



**Restoration and Management of  
Rare and Declining Habitats and  
Tree/Shrub Establishment:**

## **Establishment of Longleaf Pine Stands**

*Alabama Job Sheet Nos. AL490B,  
AL612C and AL643*



### **PURPOSE**

To prepare a site and establish longleaf pine stands at densities that benefit wildlife and protect water quality.

### **REQUIREMENTS**

- **Must be within the native range of longleaf pine (SEE MAP ON PAGE 3) and site must have suitable soils.** Sites outside of the native range will be considered based on soil suitability. For NRCS planning and program activities, the State Staff Forester will approve sites outside the native range on a case by case basis.
- Sites may be **agricultural or cutover timberland**.
- **All specified practices must be completed** unless pre-approved by NRCS or the technical service provider (TSP) in writing.
- **Containerized longleaf pine seedlings are required** for this practice. Bare root seedlings are not allowed.

### **SITE PREP**

Method and timing will be determined by site requirements as determined by the technical service provider. One or more of the following site preparation methods may be required.

- Prescribed burning.
- Bush-hogging or mowing.

- Light disking.
- In-row subsoiling.
- In-row scalping.
- Chemical site prep – to control herbaceous and woody competition, as well as invasive species such as cogongrass, kudzu, Japanese climbing fern, and other noxious species.
- Pre-application of herbicide – broadcast application of herbicide prior to planting to control grasses.
- Post emergence weed control – band application of herbicide after planting in spring or early summer.
- Mechanical site preparation such as mulching, raking, chopping, or other means used with extreme caution to prevent erosion and site degradation.

### **In-row subsoiling:**

- Should be completed 45-90 days prior to planting to allow settling. **NOTE:** In certain cases subsoiling may be completed closer to planting date if approved by TSP
- Required based on soils identified as having a hard pan present within top 15 inches.
- Light and heavy tree planter foot will not qualify as a subsoiling instrument.

**PLANTING****Longleaf Pine Seedlings.**

For adequate survival of longleaf pine, seedling and planting specifications must be followed closely. The Conservation Plan will include specifications for site preparation, planting and maintenance. It is imperative to follow the specifications.

- Stocking – Planting density for longleaf pine shall be a minimum of 400 and maximum of 684 trees per acre. Stocking density should reflect the landowner's objectives. If wildlife is the primary objective then lower densities should be utilized. If timber quality is the primary objective, then higher densities should be utilized.

Some recommended wildlife spacing are:

9' x 12' = 403 trees per acre

10' x 10' = 436 trees per acre

8' x 12' = 454 trees per acre (good spacing to select if native grasses are to be planted)

8' x 10' = 545 trees per acre

Some timber production spacing are:

6' x 12' = 605 trees per acre

7' x 10' = 622 trees per acre

For additional information on densities refer to Longleaf Pine Planting Density Fact Sheet [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1177031.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1177031.pdf)

- Planting Dates Containerized Seedlings - November – April (**provided adequate soil moisture exists**)  
**Note: Planting before January 1<sup>st</sup> will greatly reduce losses if a drought occurs the following spring.**
- Equipment
  - Machine planters – coulter to create furrow 12 inches deep with tractor speed not to exceed 2.5 miles per hour
  - Dibbles or plant bars – blades at least 10 inches long and 3 inches wide
  - Plug tools must match type of seedling root plug being planted.

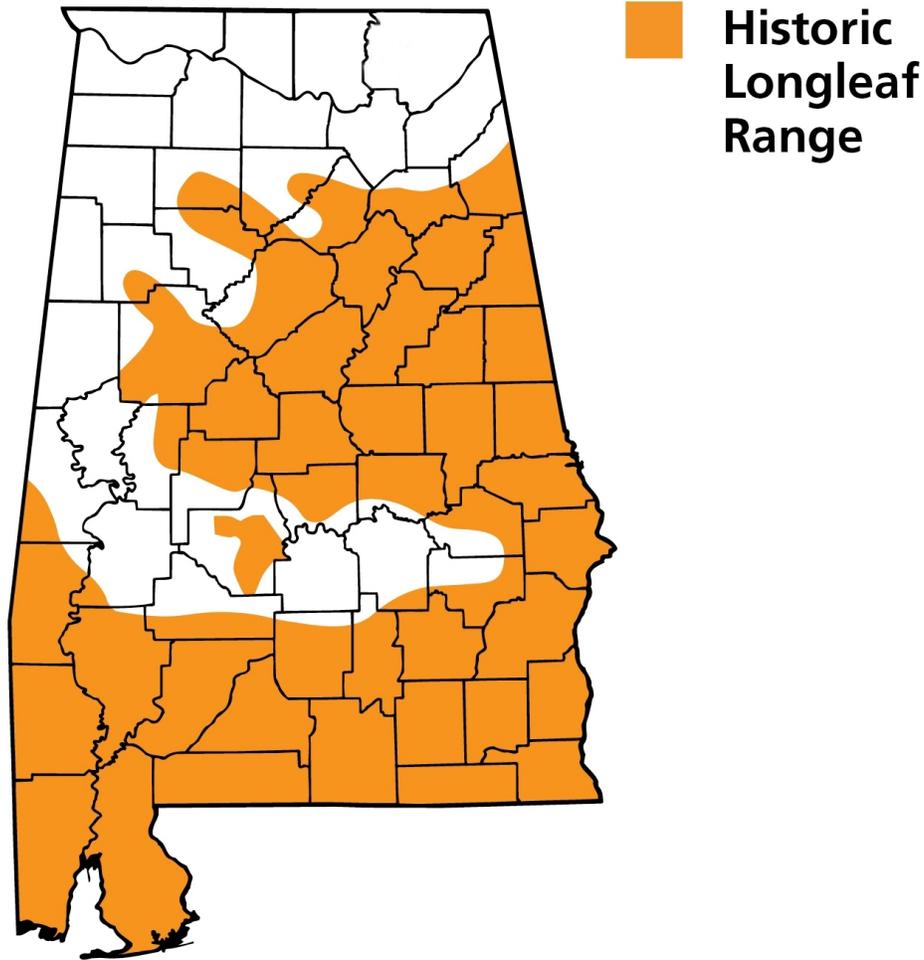
- Methods
  - Mechanical operations must follow contour of land
  - Taproot must be straight in hole
  - Soil must be firmly packed around roots
  - Root pruning is not acceptable
  - Containerized seedlings – plant with top of root plug slightly above ground line up to a maximum of two inches above ground line depending on furrow depth.
  - Do not plant in subsoil rip; plant to the side of rip, but no more than 12 inches away
- Precautions to reduce seedling stress and promote survival:
  - Keep seedling roots moist at all times.
  - Prevent lethal heating and freezing of seedlings.
  - Temperatures for planting – between 33 and 75 degrees Fahrenheit.
  - Humidity level for planting – 50 percent or greater.

**Native Grasses** – Are a vital part of the longleaf pine ecosystem. Native groundcover vegetation can be established on enrolled acreage. This can be achieved through natural succession or native groundcover planting.

**Prescribed Burning** - Fire is an important part of the longleaf pine ecosystem. Proper use of prescribed burning should be encouraged and written into the stand management recommendations.

**NOTE:** Check with Alabama Forestry Commission **prior to burning** to assure trees are at a proper stage to burn without damage.

## Native Range of Longleaf Pine



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2/2014



**SITE PREPERATION (490B)****SPECIFICATIONS**

<b>List the mechanical and chemical treatments required to control the competing vegetation.</b>	
<b>Mechanical Treatment of Methods and Plans</b> <input type="checkbox"/> Not Applicable (Producer is responsible for making sure all equipment is clean and free of invasive seed sources before treatment begins)	
Field (s)	
Plants to be controlled	
Types of equipment to be used (Scalping, mowing, hand clearing, roller chopping, light disking, etc.)	
Dates of treatment	
Operating instructions	
Techniques and procedures to be followed	
<b>Chemical Treatment Methods and Plans</b> <input type="checkbox"/> Not Applicable (Chemical application will be according to label)	
Field(s)	
Plants to be controlled	
Planned Herbicide(s) (Carrier/Surfactant)	
Rate(s) of application or spray volumes	
Acceptable dates of application	
Any special application techniques, timing consideration, for safe and effective applications	
Reference to label instructions	
<input type="checkbox"/> Pest Management Plan and WIN PST Soil Pesticide Interaction Loss Potential and Hazard Rating Report is attached and was discussed with landowner in formulating alternatives.	
Planned Mitigation Activities:	
Planned Mitigation Practices:	

## TREE PLANTING (612C) WORKSHEET

Prepared for: \_\_\_\_\_ Farm: \_\_\_\_\_ Tract: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_

### TREE PLANTING (612)

#### SPECIFICATIONS

List the planting specification for this site.	
Field (s)	
Spacing (Check one)	<input type="checkbox"/> 9' x 12' = 403, <input type="checkbox"/> 10' x 10' = 436 <input type="checkbox"/> 8' x 12' = 454, <input type="checkbox"/> 8' x 10' = 545 <input type="checkbox"/> 6' x 12' = 605, <input type="checkbox"/> 7' x 10' = 622
Planting Method	<input type="checkbox"/> Machine, <input type="checkbox"/> Hand
Seedlings	<b>Containerized seedlings only</b> – plant with top of root plug slightly above ground line up to a maximum of two inches above ground line depending on furrow depth
Dates of treatment	
Operating instructions	
Techniques and procedures to be followed	