

Wakulla Springs State Park
Cherokee Property Uplands Restoration
Updated April 2012
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- 1) The Site - A 155 acre uplands that had been clear-cut of all merchantable timber in 1987-1988 and then left to grow as is. Site became State Park property in January, 2000. Site was selected based on what its previous use was thought to be, and the fact that there was some herbaceous plant growth already present. Previous land use is thought to have been cattle production and/or crop production. This projection of use is based on historical photos, scattered large pine stumps, and vegetative growth present at the time of restoration. The vegetation at the site was a fifteen-year growth of rough with a mixture of upland hardwoods and slash pine. The hardwoods include mostly laurel oak, black cherry, yaupon, hawthorns, crabapple, dogwood, sassafras, and plum. There were also some bays, post oak, turkey oak, sparkleberry, sweetgum, hickory, and even beech. The pines were mostly slash pine but a few young longleafs were found on the site. The hardwoods were small in diameter (2-6 inches) based on their age of about fifteen years and were 20-30 feet tall. The thickets of hawthorns, crabapple, and plums are affectionately referred to by park staff as “gnarly woods” and access in these gnarly woods is poor. The slash pine are scattered with some being in clusters, and are larger than the hardwoods. The longleaf pines are widely scattered, single, and small – mostly in the grass stage or just emerging. The herbaceous growth found in portions of the site is mostly broomsedge, sumac, St. John’s-wort, grape vine, and beautyberry. The herbaceous growth is found in scattered, open areas. The soils are Alpin sand and Otela-Alpin fine sands, 0-5 percent slope. These sandy soils are excessively drained uplands. The presence of several old and mostly abandoned gopher tortoise burrows have been discovered on the tract.
- 2) The Process - The goal was to remove the hardwoods while protecting the pines and herbaceous growth. The pines were desired to help carry fire through the young planted pine stand so as to help control hardwood growth and promote herbaceous plant growth. Containerized longleaf pine seedlings would be planted after the hardwood removal. In March of 2003, Gyro-Trac work was started by the St. Joe Paper Co. This work continued until April taking about 2 months to complete due to some equipment down time. The Gyro-Trac work removed most of the hardwoods, leaving just trees 6 inches or larger in dbh and all pine trees. On May 14th and 30th portions of the Gyro-Trac areas were burned. The burns went well and were some of the hottest fires I have ever been on. All ground fuels and mulch from the Gyro-Trac operation were consumed. All large hardwoods that were left were killed to the ground-line and access for tree planting was improved. The only drawbacks to the burns were that only 25 acres was completed and that all pines left in the burned area were also killed. In September of 2003,

hardwood sprouting was observed from the Gyro-Trac trees although growth in the burned areas was much less. The regrowth was expected and a contract to do a species specific foliage herbicide treatment was approved in late October. The treatment occurred November 19th and was completed within one week. The treatment involved a 2% mixture of Chopper that was sprayed by use of a backpack sprayer, over the entire resprouting tree. A work crew of about 8 people completed the job. On January 7th and 8th of 2004 the rest of the tract was burned with good results. These fires were not as hot as the May burns of 2003, but they did consume the Gyro-Trac mulch and improved access for tree planting. Tree planting of 75,000 Florida Division of Forestry containerized Longleaf pine seedlings was started on January 23. A crew of 20 people completed the hand planting in just two days! Trees were randomly planted to a stocking of 500 trees per acre. In the weeks after the tree planting, we had good rainfall and new root growth was observed on several sampled seedlings within two weeks after planting.

- 3) Cost of the project, so far -

Gyro-Trac Work - Contractor St. Joe Paper Co.	\$77.68 /Ac
	\$12,040.00 Total
Herbicide Work - Contractor So. Forestry	\$75.00 /Ac
	\$11,625.00 Total
Tree Planting - Contractor So. Forestry	\$80.07 /1000
	\$38.74 /Ac
	\$6,005.25 Total
75,000 Seedlings - Contractor Florida DOF	\$165.00 /1000
	\$79.84 /Ac
	\$12,375.00 Total
Grand Total - So Far	\$42,045.25
	\$271.26 /Ac
- 4) Survival and growth of the longleaf pines has been excellent. There is some hardwood sprouting and the large hardwood trees have not been treated and are growing well. Active gopher tortoise burrows have been observed on site. September 2010 pine survival survey shows about 400 longleaf pine per acre.
- 5) Burning - North half of area is prescribed burned February 29, 2008, excellent burn. April 2008 gopher tortoise survey estimates 50 burrows in the northern, burned area of the site. South half of the area prescribed burned on February 1, 2009 – good burn. Zone burned February 15, 2011- excellent burn. April 2011 GPS gopher tortoise survey gives 47 burrows in the area. Group volunteer project in spring of 2011 that removed a number small and larger hardwood trees. Fall of 2011, some chainsaw reduction of hardwoods in eastern portion of zone.
- 6) What is Next? Continue to monitor pine growth, hardwood sprouting and gopher tortoise population. If able to fund, herbicide the large, remaining hardwood trees and new sprouts. We anticipate herbicide treatments of sprouting hardwoods, possible artificial dispersion of collected herbaceous plant seed, continue frequent burning (every 2-3 years), reduction of longleaf pine if survival is excessive, and possible removal of the slash pine overstory.

