

## **Environmental Stewardship Strategies: Rappahannock County Park**

The Rappahannock County Recreational Facilities Authority (RCRFA) was established by an act of the Board of Supervisors of Rappahannock County on November 2, 1978 and is governed by Chapter 47 of the Rappahannock County code.

A Master Plan has been approved which ensures that the Park facilities are designed and maintained in accordance with the mission and purposes set forth in the county code. The Master Plan outlines nine specific goals to achieve its mission, one of which is demonstrating environmental stewardship. An aerial view of the Park is shown in Attachment 1. An overview of the areas earmarked for future development is shown in Attachment 2.

This document elaborates on eight strategies the RCRFA has chosen for implementing projects that demonstrate real-life applications of environmental stewardship (Goal 7). These strategies are also tied to another RCRFA goal of providing educational outreach to local schools and the public (Goal 8). The link between these strategies for these two goals is discussed in this document.

The eight strategies described below are not listed in any priority order. Some of these strategies are independent from one another and can be pursued in parallel. On the other hand, strategies 4 and 5 depend on at least partial completion of strategy 3. As such, beginning the removal of invasive species is a high priority strategy. It will also require the most manpower to complete.

### **Goal: Demonstrate environmental stewardship**

**Strategy 1:** Invite organizations to participate in various RCRFA conservation projects

The RCRFA will actively invite other organizations to partner with and participate in various Rappahannock County Park conservation enhancement projects. Potential organizations which may be interested in collaborating with the RCRFA include, but are not limited to the following:

- Piedmont Environmental Council (PEC)
- Old Rag Master Naturalists (ORMN)
- Rappahannock Friends and Lovers of Our Watershed (RappFLOW)
- Rappahannock League for Environmental Protection (RLEP)
- Virginia Department of Forestry (VDOT)
- Virginia Department of Transportation (VDOT)
- Culpeper Soil and Water Conservation District (CSWCD)
- Child Care Learning Center (CCLC)
- Rappahannock Electric Cooperative (REC)
- Friends of the Rappahannock (FOR)
- Blue Ridge Partnership for Regional Invasive Species Management (PRISM)
- Rappahannock Garden Club
- Master Gardeners
- Rappahannock public and private schools
- Trout Unlimited (TU)
- 4-H Club

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- Boy and Girl Scouts
- Lions Club
- Knights of Columbus
- Clergy of Rappahannock

There are expected to be no costs associated with implementing this strategy.

**Strategy 2:** Provide regular service opportunities; develop a cadre of volunteers

Hold periodic Rappahannock Community Conservation Days to raise environmental awareness. The first event was held on Sunday, Oct. 21, 2018.

Offer periodic volunteer workdays to involve County residents. The first event was held on Nov. 16, 2018. The next events are planned for Saturdays March 9 and April 6. Depending on turnout and work opportunities, the Park may offer volunteer work days the second Saturday of every month, nominally from 9:00 am until noon. These work days would coincide with ORMN stewardship sessions for invasive removal, weed removal, and planting native gardens.

Provide educational outreach to local schools and the public. The Park is already working with the local high school, having created two small study plots for monitoring the impact of invasive species. Educational outreach is covered in more detail in a separate outreach strategy document. For more details please refer to the Park's Outreach Strategies document (Goal 8).

There are expected to be no costs associated with implementing this strategy.

**Strategy 3:** Remove invasive species from designated areas in the Park

Implement invasive species removal projects based on an invasive species inventory and the latest version of the Invasive Control Plan completed by Mike Wenger (ORMN). The long-term vision is to remove all seriously invasive species from the Park to a level that can be adequately managed by volunteers.

The Park's first effort to remove invasive species began on May 23, 2018 with RLEP partnering with the Environmental Science class at the Rappahannock County High School. Invasive species were removed from two small test plots in the forest near the Rush River. The school's Horticulture class will return this spring to see what species will have come up.

The first 20 ft x 115 ft section on the eastern edge of the open area was cleared Nov. 16, 2018. Additional work (started in January 2019) is required to remove additional ailanthus trees, underground root systems and to prepare the soil for planting.

The RCRFA will determine the overall sequence of land areas to be cleared of encroaching plant growth and the rate at which the work will be performed. The current plan is to address the perimeter around the upper field before attacking the main forested area. The approach for the perimeter will be to clear successive plots of all encroaching trees, shrubs and plants as manpower allows. Cleared brush and plant materials will be removed from the Park to the Amissville Recycling Center since there is no good place in the park to recycle them and renting a chipper would be an

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unnecessary cost because the Park has a source of free wood chips. Trunks and branches of felled trees will be cut into 3-4 foot sections and reused to line the trails.

For the forested area, one approach would be to begin from the first cleared plot and work downhill through the forest to the river and then start clearing successive strips to the left or right from the ridge down to the river. Another approach might be to begin by clearing the forest between the upper foot trail and the open field. The rate of clearing will be dictated by the number of volunteers available for clearing invasive species. Cleared invasives in the forest will be cut into small lengths and be allowed to compost on the forest floor.

Judicious use of herbicides may be applied to the stumps of invasive vines, shrubs and trees, usually on the day the invasives have been cut down. Application of herbicides on public lands such as the Park may only be performed by certified parties such as Registered Technicians or Commercial Applicators.

As part of the Park's public outreach program, a few specimens of invasive species will be retained and labeled. Users of the Park will be able to tour the park and identify native and invasive species alike.

Based on the level of effort required for clearing the initial 20' x 115' plot, it is evident that a significant infusion of man power will be required to complete the removal of invasives from the park. The RCRFA has been offered the use of inmates from the Rappahannock-Shenandoah-Warren Regional Jail to assist with the removal of invasive species and other labor-intensive tasks. 18 separate tasks have been identified. A crew of 6 persons can be made available week days up to 2-3 days per week. Crews bring their own tools and lunch and are supervised by corrections officers. RCRFA volunteers guide the work. The first work day occurred January 28.

There are expected to be no costs for manpower to remove the invasives, however selected equipment may need to be rented if the jail cannot provide adequate tools for days when the inmate crews assist the park with clearing debris. There may also be costs for herbicide application.

**Strategy 4:** Plant appropriate native species in designated cleared areas of the Park

The Park will develop a detailed vision/plan for the areas in the Park identified for replanting. The current vision involves deliberate plantings of new native plants, shrubs and trees in designated areas around the perimeter of the Park since it is believed the native seed bank in these areas may not be strong enough to ensure their rapid growth without incurring soil erosion. Native planting should attract insects, butterflies, birds and other wildlife. To enhance the Park visitors' experience, the vision has a preference for natives that are showy and aesthetically-pleasing (colorful flowers or fall foliage). Interpretive signage would guide the visitors' experience.

To this end, the Park plans to work with its collaborators and engage a firm to perform a site survey and landscape architectural drawing of the Park that identifies locations for planting specific native species in accordance with available sunlight, moisture and soil composition. The result may be similar to what has been developed for Rady Park in Warrenton or for the McIntire Botanical Garden in Charlottesville.

Current implementation ideas, subject to change, are described below.

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Implement native pollinator garden projects. The first octagonal raised bed was planted and mulched Nov. 16, 2018. It will be weeded and maintained by volunteers from RappFLOW, PEC and ORMN.

The area in the REC right of way under the power line is also a candidate for creation of up to three separate plots for native pollinators, warm season grasses, shrubs and small trees once it is cleared of invasives. The Park may want to include edible species (e.g. hazelnut, serviceberry) and flowering shrubs (e.g., rhododendron) as part of their plantings. REC clears the right of way every five years and is scheduled to do the next clearing at the end of 2019, followed by selective herbicide treatment during the spring of 2020. Planting could begin during 2020. If compatible species are used as part of an educational program, REC may be able to provide some funding and man hours to help with the planting, depending on the project date. REC is also willing to modify their clearing techniques so as to not damage native species planted in the REC right of way. Any plantings in the REC right of way should not compromise existing open views of the Rush River from the trails or the upper field.

Other locations along the perimeter of the open area of the park not dedicated for a future walking path are being considered for planting native pollinators, shrubs, or trees once invasives have been removed. See areas A-E in Attachment 3.

Likewise, sloped areas in the VDOT right of way adjoining Rt. 211 and Park Lane are being considered for planting of native trees and shrubs to enhance the beauty of the Park and mitigate the impact of traffic from Rt. 211. The County Administrator has contacted the appropriate people at VDOT and learned that the RCRFA will need to create a plan showing the right of way with a description of the proposed work for their approval. The plan should address any potential sight distance impacts during design (e.g. berms, tall vegetation). A Land Use Permit (LUP-LS) and Planting Agreement must be submitted for approval. See areas A, B and C in Attachment 3.

The Park plans to install appropriate low-key interpretive signage on trails and pollinator gardens. RCRFA may collaborate with RappFLOW to design interpretive signage while PEC may assist in obtaining cost estimates for design and installation.

The costs for plants and signage will need to be covered by RCRFA's annual fundraising and grants from various organizations. As of this writing, the RCRFA has applied for grants from the Krebs Fund (Piedmont Environmental Council) and RappFLOW to cover the costs for conducting a park survey, purchasing native plants, shrubs and trees, and providing interpretive signage.

**Strategy 5:** Manage the forested areas of the Park to encourage healthy forest growth

Implement Forest Management Project based on a DOF Forest Inventory and Management Plan completed June 2018 by Kyle Dingus (Area Forester). First action taken on July 30, 2018 was the felling of 12 dead and dying ash trees infested with the Emerald Ash Borer. Additional dying ash trees will require felling in the years to come.

Separate strategies are being pursued for the 'urban forest' (where most recreational facilities are installed) and 'mixed hardwood forest (sloped area between the urban forest and the Rush River). For the urban forest, the plan focuses on inspecting the health of existing trees and encouraging only native trees to be planted. In October

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2018, a native American Elm tree was planted north of the skateboard area. For the forested area, the key elements of the plan include eventual removal of invasive species from the forest floor and managing canopy gaps to encourage regeneration by native trees.

There may be costs associated with ash tree felling unless REC or inmate crews can perform these tasks. There may also be costs for native trees that are planted in canopy gaps. These costs will need to be covered by RCRFA's annual fundraising and grants from various organizations. Grant applications described under Strategy 4 will also cover these costs.

### **Strategy 6: Reduce the impact of soil erosion**

The Park will make a conscious effort to minimize soil disturbance when removing invasives, planting natives, or installing new recreational facilities. Where erosion has already occurred, the Park plans to take appropriate remediation steps, whether planting temporary cover crops, reconstructing eroded areas or applying mulch. Specific ideas are discussed in the following paragraphs.

Mulch foot trails with wood chips (provided free of charge by local contractors), especially the sloped areas prone to erosion. Provide water diversion channels on steeper sections of the foot trails. Modify landscaping around stairways to reduce erosion. Design any new trail with erosion control in mind.

Consider implement rain garden projects in low areas that collect standing water. Three potential areas have been identified: between the pavilion and the tennis courts, on the east side of the tennis courts draining toward the playground area, and a 2-foot area on the west side of parking lot. PEC will be invited to help develop a plan and provide cost estimates for plants, seed, mulch, maintenance and other materials.

Consider implementing various techniques to halt the erosion of the banks of the Rush River. Heavy rains during 2018 have cause significant undercutting of approximately 175 feet of the bank on the Park side of the river. PEC has provided the RCRFA with a list of recommended stream bed restoration companies they have worked with.

Consider implementing a riparian buffer project by planting certain native trees/shrubs (dogwood, hazelnut, black willow) for buffers on the banks of the Rush River. This project would need to be integrated with activities recommended by the stream restoration specialists to reinforce the river bank. The Headwaters Stream Initiative within PEC would be a key collaborator on this project. Usually the plants are provided free of charge. Any plantings must have low or sparse vegetation during the summer months so that the river will be visible to trail walkers.

There may be costs associated with rain gardens and river bank strengthening materials and engineering studies. These costs will need to be covered by RCRFA's annual fundraising and grants from various organizations. Grant applications described under Strategy 4 will also cover these costs.

### **Strategy 7: Maintain water quality of the Rush River**

Continue stream monitoring and restoration activities. ORMN monitors the Rush River on a regular basis.

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There are expected to be no costs associated with implementing this strategy.

**Strategy 8:** Offer events to promote appreciation of Rappahannock's dark skies

Host at least four 'dark sky events' at the Park each year to maintain the Dark Sky Park designation from the International Dark-Sky Association. These events will be held in collaboration with RLEP. The Park is open to the public after dusk for astronomical use provided individuals and groups follow agreed park reservation/notification protocols.

There are expected to be no costs associated with implementing this strategy.

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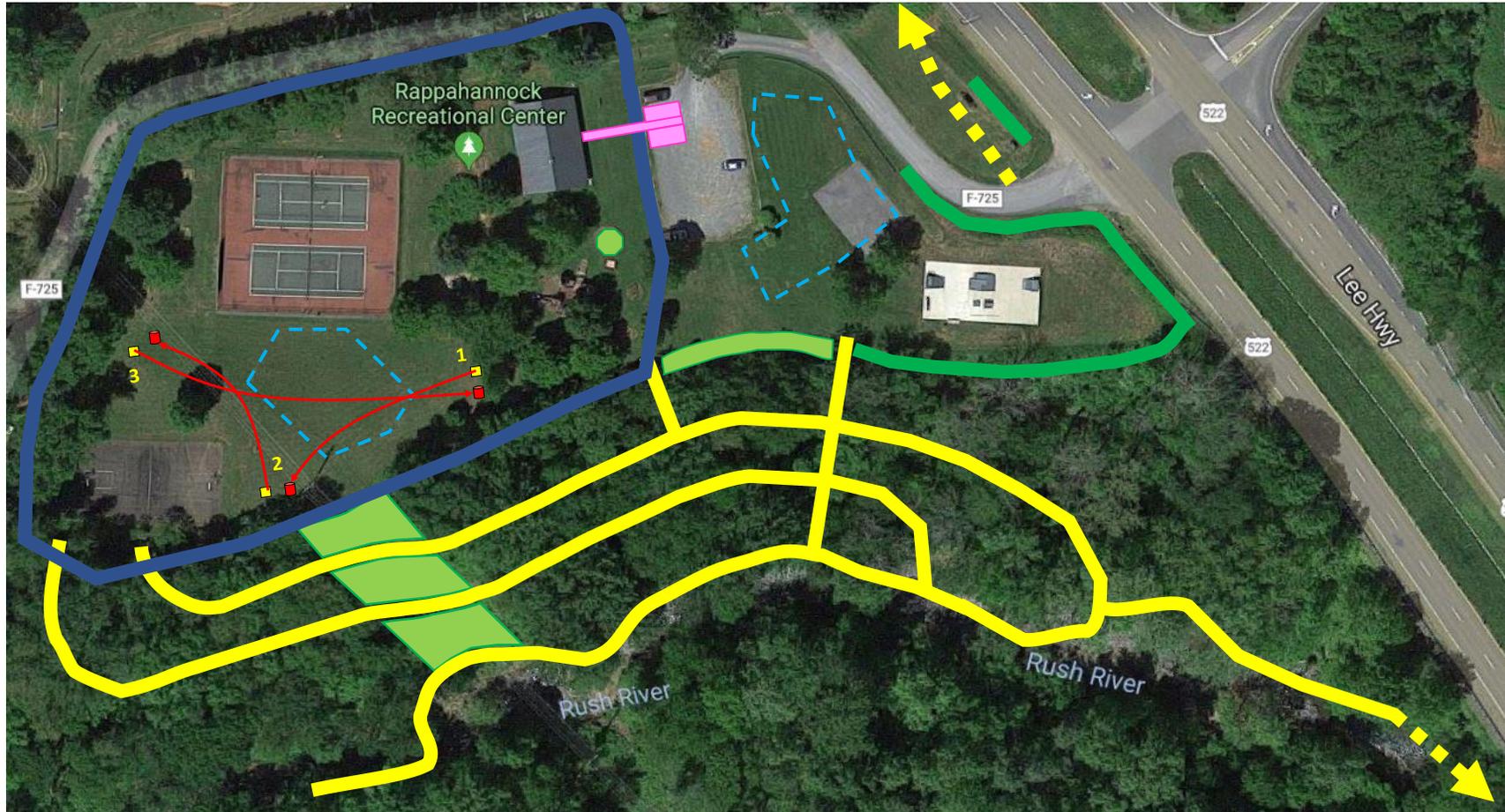
Attachment 1: Aerial View of the Rappahannock County Park

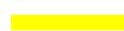
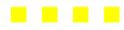


# Environmental Stewardship Strategies: Rappahannock County Park

## Attachment 2: Areas Earmarked for Future Projects

Jan 31, 2019

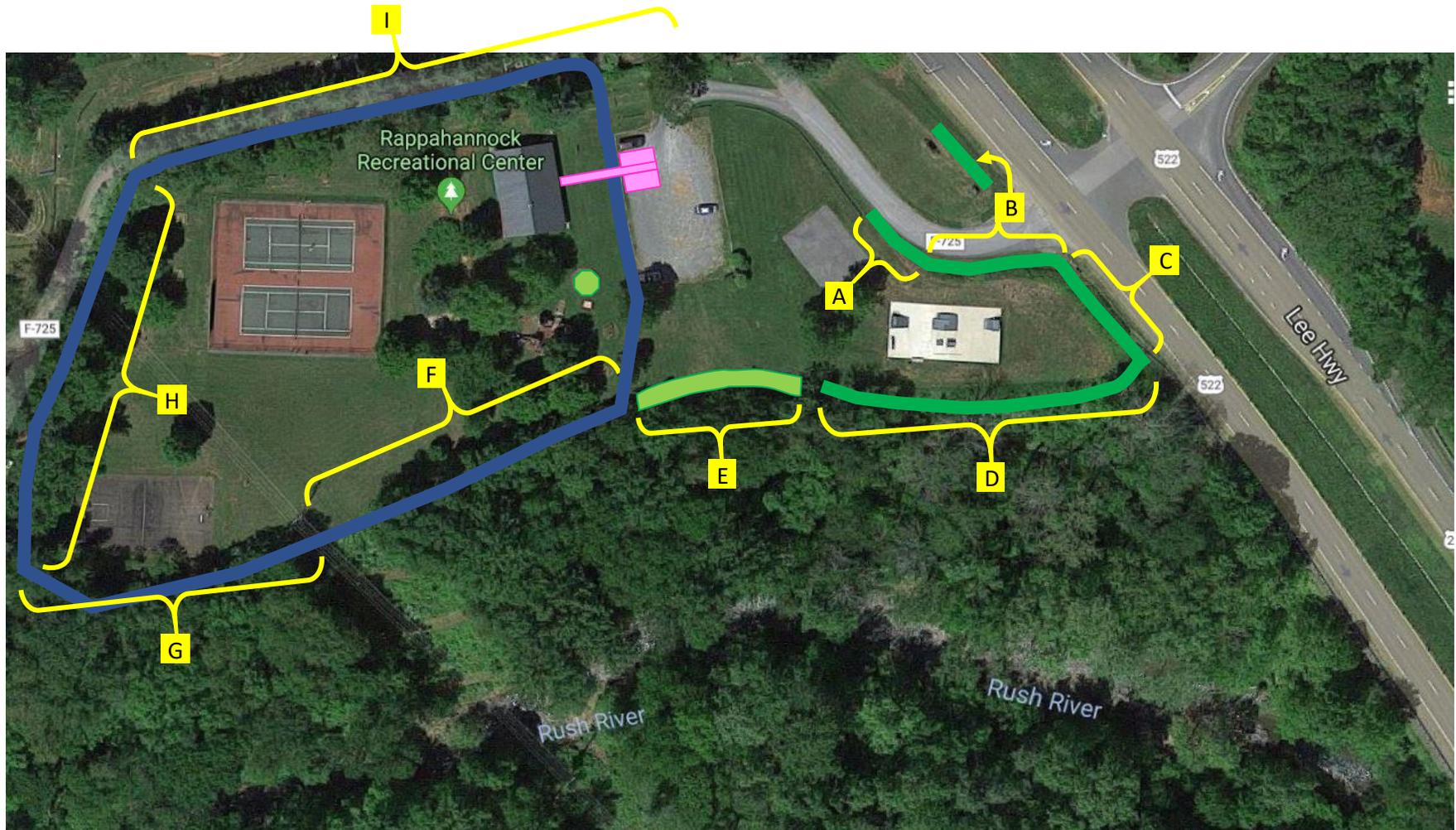


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|  Existing foot trails   |  Planned accessible trail   |  Other future plantings |
|  Future connector trail |  Planned pollinator gardens |  Accessible parking     |
|  Frisbee golf course    |  Dark sky viewing area      |  |

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## Attachment 3: Areas Earmarked for Clearing and Planting

Jan 31, 2019



- Planned accessible trail
- Planned pollinator gardens
- Other future plantings
- Accessible parking