



## Longleaf Landscape Stewardship Fund Full Proposal Project Narrative

**Instructions:** Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed nine (9) pages; please use Times New Roman font, no smaller than 11-point. Please include spaces between paragraphs. Do not delete these instructions or the text provided below. Once complete, upload this document into the on-line application as instructed.

**1) Project Overview:** Describe the importance of this project in achieving range-wide longleaf pine ecosystem restoration objectives, as well as bottomland hardwood restoration objectives, if applicable. Elaborate on the conservation outcomes and what makes them achievable and important relative to the goals in the [Business Plan: Longleaf Forest and Rivers](#) and broader set of [America's Longleaf Restoration Initiative](#) range-wide goals. Describe specifically how the project supports an existing regional, state, or local conservation plan/strategy that benefits the longleaf ecosystem. Highlight how the project will expand on existing conservation initiatives to maximize large-scale ecosystem function. **Be specific and do not include general background information on the importance of longleaf.**

Proposals should describe how the project supports the goals and activities of local Federal partners, particularly local U.S. military installations and bases (refer to RFP), National Forests and U.S. Fish and Wildlife Refuges, where relevant. Projects that will benefit U.S. military installations and bases, including work on public and private lands buffering or in proximity to installations, must download, complete and upload the [DOD Questionnaire](#) included in the Uploads section in Easygrants.

This project will result in the restoration of large portions of unconverted, fire suppressed, historically pine-dominated uplands on the Cross Bar/A1 Bar Ranches (CB/AB) property; public lands that serve as critical connection to adjacent conservation areas. Restoration will focus on a locally imperiled and unique type of longleaf pine community known as sandhill. This community occurs on deep, infertile sands and requires regular fire to maintain groundcover diversity and to reduce hardwood cover. Sandhill polygons occur interspersed within the approximately 3,500 acres of these fire-suppressed, historically pine-dominated uplands found within the portion of the property identified as the Core Conservation Area (CCA). The Ecosystem Management Plan (EMP) developed for CB/AB identified the CCA as the focus area for habitat management, restoration, and creation of a wildlife corridor to maintain connections to offsite habitats.

This project seeks to restore up to 1000 acres of select sandhill and longleaf pine flatwoods polygons within the approximately 1,964 acres of pine flatwoods (FLUCFCS 411), longleaf pine-xeric oak (FLUCFCS 412) and hardwood-conifer mixed (FLUCFCS 434) communities occurring within the CCA. This will be conducted via selective hardwood reduction and reintroduction of fire to return these areas to a natural vegetative structure more closely resembling the former sandhill composition of an open, longleaf pine dominated canopy, low oak cover, and a high diversity and abundance of native ground cover species. Such restoration will benefit local and range-wide longleaf and sandhill communities by restoring and maintaining the rare plant communities that are unique to these habitats.

This project is compatible with the goals of the EMP prepared for CB/AB, specifically pertaining to restoration of native habitats within the CCA which provide important habitat for protected/target wildlife species including: gopher tortoise (*Gopherus polyphemus*), northern bobwhite quail (*Colinus virginianus*), eastern indigo snake (*Drymarchon corais couperi*), swallow-tailed kite (*Elanoides forficatus*), red-headed woodpecker (*Melanerpes erythrocephalus*), brown-headed nuthatch (*Sitta pusilla*), wild turkey (*Meleagris gallopavo*), gopher frog (*Lithobates capito*), Sherman's fox squirrel (*Sciurus niger*), Florida mouse (*Podomys floridanus*), southeastern American kestrel (*Falco sparverius paulus*), and Florida sandhill crane (*Grus canadensis*). From a regional perspective, the role of CB/AB as a conservation corridor has been specifically recognized as a major component of Pasco County's Conservation Strategy and has been identified as a vital linkage between envisioned wildlife corridors with other large publicly owned lands or rural protection areas in the region, including Starkey Preserve, Connor Preserve, Cypress Creek Preserve, and the Green Swamp (Area of Critical State Concern). On a

larger scale, CB/AB is approximately 15 miles from the Croom Wildlife Management Area within the Withlacoochee State Forest which is home to a thriving population of red cockaded woodpeckers (*Leuconotopicus borealis*), and represents a significant potential extension of the Florida Wildlife Corridor, which is located approximately 20 miles northeast of CB/AB and includes the existing Withlacoochee State Forest-Green Swamp Conservation Corridor, and ultimately, the Ocala National Forest. The CB/AB property and the ongoing restoration work being conducted also falls within the 5-year strategic plan for the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program which has committed to providing 5 years of grant funding targeting the restoration of scrub and scrubby flatwoods habitat within CB/AB.

The conservation outcomes include restoring habitat for many protected and declining species, including NFWF target species: gopher tortoise, northern bobwhite quail, eastern indigo snake, swallow-tailed kite, red-headed woodpecker, brown-headed nuthatch, and wild turkey. Decades-long fire suppression has resulted in dense oak canopies and sparse shrub and groundcover due to deep shade and oak litter, resulting in limited forage and cover for these and other species. The property currently supports the above listed species, indicative of the ability to expand these species into suitable habitat once restored. The applicant has partnered with and received funding from the Florida Fish and Wildlife Conservation Commission for restoration of sandhill on the property, in anticipation of receiving gopher tortoises displaced due to habitat losses in the region. Wild turkey populations on CB/AB are thriving, and each of the other above species also occur on the property, but in limited numbers and locations due to the lack of cover and native forage that will be provided when restoration is complete. The regional significance of onsite habitats includes the designation of CB/AB by Audubon of Florida in 2000 as part of the "Central Pasco Important Bird Area (IBA)."

The project is additionally compatible with the NFWF *Longleaf Forest and Rivers' Implementation Plan*, as it specifically calls for the enhancement of existing longleaf forests to improve structure and, ultimately, allow for management using prescribed fire alone, an important goal for these fire-dependent communities. These outcomes are achievable based on similar results elsewhere on the property and regionally, where hardwood reduction followed by a properly timed burn program has achieved the goal of increasing native cover, restoring structure, and expanding local wildlife populations. The project includes a highly cost-effective approach that has already been used on the site, and focuses on unconverted sandhill polygons with remnant pines and persistence of sufficient native groundcover such that expansion and natural recruitment from existing seed sources is readily expected, minimizing the need for costly planting.

**2) Threats and/or Opportunities:** Describe the threats that this project seeks to address in achieving large-scale conservation of the longleaf pine ecosystem, as well as bottomland hardwoods, if applicable. Highlight the opportunities that this project will create in sustaining restoration and protection efforts in the geographic area in which the project will occur. Establish a clear need for the funds being requested and demonstrate that activities are additive and would not move forward absent funding from the Longleaf Landscape Stewardship Fund.

This project provides an excellent opportunity to restore sandhill and longleaf pine polygons within the publicly owned and managed CB/AB lands. The restoration will result in more viable longleaf pine communities across the landscape, benefiting a variety of wildlife and rare plant species which can then move to and within adjacent habitats. Native sandhills support many rare plant species that prefer fire-maintained habitats. These species can remain dormant for many years in the absence of an appropriate fire regime. The opportunity to restore and maintain regional populations of such rare species is significant. Additional opportunities include the ability to collect seeds and translocate plant and wildlife species, such as gopher tortoise, to the restored areas, further promoting expansion into adjacent habitats.

These and other pine-dominated communities on the site suffer from decades of fire suppression and lack of active management. The development of the EMP for the site in 2019 created a mechanism for addressing habitat restoration and management that was previously lacking. It included an implementation plan, prioritized action item list, and recommended methods for restoration and management within each habitat type. The action items included addressing restoration of longleaf pine and native forest areas as a high priority due to the current low quality and lack of diversity within these long-unburned areas, as well as the ultimate conversion of pine plantations used for pine straw to longleaf pine vs. slash and to sustainable silviculture practices. Because of limited funds available to this local government entity, and the need to avoid passing costs along to the public ratepayers, restoration of the overgrown sandhills has only been allowed to proceed using funding assistance from State and Federal partners. This has included Habitat Management Assistance Funding from the Florida Fish and Wildlife Conservation Commission (FWC) for restoration of sandhill habitats to benefit the gopher tortoise; and the US Fish and Wildlife "Partners Program" which is providing funding for hardwood reduction within scrub and scrubby flatwoods habitats. To their credit, Pinellas County Utilities (PCU) has focused their limited financial resources on the restoration of specific areas of scrub and scrubby flatwoods that are occupied by the federally threatened Florida scrub-

jay (*Aphelocoma coerulescens*) within the site's designated Florida Scrub-jay Management Area (FSJMA). These habitats and this species will also benefit from the restoration of the adjacent sandhill habitats, as will other pineland dependent species such as the gopher tortoise, northern bobwhite, eastern indigo snake, red-headed woodpecker, brown-headed nuthatch, swallow-tailed kite, wild turkey, and the state threatened southeastern American kestrel.

In the absence of the funding required to conduct this project, these sandhill polygons will become increasingly overgrown, shaded, and dominated by leaf litter, such that remaining native vegetation will be further excluded. In this scenario the remnant sandhill seedbank will gradually become less viable. As this occurs, restoration efforts will become more costly and difficult, with less opportunity for success due to continued loss of native groundcover species, which would necessitate planting/seeding of grasses and forbs for restoration. The few focal wildlife species that remain in these areas will disperse to seek more open habitats that provide adequate forage. Such dispersal puts these species at risk for predation, and the use of less suitable habitats will result in lower reproductive success and decreased survival rates. Additionally, lack of management to sustain native habitats could result in the conversion to other uses such as cattle grazing or production pine.

Without restoration of the former longleaf pine and sandhill habitats on CB/AB, the goals of the USFWS Partner's for Fish and Wildlife Program, Pasco County's Conservation Strategy, and FWC's goal of increasing availability of gopher tortoise recipient sites are in jeopardy. CB/AB is a vital linkage between other large publicly owned and managed lands and rural protection areas in the region. The restoration of high quality sandhill habitat on CB/AB will encourage restoration efforts on these nearby properties and will strengthen the potential for success of envisioned wildlife corridors. Pasco County is currently negotiating with a private landowner adjacent to CB/AB to establish an approximately 600-acre corridor, referenced as Stagecoach Ranch, that would provide a direct connection between CB/AB and the proposed Turpentine Mitigation Bank to the northeast. Turpentine Mitigation Bank is currently in the permitting process and will result in 474 acres under preservation and management, a large portion of which consists of longleaf pine communities previously and currently proposed for restoration. Pasco County's proposed Stagecoach Ranch corridor and the connection with Turpentine Mitigation Bank would permanently ensure that important management practices such as prescribed burning will not be hindered by the urban/natural interface. The restoration of the CB/AB sandhill habitats would incentivize the conservation and restoration of those adjacent properties and would increase the viability of a greater wildlife corridor between CB/AB and the Withlacoochee State Forest which is a part of the greater Florida Wildlife Corridor.

This project will also serve to continue and expand on internal restoration of select stands of planted longleaf pine. A total of 145 acres remaining from the original longleaf pine timber plantations established on CB/AB in 1994 and 1995 have been restored via third row thinning and subsequent prescribed burning, resulting in successful restoration of longleaf pine stands within two locations on site. An aggressive nuisance and invasive vegetation management plan was also implemented in 2023 to target problematic vegetation such as cogon grass (*Imperata cylindrica*), Caesarweed (*Urena lobata*), natal grass (*Melinis repens*), and more, through robust quarterly herbicide applications. The thinning, burning, and invasive vegetation management of these healthy 25-year-old longleaf stands provides an excellent opportunity to promote PCU's long-term goal of restoring longleaf pine habitat on-site. Additional funding will allow PCU to build on such successes.

**3) Project Location:** Provide an overview map(s) of the project location in the Uploads section in Easygrants. Summarize below, the location(s) where project activities will occur and whether activities will occur on public and/or private lands. Indicate how the project location(s) support or complement state, federal and other partner priority areas for longleaf and/or bottomland hardwood restoration and private landowner outreach. Please note that Easygrants also includes a Map module requiring applicants to define their project location. Maps submitted as uploads in Easygrants are required in addition to completion of the Map module in Easygrants.

**Figure 1, Location:** The project is located within CB/AB, public lands comprising 12,381 acres located in north-central Pasco County. The project falls within the Longleaf Landscape Stewardship Fund Program Boundary, within the historical longleaf pine range, and is along the southern boundary of the Focal Area/Local Implementation Team Boundary for Florida.

**Figure 2, Regional Conservation Lands:** The project and location complement local and regional conservation initiatives, including serving as an important linkage to existing public lands and conservation parcels. Pasco County's Conservation Strategy identifies CB/AB as a corridor connection to other publicly owned lands and rural protection areas in the region.

**Figure 3, Adjacent Landowners:** CB/AB's role as an important wildlife corridor is enhanced by the character and ownership of adjacent lands, particularly those south, southeast, east, and northeast of CB/AB. These large, privately-owned adjacent tracts retain much of the natural vegetation cover types, including longleaf, and are relatively unfragmented by

roads, residential developments, intensive agriculture, and land uses incompatible with wildlife corridors. These adjacent properties include the proposed Turpentine Mitigation Bank, located to the northeast of CB/AB, and Stagecoach Ranch.

**Figure 4, Core Conservation Area:** The project falls within the designated CCA of CB/AB, which includes habitats identified in the EMP for restoration and management for native plants and wildlife, and to enhance the connection/corridor value. This CCA also includes longleaf and sandhill restoration areas that are already underway.

**Figure 5, Core Conservation Area Vegetation Communities:** Locations of the project area (FLUCFCS 411, 412, & 434) relative to wetlands, existing longleaf restoration, and lands either actively or proposed for management for wildlife.

**Figure 6, Sandhill/Pine Restoration Areas,** depicts the location of the approximately 1,964 acres of existing upland pine forests within the CCA, including those designated for longleaf restoration under the EMP, and encompasses the 1,000 acres of proposed project area to be ultimately restored under this grant and with funding from other partners.

**4) Community Impact:** Describe: a) the community(ies) where the project will take place, b) who will benefit from the project, and c) how they were or will be engaged in project development and implementation. In the table below, provide demographic information on the community(ies), including but not limited to age, race and ethnicity, poverty rates. Potential sources of demographic information include [Explore US Census Data](#) (input zip code or city/state to get community information) and the [U.S. Census Quick Facts Page](#), which provides statistics for states and counties, and for cities and towns with a population of 5,000 or greater.

Community(ies)*	Race	Ethnicity	Poverty or Low-Income Rate
-Pinellas County Residents dependant upon drinking water from the site; -Pasco County resident recreation; -Pasco County schools; -Neighboring landowners and community partners; -State of Florida residents	68.8% White; 18.9% Hispanic; 7.7% African American; 3.5% Asian; 2.7% two or more races; 0.5% American Indian and Alaska Native; 0.1% Native Hawaiian/Pacific Islander	68.8% White; 18.9% Hispanic; 7.7% African American; 3.5% Asian; 2.7% two or more races; 0.5% American Indian and Alaska Native; 0.1% Native Hawaiian/Pacific Islander	10.9% persons in poverty

\*How community(ies) is defined may vary depending on the project geography and scope of work. NFWF staff recommends reporting data at the county level where possible. If you need additional space to provide the above information, please include the information as an upload using the “Other Document” upload category in Easygrants. Please contact NFWF program staff if you have questions or are unsure of how to complete this section.

The CB/AB project site is in rural Pasco County, FL and is operated primarily as a public water supply wellfield. The primary purpose of this property is to provide drinking water for Pinellas County residents, but restoration activities on the property serve to positively impact communities throughout Pasco County and the State of Florida. As a wellfield, much of the site is closed to public access due to security risks involved with drinking water supplies. However, discussions are underway with the Pasco County Parks Department to establish a public recreation area within the CCA. Additionally, the Pasco County School District regularly conducts field trips to the site’s education center and outdoor classrooms where students plant longleaf pine seedlings in designated locations and learn about habitat management. Local Audubon chapters routinely conduct birding field trips at CB/AB. Neighboring landowners and community partners will also benefit from the proposed restoration through the addition of high-quality wildlife habitats to support their individual restoration and land management goals. Further, CB/AB has been identified as a target property for the Florida Forever program which seeks to “conserve Florida’s natural and cultural heritage.” Florida Forever supports a wide range of goals, including water resource protection, coastal resiliency, preservation of cultural resources, public access to outdoor recreation, and the restoration and maintenance of public lands. As a result, this project will positively impact educational, recreational, and preservation opportunities for Pasco County and State of Florida residents and will continue as public water recharge and supply. Another goal of future conversion of timber to longleaf pine, and sustainable management and pine straw harvest practices will increase awareness and market demand for more eco-friendly products.

**5) Partnerships and Project Team.** Describe the partners who will be directly involved in project implementation. If a project is being implemented by an existing local partnership dedicated to longleaf pine restoration, please describe the partnership and its previous accomplishments. In most cases, this partnership should include participation by appropriate federal, state and local government staff, private landowners and non-profit organizations. If an appropriate local partnership does not already exist, please describe if there is a strategy in place to identify and engage essential partners.

List the individuals (name and title), agency or organization, and describe their specific roles in project implementation:

**Direct Partners:**

- **David Adams, Project Manager, and Stuart Dawson, Project Coordinator for Pinellas County Utilities**, will administer and direct the project, including managing contractors, schedules, restoration goals and budgets.
- **Vivienne Handy, Principal Ecologist; David Gordon, Senior Ecologist; and Christopher Keene, Ecologist with Quest Ecology Inc.**, the consulting firm under contract with PCU, will prepare methods, maps, specifications, conduct contractor oversight and pre-and post-implementation surveys and monitoring tasks.
- **Alex Kalfin, Program Planning & Monitoring Administrator, Florida Fish and Wildlife Conservation Commission**, is the coordinator for the Habitat Management Assistance Funding Program that CB/AB is participating in and will review results of current efforts and evaluate future applications.
- **Aline Morrow**, USFWS Partners for Fish and Wildlife Program, administers this grant and coordinates annual funding and reporting.

**Indirect Partners:**

- **Keith Wiley, Director for Pasco County Parks, Recreation & Natural Resources**, is the lead on the current coordination taking place to establish a county park and public access on a portion of CB/AB, including areas designated for longleaf pine restoration.
- **Van Pittman, Stagecoach Ranch**, helps steward his family's ranch where longleaf restoration is actively underway. It abuts CB/AB's northern boundary, and ~600 acres of the property are being considered for a conservation easement under Pasco County's ELAP program.
- **Pasco County Schools' Environmental Education Program** regularly utilizes the CB/AB Environmental Education Center to host field trips and student workshops. Students also participate in annual longleaf pine planting events designed to teach them the importance of this native community.
- **Dr. Francis Putz**, Distinguished Professor of Biology and Forestry, University of Florida, technical advisor on sandhill restoration methods.
- **Pasco County Schools**, regularly conducts educational workshops, field trips, and tours for local school children, including hands-on planting of longleaf pine seedlings within select restoration areas annually.
- **Tampa Audubon Society**, has partnered annually on the Florida Birding and Nature Festival with PCU since 2019, offering field trips guided by PCU and Quest Ecology staff.
- **Florida Ornithological Society** members have toured the site and provided input on management planning.
- **Pasco Audubon Society** regularly participates in field tours of the site with local members and PCU staff.

Letters of support have been received from several of these partners and are added to the Easygrants uploads section.

**6) Implementation Strategy and Activities.** Detail the strategies and activities that will be implemented to achieve the goals of the project. For instance, if the project is focused on private landowner outreach, please describe the process by which landowners will be targeted and engaged and ultimately committed to implement longleaf and/or bottomland hardwood stewardship activities on their lands. For restoration, enhancement and maintenance activities, provide details on how project sites were identified, which partners will be engaged, how habitat will be maintained over time and how sustainable local capacity will be built in the process. Provide a bulleted list of annual milestones toward progress to outcomes and/or implementation table that clearly indicates the project timeline.

The CB/AB EMP includes implementation action items that call for identifying management units for initial, relatively inexpensive restoration within priority areas. The project areas were chosen by focusing on unconverted sandhill polygons

with remnant pines and persistence of sufficient native groundcover such that expansion and natural recruitment from existing seed sources is readily expected. These remnant sandhill habitats were chosen over other uplands that lacked the native vegetation component in the understory. The project objectives are listed below:

- Reduce mid-story and overstory hardwoods to approximately 5% cover, on average.
- Increase total percent groundcover (grasses, forbs, low shrubs) and groundcover species richness toward target community-appropriate levels.
- Increase natural recruitment and establishment of longleaf pine (*Pinus palustris*) seedlings.
- Increase percent cover bare mineral soil.
- Minimize mortality of mature pines from re-introduction of fire.
- Abandon unnecessary internal roads and firebreaks.
- Trend toward managing with prescribed fire with transition-season burns over 1-to-3-year fire return intervals.
- Minimize impacts to desirable vegetation cover and wildlife during all restoration activities.
- Establish monitoring protocol to regularly assess success toward achievement of above-stated goals.

The above are proposed to be implemented using methods currently in place, specific to CB/AB habitats types, and under the direction of ecologists experienced in habitat restoration and management. Contractors experienced in hardwood reduction, herbicide application, and invasive vegetation control will be used. The methods will primarily include girdling hardwoods with chainsaws to apply herbicide directly to the cambium and leaving the resulting dead trees in place, with select felling and treatment of stumps. Select trees located in topographic lows and/or natural fire breaks will be evaluated for retention with the goal of retaining the appropriate cover by mature hardwoods in suitable locations for mast and cover for wildlife. Prescribed burns will take place within winter and spring months following completion of the structural treatments so that fire intensity in these long-unburned areas is lower, thus less likely to cause mortality of residual pines.

Herbicide applications to existing and encroaching invasive species will take place as needed concurrently with and/or following hardwood reduction to deter establishment within the restoration areas. Invasive species to target for control include, but are not necessarily limited to, cogongrass, tropical soda apple, Caesarweed, natal grass, and camphor tree.

The restored habitats will ultimately be maintained using ongoing prescribed burning and will be qualitatively monitored by land managers and County staff. This restoration work will coincide with other ongoing habitat restoration projects on CB/AB funded by grants from partners including USFWS and FWC and partially funded by the applicant, Pinellas County.

The above restoration methods will begin with the selection of management units and identification of hardwoods to be retained within each. Priority will be given to larger sandhill restoration polygons so subsequent burn units can be maximized, reducing the need for firebreaks, and increasing efficiency. The following timeline is anticipated:

Month	Activity
1-12	Mapping of management units; identify leave trees; prepare contractor specifications/methods; hire qualified contractor
6-18	Conduct hardwood reduction tasks & herbicide applications; Oversee and direct contractor actions
12-24	Monitor results, identify need/methods for preserving remnant pines; finalize burn units and schedules
15-30	Conduct prescribed burns (preference given to spring season burns, if possible, depending on fuel loads)
24-36	Monitor & record results; survey for pine seedlings, ground cover recruitment, and wildlife utilization.

Burns are anticipated to be conducted within 9-12 months following hardwood reduction but will be determined by monitoring results. This will include identifying measures to minimize mortality and damage to remnant pines. Extensive pine mortality after restoring fire to long un-burned longleaf pine forests has been attributed to smoldering combustion of duff around the bases of old pines. Crown scorch is another potential cause of mortality if adjacent mid-story or overstory fuels are present. Even if remnant pines are not directly killed during the re-introduction of fire, they can become weakened and stressed by the event, and therefore, more susceptible to disease and pests. Methods of protection that may be considered include, in order of preference: 1) raking away duff and/or removing vegetation and/or pre-burning around the bases of old trees; 2) mopping up/spraying tree bases with water before and/or after the fire to ensure no duff is burning in the sub-surface; 3) mechanical removal of dense vegetation and ladder fuels around the bases of old pines, and; 4) conducting initial restoration burn(s) during cooler winter months with adequate soil moisture.

Interim outcomes anticipated include the reduction of shade and leaf litter following hardwood treatment, and increased exposure of bare mineral soil following burning. It is anticipated that the desirable ground cover goal will be achieved via natural recruitment and will begin to be apparent after the initial hardwood reduction efforts and the initial restoration burn. It is expected after fire has consumed years of accumulated leaf litter, natural low intensity fires and recruitment of pine and ground cover will begin in concert with spring season prescribed burns conducted every 1-3 years.

**7) Conservation Outcomes.** Describe the conservation outcomes that will be achieved through project implementation. Each project is expected to include specific quantitative performance metrics that will be tracked and measured to evaluate the success of the project. Performance metrics are to be entered into the Metrics section of Easygrants.

The conservation outcomes to be achieved include several of the goals outlined in the EMP developed for CB/AB, that are specific to longleaf pine restoration, including:

- Implement measures to enhance/expand site usage by a diverse assemblage of native plant and wildlife species.
- Establish, restore, and manage for native longleaf pine flatwoods habitat, scrubby flatwoods and sandhill habitats within appropriate areas.
- Implement a Prescribed Burn Plan for the site that will mimic natural burn regimes to maintain the historic structure and composition of native habitats while protecting forestry resources.
- Control nuisance and invasive plants and wildlife that threaten the integrity of native habitats, land uses, and the achievement of management goals.

Additional, measurable outcomes will be realized such as increasing bare mineral soil cover, increasing natural recruitment and establishment of longleaf seedlings, and an increase in the total percent cover and species richness of groundcover species, including rare plants unique to these habitat types. Restoration of the historical groundcover abundance and species richness in these upland forests with community-appropriate species would be an indicator of success of the proposed restoration measures. Other conservation outcomes include the ability to increase fire management by reducing barriers to burning, such as hardwood dominance and resulting low fuel loads.

**8) Technical Merit.** Describe how the project is/will engage appropriate technical expertise and assistance throughout project planning, design and implementation to ensure the project is technically sound and feasible.

CB/AB is under the ownership of PCU, whose staff have been involved in the management and oversight of CB/AB for nearly 30 years. While primarily focused on water resource protections during that time, PCU is also vested in the habitats and wildlife of the site, and recently funded the development of a comprehensive Ecosystem Management Plan (entire document available in Uploads tab). PCU secured the services of a qualified ecological consultant to assist in the development and implementation of this plan, Quest Ecology Inc. (Quest). Quest has become a recognized leader in wildlife, protected species, and habitat restoration and management planning. Quest staff credentials include: Professional Wetland Scientists (PWS), Certified Prescribed Burn Manager, Certified Wildlands Firefighters, Master Bird Bander, FWC Authorized Gopher Tortoise Agents (GTA), Licensed Pesticide Applicators, and FDEP Qualified Stormwater Management Inspectors. When preparing the CB/AB EMP, Quest and PCU utilized scientifically published and peer reviewed literature and called on local experts and agencies for assistance and input and will continue to do so to ensure currently accepted, scientifically valid practices are employed. Quest is currently directing and overseeing the restoration of CB/AB sandhill habitats under the FWC Habitat Management Assistance Funding Program, and restoration of CB/AB scrubby flatwood habitats under the USFWS Partners for Fish and Wildlife Program. All tasks will be implemented under PCU oversight, utilizing experienced, qualified contractors and according to accepted industry and ecological restoration standards.

**9) Benefits to Priority Species:** Please describe how the restoration work described in the proposal will provide and sustain optimal longleaf habitat conditions and support the Business Plan: Longleaf Forests and Rivers goals for red-cockaded woodpecker, gopher tortoise, Bachman's sparrow and northern bobwhite. Please also describe potential benefits to other at-risk, threatened or endangered species as well as other species, such as game species. Describe expected measurable population improvements to any of these species to the extent possible based on the restoration or recovery strategies described in the proposal and how outcomes will be measured. If reliable quantitative data is unavailable, discuss the benefits to species in qualitative terms.

The Project supports the goals for NFWF target species gopher tortoise and northern bobwhite via the restoration of native habitats historically occupied by these species. The property currently supports these species, indicative of their ability to expand into suitable habitat once restored. Gopher tortoises are currently found in primarily disturbed habitats and planted pine edges, where they opportunistically take advantage of the limited open areas that have not become overgrown and shaded. Although historical population counts are lacking, it can be assumed that the property's gopher tortoise population has been in decline for many years due to fire suppression, the ensuing increase in canopy cover, and resulting decrease in forage, as well as the conversion of former habitats into production timber. This situation has been observed in the ~250 acres of sandhill undergoing restoration via the FWC program, where active burrows are noticeably infrequent.

Northern bobwhites have been observed to date at only two locations on CB/AB. During the breeding season they were heard on occasion within the Florida Scrub Jay Management Area; and they were observed twice during the nonbreeding season, adjacent to the southern Longleaf Pine Restoration Area, in the southwestern corner of the property. Restoring longleaf pine and sandhill habitats will increase the success and survival of the local population, while increasing breeding season habitat. With northern bobwhites already present, the appropriate management of these restored sites will offer suitable breeding territories, food resources, and cover to defend against predators.

Restoration of native sandhill habitats on CB/AB will also serve to enhance and create additional habitat for other species currently managed within the CCA including southeastern American kestrel and Florida scrub-Jay. Conservation measures for the southeastern American kestrel have included the installation and maintenance of nest boxes. This project will result in a considerable increase in both nesting and foraging habitat, with the removal of closed canopy areas, and the creation of snags for nesting cavities. Sandhill habitat targeted for restoration with this project also abuts the Florida Scrub-Jay Management Area which is currently being restored in part with funding from the USFWS Partner's Program Grant via hardwood reduction and prescribed burning to benefit the small resident population of scrub-jays.

Native sandhills support many rare plant species that prefer fire-maintained habitats that can remain dormant for many years in the absence of an appropriate fire regime. The expansion of state-listed species currently present can be expected, including: the endangered Curtiss' milkweed (*Asclepias curtissii*), and spreading pinweed (*Lechea divaricata*); threatened giant orchid (*Orthochilus ecristata*), Catesby's lily (*Lilium catesbaei*), and many-flowered grasspink (*Calopogon multiflorus*); and "vulnerable" species Florida scrub skullcap (*Scutellaria Arenicola*), and Florida Indian plantain (*Arnoglossum floridanum*). The opportunity to restore and maintain regional populations of such rare species is significant.

**10) Monitoring and Evaluation.** Describe the general monitoring approach that will be used to assess progress for those metrics provided in Easygrants. For projects that support the [Business Plan: Longleaf Forests and Rivers](#) goals for red-cockaded woodpecker, gopher tortoise, Bachman's sparrow and northern bobwhite, please describe what monitoring will take place to measure impact to these populations. For other indicator and/or at-risk, threatened, or endangered species that do not include specific goals in the business plan, please describe what monitoring will take place to measure impact to these populations (applicants are not required to monitor these species populations but are encouraged to coordinate with existing monitoring efforts). If the project involves landowner outreach and assistance, please describe how landowners' activities and accomplishments will be monitored, and how the project will be evaluated to determine if and how project activities led to landowner engagement in restoration activities. Please note any challenges or limitations you anticipate in conducting monitoring or the interpretation of anticipated results.

Project monitoring will consist of regular qualitative assessments for progress pertaining to canopy reduction, pine seedling establishment, native groundcover recruitment, and invasive vegetation cover. Existing project site conditions will be documented to establish a baseline and restored polygon boundaries will be mapped with estimates of existing canopy, groundcover, pine, and invasive vegetation cover. Established transects through each restoration unit will be used to collect cover data by species. Site assessments will occur monthly and quantitative data collection will take place semi-annually. Photo stations will be established at appropriate locations for before and after photos. Restored polygon boundaries will provide the metric for "acres under improved management" and burn unit maps will be created and used to document acres burned annually throughout the project.

Monitoring for gopher tortoise will include pre-and post-restoration burrow surveys. Data regarding burrow density and forage cover to determine potential carrying capacity will need to be collected to obtain approval from FWC to use the project as a gopher tortoise recipient site.

Monitoring for northern bobwhite populations will consist of qualitative observations. Limited quantitative surveys may take place during the breeding season, when male northern bobwhites will signal with their recognized “bob-white” call to attract mates and defend patches against other males. From these calls, surveyors can estimate the total number of males within the specified survey circle, and from there approximate the population size of northern bobwhites on the property.

Qualitative monitoring during the breeding season may occur for the additional NFWF focal species including eastern indigo snake, swallow-tailed kite, red-headed woodpecker, brown-headed nuthatch, and wild turkey. Monitoring of these species will allow us to determine if the project results in expanded territories and/or nesting and foraging opportunities.

**11) Project Sustainability:** Please describe how the project will be maintained after the grant end date to ensure specific ecosystem benefits are achieved and sustained over time. Who will be responsible for the long-term monitoring and maintenance of the project, and how will future funding be secured to support this and ongoing efforts of this type? For activities on lands not currently under long-term protection, what assurances or mechanisms will be utilized to sustain habitat conditions and necessary management?

CB/AB consists of public lands under the ownership and management of PCU, which will be responsible for the long-term protection, management, maintenance, and monitoring. The intent of the requested funding is to kick-start restoration such that future management can be conducted readily and cost effectively under the existing contract mechanisms. The goal to restore native longleaf pine habitats to conditions that can be managed with fire alone will allow PCU to assume future responsibility for this low-cost management activity. Management funds for CB/AB in part come from the forestry and ranching operations that take place primarily outside the CCA. The forestry resources and harvest schedule ensure future funding will continue through the established slash pine plantations on the property. On-site land management is partially funded through the credits the PCU receives in exchange for cattle ranching and residential benefits for the land manager. Funding will also be realized through the implementation of the approved gopher tortoise recipient site program with FWC.

**12) Ancillary Benefits.** Describe any ancillary benefits that may result from the project, (e.g., creates a model for landowners; establishes methods that can be shared with other practitioners; creates new partnerships; etc.).

The CB/AB property represents a rare opportunity to restore and improve a diverse ecosystem that will benefit both onsite and regional wildlife populations. The ancillary benefits include the shared experiences available to partners and other entities engaged in longleaf restoration and management, and wildlife habitat conservation in general. Decline of habitat quality due to lack of management, fire suppression in particular, is a common cause for loss of biodiversity. At least one private landowner, Stagecoach Ranch, and three public entities: Pasco County, USFWS, and FWC are already engaged in current and future partnering, which will be furthered by the successful completion of this project.

This funding provides large public landowners with the unique ability to respond to what can be considered their ethical duty to prevent the extinction of rare species and enable the persistence of native flora and fauna in an increasingly fragmented landscape. This project will fund the portion of the property that holds some of the highest potential for habitat conservation, corridor enhancement, and the preservation of biodiversity. Efforts to expand and restore these existing corridors within CB/AB, and potentially extend them to include the western linkage to Starkey Preserve as identified by Pasco County, and the northeastern linkage to Stagecoach Ranch and the proposed Turpentine Mitigation Bank, represents the maximum conservation benefit for CB/AB, adjacent lands, and the native flora and fauna that inhabit or pass through it.

This program also opens the door to continued restoration efforts on CB/AB, by allowing for the funding needed to begin on these polygons and pursue alternative management funding mechanisms such as gopher tortoise relocations. Grant funding and recipient site fees may reduce the need for production timber in slash pine and create opportunities to replace these with longleaf pine stands, and allow the site to become more self-sustaining. The current environmental education programs underway with Pasco County Schools will also benefit via access to and the monitoring of restored habitats.

The project may also serve NFWF’s stated purpose of improving the understanding of the carbon and water benefits of longleaf pine restoration and management. Opportunities may be provided here to study carbon sequestration benefits of pine versus oak dominated forests.

**13) Other (Optional):** Provide any further information important for the review of this proposal. **N/A**