



COMMONWEALTH of VIRGINIA

Department of Forestry

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Stand Plans DOF Tract: RAP18008

Dear Rappahannock County Park Board Members:

Thank you for the opportunity to assist you in practicing forest management. This stand plan will provide you with information and recommendations for the forestland in your care. In forestry terms, a stand is a group of trees similar in size, age, and arrangement that differentiates them from surrounding forestland. A stand is managed as one unit. Your overall objective is managing for forest health. The following recommendations are based upon this objective. Stand A and B are the stands and are what the descriptions and recommendations below refer to. All recommendations are suggestions and NOT mandatory.

Stand A

Description: Urban Forest- 3.7 acres

The stand is comprised of planted trees and shrubs and an overgrown fence line that has grown up in hardwoods. A playground, tennis court, basketball court, pavilion and skate park provide visitors recreational options during their visit. A photo from 1970 shows this area was a cow pasture with some trees in it.

The canopy cover from the trees enhances the visitor experience by offering shade, wildlife watching opportunities and enhances the natural beauty of the park. One of the biggest threats to the stand is invasive species. In addition, the trees should be assessed for their health and the risk they may pose to visitors.

Recommendations:

1. Have trees periodically inspected by a certified arborist to ensure health and perform a risk assessment.

Certified arborists for this area can be found at www.goodtreeacare.com. It is very important to have a professionally certified arborist perform any tree care work and risk inspections as they perform these tasks to a respected professional standard. Having inspections done ensures tree health and can detect structural defects or ailments in the trees that could cause them to fail and cause damage to life or property.

2. Encourage only native species on the grounds.

Native plants are important for maintaining a health ecosystem. They not only can be just as aesthetically pleasing as non-natives can, but they offer more environmental benefits because they have

evolved with the fauna of the area. If any more plantings are done, ensure they are native species preferably cultivated in Virginia.

3. Consider establishing pollinator meadows in the open areas.

Native wildflower and warm season grass meadows are a diminished habitat type in the piedmont. They can provide beautiful areas for visitors to see butterflies, birds and small mammals that prefer these habitats. Contact a wildlife biologist for more information.

4. Minimize erosion.

Since everything from the stand drains into the Rush River, ensuring any sedimentation or pollution is filtered into, the leaf litter of the forest is important to protecting water quality for those downstream. Simple practices, such as covering bare soil areas or installing butterfly gardens in wet spots can help.

5. Have trees protected during construction or maintenance projects.

A little planning goes a long way to ensuring that tree health is secure in the future. Unfortunately, it can take trees years to display symptoms of damage done to them decades ago. Most tree damage during development or construction is entirely preventable. Hiring a certified arborist to delineate tree protection areas and to work with the contractors performing the work can do wonders to protect trees.

Stand B

Description: Mixed Hardwoods- 3.4 acres

Overstory species include ash, black walnut, cottonwood, sycamore, yellow poplar, black locust, red maple, black cherry, southern red oak, hickory and pin oak. Understory species are spicebush, ironwood, boxelder, pawpaw, grapevine, poison ivy, Virginia creeper, blackberry, sweet birch, sweet cherry, eastern redbud, dogwood and sassafras. Non-native and invasive species found were Japanese honeysuckle, oriental bittersweet, multiflora rose, mile-a-minute, autumn olive, wineberry, mimosa, pear, English ivy, and burning bush. Tree sizes ranged from 4"-20"+ at DBH (Diameter at Breast Height or 4'6")

Soils in the stand are Hiwassee clay loam, Brandywine loam and stony alluvial land. These soils range from well to somewhat excessively drained. This is due to the stand's steepness. The Rush River flows on the eastern border and eventually into the Rappahannock River. Fire danger is moderate due to the fuels and possible ignition sources are the highway and visitors to the park. Wildlife use the stand as a travel corridor to adjacent habitats. Seasonal food is present via the mast producing trees.

The aerial photo from 1970 shows the stand intact. Over time, the stand likely had some light timber harvesting done for farm use, but no evidence was found to suggest a wide scale operation was done. Given the steep slopes, it is unlikely it was ever used for crops although cattle may have been allowed to shade up on the gentler parts. There is a rich diversity of species, but the presence of invasive species is actively hindering beneficial native regeneration especially in canopy gaps left from tree mortality. In addition, Emerald Ash Borer (EAB) is killing ash trees.

Recommendations:

1. Control invasive species and deer.

In Northern Virginia, these two are the biggest hindrances to forest management. They both work together to stress native plants and take over the growing space. It is a process of control and monitoring with the hope of getting invasives and deer to a manageable level where you have to spend less time controlling them as you initially do. The invasive vines, such as Japanese honeysuckle and oriental bittersweet should be the top priority since they kill trees.

Identification and methods to control the invasives on the property can be found at <http://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf>. Attached is a removal contractor list. If you do the work yourself and use herbicides, please be sure to follow ALL directions on the label and use great care when applying these chemicals near water resources. If you do not choose herbicides, then you can mechanically control invasives. While this is not as easy as herbicides, it can work to an extent. Goats have also been fenced in the forest to eat invasive plants. However, a treatment like that could jeopardize native plants long term because goats eat practically everything.

Deer need to be controlled as well. While hunting may not be an option at the park, encouraging the Park's neighbors to harvest deer can be helpful. If they are not controlled, then invasives will thrive since deer eat native plants. Having a forest full of invasives hurts the native ecology and leaves you few options for management or the development of a desirable forest. A desirable forest is one that includes a diversity of native vegetation and animals that should be present in its stage of succession. In addition, the more invasives there are the less food deer have to eat. Discouraging a population buildup of deer combined with invasive species control gives native plants an advantage. Controlling one, but not the other will NOT help this ecosystem. Deer and invasives lack controls, except for humans, to naturally keep them in check so it is important to reduce their numbers to restore balance.

2. Manage canopy gaps to encourage native regeneration.

The canopy gaps are not regenerating with native species because of the invasives. Ideally, brambles will take over the gaps until seedlings from the overstory seed in and take over the growing space. The gaps in the forest now are not developing as they should naturally. Once invasive species control is done, monitor for natives and allow them to colonize these spaces. This will involve yearly monitoring for invasives and controlling them to give the natives a chance to occupy the growing space.

3. Assess risk for affected ash trees with the Emerald Ash Borer (EAB).

EAB is a huge problem in Northern Virginia. Have the ash trees near the skate park looked at ASAP by a certified arborist. Given their proximity to a target area, the damage they could do when they fall is high. Most of the ones observed showed advanced signs of infestation so they will likely decline and die. Please use caution around dead ash trees, as they get very brittle when they are dead and are very prone to breaking without warning. Use caution when traversing the stand and encourage caution to all the visitors as long as the dead trees are present near any trail areas.

4. Use best management practices on your trails to minimize sedimentation into the Rush River.

Practices are at <http://www.americantrails.org/resources/trailbuilding/Basic-trail-layout-design-TN.html> and <http://www.dof.virginia.gov/water/index-BMP-Guide.htm>. Remember that pollution problems caused by trails stems from soil erosion and sedimentation being deposited in streams. Trail building activities need to be planned to minimize their impact on the environment and that all local, state, and federal laws are followed. Simple planning can save years of frustration dealing with a problem trail. Keep the following things in mind:

- Bare soil should be AVOIDED on trails to minimize erosion
- Follow the contour and avoid going perpendicular down a hill
- Keep trail surface stabilized with wood chips or other cover
- Install water diversion structures on slopes to stop the momentum of the water

Discussion:

This park is a great place to educate the public about their natural resources heritage as residents of Rappahannock County. It can help foster pride of trees and the fact that the county is a nursery for a river that hundreds of communities count on for their livelihood downstream. While management activities, such as deer hunting may not be feasible on the property, invasive control certainly is. Prior to completing invasive control which will be noticeable due to dead vegetation, a public education campaign should be implemented to the citizenry. This will help inform them of why the work is being done and how it helps protect their natural resources.

Additional Resources:

For questions regarding agriculture technical assistance, regulations, cost share programs and anything else, please contact the Culpeper Soil and Water Conservation District (<http://www.culpeperswcd.org/>) and the Rappahannock County VCE Office at (<http://offices.ext.vt.edu/rappahannock/>). If you are interested in having the wildlife habitat assessed on the property, please consult with a wildlife biologist. The Virginia Department of Game and Inland Fisheries Wildlife Biologist for Rappahannock County is David Kocka and he can assist you. His email and phone number are david.kocka@dgif.virginia.gov and (540) 248-9360. Other natural resource assistance is available through the Natural Resource Conservation Service (NRCS). Rex Rexrode District Conservationist (540-825-4200 x 101 or rex.rexrode@va.usda.gov) can provide further assistance. For other wildlife assistance, especially with the warm season grass field, contact Justin Folks, Private Lands Biologist with NRCS, at (540) 248-6218 x 108 or justin.folks@va.usda.gov. In addition, Celia Vuocolo Habitat and Stewardship Specialist for the Piedmont Environmental Council cvuocolo@pecva.org or (540) 347-2334 x 7086 can provide wildlife assistance.

Please contact me with any questions and I will be glad to help. It has been a pleasure working with you. I wish you many blessings in your land management activities.

Respectfully,

Kyle D. Dingus
Area Forester