

Area Description

Little River Wildlife Management Area is located in eastern Grant Parish, along the west side of Little River. Compartment 6 is located in portions of sections 16, 17, 20, and 21 of T8N, R1E and bounded by Sulphur Creek to the north, Little River and private property to the east, Little Creek to the south, and a pipeline with WMA boundary line to the west. In 2011, this compartment was re-proportioned due to additional lands being acquired by LDWF. The added acreage consists mostly of managed pine previously owned by a forest industry company. The compartment contains 724 acres of mostly planted loblolly pine in the hills and small areas of bottomland hardwood forest along the major creek bottoms. Most of the topography of the compartment begins the terrace uplands with gently to moderately to strongly sloping well drained soil and broad ridges with small drains leading to minor tributaries of Little River. In 2015, the compartment was inventoried and a management prescription was developed. The resulting management plan included 132 acres of intermediate thinning of the existing loblolly pine. The objectives were to promote development of desired wildlife habitat, and improve tree health and growth. The 2015 prescription specified that the remaining pine stands within this compartment would not receive harvest treatments, however, before the next entry cycle of 20 years, stand conditions should be monitored for additional habitat development needs.

Current Conditions

Forest Types

The forest type and structure of compartment 6 is made up of 457 acres (63%) of planted loblolly pine, 133 acres (18%) of willow oak and overcup oak / bitter pecan, and 134 acres (19%) of mixed pine / hardwood forest. The northeastern part of the compartment contains the 112 acres of a mixed pine hardwood stand which appears to have developed from natural regeneration. This area exhibits greater plant species and structural diversity than the surrounding forest types. Within the planted loblolly pine forest type, there are stands of varying age, development, and structure. The current conditions of one of the loblolly stands that was not treated in 2015 is a closed canopy stand with limited understory structure. This 25-year-old loblolly plantation consist of approximately 102 acres of plantation and 10 acres of stream side management zone (SMZ). This stand has a basal area of 130 sq. ft. per acre, a mean diameter of 10 inches, and is stocked at 250 trees per acre. Approximate pine timber volumes for this stand include 1.924 MBF per acre of sawtimber, 21 cords per acre of chip-n-saw, and 11 cords of pulpwood per acre. The average merchantable heights are 34 feet for pulpwood and chip-n-saw and 27 feet for sawtimber logs. Observed total heights are 60 to 70 feet with a shallow crown length form. Shaded woody vines, shrubs, and advanced hardwood regeneration of varying density make up most of the understory and midstory structure. The adjacent pine stand to the east is a 122-acre, approximately 35-year-old, loblolly pine plantation established by a previous landowner and last thinned in 2005 by LDWF. This stand has a basal area of 139 square feet per acre with a mean diameter of 14 inches and a density of 179 trees per acre. Approximate pine timber volumes for this stand include 10.487 MBF per acre of sawtimber, 11.5 cords per acre of chip-n-saw, and 4.5 cords of pulpwood per acre. The average merchantable heights are 40 feet for pulpwood, 54 feet for chip-n-saw and 41 feet for sawtimber logs. Observed total heights are 70 to 80 ft. Shaded woody vines, shrubs, and advanced hardwood regeneration of low to very low density make up most of the understory and midstory structure.

Soils

The pine areas are typically in the terrace uplands on Malbis-Glenmora gently sloping and very gently sloping, moderately well drained soils, and on Cadeville-Ruston gently sloping to strongly sloping, moderately well drained, and well-drained soils that have a loamy surface layer and a clayey or loamy subsoil. Most of these soils have moderately low fertility, runoff is medium, and the hazard of water erosion is moderate. These soils are well suited to woodland and a high potential for pine timber, site index for loblolly pine ranges from 80-90.

Wildlife

The upland sites within Little River WMA are composed of pine that was planted by commercial methods prior to LDWF ownership. These sites are situated within the historic longleaf savannah range, but are now composed of loblolly pine. Management of these stands should consist of silvicultural practices that move the stand structure towards a more open pine system which will more closely reflect the habitat once provided by longleaf pine savannah. Such management will provide habitat for species including red-cockaded woodpecker, Bachman's sparrow, brown-headed nuthatch, and Northern bobwhite. Collectively, the habitat requirements of these species meet the needs of all priority species within open pine habitats of the West Gulf Coastal Plain ecoregion. Additional game species benefiting from open pine habitat include white-tailed deer, fox squirrels, and Eastern Wild Turkey.

The desired understory is one composed of native grasses, forbs, and legumes. They provide important nesting, escape cover, and foraging habitat for the wildlife which inhabit open pine systems. They are also instrumental in fueling prescribed fires that are integral to maintaining open pine habitat.

Understory species such as big bluestem, split-beard bluestem, little bluestem, slender bluestem, blazing stars, grassleaf golden aster, Texas ironweed, piney woods dropseed, and roundhead lespedeza are expected to increase as a result of this management.

Objectives

- Promote desired wildlife habitat
- Increase understory structure and diversity by promoting growth of native grasses and forbs
- Maintain stream side management zones
- Improve tree health, vigor, and production

Methods

Intermediate Thinning (255 acres)

- Tree removal will be done using an operator selection method, cutting every fourth row of planted trees and thinning in between the cut rows
- Trees to be removed between the cut rows will be selected according to tree vigor, crown position, and form; remove trees in decline and of poor quality
- The amount of thinning removal will be based on a reduction of stocking equal to a basal area of 65 sq. ft. per acre

Concerns

- Residual tree logging damage
- Erosion control in susceptible areas
- Road condition during logging activities

Treatments

An intermediate rotation harvest using an improvement thinning will promote health, vigor and growth of the desired growing stock within the stands. Tree removals based on spacing will stimulate diameter growth and crown development of the remaining trees. Due to low live crown ratio, the stand will be thinned to no less than 65 square feet of basal area. Thinning any heavier can cause an undesirable response to the future health and growth of the stand. A second entry thinning will be needed to create a more desirable open pine forest structure. The management goal of this treatment is to progress this stand towards long-term sawtimber production and the development of open pine habitat. To improve wildlife habitat structure and diversity, thinning will provide sunlight to promote desirable vegetation under the tree canopy consisting of native grasses, forbs, and legumes. A continuous prescribed fire regime will create and maintain desirable vegetation composition for quality wildlife habitat and minimize wildfire risk by reducing fuel loads. A general prescribed fire plan for the compartment will include control burning of each stand or composite of stands on a two to three year cycle alternating between dormant and growing seasons. Dormant season burning will reduce fuel loads to minimize wildfire effects, while growing season burns will control hardwood midstory. Combined, this will create and maintain desirable vegetation and structure for wildlife.

Logging Requirements

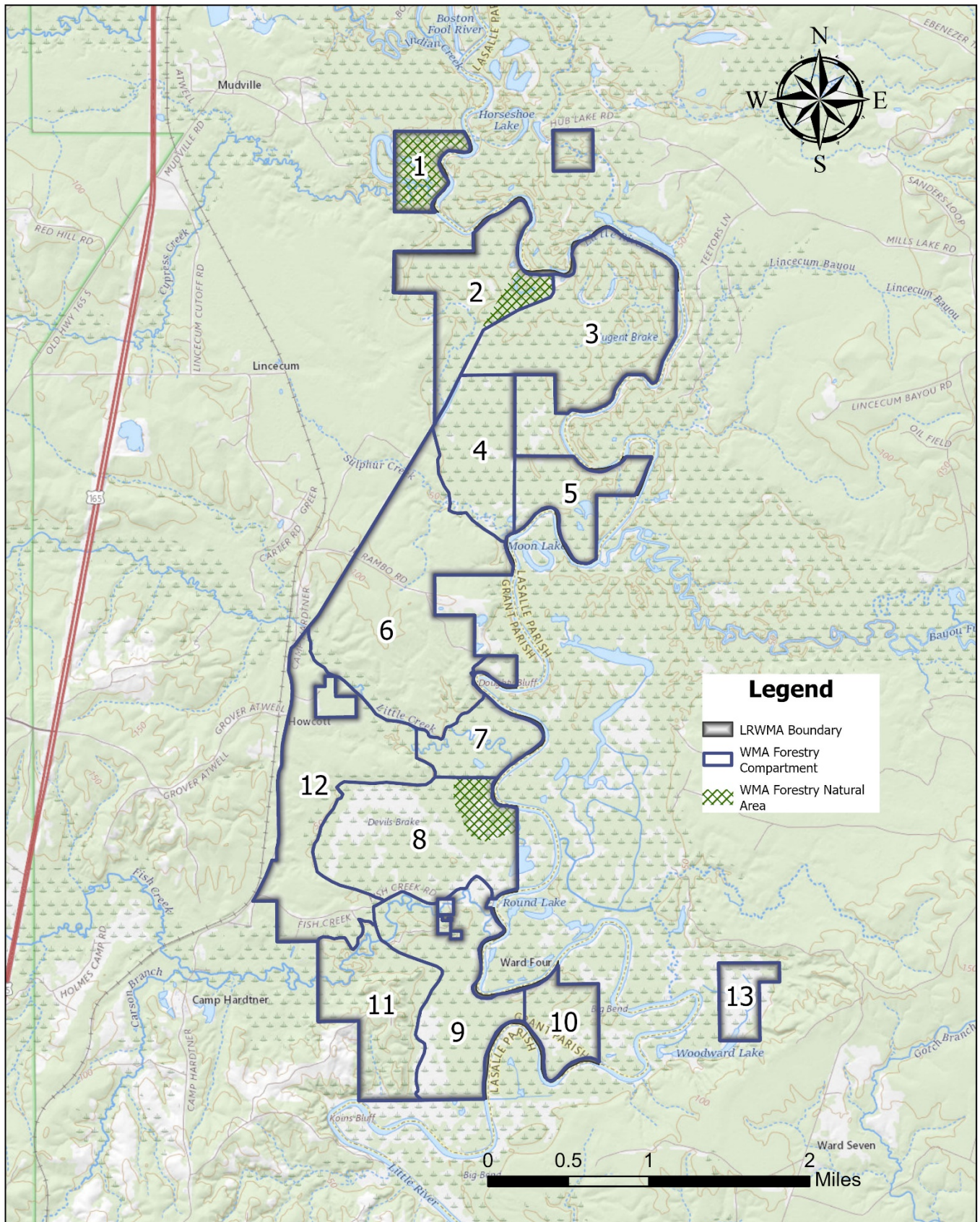
- No tops left within 6 feet of base of live trees
- Firebreaks to be kept clear of debris and widen to 30 feet
- Disperse skid trails to minimize damage to herbaceous community
- No harvesting during wet periods
- No harvesting during the spring turkey season or firearm seasons for white-tailed deer
- All logging slash should be redistributed throughout treatment area
- Follow Louisiana BMP guidelines at all times
- Limit soil disturbance

Additional Entry Requirements

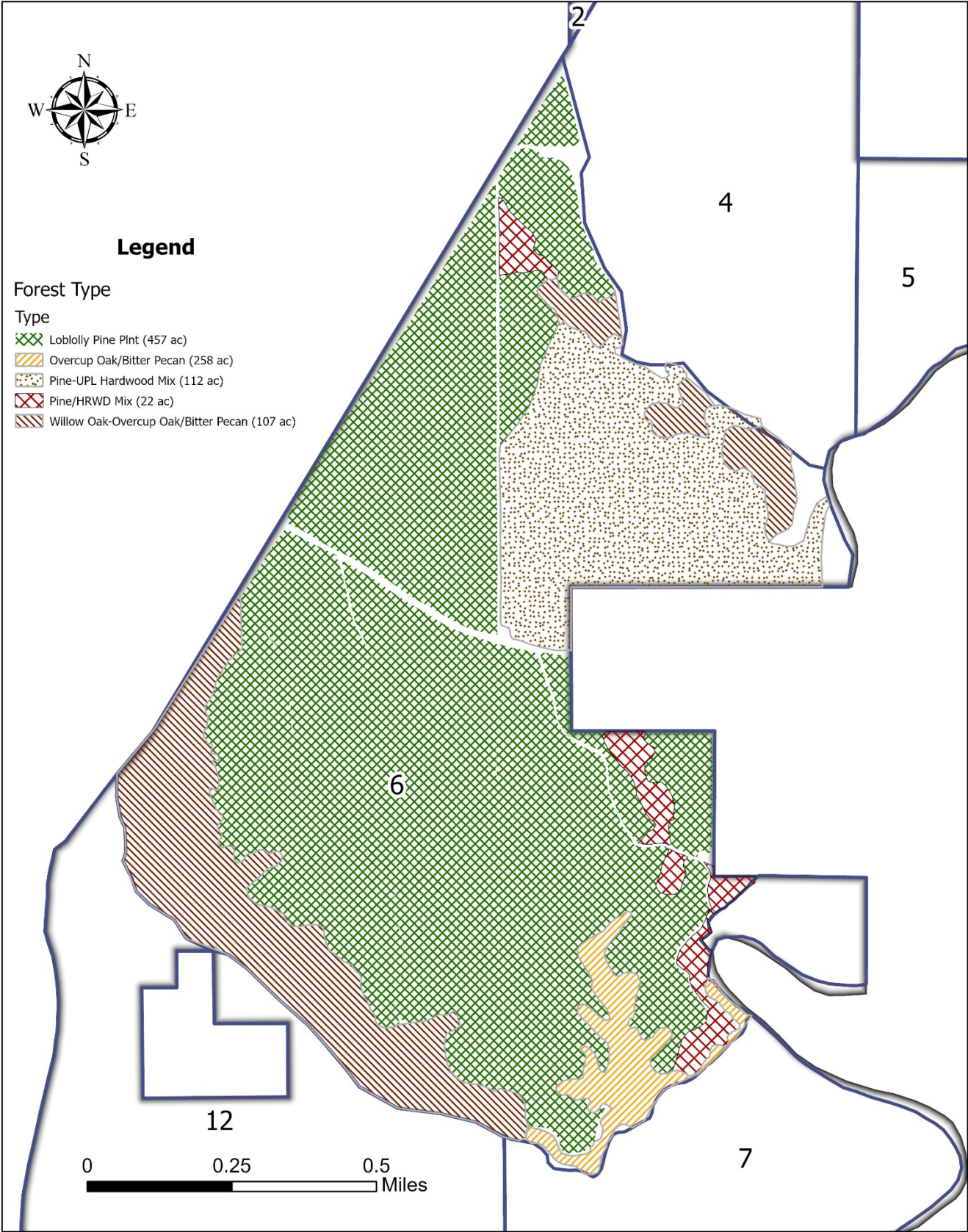
- Monitor habitat development
- Re-evaluate to determine when additional thinnings are required

Attached maps (WMA, Forest Type, Treatment, and Harvest History)

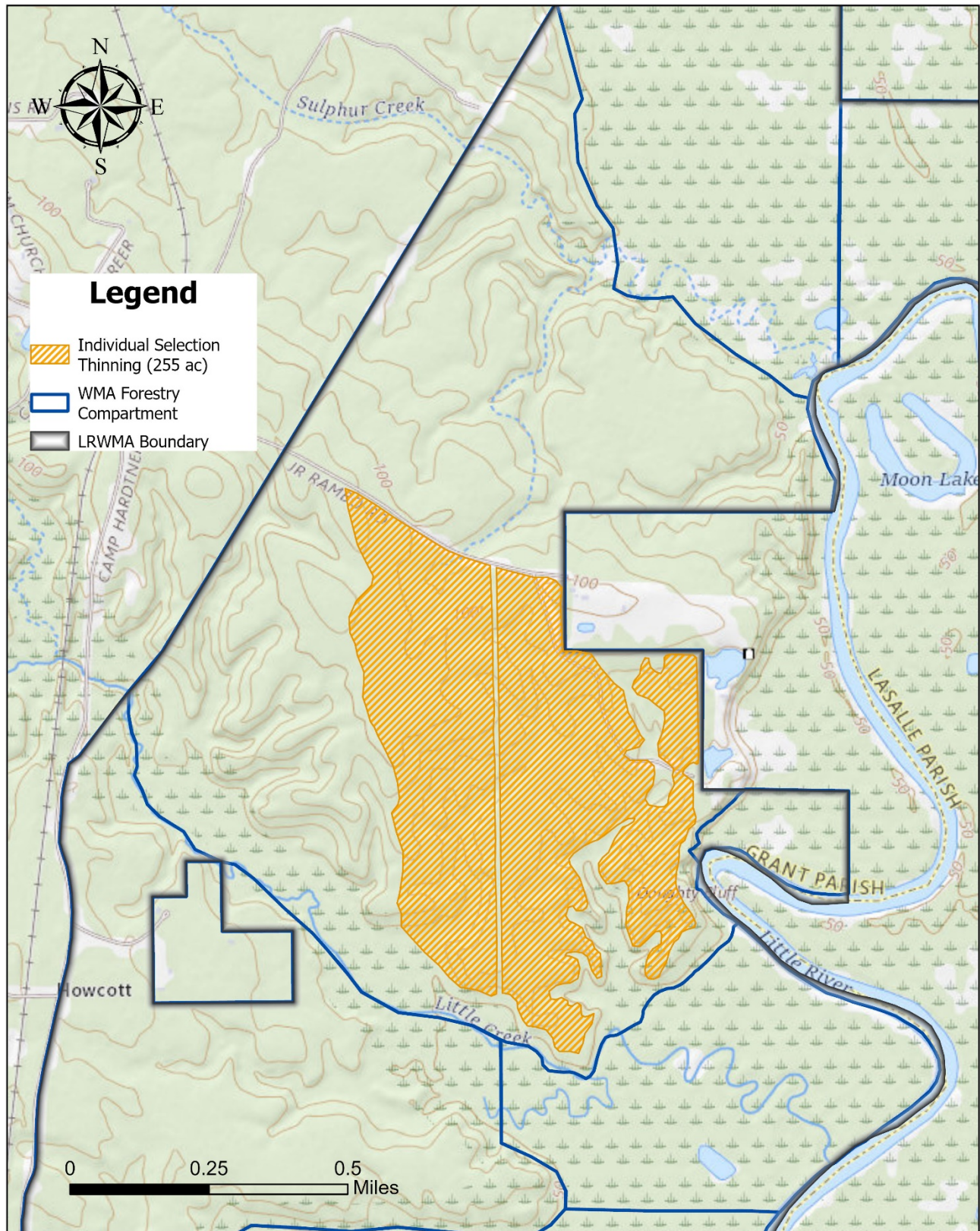
Little River WMA Forestry Compartments and Natural Area



Little River WMA Compartment 6 Forest Type



Little River WMA Compartment 6 Proposed Treatment



Little River WMA Past Treatments

