

Land Use Revalidation for Forest Land in Page County, Virginia

Report prepared by Ann M. Gallagher, M.S., ISA Certified Arborist® MA-5484A
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Background

The property owner purchased the lot in 1973 with the intent of maintaining the property as a tree preservation as a wildlife refuge. The Page County, Virginia property is described in title documents as "Beginning at a point in the total boundary of Gue, said point being N 88° 41' 30" E 626.85 feet from a set stone: Thence, with 2 new lines through Gue N 1° 18' 30" W 995.00 feet to a point; Thence, N 75° 20' 40" E 2093.28 feet to a point on the total boundary. Said point being on top of a ridge; Thence, with 4 lines along top of said ride, S 21° 25' 5" W 590.16 feet to a point; Thence, S 24° 35' 05" W 188.32 feet to a point; Thence, S 0° 55' 11" E 371.25 feet to a point; Thence, S 8° 00' 00" E 396.00 feet to a point; Thence, leaving the top of said ridge, S 88° 41' 30" W 1770.00 feet to the beginning, containing 50.076 Acres" (Figures 1 and 2). Elevation ranged from 1600 to 2100 feet above sea level (Figure 3). This property is adjacent to The U.S. Department of the Interior's Shenandoah National Park. Since purchase the trees have been left to develop into a mature forest community with appropriate tree species of varying size, health, and age in order to provide habitat for wildlife meeting Virginia Department of Conservation and Recreation requirements for a "natural area".

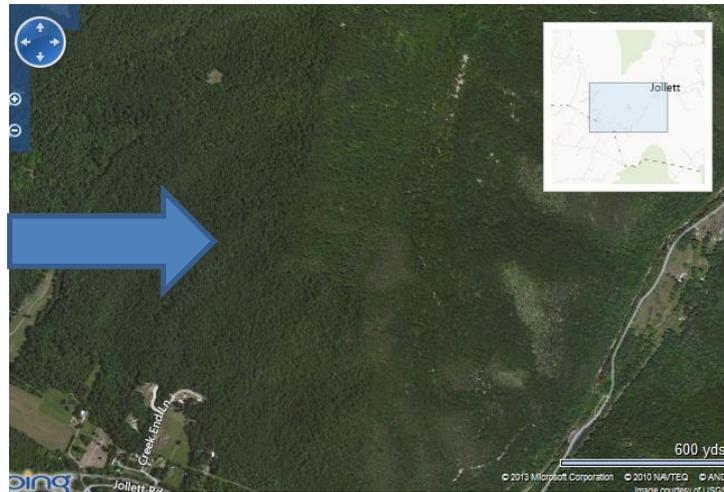


Figure 1: Satellite image of the property from <http://maps.nationalgeographic.com/map-machine#s=h&c=38.454328070763076,%20-78.54733228683472&z=15>

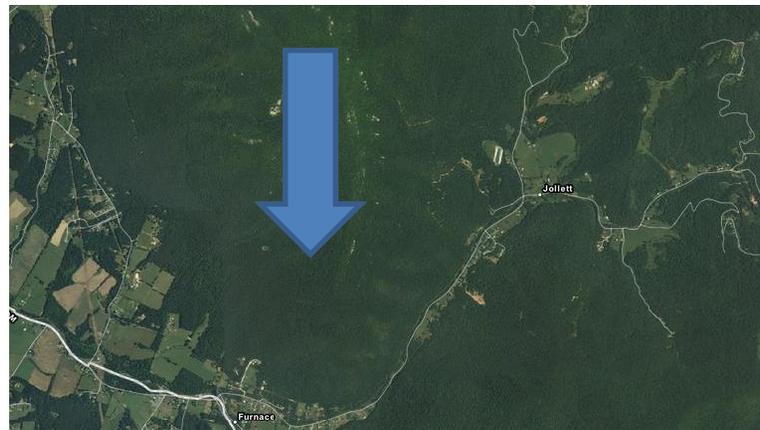


Figure 2: Satellite image of the property from <http://www.mapquest.com/satellite-maps/>



Figure 3: Topographic map of the property from:

http://www.mytopo.com/maps/index.cfm?search_string=shenandoah%2C+va

Methods and Findings

Property overview:

On May 19, 2013 the property was accessed through the established ingress and egress easement. Explored on foot, tree species and distribution, distribution fluctuations, and unusual characteristics of the property were observed. Trees ranged in size from young saplings to mature trees. Trees exhibited good health characteristics and growth patterns expected in a forested stand. Branching structure, leaf size and distribution, trunk taper, and root crown were consistent with trees growing in a densely forested property. Undergrowth was consistent with a vital forest community; leaf litter coverage supporting herbaceous plant growth including native orchids, winterberry, wild ginger, solomon's seal, and iris. Woody understory shrubs included blueberry, mountain laurel, and witch hazel. Encountered tree species were primarily deciduous species including dogwood (*Cornus florida*), oaks (*Quercus alba*, *Q. prinus*, *Q. rubra*), sassafras (*Sassafras albidum*), maples (*Acer pensylvanicum*, *A. rubrum*), black gum (*Nyssa sylvatica*), American chestnuts (*Castanea dentata*), hickory (*Carya sp.*), cherry (*Prunus pensylvanica*), and white ash (*Fraxinus americana*). There were at least two mature pines trees; Virginia pine (*Pinus virginiana*). These tree species densely covered the property with one exception -

on the small rockslide (approximately 40 x 30 feet) only a few trees, notably an American chestnut (*Castanea dentata*) were growing within the rocky area.

Sampling sites:

Multiple plots were randomly selected. Trees within the plots were identified and measured. Tree species within the randomly selected areas included American chestnut (*Castanea dentata*), black gum (*Nyssa sylvatica*), maples (*Acer pensylvanicum*, *A. rubrum*), sassafras (*Sassafras albidum*), and oaks (*Quercus alba*, *Q. prinus*, *Q. rubra*). The findings are reported by age and species composition.

Age:

Using growth factors to estimate age the largest *Q. prinus* tree is estimated to be 130 years old. Nearly 5% of the trees were estimated in excess of 100 years. About 20% of the trees were estimated to exceed 50 years of age. An additional 10% were between 20 and 50 years old. Excluding the oaks, the oldest measured trees were *A. rubrum* (estimated at 20 years) and *F. Americana* (estimated at 13 years). It is worth noting: based on experiential evidence this estimate is most likely underestimating the actual age since reduced size would be expected in the competitive environment of the shady forest.

Species Composition and Distribution:

Trees of a measurable size (trunk diameter greater than 0.5 inches) were found, on average, every 4 feet. The most commonly occurring tree was the chestnut oak (*Q. prinus*) with specimens ranging from under 2" in diameter to 22". All three oak species together dominated the forest with 50% of the measurable trees being one of the three types of oak. Nearly 30% of all trees were *Q. prinus*. A remarkable 10% of the trees were *C. dentata*. Representing approximately 10% each were *N. sylvatica*, *S. albidum*, and *A. pensylvanicum*.

Conclusions

The densely covered property represents an ideal for mountain property on the eastern side of the Shenandoah River and adjacent to the Shenandoah National Park. In keeping with the goal to preserve a forest community for use by wildlife

the tree species, age, composition, and distribution represent an idea composition for the property. Native trees in a community exhibiting appropriate diversity suggest a property benefitting from decades of management in keeping with a natural area.

Photographic documentation from site visit



Typical tree distribution at the lower elevations of the lot.



Typical tree distribution at the higher elevations of the lot.



An American chestnut re-establishing itself within the small rockslide (approximately 40 x 30 feet) located near the higher elevation of the lot.



The other side of the small rockslide fringed with blueberry bushes and oak trees.



Wildflowers such as this orchid were found; supported by the overall structure of this forested property.



Homeowners downslope of the property report sighting black bears, rattle snakes, and other wildlife emerging from the property. At the time of the site visit this young tree showed unmistakable indications of animal presence supported by scat.