

Example Management Plan shared as part of the Forest Guild's Ecological Forestry Initiative www.forestguild.org/ecological_forestry.html

CRUMMIES CREEK TREE FARM

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LOCATION AND GENERAL WOODLAND DESCRIPTION

This woodlot, consisting of 710 acres, is located in the Right Fork of Crummies Creek in Lee Magisterial District of Calhoun County. The property is located approximately 2 miles east of WV 16 on the Right Fork of Crummies Creek. Crummies Creek Tree Farm is located about three miles south of Arnoldsburg on the waters of the Right Fork of Crummies Creek, a minor tributary of the West Fork of the Little Kanawha River.

A majority of the forestland of Crummies Creek Tree Farm was moderately to severely harvested in the 1980s by a previous owner. In 1990, an aggressive silvicultural improvement effort was started on the property that has continued to the present time. In early 1993 a Forest Stewardship Plan was completed for the woodland that has helped direct the completion of several hundred acres of grapevine and cull removal, crop tree release and the development of miles of access roads and trails. Timber has been harvested in a variety of forest improvement cuts since 1994. Improvement cuts were completed in 1994, 1996, 1997, 1999, 2000 and 2002.

The ice storm of February 2003 caused widespread damage on all north facing slopes above 1000 feet in elevation. In several northeast facing coves of the Tree Farm, patches of small sawtimber sugar maple were obliterated by the weather event. Salvage logging after the ice storm resulted in the recovery of timber from every high elevation portion of the property. During the salvage logging, most existing access roads and trails were cleared and two miles of new woods roads were constructed in the woodlands of Crummies Creek Tree Farm.

The forest soils in many of the coves at Crummies Creek Tree Farm are atypically fertile and support a broad array of understory plants of commercial and ecological significance. Since the early 1990s, the owners have been managing to promote and maintain the native populations of medicinal plants found in the Crummies Creek woodland. The process began by eliminating the commercial harvest and removal of plants, plant parts and log moss from the woodland so that exploited populations could recover. Black Cohosh is an extremely common understory plant on the north facing slopes and is closely associated with native populations of Goldenseal and ginseng. Since 1998 ginseng and Goldenseal plantings have been established in several locations. A wild ginseng research plot administered by WVU is presently located in the northern hardwood forest type, Stand 1.

In addition to cultural improvements, efforts have been made to develop and enhance wildlife habitat in Crummies Creek Tree Farm. Since 1994 seven wildlife waterholes "dugouts" have been established in the woods. The area surrounding several of the dugouts has a noticeably increased amphibian population. Grape arbors have been largely eliminated but several small areas have been maintained for wildlife habitat, especially in areas surrounding ledges and rock outcrops. During thinnings and cull removal, large diameter culls with shaggy bark such as red maple and shagbark hickory have been left for the benefit of bats. There is a rattlesnake den in a

rocky area near the center of the property and rock ledges and overhangs are the habitat for several species of bats. One area with a high ledge and big drop is a late summer gathering spot for turkey vultures. In addition to all the birds, small amphibians, reptiles and furry critters found in the woods, large game animals known to frequent the Crummies Creek woodlands include: turkey, deer, bobcat, squirrel, raccoon and black bear. Ravens are regularly encountered throughout the winter and numerous pileated woodpeckers take advantage of the variety of snags created during timber stand improvement work. The property has a high deer population.

More than 40 timber species grow on the property including: red, chestnut, black, scarlet and white oak, yellow poplar, sugar maple, red maple, basswood, cucumbertree, hickory and white ash. Black walnut, sourwood, sassafras, red bud, elm, black gum, locust and hophornbeam occur as associated species throughout the stands. The majority of the timber on the property is in the large pole to small sawtimber size classes. The sites are of good to very good quality for the production of forest products. The property shows historical evidence of multiple fires with no fires having burned within the past fifteen years. Defoliation of white oak trees by loopers has caused mortality in several parts of the property. Japanese stiltgrass (*Microstegium vimineum*) is becoming a major threat to the forest and Chinese tree of heaven has become established in several places. No other serious insect or disease problems were detected during this evaluation.

All of the stands on the property are immature and the consistent harvest of timber is a high priority for the woodland owners at this time. Much of the property is currently in a condition that should make timber harvesting a priority during the planning period. The original inventory of Crummies Creek Tree Farm that was determined during the cruise for the Stewardship Plan at the completion of the 1992 growing season was:

*Total Volume January 1993	1,636,965 bd. ft. 6,425 cords
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The inventory of Crummies Creek Tree Farm that was determined during the cruise for the Stewardship Plan at the completion of the 2003 growing season was:

* Total Volume January 2004	3,154,025 bd. ft. 4,525 cords
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* International 1/4 inch log rule

LANDOWNERS OBJECTIVES

The Richardson cousins are interested in continuing the implementation of a forest management program that will improve the long term value of the timber and nontimber commodities growing on the property while providing for an increased diversity of wildlife species along with enhanced opportunities for woodland recreation. The primary objective of this plan is to present recommendations designed to assist John and Russell in meeting their goals while improving the quality of individual trees. Management activities will be concentrated on the better quality sites where maximum returns from wood products and associated forest benefits can be realized. During the process of implementing this plan, the incorporation of a long term strategy for fee based recreational access and the sustainable production of nontimber forest commodities will be of increasing significance and importance.

Sample recommendation for the property for one of the 13 forest types.

FOREST MANAGEMENT RECOMMENDATIONS

<u>STAND</u>	<u>ACRES</u>		<u>RECOMMENDATIONS</u>
1-BB	79	Average age: 55 years Site Index: 90+	Soils: PvE, GvF, GpF3

Stand Description Narrative:

This is a northern hardwood stand of medium sawtimber size found in a hollow with steep slopes, deep coves and exposures to the north and northeast. The “Ghosty Fork” area has mixture of species in the overstory. In the original Stewardship plan, 21% of the basal area was cull beech. In spite of the damage from the 2003 ice storm, 17% of the present stand inventory is cull. Portions of the stand have been harvested at four different times since 1994 and much of the stand is developing a serious problem with Japanese stiltgrass. The present overstory breakdown is as follows: red oak 20%, basswood 14%, sugar maple 12%, yellow poplar 11%, white oak 10%, beech 7%, black oak 7%, hickory 6% and white ash and chestnut oak 4% each. The entire stand has a very diverse understory cover of native plants of significant commercial value. Ginseng and Goldenseal have been planted in several locations in the type and a portion of the stand understory is the source of black Cohosh seed that is marketed outside West Virginia. A ginseng research plot is located within the type and the black Cohosh plants have been studied and genetically mapped by medicinal plant researchers. Access through the stand is provided by the main “bench” trail and the uppermost areas have roads that were reestablished or constructed during salvage logging after the 2003 ice storm. A gas well access road that rises from the Crummies Creek valley to the ridgetop provides access to the highest elevation portion of the stand. Approximately fifteen acres of the stand were treated for cull removal in 1994-95. The proportion of oak in the overstory is 37% and the potential for gypsy moth mortality is moderate. Approximately two acres of the stand is part of a grape arbor and grapes are present in about 10% of the type. Most of the grapes encountered in the area during the initial planning period have been treated. Generally, the red, white and black oak trees are of high quality. Other than fire scars the stand appears to be healthy. Almost 5 acres of the stand were treated for grapevines in 1998.

Recommended Treatment Narrative:

Access into and through the area should be maintained. The spread of Japanese stiltgrass within the area should be contained, if possible and regular thinnings and improvement cuts should continue. The developing timber in the stand is of excellent potential quality and of very high potential value. The highest priority for the stand would be to prevent forest fire in the stiltgrass, remove additional culls and complete grapevine cutting around the fringes of maintained grape arbors. Some of the largest cull beech should remain for den trees.