spreadsheets/d/1DZBNBnQiL2YDe8YXx0T_A33GVGi3eIDYRQKHLOq_drY/edit#gid=260508588

MOTUS: receiver station placement map: <https://motus.org/data/receiversMap?lang=en>

How MOTUS works, some examples: <https://motus.org/data/tracksSearch>

MOTUS videos: <https://motus.org/video/>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Ankeny Hill Nature Center is a product of an unusual and effective partnership among Salem Audubon, The Friends of the Willamette Valley National Wildlife Refuge Complex, and the U. S. Fish and Wildlife Service. Half of Gehlar Hall, the main building of the Center, has been completed. It's a very classy structure, with an indoor classroom, a covered outdoor learning space, and restrooms. Most of the cost of this building has come from a bequest made by Mark Gehlar to Salem Audubon many years ago; the U. S. Fish and Wildlife Service has provided the rest. With the anticipated increase in traffic to the site of the Nature Center, a new, safer road access point was needed, along with access roads and parking areas at the Nature Center. That work is now complete. The COVID-19 pandemic has halted our plans to open the Nature Center area to the public. We anticipate it will be safe to do so January 2022. Meanwhile, the Service is engaged in restoring most of the site to native emergent prairie, upland prairie, oak savanna, and riparian habitats. This work has included removal of the nonnative plants on the site. That work continues. We anticipate expanding the capacity of the Nature Center by adding the David Marshall Classroom to be situated on Peregrine Marsh. That work will begin next summer.

This is a long-term project; all phases will be operated in a three-way partnership.

Project 2

1500 maximum characters

Salem Audubon Nature Reserve

Located in West Salem, this seven acre parcel of wooded hillside on Eola Drive was acquired through a generous contribution by the Gehlar and Schneulle families in 1992. For the past two decades, Salem Audubon volunteers have worked to improve this urban forest for wildlife habitat and as an educational resource for the community. Ongoing efforts help to eradicate exotic plant species, including invasive English Ivy, Scotch broom and Himalayan blackberry, and to plant native species. The City of Salem Public Works awarded Salem Audubon a Watershed Protection and Preservation Grant to assist in this effort. The Nature Reserve provides valuable habitat to many species of birds and pollinators such as bees and butterflies. Every year, two Osprey build a nest and raise their young on a platform at the Nature Reserve. Through partnerships with local schools, the Reserve provides hands-on experience for students to learn outdoor skills such as working together to spread wood chips on the reserve trails.

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Google Forms

OCRf Project Proposal Form

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Email *

pbwced@qwestoffice.net

Project Information

Project Title *

Camp Creek Ecosystem Resiliency

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

This project is on Camp Creek in the North Fork Burnt River watershed, approximately 45 miles southwest of Baker City, north of Whitney Valley on lands administered by the Whitman Ranger District of the Wallowa Whitman National Forest. Watershed issues addressed are: 1) degraded groundwater recharge and water storage functions, yet abundant unconfined and wide valleys are present, 2) limited water table maintenance supporting narrower riparian vegetation communities than the abundant willow valleys than could be present, 3) limited zones for water quality filtering, 4) excessive bank erosion resulting in streambeds with abundant fine silts, and a resulting limited fish and wildlife riparian and aquatic habitat. Throughout the 2.5-mile project reach, the creek is incised, not connected with broad historic floodplain, and beaver are not present. The result is a stream with an altered potential riparian vegetation community of sagebrush or lodgepole pine, instead of multiple species of willow, simplified aquatic habitat and one that is more efficient at routing water out of the system. Both Camp Creek and the North Fork Burnt River experience very low summer base flows and water temperature that exceed state water quality standards (303d water quality impaired for water temperature). We propose to utilize low-tech process-based restoration techniques (beaver dam analogues – BDAs) to reconnect Camp Creek with its historic floodplain and facilitate restoration of the native willow community by fencing to exclude ungulates from seven protection areas averaging 0.80 acres in size. This is a collaborative project between the Powder Basin Watershed Council, Oregon Department of Fish and Wildlife, and the Wallowa Whitman National Forest.

Primary Contact Person *

Tim Bailey

Primary Contact Email Address *

pbwced@qwestoffice.net

Primary Contact Phone number *

541-523-7288

Lead Organization *

Powder Basin Watershed Council

Mailing address *

2034 Auburn Avenue Suite B, Baker City, OR 97814

Lead Organization Federal Tax ID *

87-0763085

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Unity, Oregon

Project Location (County) *

Baker County

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

09 / 30 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

168772

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

This project will restore the Camp Creek aquatic and valley bottom ecosystem to provide ecosystem services of abundant cold and clean water well distributed temporally and spatially, abundant quality fish and wildlife habitat, and resiliency to wildland fire.

We will use a combination of beaver dam analogues (BDA's), post assisted log structures (PALS) and coarse wood placements to accomplish our objectives. Primary BDA's will be placed to activate historic side channels and decrease stream power to induce aggradation in the mainstem during peak flow events. Secondary BDAs will be placed to support fish passage through primary BDAs (stair stepping) and connect local floodplains.

PALs will be installed where materials are readily available and opportunities exist to activate inset floodplains or to generate sediment needed to aggrade the bed behind BDAs. Coarse wood placements will be implemented where materials are readily available to increase instream habitat diversity and reduce conveyance efficiency.

We have used LiDAR imagery and on-the-ground survey to determine locations of primary BDAs. Secondary BDAs will be located to achieve fish passage criteria. PALs and coarse wood will be placed opportunistically.

Channel incision through much of the 2.5 reach is approximately 2 feet. In this scenario, we are confident our objective will be achieved. However, channel incision at the upper and lower most extent of the reach is much greater, thus success less certain. For this reason, we are taking an adaptive approach, beginning with low-tech actions with minimal implementation disturbance and reliance on heavy equipment as the preferred approach. We will implement our planned low-tech approach and monitor achievement of objectives. If objectives are not being met at an acceptable rate, we will adapt the approach, where needed, to meet the objective. This would be accomplished through a future project funding request.

Work crews employed by the Powder Basin Watershed Council will conduct the work. To provide an educational opportunity as part of this project, we will work with the Baker Resources Coalition and Baker Technical Institute to provide internship opportunities to high school aged students and/or young adults. This will provide experience in the natural resources and outdoor education in a small rural community with few other opportunities of this nature. We will also seek out other groups that provide opportunities for diverse and underserved communities, such as the Northwest Conservation Corps.

Mechanized equipment will include pick-up trucks and UTV's to transport people, equipment, tools and materials, and a hydraulic post driver for construction of BDAs and PALs.

To expedite recovery of riparian vegetation, with a focus on native willow, we will construct fencing to exclude livestock from riparian areas to facilitate recovery of native riparian vegetation, with an emphasis on areas where native willow is present but hedged heavily by wild ungulates. This area is a vacant cattle allotment and elk sign around these stunted willows is abundant. Seven exclosures will be constructed averaging 0.80 acres in size (range 0.29 acres to 2.66 acres). Six of the exclosures will be constructed of 6' high woven wire and steel posts, and one will be buck and pole fencing.

Once native willows recover within the exclosures to the degree that they can sustain ungulate browsing, the exclosures will be dismantled and reinstalled at other locations where temporary protection is needed. Our intent is that the instream work implemented will in the short-term create conditions to meet our restoration objectives, but colonization by beavers will sustain these conditions over the long-term. Through implementation of these actions, we will provide habitat (ponded water) and food (abundant native willows) in an environment (wetted floodplain) that will attract beaver colonization.

With respect to Columbia Basin Redband trout, Camp Creek within the project reach is characterized by simplified, homogenous channel characteristics and flow features. We will place a variety of wood-based

structures in the channel, all with the primary objective of reconnecting Camp Creek with its historic floodplain. These same placements will also greatly diversify channel form and flow features. In addition to BDAs and PALs, which will create pool habitats and hiding cover, coarse wood will be placed in the channel to reduce conveyance efficiency and provide in-channel cover for trout. In total, these added features and restored functions will provide a more abundant food base for trout, and more diverse structural habitat. As Columbia Spotted Frog require slow moving ponded water, through all life history stages, Camp Creek currently provides little suitable habitat. Standing water, flooded meadows and willow provide breeding, foraging and overwintering habitat. This project will result in providing suitable habitat for Columbia spotted frog and provide connectivity between other currently occupied habitats within the watershed.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

The project goal is to restore the Camp Creek aquatic and valley bottom ecosystem to provide ecosystem services of abundant cold and clean water well distributed temporally and spatially, abundant quality fish and wildlife habitat, and resiliency to wildland fire.

Objective 1

Reconnect 2.5 miles of Camp Creek with its historic floodplain by 2030. Reconnecting of the historic floodplain includes aggradation of the main channel, allowing activation of historic side channels and flooding at recurrence interval of 1.5 to 2 years.

Objective 2

Expedite recovery of riparian vegetation, with a focus on native willow, on 5.6 acres of riparian habitat along Camp Creek.

Objective 3

Beaver will occupy and build dams throughout the 2.5 mile project reach by 2030. Achievement of this objective will be facilitated by implementing objectives 1 and 2. Actions under this objective will be primarily to document beaver activity within the project reach.

Objective 4

Improve aquatic habitat conditions for Columbia Basin Redband Trout and Columbia Spotted Frogs along 2.5 miles of Camp Creek by 2025.

Objective 5

Monitor effectiveness of restoration actions toward meeting project objectives for five years post-implementation.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Willow exclosure fences will be removed when a belt transect shows that 70% of willow cover are above browse heights for elk (6 feet). Transects will be established in each of the exclosures or one transect will be established and others will be photo-monitored.

To adaptively manage the desired restoration outcome described in our goal and objectives, we propose to implement the following project effectiveness monitoring:

Channel-Floodplain Connectivity (Objective 1): We will establish and measure cross sections upstream of a select group of primary BDA's to document channel aggradation. Cross-sections will be established and measured immediately following implementation. A lack of measurable and increasing aggradation toward meeting our objective of activated side channels and flooding of the historic floodplain will trigger development of additional restoration actions. If available, drone imagery will be used to document flooding of the historic floodplain at peak flows. We will take photopoints spring and fall at transect locations to document ponding of water upstream of BDAs.

Restoration of native willow communities (Objective 2): We will establish photopoints at each of the seven protection exclosures and take photographs annually, spring and fall. Belt transects will be established in each of the exclosures to monitor willow recovery or one transect will be established and others will be photo-monitored.

An annual walk-through survey of the project reach will be conducted to document beaver activity.

Locations of beaver activity (dam building, lodges, forage caches, chewings, etc.) will be documented by type description, photograph and GPS location. Citizen scientists will have the opportunity to contribute to the Northeast Oregon Beaver Survey project in iNaturalist.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project is in the Burnt River watershed, a Strategy Conservation Opportunity Area (COA ID #166). This watershed is identified as a COA due to its high potential for riparian habitat restoration. This project will implement recommended conservation actions listed in the Strategy including, 1) enhancing watershed function, connection to riparian habitat, flow and hydrology, and 2) restoring riparian habitat.

The Strategy Habitat this project will improve is "flowing water and riparian habitats." Six of the limiting factors identified for this Strategy Habitat are addressed by implementing the following recommendations: 1) improve streamflow and water storage, 2) improve channel complexity, 3) encourage beaver dam-building activity, 4) increase riparian habitat cover 5) restore riparian vegetation to filter sediments, 7) restore riparian zones that provide the full array of associated ecological functions, 8) enhance the extent and connectivity of existing riparian habitats, 9) maintain channel integrity and natural hydrology, and 10) selectively fence restoration to exclude ungulates until riparian vegetation recovers.

This project will increase the extent and connectivity of habitat for Columbia Spotted Frog, a Strategy Species. This project will address limiting factors identified for this species in the Strategy including lowering of water tables through down-cutting of stream channels. We expect frogs to recolonize this area once suitable habitat is restored.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

Administration

Contract services

Equipment

Personnel

Supplies/materials/services

Travel

Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

\$9,165 are for fencing supplies/materials and 10,385 for personnel (youth work crew).

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Work crews employed by the Powder Basin Watershed Council will conduct fence construction and installation of BDAs and PALs. US Forest Service will provide funding. US Forest Service and Powder Basin Watershed, with assistance from Baker Resources Coalition, Baker Technical Institute, and Northwest Conservation Corps will conduct monitoring via internship opportunities for high school students and young adults. Oregon Department of Fish and Wildlife will provide technical assistance and potentially funding.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

1) January 2022 - USFS and PBWC Complete Project Designs; 2) March - June 2022 and 2023, acquisition of supplies and materials; 3) March - June 2022 and 2023 intern and youth crew recruitment and hiring; 4) July - September 2022 and 2023 project implementation; 5) 2024-2028 post project implementation effectiveness monitoring

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Powder Basin Watershed Council website: <https://www.powderbasinwatershedcouncil.org/>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In 2019, through funding provided by the Idaho Power Company, we contracted with the Utah State University, Department of Watershed Sciences to implement the Beaver Restoration Assessment Tool in the North Fork Burnt River Watershed. This resulted in the report: Macfarlane WW, Meier MD, Hafen C, Albonico MT, and Wheaton JM. 2019 North Fork Brunt River Beaver Restoration Assessment Tool: Building Realistic Expectations for Partnering with Beaver in Restoration and Conservation. Prepared for the Powder Basin Watershed Council. Logan, UT. 80 Pages. This exercise provides the PBWC and partners with a good basis for designing and implementing actions to facilitate restoration of aquatic habitats, including recolonization of Beaver in the North Fork Burnt River watershed and is foundational for the proposed project.

Project 2

1500 maximum characters

Powder Basin Long-Term Water Quality Monitoring: Since 2011 (2011 - 2020) , the Powder Basin has implemented a long-term water quality monitoring program to characterize water quality conditions in the Brownlee, Powder and Burnt River Subbasins. Annually we have collected data from up to 68 monitoring sites on the following parameters: water temperature, dissolved oxygen, pH, conductivity and turbidity. This monitoring effort has helped the PBWC, partners and the community in general, understand where water quality is exceeding state water quality standards and where water quality is limiting aquatic biota. Implementation of this project has been supported by local volunteers, giving the local community hands on opportunities to understand watershed conditions, and allowing us to expand our efforts from the OWEB funding provided.

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Google Forms

OCRF Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here:

<https://www.dfw.state.or.us/conservationstrategy/OCRF/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

stephanie@natureed.org

Project Information

Project Title *

Westlank Oak Woodland Restoration Project

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

The Westlake Oak Woodland Restoration and Interpretation Project restores 21.4 acres of suburban Oregon White Oak woodland and creates a plan to ensure the continued stewardship of the area through community education and citizen science monitoring. Westlake Home Owners Association (HOA) contains 200+ homes surrounded by twenty acres of Oregon white oak woodland habitat. These twenty acres are divided into three 'tracts' A (17 acres), B (2.7 acres), and C (1.7 acres). The Oswego Lake Watershed Council has partnered with the Westlake HOA, City of Lake Oswego, Clackamas Soil and Water Conservation District and Wisdom of the Elders to fund an the restoration of Tract A by removing invasive plants (predominantly ivy and blackberry) and invasive trees (mainly hawthorne) from the 17 acres. We have also designed and implemented an oak release project by removing trees (mainly ash, big leaf maple, cherry, and Douglas fir) that compete with oak development. The native sub canopy has been replanted to develop a healthy understory of cascara, vine maple, Indian plum, hazelnut, and other appropriate natives. Oak-associated species have been observed including sweet trilliums, camas, white breasted nuthatches, and western gray squirrels, all noteworthy oak obligate species. OLWC is requesting funding to complete this restoration work on Tracts B and C using the approach used on Tract A. We will also develop an education program through signage, web based information and school curriculum that helps community members understand the importance of oak woodland habitat with emphasis of future stewardship of the oaks. The educational materials will include an emphasis on how this land and the associated oaks were used by the original inhabitants. Indigenous residents actively maintained these areas to promote healthy Oregon White Oak populations. Monitoring protocols will also be implemented by volunteer citizen science volunteers to support continued conservation efforts.

Primary Contact Person *

Jack Halsey

Primary Contact Email Address *

jack@oswegowatershed.org

Primary Contact Phone number *

503-754-8770

Lead Organization *

Oswego Lake Watershed Council

Mailing address *

PO Box 1015
Lake Oswego, OR 97034

Lead Organization Federal Tax ID *

27-5081779

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Lake Oswego

Project Location (County) *

Clackamas

Project Start Date

MM DD YYYY

03 / 01 / 2022

Project End Date

MM DD YYYY

06 / 30 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

45955

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Oswego Lake Watershed Council (OLWC) is seeking funding to support restoration and interpretation for habitat enhancement of an uncommon ecosystem of oak woodland on private property within the city limits of Lake Oswego. Westlake Home Owners Association (HOA) contains 200+ homes surrounded by 21.4 acres of Oregon white oak woodland habitat. This acreage is divided into three 'Tracts' A (17 acres), B (2.7 acres), and C (1.7 acre). (A map of the area can be found at <https://www.westlakehomeowners.org/files/WLHO-map-27.jpeg>).

Fewer than 5% of oak ecosystems from the 1800's remain in the Willamette Valley. from the 1800's. According to Metro's GIS layer of high value habitat, Westlake HOA ranks as one of the high value ecosystems in the region. OLWC feels this area presents a worthy opportunity for oak woodland preservation. In addition, the ground forbe layer consists of 1,000's of camas and sessile trillium, another two uncommon plant species directly associated with oak woodlands. Other oak-associated species have been observed including white breasted nuthatches, and western gray squirrels, a noteworthy oak obligate species. The mature white oak canopy's current condition is stressed as illustrated by the shape of the crowns resembling q-tips and is lacking in epicormic branching, a typical growth pattern of oaks, which leads to a lack of acorn production. Since 2019, OLWC has worked with the Westlake HOA to restore Tract A of their common property. Invasive species such as hawthorn trees, ivy, blackberry, and other invasive species have been removed. There has also been oak release involving girdling, removing, and pruning of Douglas fir, Oregon ash, big leaf maple, and invasive cherry to open up growing space for the associated oaks.

We are requesting funding to continue this work on Tracts B and C by removing invasive plants (predominantly ivy and blackberry) and competing trees from the 4.4 acres. Invasive plants will be removed by hand by a combination of Wisdom of the Elders work crews and volunteer work parties. The oak release protocol developed in our work on Tract A, will be implemented to remove trees (mainly ash, big leaf maple, cherry, and Douglas fir) that compete with oak development. These trees will be removed by incorporating a natural ecosystem approach utilizing a combination of tree removal, girdling, and selective pruning. A number of snags will be left for habitat for cavity dwelling species and trees that are felled will be chipped and logs bucked to reduce the risk of wildfire in the Westlake housing development. The native sub canopy will be replanted to develop a healthy understory of cascara, vine maple, Indian plum, hazelnut, and other appropriate native plant species. Native grasses will be reintroduced through seeding.

Equally important to the on the ground restoration work is community education on the importance of preserving Oregon White Oak habitat. Understanding and appreciating this unique ecosystem and the associated obligate species is crucial if these areas are to be protected in the future. Education about these oaks needs to include the voice of indigenous populations sharing the importance of these habitats to the original habitants of this area. Indigenous peoples utilized acorns as food, oak wood in the production of bowls and digging sticks. Sharing their stories is an important part of acknowledging the first people to live in this area as giving them an active voice in how the land can be used and protected today. To impart this knowledge two interpretive signs will be designed and installed at the project site where there is active walking. Materials will also be developed and displayed on the City of Lake Oswego and OLWC websites. There will be specific information, aligned with Lake Oswego School District (LOSD) curricula, distributed to LOSD teachers. The information will also be presented to teachers during the November 2022 LOSD district wide professional development event.

The OLWC Education and Outreach specialist will work with community volunteers to establish an active monitoring program for the Westlake Oak Woodland. Using a combination of iNaturalist and the LO Tree Survey volunteers will be trained to record annual acorn production, development of the oak canopy, bird surveys, and wildflowers associated with this habitat. Photo monitoring points will be established and an annual photo monitoring program established. The Westlake HOA will assist in recruiting residents to support these efforts.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal 1- A healthy oak woodland where oak flourish free from canopy competition and obligate plant and animal species habitat is restored and protected. There are maintenance plans in place that will support the oak woodland development in the future.

Objective 1 A - Protocols are developed to protect the oaks and obligate species identified in the woodland.

Objective 1B - The Westlake HOA funds a maintenance budget to fund maintenance work in the future. Care for the oak wetlands will become part of the culture of the HOA organization.

Goal 2 - The importance of oak woodland habitats is shared with the community through interpretive signage and education programs and materials with emphasis on the importance of oak habitat to indigenous population and continued protection of oak woodland habitat. City residents use this knowledge to actively protect oak woodlands on both public and private land.

Objective 2 A - Messaging to educate the community is developed to share the importance of the unique ecosystem with the community including Westlake residents, walkers that visit the area, school children and residents of the greater community.

Objective 2 B - OLWC works with local tribes to support sharing the importance and care of oak woodland from the perspective of the area's original habitants.

Objective 3 B - The Lake Oswego School District incorporates understanding of the importance of oak woodlands into their education programs.

Goal 3 - The condition of the Westlake oak woodland is monitored to demonstrate the success of the project and support continued stewardship of the area.

Objective 3A- OLWC recruits, trains and supports volunteers citizen scientists to effectively execute the monitoring protocols.

Objective 3B - OLWC shares monitoring results with the community annually.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Goal 1: A healthy oak woodland where oak flourish free from canopy competition and obligate plant and animal species habitat is restored and protected.

Measurables:

- a. Competing trees and invasive plants are removed from the site.
- a. Oaks are photo monitored annually. for a minimum of 20 years, to document crown development.
- b. Annual nesting survey of bird species within the protected area.
- c. Photo monitoring of understory and ground forbes annually.
- d. Documentation of acorn production annually.

Goal 2: The importance of oak woodland habitats is shared with the community through interpretive signage and education programs with emphasis on the importance of oak habitat to indigenous populations.

Measurables:

- a. Members of the Native American community are engaged in sharing their knowledge of the traditional use and protection of oaks by indigenous populations.
- b. Citizen scientists are engaged in monitoring the oak woodland.

Interpretive signage is installed to explain the importance and characteristics of the oak woodland to those walking in the area.

- c. Educational materials are developed and shared with the community through the OLWC and City of Lake Oswego websites.
- d. Oak habitat updates are incorporated into the annual Lake Oswego Tree Summit sponsored by OLWC.

Goal 3. The condition of the Westlake oak woodland is monitored to demonstrate the success of the project and support continued stewardship of the area.

Measurables:

- a. OLWC develops monitoring protocols including photo monitoring, the LO Tree Survey and iNaturalist.
 - b. Citizen science volunteers are recruited, trained and supported in implementing the monitoring protocols.
-

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The Oregon Conservation Strategy (OCS) states that less than 5% of oak woodland habitat remains in the Willamette Valley. According to Metro's GIS layer of high value habitat, Westlake HOA ranks as one of the high value oak ecosystems in the Portland region. The Oregon Conservation Strategy states " Because much of the remaining oak woodlands are in private ownership and maintenance of these habitats requires active management, cooperative incentive-based approaches are crucial to conservation."

This project is directly aligned with the OCS recommendations for protection of oak woodlands through opening the woodland canopy through selective harvesting of competing tree species, removal of invasive species, and the re-establishment of site-appropriate native grasses, plants and shrubs. This project also supports Pacific Region Bird Habitat Conservation through the protection of nesting sites through improving arboreal nesting, creating snags to provide cavity nesting sites, and improving ground nesting habitat.

A crucially important aspect of this project is the development of long range plans for private ownership maintenance of the habitat. Education is key to developing an understanding of the importance of the oaks under their care. The community needs to value the oak woodland they are stewarding. Once that understanding of their responsibilities are embedded into the organization's culture and the maintenance budget the oak woodland ecosystem will prosper.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

	OCRF	Match	TOTAL
Staffing			
Restoration Project Management (160hrs@\$35/hr)		5,600	5,600
Educational Project Management (320hrs.@\$30/hr)	4,860	4,860	9,720
IRCO Paid Interns		2,600	2,600
Volunteers \$15/hour (300 hrs)		4,500	4,500
Contractors			
Arborist - Tree Removal	5,000		5,000
Tribes Consultant (20 hrs @ \$100/hr)	2,000	2,000	4,000
Wisdom of the Elders - Invasive species removal		2,000	2,000
Materials			
Project Supplies - Plants	1,140		1,140
Interpretive Signage	5,000		5,000
Permits	1,800		1,800
Overhead - 10%	2,000	2,595	4,595
TOTAL	20,000	25,955	45,955

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Westlake Homeowners Association - Funding for Project Management, volunteer recruitment,

Clackamas Soil and Water Conservation District - Funding for half of the Educational Project Management, funding for Wisdom of the Elders Restoration Crews, administrative overhead support to cover telephone, computers, workers comp. and liability insurance.

Immigrant Refugee Community Organization - funding for young adult intern supporting restoration and development of educational materials

City of Lake Oswego - funding for permit fees

Friends of Tryon Creek State Park - Funding to support Native American consultant supporting development of educational materials and messaging for interpretive signage

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Restoration Timeline March 2022 - Invasive plant species removal by volunteers and Wisdom of the Elders Restoration Crews. Planning for tree removal to commence in the Fall April - June 2022- invasive plant species removal July - August 2022 - invasive plant species removal September - December 2022 - Tree removal, girdling and pruning. Complete invasive plant species removal. Distribute grass seed. January - March 2023 - Planting of native herbaceous forbs and shrubs. April - May 2023 - Establish summer watering protocol with surrounding neighbors. June 2022 - Project completion. Write reports. Education and Interpretation March 2022 - Contract with Gabe Sheoships, Friends of Tryon Creek State Park, to facilitate development of Native American narrative on the history and importance of Willamette Valley oak woodland. April - June 2022 - Develop interpretive signage messaging. Develop community education messaging and outreach plans. July - August 2022 - Continue interpretive signage design., Work with Westlake HOA board of directors to include oak woodland information on their website and include an information session in their annual meeting. Work with Lake Oswego School District (LOSD) Sustainability TOSA (Teacher on Special Assignment) to integrate oak woodland curriculum into the district curricula. September - 2022 - Complete interpretive signage design and submit for construction. Organize information to be displayed on the OLWC, Westlake HOA and City of Lake Oswego websites. October 2022 - Present oak woodland updates at the annual Tree Summit sponsored by OLWC. November - December 2022 - Present oak woodland information at the annual LOSD professional development conference and support teachers incorporation into their personal curricula. January - February 2023 - Recruit local newspaper, City of Lake Oswego Newsletter and community partners to share access to oak woodland information on the OLWC website. March 2023 - Present information on oak woodland at the annual meeting of the Westlake HOA. April 2023 - Install oak woodland interpretive signs. May - Survey local residents on effectiveness of oak woodland information. Make adjustments to website material as needed. June 2023 - Project completion. Write reports.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

OLWC Projects <https://www.oswegowatershed.org/current-projects/>

Westlake HOA Site Map <https://www.westlakehomeowners.org/files/WLHO-map-27.jpeg>

Westlake HOA Project Description <https://www.westlakehomeowners.org/files/Westlake-Oaks-Story.pdf>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

From 2015 to 2017, OLWC completed a \$55,815.00 neighborhood stormwater project funded by OWEB and the landowner. Tanglewood tributary is part of a 25-acre park located on the property of Mountain Park Homeowners Association. The site included a highly degraded incised channel due to stormwater runoff from residential land use. A new stormwater management system was designed and constructed in order to create a stable stream profile and lessen the velocity of the water discharged through the existing culvert upstream. This construction created a new wetland stormwater facility, which was planted with riparian native plantings to reduce erosion and stabilize the previously incised channel through the park. Invasive species were removed, including English ivy, Himalayan blackberry, English hawthorn, holly, yellow archangel, and garlic mustard.

Outreach and education activities were key to the success of this project. Cascade Education Corps and the Tigard High School Oregon Youth Conservation Corps supported habitat enhancement work while providing workforce development training and place-based science education. Neighborhood volunteers and students contributed by volunteering their time to remove invasives and install native plants. Project outcomes were shared with stakeholders via community events, web updates, interpretive signage, and site tours. Strong partnerships and community buy-in ensured that project investments led to improved ecological and hydrologic conditions.

Project 2

1500 maximum characters

From 2016 to the summer of 2021, OLWC worked on a habitat restoration project with a streamside landowner on Hallinan Creek. The Gans Street project was funded with two Habitat Enhancement Program grants from the City of Lake Oswego. The site was targeted for restoration due to a steep, incised stream bank with flashy flow and active erosion. Invasive plants threatened native vegetation in the upland and riparian sections of the property.

OLWC staff worked with contractors and volunteers to clear invasives and plant natives. Removal of blackberry thickets, dense ivy, trash, and invasive shrubs along the riparian area allowed space for replanting. Planting and maintaining fast-growing native trees and shrubs in upland and riparian zones has provided improved soil stabilization, water absorption, short term shading, and wildlife habitat. Installation of Douglas fir, Western red cedar, and Oregon white oak throughout the site further supports long-term shade for the creek.

Partnerships with Friend of Hallinan Woods, the City of Lake Oswego, High School Green Teams, and Hallinan Elementary School provided a variety of educational opportunities, volunteer stewardship activities, and monitoring projects. We have also focused efforts on improving neighboring properties along the creek. . We recently began a new 3-year restoration project on the property directly downstream to further expand our impact.

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OCRF 2021 Budget					
		OCRF	Match	Total	
Staffing					
	Restroration Project Management (160hrs@\$35/hour)		5,600	5,600	WHOA
	Educational Project Management (320hrs.@\$30 hour)	4,860	4,860	9,720	CSWCD
	IRCO Paid Interns		2,600	2,600	IRCO
Volunteers \$15/hour			4,500	4,500	
Contractors				0	
	Arborist - Tree Removal	5,000		5,000	
	Tribes Consultant (20 hrs @ \$100/hr)	2,000	2,000	4,000	FOTCSP
	Wisdom of the Elders - Invasive species removal		2,000	2,000	CSWCD
Materials				0	
	Project Supplies - Plants	1,140		1,140	
	Interpretive Signage	5,000		5,000	
Permits			1,800	1,800	City of LO
Overhead - 10%		2,000	2,595	4,595	CSWCD
TOTAL		20,000	25,955	45,955	

OCRF Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRF/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

katiev@nclctrust.org

Project Information

Project Title *

Recreational management plan for the Rainforest Reserve and Arch Cape Forest

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The North Coast Land Conservancy (NCLC) and our partners request funding support for creating a Recreational Management plan for Oregon's newest conservation area. The defining mountain range of the North Coast, slashing northeasterly to southwesterly from Saddle Mountain to Neahkahnie Mountain, is a relic of an ancient volcanic event. These peaks—'islands in the sky'—were once isolated by an oceanic moat. That isolation gave rise to a unique landscape of incredible diversity in ecology and geology. An effort underway for more than a decade to conserve this area through two acquisition projects is nearly complete, The Arch Cape Forest and the Rainforest Reserve. NCLC and Arch Cape Water and Sanitary District (ACWSD) have worked closely to secure these properties. The combined area is 5000 acres adjacent to both Oswald West State Park and Cape Falcon Marine Reserve. As future landowners, we will collaborate on protection of these natural resources and management of recreation. Our team has secured technical assistance support from National Parks Services Recreational Trails and Conservation Assistance (RTCA) program, and seeks additional support from OCRf in order to create a Recreational Management Plan for our project area. Funds from OCRf will support the staff time needed for NCLC to engage deeply in a public process over the next 12 months to support our team as we make decisions about:

- recreation opportunities that will be provided or encouraged in the project area; what and where.
- management of the project area's current and future recreation resources and activities
- integration of recreational use with environmental and cultural values and other land uses such as water protection and forestry operations.

Primary Contact Person *

Katie Voelke

Primary Contact Email Address *

katiev@nclctrust.org

Primary Contact Phone number *

5034405648

Lead Organization *

North Coast Land Conservancy

Mailing address *

PO Box 67 Seaside Or 97138

Lead Organization Federal Tax ID *

93-0957815

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Arch Cape

Project Location (County) *

Clatsop

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

12 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

16000

Total Project Cost *

64000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

NCLC recently purchased the Rainforest Reserve for its conservation, cultural, and recreational values, and is ready to create the recreational plan through a public and expert led process with our neighbors at Arch Cape Forest.

This combine 5000 acre area features an unusually compressed, biogeographically concentrated coastal-fronting forested watershed. Mountains with rocky peaks featuring globally rare plant species rise sharply from the sea and streams cascade directly into the ocean through diverse forests.

The direct land-sea interface of the coastal-fronting watersheds within the Rainforest Reserve results in a landscape that is home to a rare mix of plants and animals. Steep forested slopes and rock outcrops featuring globally rare plant communities characterize the property. The Nature Conservancy and Oregon State Land Board first identified this landscape as exceptional and in need of conservation in the 1970s when surveys revealed "one of Oregon's outstanding rare plant assemblages" and a rare coastal population of silver fir clinging to the rocky soils and near-vertical rock faces surrounding Onion Peak.

Preservation of the 3,500 acres advances several conservation principles, namely improving connectivity, protecting a large intact area, complementing existing ecological networks and protecting a site with exceptional biodiversity values. This acquisition linked the 2,500 acre Oswald West State Park, the proposed 1,500 acre Arch Cape Community Forest and the Cape Falcon Marine Reserve. The entire expanse will form a 32-square-mile protected area from the nearshore ocean to the tips of the coast range.

Connectivity on this scale is unprecedented on the Oregon coast. When linked together, Oswald West State Park, the Rainforest Reserve, and the proposed Arch Cape Community Forest will create a 7,500-acre protected area dwarfing the largest state parks along the Oregon coast, and rivaling the largest state parks in Oregon: Cottonwood Canyon near John Day (7,735 acres) and Silver Falls near Salem (9,057 acres). Opportunities for protection and connection of such large areas are extremely rare on the coast, where land values are high and forest ownership is dominated by industrial timber farms.

The Nature Conservancy and Oregon State Land Board first identified this landscape as exceptional and in need of conservation in the 1970s when surveys revealed "one of Oregon's outstanding rare plant assemblages" and a rare coastal population of silver fir clinging to the rocky soils and near-vertical rock faces surrounding Onion Peak. The rocky outcroppings of Onion Peak and nearby Angora Peak were once the submarine canyon of the Columbia River; they rose out of the Pacific Ocean tens of millions of years ago in isolation, undergoing island evolution and speciation. Because of this, these peaks are home to several endemic plant species, which persist in isolation on these rare rocky outcroppings. Four plant species are federal species of concern: Saddle Mountain bittercress, queen of the forest, Saddle Mountain saxifrage, and Chambers paintbrush. An additional 26 plant species on this property are either endemic to the rocky balds of the northern Coast Range or are living at the extreme edge of their range, making these plant communities unique.

Accompanying these rare plant assemblages are important and uncommon aquatic and terrestrial species ranging from invertebrates to large mammals. The streams and seeps of the Rainforest Reserve provide habitat for the federally threatened Oregon coast coho and cutthroat trout, species ranked by the Oregon Conservation Strategy as having the greatest conservation need; the Columbia torrent salamander and Cope's salamander, which are species considered vulnerable to and at high risk of extinction, respectively, by the Oregon Biodiversity Information Center; and the black petaltail dragonfly, whose only known breeding site in the Coast Range is on this property. Close to 90 bird species use the Rainforest Reserve as habitat,

including state species of concern and OWEB priority species willow flycatcher, Rufous hummingbird, band-tailed pigeon, and peregrine falcon. Large mammals including American black bear, coyote, mountain lion, elk, bobcat, and black tailed deer are known to inhabit the property.

The lower reaches of Arch Cape Creek provide spawning habitat for the federally threatened Oregon coast coho as well as winter steelhead Fall Chinook and cutthroat trout, a species ranked by the Oregon Conservation Strategy as having the greatest conservation need, also utilize Arch Cape Creek, with resident cutthroat populations existing higher in the watershed. These salmonid species all require streams with clean gravel, complex habitat, and cool temperatures, variables that are greatly enhanced by mature riparian vegetation and upland forest, which permanent protection of the Rainforest Reserve will provide.

Amphibian surveys have documented the presence of two priority amphibian species, Columbia torrent salamander and northern red-legged frog, in the Rainforest Reserve. The Columbia torrent salamander, in particular, requires clear running streams with gravel substrates and low siltation for reproduction, suggesting that the Arch Cape Creek watershed and others within the Rainforest Reserve are quality habitat, if sedimentation can continue to be mitigated by permanently protecting it from further logging activities. Based on documented occurrences in rocky headwater streams around Saddle and Nicolai Mountains, the coastal tailed frog, a State priority species, and Cope's giant salamander, an ORBIC-ranked S2 sensitive species, also reside in the Rainforest Reserve.

Protection of the Rainforest Reserve will preserve the diverse array of habitats, including maturing temperate rainforest, high elevation silver fir forests, subalpine meadows, riparian corridors, and rocky balds supporting a unique and diverse assemblage of species now and into the future, and will provide joy and wonder to all the generations of Oregonians who will cherish walking among its beauty.

Conservation in the Rainforest Reserve reaches many of Oregon's conservation strategy priorities. It also poses an opportunity and a need to plan for appropriate public access and recreation.

Our team is seeking support from OCRIF to create a Recreational Management Plan for our project area, and support for our team as we make decisions about

- recreation opportunities that will be provided or encouraged in the project area; what and where.
- management of the project area's current and future recreation resources and activities
- integration of recreational use with environmental and cultural values and other land uses such as water protection and forestry operations.

The end result of this specific planning project will be a recreation management plan that advises the project team members and the public at large. This plan will also support the broader outcomes articulated below:

- Local residents, agencies, and neighbors have the opportunity to provide comment on plans.
- Recreational use, demands, and opportunities in project area are well understood by partners, neighbors and public.
- Land uses and values in project area are well understood and considered in decisions about recreational uses.
- Management strategies support the needs of the forest landowners
- Infrastructure needs to support recreational activities are understood.

The partners in the project desire the plan to account for competing land uses, ecological and cultural effects, and safety concerns by addressing the following:

- Ensuring fair access to recreation opportunities
- Protecting the sensitive geological, ecological and water resources

- Addressing unauthorized use
- Preventing interference with indigenous cultural practices
- Ensuring sufficient recreation infrastructure
- Ensuring sufficient recreation management and regulation/enforcement capacity of landowners

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal for the plan:

Project partners desire this recreational management plan to result in our ability to provide a seamless recreation experience for people across multiple ownerships while maintaining the conservation attributes of the land and waters through strategically planned access, education, information, and outreach.

Objectives of planning process:

- Expert and public engagement in decision making about what types of recreation opportunities are desired and where, as well as where/what should be avoided.
Types or recreation a under consideration include but are not limited to hiking, mountain biking, e bikes, horses, dogs, rifle and bow hunting, and fishing.
- Expert and public engagement in strategies and actions to address area-wide issues such as signage, permits, waste management, public education, public communication, and parking.
- Expert and public engagement in strategies and actions to address management, enforcement, and regulation of use, particularly around shared access points and borders.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The major outcome will be a combined recreational management plan created for the total 5000 acres by year's end 2022.

Initial phases will begin implementation throughout 2022 such as interim signage, permitting, mapping, and educational tours.

It is anticipated that trails mapping will occur in 2022 and new trail creation (if recommended) will begin in 2023. Permeant signage and messaging will be implemented in 2023.

Success in the planning process will mean that multiple demographics and interest groups feel heard and recognized in the plan, and that users indeed have a seamless recreational experience across multiple ownerships. Long term success will be measured anecdotally by user feedback, and specifically by the positive or negative effects to the property stemming from public access on the land.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

The property will provide world-class recreational experiences with ocean vistas and rocky peaks, stunning vistas, rare flora and fauna, and deer and elk hunting.

Conservation here protects many State and federal species and habitats of concern. Four plant species are federal species of concern: Saddle Mountain bittercress, queen of the forest, Saddle Mountain saxifrage, and Chambers paintbrush. 26 plant species are either endemic or are living at the extreme edge of their range. The streams and seeps provide source drinking water as well as habitat for the federally threatened Oregon coast coho and cutthroat trout, species ranked by the OR Conservation Strategy as having the greatest conservation need; the Columbia torrent salamander and Cope’s salamander, which are species considered vulnerable to and at high risk of extinction, respectively, by OBIC. 90+ bird species use the Rainforest Reserve as habitat, including state species of concern willow flycatcher, Rufous hummingbird, band-tailed pigeon, and peregrine falcon. Large mammals including black bear, coyote, mountain lion, elk, bobcat, and black tailed deer inhabit the property.

North Coast Land Conservancy hopes that by allowing the public to access this stunning wilderness, generations of Oregonians will be inspired to support conservation and be good stewards of Oregon’s natural resources.

For projects that address a conservation priority, what are the primary taxa that will affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

This request for funds in the amount of \$16,000 will support NCLC staff working an average of 20 hours per month for the duration of the project .
.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The Rainforest Reserve enjoys broad support from the community. Public open houses hosted by NCLC to explore future management of the Rainforest Reserve have revealed enthusiastic support for the project from the public in communities from Astoria to Nehalem. The following organizations and individuals will lend their support and/or expertise in outreach, forest management, due diligence, source water protection, management plan creation, and recreation management.

- Oregon Parks and Recreation Department
- City of Cannon Beach
- Ecola Creek Awareness Project
- Ecola Creek Watershed Council
- Haystack Rock Awareness Program
- Friends of the Cape Falcon Marine Reserve
- Greater Ecola Natural Area
- U.S. National Park Service
- Oregon Department of Fish and Wildlife
- Greenwood Resources
- Clatsop-Nehalem Tribe
- EcoTrust Forest Management
- Filipendula Chapter of the Native Plant Society of Oregon
- U.S. Fish and Wildlife Service
- Clatsop County Commissioners
- Congresswoman Suzanne Bonamici
- Lower Nehalem Watershed Council
- North Coast Watershed Association
- Necanicum Watershed Council
- Arch Cape Water and Sanitary District
- Oregon Department of Environmental Quality
- Sustainable Northwest

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Small planning team began summer 2021. Beginning in February 2022, planning team will invite public participation with each major recreation topic, and will illicit participation in multiple ways. Team will take all feedback into consideration and create draft recreation plan by summer 2023. After public feedback to the draft, final plan will be completed by years end 2022.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

<https://nclctrust.org/creating-a-rainforest-reserve/>, <https://www.archcapeforest.org/>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

North Coast Land Conservancy recently completed an \$11.8mil capital campaign to purchase and conserve the Rainforest Reserve, a 3,500 acre habitat reserve

Project 2

1500 maximum characters

North Coast Land Conservancy removed a 2 mile levee along the Necanicum river and restored hydrology and function to 300+ acres of floodplain habitat while also solving a decades long chronic flooding problem on HWY 101 in Seaside.

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Google Forms

OCRf Project Proposal Form

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Email *

rika@deschuteslandtrust.org

Project Information

Project Title *

Diverse Stakeholder Engagement for Skyline Forest

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Deschutes Land Trust has been working for years to conserve a 33,000 acre block of land near Bend and Sisters, Oregon called Skyline Forest. Surrounded by state and federal lands, Skyline Forest contains important wildlife corridors and habitat, provides tremendous recreation opportunities, is a critical wildfire safety buffer for local communities, and protects the scenic green foothills that set off the Central Oregon Cascades. This area is currently on the market for \$127 million and being advertised as a prime location for a destination resort or cluster development. The current price prevents immediate acquisition of the property for conservation. Deschutes Land Trust is seeking to lead a Stakeholder Engagement process beginning in 2022 to develop a new community vision for Skyline Forest. Our goal will be a robust, community-wide effort that engages local organizations, leaders and community members around creating a shared vision for Skyline's future conservation and management. Once completed this vision will serve as an essential tool as we continue down the path toward acquisition and permanent conservation of Skyline Forest. We are asking for support from OCRF to help us realize our commitment to Diverse Stakeholder Engagement. If funded, we will work with a DEI professional to host special engagement sessions focused on how we can approach conservation in Skyline Forest using an equity lens. Our goal will be to adopt a set of DEI principles that will underly and inform all future management decisions in Skyline Forest. We want to ask the questions: What does an equitable outdoor experience look like? How can we avoid the pitfalls of the past in recreation and conservation? We have a blank slate, what do we want to create? Using these as our guiding questions, we believe that Skyline Forest can serve as a model and a catalyst to apply this thinking to all our managed lands.

Primary Contact Person *

Rika Ayotte

Primary Contact Email Address *

rika@deschuteslandtrust.org

Primary Contact Phone number *

5413011844

Lead Organization *

Deschutes Land Trust

Mailing address *

210 Irving Avenue, Suite 102 Bend, OR 97703

Lead Organization Federal Tax ID *

93-1186407

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Bend

Project Location (County) *

OR

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

06 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

8000

Total Project Cost *

60000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Deschutes Land Trust has been working for years to conserve a massive block of land near Bend and Sisters, Oregon called Skyline Forest. This 33,000 acre tree farm has historically been known as the Bull Springs Tree Farm, and is one of several commercial timberlands in central Oregon at risk of conversion to residential development. Surrounded by state and federal lands, Skyline Forest contains important wildlife corridors and habitat for mule deer and other species, provides tremendous recreation opportunities including hiking, trail running, camping, cycling, mushroom foraging and wildlife viewing, is a critical wildfire safety buffer for local communities, and protects the scenic green foothills that set off the Central Oregon Cascades.

Over the years, residents, businesses, and elected officials have strongly and consistently supported the protection of Skyline. Recent fires only underscore the risk of putting homes in Skyline Forest. If protected, Skyline Forest would support sustainable production of forest products, jobs, wildlife, scenic views, and recreation. This area is currently on the market for \$127 million and being advertised as a prime location for a destination resort or cluster development. The current price prevents immediate acquisition of the property for conservation.

However, with Central Oregon's real estate market booming and impacts of climate change driven fire and drought mounting, we recognize that we must take action now to ensure that Skyline Forest continues to offer refuge and access for wildlife and the Central Oregon Community.

In this vein, Deschutes Land Trust will lead a Stakeholder Engagement process beginning in 2022 to develop a new community vision for Skyline Forest. Our goal will be a robust, community-wide effort that engages local organizations, leaders and community members around creating a shared vision for Skyline's future conservation and management. Within this effort we are committed to creating a process that is welcoming and inclusive and we are focused on ensure that voices from marginalized communities are represented and centered in our process.

Once completed this vision will serve as an essential tool as we continue down the path toward acquisition and permanent conservation of Skyline Forest.

Our Stakeholder Engagement Process will comprise the following strategies:

1. **Facilitated Stakeholder Dialogues:** We will work with a professional facilitator to host a series of working sessions attended by stakeholders including recreationists, local non-profit and conservation groups, tribal members, land managers, county/city/state government officials, neighbors, fire managers and others. These sessions will be designed to identify and map current community priorities on Skyline Forest and also to solicit input for a vision for future management.
2. **Skyline Open House Tours:** These events will invite stakeholders, community members and leaders to guided tours on Skyline Forest as a means to familiarize them with the current and future value of Skyline to the Central Oregon Community.
3. **Community Input Survey:** This survey tool will be used to measure community support for conservation of Skyline Forest. In addition, the survey will allow for broader community commentary on future management and use.
4. **Diverse Stakeholder Engagement:** We will work with a DEI professional to host separate engagement sessions focused on how we can approach conservation in Skyline Forest using an equity lens. Rather than soliciting specific input on future uses and management of Skyline Forest, which will be accomplished via the stakeholder dialogue, this session will focus on the development of broad strategies for equity and inclusion that will serve as a tool to inform all future decisions. Our objective will be to adopt a set of DEI principles that will underly and inform all future management decisions in Skyline Forest. It is our hope that

these same principles can later be applied broadly to all current and future Land Trust properties. We have been able to secure some funding and anticipate additional funds for strategies 1-3. We are asking for support from the Oregon Conservation and Recreation Fund to help us achieve strategy number 4.

We believe that Deschutes Land Trust is well positioned to pursue a Diverse Stakeholder Engagement Strategy. Over the past 3 years, the Land Trust has worked both internally and externally to build our DEI capacity, strengthen our community partnerships and prioritize Diversity, Equity and Inclusion across our organization. In doing so, we have realized several accomplishments and milestones:

1. Adopting public statements and practices to communicate our commitment to DEI (Equity statement, Statement on Racism, Land Acknowledgements in all programs and communications)
2. Establishing an Equity Council within our organization focused on organizational policy development, messaging, staff professional developments and workplace culture.
3. Strengthening our relationships and understanding of tribal communities through land visits, learning sessions and participation in the Land Justice Project through the coalition of Oregon Land Trusts.
4. Listening Sessions with Latinx communities in Prineville and Madras.
5. Preserve Inclusivity Assessments of Land Trust properties conducted by Latinx Community Members paid for their time with future assessments planned in partnership with People with Disabilities and LGBTQIA+ community members.

Our Diverse Stakeholder Engagement process would represent a new approach for us. Our previous approaches focused on gathering baseline information from underserved communities about their perception of the Land Trust and of current levels of engagement with outdoor recreation and conservation. We have also focused on soliciting information specific to Land Trust preserves and how to make them more inclusive. For this project, we would like to work with diverse stakeholders to develop principles related to Equity and Inclusion using Skyline Forest as a backdrop. We want to ask the question: What does an equitable outdoor experience look like? How can we avoid the pitfalls of the past in recreation and conservation? We have a blank slate, what do we want to create? Using these as our guiding questions, we believe that Skyline Forest can serve as a model and a catalyst to apply this thinking to all of our managed lands.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal: A robust, community-wide effort that engages local organizations, leaders and community members around creating a shared vision for Skyline's future conservation and management.

Strategy 1. Facilitated Stakeholder Dialogues: We will work with a professional facilitator to host a series of working sessions attended by stakeholders including recreationists, local non-profit and conservation groups, tribal members, land managers, county/city/state government officials, neighbors, fire managers and others.

OBJECTIVE: Identify and map current community priorities on Skyline Forest and also to solicit input for a vision for future management.

Strategy 2. Skyline Open House Tours: These events will invite stakeholders, community members and leaders to guided tours on Skyline Forest

OBJECTIVE: familiarize community with the current and future value of Skyline to the Central Oregon Community.

Strategy 3. Community Input Survey: We are hoping to utilize a community survey to both raise community awareness about Skyline Forest as well as to allow for broader community commentary on future management and use.

OBJECTIVE: conduct a statistically valid survey to track awareness, perceptions, and priorities of Bend & Sisters residents regarding Skyline Forest.

Strategy 4. Diverse Stakeholder Engagement: We will work with a DEI professional to host separate engagement sessions focused on how we can approach conservation in Skyline Forest using an equity lens. Rather than soliciting specific input on future uses and management of Skyline Forest, which will be accomplished via the stakeholder dialogue, this session will focus on the development of broad strategies for equity and inclusion that will serve as a tool to inform all future decisions.

OBJECTIVE: Adopt a set of DEI principles that will underly and inform all future management decisions in Skyline Forest. It is our hope that these same principles can later be applied broadly to all current and future Land Trust properties.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

Outcomes and Measuring Success For Diverse Stakeholder Engagement:

Outcome 1: Retaining services of DEI consultant to engagement process

Measurement: Scope of work developed, Consulting proposals solicited, contracted deliverables completed and products created through process are received.

Outcome 2: Significant participation from people with marginalized identities

Measurement: At least one participant from Latinx, BIPOC, LGBTQIA+ and differently abled communities participating in each session. Survey tools will measure participant experience and engagement.

Outcome 3: Adoption of DEI principles that will guide and inform all future management decisions in Skyline Forest

Measurement: DEI principles are drafted and approved by diverse stakeholder participants. DEI Principles are shared with larger stakeholder group. DEI principles are shared with Land Trust staff and board.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Our Diverse Stakeholder Engagement process will further the priority development of opportunities to engage and expand the number and diversity of Oregon's outdoor users. We will be engaging people from marginalized identities in conversation about how we can approach our conservation work and learn new ways of working, listening and communicating. By starting with these conversations, we believe that our future management plans will maximize access and benefits for all communities and create authentic connections between people and the lands we manage. This project will also introduce new audiences to the recreation opportunities in Skyline Forest. Through field trips, hikes and snow days, we will provide opportunities for participants to explore Skyline Forest and provide them materials to share within their communities.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

OCRF Funds will be used to hire a DEI consultant to assist with scheduling and facilitation of the Diverse Stakeholder Engagement process. OCRF Funds will also be used for administrative costs and supplies and materials related to engagement sessions, field trips (eg refreshments, meeting materials, etc). OCRF funds will also be used to pay stipends to participants in the Diverse Stakeholder Engagement process.

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Central Oregon Land Watch: Central Oregon Land Watch will be leading the development of the Community Input Survey. They will also act as a stakeholder during Stakeholder Dialogues.

Deschutes Trails Coalition: Will act as a stakeholder and recruit additional stakeholders during Stakeholder Dialogues.

US Forest Service: Will act as a stakeholder during Stakeholder Dialogues.

Vamanos Outside: Will assist with recruitment of Latinx participants for Diverse Stakeholder Engagement.

Oregon Adaptive Sports: Will assist with recruitment of participants with disabilities for Diverse Stakeholder Engagement.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

TIMELINE: December 2021: Community Survey Conducted January 2022: DEI Consultant Scope of Work Completed February 2022: Stakeholder Dialogues and Diverse Stakeholder Engagement Sessions Begin March 2022: Field Trips/Site Visits conducted April 2022: Stakeholder Dialogues and Diverse Stakeholder Engagement Sessions Continue May 2022: Final Stakeholder Dialogues and Diverse Stakeholder Engagement Sessions June/July 2022: Final community vision and DEI principles documents for Skyline Forest complete.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The Land Trust and Western Monarch Advocates joined forces in 2021 to boost habitat for the imperiled Western monarch butterfly in Oregon. The Land Trust kicked off the project in Central Oregon in September by partnering with a variety of community groups to plant milkweed. Highlights include:

Bend: partnered with Bend Pollinator Pathway to plant more milkweed in new pollinator gardens they are growing in the city. We also partnered with Vámonos Outside to distribute milkweed to students and families in the Juntos Aprendemos program and the Silver Rails Elementary English Language Development program. The Environmental Center also helped distribute some via their Garden Educator Network.

La Pine: we partnered with South County Gardening to give milkweed to local gardeners and plant in the Victory Garden in La Pine.

Prineville: we partnered with Crook County schools to provide plants for new pollinator gardens at Steins Pillar Elementary, Crooked River Elementary, and Crook County High School. We also partnered with Mosaic Medical to distribute milkweed to senior citizens who love gardening.

Warm Springs: we are partnering with Warm Springs Community Action Team to distribute milkweed in the Warm Springs community.

Together we planted more than 1,500 new native plants in our communities.

Project 2

1500 maximum characters

The Land Trust and our restoration partners began the first phase of a six-mile restoration of Central Oregon's Whychus Creek in 2016. The first phase focused on approximately 1.5 miles of Whychus Creek in the northernmost part of Whychus Canyon Preserve.

The second phase began in 2021 and focused on the southernmost portion of the creek that runs through Rimrock Ranch. Much of the work was similar to the 2016 restoration project at Whychus Canyon Preserve. Video here: <https://www.deschuteslandtrust.org/protected-lands/whychus-canyon-preserve/wc-creek-restoration>

The Land Trust has partnered with the Upper Deschutes Watershed Council and the Deschutes National Forest on this restoration project. Additionally, a project advisory committee has provided design review and specific scientific expertise where needed. Members of this group include representatives from Oregon Department of Fish & Wildlife, U.S. Fish & Wildlife Service, U.S. Forest Service, Confederated Tribes of Warm Springs Reservation, Portland General Electric, and Bureau of Land Management.



OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

john.deluca@usda.gov

Project Information

Project Title *

Restoring Fire to Remote, At-Risk, and Fire-Dependent Landscapes of Strategy Habitats and Strategy Species on the Sisters Ranger District

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The Sisters Ranger District of the Deschutes National Forest aims to increase the pace, scale, innovation and growth based on adaptive management (as in , of its prescribed fire program, with a primary focus on restoration of Strategy Habitats, including ponderosa pine woodlands, aspen woodlands, late successional mixed conifer forests, and grasslands. Acquisition of a portable Remote Automated Weather Station (RAWS), and OCRf funding would help the district achieve this goal that will only become increasingly important as the climate continues to warm and dry on the public lands of central Oregon.

Primary Contact Person *

John DeLuca

Primary Contact Email Address *

john.deluca@usda.gov

Primary Contact Phone number *

(541) 255-5271

Lead Organization *

Sisters Ranger Station, Deschutes National Forest, US Forest Service

Mailing address *

PO Box 249, Sisters, OR 97759

Lead Organization Federal Tax ID *

N/A; Federal Government

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Sisters, Oregon

Project Location (County) *

Sisters Ranger District, especially all landscapes outside of the southern pine area around the town of Sisters.

Project Start Date

MM DD YYYY

03 / 01 / 2021

Project End Date

MM DD YYYY

12 / 31 / 2070

Funding Amount Requested *

The maximum request is \$20,000.

19728.85

Total Project Cost *

19728.85

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

This proposal would pay for the acquisition of a portable Remote Automated Weather Station (RAWS). The OCRF would help the Sisters Ranger District expand on its legacy of restoring prescribed fire to treasured landscape, where high levels of species richness, densities of restricted-range species, and exemplary and far-reaching relicts of legacy Strategy Habitats abound. It would help the Sisters Ranger District immediately achieve a larger acreage and higher quality of prescribed fire across a wider geographic and in a more biodiverse manner.

Prescribed fire managers use RAWS to monitor vegetation (fuels) characteristics and assess opportunities to responsibly reintroduce fire to Strategy Habitats. RAWS record information such as temperature, relative humidity, precipitation, solar radiation, wind speed/direction, fuel temperature, and fuel moisture. They relay this data in real time to the web and make it available to wildland fire managers and the public.

Strategy Habitats and Species on the Sisters Ranger District remain at an ever-increasing risk of stand-replacing wildfire, a type of fire to which they have not adapted to and evolved at the current trend of rising extent and severity. More prescribed fire – when conditions of fire weather and fuels align to produce ideal results on the ground – would help.

Many landscapes of the Sisters Ranger District lie outside the range of data collection for the Colgate RAWS station in the ponderosa pine woodlands around the town of Sisters and to the south. It requires much time and distance to access the many, secluded, and rugged watersheds of the Sisters Ranger District. Examples include the Green Ridge, the treasured and famed Wildernesses and foothills from Jefferson to Broken Top, much of the Metolius, and the large stretches of mule deer winter range to the south, southwest, and northeast of Garrison Butte.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

RAWS allows prescribed fire specialists to discover narrow but suitable windows of opportunity with just the right weather conditions to apply fire to the landscape. By learning when these "goldilocks" conditions occur in real time, the district will accelerate the pace and scale of Strategy Habitat restoration and protection, especially in remote portions of the district such as the Green Ridge landscape. More prescribed fire will result in increased restoration of Strategy Habitats such as ponderosa pine woodlands, aspen woodlands, and grasslands. Restoring fire to these Strategy Habitats will also indirectly benefit adjacent late successional mixed conifer forests (another Strategy Habitat) by creating landscape-scale treatments that allow fire managers to contain stand-replacing wildfires.

Strategy species to benefit include: mammals (American pika, American marten, Sierra Nevada red fox, hoary bat, fringed myotis, pallid bat, spotted bat, Townsend's big-eared bat); amphibians (Cascades frog, Rocky Mountain tailed frog, western toad); and birds (northern spotted owl, great gray owl, flammulated owl, northern goshawk, mountain quail, Lewis's woodpecker, white-headed woodpecker, pileated woodpecker, western bluebird, white-breasted nuthatch, chipping sparrow, olive-sided flycatcher, willow flycatcher, yellow-breasted chat).

Other than improving conditions for Strategy Habitats and Strategy Species, other benefits include enhancement of hunting opportunities (by improving game habitat) and protection of domestic water supplies and recreational trail systems.

This project also incorporates conservation education. The Deschutes National Forest actively collaborates with the non-profit Discover Your Forest and plans to use RAWS information to produce a fire weather education component available to local area schools, including schools of the Confederated Tribes of Warm Springs. This will provide students with applied knowledge on fire ecology. For example, it will help students understand the relationship between fire weather and fire effects on Strategy Habitats and Strategy Species.

Signage will also be installed to explain the use of OCRF-funded RAWS - including the implementation of real-world examples of adaptive management monitoring and predictive services and the outcomes for water quality and quantity, Strategy Habitats and Strategy Species, and other natural and cultural values.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

In FY2022, 2392 acres are planned without a RAWS. Approximately 10%-30% more planned - at a higher level of conformance with well-known and typical quantitative metrics of "Burn Plans" (e.g., canopy cover, % consumption of down logs and snags, creation of snags and down logs, consumption of different types and size classes of vegetation) and qualitative assessment of measures of excellence in a framework that welcomes partnerships - with a RAWS.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

More prescribed fire will result increase restoration of Strategy Habitats such as ponderosa pine woodlands, aspen woodlands, and grasslands. Restoring fire to these Strategy Habitats will also indirectly benefit adjacent late successional mixed conifer forests (another Strategy Habitat) by creating landscape-scale treatments that allow fire managers to contain stand-replacing wildfires.

Strategy species to benefit include: mammals (American pika, American marten, Sierra Nevada red fox, hoary bat, fringed myotis, pallid bat, spotted bat, Townsend's big-eared bat); amphibians (Cascades frog, Rocky Mountain tailed frog, western toad); and birds (northern spotted owl, great gray owl, flammulated owl, northern goshawk, mountain quail, Lewis's woodpecker, white-headed woodpecker, pileated woodpecker, western bluebird, white-breasted nuthatch, chipping sparrow, olive-sided flycatcher, willow flycatcher, yellow-breasted chat).

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

The proposal would fund the acquisition of materials for a Quick Deploy RAWS:

\$17,815 for

- King radio
- F6 Datalogger w/G6 & RVT2 QD Version
- Voice Transmitter QD Internal Conn Customer King R
- Quick Deploy Enclosure with Tripod Legs
- Quick Deploy Power Supply Solar Panel Batteries
- Wind Speed & Direction Sensor QD Mount Cable
- Quick Deploy Mast Height Extender 30"
- Temp Humidity Sensor Solar Shield QD Mount 6ft
- Rain Gauge QD Mount 20 ft Armoured Cable
- Fuelstick Moisture Sensor 12 ft Armoured Cable
- Fuel Stick Mount Quick Deploy Station
- Solar Radiation Sensor QD Mount and Cable
- Quick Deploy Station Shipping Cases (2)
- Cable AC Adapter to Solar Panel Port
- FTS Manual

\$594 for

- Soil moisture probe

\$270 for

- cable and misc. equipment

A estimated breakdown from the equipment vendor is available upon request. The estimate lumps these into three amounts.

\$800 for interpretative signage

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The Confederated Tribes of Warm Springs; ODFW; USFWS; Discover Your Forest; Friends of the Metolius; The Children's Forest; Sisters School District; Black Butte School; Oregon State University (Corvallis and Bend campuses).

Timeline *

Please identify the key milestones towards completing the project and achieving results.

This OCRF proposal, if funded, would help the immediate increase of accomplishments on the Sisters Ranger District, as measured by a larger acreage and higher quality of prescribed fire across a wider geographic and in a more biodiverse landscape. Conservation education with a focus on interpretative signage, school outreach, and other methods would occur in FY22 and beyond..

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Other than improving conditions for Strategy Habitats and Strategy Species, other benefits include enhancement of hunting opportunities (by improving game habitat) and protection of domestic water supplies and recreational trail systems.

Adaptive management, as in the USGS official guidelines for adaptive management, increasingly informs efforts on the Sisters Ranger District, and this RAWS station would contribute to that trend.

The USGS publication is available at:

<https://www.doi.gov/sites/doi.gov/files/migrated/ppa/upload/TechGuide.pdf>

Additional Context: The effects of stand-replacement fire were acutely shown in 2020 during the Green Ridge Wildfire. The fire began with a lightning strike and required 17 days for firefighters to contain, cost 11.2 million dollars, and resulted in 4,338 acres of primarily stand replacement fire on federal and private lands. Frequent application of low-intensity fire to this specific ponderosa-dominated landscape will drastically reduce the likelihood of high-severity fire occurring and spreading through the greater Green Ridge landscape and other landscapes with tens of thousands of acres of Strategy Habitats at risk. RAWS will allow fire managers to fine-tune the implementation of under-burning with weather and fuels conditions that support precise habitat restoration outcomes, help control high-severity fires, and reduce smoke impacts to our local communities.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

From 2008 to 2017, average of 680 acres underburned per year.
In 2018, 1,576 acres were completed (131% increase) and
1,981 acres were completed in 2019 (191% increase).

Project 2

1500 maximum characters

In 2020 only 114 acres were burned to due COVID-19 restrictions.
2021 Spring only (no Fall RX due to COVID) 1090 acres

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OCRf Project Proposal Form

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Email *

margaret.hallerud@oregonstate.edu

Project Information

Project Title *

Coastal Marten Genetics: Creating tools for population level monitoring and addressing information gaps

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Marten are a strategy species in the Oregon Conservation Strategy with important data gaps on population densities, habitat requirements, distribution, general ecology, and connectivity of populations. Humboldt or coastal martens (*Martes caurina humboldtensis*) are a unique subspecies of the Pacific marten found on Oregon and California coasts. Coastal martens were recently designated as federally threatened and persist only in fragmented subpopulations. Much of the information on coastal martens in Oregon comes from ongoing scat detection dog surveys, with information gained from these scats currently limited to species identification and diet due to methodological limitations. We propose to develop a novel genetic tool for reliably and affordably genotyping marten scats to identify individuals and sex. By providing for individual identification of scats, our tool will allow researchers and managers to estimate population density, gene flow, and inbreeding depression using current survey methods. We will apply this new tool to hundreds of banked coastal marten scat samples to estimate population genetics and preliminary landscape genetics, as well as make the tool publicly available for other researchers and managers to access. As additional samples and populations are analyzed, we will be able to gain more information not only on population genetics and connectivity of populations, but also on relationships between habitat and marten density and possibly even survival and fecundity estimates if multi-year samples become available.

Primary Contact Person *

Margaret Hallerud

Primary Contact Email Address *

margaret.hallerud@oregonstate.edu

Primary Contact Phone number *

630-935-1629

Lead Organization *

The Levi Lab at Oregon State University

Mailing address *

Nash Hall 104
2820 SW Campus Way
Corvallis, OR 97331

Lead Organization Federal Tax ID *

61-1730890

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Corvallis, OR

Project Location (County) *

Lincoln, Lane, Douglas, Coos, Curry, Josephine

Project Start Date

MM DD YYYY

02 / 01 / 2021

Project End Date

MM DD YYYY

09 / 15 / 2021

Funding Amount Requested *

The maximum request is \$20,000.

19948

Total Project Cost *

19948

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Understanding the conservation status and population viability of rare forest carnivores such as martens necessarily requires information on population density and genetic health, including inbreeding and gene flow. Humboldt or coastal martens (*Martes caurina humboldtensis*) are a Distinct Population Segment of the Pacific marten and were recently designated as federally threatened (USFWS 2021). They were characterized almost a century ago as “rapidly disappearing” (Grinnell and Dixon 1926) and no verifiable records of coastal martens existed from 1942–1996, when it was assumed that they were extirpated (Zielinski et al. 2001). Since their rediscovery in 1996, four small subpopulations have been identified where coastal marten persist, including the Central Coast Oregon, South Coast Oregon, Oregon/California border, and northern California subpopulations. Existing research suggests that existing subpopulations are small and presumably fragmented (e.g., Linnell et al. 2018), but data on demographic information (e.g., population density, age structure, survival, and fecundity) and connectivity are lacking. Additionally, detections of coastal martens have occurred in areas outside of these subpopulations, but whether these detections represent new subpopulations or individual animals is unknown due to knowledge gaps and limitations in existing survey methods.

Ongoing surveys to map the distribution of coastal martens are employing scat-detection dogs and genetic confirmation of species identity. An additional step of identifying individual animals by genotyping these scats would allow for density estimation using spatial capture-recapture techniques. Unfortunately, current genotyping methods relying on microsatellites have proven ineffective for identifying unique individuals, leaving a bank of hundreds of coastal marten DNA extracts unused. Developing accurate and affordable genotyping methods would unlock the potential of these scats to provide information on population density, as well as habitat selection, population genetics, and information on the connectivity of subpopulations.

Microsatellites are repeating patterns of two, three, or four nucleotides. For example, the sequence “TATATATATA” or “GCAGCAGCAGCA” may repeat a variable number of times within a population, and due to the heritability of DNA from both parents, individuals may possess different alleles, each with a different number of repeats. The distribution of microsatellite lengths can be used to identify unique individuals or population genetics. There are 14 known microsatellites that are used to identify non-invasive samples (e.g., hair, scat) from martens to individual and sex. Amplification of scats has proven problematic in multiple genetic laboratories with only ~17% of scats successfully genotyped, likely due to poorly developed microsatellite markers. Microsatellites have several notable disadvantages. First, longer repeats require amplification of larger fragments of DNA, which reduces the amplification success from degraded DNA sources such as scats. Second, microsatellites are measured using a technique called capillary electrophoresis, which produces a visual output that a human must spend time to classify at a given length. Third, these classifications are not readily transferable among labs, which limits the long-term utility and verifiability of DNA identification.

Due to the development of high-throughput sequencing, which allows us to actually read large amounts of genetic material, we can now recover actual DNA sequences rather than measuring the length of DNA fragments. Rather than rely on microsatellites, we can now easily use single-nucleotide polymorphisms (SNPs), which are variants at individual DNA basepairs, to identify individuals and attain population genetics information. Over the last several years, high-throughput sequencing has opened the door to affordable genotyping of large numbers of individuals using SNPs with a technique called GTseq (Campbell et al. 2015). This method, now being implemented in the Levi Lab at Oregon State University for other carnivores (Eriksson et al. 2020), leads to much higher success rates by amplifying very short DNA fragments, which are retained even in degraded samples such as scats. In addition, the method is cost effective because

large numbers of samples can be multiplexed on a single sequencing run and because genotyping can be easily automated.

The first step to implementing affordable SNP genotyping with high-throughput sequencing is the development of a single nucleotide polymorphism panel for the marten genome, which has recently been completed (Colella et al. 2021). We propose to integrate these published SNPs into a genotyping by amplicon sequencing panel (Eriksson et al. 2020) to allow for highly affordable genotyping of fecal DNA. This requires substantial primer optimization and testing. Such optimization requires, for instance, determining primers that can be pooled together in the same PCR reactions (e.g., they must share melting temperatures and not interact). We will use primer optimization software and laboratory tests to optimize a coastal marten genotyping protocol based on these SNPs. We will then demonstrate the efficacy of the approach on already extracted marten scats. Both the development of SNPs and genotyping will require substantial bioinformatics expertise. The Levi Lab has now published successful SNP genotyping assays for coyotes, bobcats, pumas and black bears (Ruprecht et al. 2020), and has recently completed assays for brown bears and wolves. All bioinformatics products will be made public and open source.

This project will immediately produce a reliable and affordable method to estimate marten densities using already available genetic samples that are currently unanalyzed due to the low success rate with microsatellites. As we analyze additional samples, we will be able to both estimate marten densities and population size, as well as population connectivity and inbreeding depression, and potentially estimate values such as survival and fecundity with multi-year samples. This will facilitate understanding of the viability of coastal marten subpopulations, as well as provide information on coastal marten detections outside of the known subpopulations.

Campbell, NR, SA Harmon, and SR Narum. 2015. Genotyping-in-Thousands by sequencing (GT-seq): A cost effective SNP genotyping method based on custom amplicon sequencing.

Colella, JP, T Lan, SL Talbot, C Lindqvist, and JA Cook. 2021. Whole-genome resequencing reveals persistence of forest-associated mammals in Late Pleistocene refugia along North America's North Pacific Coast. *Journal of Biogeography* 48:1153-1169.

Eriksson, CE, J Ruprecht, and T Levi. 2020. More affordable and effective noninvasive single nucleotide polymorphism genotyping using high-throughput amplicon sequencing. *Molecular Ecology Resources* 20:1505-1516.

Grinnell, J, and JS Dixon. 1926. Two new races of the pine marten from the Pacific coast of North America. *University of California Publications in Zoology* 21:411-417.

Linnell, MA, K Moriarty, DS Green, and T Levi. 2018. Density and population viability of coastal marten: a rare and geographically isolated small carnivore. *PeerJ* 6:e4530 - 4521 pg.

Ruprecht, JS, CE Eriksson, TD Forrester, DA Clark, MJ Wisdom, MM Rowland, BK Johnson, and T Levi. 2021. Evaluating and integrating spatial capture-recapture models with data of variable individual identifiability. *Ecological Applications* 31(7):e024505.

USFWS. 2021. Recovery outline: Coastal marten, Distinct Population Segment of the Pacific marten (signed 21 Jan 2021).

Zielinski, WJ, KM Slauson, CR Carroll, CJ Kent, and DG Kudrna. 2001. Status of American martens in coastal forests of the Pacific states. *Journal of Mammalogy* 82:478-490.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our primary goal will be to develop molecular tools to identify individual coastal martens and their population genetics from fecal samples, and to make these tools publicly available so that researchers and land managers may apply them.

Objective 1: Create novel genetic tools to make it possible to identify the sex and individual from non-invasive samples (scats, hair) of martens, which is currently infeasible.

Objective 2: Assess population genetics of coastal martens (i.e., population size, sex ratios) by genotyping ~300 currently banked scat samples and make this information available to managers.

Objective 3: Conduct preliminary analysis of coastal marten gene flow (e.g., connectivity and inbreeding metrics) using landscape genetics on previously collected scats.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The main expected outcome of this project is a successful assay of SNPs that can identify closely related individual martens using degraded DNA from scat samples. We will consider our assay highly successful if, under these conditions, we achieve a genotyping success rate of 70% or higher and moderately successful if the genotyping success rate is between 50% and 70%.

Other project outcomes will include results from population genetics and preliminary landscape genetics analyses on coastal marten populations pertaining to the ~300 marten scats available, which will include at minimum the Central Coast Oregon population and the southern Oregon population. Success for population genetics calculations will be measured by the uncertainty associated with population density estimates, as quantified by the standard deviation. Defining success for the preliminary landscape genetics analysis will similarly rely on the uncertainty around estimates.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

Martens are listed as a "strategy species" by the Oregon Conservation Strategy. Our project will advance marten conservation and research by providing a molecular tool that will leverage data from existing and future scat detection dog monitoring efforts to gain knowledge on population density, habitat needs, and connectivity of martens. We will directly fill important data gaps listed by the OCS by assessing population densities and functional connectivity of coastal marten subpopulations. By providing a tool to measure marten population density and connectivity across different habitats, this project contributes to the key conservation issues of land use change and barriers to animal movement. In particular, we will increase access to science that supports land use planning efforts (land use change action 1.1) and provide tools to identify animal movement corridors and barriers (animal movement action 2.2).

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

\$15,448 – Sequencing lanes (service) – The majority of the ORCF funding will be used on service fees for 4 next generation sequencing lanes at OSU's Center for Quantitative Life Sciences. These lanes will be used for DNA sequencing of samples for SNP assay testing and final SNP assay application to banked scats. Each lane costs \$3,862.

\$2,250 – Library preparation (personnel) – To reduce costs, all library preparation for sequencing will be done in-house. Personnel time for preparation of sequencing libraries will include two PCR steps, DNA quantification, normalization, and pooling of genetic samples.

\$2,250 – General lab consumables (supplies) – Library preparation will require equipment such as PCR reagents, disposable pipette tips, PCR plates, disposable gloves, etc.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The Levi Lab at Oregon State University will develop and share molecular tools, sequence available marten DNA extracts, and run analyses on sequencing results. The National Council for Air and Stream Improvement, Inc. (NCASI) has collaborated on sample collection and may provide high quality DNA via tissue samples. The U.S. Forest Service – PNW Region has been a collaborator on sample collection and will be an end user of sequence results.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Milestone 1: Optimize primers for a marten genotyping by amplicon sequencing SNP panel (April 15, 2021). This will require an iterative process of identifying SNPs with high variability to include in the panel, designing primers to amplify DNA regions containing the chosen SNPs, checking that primers do not amplify prey DNA, testing compatibility of all primers using primer optimization software, and finally testing compatibility of all primers and genotyping success of the panel. Milestone 2: Illumina sequencing library preparation of available marten samples (June 15, 2021). This will include PCR amplification of marten DNA based on the SNP panels, post-PCR cleanup of amplified DNA using magnetic beads, a second round of PCR to attach a unique index primer to each sample, and DNA quantification and normalization of each sample. With all samples uniquely tagged and normalized, all samples within a PCR plate will then be pooled into a single Eppendorf tube. These pools will then be cleaned, DNA quantified, and normalized again so that each pool is evenly represented, before pooling into a final Eppendorf tube that will be submitted for sequencing at OSU. Milestone 3: Run bioinformatics pipeline for marten sequencing results (July 15, 2021). Unix and PERL scripts will need to be designed to identify sex and genotype for each sample. Blank controls (i.e., samples with no DNA) included in the extraction process will be assessed for contamination. Milestone 4: Calculate population genetics from sequencing results, including running a genetic spatial capture-recapture model to estimate subpopulation densities and calculating sex ratios (August 15, 2021) Milestone 5: Finish preliminary analysis of coastal marten connectivity and inbreeding using landscape genetics (September 15, 2021)

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The Levi Lab has successfully processed more than 1000 samples collected via NCASI's scat detection dog surveys, including identifying each scat to species and metabarcoding each scat to understand coastal marten diet. Species identification of scats has provided important data for modeling coastal marten distribution and habitat associations (Moriarty et al. 2021). Metabarcoding scats for diet analysis, coupled with camera-trap surveys, has helped understand the role of prey items in broad-scale habitat use by coastal martens (Eriksson et al. 2019). These efforts have resulted in the following two open source publications:

Eriksson, C. E., K. M. Moriarty, M. A. Linnell, and T. Levi. 2019. Biotic factors influencing the unexpected distribution of a Humboldt marten (*Martes caurina humboldtensis*) population in a young coastal forest. PLoS ONE 14(5): e0214653.

Moriarty, K. M., J. Thompson, M. Delheimer, B. R. Barry, M. Linnell, T. Levi, K. Hamm, D. Early, H. Gamblin, M. S. Gunther, J. Ellison, J. S. Prevey, J. Hartman, and R. Davis. 2021. Predicted distribution of a rare and understudied forest carnivore: Humboldt marten (*Martes caurina humboldtensis*). PeerJ: 11670.

Project 2

1500 maximum characters

The Levi Lab wrote the protocol for genotyping by amplicon sequencing using single nucleotide polymorphisms (SNPs) (Eriksson et al. 2020) and developed SNP panels for individual identification of cougar, black bear, coyote, and bobcat scats. These panels were then applied to 72 bear scats, 95 bobcat scats, 17 cougar scats, and 201 coyote scats with respective genotyping success rates of 60%, 91%, 88%, and 93%. Genotyping results were then used to calculate population density for each species using genetic spatial capture-recapture models. These efforts resulted in the following publications:

Eriksson, C. E., J. Ruprecht, and T. Levi. 2020. More affordable and effective noninvasive single nucleotide polymorphism genotyping using high-throughput amplicon sequencing. Molecular Ecology Resources 20:1505-1516.

Ruprecht, J. S., C. E. Eriksson, T. D. Forrester, D. A. Clark, M. J. Wisdom, M. M. Rowland, B. K. Johnson, and T. Levi. 2021. Evaluating and integrating spatial capture-recapture models with data of variable individual identifiability. Ecological Applications 31(7): e024505

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

scottharris@appliedeco.org

Project Information

Project Title *

Evaluating the effectiveness of prairie restoration for Streaked Horned Lark in the Willamette Valley

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

The Streaked Horned Lark (hereafter lark) is an Oregon Conservation Strategy sensitive species and listed as Threatened under the U.S. Endangered Species Act. The majority of extant populations (<2,000 birds) are in the southern Willamette Valley – the location of our two study sites. Larks require a large, open landscape of low-statured herbaceous vegetation with patches of sparsely vegetated ground. Agricultural practices and prairie succession in the absence of natural or cultural fire reduce available habitat for larks. Prairie restoration practices have been developed to specifically address this need, which is promulgated in both the lark recovery plan and recent Federal listing of the bird. However, the effectiveness of these treatments to contribute to lark recovery has not been verified. We propose to monitor the effectiveness of these treatments over 2 years at 2 sites where vernal pools and habitat swales have recently been created specifically for lark conservation.

Primary Contact Person *

Scott Harris

Primary Contact Email Address *

scottharris@appliedeco.org

Primary Contact Phone number *

(541)609-0902

Lead Organization *

Institute for Applied Ecology

Mailing address *

563 SW Jefferson Ave, Corvallis OR 97333

Lead Organization Federal Tax ID *

93-1283716

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Corvallis, Brownsville

Project Location (County) *

Benton, Linn

Project Start Date

MM DD YYYY

04 / 01 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

18643

Total Project Cost *

18643

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Summary and background

The Streaked Horned Lark (hereafter lark) is an Oregon Conservation Strategy sensitive species and listed as Threatened under the U.S. Endangered Species Act. The majority of extant populations (<2,000 birds) are in the southern Willamette Valley – the location of our two study sites. Larks require a large, open landscape of low-statured herbaceous vegetation with patches of sparsely vegetated ground. Agricultural practices and prairie succession in the absence of natural or cultural fire reduce available habitat for larks. Prairie restoration practices have been developed to specifically address this need, which is promulgated in both the lark recovery plan and recent Federal listing of the bird. However, the effectiveness of these treatments to contribute to lark recovery has not been verified. We propose to monitor the effectiveness of these treatments over two years at two sites (Herbert Farm Natural Area and Erion Wetlands) where vernal pools and habitat swales have recently been created specifically for lark conservation. The outcomes of this project will directly contribute to the conservation of the Streaked Horned Lark and the evaluation of habitat restoration treatments described in the Oregon Conservation Strategy.

Implications for management and conservation

This project will be a critical continuation of lark monitoring and research efforts that has occurred during the early successional stages of prairie restoration - as the sites have been moving from converted agricultural fields to prairies. Monitoring at Erion Wetlands and Herbert Farm have been occurring over the past three and four years, respectively, both during and following restoration treatments.

Lark populations at both sites showed an expected increase at the beginning (first two years) of the conversion when significant bare and sparsely-vegetated ground was present. The sites are now entering the phases when prairie vegetation is becoming established and habitat suitability for larks may be reduced. It will therefore be essential to evaluate the larks' response to these changes to understand the value of these restoration prescriptions and provide adaptive guidance for future efforts.

Sites

Herbert Farm and Natural Area is a 221 acre conservation property owned by the City of Corvallis with a conservation easement facilitated by the Oregon Department of Fish and Wildlife and Bonneville Power Administration. There has been recent ongoing conversion of approximately 100 acres on the west end of the property from agriculture (i.e., grass fields) to native prairie with an emphasis on providing habitat for larks. One 25-acre section, which had been in chemical fallow since 2014, was seeded in fall 2018 and 2019 to create a mosaic of bare ground and sparse, low-statured vegetation. This field had two berms created by the USFWS Partners for Fish and Wildlife Program to flood swales and potentially create more suitable lark habitat during the breeding season. Larks were known to have nested at Herbert Farm prior to 2014 in sparsely vegetated areas of natural swales, roadside ditches, and field borders of the grass seed fields. From 2014-2018, there were only a few sightings and no known nesting. However, in 2019 there were 2-3 nesting pairs, and 3-4 nesting pairs in 2020. Herbert Farm is also a popular publicly-accessible recreational destination for hikers and bird watchers.

Erion Wetlands is a 320-acre private property located in the southeastern Willamette Valley in Linn County. The property is being taken out of agricultural production (i.e., grass fields) and converted to native habitats with an emphasis on wildlife and endangered species conservation. Approximately 120 acres is being converted to native prairie, with approximately 70 acres of that managed specifically for larks. The history

of lark occupancy on the property is unknown. However, they have been detected in the recent past during roadside surveys, and there were 1-2 pairs in the sparsely-vegetated field road within the property just prior to the initiation of habitat restoration in 2017. Thirteen vernal pools were constructed, specifically to benefit larks, between 2017 and 2020. In 2019, 2-3 nesting pairs of larks were observed and 4 nests were located. In 2021, 12-14 pairs were observed.

Methods

The project will include two breeding seasons of lark monitoring (April-July 2022-2023) at the two sites by Avifauna Northwest (Bob Altman). Lark surveys will be conducted using an area search methodology in which the observer moves freely through a defined area emphasizing time spent in locations where birds are occurring. This method results in complete coverage of the area, with the freedom of movement to seek out and follow-up on detections. Area searches will be conducted at least once a week during the breeding season (May through July) and twice a month during the pre-breeding season (April). Visits will be at least five days apart, conducted during morning hours when birds are most active (i.e., before 11 am), and only under favorable weather conditions for bird detection (i.e., no rain or high winds). The number, gender, and age of all larks will be recorded. Each visit will document the occurrence of, and estimate the abundance of larks, and to document the degree of use of vernal pools and swales compared the remainder of the prairie restoration.

Key Personnel

Bob Altman is the Director of Avifauna Northwest. He has been providing leadership and project management on numerous bird and habitat conservation activities in the Pacific Northwest for the last 30 years. He is a major contributor to The Willamette Valley Landowner's Guide to Creating Habitat for Grassland Birds, the primary reference cited in the Oregon Conservation Strategy for grassland birds. He conducted the original research on larks in the Willamette Valley in the 1990's, and is a member of the Streaked Horned Lark Recovery Team. He has also worked internationally with partners in Mexico and Central America on conservation of our breeding birds that winter and migrate through those areas.

Scott Harris is the Director of Conservation Research for the Institute for Applied Ecology (IAE). IAE is a 501c3 non-profit based in Corvallis, Oregon with the mission to conserve native species and habitats through restoration, research, and education. IAE has been working for over 20 years on monitoring, research, and restoration efforts for conservation priority plants and wildlife in the region, working with many partners including federal, state, and municipal agencies, and private landowners. Scott has a PhD in Forest Ecology from Oregon State University where his research focused on forest management impacts on birds.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Our goals are to:

- 1) Estimate the occurrence and abundance of Streaked Horned Larks at two prairie restoration sites in the southern Willamette Valley.
 - 2) Evaluate the effectiveness and longevity of habitat restoration treatments for suitable lark habitat
 - 3) Provide continuity for the long-term monitoring at these two sites, to inform species recovery strategies and range-wide population estimates.
-

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

At the end of the project, we will share a report with project partners and funders describing the activities conducted and 1) a record of observations and an estimate of the abundance of Streaked Horned Larks at the two sites, 2) an evaluation of the effectiveness and longevity of created vernal pools and habitat swales to provide habitat for nesting Streaked Horned Larks, and 3) recommendations for future lark conservation and habitat restoration.

Project success will be measured by the contribution our study makes to the program priorities identified in the Expenditure Framework. Specifically, we will evaluate the effectiveness of restoration treatments identified in the Oregon Conservation Strategy (for Streaked Horned Lark) and conduct monitoring "directly related to implementing the recommendations in the Oregon Conservation Strategy".

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

For Streaked Horned Larks, the Oregon Conservation Strategy provides the following guidelines: "manage habitat by maintaining or restoring large, sparsely-vegetated grasslands, and creating protected nesting areas". Yet the few restoration treatments that have been applied have not been evaluated for their effectiveness at contributing to lark population persistence. Our study will evaluate the effectiveness and longevity of two of these restoration treatments: creation of vernal pools and habitat swales.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRF Funds *

Describe the specific expenditures for your project that will be supported by the OCRF funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

We are requesting \$18,643 of OCRF funds for this project. \$14,000 will be a contract to Avifauna Northwest to conduct monitoring at the two sites for two years and 1) estimate the occurrence and abundance of Streaked Horned Larks, 2) evaluate the effectiveness and longevity of restoration treatments, and 3) provide recommendations for future lark conservation and habitat restoration. \$1,200 will be for IAE staff to manage the project and provide contract oversight. \$3,433 will be for administration at IAE's NICRA of 22.65%.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The City of Corvallis manages the Herbert Farm and Natural Area. They have been working with IAE and other partners on active restoration projects at this site over the past few years. The city's role in this project will be to provide technical consulting and permission to conduct monitoring at this publicly-accessible site. The U.S. Fish and Wildlife Service has previously funded lark monitoring at our two sites. Their role will be to provide consulting and we will share all information with the service to inform conservation planning for larks. Scott Erion is the owner of Erion Wetlands. His role will be to provide access for monitoring activities. Erion Wetlands also regularly provides guided tours of restoration activities.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

August 2022 - completion of the 2022 monitoring season. August 2023 - completion of the 2023 monitoring season. December 2023 - final reporting

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

The work of IAE can be seen at our website: <https://appliedeco.org/>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Benton County HCP Effectiveness Monitoring

The Institute for Applied Ecology (IAE) completed effectiveness monitoring at five sites owned or managed by Benton County in spring and summer of 2018 as specified in the Benton County Prairie Species Habitat Conservation Plan (HCP) and direction from the Natural Areas and Parks Department. The HCP specifies that effectiveness monitoring is to be completed every three years. Monitored sites were: Beazell Memorial Forest, Fitton Green Natural Area, Jackson-Frazier Wetland, and two private properties. The following species and habitats were monitored: Fender's blue butterfly (*Icaricia icarioides fenderi*) habitat, Taylor's checkerspot butterfly (*Euphydryas editha taylori*) habitat, Bradshaw's lomatium (*Lomatium bradshawii*), Nelson's checkermallow (*Sidalcea nelsoniana*), Kincaid's lupine (*Lupinus oreganus*), and Willamette daisy (*Erigeron decumbens*).

Project 2

1500 maximum characters

Streaked Horned Lark Conspecific Attraction Study

In order to attract larks to newly created habitat, we evaluated the efficacy of using conspecific playback alongside decoys to attract larks to managed and restored land near their largest regional population at the Corvallis airport, in 2018. The use of conspecific playback has been an effective tool for many years to attract colonial birds to previously unused but suitable breeding locations, and recent studies have shown its potential to attract territorial birds, such as larks. The use of conspecific playback and decoys to attract streaked horned larks (*Eremophila alpestris strigata*) to unused or underused habitats showed promise when combined with active vegetation management that provides suitable habitat for larks. Although each of the sites had open habitat at the initiation of the study, habitat rapidly became unsuitable for breeding larks as the vegetation grew dense and tall early in the season. A portion of Herbert Farm where the vegetation was controlled by periodic herbicide application throughout the summer remained suitable, but current vegetation management at the Corvallis Airport provided necessary habitat throughout the breeding season and likely reduced any potential movement of larks.

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Google Forms

OCRf Project Proposal Form

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Email *

Gary.L.lvey@gmail.com

Project Information

Project Title *

Oregon Trumpeter Swan Research and Education

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

This project will help expand on Oregon Dept. of Fish and Wildlife's (ODFW) Waterfowl Program's research on origins and migration paths of Trumpeter Swans that winter and migrate through eastern Oregon. It will include marking 6 adult Trumpeter Swans with GPS-GSM radio collars (purchased with this grant funding) during winter at Summer Lake Wildlife Area and Malheur National Wildlife Refuge with the purpose of determining their origins (breeding grounds) and migration pathways. A second objective of this proposal involves education and public awareness. The data from the marked swans will be documented and developed into a presentation that is available the public and to be presented at our 26th TTSS Swan Conference/7th International Swan Symposium and will also be used to develop an educational product, targeting grade school children where they can learn about Trumpeter Swans in Oregon, their life history, conservation needs and will include development of lesson plans for teachers, to include lessons in science, math and geography using the swan locations derived from the study.

Primary Contact Person *

Gary Ivey

Primary Contact Email Address *

Gary.L.Ivey@gmail.com

Primary Contact Phone number *

541-383-2033

Lead Organization *

The Trumpeter Swan Society

Mailing address *

12615 ROCKFORD ROAD, Plymouth, MN 55441

Lead Organization Federal Tax ID *

23-7220654

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Summer Lake, Frenchglen

Project Location (County) *

Lake, Harney

Project Start Date

MM DD YYYY

01 / 02 / 2022

Project End Date

MM DD YYYY

12 / 31 / 2024

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

60000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

The Trumpeter Swan Society (TTSS) is submitting this proposal to provide funding to support Oregon Trumpeter Swan research and, additionally, to develop educational information for the Oregon public's benefit. This project will primarily be a research project which will further our understanding of Oregon's Trumpeter Swans and their use of habitat sites in Oregon and the broader Pacific Flyway. The research will expand on ODFW's current project, to mark and track Trumpeter Swans using Eastern Oregon wetlands. Since 2019, a total of 7 Trumpeter Swans have been fitted with GPS-GSM neck collars by ODFW and TTSS which allow unique tracking of their movements and locations using cell phone technology. This proposal will expand this research by placing an additional 10 collars (3 to be purchased with TTSS funds) on Trumpeter Swans that use wetlands at Summer Lake and Malheur National Wildlife Refuge (NWR) during winter. Swans would be captured and marked as weather permits over the next two winter seasons, and a few collars might also be used to mark Trumpeter Swans which summer in Oregon. These collars will provide very detailed data on the movements and locations used by each individual swan, broadening our scientific understanding of their use of Oregon and other Pacific Flyway habitats throughout their annual cycle. Similar data on Trumpeter Swan movements is currently being collected from swans marked in other western states, and the data from Oregon will compliment those studies and further our understanding of Pacific Flyway Trumpeter Swan migration and habitat use.

ODFW is our primary partner in this project. Other partners include the U.S. Fish and Wildlife Service staff at Malheur NWR, plus two non-profits that have staff in Harney County and work closely with Malheur NWR; Friends of Malheur Refuge and Portland Audubon Society. TTSS will acquire the GPS-GSM collars. ODFW will lead capture efforts and provide airboats and equipment for night capture of swans. TTSS and other partners volunteers and staff will assist with capture efforts.

Additionally, we will collect feathers from Trumpeter Swans captured during this study and submit them to the U.S. Geological Survey for use in their study of Trumpeter Swan origins by analyzing isotopes in feathers to determine summering areas for Trumpeter Swans that winter in the lower 48 states. Having marked birds with known summer locations will help them assess the summer origins of unmarked Trumpeter Swans that are harvested during "generic" swan hunts in other western states.

Our second theme of this proposal is to use the data from the collar study to develop public-friendly information to educate people about the migration routes, habitats used and timing of movements to better understand the annual cycle behaviors of Trumpeter Swans. ODFW will receive and compile the data from the collars and TTSS will assist with analyses and development of the information in forms that will inform and educate the general public. We will work with ODFW's Information and Education staff to develop information and messaging about the project so that it is available to the general public in an online format. We will also present the data to the Pacific Flyway Council and at professional wildlife meetings such as the Oregon Chapter of the Wildlife Society and the upcoming 2022 26th TTSS Swan Conference/7th International Swan Symposium.

We will also develop educational materials targeted at grade school children (8-11 years), including an on-line book with a focus on Trumpeter Swan habitats (wetlands) and various topics such as becoming a scientist and other careers related to swans, wetlands and research, basic ornithology, swan distribution and geography, swan parts and how they use them, how swans use wetlands, the food web, wetland values and functions, swan threats, and ways to help swans and their habitats. Additionally, several teacher guides

will be incorporated into the book using the location data from the tracking research in math (how fast did the swans move between locations, geography (what state, province, district, county, nearest city of select swan locations, how many states/provinces did a swan use?), science (find swan locations in GoogleEarth, label swan parts, identify waterfowl and non-waterfowl bird types).

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal 1. Continue and expand GPS-GSM Trumpeter Swan migration study.

Objective 1: Capture and mark 10 Trumpeter Swans.

Objective 2. Analyze and synthesize location data from the study.

Objective 3. Collect feathers to contribute to USGS isotope study.

Goal 2. Develop public-friendly and kid-friendly environmental education products.

Objective 1. Develop a presentation for professional use (presentations at organizational meetings) and a report/scientific paper to preserve the study results.

Objective 2. Develop an online book targeted at educating kids including activities and teacher guides to further their learning about Trumpeter Swans and wetlands.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

1. Data from 10 Trumpeter Swans added to the ongoing study. Success = Deployment of 10 collars.
2. Study results synthesized and published. Success = presentations at 3 professional meeting venues. Results will be documented in a report.
3. Online public information for the study results. Success = development of news releases/web page of study results in a general public-friendly format.
4. An online educational book about Trumpeter Swans and wetlands for kids. Success = completion of this product.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project advances our scientific understanding of Trumpeter Swans, an Oregon Strategy species. As stated under the Strategy Species description: "Trumpeter Swans are closely associated with wetlands. Breeding pairs, wintering birds, and migrants need high-quality marshes, ponds, or other water bodies with submerged aquatic plants for foraging and emergent vegetation for nesting." This project will help determine Oregon wetland sites chosen by Trumpeter Swans. The educational aspect will heighten public awareness of wetland habitats in relation to Trumpeter Swans.

This project will directly address data gaps identified for this species in the Strategy, including to: "Improve understanding of movement patterns/travel corridors as related to power line locations in need of marking/modification. Identify important breeding habitat within each ecoregion. Determine the origin (breeding locations) of wintering birds." The research will also help inform important Trumpeter Swan conservation actions.

Community science will be involved in this project through our TTSS Trumpeter Watch Program which encourages citizen science reports of marked swans. Several swans previously marked in this study have been reported to Trumpeter Watch and those reports often include site photos which gives better insight into habitat conditions at swan locations.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRFB Funds *

Please select the categories of work that will be supported by the OCRFB funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRFB Funds *

Describe the specific expenditures for your project that will be supported by the OCRFB funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Planned expenditures for OCRFB funds include use of \$12,250 to purchase 7 GPS-GSM neck collars and data coverage (@ \$1,750 each), use of \$2,400 to cover educational activity book page costs, plus use of \$2,350 for salary for development an online book, and use of \$3,000 for admin costs (TTSS policy is 15%). Also, to further these project goals, TTSS will purchase an additional 3 collars, provide travel and volunteers to assist with capture and data synthesis, for an estimated value of about \$10,000 including cash and in-kind support. Additionally, ODFW has invested over \$20,000 in cash and labor for this project and we anticipate the value of their work to continue the research will be at least and additional \$10,000 in labor.

.....

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The Trumpeter Swan Society will work on this project in partnership with ODFW staff, U.S. Fish and Wildlife Service staff (Malheur National Wildlife Refuge), Friends of Malheur Refuge and Portland Audubon Society.

.....

Timeline *

Please identify the key milestones towards completing the project and achieving results.

2022 January – February: capture enough Trumpeter Swans to deploy at least half of the GPS-GSM collars. 2022 October: present preliminary findings at the 26th Trumpeter Swan Conference/7th International Swan Symposium. 2023 January – February: capture enough swans to deploy any remaining collars. 2024 October – Develop public information website materials about the project and its results. 2024 December – Complete the online book.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

TTSS is the only non-profit that focuses on Trumpeter Swan conservation throughout North America and our staff and Board includes experts on Trumpeter Swans and their conservation and management. We have partnered with ODFW since 1990 on development and implementation of plans to restore Oregon's once declining breeding flock and to expand its distribution in SE Oregon. TTSS's lead on our Oregon work is Dr. Gary Ivey who received his PhD at Oregon State, studying Sandhill Crane ecology. Dr. Ivey began research on Malheur NWR Trumpeter Swans in 1980 and worked as Refuge Biologist at Malheur for 15 years (through 1998). He is dedicated to helping Oregon build a healthy Trumpeter Swan population.

Our web page contains much information on Trumpeter Swans, including conservation issues and needs.

See: <https://www.trumpeterswansociety.org>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Coordination of the Oregon Trumpeter Swan Restoration Program with ODFW. Since 2009, TTSS has partnered and worked closely with ODFW to acquire Trumpeter Swans for release at Summer Lake Wildlife Area. TTSS has managed 3 captive pairs to provide young for the program and has worked with several zoos to acquire additional release stock. We have also shared costs of acquisition of young swans for release and assisted by transporting swans and helping with release events. The program has resulted in a new flock of over 30 adult trumpeters outside of Malheur NWR, including new breeding pairs in Lake and Crook counties. The program is ongoing.

Project 2

1500 maximum characters

Trumpeter Watch. This Trumpeter Swan Society citizen science program was launched by TTSS in 2009 and has gathered data on Trumpeter Swan distribution across North America, including many reports from Oregon. Birds marked in Oregon's Trumpeter Restoration Project have also been reported to Trumpeter Watch, increasing our knowledge and understanding of the project. This program is ongoing and our information on Trumpeter Swan distribution through all seasons is growing annually.

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Google Forms

OCRf Project Proposal Form

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Email *

pamelaslaughter95@gmail.com

Project Information

Project Title *

People of Color Outdoors Guardians at Whitaker Ponds

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

People of Color Outdoors will host a series of week long nature education classes for children and their parents. The program is called "People of Color Outdoors Guardians at Whitaker Ponds. Each day, they will learn about a different set of animals/plants/birds, etc. Each night they will get some easy homework meant to keep the parents engaged and excite the children about returning the next day to share. There are lots of little incentives and prizes like bubbles, books, pencils, erasers, and other school supplies to keep the level of excitement high. Each day, the children and their parents will learn something about Whitaker Ponds. At the end of the week, the children graduate as Guardians!

Primary Contact Person *

Pamela Slaughter

Primary Contact Email Address *

pamelaslaughter95@gmail.com

Primary Contact Phone number *

5033491061

Lead Organization *

People of Color Outdoors

Mailing address *

8732 NE Hassalo St. Portland, OR 97220

Lead Organization Federal Tax ID *

03-0456181

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland

Project Location (County) *

Multnomah County

Project Start Date

MM DD YYYY

07 / 11 / 2022

Project End Date

MM DD YYYY

08 / 19 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

15010

Total Project Cost *

15010

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

People of Color Outdoors will host several one-week nature education programs from 9am - 12pm, M-F. Each day, elementary school age children will learn something about Whitaker Ponds - the history, animals, birds, plants, and marine life along the slough.

Our schedule will look something like this: Monday – breakfast, history of area, and how a junkyard was transformed to become a nature refuge when people decided to restore the land. The children will learn what guardians are and decide whether or not they want to become a guardian. They will all brainstorm together on how they can serve as guardians.

We will explore the area, and learn about a common resident – the American beaver. The children will learn from stories, photos, pelts and evidence. We'll hike the loop and note what we see, then return to the gazebo to share our findings. They then get homework assignments. The homework is based on each child's interest. (someone that loved hearing me tell a story about robins might take the book home and pick a vocabulary word from the book to share with the group the next day)

Tuesday – breakfast, break up into two groups, hike the loop, make note of what's different – (beaver chewed trees, new scat or droppings, shells left behind by otters, etc. Share homework discoveries next. A guest speaker (biologist) will teach about the bats and turtles that live at Whitaker Ponds and will also briefly share about the other wildlife living on/near the slough, such as herons, egrets, nutria, kingfishers, osprey, frogs, fish. Get homework.

Wednesday – breakfast, hike the loop and see what's different. Share homework discoveries. Then, an all morning paddle down the slough to explore and see if we spot the wildlife we learned about. Get homework.

Thursday – breakfast, hike the loop and see what's different. Share homework discoveries. We'll have a guest speaker bring educational birds and share with the children about the role of raptors in the ecosystem.

The children will review what they've learned all week, and choose a favorite plant, animal, bird, or amphibian to be a guardian to. They will receive three little known facts about their subject, and their homework will be to remember and present those facts to their cohort on Friday.

Friday – breakfast, the children each present about their favorite to the group, including three "secrets" (things that most people don't know, like the fact that beavers have two sets of lips). We'll do our daily walk to see what's different from the day before, then play games that basically review what they've learned. After that, they graduate as guardians, are presented with their Guardianship Certificates, and eat pizza.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal 1: Create a sense of protectiveness in children and their parents towards Whitaker Ponds and natural spaces in general, and help families spend regular time in nature together.

Objectives:

The children learn about the power that people have to transform and protect an area, and understand that people make choices that impact nature.

Give children information to share with others - make them a teacher and future expert on the topic that they are interested in.

By splitting the group into two and doing daily observational walks, the children become very observant and they start to feel as if they know the area intimately. They develop a relationship with the land.

The children leave with an understanding about how all life is related in nature. That all life matters and supports other life in some way.

To make being in nature fun and normal. Not just for education, wildlife watching, or a specific purpose.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The outcomes and measure of success is largely anecdotal. The program will be successful if it increases the interest, sense of protectiveness and love for nature. If we visit Whitaker Ponds and other natural spaces and see our participants there on their own or better yet, with others as their guests, then that would be successful to POCO.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

People of Color Outdoors is focused on helping Black, Indigenous and People of Color (BIPOC) to develop the habit of spending regular time outdoors in nature, especially in family groups. Our summer programming will engage and expand the number of BIPOC at Whitaker Ponds specifically, and we believe that as a result of being confident and successful at Whitaker Ponds, families will venture out into other natural spaces on their own.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

We encourage families to become "guardians" and take care of natural spaces by picking up litter, packing out what is packed in, being respectful of the land (don't throw rocks in the water, stay on the trail, don't pick up or catch small animals, etc.)

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other: food

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

\$1900 - contract services for guest speakers; \$3900 for contract services for canoe rides and instruction, staff members, gear; \$5250 administration and operating program at \$35 per hour for 25 hours per week; \$2250 for personell at \$25 per hour, 15 hours per week; supplies/materials/food \$1285; \$425 mileage reimbursement for two.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

The Columbia Slough Watershed Council will provide canoes, paddles, lifejackets, instruction and canoe captains; Perch will provide educational birds, Samantha DeJarnette (Always Be Birding) will lead a nature and birding walk; unnamed wildlife biologist (possibly from Oregon Dept of Fish and Wildlife) will provide bat/turtle education - each week.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

The big milestone each week will be to see the children share with confidence about the wildlife or plant they chose to learn about and share about. Another milestone is when they graduate and are proud new guardians.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

I have photos and video but don't have a way to share here.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

We hosted our first overnight camp at Camp Westwind in 8/21 with funds from OCRF. There were approximately 70 BIPOC at the camp. None had been to Westwind before, except for a few that have visited with POCO earlier in 2021 or in 2020 for a day trip.

We were able to hike, share stories, learn about the Indigenous history of the area from some that attended, we discussed climate change and how it was starting to affect the plants, migrating birds, etc. We talked about wildlife corridors and the importance of it. We there there for three days, and were about to spend a lot of relaxed time learning, exploring and being first time campers. It was a magical time.

Project 2

1500 maximum characters

We hosted our first summer program at Whitaker Ponds from 7/21 - 8/21. It was a wonderful experience. The children and parents were impacted, and want to return to another summer program. Many were home schooling due to covid-19 and wanted POCO to continue the programming throughout the year in a virtual and in person combo. The parents from some weeks returned on paddle day to paddle again. I have personally run into families at Whitaker Ponds after their child/ren participated in our summer program.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

jamespholley@gmail.com

Project Information

Project Title *

Harborton Frog Mortality Assessment

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

Harborton Wetland is a 74-acre parcel located along Multnomah Channel within the historic Willamette River Delta and owned by Portland General Electric (PGE). Since the city was founded, most of the wetlands and riparian habitats of the Lower Willamette River Basin have been destroyed. Annually, hundreds to thousands of Northern red-legged frogs (*Rana aurora*, RAAU) migrate from terrestrial uplands in Portland's Forest Park across Highway 30 to the Harborton Wetland to breed. During this migration, passing cars kill an unknown number of animals. Conservative estimates put amphibian road crossing deaths in the hundreds at this site, but the number could be substantially higher with evidence of soft frog carcasses disappearing rapidly on this busy highway. In 2014, the Harborton Frog Shuttle was established to assist the frog migration and reduce the effects of anthropogenically inflated mortality. While the shuttle is a great tool for community involvement, a more sustainable and permanent solution is called for. A wildlife undercrossing and/or creating improved wetland spaces that do not require road crossings are the primary proposed solutions. These are expensive, infrastructure-based solutions and more data is required to find the most appropriate path forward. Specifically, increased data on the rate and location of frogs being killed at road crossings will inform timing and movement patterns to find the best solution. The Northwest Ecological Research Institute (NERI) has performed amphibian surveys and restoration for decades throughout the Pacific Northwest.

Primary Contact Person *

Jim Holley

Primary Contact Email Address *

jamespholley@gmail.com

Primary Contact Phone number *

5033205544

Lead Organization *

Northwest Ecological Research Institute (NERI)
.....

Mailing address *

130 NW 114th Ave., Portland, OR 97229
.....

Lead Organization Federal Tax ID *

DUNS: 803039221 & TIN: 93-0901125
.....

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Linnton

Project Location (County) *

Multnomah

Project Start Date

MM DD YYYY

01 / 01 / 2022

Project End Date

MM DD YYYY

03 / 30 / 2022

Funding Amount Requested *

The maximum request is \$20,000.

6449

Total Project Cost *

7000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Harborton Wetland is a 74-acre parcel owned by PGE located along Multnomah Channel within the historic Willamette River Delta (Figures 1 & 2). Since the City of Portland was founded, most of the wetlands and riparian habitats of the Lower Willamette River Basin have been destroyed. Annually, hundreds to thousands of RAAU migrate from terrestrial upland habitat in Portland's Forest Park across Highway 30 to the Harborton Wetland. During this migration, passing cars kill an unknown number of animals crossing Highway 30. Conservative estimates put amphibian road crossing deaths in the hundreds at the site, but the number could be substantially higher with evidence of soft frog carcasses disappearing rapidly on a busy highway.

In 2014, the Harborton Frog Shuttle was established to assist the frog migration and reduce the effects of anthropogenically inflated mortality, shuttling between 433 and 2006 RAAU from December through March each year across Highway 30. While the shuttle is a great tool for community involvement, a more sustainable and permanent solution is called for.

Long-term Solutions

The complexities of the life history of RAAU, numerous landowners and agencies involved in their migration at the Harborton Wetland led the Oregon Wildlife Foundation (OWF) to hire Jim Holley to perform an assessment of the situation surrounding the Harborton frog migration in March 2021. Jim has worked with amphibians in the Pacific Northwest since 2008 and been a member/captain of the Tuesday Team on the Harborton Frog Shuttle since 2016. He received a Masters of Environmental Management degree from Portland State University in June 2021.

Historic agency data on RAAU has been gathered, exploration of other breeding habitat performed, and bimonthly roadkill surveys have been completed within the study area. Initial analysis points to long distances between breeding sites as a factor in the outsized migration at Harborton, but requires more supporting data on the mortality rate of amphibians at road crossing sites. A complete report for OWF on limiting factors and potential solutions will be completed in March 2022.

Life History

RAAU is a federally listed species of concern and a state listed sensitive species in Oregon (ODFW, 2016). RAAU spend 8-11 months of the year dwelling in upland terrestrial habitat with a dense understory, well-represented by Portland's Forest Park (Hayes et. al., 2008). Each winter most adults migrate to wetlands to mate and lay egg masses, often returning to their natal wetland. Specific wetland breeding conditions for RAAU breeding habitat are well represented at Harborton Wetland including being proximate to upland habitat, high solar exposure, a depth profile of 0.2 - 1.5m during the breeding season and low flow velocity (Hayes et al., 2008). Connectivity between upland and prime wetland habitats is extremely limited, most notably by Highway 30 (Figure 2). The requirement of upland habitat adjacent to specific wetland habitat makes RAAU an excellent example of the need for landscape scale conservation efforts, a prominent part of the Oregon Conservation Strategy.

Initial Assessment Synopsis

RAAU wetland breeding habitat has been largely diminished within the Portland Metro Urban Growth Boundary. The length of the Tualatin Mountains historically had wetlands scattered throughout the vast floodplains of the Lower Willamette and northern Tualatin River Basins. Now, the upland habitat lacks connectivity to the wetland habitat formerly present south of Harborton Wetland (Figure 2). The migration occurring to Harborton Wetland may be unnaturally large due to the lack of other nearby wetland breeding habitat through the heart of Forest Park to the south (Table 2). Frogs killed crossing Highway 30 are almost certainly additive mortality that would not occur without this human created barrier.

Fifteen sites within the study radius were identified as having RAAU breeding activity in 2020, eight of

which had greater than 50 egg masses. The wetland pond at Audubon is the only known major (>50 egg masses) RAAU egg mass site within the confines of Forest Park and, notably, the only major site in the southern half of Forest Park (Figure 3). A relatively high number of egg masses (>500) are produced annually at this site, yet it is not ideal RAAU breeding habitat. The density of egg masses (0.68 egg masses/m²) is among the highest in the Portland Metro region (Table 1). The substantial forest canopy cover over the wetland limits solar exposure to the pond. This is atypical of other productive RAAU breeding sites. The large distance from other potential wetland breeding sites (Table 2) point to the potential for habitat improvements targeted at areas south of the Harborton Wetland.

Potential Solutions

Ideal RAAU habitat is contiguous with no anthropogenic barriers. Given the existing conditions, habitat improvements will include ways to decrease frogs crossing roads and minimize migration distances between breeding sites. Two long-term potential restoration approaches stand out:

1. Wildlife Highway Undercrossing(s) under Highway 30 @ Harborton: Facilitate frog passage to wetland breeding habitat without use of the highway surface. The Columbia River Estuary Restoration Taskforce (CREST) is in the final planning stages of installing an undercrossing better connecting Palensky Wetland to the Tualatin Mountains 2km north of the Harborton site (as of Summer 2021). Any other proposed undercrossing specifically for the Harborton site or elsewhere will observe how this project unfolds.
2. Build/Improve breeding ponds within the upland habitat decreasing distances between breeding ponds and minimizing road crossings (Figure 3). The potential locations of ponds and improvements are subject to appropriate hydrologic conditions, strategic spacing, and other local restrictions to most efficiently mitigate frog road crossings and minimize migration distances.

Data Gap

Data on the mortality rate of frogs on Highway 30 is largely unknown. Roadkill surveys have been conducted on a bimonthly basis to gather information on the array of species being killed in the four mile stretch of highway between Linnton and Palensky Wetland. Results from March through September indicate that frog populations are the only clade incurring large losses with bird and mammal mortality found in single digits on each survey and spread amongst many species. The survey closest in time to a migratory event occurred on 28 April, 2021. Of 55 frogs observed as roadkill, 35 were observed inside of the white lines. Upon returning to the starting point at the end of the three hour survey, all evidence of the frogs initially observed inside the lines had already disappeared. All other surveys noted at least twice as many amphibian corpses outside of the white lines as inside.

While data is sparse on the rate of disappearance of amphibian bodies, it is probable that estimates of additional mortality based on the evidence of bodies is far below actual mortality rates. Targeted research at Harborton and other likely road-crossing locations is required to more fully understand the impact that anthropogenic barriers are having on our pond-breeding amphibian populations.

Study Design

Researchers will coordinate with the Harborton Frog Shuttle to identify likely nights of high frog movement within the study area. Choosing safe areas from which to observe, researchers will observe and record frogs migrating without assistance. Time of road entry and exit will be recorded, as will the state of each corpse every 15 minutes until all traces disappear. A TRAFx counter will be used to record the amount of traffic passing by the site.

Surveys will be conducted at least twice at each location. Sites will include known RAAU breeding locations and roads of varying widths and speed limits. Harborton, Palensky, Audubon, and Springville Road will be included in the study with spot checking at other sites.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Project goals:

1. To reduce RAAU mortality from vehicles during migration between upland habitat and wetland breeding sites at Harborton Wetland.
2. To develop strategies and insights for reducing amphibian mortality from vehicles at other migration road crossings.

Project objectives:

Collect and analyze data collected by the Harborton Frog Shuttle, ODFW, and other agencies to assess threats and limiting factors for Northern red-legged frogs (*Rana aurora*, RAAU) at and around the Harborton Wetland.

Perform roadkill surveys, egg mass surveys, and landowner outreach to inform an assessment of the factors impacting amphibian migration within the greater Harborton study area.

Propose and critique potential habitat improvement options for the RAAU population at the Harborton Wetland.

The Harborton Frog Shuttle has gathered valuable data on the timing and size of frog movements correlated with climatic conditions. The Harborton Frog Shuttle Mortality Assessment aims to fill in data gaps surrounding red-legged frog migration patterns and factors unnaturally limiting their population size. Data obtained by this study will help target and customize restoration and mitigation efforts where they will be most effective. As the vast

impact of anthropogenic barriers on wildlife populations becomes more obvious, future efforts to support amphibian migrations will be more fully informed.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The long-term goal of the Harborton Frog Mortality Assessment is to find sustainable solutions to overcome the barriers created by urban development and maintain a variety of wildlife within the urban sphere. This project aims to more fully inform the assessment of conditions surrounding the RAAU migration at and around the Harborton Wetland by quantifying the unassisted success rate across varying types of roads. With increased and targeted data on roadkill mortality, the scope of migratory barriers will be more apparent. A more complete understanding of the size, location, and timing of amphibian migrations will also improve the implementation of expensive infrastructure-based solutions.

Additionally, movement corridors for RAAU are likely similar for other species that are more stealthy in their need for multiple habitat types. Quantifying the rate, impact, and intensity of roadkill on different types of roads and species will aid in informing the best solution to the frog migration at Harborton Wetland and similar situations in the future.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project advances the needs of the Oregon Conservation Strategy as the situation surrounding the red-legged frog migration to the Harborton Wetland plays out on a landscape scale. The outsized migration to this site is likely driven by the lack of wetland habitat within the confines of Portland's Forest Park and the destruction of wetlands within the City of Portland. RAAU are a strategy species that highlight the lack of connectivity and key corridors within the study area surrounding the Harborton Wetland.

The Harborton Frog Shuttle has provided key data since 2014 documenting the timing, conditions, and volume of the annual frog migration through thousands of hours of community scientists assisting frogs down to the wetland and then back up after their breeding is complete. The Harborton Frog Mortality Assessment will supplement this data and fill in important gaps in the literature about the impact of roads.

The Harborton Wetland is located just outside of the Portland Metro Urban Growth Boundary but within the historic Willamette River Delta along Multnomah Channel. It is the first remaining intact wetland downstream of downtown Portland and is demonstrably important to maintaining amphibian populations in the urban area

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Administration: 15% = \$872

Equipment: \$500 (portable table, strong lights, rain suits)

Personnel: \$5000 (10 survey nights @ \$500)

Travel Expenditures: \$308 (550 miles @ \$0.56/mile)

Total: \$6680.00

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Northwest Ecological Research Institute (NERI): fiscal agent and project sponsor

Harborton Frog Shuttle: Non-profit organization dedicated to assisting red-legged frogs across Highway 30 in Linnton, OR. The Harborton Frog Shuttle will provide logistical information to researchers about up to date frog movement trends and numbers.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

January - March, 2022: Monitor frog migration points when conditions are appropriate

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

<https://www.myowf.org/harborton-frog-shuttle>

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

The NERI bluebird project has maintained and restored bluebird habitat at a series of locations in Oregon.
<http://www.nweri.org/reports/category/bluebirds/>

Project 2

1500 maximum characters

NERI has assisted in managing Southwest Washington's Amphibian Monitoring Project for many years. This project involves community scientists in gathering data on local amphibian populations.
<https://clarkgreenneighbors.org/en/60-volunteering-opportunities/213-annual-amphibian-monitoring-training-southwest-washington-amphibian-monitoring-project>

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Google Forms

Harborton Frog Shuttle Mortality Assessment: Tables & Figures

James Holley, MEM

Northwest Ecological Research Institute

jamespholley@gmail.com

October 2021

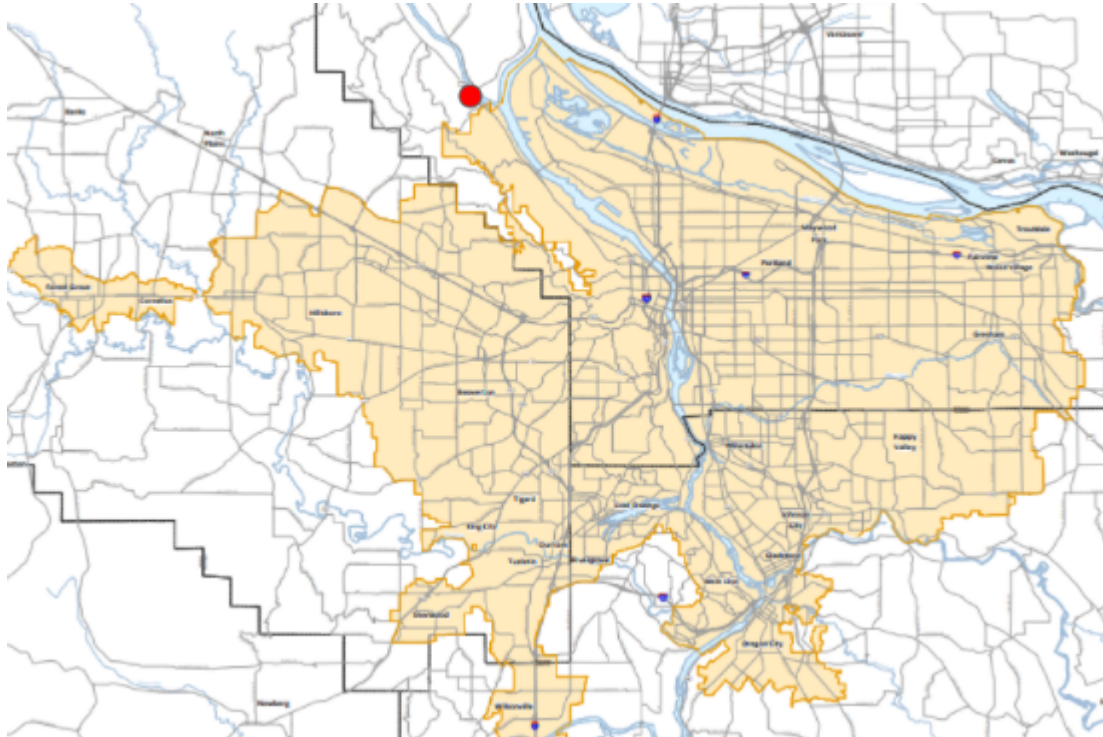


Figure 1: Portland Oregon Metro Urban Growth Boundary. Harborton Wetland indicated by a red circle.

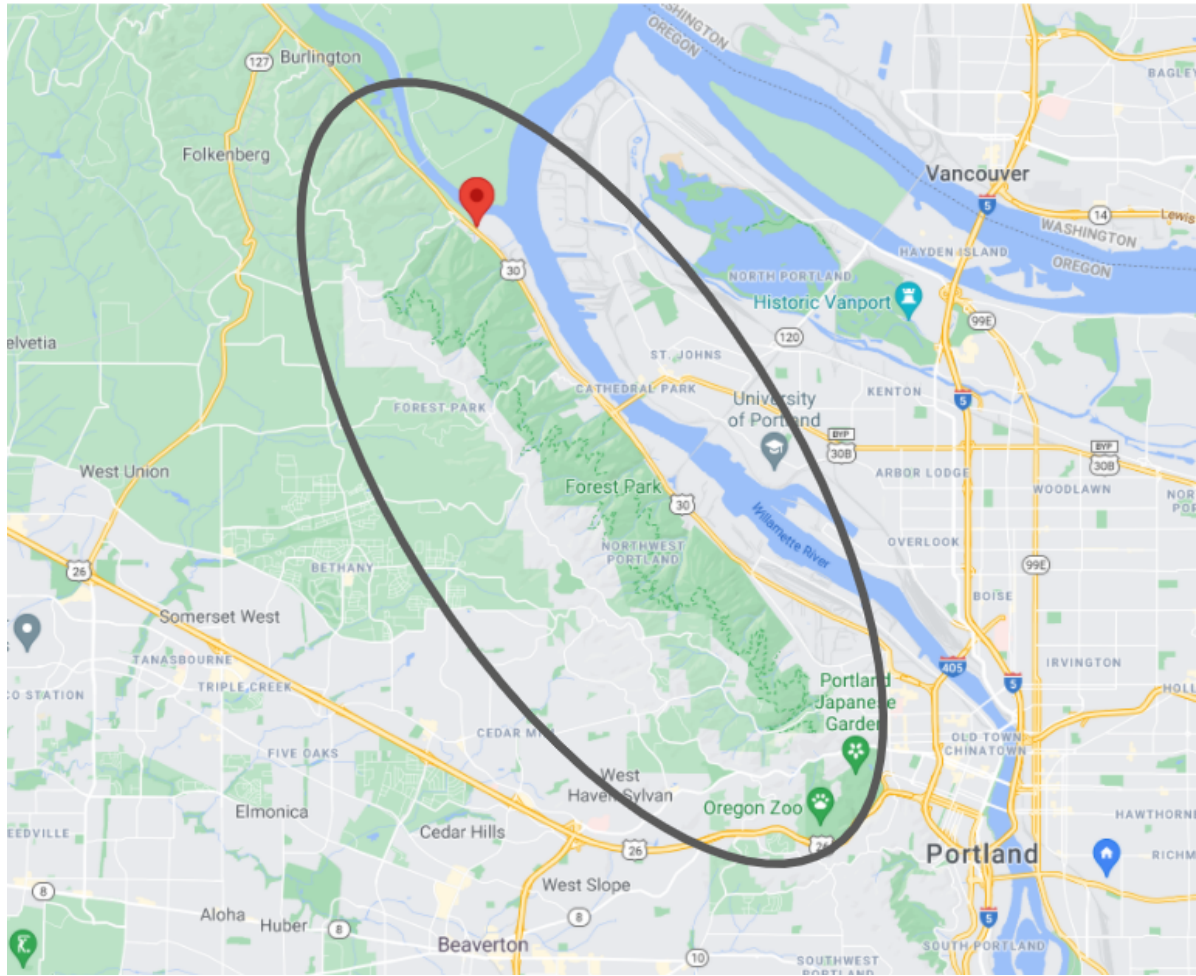


Figure 2: Map of the Harborton Wetland study area. Forest Park has few wetlands appropriate as RAAU breeding habitat. The site lies just beyond the Portland Metro Urban Growth Boundary (UGB).



Figure 3: Blue points are existing RAAU breeding sites with known RAAU breeding (# RAAU egg masses). Green points are sites/wetlands to potentially build/improve. Note the unequal distribution of breeding sites.

Table 1: Egg mass density at known RAAU breeding sites with >50 egg masses. Area estimates are of the entire wetland area which may not all be appropriate RAAU breeding habitat.

Site Name	MAX RAAU egg masses	Pond Area (m ²)	Egg Mass Density
Harborton	1200+	17305	0.2935
Palensky	~500+?	1137600	0.0004
Audubon	~500+	828	0.6039
McNamee 1	~500+	734.8	0.6805
McNamee 2	75	140.5	0.5338
Mult Ch	~500+	744793.7	0.0004
Whittle	~200+?	15438.8	0.0130
Malinowski 2 (small)	81	682.2	0.1187

Table 2: Crow's distances between wetlands and number of egg masses found. Only sites with >50 egg masses included in this table.

Site Name	Site Manager	Nearest Neighbor	Nearest Neighbor Distance (m)	Second Nearest Neighbor	2nd neighbor Distance (m)
Harborton	PGE	Palensky	2832	McNamee 2	3878
Palensky	ODFW	Harborton	2832	McNamee 1	2210
Audubon	Audubon	Malinowski (small)	7790	Harborton	11247
Foster	private	McNamee 2	1000	Palensky	2390
McNamee	private	McNamee 1	1000	Palensky	2080
Mult Ch	Metro	Whittle	2070	Palensky	5670
Whittle	Metro	Multnomah Channel	2070	McNamee 2	2470
Malinowski 2 (small)	private	Audubon	7010	Palensky	7280

Resources

Hayes, M.P., Quinn, T., Richter, K.O., Schuett-Hames, J.P., and Serra Shean, J.T. 2008. Maintaining lentic-breeding amphibians in urbanizing landscapes: The case study of the Northern red-legged frog (*Rana aurora*). *Society of Amphibians and Reptiles Urban Herpetology* 3: 133-149.

Oregon Department of Fish and Wildlife. 2016. Oregon Conservation Strategy. Oregon Department of Fish and Wildlife, Salem, Oregon.

Portland Parks and Recreation. 1995. Forest Park Natural Resources Management Plan. [Forest Park Natural Resources Management Plan](#)

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

amiic@wayfindingacademy.org

Project Information

Project Title *

Wayfinding Ambassadors Program

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRF website. (2000 character max)

Wayfinding Academy (WFA), a 501(c)3 nonprofit community college, will enhance educational, personal and professional outcomes for historically underrepresented students through a new "Wayfinding Ambassadors" program that advances outdoor equity and conservation priorities. High-level elements of this program include: 1. Curriculum and labs developed by the college with a central focus on the Oregon Conservation Strategy and Oregon's nine ecoregions; 2. Service as a convener and academic resource for the broader community on outdoor equity and conservation, including the Oregon Conservation Strategy and Oregon's nine ecoregions; 3. Equity-centered learning and development that fosters diverse representation in the outdoors and associated careers; 4. Stewardship projects that inspire lasting engagement, build practical skills, and benefit recreation infrastructure and natural areas in multiple ecoregions; and 5. Student projects that raise awareness and spur action in the broader community on outdoor issues, including priorities in the Oregon Conservation Strategy. Centering equity, the Wayfinding Ambassadors program will be developed in partnership with Self Enhancement, Inc. (SEI), a nonprofit serving youth and families, primarily African Americans and other communities of color, with culturally-responsible academic and wraparound services. Trailkeepers of Oregon (TKO), a statewide nonprofit trail stewardship organization, will serve as the inaugural community partner providing hands-on experience, training and mentorship for students in the field. The Wayfinding Ambassadors program's unique combination of college curriculum, professional training, and community outreach will connect students with the natural world in new and memorable ways. With adequate funding, the program is easily scalable to serve broader populations, school sites, and community partners -- aiming to inspire, educate, and empower the next generation of leaders in a more equitable outdoors.

Primary Contact Person *

Amii Chong

Primary Contact Email Address *

amiic@wayfindinacademy.org

Primary Contact Phone number *

503-490-0322

Lead Organization *

Wayfinding Academy

Mailing address *

8010 North Charleston Ave., Portland, OR 97203

Lead Organization Federal Tax ID *

47-2943786

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

Portland

Project Location (County) *

Multnomah

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

01 / 31 / 2023

Funding Amount Requested *

The maximum request is \$20,000.

20000

Total Project Cost *

42223.36

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Wayfinding Academy (WFA), a 501(c)3 nonprofit community college, will enhance educational and professional outcomes for historically underrepresented students through a new "Wayfinding Ambassadors" program that advances outdoor equity and conservation priorities, including a central focus on the Oregon Conservation Strategy and Oregon's nine ecoregions.

1. Tailored curriculum and labs developed by the college with a central focus on the Oregon Conservation Strategy and Oregon's nine ecoregions

The Wayfinding Ambassadors program will be an enrollment option under the college's Self & Society degree and new Social Change & Civic Action degree.

Within WFA's existing curriculum, interactive Labs are a key component that brings students and community members together for in-depth exploration of subject matter. As part of the Wayfinding Ambassadors program, the WFA will design and deliver a 12-week Lab on Outdoor Equity and Conservation with central focus on the Oregon Conservation Strategy and Oregon's nine ecoregions. Taught by experienced, accredited faculty, the Lab will complement hands-on experience college students gain through outdoor internships. Open to students and the public, labs can be a resource and foster connections and conversations that transcend the classroom.

In addition, students are required to complete courses that focus on environmental issues within WFA's Core Curriculum, such as Science, Technology, and Society (with primary emphasis on environment and sustainability) and Designing Our Future (exploring sustainability through the lens of environmental science and the power of social movements to solve environmental problems, offer hope, and change the world). Core Curriculum courses include 72 hours of classroom instruction over 12 weeks.

As detailed below, Wayfinding Ambassadors will also complete culminating projects that demonstrate learning through public outreach that raises awareness and spurs action in the broader community on outdoor issues, such as priorities in the Oregon Conservation Strategy.

2. Service as a convener and academic resource for the broader community on outdoor equity and conservation, including the Oregon Conservation Strategy and Oregon's nine ecoregions

This program's unique combination of tailored college curriculum, professional skills training, and community outreach can unlock additional benefits for community partners. WFA seeks to build synergy by serving as a convener and academic resource on outdoor equity and conservation curriculum, including course content on the Oregon Conservation Strategy and Oregon's nine ecoregions. TKO will also serve as a convening partner to help connect outdoor stakeholders with the educational resources offered by WFA. This partnership will seed knowledge about the Oregon Conservation Strategy and stimulate action on related priorities.

3. Equity-centered learning and development that fosters increased diversity in the outdoors and associated careers

Centering equity, WFA has established a strong partnership with SEI to better support students of color, including collaboration on recruitment, scholarship offerings, and curriculum on equity and social change.

SEI is Oregon's largest African American-led nonprofit multi-service organization, last year benefiting over 18,000 K-12 students, youth ages 18-25, families, and individual adults. SEI presently works with 23 schools across five districts, and has decades of experience in preparing youth of color to enroll and persist in higher education and early career exploration. Despite the pandemic, the graduation rate among SEI enrollees in 2020 and 2021 was 100%.

Both SEI and WFA seek to illuminate pathways for students to further their education through enrollment at WFA after graduating high school. In partnering on this proposal, WFA and SEI aim to deliver compelling, accessible programming that keeps students engaged and eases transitions from K-12 to higher education and beyond.

At the college level, internships serve important roles in retaining students, increasing career readiness, and connecting students with prospective employers. However, the majority of WFA students work half- or full-time jobs on top of educational obligations, and do not have the financial stability to forgo work and participate in unpaid career development. Therefore, the Wayfinding Ambassadors program will include \$15-per-hour paid internships for underrepresented and financially disadvantaged students in the fields of outdoor equity and conservation.

This effort builds on WFA's Free Tuition Initiative for BIPOC Oregonians, which recognized that all people deserve to grow and learn without crushing debt and took the concrete step of waiving tuition for BIPOC Oregonians, beginning with Black and Native American students and scaling up to all BIPOC students. Moving beyond tuition, this program will provide more equitable access to career development and improve representation in the outdoors.

Students enrolled in Wayfinding Ambassador internships will perform 108 hours of service over 12-week academic terms. WFA staff will identify and build partnerships with relevant organizations and facilitate meaningful experiential learning environments that complement coursework. This will include hosting at least two community receptions to highlight the program's mission and mutually beneficial partnership opportunities. Community outreach and engagement efforts will be developed in consultation with SEI.

4. Stewardship projects that inspire lasting engagement, build practical skills, and benefit trails and natural areas in multiple ecoregions

Trailkeepers of Oregon (TKO), a nonprofit trail stewardship organization, will partner with WFA as the inaugural Community Partner for the Wayfinding Ambassadors program. TKO has a strong background in practical training and mentorship, with 379 stewardship events, 3,604 volunteers hosted, and over 299,251 feet of trails improved in 2019 alone. Operating across federal, state and local scales and rural and urban contexts, TKO is well-positioned to offer engaging outdoor learning experience in multiple ecoregions identified in the Oregon Conservation Strategy. TKO will also ensure environmental compliance and permitting in service agreements with land managers.

In addition to protecting and enhancing Oregon's trail network and public lands, a primary goal is to connect students with the natural world in new and memorable ways that will resonate into the future. Students will participate in weekly outdoor events, learn about all facets of trail construction and maintenance, and receive professional training, ranging from outdoor first aid certification to anti-racism workshops, leadership school and more. Students will get to apply their knowledge during closely supervised trail work parties.

TKO staff are enthusiastic about the prospect of mentoring students from entry level to future crew leaders that can teach and mentor others themselves, as well as TKO staff learning from WFA participants with

different backgrounds and experiences.

5. Student projects that raise awareness and spur action in the broader community on outdoor issues, including priorities in the Oregon Conservation Strategy

Students will complete culminating projects that synthesize their learning across coursework and internships. Projects will include outreach and education to raise awareness in the broader community about outdoor equity and conservation priorities, including priorities in the Oregon Conservation Strategy. Examples could include hosting educational events about the Oregon Conservation Strategy, highlighting responsible outdoor recreation techniques through culturally- and linguistically-accessible materials, or facilitating community days of action on environmental justice issues. SEI will advise on equity issues related to community outreach and associated curriculum.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

1. Empowering the next generation of outdoor leaders

A recent report from the Bureau of Economic Analysis indicates outdoor recreation accounts for 2.9% of Oregon's GDP and 4.4% of employment, growing 24% between 2012-2017 and 6% faster than the broader economy. Recognizing this opportunity, this program prioritizes career readiness.

At the same time, access and benefits are not spread evenly. A recent SCORP update noted lack of youth engagement, an increasingly diverse population and an underserved low-income population as pressing issues. Oregon's education system has struggled to address these challenges, particularly for students of color who face lower graduation rates and more debt, on average, than white students.

This proposal seeks to support underrepresented students on career paths that traditionally lack diversity. This will be accomplished through deliverables detailed under Outcomes and Measuring Success. Students will learn, engage, and grow into leadership roles.

2. Raising awareness and engagement around outdoor equity and conservation

a. Coursework and Labs will teach about outdoor priorities, including the Oregon Conservation Strategy and Oregon's nine ecoregions.

b. Exposure to new landscapes and acquisition of skills will bolster confidence and inspire lasting engagement in the outdoors.

c. Participation in Labs by members of the broader community will boost awareness beyond the college.

d. Student projects will raise awareness and spur action in the broader community.

e. WFA will serve as a convener and academic resource for the broader community on outdoor priorities, including the Oregon Conservation Strategy.

These prongs seek to seed knowledge about outdoor priorities, foster a culture of stewardship, and improve the likelihood participants remain active in outdoor contexts in the future. WFA aims for its curriculum to have ripple effects, with shared learning passing from one community to the next.

3. Benefiting recreation infrastructure and natural areas in multiple ecoregions

Oregon's trail network and natural areas are vital to our economy and health. A recent SCORP update notes outdoor physical activity in Oregon resulted in \$1.4 billion in healthcare savings in 2018. However, growing pressures make stewardship more important than ever. In this program, students play a direct role in maintaining and preserving Oregon's outdoor recreation infrastructure and natural areas in multiple ecoregions.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

WFA Student Goals:

- Students learn about outdoor equity and conservation, including the Oregon Conservation Strategy and Oregon's nine ecoregions, through coursework, labs and internships
- Students complete 108 hours of internship service over 12 weeks
- Students complete culminating projects focused on outdoor equity and conservation, including public outreach components
- Student demonstrate gains in self-sufficiency; leadership; appreciation of stewardship principles; and outdoor engagement post-program

WFA Program Goals:

- Serve as a convener and academic resource for the broader community on outdoor equity and conservation, including the Oregon Conservation Strategy and Oregon's nine ecoregions
- Connect with at least 10 potential Community Partners, host at least two community receptions, and secure new partnerships
- Place at least 8 students in paid internships at target outdoor organizations
- Facilitate mutual learning of all partners from each other's unique backgrounds

TKO:

- Deliver at least one outdoor stewardship or training event each week for 12 weeks;
- Engage students in at least 6 trail parties across Coast Range, Willamette Valley, and West Cascades ecoregions
- Engage students in at least 6 professional training events, such as:
 - >TKO Leadership School - Ambassador Training, Leadership Lab and Crew Leader School, Anti-Racism Workshops
 - >TKO Scout School - Trail Eyes Lab and Advanced Scouting
 - >Outdoor First Aid / CPR Certification
- Familiarize students with local, state and national parks, forests and landscapes in multiple ecoregions
- Facilitate networking, professional development and mentorship for students
- Enable pathways for future internships, leadership and employment opportunities with TKO and other local, state and federal land management organizations
- Enhance and preserve trail systems and natural areas in multiple ecoregions
- Inspire sustained participation in outdoor activities and related careers

Data collection methods:

WFA assesses internship outcomes through student and supervisor surveys regarding student growth and achievement via the following Google Forms:

[tinyurl.com/WFA-Intern-Review-Form](https://forms.gle/1r9E2U734gcrBpv_IPQUGM27gkUny8PCeKwhVOs_cNol/edit#response=ACYDBNngdiEaelWm-qtNbVBoimJmVKd...)

[tinyurl.com/WFA-Supervisor-Evaluation-Form](https://forms.gle/1r9E2U734gcrBpv_IPQUGM27gkUny8PCeKwhVOs_cNol/edit#response=ACYDBNngdiEaelWm-qtNbVBoimJmVKd...)

TKO will facilitate similar post-event reports and surveys, including data on the number of participants, types of activities, feet of trail improved, hours completed, perceptions of participants, and other information documenting progress.

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

1. Outdoor Users - A key goal of the program is to empower historically underrepresented students to engage with Oregon's outdoor spaces and pursue careers in the field. Paid internship opportunities will break down traditional barriers to entry.
2. Wildlife-Associated Recreation - A key goal is to increase engagement of historically underrepresented students with Oregon's outdoor spaces, specifically via exposure to Oregon's trail system. Trail use is many individuals' primary means of access to nature and offers proximity and connection to myriad wildlife in a non-consumptive manner.
3. Enhancement and Restoration of Trails - This is the primary focus of internship placements with TKO.
4. Education Opportunities - In core curriculum and Labs, students will study:
 - A. Conservation - Habitat restoration
(All relevant taxa are checked in question 22, as coursework will cover the full Oregon Conservation Strategy.)
 - B. Conservation - Science, research, and monitoring:
 - C. Recreation - Research or planning
5. Education Materials - Student projects and WFA's role as a community resource result in education opportunities/materials for the public on outdoor priorities.
6. Students may also choose habitat restoration activities; science, research or monitoring activities; and/or research or planning that supports responsible recreation as part of their culminating projects.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRF Funds *

Please select the categories of work that will be supported by the OCRF funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other: Student intern trainings & certifications

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Project budget spreadsheet link: tinyurl.com/WFA-budget

1. Personnel: \$12,960 for equitable compensation of internship service by underrepresented students (\$1,620 per intern, 108 hours each at \$15/hour). \$5,000 for TKO personnel at a discounted rate.
2. Equipment: \$240 to TKO for student equipment.
3. Other: Student Trainings & Certifications. \$1,040 to TKO for professional training and certifications for students.
4. Administration: \$760 to WFA to cover a portion of administrative costs.
5. In-Kind Contributions: WFA, TKO, and SEI will make in-kind contributions valued at \$22,223.36. This includes:
 - A. Lab (\$500)
 - B. Receptions (\$600)
 - C. WFA, TKO, and SEI staff hours (\$12,658.96)
 - D. Tools (\$1,200)
 - E. Mileage (\$392.40)
 - F. Other administrative costs (\$1,164)
 - G. Project value of TKO volunteer stewardship completed (\$5,708)

WFA will explore additional private fundraising to supplement grant funding to scale up the program and ensure it continues for years to come.

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Wayfinding Academy

Wayfinding Academy (WFA) is a 501(c)3 nonprofit community college at the heart of a movement to revolutionize higher education and ensure all students have the chance to thrive. Located in and serving a historically under-resourced region of North Portland and surrounding communities, WFA prioritizes equity and empowerment of diverse voices in all contexts.

Among the college's current student body, 52% identify as BIPOC, 44% identify as LGBTQ+, and 16% are first-generation college students. Emphasizing equity in hiring, all WFA staff positions receive approximately equal compensation. 53% of staff identify as BIPOC, 15% identify as people who experience disabilities, and 85% identify as gender non-conforming or members of groups that have historically experienced gender- or sex-based discrimination in the workplace.

WFA will serve as the grant project lead, developing and managing the Wayfinding Ambassadors program. The college will create relevant curriculum and labs on outdoor equity and conservation, including the Oregon Conservation Strategy, and contribute staff resources to all program areas, including the community partnerships, student internships, and community outreach components as well as monitoring and evaluation of outcomes.

More information about WFA and its professional staff is available at: www.wayfindingacademy.org.

Trail Keepers of Oregon

Trailkeepers of Oregon (TKO), a statewide nonprofit trail stewardship organization, will partner with Wayfinding Academy as the inaugural Community Partner for the Wayfinding Ambassadors program in 2022. TKO's mission is to protect and enhance the Oregon hiking experience through trail stewardship, advocacy, outreach and education. TKO's vision is that Oregon's trails and natural lands are well cared for by TKO-inspired stewards and dedicated public resources, connecting people with nature and one another on trails that are accessible and welcoming to all communities.

In furtherance of this mission, TKO will provide hands-on experiential learning, training and mentorship for students enrolled in the Wayfinding Ambassadors program to develop practical skills, increase comfort in the outdoors, and foster careers in outdoor-related careers. TKO will also ensure environmental compliance and permitting in volunteer service agreements with land managers.

More information about TKO and its professional staff is available at: www.trailkeepersoforegon.org.

Self Enhancement, Inc.

Self Enhancement, Inc. (SEI) is a Portland-based nonprofit serving youth and families, primarily African Americans and other communities of color, with culturally-responsible academic and wraparound services.

SEI is Oregon's largest African American-led nonprofit multi-service organization, last year benefiting over 18,000 PK-12 students, youth ages 18-25, families, and individual adults. The organization's relational

service delivery model is culturally specific for African Americans and responsive to other cultures and intersecting backgrounds. SEI presently works with 23 schools across five Metro-area districts, and has decades of experience in preparing Black and other youth of color to enroll and persist in higher education and early career exploration.

With four decades of experience in addressing the complex needs of youth and families through the provision of high-quality culturally specific and responsive services, SEI has been vital in helping overcome traditional and persistent barriers. Both WFA's new Social Change & Civic Action degree and the college's Free Tuition Initiative for BIPOC Oregonians were developed in partnership with SEI. For the Wayfinding Ambassadors program, SEI will partner in advising on equity issues related to community engagement components and course content.

More information about SEI and its professional staff is available at: www.selfenhancement.org.

In addition, WFA will actively recruit new community partners throughout the project timeline.

Timeline *

Please identify the key milestones towards completing the project and achieving results.

Throughout full duration of project timeline: Core curriculum and Labs developed and taught by the college with a central focus on the Oregon Conservation Strategy and Oregon's nine ecoregions. Equity-centered learning and development that fosters diverse representation in the outdoors and associated careers.

February 2022: Create program marketing materials and language. Research and compile list of potential Community Partners that meet target criteria. Contact and meet with potential Community Partner organizations. Ongoing design and staff recruitment for Lab on Environmental Science, Conservation and Outdoor Equity. March to April 2022: Host first recruitment reception for ~5 potential Community Partner organizations. Connect partner organizations with interested student interns to interview for Spring/Summer internships. May to July 2022: Award stipends to 4 students from historically underrepresented and economically disadvantaged groups. Provide logistical support for students and organizations throughout Spring/Summer internships. July 2022: Administer evaluations and assess initial program internship cycle. Additional outreach to and meetings with potential Community Partner organizations. August 2022: Host second recruitment reception for ~5 potential Community Partner organizations. Connect partner organizations with interested student interns to interview for Fall/Winter internships. September 2022 to January 2023: Teach Lab to students and the broader community on the topic of Environmental Science, Conservation and Equity. Award stipends to 4 students from historically underrepresented and economically disadvantaged groups. Provide logistical support for students and organizations throughout Fall/Winter internships. Administer evaluations and assess second program internship cycle and full program success.

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Link to SEI's Letter of Support: tinyurl.com/SEI-Letter-of-Support

Link to Spreadsheet of Project Budget: tinyurl.com/WFA-budget

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

Free Tuition Initiative

wayfindingacademy.org/free-tuition-initiative

In the wake of the 2020 murder of George Floyd, WFA took concrete steps to increase support for students of color by establishing a Free Tuition Initiative for BIPOC students in Oregon, starting with Black and Native American Oregonians.

According to Oregon's Higher Education Coordinating Commission, students of color accrue more debt than white students. Black and Indigenous people in Oregon have been disproportionately impacted by Oregon's white supremacist history. In addition, college debt is a major factor in the racial wealth gap in this country.

The Free Tuition Initiative removes a major financial barrier to college education and aims to end the intergenerational cycle of debt and poverty. The full value of each scholarship is \$24,000 (\$12,000 per year for 2 years).

Since the launch of the Free Tuition Initiative in August 2020, WFA has awarded 8 full tuition scholarships to Black and Indigenous students. The funding for this initiative comes from WFA's general fund and from grant monies. WFA has received \$34,000 in grant funding from the Jackson Foundation, Autzen Foundation, Collins Foundation, and Marie Lamfrom Foundation to support the Free Tuition Initiative.

WFA aims to have $\frac{1}{4}$ to $\frac{1}{3}$ of each cohort be recipients of the Free Tuition Initiative. In the Fall 2021 term, the college has 25 enrolled students, 8 of whom are Free Tuition Initiative recipients.

Project 2

1500 maximum characters

Far-A-Wayfinding

wayfindingacademy.org/virtual

In response to COVID, WFA launched a Far-A-Wayfinding online program in September 2020 that took core elements from the college's 2-year program and restructured them into an 8-week remote learning experience. Participants can enroll in the 2-year program upon completion of Far-A-Wayfinding, and count the online credits to the full degree.

To date, Far-A-Wayfinding has been offered twice. 11 students have participated in the program. Of those students, 8 enrolled in the full-time degree upon completion of the online program. The strong success of this program led to its permanent addition to course offerings.

The Far-A-Wayfinding program has 3 elements: the Intro to Wayfinding Course, Weekly Guide meetings, and online Labs.

Intro to Wayfinding course - Uncover your passion and establish a starting point to become an agent for positive change in the world.

Weekly Guide meetings - WFA believes forming strong relationships with students is the best way to help them grow and increase their sense of agency. Every Far-A-Wayfinding participant is paired with a Guide who meets with them for 45 minutes each week to provide personalized support.

Online Labs - WFA curriculum is complemented by 12-hour workshops called Labs. Labs bring together students and members of the community and are designed to explore a specific topic or skill set in more detail. Labs are taught by experts in a variety of fields.

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Google Forms

OCRf Project Proposal Form

Thanks for your interest in applying for a grant from the Oregon Conservation & Recreation Fund. More information, including information on the Conservation & Recreation Advisory Committee's program priorities, available funds, and guidelines for preparing your application are available online here: <https://www.dfw.state.or.us/conservationstrategy/OCRf/committee.asp>. Questions can be referred to the Department of Fish and Wildlife via email: odfw.ocrf@odfw.oregon.gov or by phone: 971-719-1192.

Email *

lindseyjones@wallowaresources.org

Project Information

Project Title *

White-headed Woodpecker Monitoring, Demographics, and Space Use in Managed Forests of the Blue Mountains

Project Overview *

Please provide a short summary that could be used to describe your project on the OCRf website. (2000 character max)

White-headed woodpecker are a focal species for late-successional dry forest, a priority species for the U.S. Forest Service, and an Oregon Conservation Strategy species due to the steep decline in their habitat and population trend. However, Blue Mountain Forests do not currently have a monitoring program in place for this species. Data from this study will determine whether fuels reduction treatments are affecting white-headed woodpecker occupancy, reproduction, and space use. Data will be used to develop a protocol that will form the basis of a long-term monitoring program. Results of this study will improve our understanding of foraging needs of White-headed Woodpecker to inform stand-scale silviculture prescriptions and better understand tradeoffs associated with space use and nest success. By integrating home range data with occupancy estimates, land managers will have the ability to estimate White-headed Woodpecker abundance across a wide range of habitat conditions. Home range estimates will allow for estimation of carrying capacity across the landscape in relation to forest management. Knowing the carrying capacity that treated and untreated stands can support will enable us to prioritize treatment areas to increase the size and quality of suitable habitat patches and improve connectivity between them.

Primary Contact Person *

Lindsey Jones

Primary Contact Email Address *

lindseyjones@wallowaresources.org

Primary Contact Phone number *

931-308-1424

Lead Organization *

Wallowa Resources

Mailing address *

401 NE 1st Street, Enterprise, OR 97828

Lead Organization Federal Tax ID *

91-1794627

Geography/Ecoregion *

Consult the Oregon Conservation Strategy Ecoregions: <https://oregonconservationstrategy.com/ecoregions/>. Check all that apply.

- Blue Mountains
- Coast Range
- Columbia Plateau
- East Cascades
- Klamath Mountains
- Nearshore
- Northern Basin & Range
- Willamette Valley
- West Cascades

Project Location (City) *

La Grande

Project Location (County) *

Union

Project Start Date

MM DD YYYY

02 / 01 / 2022

Project End Date

MM DD YYYY

02 / 29 / 2024

Funding Amount Requested *

The maximum request is \$20,000.

10709

Total Project Cost *

193000

Project Description

Tell us about your project.

Project Narrative *

Please describe your project in full. (8000 character max)

Field methods.—A subset of adult white-headed woodpecker (WHWO) will be radio marked to estimate adult space use and foraging behavior. These adult WHWO will be captured at nests using mist-nets, noose traps, and hoop nets. The objective will be to capture and radio mark 40 WHWO (20 each in control and potential treatment sites) each field season.

Each radio-marked WHWO will be located every 2–5 days between sunrise and sunset using a R410 VHF receiver. A GPS location will be recorded every 4-5 minutes using a handheld GPS unit for locations where the bird is found to remain on a tree for at least 5 seconds, while maintaining a distance of at least 10 m from the bird. At this same time, surveyors will note if the bird is foraging by pecking, probing, gleaning, flaking, or excavating; the tree species the bird is foraging on; and the foraging substrate (i.e., cone, stem [live or dead], or foliage).

Following the field season, remotely sensed habitat data will be compiled for analyses, including topography, nearest distance to edge (i.e., the boundary between closed canopy forest and an opening in the canopy), distance to management treatment, canopy cover, patch area, patch edge, etc.

Statistical analyses.— Home ranges will be estimated for nesting (i.e., incubation and brood rearing) and non-nesting (fledging and post-fledging) periods separately. Kernel density techniques will be used to estimate home ranges using the 50th and 95th percentile kernel density estimates for all birds with at least 30 location fixes (Kernohan et al. 2001). Notably, these two different measures will allow for the differentiation of core areas used from the larger home range for each bird. Home range statistics will then be related to remotely sensed habitat conditions in each nesting period using generalized linear mixed models with random effects for individual birds. A mixed effect multinomial logistic regression model will then be used to estimate foraging preferences in the different nesting seasons and different forest treatment types.

Application of study results.— For territorial species, how animals use space can dictate the capacity of landscapes to support populations. This work will allow for the estimation of carrying capacity across the landscape in relation to habitat conditions, including forest management practices. By integrating these data with occupancy probability estimates, managers will have the ability to estimate WHWO abundances across a wide range for forest habitat conditions to monitor WHWO population dynamics (Tingley et al. 2016). Moreover, these data can be integrated with the data from Objective 3 (see number 18) to examine the tradeoffs associated with space use and nest success. Finally, the results of the foraging preference analysis increases our understanding of the needs of foraging adult WHWO across the different nesting periods to inform within forest stand management practices and better understand patterns uncovered in occupancy dynamics and nest success.

Project goals and objectives *

Please describe the project goals and objectives. (2500 character max)

Goal: Improve our understanding of foraging needs of White-headed Woodpecker to inform stand-scale silviculture prescriptions and better understand tradeoffs associated with space use and nest success.

Objectives:

1. To evaluate the efficacy of using audio recording units (ARUs) to monitor landscape-scale space use by White-headed Woodpecker (WHWO).
2. To develop, implement, and evaluate a sampling design to monitor the distribution of WHWO and other species in the Blue Mountains, Oregon.
3. To estimate WHWO nest site selection and nest success in relation to the size and spatial arrangements of management treatments.
4. To estimate WHWO home range size and foraging habitat use in relation to the size and spatial arrangements of management treatments.

Funding has already been secured for objectives 1-3. This proposal is specifically asking for funding to accomplish objective 4.

Outcomes and Measuring Success *

Please describe the expected outcomes of your project and how success will be measured. (2500 character max)

The desired outcome (and measure of success) for this project is to obtain the following metrics for both treatment and control areas:

change in occupancy, 2) nest density, 3) Home-range size 4) abundance, and 5) carrying capacity

Conservation & Recreation Advisory Committee Program Priorities *

Which of the Program Priorities does your project address?

- Conservation - Habitat restoration and improving habitat connectivity related to implementing the recommendations in the Oregon Conservation Strategy and evolving science recommendations in the Oregon Conservation Strategy and evolving science
- Conservation - Science, research, and monitoring directly related to implementing the recommendations in the Oregon Conservation Strategy, especially through community science activities.
- Recreation - Opportunities to engage and expand the number and diversity of Oregon's outdoor users.
- Recreation - Opportunities to introduce Oregonians to wildlife-associated recreation
- Recreation - Educational materials and opportunities related to responsible recreation, ecology, and wildlife conservation for kids and adults in multiple languages.
- Recreation - Research or planning that supports responsible recreational opportunities
- Recreation - Enhancement or restoration of trails and access to waterways in a way that preserves or enhances sensitive habitat or that resolves impacts related to informal or dispersed recreation in sensitive habitat

Program Priorities Narrative *

Please describe how your project advances the above priorities, including any connections you see to the Oregon Conservation Strategy. (1500 character max)

This project lies within the Blue Mountains Ecoregion in the Willowa Mountains COA (COA #163) in the Ponderosa Pine Woodlands Strategy Habitat. WHWO is specifically identified as a Strategy Species for this habitat type. This project will collect data on all 3 of the data gaps identified in the OCS for this species: 1) assess distribution, 2) evaluate impacts of forest management practices on woodpeckers and habitat suitability of managed forests, 3) quantify predation rates and describe habitat relationships of predators. The OCS identifies A Conservation Assessment for WHWO (MellenMcLean et al. 2013) as the key plan to guide conservation and research for this species. Our study design incorporated the methods from the Research, Inventory, and Monitoring Opportunities section of this document. The monitoring strategy (and our study design) outlines a 3-pronged approach including: broad-scale occupancy and distribution monitoring; effectiveness monitoring; and validation monitoring for HSI models. The protocol is designed to provide data on the effectiveness of treatments to restore habitat, and the impacts of treatments with other objectives (e.g., fuels reduction) on WHWO. The data will be used to better define habitat associations of WHWO, and to design treatments at the stand and landscape scales. Once baseline data is obtained, this protocol will be used to monitor long-term change in the distribution and occupancy of WHWO across the entire Blue Mountains.

For projects that address a conservation priority, what are the primary taxa that will be affected?

- Birds
- Mammals
- Reptiles
- Amphibians
- Fish
- Plants
- Invertebrates
- Not applicable
- Other:

OCRf Funds *

Please select the categories of work that will be supported by the OCRf funds requested in this proposal.

- Administration
- Contract services
- Equipment
- Personnel
- Supplies/materials/services
- Travel
- Other:

OCRf Funds *

Describe the specific expenditures for your project that will be supported by the OCRf funds requested in this proposal. Expenses must be identified either as administration, contract services, equipment, personnel, supplies/materials/services, or travel expenditures. (1000 character max.)

Supplies/materials/services:

VHF receiver (R410) Qty:2 = \$2,000

VHF transmitter (ATS A2405 1.2g) QTY: 40 = \$8,000

Traps - mist nets, noose traps, and hoop nets = \$400

Spring scale - Pesola® Micro-Line Spring Scale QTY:53 = \$159

Bird holding bag QTY:30 = \$150

Partners *

Identify partner organizations that will be actively involved in the project and describe their roles

Wallowa Resources will collect habitat measurements

Forest Service biologists and ODFW interns will deploy acoustic recording units and radio-tag and track birds

US Forest Service Pacific Northwest Research Station completed the study design and will analyze data and publish results

Timeline *

Please identify the key milestones towards completing the project and achieving results.

2021-Study Plan Development (February-May); 2022- Sampling and Data Collection Sampling and Data Collection (1st Season) Deploying ARUs (May-June) Conducting transect surveys(May-June) ; 2022- field data collection (May-Aug) data analysis (Fall); 2023- 3rd season field data collection (May-Aug) data analysis and reporting (Fall)

Other information

Please provide any additional information you'd like the Committee consider, including links to project website or other media.

Necessary permits for animal capture and handling have already been obtained.

Past Projects/Experience

Describe two projects completed by the Lead Organization in the last 5 years and the results achieved

Project 1

1500 maximum characters

In 2021, Wallowa Resources hired and managed a four person summer crew to collect the first year of pre-treatment monitoring data for the newly received Collaborative Forest Landscape Restoration (CFLR) project on the Wallowa-Whitman and Umatilla National Forests. The crew collected forest stand exam data in addition to metrics related to wildlife habitat metrics, invasive species, First Foods such as huckleberries, and understory vegetation. The USFS, and all partners in the All Lands Partnership, have asked Wallowa Resources to continue this crew, and to expand it to collect data beyond the upland forest plots. This project- the data are still being collected at the time of this application- demonstrates our ability to work across jurisdictions with multiple partners to achieve common goals across our NE OR landscape.

Project 2

1500 maximum characters

Wallowa Resources has a strong interest in protecting rare and sensitive species. Since 2017, we have worked with US Fish and Wildlife Service (USFWS), The Nature Conservancy (TNC), Wallowa-Whitman National Forest, and other stakeholders to implement projects relevant to the USFWS Recovery Plan for Spalding's catchfly- a plant species listed as threatened under the Endangered Species Act. Specific projects include inventories for the plant in Hell's Canyon, Zumwalt Prairie, and the Imnaha River canyons; collecting, managing and analyzing monitoring data on the Timber Pasture of the Wallowa-Whitman National Forest; and writing a required Habitat Management Plan for the TNC Zumwalt Prairie Preserve Key Conservation Area. All of these projects are critical to meeting the de-listing criteria of the Recovery Plan, and we continue to work with key partners to ensure collaboration across the 4 state range to this end.

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