

July 12, 2019

To: Richmond Selectboard

cc: Josh Arneson, Jessica Draper,

From: Mary Houle, Ed Wells, Harland Stockwell, Jessie Lawrence, Michalea Stickney, Jon Kart

Re **Ad-Hoc Committee Report on Improvements to Volunteers' Green**

Dear Selectboard members, we provide this report in advance of your July 15, meeting where we will present the findings and recommendations that we've developed over the past year.

Background

In July 2018 the Selectboard, in response to concerns about riverbank erosion occurring along Volunteers' Green downstream of the bandshell charged an ad-hoc committee with investigating and developing recommendations for protecting Volunteers' Green.

Ad-Hoc Volunteers' Green Committee

Member	Representing
Mary Houle	Conservation Commission
Ed Wells	Trails Committee
Harland Stockwell	Recreation Committee
Jessie Lawrence	Interested Neighbor
Jon Kart	Interested Neighbor
Michaela Stickney	Master Naturalist

Since that time our committee has visited the site with state river scientists, biologists and restoration ecologists; interviewed engineers and specialists with river NGOs and for-profit design firms; consulted with stakeholders (e.g., baseball and soccer leagues) and we held an open meeting to solicit input from the public. We've also found outside funds to cover most of the costs for the work we propose.

Recommendations

This report contains five recommendations, three of which go a bit beyond our initial charge. For those we are asking the Selectboard to consider expanding our charge.

1. **Widen the forested buffer between the Winooski River and ballfields to approx 75-feet.** (see fig 1)

Background: Riverbank erosion is evident along significant stretches of Volunteers' Green. The river scientists, restoration ecologists, and other specialists all identified widening the forest buffer as the first, best and easiest action to slow the rate of erosion. They cautioned that it will 20-30 years for the root systems of these trees to spread and integrate in order to get the greatest benefit. Widening the buffer to 75-feet will help and still allows for all the ball fields used by the baseball and soccer leagues.

Cost: \$2,700 for trees and tree tubes. All these costs can be covered by the Friends of the Winooski River and the U.S. Fish & Wildlife Service. Planting will be done by volunteers. Some incidental expenses might be needed for flagging, signage and site preparation which could be covered by the town's Conservation Reserve Fund.

Next Step for Selectboard: The Selectboard could authorize the Town Manager to enter into an agreement with Friends of the Winooski River (FWR). With the agreement would provide trees, tubes and technical assistance. Richmond would have to agree to keep the trees for at least 10-years.

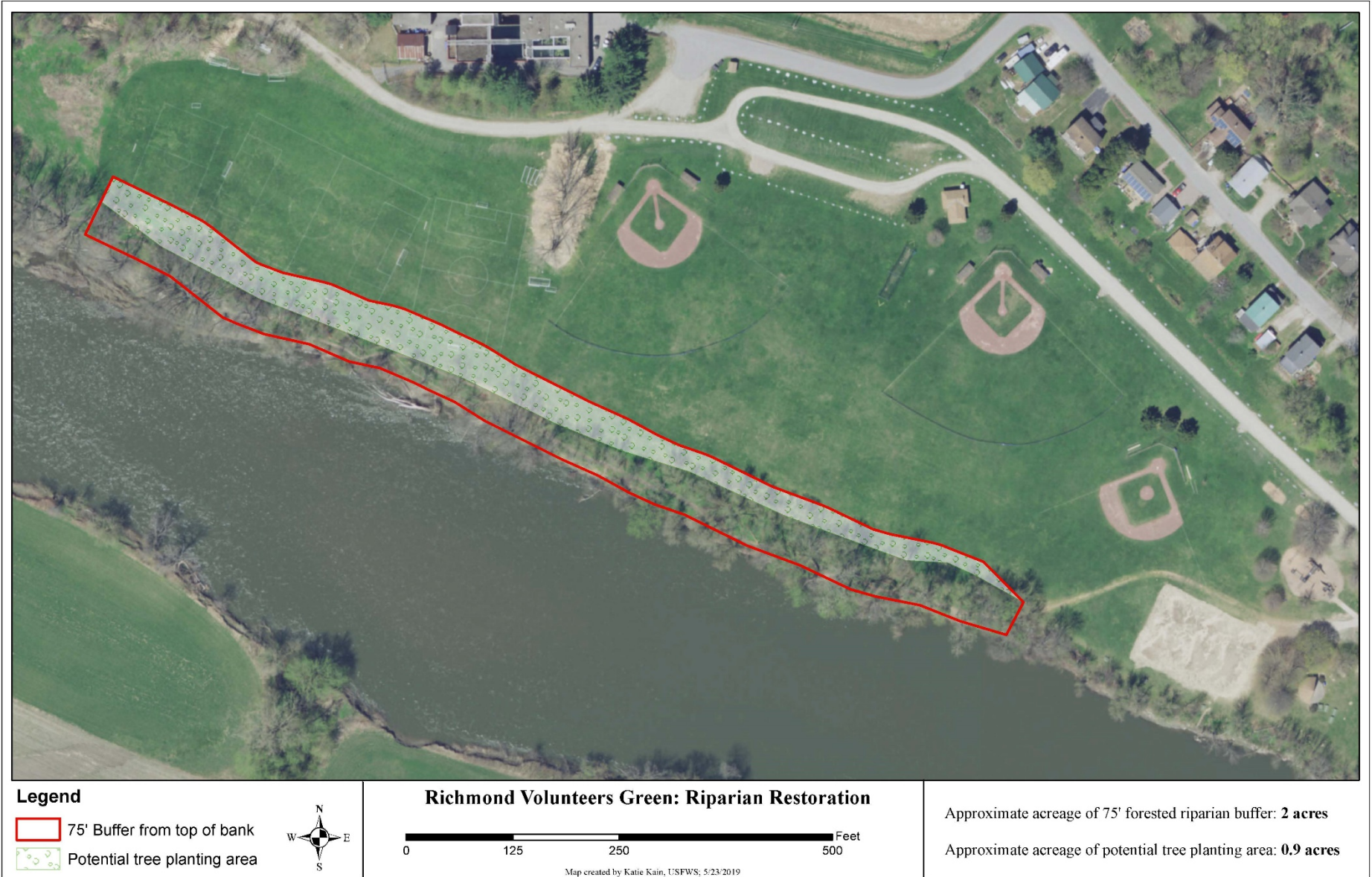


Figure 1. Proposed plan to widen the forested buffer between the river and ballfields at Volunteers' Green to approx 75-feet.

Species to be planted: Silver maple , Basswood , Chokecherry, Hackberry , Cottonwood, Nannyberry (all native to VT floodplains).

2. **Conduct a Phase 2 Geomorphic Assessment of the Winooski River in Richmond and identify appropriate streambank stabilization options.**

Background: Planting trees can slow the rate of erosion, but it will not stop erosion. At our public meeting people encouraged efforts to stabilize the riverbank in place (e.g., tie down trees to the riverbank). The engineers and river scientists that we interviewed recommended that before such actions are taken a scientific assessment of the forces acting on the riverbank in this stretch of the river should be determined. This is known as a Phase 2 Stream Geomorphic Assessment. The results will help identify the scale and type of actions needed to stabilize the riverbank at Volunteers' Green. The assessment would be conducted by an environmental consulting firm and would follow state requirements and guidelines.

Cost: \$2,000-\$3,000 per stream reach. The costs can be covered by an ecosystem restoration grant from the VT Department of Environmental Conservation. DEC recommended partnering with an NGO (e.g., Friends of the Winooski) on a grant application. FWR is interested in the opportunity. Or, CRF funds could be used. If desired, other reaches of the river could also be assessed (this is recommended by DEC).

Next Steps for Selectboard: Authorize the Town Manager to submit a grant application to DEC's Ecosystem Grants program (or to the CRF) for funding for a phase 2 geomorphic assessment of the Winooski River in Richmond (at Vol Green and/or other reaches of the river). If the grant is received issue an RFP for the assessment.

3. **Authorize the Ad-Hoc Committee to develop a landscape design and budget to improve bandshell and rip rap area at Volunteers' Green.**

Background: The rip rap project originally included a plan to re-plant trees at the top of the bank after the rip rap was installed. Due to budget overruns and personnel changes, re-planting never occurred. As our committee looked to resolve this need it became clear that the other plantings in the bandshell area are in dire need of attention (e.g., over-grown, full of weeds). The design could include new plants, restoring benches and signage. We have found a landscape architect who will help design the plan. Because this goes beyond our original charge, we feel we need authorization from the Selectboard first.



Figures 2-3 overgrown landscaping at the bandshell

Cost: No cost to develop a restoration plan/design. Implementing the plan, if approved by the Selectboard could be eligible for CRF funds. Long-term maintenance would likely require the Selectboard to allocate funds to the Recreation Committee.

Next Steps for Selectboard: Authorize the Ad-Hoc Committee to develop a landscape design and budget for the bandshell and rip rap area at Volunteers' Green.

4. **Authorize the installation of steps to the river access area and flat rocks for sitting/fishing along the rip rap area** (see figures 5-6).

Background: During the installation of rip rap, the area where people carried boats to/from the river was opened-up (trees removed). This area now silts-in after high water events and the bank slope has become steeper. Many similar access areas in the state have installed stairs to make access easier and safer. Also, we have noticed that many people are walking and standing on the rip rap to get closer to the river (for fishing or just to explore). The addition of flat rocks (large enough that they won't be washed away) would significantly improve people's enjoyment of the site and make it easier to sit/stand without fear of twisting an ankle. Because this goes beyond our original charge, we feel we need authorization from the Selectboard first.



Figure 4: Steep slope from the river to the Green. People use the rip rap to fish despite the uneven footing.

Cost: Cost of materials (cedar posts, rock, gravel, cement) can be covered by the Fish & Wildlife Department. The VYCC has offered their staff to install the steps at no charge to the town. Some incidental expenses might be needed for site preparation.

Next Steps for Selectboard: Authorize the Town Manager to enter into an agreement with the Fish & Wildlife Department for the cost of materials and with VYCC for installation. The Selectboard could authorize the drafting of a CRF application for up to \$2,000 for incidentals. Richmond would have to agree to keep the stairs in place for at least 10-years and perform basic maintenance (e.g., brush off sand after major high-water events).



Figure 5. Example of stairs with boat ramp shortly after being installed



Figure 6. Another stair design example with boat ramp several years after installation.

5. **Authorize the Ad-Hoc Committee to develop language for an access area sign.**

Background: Citizens have many questions. They want to know about boating opportunities, they ask why rip rap was installed, and are surprised to hear that the Volunteers’ Green is in a floodplain. An informational panel placed near the boat access area can answer these and other questions. Also the U.S. Fish & Wildlife Service and Lake Champlain Basin Program would love to install a panel about salmon restoration in the Winooski at Volunteers Green

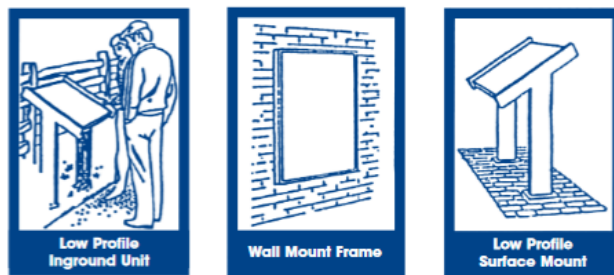


Figure 7. Info panel design sample from LCBP.

Cost: All design/production costs can be covered by the Lake Champlain Basin Program, Installation by Richmond.

Next Steps for Selectboard: Authorize the Ad-Hoc Committee to draft language for the panel. The Selectboard could authorize the drafting of a CRF application for up to \$1,000 for incidentals.