The Berry College Longleaf Pine Project

A 25 year Update and Future Management Recommendations

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See Table 1 for a summary of historical management practices in the following sites:

Old Growth Management areas (including HOD Southwest, HOD Southeast, SAVE Middle (SVM) and SAVE East (SVE), and the Core Management Area (Stands A, B, C, D, E):

Goals: Maintenance of open canopy dominated by Longleaf pine, natural regeneration of Longleaf pine, diverse understory that includes characteristic Mountain Longleaf pine forest plants, reduced litter and minimal duff accumulation, diverse associated fauna, and reduced risk of hazardous wildfire.

Most recent activities:

These sites were all included in the area placed under permanent protection (to be managed for old growth Longleaf pine) by the Berry Board of Trustees at the Spring 2024 meeting.

All areas listed above were burned by prescribed fire in 2024 or 2025.

Mulching and pre-commercial stand thinning was done in Stands A and E in late 2024.

A small wildfire occurred in Stand E in early 2025. A small number (+/-50) of Longleaf pine seedlings were added to this area after the burn.

Recommendations: Rx burn at intervals of three to five years. HOD Southwest (the "Amoeba") has a nice stand of very old Longleaf pines in its lower, center section. Large Longleaf pines there should be raked around before the next fire, then should be mopped up around after the fire to prevent duff smoldering and fine root damage. A sequence of fires one to two years apart may be necessary to reduce duff levels to safe levels in this particular area.

Core Stand A, May 2025

Core Stand B, May 2025

Core Stand C, May 2025

Core Stand C, May 2025 – showing patch of natural regeneration

Core Stand D, May 2025

Core Stand E, May 2025

SAVE East, May 2025

SAVE Middle, May 2025

HOD Southeast, May 2025

HOD Southwest (Amoeba), May 2025

HOD Southwest (Amoeba), May 2025 - showing dying old growth trees.

Selective and Clear Cuts (including Selective Cut 1 (SC1), Clear Cut (CC), Selective Cut 2 (SC2), Possum Trot (PT) and Seed Tree Cut (STC or G):

Goals: Similar goals to those of the Core Management areas plus commercial use of harvested timber. These are sites timbered and planted with Longleaf pine seedlings at various times.

Most recent activities:

All areas listed above were burned by prescribed fire in 2024 or 2025.

Precommercial thinning was done in Seed Tree Cut (Stand G) in 2023.

Edges of SC1 and SC2 were cleared of competing loblolly and other trees in 2024.

Recommendations:

Thin stands to open canopy and foster understory plant diversity.

Possibly use Stoddard-Neel approach to tree removal that fosters natural regeneration via selective harvesting.

Prescribed burning on a three-to-five-year rotation.

Selective Cut 1, May 2025

Selective Cut 2, May 2025

Possum Trot, May 2025

Clear Cut, May 2025

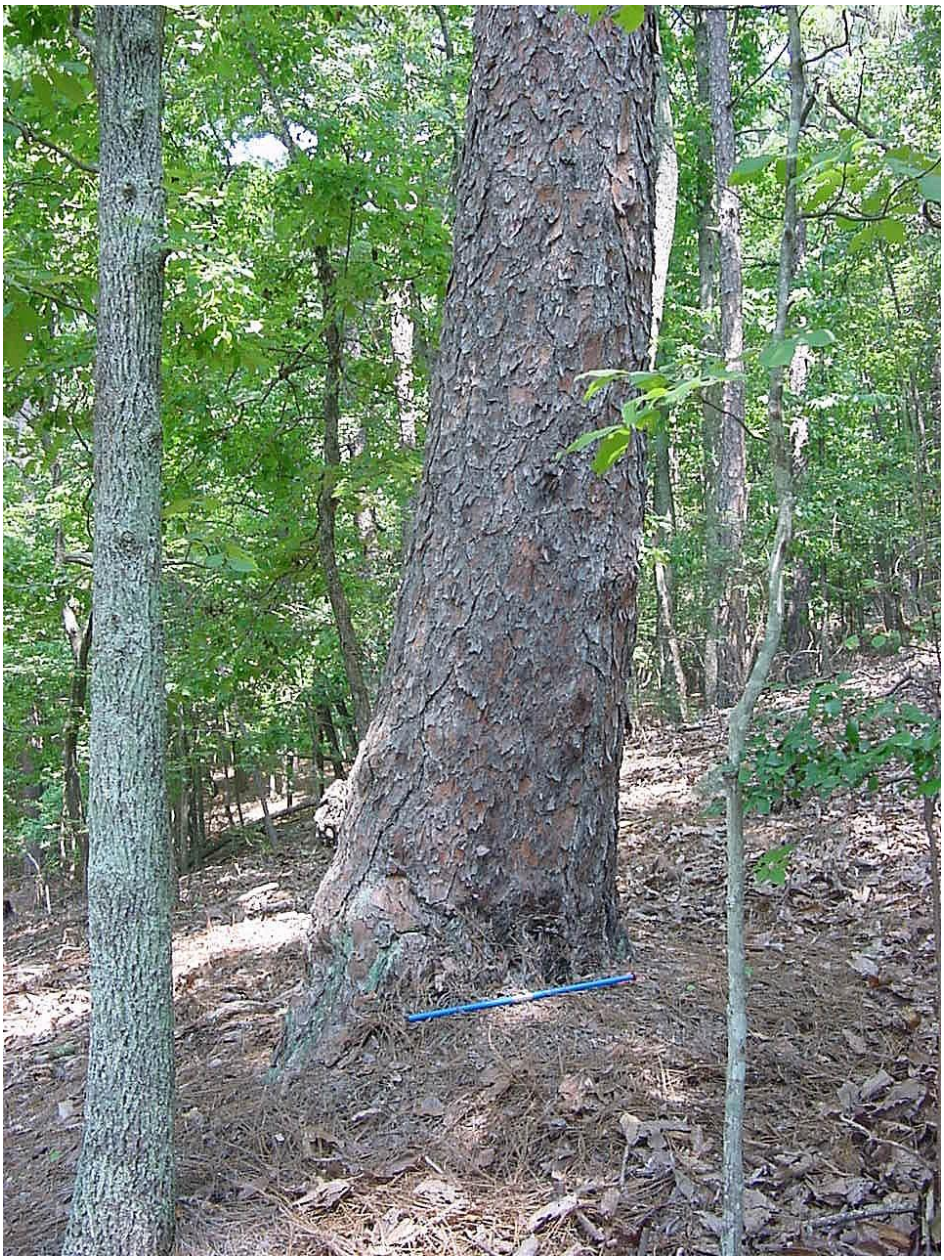
Stand G (Seed Tree Cut), May 2025

SAVE West (SVW) and Stand F:

Goals: Maintenance of no-burn reference areas and conservation of some of the oldest Longleaf pines on campus.

Most recent activities: Stand F had all fire-sensitive hardwoods < 14 inches DBH inoculated with Arsenal in 2008.

Recommendations: Prevent and control wildfire. If a wildfire occurs, mop up around old growth Longleaf pines to prevent duff smoldering and fine root damage.



Stand F (SAVE West), 2004 - showing large old growth Longleaf pine.

Stand H (Water Treatment Plant area):

Goals: Conservation of some of the oldest Longleaf pines on campus.

Most recent activities: Continued fire suppression (a small wildfire occurred here in mid-2010s and was contained to a small area).

Recommendations: This area has historically been maintained as a no-burn reference area, partly due to concerns about burning too close to the water treatment plant and some houses there. If it is to be burned by prescribed fire to reduce wildfire hazards, large Longleaf pines should be raked around before the fire, then should be mopped up around after the fire to prevent duff smoldering and fine root damage. A sequence of fires one to two years apart may be necessary to reduce duff levels to safe levels.

Unmanaged Stand H2, May 2025

Grafted Seed Orchard (collaboration with Agricultural Operations):

Goal: Maintenance of ~100 trees for long-term commercial harvest of cones for seed production.

Most recent activities: Commercial cone harvest in 2020. Fences checked in fall 2024. Fertilized with super triple phosphate in spring 2025.

Recommendation: Because this is a silvopasture project containing sheep, the main management recommendation is annual repair/expansion of sheep fence around trees.

Grafted Seed Orchard (Ball Field), May 2025

Stretch Road Seed Orchard:

Goal: Maintenance of ~520 trees for long-term commercial harvest of cones for seed production. Ancillary goal of promoting a diverse understory plant community.

Most recent activities:

Cones harvested in 2024.

In 2024/2025, trees were trimmed of lower branches, fertilized with super triple phosphate, and measured by Forest Ecology class.

To prevent girdling trees with wire hoops, tags were wired to screws on trees in fall 2024.

The area was burned by prescription in April 2025.

~20 seedlings were planted immediately following the burn at spots that had been prepped with glyphosate herbicide. Follow-up herbiciding was done in early May around each seedling.

Recommendations:

Approximately 20 trees planted in 2025 will need to be maintained by spot application of herbicide for about 2 years.

Periodic mowing and/or prescribed burning will be needed to maintain the understory and control woody plant competition. Jeff Ward has been doing the mowing for us.

In the future, inferior trees should be removed in such a manner as to maintain overall genetic diversity (keeping at least some offspring of all maternal trees alive).

There is some potential for pine straw collection at this site.

Stretch Road Orchard, May 2025

Central Grove Seed Orchard:

Goal: Maintenance of ~1500 trees for long-term commercial harvest of cones for seed production. Ancillary goal of promoting a diverse understory plant community.

Most recent activities:

In 2024/2025 the rows received herbicide application, precommercial thinning of competing trees was done, living trees were fertilized with super triple phosphate, tags were replaced, and the orchard was burned by prescription. ~5% of living trees did not apparently survive the burn.

In late April and early May 2025, ~333 new seedlings were added (three different sources). The areas around newly planted seedlings were fertilized with super triple phosphate and then the area surrounding each seedling was treated with glyphosate herbicide.

Recommendations:

Approximately 333 trees planted in 2025 will need to be maintained by spot application of herbicide for about 2 years.

Periodic mowing and/or prescribed burning will be needed to maintain the understory and control woody plant competition. Jeff Ward has been doing the mowing for us; funds are available for him to do this for the first time in Central Grove in 2025.

To prevent girdling trees with wire hoops, tags should be moved up higher or placed on stainless-steel screws (as in the Stretch Road orchard).

In the future, inferior trees should be removed in such a manner as to maintain overall genetic diversity (keeping at least some offspring of all maternal trees alive).

There is some potential for pine straw collection at this site.

The western firebreak should be re-graded to prevent water from running into the orchard during wet spells.

Central Grove Seed Orchard, May 2025

Central Grove orchard, May 2025 – showing newly planted seedling

All three Seed Orchards:

Activities have been funded by The Nature Conservancy, Georgia Pacific, and The Longleaf Alliance funding sources.

Each year the cone crop should be visually estimated.

In advance of a significant cone crop (every 5 to 10 years), plan cone harvest. Southern Seed Company (Kirk Hinson) has been our collaborator on this.

Arrange and assist with cone harvesting.

Clean and test viability of seed batches.

Note: Video documentation of cone harvesting and seed processing procedures is available.

Berry College Longleaf Pine Trail:

Goals: Public access to the Core Management Area and educational outreach concerning the conservation of Longleaf pine forests. Originally funded by GA-DNR and GFC grants. Trail includes both walking (Core Management area) and driving (at various distant sites) components. Informational signs are in both locations (five along the walking trail and four located along roads).

Most recent activities: In 2023/24 all signs were redesigned and replaced. The wooden parts of signs were re-stained. Gravel was added to eroded spots in the lower section of the trail that runs through Stand A in 2025.

Recommendations:

Work will be needed to better maintain the trail itself, particularly in steeper sections subject to erosion.

Periodic maintenance of signs here and at other sections (SAVE, SC1, CC, and SC2) will be needed in the future.

New “mini-roofs” should be added to all signs.

Directional signs and possibly “no biking” signs may be added at key spots along the walking trail.

Note: electronic versions of all signs are available.

Longleaf Trail (Stand C area), May 2025

Longleaf Trail, May 2025, showing erosion in steeper sections (w/ minor repair)

Note: The recommendations in this document do not include any area newly planted in longleaf pine since 2021; these newer areas are considered outside of the historical Berry College Longleaf Pine Management Area.

Research relevant to the overall goals of the management plan is encouraged, particularly assessments of progress toward those goals and research that may inform adaptive

management. That said, any research that adds to the knowledge base or that takes good advantage of the variety of management practices should be encouraged.

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