



### **Bull Run/occoquan Trail Assessment**

In 2017, NOVA Parks contracted with Applied Trails Research (ATR) to conduct an assessment of the Bull Run/occoquan Trail. (BROT) As part of this assessment, ATR looked at: trail alignment and the overall sustainability of the current trail/design, water crossings, and the appropriate level of service for a multi-use trail. The results of the assessment indicated that significant issues exist throughout the entire trail. From these results, NOVA Parks and ATR generated recommendations and project priorities to address the identified conditions to ensure the BROT remains a valued recreational experience for years to come.

### **Physical Sustainability**

When originally designed, the trail was routed on existing historic road beds and connected by very informally designed segments. Many of the informal connectors' alignments run on or near the steepest path down the landscape and this has greatly impacted the overall physical sustainability of the trail by not allowing for proper management of water. Because of this, erosion has taken hold in countless areas and desperately needs to be addressed. When this type of erosion occurs trail users then attempt to avoid these areas, then widening of the trail then occurs exacerbating the erosion issues and the overall design and path of the trail. It is a problem that has persisted for years and has now made the BROT very hard to manage and maintain.

### **Managerial Sustainability**

Maintenance of the BROT is highly dependent on a sizable and skilled volunteer trail stewardship contingent. We are lucky to have a hearty bunch of dedicated volunteers with the Potomac Appalachian Trail Club (PATC) to provide most of the trail maintenance. It has been determined that more effective management of water off of the trail is the highest level need currently. As previously stated, this is not possible on most old road segments that have reached a subgrade condition.

Bridges over side streams are abundant throughout the BROT. Upstream development has resulted in stormwater discharges from these streams that regularly scour and overtop banks. Many of the existing bridges are small and built on floodplains at bankfull elevations, where they risk being carried away in a moderate flood. It is recommended that new bridge locations be developed at a higher position on the landscape where flood and rotting effects will be mitigated. This also requires trail rerouting.

## **Social Sustainability**

This is how the trail functions based on how well it manages the use it receives. Part of the assessment was to look at ways to improve a trail that was not purpose-developed (Physical Sustainability) to ultimately provide a quality backcountry-feeling experience. These things include everything from a trail user's parking experience to trail orientation and navigation. Currently, the BROT struggles in some of these areas as well.

## **Current Conditions**

Much of the impacts revolve around visitors avoiding obstacles or muddy conditions in the trail tread. The informally routed trail only laterally confines trail use width, where there are historic berms on the sides of compacted/eroded road beds. Where trails have been hiked in, there is no width, confinement and trail users have trampled widening paths when they encounter obstacles such as roots, rocks, water bars (which further reduces the utility of these structures), or muddy conditions. Eventually, some trees will be permanently damaged as their root structures are undermined. Additionally, the trail widening and braiding, along with the historic road routing, reduce the backcountry-feeling of the BROT. Redeveloping eroding sections as relatively narrow, contour-aligned routes, will confine use to the trail tread and improve the trail's intended backcountry nature and NOVA Parks' ability to maintain it.

## **Next Steps**

NOVA Parks will continue to work closely with PATC to address many of the issues that currently exist. NOVA Parks has also identified some potential grant opportunities that we will explore to see if grant funds can assist with trail improvements. NOVA Parks is working diligently to improve and sustain this amazing resource, and we are excited as we begin this long term plan of improvements.