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INTRODUCTION

Since the 2009 release of the Range-wide Conservation Plan for Longleaf Pine (Conservation Plan), which identified an ambitious goal of increasing longleaf acreage to eight million acres by the year 2025, a diverse partnership of natural resource management agencies, non-governmental organizations, institutes of higher learning, forest industry, and private landowners have joined forces to promote longleaf conservation and restoration in an effort referred to as the America's Longleaf Restoration Initiative (ALRI). The Longleaf Partnership Council (LPC), which includes representation from all of these stakeholder groups, was formed in 2011 to increase communication, collaboration, and leverage for implementation of the Conservation Plan. This partnership has gained national recognition as a model of collaborative landscape-scale conservation.

This document, Strategic Priorities and Actions 2022-2024, is the fourth and final three-year step-down planning document designed to provide a more focused look at short-term activities needed to advance the goals and objectives of the Conservation Plan. More specifically, the purpose of Strategic Priorities and Actions 2022-2024 is to:

- Identify strategic priorities and recommend actions needed over the next three years that continue ALRI's progress toward the restoration goals in the Conservation Plan.
- Provide mechanisms and metrics to track, measure, and demonstrate progress toward these goals.
- Provide outreach information describing ALRI's accomplishments to LPC members and other interested parties.
- Affirm and potentially expand the roles and contributions of current LPC members and supporters.
- Identify opportunities to engage additional partners in the longleaf conservation effort as well as opportunities to align with and leverage complementary conservation efforts such as State Wildlife Action Plans, State Forest Plans, and others.

The LPC considers this document to be critical because the planning period covers the final three years of the original Conservation Plan's scope. Analyses of past progress and current projections for the next three years suggest that it is highly unlikely that we will achieve the 8-million-acre goal by 2025. This does not diminish the incredible achievements that have been made since the founding of the LPC; the partners are steadfast in their commitment to reaching the 8-million-acre goal regardless of the timeframe. We are very proud of our accomplishments to date, which include:

- Since 2008, almost 1.7 million acres of longleaf pine have been planted (Source: Southern Forest Nursery Management Cooperative 2021).
- Since 2013, approximately 13.7 million acres have been treated with prescribed fire.
- Over 270,000 acres have been protected for their value as longleaf pine habitat.
- Over 31,000 acres have been converted to longleaf dominance by silvicultural treatments such as midstory removal and harvest of offsite pine species.
- In total, over 17 million acres have been impacted through the ALRI.

 As of 2021, over 100 representatives and 55 organizations have served on the LPC, bringing diverse perspectives and expertise to the table that make ALRI a true collaborative effort.

Success in ultimately achieving the 8-million-acre goal will require the continued involvement and commitment of the large and collaborative partnership now in place. ALRI has earned a reputation as a national model for effective conservation partnership. Looking forward, developing markets, growing recognition of the benefits of longleaf pine related to climate resilience, and the incredible momentum ALRI has built for longleaf pine all suggest continued success. It is important that the agencies,

organizations, and individuals involved with ALRI look forward and define how the collective partnership will continue to work toward our goals beyond 2025. A follow-up document to the original Conservation Plan, a "V2", is needed to ensure the continued commitment of ALRI's partners and supporters toward reaching these common goals. The strategies and actions summarized in a revised Conservation Plan will help maintain and build upon the substantial momentum for longleaf pine conservation that has developed over the past two decades and help ensure continued support for longleaf restoration and conservation and ultimately, the achievement of the 8-million-acre goal.



RANGE-WIDE PARTNERSHIP FRAMEWORK

Strategic Priorities and Actions 2022-2024 focuses on collaborative approaches of the involved partner agencies and organizations at all scales. ALRI and partners operate at the national, rangewide, state, or regional scale, and perhaps most importantly, often at the local scale. Each scale offers an opportunity to coordinate and collaborate for different purposes.

LOCAL

At the local scale, Local Implementation Teams work to bring landowners, managers, and other partners together to deliver results on the ground. These teams are typically centered on Significant Geographic Areas identified in the Conservation Plan. They are responsible for identifying boundaries for focused restoration and maintenance activities, bringing key stakeholders together, defining and implementing priority management actions, and tracking and reporting results of local efforts. They coordinate with other Local Implementation Teams across the range as part of a network to share their approaches as well as help identify priority issues that need addressing at larger scales.

STATE

At the state level, State Coordination Teams serve to coordinate actions of Federal and State Agencies, NGOs, and Local Implementation Teams and help define programs, allocate funds, and report accomplishments. State Coordination Teams work through existing organized entities to identify state goals, track and report accomplishments, and coordinate and leverage opportunities among programs at both public and private levels.

REGIONAL

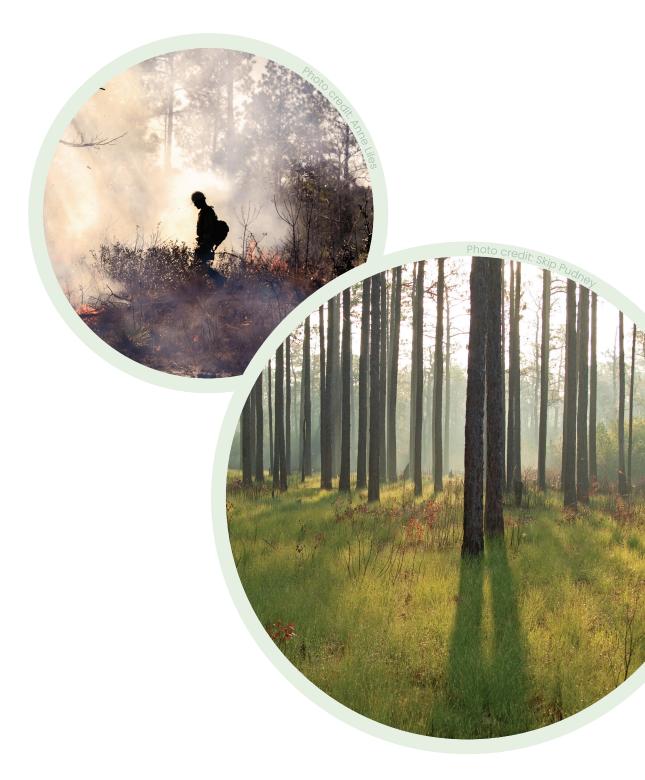
At the regional scale, agencies and multi-state organizations represent regional partners working together in a coordinated fashion. The LPC works primarily at this level. Many key issues such as planning, development of strategies to increase

prescribed burning, accomplishment reporting, monitoring seedling supplies, and development of understory plant material supply chains are best addressed at the multi-state or range-wide scale. Technical teams, typically staffed by LPC members and other regional partners, address range-wide issues and work with the members of the LPC and the State and Local Teams to implement their key actions.

NATIONAL

Three federal departments (Interior, Agriculture, and Defense) have committed to advancing the goals of the Conservation Plan. Federal agency coordination is accomplished through the Federal Coordinating Committee. In addition, several NGOs that operate at the national level have adopted longleaf restoration as priorities. This national profile offers the opportunity to bring national resources, programs, and policies to bear in order to achieve the goals of the plan.

Communication and coordination are necessary across all of these scales to effectively achieve the goals of the Conservation Plan by leveraging resources, replicating successes, and avoiding common mistakes. This collaboration is typically conducted through the Longleaf Partnership Council and individual agency/organization members' staff that support ALRI. See Appendix B for a list of commonly used acronyms used to identify many of the partners or programs listed in this document.



2022-2024 STRATEGIC PRIORITIES AND ACTIONS

1. ADVANCE KEY OUTCOMES

A. Significantly increase acres of longleaf pine ecosystems through establishing new longleaf forests. Fully functional longleaf pine stands provide quality habitat for at-risk species, economic returns for landowners, enhanced landscape resilience, improved water quality/quantity, and other societal benefits. The Conservation Plan established a goal of increasing acreage of longleaf-dominated forests, forests with greater than 50% longleaf composition, to 8 million acres by 2025, with a majority of that increase occurring on private lands and many of those acres in prioritized landscapes within designated Significant Geographic Areas. Establishment of new longleaf stands through planting has been enormously successful, averaging about 134,000 new acres annually over the past five years. In total, approximately 1.7 million acres of new longleaf have been established since 2008. However, ongoing losses reduce the overall impact of these impressive numbers for establishment.

The most current FIA data estimates approximately 4.7 million acres of longleaf pine, although the Longleaf Ecosystem Occurrence Geodatabase (LEO) project (see Section 2 below) will help us understand the true number of acres on the ground. With appropriate management applied, such as frequent prescribed fire, establishment of new longleaf forests can dramatically increase the population sizes and abundance of desired wildlife species, particularly when these forests reach the desired Maintenance Condition Class adopted by the LPC. Certainly, not all acreage planted or improved will ultimately reach this condition (much is not even intended to), but longleaf managed with this objective has the potential to provide optimal habitat for a large variety of endangered, threatened, or at-risk plants and animals, migratory birds, and game species (see Appendix C).

B. Improve and maintain existing acreage of longleaf pine ecosystems, with an emphasis on increasing the acreage of prescribed fire accomplished annually. The Conservation Plan prioritizes improving the condition of existing longleaf ecosystems, with a goal of doubling the acreage classified as maintenance condition class from 1.5 to 3 million acres. These improvements will require increased fire acreage and fire frequency, commercial and non-commercial thinning, midstory treatments, native understory restoration, and treatment of invasive exotic plants. Our accomplishment reports have shown significant information gaps in accounting for these activities on private lands outside of cost-share or incentive programs, and reporting mechanisms need refinement.

C. Comprehensively identify and convert existing mixed stands with a longleaf component to longleaf-dominant stands. Recent analysis shows that identifying mixed stands in which longleaf is a secondary component (< 50% of stand composition) and converting them to longleaf-dominant stands by harvest of undesired species is another potentially powerful approach for increasing acreage classified as longleaf pine. By working on public lands and with private landowners to identify these acres, reduce the non-longleaf component, plant longleaf where needed, and institute prescribed fire on a regular basis, we can reach maintenance class objectives with a component of older trees much more rapidly than by planting alone. This approach provides an opportunity to reduce restoration costs and achieve the desired stand structure and composition more quickly.

ACTIONS	IMPLEMENTATION
1.1 To achieve the 3-year projections for longleaf pine ecosystem acres, increase annual establishment on private lands to 120,000 acres by 2024 while maintaining annual establishment of 30,000 acres on public lands. Seek commitment from state partners and federal land managers to restore longleaf to all appropriate longleaf sites.	LPC/FCC member agencies State Forestry and Wildlife Agencies NFWF Longleaf for All
1.2 Develop a range-wide approach to analyze available data and identify opportunities to convert stands with a minor longleaf component to longleaf-dominant stands on public and private lands. Aggressive increases to 50,000 acres of annual conversion are a necessary first step.	LPC/FCC member agencies USDA-FS – FIA
1.3 Increase the acreage and frequency (every 2-3 years recommended) of prescribed fire on private lands, with a target of annually burning 500,000 acres by 2024. This can be accomplished though federal and state incentive programs, privately funded programs, and by increasing capacity of qualified prescribed fire practitioners.	LPC/FCC member agencies State Forestry and Wildlife Agencies TNC LIT Coordinators NFWF Prescribed Burn Associations Longleaf for All
1.4 Utilize prescribed fire to improve and maintain longleaf dominant and co-dominant stands on public land over the next 3 years by annually burning 1.5 million acres, with a burn frequency target of every 3 years. Engage in partnerships to increase prescribed fire application within SGAs and expand prescribed fire training opportunities for both public and private land managers.	LPC/FCC member agencies State Forestry and Wildlife Agencies SERPPAS Prescribed Fire Working Group NFWF LIT Coordinators NGOs TNC
1.5 Advance restoration and conservation of lands with the goal of precluding the need to list species under the Endangered Species Act, and recovering threatened or endangered species (including, but not limited to, longleaf-associated species). Encourage partners to actively pursue progress towards maintenance class conditions as outlined in the 2014 LPC document "Longleaf Pine Maintenance Condition Class Definitions."	LPC/FCC member agencies
1.6 Increase capacity and technical information needed to restore native understory plant communities by focusing on three primary objectives: (1) increase access to resources (e.g., seed material, equipment, restoration training/knowledge transfer) that facilitate groundcover restoration, (2) refine groundcover/condition class metrics to better assess Maintenance Condition Class, and (3) develop working policies that streamline the groundcover restoration process.	USDA-NRCS TLA Jones Center at Ichauway USDA-FS – Southern Research Station USDA-FS – S&P National Seed Laboratory Nurseries/Native seed providers
1.7 Emphasize treating high-priority non-native invasive plant species, with special attention paid to cogongrass and climbing fern.	LPC/FCC member agencies USDA-FS – S&P Forestry State Forestry and Wildlife Agencies LIT/other Ecosystem Support Teams

2022-2024 STRATEGIC PRIORITIES AND ACTIONS

2. UNDERSTAND AND PRIORITIZE THE LONGLEAF LANDSCAPE

Complete range-wide longleaf pine mapping to guide planning efforts. Since the Conservation Plan was released in 2009, the absence of baseline information on the location, extent, and condition of longleaf pine has limited our ability to adequately prioritize restoration strategies. Efficient use of limited resources will require a detailed, sciencebased, objective mapping and assessment effort to develop spatially explicit conservation plans to identify priority conservation areas. The Conservation Plan identified the following key actions related to addressing this information gap: 1) detailed spatial assessment of Significant Landscapes and initial condition classification, 2) range-wide identification of Significant Sites for longleaf conservation, and 3) spatial prioritization within each Significant Geographic Area of conservation efforts to leverage response of focal wildlife species. Addressing this need, incorporating principles of conservation biology and landscape ecology to leverage connectivity, buffering, and wildlife species response, is critical for further refinement and prioritization of regional strategies as well as developing spatially explicit restoration and conservation priorities and plans for Local Implementation Teams.

The 2012-2013 pilot project conducted by the Florida Natural Areas Inventory (FNAI) and the Florida Forest Service was a highly successful proof of concept that successfully mapped 2.15 million acres of longleaf ecosystems across Florida, almost half of the known longleaf across the range. Utilizing grant funds from NRCS, administered through the U.S. Endowment for Forestry and Communities, the LPC has partnered with FNAI and The Longleaf Alliance to expand this methodology to SGAs throughout the historic range of longleaf with the LEO project. Upon completion in 2022, this effort will greatly improve our understanding of the location, extent, and condition of existing longleaf pine in a spatially explicit manner. Concurrently, the SE FireMap project is nearing completion and will provide information about fire history and activity across the range of longleaf pine. The lack of this knowledge has, to this point, been a major barrier to fulfilling the three objectives related to the SGA cross-cutting theme outlined in the original Conservation Plan and this work has not been undertaken.

With the completion of these projects and advances in the availability of relevant data since ALRI began, we will soon have the needed tools and data to enable the sophisticated spatially-explicit conservation planning for longleaf pine that was originally envisioned. We recommend that this work be done in preparation for the next phase of the longleaf restoration initiative and as a foundation for the revision of the Conservation Plan.

ACTIONS	IMPLEMENTATION
2.1 Complete the development of LEO, both within (LEO v1) and outside of current LITs (LEO v2).	USDA-NRCS FNAI U.S. Endowment for Forestry and Communities TLA LPC/FCC member agencies LPC Leadership Team LIT Coordinators
2.2 Improve reporting of prescribed fire in longleaf by: 1) leveraging and building compatibility of state permitting/notifications systems, and 2) supporting continued improvements and ongoing maintenance of the SE FireMap project.	USDA-NRCS LPC/FCC member agencies TLA Tall Timbers State Forestry Agencies LPC Leadership Team LIT Coordinators
2.3 Prioritize and expand prescribed burning research opportunities including effects of scale, intensity, and timing of burns.	LPC/FCC member agencies
2.4 Qualitatively and quantitatively describe annual losses in LLP acreage.	USDA-FS – FIA LPC/FCC member agencies
2.5 Continue to work with FIA to utilize their data for assessment, monitoring, and reporting. Explore opportunities to more effectively use FIA data to inform minor longleaf component stand conversion potential and distribution.	USDA-FS – Southern Research Station USDA-FS – FIA LPC Leadership Team
2.6 Utilize new data from LEO, SE FireMap, and other sources to develop spatially explicit LLP resource map, including the identification of Significant Sites and completion of Significant Geographic Areas objectives from the Conservation Plan.	NFWF FCC member agencies LPC Leadership Team LIT Coordinators Third-party contractor

2022-2024 STRATEGIC PRIORITIES AND ACTIONS

3. EXPAND AND ADVANCE LONGLEAF RESTORATION ON PUBLIC LANDS

Continue and expand opportunities to advance longleaf restoration on public lands. Since the Conservation Plan's release in 2009, public lands continue to contribute significantly to the restoration and management of longleaf pine. The majority of this has taken place on Department of Defense installations and National Forests, but National Wildlife Refuges and state and local lands have also made significant contributions. For example, the USDA-FS "Million Acre Challenge" has been a landmark achievement for these efforts on public lands, with over 500,000 acres of National Forest lands now on the path to restoration of

longleaf pine. While public lands contain significant intact longleaf acreage, they also present some of the best opportunities to restore and permanently maintain longleaf forests due to their protected status. Current administrative goals to reduce wildfire risks and mitigate the effects of climate change present opportunities to utilize increased funding appropriations for controlled burning and optimal forest management. Additionally, most of the states in the longleaf range have Shared Stewardship agreements in place to enhance and support continued cross-boundary forest stewardship. Agreements have been signed in North Carolina, Georgia, Florida, Alabama, Mississippi, and Texas as of the writing of this report.



ACTIONS	IMPLEMENTATION
3.1 Support continuation of the "Million Acre Challenge" to put an additional 1 million acres of National Forest System lands "on the path" to longleaf dominance. Over 50% of the Challenge has been met with continued efforts to put the remaining 500,000 acres of NFS lands "on the path" to longleaf restoration by 2025. Promote expansion of stewardship contracting to accelerate longleaf pine restoration on National Forests.	USDA-FS LITS NGOs
3.2 LITs engage with National Forests in their SGA, as well as other public agencies, in land management planning and project implementation. Review Shared Stewardship agreements that have been signed and use as a tool to enhance collaborative cross-boundary longleaf management.	USDA-FS LIT Coordinators
3.3 Promote inclusion of longleaf restoration in management planning for lands administered by state wildlife and forestry agencies, the USACE, state parks, heritage areas, community-owned forests, and other public lands. Utilize data from LEO and other mapping projects to identify opportunities for longleaf restoration on these lands and actively promote it to managers.	LIT Coordinators DoD State Forestry and Wildlife Agencies State/County Water Management Districts State Parks NPS USACE Longleaf for All
3.4 Advance land protection priorities through submission of projects to the LWCF, Forest Legacy, REPI, ACUB, CFLRP, Acres for America, the Sentinel Landscapes Partnership, and other funding programs.	USDA-FS USFWS DoD State Forestry and Wildlife Agencies

4. EXPAND AND ADVANCE LONGLEAF **RESTORATION ON PRIVATE LANDS**

Continue and expand opportunities to advance longleaf restoration on private lands. Since the Conservation Plan was published in 2009, more acres of longleaf pine have been established on private land than public land (83% from 2013-2017). Over half (56%) of the acreage planted on private lands in 2017 was accomplished without costshare or incentives. These numbers highlight how critical private lands are for the success of ALRI and demonstrate the scale of opportunities working with motivated landowners. At the same time, longleaf acres are continuing to be lost according to FIA data.

ALRI launched a new working group in 2020, Longleaf for All, as an ongoing commitment to be an advocate and partner for minority landowners, professionals in the field of forestry and longleaf restoration, and recreationists. Land ownership comes with an array of challenges; however, for minority and under-resourced landowners, additional barriers exist that resulted, and continue to result, in a cycle of perpetual land loss in the Southeast. Longleaf for All can increase minority participation in forestry related programs, practices, and activities and help landowners reap the economic, ecological, and cultural benefits of owning forested land. This working group is also working to improve access, availability, and educational opportunities on public lands for minorities and at-risk communities.

ACTIONS	IMPLEMENTATION
4.1 Continue to support education and outreach to private landowners by annually hosting 35 longleaf-specific landowner field days throughout the range.	USDA-NRCS LIT Coordinators TLA NWTF TNC Jones Center at Ichauway State Forestry and Wildlife Agencies
4.2 Utilizing the <i>Longleaf for All</i> network, address the additional barriers that exist for minority and under-resourced landowners such as: property rights (heirs' property) and access to legal counsel; size and scale of small landowners; and access to markets and outreach. Increase pathways for minority professionals in the fields of forestry, biology, and prescribed fire in the longleaf restoration effort.	All
4.3 Harness existing partnership networks to raise landowner awareness – especially to historically underserved producers – of options for NRCS technical and financial assistance to restore and improve longleaf pine. Encourage partner participation in State Technical Committees and associated local working groups.	LIT Coordinators NRCS State Conservationists TLA TNC NWTF NGOs State Forestry and Wildlife Agencies Longleaf for All

ACTIONS	IMPLEMENTATION
4.4 Continue to identify and promote other incentive programs and funding opportunities for longleaf restoration, such as RCPP, state programs, local cost-share, and the Sentinel Landscapes Partnership.	LPC/FCC member agencies LIT Coordinators TLA Longleaf for All
 4.5 TIMOs and REITs manage large acreages of forests that are suitable for longleaf restoration. Continue current efforts to engage these landowners, as well as other types of large private landowners. Seek and promote opportunities to incentivize large landowners that do not qualify for traditional incentive programs. Address issues of higher liability insurance requirements to conduct 	LPC/FCC member agencies LIT Coordinators TIMO and REIT representatives SFI AFF TLA USDA-NRCS
 prescribed burns on TIMO lands. Encourage development of perpetual easement programs for working forests that value conservation actions above traditional easement valuations. 	
4.6 Continue growth and yield project for planted longleaf pine to accurately assess opportunity costs of choosing longleaf pine over other species of southern pine. Initial plot measurements complete in 2022, model development in 2023. Seek funding to finish project with remeasurements and model refinement in 2025 and 2028. Distribute results after second remeasurement.	LPC/FCC member agencies TIMO and REIT representatives Jones Center at Ichauway TCF
4.7 Continue engagement with non-industrial private forest landowners and private forestry consultants on longleaf pine, including economics, by improving coordination with organizations such as the Association of Consulting Foresters, the American Tree Farm System, Forest Stewardship Council, Sustainable Forestry Initiative, Forest Stewardship Programs, and State Forestry Associations. Continue efforts to develop markets for longleaf-specific products and/or longleaf restoration-related activities. Work to connect smaller landowners with forestry associations and consultants to increase market opportunities.	LPC/FCC member agencies LIT Coordinators AFF FLA TLA Longleaf for All
4.8 Continue to work with partners and agencies to increase land protection for longleaf forests. In particular, explore opportunities to promote longleaf restoration on easement-protected lands by working with local land trusts and the Land Trust Alliance.	TNC TCF TPL Land Trust Alliance (Southeast)
4.9 Advance land protection priorities through submission of projects to the Forest Legacy, REPI, ACUB, RCPP, Acres for America, the Sentinel Landscapes Partnership and other funding programs.	USDA-FS USDA-NRCS USFWS DoD State Forestry and Wildlife Agencies

5. STRENGTHEN THE PARTNERSHIP

Look for opportunities to strengthen ALRI and expand the effort to bring in new partners and stakeholders that are supportive of the goals established in the Conservation Plan. It is widely recognized that the key to the success of ALRI to date has been the diversity and collaborative efforts of the partners who support it.

ACTIONS	IMPLEMENTATION
5.1 Work to assess longleaf seedling needs and communicate needs through appropriate channels to keep producers informed of increases in seedlings needed. Promote genetic improvement of longleaf to increase survival, growth, yield, and quality of planted longleaf.	LPC member agencies State Coordination Teams TLA Southern Nursery Management Cooperative – Auburn USDA-FS – Southern Research Station State Tree Improvement Cooperatives
5.2 Highlight and promote unique benefits of longleaf for climate resiliency and adaptation, provision of ecosystem services, and public benefits (carbon storage and water quality/quantity). Promote research on these topics and disseminate results.	FCC member agencies LPC member agencies FSA NFWF State Coordination Teams LIT Coordinators Jones Center at Ichauway USDA-FS – Southern Research Station Clemson University
5.3 Promote effective, timely communications and outreach through existing partner capacity: 1) develop policy outreach strategy to promote awareness among political leaders of longleaf success stories, 2) promote in-reach activities to further engage LPC member agencies, 3) share ongoing research results (e.g. Rx fire, ecosystem services, etc.), and 4) update website to better reflect progress and strategic plan. Explore new and emerging opportunities for virtual/digital communication and outreach. Plan and execute 2025 ALRI celebration.	LPC Communications Team

ACTIONS	IMPLEMENTATION
5.4 Improve State Coordination Team and LIT coordination by continuing range-wide and regional LIT coordination meetings to increase collaboration.	LIT Consul LPC member agencies State Coordination Teams LIT Coordinators NFWF State Forestry and Wildlife Agencies Longleaf for All
5.5 Looking beyond 2025, plan and develop revised V2 Conservation Plan including foundational LLP Resource Map (Action 2.6). Develop and sign extension of 2010 Interagency MOU. Revise Declaration of Partnership for current partners and recruit new signatories. Seek opportunities to complement and align with other conservation collaboratives such as State Wildlife Action Plans, State Forest Plans, NBCI, LCC conservation blueprints, critical watershed designations, SERPPAS, the Sentinel Landscapes Partnership, Keeping Forests, etc.	LPC/FCC member agencies



CONCLUSION

This three-year implementation document was developed to identify the priority actions that need to be accomplished to reach the longterm goals identified in the Conservation Plan and to maintain and build upon the substantial momentum for longleaf pine conservation that has developed since establishment of the ALRI. This blueprint for priorities and actions provides a basis to leverage existing cooperative efforts within the LPC as well as a platform for the development of new collaborations. Implementing the action items identified in this document will not only increase the overall acreage of longleaf pine and improve the condition of existing longleaf pine ecosystems, it will also lay the groundwork

to make even greater advances toward our goal by improving outreach, better coordinating onthe-ground restoration activities, and expanding the resource base in order to broaden the scope and efficiency of our activities. Continued effective communication, engagement of policy makers, and demonstrated success in restoring longleaf pine are crucial elements required for ALRI to maintain its momentum and reach our restoration goals. These next three years should focus on preparing the Initiative to continue its work by developing a V2 Conservation Plan. This will be critical to ensuring the long-term success of ALRI beyond 2025 and the ultimate achievement of our goals.



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APPENDIX A

America's Longleaf Restoration Initiative: Key Milestones and Accomplishments

In the 1990s, conservation efforts began to halt the century-long, range-wide decline of longleaf pine ecosystems. Based on growing interest in this forest type, The Longleaf Alliance was created in 1995 and quickly became the leading advocate for longleaf restoration and a clearing house of information for agencies, organizations, landowners, and businesses involved in longleaf conservation work.

Federal land management agencies began taking landscape approaches to restoring longleaf ecosystems, implementing efforts to establish new longleaf pine acreage as well as to improve and maintain the estimated 1.2 million acres of existing longleaf pine on federal lands. State and federal cost-share programs applicable or targeted to longleaf restoration provided valuable assistance to landowners, including over 340,000 acres of longleaf established on marginal agricultural land through the Conservation Reserve Program (CRP) administered by the USDA Farm Service Agency. Local partnerships, such as the Gulf Coastal Plain Ecosystem Partnership (GCPEP), began looking beyond ownership boundaries at larger landscapes to conserve longleaf pine and associated plants and animals. The work of the USDA-FS Southern Research Station, forest nurseries, and academic institutions led to advances in management techniques, greater seedling availability, and increased planting survival rates, which made longleaf pine a more attractive alternative for public and private land managers.

Cumulatively, these efforts slowed the loss of longleaf pine ecosystems, with acreages stabilizing at about 3.4 million acres. However, it was clear much more needed to be done in order to restore and sustain longleaf pine ecosystems long-term, as longleaf on private lands and natural stands continued to show decline. Major accomplishments and milestones are documented as follows:

2007

A Regional Working Group comprised of 22 agencies and organizations forms, identifying the need for a range-wide conservation effort.

2008

A planning charrette involving over 100 natural resource professionals and landowners was held to begin the scoping process for the strategic plan.

2009

The Range-wide Conservation Plan for Longleaf Pine was released at the North American Wildlife and Natural Resources Conference in Washington, DC, and the America's Longleaf Restoration Initiative was launched.

An \$8.9 million American Recovery and Reinvestment Act (ARRA) Regional Longleaf Restoration Project was awarded, resulting in approximately 70,000 acres of improvements on state-owned and private lands.

2010

An MOU was signed by the Departments of Agriculture, Defense, and Interior during an America's Great Outdoors listening session, committing the signatories to implementation of the Conservation Plan and establishing the Federal Coordinating Committee for longleaf pine.

The Osceola National Forest was awarded a Collaborative Forest Land Restoration (CFLRP) project totaling between \$1.5 and \$2 million annually to restore longleaf pine.

2011

Conservation leaders across the South created the Longleaf Partnership Council, which includes 33 members representing federal agencies, state agencies, NGOs, private industry, universities, and private landowners.

State Coordination Teams were formed in Texas, Louisiana, Mississippi, Alabama, and North Carolina. The states of Florida, Georgia, Virginia, and South Carolina began efforts to formalize similar teams.

Eleven Local Implementation Teams began working in Significant Geographic Areas and Significant Sites identified in the Conservation Plan. Eventually, more LITs were formed to cover all these areas.

The USDA NRCS Wildlife Habitat Incentive Program provided approximately \$30 million for longleaf restoration in 2010 and 2011, resulting in over 150,000 acres of longleaf improvements on private lands.

2012

The USDA Forest Service designated the America's Longleaf Restoration Initiative as a High Performance Partnership within its Public-Private Partnership Strategy.

USDA announced that the Desoto National Forest was awarded \$2.7 million for an accelerated landscape longleaf restoration project, closely coordinated with the Mississippi Army National Guard and The Nature Conservancy.

The National Fish and Wildlife Foundation (NFWF) announced the establishment of the Longleaf Stewardship Fund, with \$3 million in funding from USDA, DOI, DoD, the Southern Company, and NFWF, available for the 2012 grants. Over 40 preproposals totaling \$7 million and 95,000 acres of proposed restoration activities were submitted.

The America's Great Outdoors initiative was formed, and the longleaf pine ecosystem was one of five focal landscapes highlighted in the report.

2013

The Longleaf Partnership Council released its first 3-year action plan (Strategic Priorities and Actions 2013-2015) that established priorities for capturing and reporting range-wide restoration progress.

NRCS began implementing the Working Lands for Wildlife Program, which enabled landowners to receive technical and financial assistance for voluntarily restoring and improving longleaf habitat on their land for the gopher tortoise.

The Longleaf Partnership Council released the Longleaf Pine Planting Density Fact Sheet to clear up widespread misconceptions and help guide landowner longleaf pine planting rate decisions.

International Paper and NFWF announced the Forestland Stewards Initiative, a \$7.5 million effort aimed at restoring and protecting landscapes in three priority regions in the South over a five-year period. This Initiative will benefit longleaf restoration efforts in the Carolina Low Country (both NC and SC) and the Piney Woods of TX and LA.

2014

NRCS announced the establishment of the Regional Conservation Partnership Program (RCPP), a comprehensive and flexible program that uses partnerships to stretch and multiply conservation investments and reach conservation goals on a regional or watershed scale. The longleaf pine ecosystem was one of eight Critical Conservation Areas designated by the Secretary of Agriculture for greater emphasis under the RCPP.

The Longleaf Partnership Council adopted Longleaf Pine Maintenance Condition Class Definitions: A Guide to Assess Optimal Forest Habitat Conditions for Associated Plant and Wildlife Species to help guide restoration efforts.

The Longleaf Partnership Council released the 2013 Range-wide Accomplishment Report, the first of comprehensive annual accomplishment summaries. This first report documented 156,000 acres of longleaf establishment and 1.38 million acres of overall longleaf ecosystem improvement activities.

The longleaf cone crop was one of the most prolific in recent years at an estimated 98 cones/ acre. This near-bumper crop helped relieve seed shortages range wide.

A ceremony to mark the Five-Year Anniversary of the release of the ALRI Range-wide Conservation Plan took place in Washington, DC. An estimated 200 participants attended the Progress and Promise themed events to celebrate ALRI's past successes and look to the future for ways to maintain the momentum needed to achieve the eight-million-acre restoration goal.

2015

The Longleaf Partnership Council's 2014 Range-wide Accomplishment Report documented 153,000 acres of longleaf establishment and 1.5 million acres of overall longleaf ecosystem improvements.

The Department of Interior awarded \$770,000 to implement prescribed fire in longleaf ecosystems in the South Atlantic Landscape Conservation Cooperative through its Resilient Landscape program.

The Longleaf Stewardship Fund expanded to provide a total of \$4.6 million in funding available for longleaf restoration efforts.

2016

The Longleaf Partnership Council's 2015 Rangewide Accomplishment Report documented 151,000 acres of longleaf establishment and that restoration activities were reported on 1,926,456 acres of public and private lands. Approximately, 1.58 million acres of prescribed burning was reported in longleaf pine for all ownerships.

The Longleaf Partnership Council released its second 3-year action plan (Strategic Priorities and Actions 2016-2018) that established priorities for capturing and reporting range-wide restoration progress.

The U.S. Departments of Agriculture, Defense and Interior, through the Sentinel Landscapes Partnership, designated Eastern North Carolina and Avon Park Air Force Range, Florida, as Sentinel Landscapes.

The documentary, Secrets of the Longleaf Pine, was released by Red Sky Productions and premiered on Public Broadcasting System in Georgia, Alabama, and South Carolina. Directed by Rhett Turner, the documentary went on to receive the Southeast Regional Emmy Award in 2016. The documentary is available at http://video.gpb.org/ video/2365587919/ and http://longleafpine.org/

2017

The Longleaf Partnership Council's 2016 Rangewide Accomplishment Report documented that 139,500 acres of longleaf pine were established (an 8% decrease from 2015) and more than 433,000 acres of prescribed burning was reported on private lands in 2016, an increase of 88,000 acres over the record total reported in 2015. This increase can be directly attributed to improved reporting by the State of Georgia, who began its first full year of a revised prescribed fire permitting process that specifically asked whether the planned operation would take place in longleaf pine stands. Total restoration activities were reported on a record 2,023,214 acres of public and private lands.

Recognizing the need to reinvigorate and accelerate the pace and scale of restoration to achieve the 8-million-acre goal by 2025, the Longleaf Partnership Council identified and released seven "Game Changers," defined as specific, action-oriented strategies that will significantly accelerate the pace of restoration.

NFWF announced that \$5.5 million in grants awards to support the restoration of the longleaf ecosystem in nine states. NFWF's Longleaf Stewardship Fund reached a historic milestone, surpassing 1 million acres of longleaf pine restored or enhanced.

The U.S. Departments of Agriculture, Defense and Interior, through the Sentinel Landscapes Partnership, designated a significant southern part of Georgia as a Sentinel Landscape. The state of Georgia and a number of private conservation organizations have identified about 1.3 million acres as critical to important natural resources, working economies, and military readiness within the landscape's boundary.

2018

The Longleaf Partnership Council's 2017 Range-wide Accomplishment Report documented 131,000 acres of longleaf establishment, 1.37 million acres of burning in longleaf stands, and 1,703,391 acres of overall longleaf ecosystem improvements.

The USDA Forest Service launched the "Million Acre Challenge" to put an additional 1 million acres on the path towards longleaf restoration.

NFWF announced a record \$6.5 million in grants to benefit longleaf pine forest and wildlife in eight states across the Southeast. Twenty-eight grants will support efforts to conserve more than 350,000 acres of longleaf pine habitat and recover populations of at-risk wildlife.

2019

The Longleaf Partnership Council's 2018 Range-wide Accomplishment Report documented 130,314 acres of longleaf establishment, 1.63 million acres of prescribed burning in longleaf stands, 22,414 acres of lands protected, and over 1.8 million acres of overall longleaf ecosystem improvements.

2020

ALRI celebrated 10 years of accomplishments in 2020. Between 2010-2020, partners established over 1.4 million acres of longleaf pine, conducted prescribed burns on over 13 million acres of longleaf stands, and protected over 270,000 acres of lands. These accomplishments translate to positive outcomes for local economies, national defense, rare species, recreation, forest resiliency, wildfire risk, clean air and water, carbon sequestration, and climate change mitigation.

The Longleaf Partnership Council's 2019 Range-wide Accomplishment Report documented 133,414 acres of longleaf establishment, 1.4 million acres of prescribed burning in longleaf stands, 39,727 acres of lands protected, and over 1.7 million acres of overall longleaf ecosystem improvements.

The LPC launched a new working group, Longleaf for All, as an ongoing commitment to be an advocate and partner for minority landowners, professionals in the field of forestry and longleaf restoration, and recreationists by increasing minority participation in forestry related programs, practices, and activities and helping landowners reap the economic, ecological and cultural benefits of owning forested land.

2021

The Longleaf Partnership Council's 2020 Range-wide Accomplishment Report documented 138,283 acres of longleaf establishment, 1.4 million acres of prescribed burning in longleaf stands, 34,790 acres of lands protected, and 1.9 million acres of overall longleaf ecosystem improvements.



APPENDIX B

List of Acronyms Used

ACUB	Army Compatible Use Buffer program
AFF	American Forest Foundation
ALRI	America's Longleaf Restoration Initiative
ARRA	American Recovery and Reinvestment Act
CFLRP	Collaborative Forest Landscape Restoration Program (USFS)
CRP	Conservation Reserve Program (FSA)
DoD	Department of Defense
DOI	Department of Interior
FCC	Federal Coordinating Committee
FIA	Forest Inventory and Analysis program (USFS)
FLA	Forest Landowners Association
FNAI	Florida Natural Areas Inventory
FSA	Farm Service Agency
GCPEP	Gulf Coastal Plain Ecosystem Partnership
LCC	Landscape Conservation Cooperative (USFWS)
LEO	Southeast Longleaf Ecosystem Occurrence Geodatabase
LIT	Local Implementation Team
LPC	Longleaf Partnership Council
LWCF	Land and Water Conservation Fund
NBCI	National Bobwhite Conservation Initiative
NPS	National Park Service
NFWF	National Fish and Wildlife Foundation

NGO	Non-Governmental Organization
NRCS	Natural Resources Conservation Service
NWTF	National Wild Turkey Federation
RCPP	Regional Conservation Partnership Program (NRCS)
REIT	Real Estate Investment Trust
REPI	Readiness and Environmental Protection Integration (DoD)
SERPPAS	Southeastern Regional Partnership for Planning and Sustainability
SFI	Sustainable Forestry Initiative
SGA	Significant Geographic Area
TCF	The Conservation Fund
TIMO	Timber Investment Management Organization
TLA	The Longleaf Alliance
TNC	The Nature Conservancy
TPL	Trust for Public Lands
USACE	United States Army Corps of Engineers
USDA-FS	United States Department of Agriculture - Forest Service
USFWS	United States Fish and Wildlife Service
USDA-FS	United States Department of Agriculture - Forest Service

APPENDIX C

Species Response to Longleaf Restoration Activities

One of the major drivers for longleaf pine recovery efforts is to improve conditions for wildlife and enhance floral and faunal diversity. The Rangewide Conservation Plan for Longleaf Pine identifies a target of having three million acres (of the overall eight-million-acre goal) in or moving toward a maintenance state that provides forest conditions "that will provide ecosystem functions, processes, and assemblages of representative plants and animals."

Numerous partners involved in the America's Longleaf Restoration Initiative are primarily engaged out of a desire or organizational mission to benefit wildlife populations by increasing the amount of suitable habitat through longleaf restoration. Some partners are specifically interested in rare and declining wildlife species and positively impacting recovery or listing decisions under the Endangered Species Act related to these species. With that in mind, the Longleaf Partnership Council identified parameters necessary for forests to be considered in this maintenance state and outlined these in the Longleaf Pine Maintenance Condition Class Definitions document released in October 2014. This document identified ranges of overstory, mid-story, and ground cover conditions that were indicative of fully functional and advanced-stage longleaf pine forested ecosystems.

The ALRI partnership is a diverse coalition whose members have equally diverse land management goals. While many partners are interested in longleaf because of its wildlife benefits, others focus more on economic considerations, recreational opportunities, and other attributes of longleaf pine. It is imperative when making estimates of species' responses to longleaf restoration activities that we not assume that every acre established

will automatically receive the ensuing activities or maturation time needed to move these young longleaf forests into the optimal maintenance condition class needed to support wildlife species of concern. For example, if we report restoring 100,000 acres of longleaf through establishment, there is nothing implied in that report that suggests that 100% of this planted acreage will ultimately move into the maintenance condition class. Not only are intermediate activities such as thinning operations and regularly applied prescribed fire necessary, long time horizons are required for newly established longleaf stands to mature into the type of forest desired by most wildlife species. A statement repeated frequently by longleaf proponents is that, "It takes 50 years to grow a 50-year-old tree." Clearly, there is a complex and dynamic temporal gradient in longleaf forest development. Younger forests may provide preferred habitat for certain species, whose numbers may then decline as the forest matures into a denser canopy. Conversely, with other species, low numbers of individuals may inhabit younger stands and then increase their populations as these stands mature. Finally, some longleaf-associated species will not utilize stands until they are relatively mature, with open canopies, moderate stocking levels, and herbaceousdominated understories.

Numerous efforts have been, or are currently being conducted, to further assess optimal open-pine forest conditions for wildlife and to make inferences based on existing knowledge that can help quantify how restoration activities may impact species occurrence and population size. In 2012, a group collaborated on a project sponsored by the

National Fish and Wildlife Foundation to synthesize existing knowledge of potential species response to longleaf restoration. Utilizing a literature survey and expert opinion, this work projected numerical population response from four indicator species based on current understanding of these species' home range and habitat requirements. These parameters were incorporated into a Bayesian network model that also included variables of spatial and temporal dynamics as well as relative costs of management actions. While beyond the scope of this appendix to outline details of this model, the component of the model that captures potential population responses is relatively straightforward. These projections are predicated on several assumptions:

Newly established longleaf stands will persist over relatively long spans of time, allowing full development of conditions outlined in the Maintenance Class document.

These stands will be managed with the regular and frequent application of prescribed fire.

Stocking levels and canopy closure will be maintained within the range of desired conditions for wildlife through regular thinning.

Other management interventions will be employed as necessary to maintain all strata of the stand within the range of desired conditions for wildlife as outlined in the Maintenance Class document.

Source populations of wildlife species are located within suitable dispersal distances to colonize restored sites, or translocation activities will be used to compensate if that is not the case.

Under these assumptions, it may be reasonable to expect that fully restored acres could, as an example, provide suitable habitat for the indicator species at the following rates:

SPECIES	AVERAGE DENSITY
Bachman's sparrow	10 acres/pair
Bobwhite quail	40 acres/covey (average 12 birds)
Gopher tortoise	3 acres/tortoise
Red-cockaded woodpecker	150 acres/group (average 3-4 birds)

It is important to remember that these projections are based on the wildlife research community's current understanding of presence/absence of a species under selected conditions of habitat structure. There is not adequate data to make informed estimates of reproductive potential or overall population trends for a given site, which are the true measures of wildlife population health. These projections were intended as a first step of an iterative process and will require more study to better understand the impact of our conservation investments. Researchers continue to explore these questions through modeling, field data collection, and monitoring and model validation, so these projections are subject to refinement as more information is gathered and evaluated. Ultimately, some assumptions will have to be made that a given percentage of acres established will be managed in a proper way and for a long enough period of time to provide appropriate habitat structure for wildlife species of interest. Once those assumptions have been quantified, we can begin to make confident estimates of potential wildlife response to restoration actions.

APPENDIX D

Glossary

America's Longleaf Restoration Initiative (ALRI):

A collaborative effort of multiple public and private sector partners that actively supports rangewide efforts to restore and conserve longleaf pine ecosystems. The vision of the America's Longleaf Initiative is to have functional, viable, longleaf pine ecosystems with the full spectrum of ecological, economic, and social values inspired through a voluntary partnership of concerned, motivated organizations and individuals. Meeting this challenge will require the strategic coordination of conservation actions among many partners and sectors that influence land use, with the goal of ensuring long-term sustainability and resiliency of these systems, and their constituent biodiversity.

Conservation Reserve Program: The Conservation Reserve Program (CRP) is a voluntary program for agricultural landowners administered by the USDA Farm Services Agency. Through CRP, an individual can receive annual rental payments and costshare assistance to establish long-term, resourceconserving vegetative covers on eligible farmland. Acreage enrolled in the CRP is planted to preapproved, resource-conserving vegetation, making the program a major contributor to increasing wildlife populations in many parts of the country.

Conservation Stewardship Program:

The Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resource concerns. Participants earn CSP payments for conservation performance - the higher the performance, the higher the payment.

Environmental Quality Incentives Program:

The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides financial and technical assistance to agricultural producers through contracts up to a maximum term of ten years in length. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air, and related resources on agricultural land and non-industrial private forestland. In addition, a purpose of EQIP is to help producers meet Federal, State, Tribal, and local environmental regulations.

Federal Coordinating Committee (FCC):

In June 2010, the Departments of Agriculture, Defense, and Interior formalized their commitment to the America's Longleaf Restoration Initiative and the goal of restoring 8 million acres in a Memorandum of Understanding. This agreement established the FCC, which coordinates efforts among participating Federal Agencies.

Local Implementation Teams: These Teams are developed at the local level by those interested in longleaf restoration. Each group defines the range and scope of actions they will undertake with an emphasis on convening multiple local area stakeholders, meeting resource needs, and implementing on-the-ground conservation/ restoration actions. It is anticipated that the bulk of restoration efforts will be carried out by Local Implementation Teams.

Longleaf Pine Priority Counties: The Longleaf Pine Priority Counties are those counties that have been identified by NRCS as designated focused areas for restoring longleaf pine ecosystems in the state and are usually located in the vicinity of a military installation, a national forest, national wildlife refuge, state forest, or heritage reserve.

Maintenance Condition Class: Longleaf pine forests in the maintenance condition class are considered to currently possess the fire regimes and ecological characteristics representative of the desired functioning longleaf pine ecosystem type. It is estimated that 1.4 million acres of longleaf pine forest type are in, or very near, this level. Retention of these areas is considered to be a priority in the Range-wide Conservation Plan for Longleaf Pine.

Range-wide Conservation Plan for Longleaf

Pine: A comprehensive 15-year plan prepared by representatives of multiple State/Federal agencies and NGOs that provides the national framework for the longleaf pine restoration effort. This plan is currently available at http://www.americaslongleaf. org/resources/conservation-plan/.

Regional Conservation Partnership Program

(RCPP): The RCPP is a new, comprehensive, and flexible program that uses partnerships to stretch and multiply conservation investments and reach conservation goals on a regional or watershed scale. Through RCPP, NRCS and state, local, and regional partners coordinate resources to help producers install and maintain conservation activities in selected project areas. Partners leverage RCPP funding in project areas and report on the benefits achieved.

Significant Geographic Areas (SGAs): The Rangewide Conservation Plan for Longleaf Pine identifies SGAs as sites "where resources, expertise, partners, and policy implementation can optimally be focused to conserve longleaf pine ecosystems."

Identifying these SGAs enables natural resource managers to target longleaf pine recovery efforts to locations where they will have the greatest impact and the optimal potential for success. SGAs may be divided into two distinct types based on size, complexity, and connectivity: 1) Significant Landscapes and 2) Significant Sites. Though Significant Sites are considerably smaller areas, they are considered to be of equal importance in that they provide extant examples of longleaf pine ecosystems.

Significant Landscapes for Longleaf Pine

Conservation: A type of Significant Geographic Area that is greater than 100,000 acres, has a core area of intact longleaf pine forest, is under some type of long-term conservation management scheme, and lacks constraints for management activities such as application of prescribed fire.

Significant Sites for Longleaf Pine Conservation:

A Significant Geographic Area of less than 100,000 acres that contains ecologically significant longleaf pine plant communities and provides an opportunity to protect and implement appropriate conservation activities.

Southeast Association of Fish and Wildlife **Agencies (SEAFWA):** The SEAFWA organization is composed of members representing the primary agencies involved in management of fish and wildlife resources in 15 States (plus Puerto Rico and the U.S. Virgin Islands) in the Southeastern U.S. The entire longleaf pine range falls within the SFAFWA boundaries.

State Coordination Teams: State Coordination Teams (SCTs) are made up of a wide assortment of representatives from Federal, State, and local level agencies/organizations/groups/stakeholders. SCTs serve to coordinate local/state level longleaf pine restoration/maintenance activities and integrate those activities with the range-wide effort.

APPENDIX D

Technical Teams: Teams of experts assembled at the request of the Longleaf Partnership Council to address existing or emerging range-wide issues that may impact longleaf pine conservation efforts.

Working Lands for Wildlife (WLFW): WLFW uses a voluntary, innovative approach to benefit high-priority habitat for seven species of wildlife that are declining, candidates for listing, or listed under the ESA. One of these species is the gopher tortoise, which inhabits longleaf pine ecosystems across a portion of the historic range. Through WLFW, NRCS works with agricultural producers to create and improve wildlife habitat with regulatory predictability from the U.S. Fish and Wildlife Service. Through WLFW, producers can receive technical and financial assistance to voluntarily restore and improve habitat on their land for the target species.







