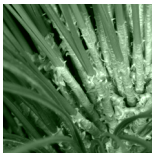
SERPPAS Implementation of the Longleaf Pine Range-wide Conservation Plan

Report to SERPPAS Principals

November 18, 2009


A report of the actions to be undertaken by the Southeast Regional Partnership for Planning and Sustainability for range-wide conservation of longleaf pine forests in the South

AMERICA'S LONGLEAF
A Restoration Initiative for the Southern Longleaf Pine Forest

Issue Area: Address Smoke Management and Air Quality

From the Range-wide Conservation Plan

- **RCPLP Key Action**—Through education and outreach, advance awareness of fire's influence in shaping and sustaining native ecosystems, as well as the benefits of frequent fire management as opposed to wild fire.
- **RCPLP Key Action**—Work cooperatively with the U.S. EPA and the state air quality agencies to address smoke management for fire management and to facilitate increased burning while complying with state air quality laws. Recognize the positive aspects of fire management on air quality in state plans. A key activity is the participation in the development and/or updating of Smoke Management Programs prepared by state air quality and land management agencies.

Organizations Represented on the Team

Co-chairs:

- SC Department of Health and Environment and Control
- US Environmental Protection Agency, Region 4
- Georgia Department of Natural Resources, Environmental Protection Division
- US Forest Service
- Department of Defense/Army
- Department of Defense/Air Force
- US Fish and Wildlife Service
- US Environmental Protection Agency, Office of Air Quality, Planning and Standards (OAQPS)
- National Resource Conservation Service

Priority actions on which substantial progress could be made in the next 12-18 months.

I. Evaluate current communication and outreach processes and tools

- Share ideas and best practices for media, messages, timing, geographic area, *etc.*, with full understanding that advance communication and notification on planned fires should not be a "one size fits all" methodology;
- Use and reinforce existing networks; develop forums to encourage multiple state and agency communication;
- Focus on appropriate local communications and tools, since actions around individual prescribed burns will be local.
- Hold a regional forum to initiate implementation of this action.

II. Develop and share consistent data and best management practices

- Develop and adopt parameters needed for consistent reporting;
- Develop regional ability to track acres burned and the resulting emissions from those burns, both present and future;
- Harmonize multiple state inputs and data;
- Improve management of information flow;
- Hold a regional forum to initiate implementation of this action.

III. Reinforce and/or add interagency collaboration where needed.

Next Steps and Timeline for Tackling the Identified Priorities

Next Steps	Time
Form two working groups to address Priority Action Items I and II.	Members to be identified in the next 30-45 days (From October 28, 2009).
Establish a planning committee and launch an advanced notice of a workshop/open forum to initiate the evaluation of current communication and outreach processes and tools identified in Action Item I and the implementation of the data needs and best management practices (BMPs) identified in Action Item II.	End of January, 2010
Hold workshop/ open forum	2nd Quarter 2010
Joint meeting of the two working groups to capture what has been learned; begin development of BMPs; implement actions identified at the workshop/forum.	3rd Quarter 2010
Face-to-face meeting of the Longleaf Smoke Management/Air Quality Committee; fully address Priority Action III; assess progress and define next steps.	4th Quarter 2010

Potential Areas of Connectivity with Other Teams

- **Continue "Contributions Matrix"**—interactions with this workgroup will help to ensure awareness and communication among all aspects of the Conservation Plan. The education/outreach components of the Smoke Management and Air Quality team are an implicit part of the stated goal of the Contributions Matrix to "communicate, educate and reach out to support all strategies".
- **Expand and Coordinate Inventory and Mapping**—This mapping effort could potentially support the Smoke Management and Air Quality Team's goals to develop regional ability to track acres burned and to harmonize multiple state inputs and data collection.
- **Coordinate Climate Change Research**—Increasing acreage of longleaf pine should provide opportunities for carbon sequestration. At the same time, increasing acreage of a fire-dependent ecosystem may contribute to climate change by releasing carbon from fires. Prescribed fires, needed to promote longleaf ecosystem health, may also mitigate climate change by reducing the likelihood of catastrophic wildfires.

Resource Needed

- Funds for meetings, conference calls, logistics for both;
- State Natural Resource Agency participants for workgroup;
- Regional workshop support;
- Mapping and inventory support (current);
- Mapping (future growth).

Accomplishments to Date

- Stakeholders identified;
- Key meeting with leadership of EPA's Office of Air Quality, Planning and Standards;
- Exploring the possibility of this collaboration becoming a model that could be used by EPA/OAR/OAQPS in other areas of environmental management;
- Face-to-face meeting in Atlanta, September 28, 2009;
- Developed action plan for presentation to SERPPAS Principals meeting, November, 2009;
- Conference calls, October 14, 28, 2009.
- Developed action plan for presentation to SERPPAS Principals meeting, November, 2009;
- Set next conference call for workgroup for December 9, 2009.

Expand and Coordinate Inventory and Mapping for Longleaf Ecosystems

I. Issue Area Title—Longleaf Pine- Expand and Coordinate Inventory and Mapping

II. Team Co-Leads—Cindy Dohner (USFWS), Dee Freeman, and Chris Russo, (NC Department of Environment and Natural Resources)

Steering Committee Support—Aaron Valenta (USFWS), Chris Russo- NC DENR,

Liason—Ken Arney and Tom Darden

III. Background on Issue—The Range-wide Conservation Plan for Longleaf Pine (RCPLP) calls for improved, comprehensive and coordinated efforts to identify existing longleaf forests, their overstory and understory condition, fire regimes and conservation values. The RCPLP also calls for mapping and data management in order to refine Significant Geographic Areas, monitor progress in meeting goals, support more detailed conservation planning, and identify management needs within specific Landscapes or Sites. Improved inventory and mapping is central to both longleaf restoration and to better address many of the broader questions of forest sustainability of southern forests. The current Plan's longleaf forest acreage estimates were largely based on the USDA Forest Service's Forest Inventory and Analysis (FIA) data supplemented with stand level data from three agencies. Precision estimates are low at the county or sub-state levels, and lack detail to address inventory and monitoring needs for the ecosystem.

IV. Applicable Key Actions from the Range-wide Conservation Plan for Longleaf Pine (RCPLP) with referenced page numbers in the Conservation Plan:

Public Lands Strategy, Objective A, Key Action 1 (page 10):

- **RCPLP Key Action 1**—Agencies will determine ongoing and planned management and restoration on public lands.

Private Lands Strategy, Objectives A and B, Key Actions 4 and 11 (page 12-13):

- **RCPLP Key Action 4**—Develop a robust system to inventory those lands under publicly held conservation easements and determine their current and potential support for active management and restoration of longleaf with particular attention to those easements within Significant Geographic Areas.
- **RCPLP Key Action 11**—Develop a comprehensive database capturing in a spatially explicit manner the longleaf-related activities of all federal and state agencies administering landowner assistance as a means of promoting coordination and measuring success within the Significant Geographic Areas and across the range.

Fire Management Strategy, Objective A, Key Action 1 (page 16):

- **RCPLP Key Action 1**—Work with USDA Forest Service (Forest Inventory and Analysis), State forestry and State wildlife agencies and others to develop estimates of longleaf acres by ecological condition class and management category.

Significant Geographic Areas, Objectives A and B, Key Actions 2a and 3 (page 23):

- **RCPLP Key Action 2a**—Complete a long-term sustainability assessment of the first iteration of 16 Significant Landscapes for Longleaf Pine Conservation for (a) ecologically appropriate boundaries, landownership, current condition, and management needs (maintain, improve, restore).
- **RCPLP Key Action 3**—Complete a more thorough remote sensing assessment and ground validation of extant stands of longleaf pine throughout the historic range of the species.

Priority Goals of the Inventory and Mapping effort

- Develop geographic area and landscape level information to guide prioritization of investments,
- Inform strategic decisions regarding range-wide allocation of partnership resources, and
- Monitor accomplishments and long-term results of ecosystem restoration efforts.

V. Priority Objectives and Actions

a. Develop appropriately precise estimates of acreage and types of maps of longleaf pine at the range-wide scale.

b. Develop appropriately precise estimates of acreage, condition, and measures of success at the state/local levels. Map longleaf pine at the Significant Geographic Areas to track those attributes.

c. Complete the identification of Significant Sites for Longleaf Conservation.

d. Coordinate with state and federal agencies involved in longleaf mapping and inventory.

e. Define metrics to guide local inventories particularly to better describe and monitor conditions for habitat and economics.

VI. Next Steps

a. Establish a Inventory and Mapping working group composed of key users and technical representatives to:

   i. Refine mapping and inventory needs at the range-wide scale as called for in the attached, detailed action plan, and

   ii. Assist local implementation teams in defining and accomplishing mapping and inventory efforts at the local level.

b. Assess and adjust, where needed, different models for data and mapping efforts within Significant Geographic Areas.

c. Coordinate with ongoing efforts of state, NGO and federal efforts to map and inventory longleaf forest amounts and conditions.

d. Complete and compile Pine Species Profiles into open pine/longleaf community profiles to establish biological goals and objectives and refine inventories.

VII. Potential Areas of Connectivity with Other SERPPAS Teams

a. The Inventory and Mapping Team recognizes that their efforts are connected and support efforts to stand up local implementation teams as recommended by the Private Lands Assistance Team. In addition, the topic of mapping and inventory would logically be addressed in a spring 2010 workshop as called for under the Significant Geographic Team's Action Plan.

VIII. Resources Needed

a. Establishing an Inventory and Mapping working group that will require in-kind contributions of agency/organization and contractor support to further define and develop range-wide mapping and summary information.

b. In connection with standing up local implementation teams, supporting the mapping efforts at the state/local level will require resources to:

   i. Develop mapping /inventory standards and approaches, and

   ii. Develop "the good map" at the state/local scales.

IX. Accomplishments to date

a. First estimates of range-wide acres and goals have been established under the Range-wide Conservation Plan along with the range-wide map of Significant Geographic Areas.

b. The September, 2009 Inventory and Mapping workshop defined inventory and mapping actions to address the goals and objectives to support implementation of the Range-wide Conservation Plan (attached)

c. The USFWS has species profiles in review as called for under Action VI d.

d. Mapping has been actively underway in eastern North Carolina and is planned in Florida to develop the next generation of the "good map" at state or local scales for longleaf

e. The Longleaf Alliance has collected information from voluntary contributors to map existing longleaf range-wide.

f. Range-wide mapping and assessments are underway to improve a "decision support model" for species of management concern.

Issue Area: Support Landscape Implementation Teams in support of LLP Significant Geographic Areas

From the Range-wide Conservation Plan:

a. Implementation Strategy, Objective A, Key Action 2 (page 27):
   - **RCPLP Key Action 2**—Initiate actions to stand up local teams within Significant Geographic Areas to further area-specific planning and on-the-ground actions.

b. Public Lands Strategy, Objective C, Key Action 7 (page 10):
   - **RCPLP Key Action 7**—Support local teams under *America's Longleaf Initiative* as a structure and mechanism to guide restoration through public/private coordination within Significant Geographic Areas. Establish or expand efforts in two to four Significant Geographic Areas in the next three years in order to demonstrate implementation of and accelerate conservation efforts on the ground. Institutions such as the Gulf Coastal Plain Ecosystem Partnership (GCPEP) can serve as a model of public/private coordination at a sub-regional, landscape scale.

Organizations Represented on the Team

Team members include:

- Mr. John Conger (DoD)
- Mr. Jim Karels (FL DOF)
- Mr. Steve Jennings (FL DOF)
- Mr. Bruce Beard (DoD)
- Mr. Vernon Compton (TNC)
- Mr. Bill Puckett (NRCS)
- Ms. Linda Casey (AL FC)
- Mr. Gary Moody (AL DCNR)
- Mr. Barry New (NC)
- Ms. Catherine Rideout (USFWS)
- Mr. Tom Darden (BAH/DoD)
- Others

Priority Actions on Which Substantial Progress Could be Made in the Next 12-18 Months.

- Utilize SERPPAS web-site presence to capture initial demonstration models, model white paper, and points of contact.
- Continually update web-site to include new implementation structures and mechanisms as they are stood up.
- Identify demonstration models that overlap the 16 Significant Geographic Areas identified in the RCPLP.
- Convene Spring 2010 workshop (potentially co-sponsored with Longleaf Alliance and Southern Group of State Foresters) to highlight implementation models.
- Confirm with team the two-four Demonstration SGAs to focus implementation efforts for the following two years.
- Facilitate implementation of other Action Plan goals within those selected Demo SGAs.

Next Steps and Timeline for Tackling the Identified Priorities

Next Steps	Time
Collect all model SGA information and publish through SERPPAS website	January 2010
Convene SGA Action Team to review models, identify shared resources, and identify demonstration models that overlap the 16 SGAs in the Plan	February 2010
Convene Spring 2010 workshop (potentially co-sponsored with Longleaf Alliance and Southern Group of State Foresters) to highlight implementation models.	Spring 2010 (approx. May)
Hold Demo SGA Team meetings for partners within each selected demonstration SGA	Summer 2010

Potential Areas of Connectivity with Other Teams

- SGAs Teams operate on a more focused, local scale and would overlap with every other Action Teams goals.
- Representatives from each SGA Team should be communicating with other Action Teams to provide information on the specific issues relevant to that area.
- The Inventory & Mapping Team would also support SGAs in developing mapping and inventory methods, in part, through local expert workshops.
- Include Inventory & Mapping as a beginning task for the Local Implementation Teams in each Significant Geographic Area.
- Work with all teams, especially Air Quality/Smoke Management and Assistance to Private Landowners, to standardize data that can be provided to states for their assessments.

Resources Needed

- Staff support for collecting SGA model narratives, compiling selected SGA data from relevant partners, and serving as SGA liaison for other Action Teams.
- Meeting support for SGA Workshop in Spring 2010 and two-four Demonstration SGA workshops in Summer 2010.

Accomplishments to Date

- Held initial meeting/conference call of team on September 11th
- Discussed and identified new and existing implementation models to guide restoration through public/private coordination within Significant Geographic Areas.
- Identified potential demonstration models, including:
  - Gulf Coastal Plain Ecosystem Partnership (GCPEP)
  - Existing state coordination frameworks (*i.e.,* State Technical Committees)
  - Developing North Carolina state-centric model
  - New Southern Alabama initiative utilizing GCPEP-like structure
  - State of Florida ARRA Stimulus funding implementation
  - Potential Joint Venture collaboration
  - Others?
- Identified points of contact for example demonstration models to serve as subject matter experts in sharing information and lessons learned.
- Collected narrative summaries for two demonstration models and compiled into uniform report.

SERPPAS Action Plan Private Lands Assistance Team

I. Team Co-leads—Linda Casey, Alabama State Forester, and Bill Puckett, State Conservationist, NRCS in Alabama

II. Organizations Represented on Team—USFWS (Ronnie Haynes, Partners for Fish and Wildlife); NRCS (Bruce Wight, National Forester); Southern Region Cooperative Extension Service (Bill Hubbard); Longleaf Alliance (Rhett Johnson/Dean Gjerstad); US Endowment for Forestry & Communities, Inc. (Carlton Owen); Wildlife Mississippi (James Cummins); SEAFWA (Tim Ivey, Forest Land Resources Committee)

III. Co-liaisons—Lark Hayes and Tom Darden

IV. Background on Issues

The vast majority of forestland potentially available for restoration across the longleaf range is privately held. Despite the emergence of timber investment management organizations (TIMO's) and real estate investment trusts (REIT's) over the past decade or so, some two-thirds of the forest land in the South remains in the hands of individuals and family forest landowners, also call non-industrial private forest landowners. Accordingly, the success of the Conservation Plan requires making a persuasive case for retaining and restoring longleaf with these landowners and the service and consulting foresters who assist them.

The front-end costs of longleaf restoration are significant as is the need for technical assistance from those knowledgeable about longleaf systems. Many landowners would find these costs prohibitive but for some form of public support. Fortunately, an array of publicly funded landowner assistance and incentive programs also exists (many authorized in the federal Farm Bill) to improve stewardship of forestland. Various programs to assist in hurricane recovery also offer opportunities for financial assistance in restoring longleaf.

The State Technical Committees of the Natural Resources Conservation Service (NRCS) are especially important insofar as they help make decisions on the priority uses of several large programs. The U.S. Fish and Wildlife Service's Partners for Fish and Wildlife is another significant federal effort that carries out voluntary longleaf habitat improvement action. On the state level, landowner programs implemented by the state fish and wildlife agencies and the State Foresters also play key roles.

(Excerpted from the Range-wide Conservation Plan for Longleaf Pine (RCPLP) at pages 10-11.)

V. Priority Actions for Next 12-18 Months

1. Actively engage federal and state agencies, (*e.g.,* State Technical Committees, State Stewardship Committees, *etc.*), that guide or provide technical assistance and cost-share to forest landowners to encourage them to increase support for landowners (especially those in the Significant Geographic Areas) willing (a) to improve poor quality longleaf stands through thinning and burning, (b) to convert forests back to longleaf on appropriate sites and (c) to plant new acres of longleaf trees and restore understories.
(RCPLP Objective B, Key Actions 5 and 6, p.12.)

2. In support of Priority #1, encourage longleaf advocates to participate on a state-by-state basis in the state foresters' development of the assessments and strategies to ensure that threats to longleaf are identified, that the Significant Geographic Areas identified in this Conservation Plan are considered as priority areas in the assessments and strategies for supporting longleaf restoration are included.
(RCPLP Objective D, Key Action 14, p.13.)

3. In support of Priority #1, gain a more in-depth understanding of the longleaf restoration activities called for in CWCP/S's across the range and work with both the Southeastern Association of Fish and Wildlife Agencies and individual state agencies to identify and implement common priorities.
(RCPLP Objective E, Key Actions 17 and 18, p.13.)

4. Select two or possibly three Significant Geographic Areas, or perhaps states, as demonstration areas in which to accelerate implementation of the preceding priorities.

Discussion—The recommendation of the four foregoing priorities by this Team is driven in large part by the Team's conviction that SERPPAS should consider taking a very targeted approach to implementation of the Range-wide Conservation Plan. While many Team members found the large number of Objectives and Key Actions in the Plan helpful, that comprehensive approach may be somewhat overwhelming. The Team believes that given the budget cuts many state agencies are facing and other factors, now is the time to sharply restrict priorities for the implementation phase. Accordingly, the focus should be on ensuring technical assistance and cost-share to willing landowners and selecting two or three locations to concentrate some extra resources and demonstrate success.

VI. Next Steps with Timeline

1. Engage the national and regional and state leadership for all key land owner assistance programs with the aim of further informing them of the significance of longleaf restoration and promoting this as a worthy outcome of the programs they oversee. Initial stakeholders include Natural Resources Conservation Service, Farm Services Agency, USFWS (including Partners program and Landscape Conservation Cooperatives), USFS/S&PF and state foresters, and state wildlife agencies.

2. Identify other key stakeholders who are supportive of achieving longleaf outcomes *via* landowner assistance programs and encourage their participation and engagement with above mentioned program managers. Among these stakeholders are Longleaf Alliance, National Wildlife Federation, the Nature Conservancy, Environmental Defense Fund, Northern Bob-White Quail Conservation Initiative, the Conservation Fund, Partnership for Conservation of Southern Forestland, National Association of Conservation Districts and the joint committee of SEAFWA and SGSF (Southeastern Forestry and Wildlife Working Group), among many others.

3. Further collaborate with the Significant Geographic Areas team to identify appropriate models and otherwise to support focused implementation at two or three landscapes around the region to serve as demonstration projects.

4. With respect to a timeline, all the next steps should be initiated by January 31, 2010. Using the contributions matrix or successor tool, also roll up and evaluate all the proceeding activities within six months of the adoption of this action plan.

VII. Potential Areas of Connectivity with Other SERPPAS Teams

The Team is aware that its Priority #4 regarding selection of demonstration areas for accelerated implementation is closely related to the work of the SERPPAS Team on Implementation for Significant Geographic Areas. This Team looks forward to more discussion to integrate its demonstration efforts with that Team and others. Moreover, this Team recognized that significant education and outreach efforts to landowners and other decision-makers would be essential to implementing its four priorities. The Team is aware that Communications, Education and Outreach are identified in the Conservation Plan as a "cross-cutting approach" at page 23. Again, anticipating that multiple teams may generate education and outreach needs, this Team looks forward to participating in that ongoing discussion. Finally, this Team underscores the importance of the Economic and Market-Based Strategy in the Conservation Plan at page 14. More particularly, making available accurate information on the economics of longleaf to private landowners will be essential to interesting them in participating in assistance/incentive programs for managing longleaf.

VIII. Resources Needed

The additional resources needed will to some degree be dependent upon the interest and availability of the two federal family coordinators at USFS and USFWS, state agency representatives and NGO stakeholders to assist with the implementation of this action plan. At a minimum, it is highly desirable to have one or more designated points of contact for each state within the longleaf range to take responsibility for ensuring that the targeted agencies are informed about the importance of longleaf. These points of contact would also assist in the roll up of accomplishments. In addition a network consisting of these state-level contacts should be stood up with one or more persons designated as managers of this private lands assistance network on a regional basis.

Funding to support standing up efforts in the selected landscapes is desirable. Efforts to support local team collaboration, securing funding for 'action on the ground" and providing key leadership in these landscapes will facilitate critical forward progress in implementation of the Conservation Plan.

IX. Accomplishments to Date

Consistent with Priority #1 above, the Team Co-leads have already reached out to the State Conservationists across the longleaf range in a teleconference of September 1, 2009 to ensure that these key decision-makers are aware of the Range-wide Plan and SERPPAS efforts to implement it. An equally important purpose of that call was to survey what activities are already underway in the various states by NRCS. A brief summary of those activities has been compiled and has provided information relevant to developing "next steps" for the Team's priorities. A copy is appended as Attachment A.

SERPPAS Action Plan for Longleaf Pine Coordinate Climate Change Research

I. Focus Area Title—Longleaf Pine Coordinate Climate Change Research.

II. Co-Leads

a. NOAA—Deke Arndt, Chief, Climate Monitoring Branch, *Derek.Arndt@noaa.gov*

b. USFS—Kier Klepzig, Assistant Director of USFS Southern Research Station, *kklepzig@fs.fed.us*

c. Other Support—Jim Sweeney, Piedmont South Atlantic Coast (PSAC) and Roel Lopez, Gulf Coast (GC) Cooperative Ecosystem Studies Units (CESU).

III. Organizations Represented—NOAA, USFS, USFWS, and CESUs.

IV. Background to Issues

Scientific research is needed to better understand the future effects of climate change on forests in general and longleaf in particular. Such information can serve to better direct longleaf restoration efforts. The Climate Change Tree Atlas (2007) developed by the USDA Forest Service predicts the relative frequency, density, and dominance of various tree species under future climate scenarios. The study concluded that longleaf pine would be the clear "winner" among all the southeastern pines (including loblolly, shortleaf and slash) by a very wide margin in response to climate change. This is consistent with the fact that longleaf is more resistant to drought and higher temperatures. However, many questions remain in understanding the likely effects of climate change on the longleaf pine ecosystem as well as the role longleaf restoration could possibly play in mitigating or adapting to such change. Applicable Key Actions from Range-wide Conservation Plan for Longleaf Pine (RCPLP) include:

Climate Change Strategy, Objective A, Key Actions 1-3 (page 20):

a. Promote more extensive scientific research of the potential effects of global warming on the longleaf ecosystem, including the tree species, plants and animals, and ecosystem structure and function.

b. Promote further research on the contributions that longleaf restoration and management could play in carbon sequestration and adaptation to increasing carbon dioxide levels and temperatures. Such studies should include development of a standardized carbon accounting system and baseline inventories for longleaf systems to promote marketing and crediting of longleaf sequestration efforts.

c. Promote further research on the potential climate change impacts from the increased level of prescribed burning needed to restore and maintain healthy longleaf ecosystems. Also, promote further study to gain a better understanding of the climate change impacts of frequent fire management versus catastrophic wildfires.

V. Priority Actions for next 12-18 months

The focus team identified two broad actions for implementing the coordination of climate change research in the next 12-18 months: (1) improved communication and (2) identification of priority research areas. A one-day workshop held November 2nd in Atlanta provided initial input into actions for the focus team to implement this coming year. Here we provide preliminary recommendations based on workshop input.

a. Communication—increased communication of current and on-going research is critical to research coordination. The team identified several strategies to improve communication:

i. Compile and draft a recommendation paper based on input from the recent one-day LLP/CC workshop held in Atlanta. We anticipate the identification of priority research areas and other process actions SERPPAS might support in the short- and near-term.

ii. Establish a web site to act as a clearinghouse of information including current research projects, scientific publications, and possible funding sources.

iii. Establish a workgroup to meet periodically to exchange information and shepherd future action items.

iv. Support LLP Carbon Sequestration workshop (February 2010) sponsored by USFWS and Longleaf Alliance.

b. Priority Research Areas—Priority research areas were identified at the workshop and are currently being compiled into a draft recommendation report to be released later in the year. Some example research priority areas identified by workshop participants include:

i. Improve understanding of carbon sequestration in longleaf ranging from contributions of longleaf to climate change mitigation to improving landowner participation.

ii. Incorporate historically under-utilized long-term data sets in climate change models for longleaf ecosystems.

iii. Determine the role of prescribed fire particularly with expected changes in frequency and intensity of fires to longleaf management efforts.

iv. Design and provide for adaptation relative to climate change in models and management approaches. Effects of climate change are going to be regional or even sub-regional and may even be multi-directional (*i.e.,* benefitting some areas/species while negatively impacting other species in other areas). Thus, research or management plans must be flexible (*i.e.,* adaptive) and include greater integration of uncertainty in longleaf models.

VI. Next Steps with Timeline

- Draft workshop "recommendation paper" to include (1) gaps and priorities, and (2) implementation recommendations to aid in the coordination of climate change research supporting longleaf restoration. Participant input into the draft paper is expected in Fall 2009 with final draft available by the end of the year.
- Reconvene the LLP/CC Action Team in early Spring 2010 to outline specific recommendations for presentation to at the Spring 2010 Principals' meeting.
- Establish web-based clearing house for sharing information (early Spring 2010).
- Draft research agenda of priority areas (mid-Spring 2010).

VII. Potential Areas of Connectivity with other Teams

- Address smoke management and air quality – a key research area discussed in the workshop was the anticipated increase in the use of prescribed fire in managing longleaf pine, and understanding the potential impacts of such management actions on smoke management and air quality concerns. Research questions related to the frequency and intensity of prescribed fire effects would directly support the smoke management and air quality team in their efforts.
- Expand and coordinate inventory and mapping – baseline inventories on longleaf distributions and projected shifts due to climate change are needed. The LLP/CC and Inventory and Mapping teams need to coordinate their efforts and desired inputs.

VIII. Resources Needed

- Funds for meetings, conference calls, and logistics.
- Website maintenance support.
- Regional workshop/meeting support.
- Possible "seed money" for joint research projects.

IX. Accomplishments to Date

- An initial 9-member focus area team comprised of representatives from various agencies was established. The co-leads for the team include Deke Arndt (NOAA), Kier Klepzig (USFS), Bob Shaw (GC-CESU), and Jim Sweeney (PSAC-CESU). Other stakeholders also were identified.
- An initial teleconference to discuss strategies for coordinating climate change research relative to longleaf pine was held July 14, 2009. Meeting participants discussed various strategies to meet the objectives of the action team. Participants were Deke Arndt, Bob Shaw, Jim Sweeney, Lark Hayes, Kier Klepzig, Bob Lazenby, Jonathan Weiss, and Roel Lopez.
- Hosted a one-day workshop in Atlanta, Georgia in November 2, 2009 with 25 participants.
- Plan a Carbon and Longleaf February, 2010 at Auburn University

Longleaf Pine Tree Seedling and Understory Plant Material

I. Issue Area Title: Tree Seedling and Understory Plant Material

II. Team

c. Co-Leads

- **USDA Forest Service**—Liz Agpaoa, Southern Regional Forester, *lagpaoa@fs.fed.us*
- **Georgia Forestry Commission**—Robert Farris, Director, *bfarris@gfc.state.ga.us*

d. Team Members

- **USDA Forest Service**—George Hernandez, Southern Region Nursery Specialist, *ghernandez@fs.fed.us*
- **Georgia Forestry Commission**—Russ Pohl, Chief Forester, Reforestation, *rpohl@gfc.state.ga.us*
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- **USDA NRCS**—Tom Ward, Forester, *tomas.ward@gnb.usda.gov*
- **USDA Forest Service**—Victor Vankus, Botanist, National Seed Lab., *vvankus@fs.fed.us*
- **USDA NRCS**—Ramona Garner, Botanist ramona. *garner@gnb.usda.gov*
- **Department of Defense**—Viola Walker, Restoration and Native Grass Program Manager, Eglin AFB *viola.walker@eglin.af.mil*
- **Longleaf Alliance**—Mark Hainds, Research Coordinator, *hainds@alaweb.com*
- **The Nature Conservancy**—Doria Gordon, *dgordon@tnc.org*
- **Jones Ecological Center**—Kay Kirkman, Research Ecologist, *kay.kirkman@jonesctr.org*
- **Mississippi Forestry Commission**—Charlie Morgan, State Forester, *cmorgan@mfc.state.ms.us*
- **Mississippi Forestry Commission**—Patrick Glass, Director of Operations, *pglass@mfc.state.ms.us*
- **Auburn Nursery Management Cooperative**—Scott Enebak, *enebasa@auburn.edu*
- **Roundstone Native Seed Company**—John Seymour, Owner, *john@roundstoneseed.com*
- **Jeff Gliztenstein Consulting**—Jeff Gliztenstein, Ecologist, *jeffglitz@aol.com*

III. Background to Issue

As described in the Range-Wide Conservation Plan for Longleaf Pine, supplies of ecologically appropriate plant material are essential to achieve goals of the Plan. Both overstory & understory seeds and plant materials are essential in supporting the vast biodiversity and providing the ecological structure to support fire regimes called for in the Plan. Shortages of both longleaf pine seed and seeds of the understory plant materials will be bottlenecks in meeting restoration goals.

IV. Applicable Key Actions from Conservation Plan

Understory and Overstory Restoration Strategy, Objective C, Key Actions 13 and 15 (page 18):

a. Key Action 13—Dramatically increase longleaf tree seed and seedling production in the public and private sectors. This requires support for existing nurseries and seed orchards, expanding capacity of existing or new nurseries and seed orchards, coordinating seed collection and related seed processing work, and exploring new technologies in seedling production.

b. Key Action 15—Coordinate the development of a native plant seed market in the longleaf pine range. Encourage private landowners to participate in efforts to provide additional incentives for landowners to manage, improve, and restore longleaf pine ecosystems.

Public Lands Strategy, Objective C, Key Action 7 (page 10):

a. RCPLP Key Action 7—Support local teams under *America's Longleaf Initiative* as a structure and mechanism to guide restoration through public/private coordination within Significant Geographic Areas. Establish or expand efforts in two to four Significant Geographic Areas in the next three years in order to demonstrate implementation of and accelerate conservation efforts on the ground. Institutions such as the Gulf Coastal Plain Ecosystem Partnership (GCPEP) can serve as a model of public/private coordination at a sub-regional, landscape scale.

V. Short-term Actions (July-November 2009):

1. Initial Conference Call meeting held July 16, 2009.
2. Identified and completed important steps or milestones to achieve prior to November SERPPAS meeting. These steps and milestones were:

a. Completed Team Makeup

b. Began compilation of a complete list of LL seedling and LL understory plant material growers, seed producers, seed cleaning facilities, storage facilities and capacities across the South

c. Delivered key messages during the Tifton, GA Longleaf Nursery Conference

VI. Identify and list long-term steps/milestones for strategies beyond November 2009.

a. Longleaf Habitat Understory Restoration: Coordination of Resources and Development of a Native Plant Industry in the Region Coordinating resources and information and the development of a native plant industry to supply seeds and seedlings across the entire longleaf habitat region is critical to longleaf understory restoration. Land managers, research scientists, seed companies, nurseries and others have repeatedly identified these needs. A Restoration Coordinator focused on understory plants can work with the organizations and groups involved in longleaf understory restoration and can advance these efforts by facilitating the exchange of information, coordinating resources, and guiding the development and growth of the native plant industry in this region.

Priority Actions:

- Document Ecological Reference Sites (species and management) and list species suitable for restoration projects
- Establish propagation guidelines
- Summarize research and technical information to date and identify needs and sources of funding
- Assess the demand for native seeds/plants and the production capacity of seed companies and nurseries
- Identify a Restoration Coordinator to manage these actions

b. Tree Seedlings Supply—Based on an informal sample, it is clear that growers and seed producers are capable of ramping up production and will do so if they believe there will be a market for their products. While demand will never be fully predictable, producers can make informed decisions if up-to-date information is available and readily accessible. The proposed solution is a web site functioning as a clearing house for information related to longleaf flowering, cone production, seed inventories, storage and processing facilities, nursery production, and funding for assistance programs.

Priority Actions:

- Institutionalize an Inventory of Resources: seed production facilities, processing facilities, nursery capacities, seed/cone producers, inventories, *etc.*
- Identify Funding Potential for Private Landowners (current and future)
- Quantify Planting on Public Lands (current and future)

If you have any questions, feel free to contact Russ Pohl (*rpohl@gfc.state.ga.us*, 478/751-3520), George Hernandez (g*hernandez@fs.fed.us*, 404/347-3554)

Issue Area: Continue "Contributions Matrix"

From the Range-wide Conservation Plan:

a. The Range-wide Conservation Plan for Longleaf Pine (RCPLP) offers cross-cutting approaches that guide actions related to all of the strategies in the Plan. The RCPLP calls for organizing to:

   i. Target limited resources to Significant Geographic Areas,

   ii. Communicate, educate, and reach out to support all strategies, and

   iii. Evaluate conservation outcomes of efforts and actions. 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.

b. Upon committing to this vision, the SERPPAS Principals asked USDA Forest Service to lead interested members in determining specifically how SERPPAS could effectively engage in implementation. A product of this effort is the compilation of member organization activities, current and planned, that contribute to achieving the goals of the Plan. Even as the information was being collected, it became apparent the report would add value by helping members improve coordination, leverage resources, and identify opportunities to implement the RCPLP.

Organizations Represented on the Team

- **Co-chairs**—John Conger (DoD) and Bob King (SC DHEC)
- **Team members include**—Tom Darden (BAH/ASE), Becky Ralston (BAH), Bruce Beard (DoD), John Dondero (USFS), and all contributors from every SERPPAS organization.

Priority actions on which substantial progress could be made in the next 12-18 months.

I. Evaluation of existing data in the contributions matrix

- Previously collected data should be reviewed and data gaps identified
- Based on current data input and data gaps, the team will develop supplemental questions/data fields to gather more specific data of interest to the SERPPAS Principals and the Action Teams
- Action Teams will have the opportunity to review and submit questions

II. Second wave of data collection

- The team will release a wide-scale and targeted data call to request SERPPAS partners update and supplement their existing data
- Specific questions developed by the team will be used to capture data of specific interest to the Action Teams
- Data will be consolidated and released on the SERPPAS website

III. Development of more widely accessible and easily updated "Contributions Matrix"

- In order to make the Contributions Matrix a dynamic and relevant source of data on longleaf pine, a more user-friendly interface should be developed
- On the SERPPAS website, a simple database and reporting link would be developed
- This would allow partners to update their own information relevant to longleaf restoration, run reports of real-time data, and filter for individual partner or specific strategy data

Next Steps and Timeline for Tackling the Identified Priorities

Next Steps	Time
Develop Contributions Matrix introduction/ elevator speech to highlight importance of continually updating data as a coordinated effort to LLP Plan implementation	December 2009
Analyze existing data to determine data gaps and areas of interest to Action Teams	December 2009
Request review and revision of supplemental questions for second wave datacall	January 2010
Second wave datacall released to SERPPAS partners	January 2010
Release second wave of consolidated data on SERPPAS website	Late February 2010
Development of user-accessible database tool on SERPPAS website	February 2010–April 2010
Release of Longleaf Pine Database	May 2010

Potential Areas of Connectivity with Other Teams

- This group should interact with all other action teams to eventually serve as the information cross-cutting bridge and clearinghouse for longleaf pine projects undertaken by SERPPAS.

Resource Needed

- Continued input from SERPPAS partners and beyond!
- Information technology support; *i.e.,* database developers
- Minimal funding to support matrix database development and maintenance

Accomplishments to Date

- Letter sent by co-chairs on 15 June 2009 to formally request Contributions Matrix input from SERPPAS partners
- Compiled additional and updated information into currently existing matrix framework and made a copy accessible through the SERPPAS website.
- Identified data gaps and appropriate contacts within those partner organizations to encourage and facilitate data sharing.
- Began evaluating easiest and most widely acceptable method for continued and future additions and updates to the Contributions Matrix, i.e web-accessible database
- Identified unique or noteworthy items in the current Contributions Matrix to highlight in report to Principals.