

Steam Engines Made Hauling Wood Much Easier and Opened Up Most of the Longleaf Forest to Logging

(bolded words in text indicate key words and concepts)

Student Information:

Steam engines made logging much easier. Loggers built railroad tracks along ridges and logged on both sides of them. Trains replaced rafts as the best way to move heavy logs to the sawmill.

Teacher Information:

The exhaustion of the white-pine forests in New England by the end of the nineteenth century saw northern investors and land speculators purchasing large areas in the south covered with vast acreage of longleaf pine. With this investment came advances in technology to step-up production and increase efficiency of logging. Before the use of steam power, it was not cost effective for a company using mules and oxen to log much more than a mile or two from streams and rivers. This meant millions of acres of backcountry longleaf forests were untouched prior the twentieth century. Steam power, however, opened up the entire longleaf pine forest landscape to logging. Few areas were spared from **logging**. By 1907, the 5 ½ million acres of old-growth longleaf pine forests were being cut per year.

Timber companies built **spur lines** along ridges across the south and logged the slopes on either side. These lines were also called **tram lines** (named after the train) or **dummy lines** (because they weren't considered a "real" rail line connecting one community to another). Because these rail lines were often haphazardly laid onto the ground, the wheels of the flatcars had several inches of left/right and up/down "play" in them. Still it was not uncommon for trains to "jump" the tracks.

Early steam locomotives burned wood (usually pine). The stack on these wood-burning locomotives was designed to bulge at the top. This bulge was engineered to act as a spark arrester and lessen the threat of wildfire. Sparks coming off of train wheels, however, were responsible for starting many fires in the woods.

Some companies used **steam skidders** powered by "**donkey engines**" to haul logs to the trackside, where they were loaded on rail cars. Although efficient, these machines were very destructive to the regeneration of the forest as logs were carelessly skidded over young longleaf pine seedlings. Trains could move large amounts of **bulk goods**, including wood, efficiently and they soon overtook water transport as a shipping choice.

The **milling** of wood was also powered by steam. Prior to the use of steam, most mills were powered by water and were limited in where they could be located. Such mills were not efficient and did not produce much sawn wood. With steam, mills were often built close to railheads and became the focal points for mill towns. At first, most mills were constructed of wood. However, fire was a constant threat and many a mill was burnt to the ground. Over time, mills switched to using metal in their construction.

When all the timber that could be reached from a spur was cut, the trains backed out, pulling the rails up behind them. Old rail beds or tram ways are common across the southern landscape today. Steam locomotives that were not sold to other logging companies or to commuter railroads were usually scrapped for metal. Today only a handful of these steam workhorses of the lumber industry remain.

Key Words and Concepts: bulk good, donkey engine, dummy line, logging, milling, spur line, steam engine, steam skidder, tram line.