

2024 Northern Virginia Wayfinding and Amenities Implementation Study

EXECUTIVE SUMMARY, PUBLISHED OCTOBER 25, 2024



Introduction

The Northern Virginia Regional Commission (NVRC) is a regional council of thirteen local governments in the Northern Virginia suburbs of Washington D.C., representing one of 21 planning districts that serve the Commonwealth of Virginia. With a rich history spanning over 60 years, NVRC's chief roles and functions have focused on providing information, performing professional and technical services for its members, and serving as a mechanism for regional coordination. Current programs at the Commission address a wide array of local government interests, including the advancement of safety, connectivity, usage, and accessibility to recreational trails in the region.

Through data and mapping activities, special studies, and coordination with land managers, advocacy groups, and other trail partners, NVRC aims to advance the diverse range of trail priorities in the region. NVRC also provides specific coordination for the Potomac Heritage National Scenic Trail (PHNST) sections in Northern Virginia through partnerships with the National Park Service and land managers.

In 2021, NVRC completed a study entitled, [Health, Social Equity, and Economic Impact of the Potomac Heritage National Scenic Trail in Northern Virginia](#). Findings indicated that "the biggest deterrents to participants and their families using the trail include a lack of accommodations (i.e., parking and restrooms) particularly for seniors and persons with disabilities, accessible online information, and wayfinding signage along the trail". The study also revealed gaps in access points along the trail in moderately high and high socially vulnerable Census tracts. Beyond direct links to the trail, improved pedestrian and bike infrastructure in the greater trail corridor would encourage additional use by residents.

The two-phase PHNST Wayfinding and Amenities Implementation Study was developed as a necessary part of addressing these study findings. Phase One, as outlined in this report, resulted in an inventory of existing wayfinding and amenities along the trail using volunteer data collection. Phase Two of the project will examine where the trail requires increased and improved signage and amenities for greater

accessibility. NVRC will hire a consultant to utilize data collected from Phase One to create a full wayfinding and amenities implementation plan, including the selection of recommended sites to install new signage and amenities.

Executive Summary of Study Results

Background

The Potomac Heritage National Scenic Trail (PHNST) is a developing network of outdoor recreation pathways that celebrate the natural and cultural history—and continuing evolution—of lands and waterways between the Chesapeake Bay and the Allegheny Highlands. Spanning over 138 miles in Northern Virginia, the PHNST serves as an important historic, cultural, and natural resource for the region's residents and visitors to explore and enjoy. Segments of the trail network are managed by local, regional, state, and federal agencies and, in some cases, by private organizations.

Along with the evolution of the PHNST network over the past 15 years, the need to better develop clear connections between and among PHNST segments has become increasingly apparent to fully realize the values associated with the designation of the PHNST as a component of the National Trails System. In an effort to address this need, the National Park Service (NPS) produced [The Potomac Heritage National Scenic Trail Route Marking & Graphic Identity Guide](#) in March 2015. The guide is intended to be used by PHNST segment managers to establish a consistent identity for the network through a set of clear, concise, and flexible tools.

As detailed in the Route Marking & Graphic Identity Guide, consistency allows users to plan and execute travel with a high level of confidence, and a means to navigate and experience intended routes. In addition, clear, consistent, and recognizable graphics will help develop and maintain an identity for the PHNST network, trail experiences among users, and NPS partner agencies and organizations. This established identity will allow further development of advocates for outdoor recreation and conservation and establish a basis on which to promote PHNST experiences and associated places to national and international audiences.

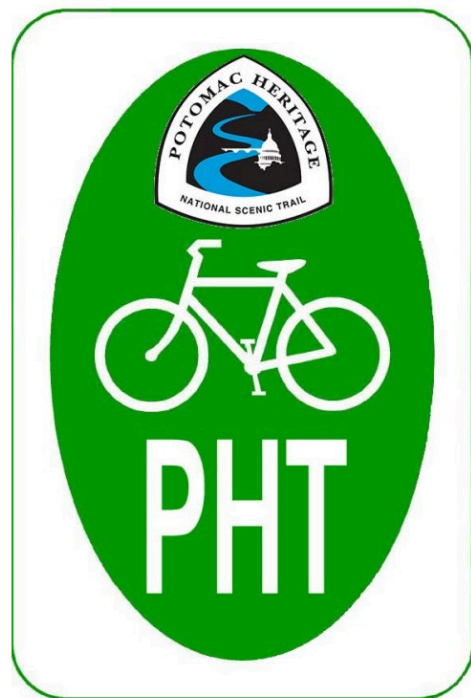
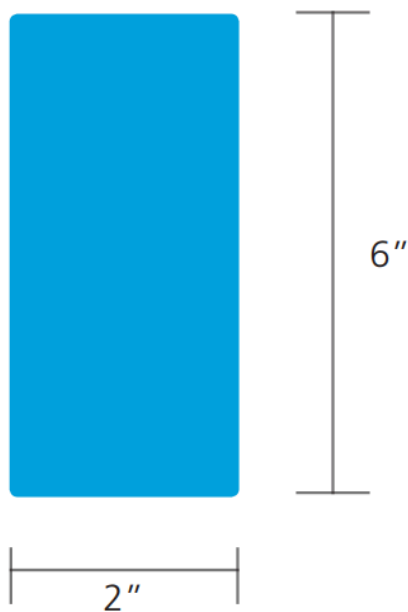
This Wayfinding and Amenities Implementation Study was conducted to assess how consistently the PHNST is promoted throughout the Northern Virginia region, to evaluate where there are gaps in the trail's promotion [e.g., logos, blazes, and informational signs (see below)], and to collect data to share with trail managers and the general public on the location and condition of a variety of wayfinding types, amenities, and points of interest.

The data inventory and associated maps created through this study are intended to be used by PHNST trail managers to inform planning and funding efforts, to show PHNST visitors where current amenities and points of interest are located, and ultimately to improve the future user experience of the PHNST network.

PHNST Blue Blaze

On-Road Bicycling Route

The Standard Blaze



Primary Trails should be marked with a blue (Pantone 299 blue) paint blaze in both directions of travel. More details on blazing can be found on page 10 of [the guide](#).



On-Road Cycling Route – MUTCD M1-8a



Cross-Country Skiing



Hiking



Paddling



Horseback Riding



Mountain Biking

Examples of PHNST wayfinding from [The Potomac Heritage National Scenic Trail Route Marking & Graphic Identity Guide](#). See the guide for more information.

Overview of Methodology

Volunteers were recruited to assist with data collection across the entire 138 miles of the PHNST in Northern Virginia, beginning in late winter 2024. Approximately 25 volunteers participated, and each were assigned trail segments, parks, and trailheads based on individuals' availability and preferences (e.g., level of difficulty, biking versus walking or hiking, etc.). Volunteers were trained in March 2024 on how to use Survey123 – the ArcGIS mobile application used to conduct the surveys - as well as the needs and expectations of the study. Volunteers communicated iteratively with NVRC staff as data was collected between April and August of 2024.

Each survey point contains the following information: the location of the amenity or signage, details about the amenity or signage, 1-2 photographs, and optional

comments. The survey data was reviewed by NVRC staff and additional information, such as the condition of each amenity or sign, was added to the data entries.

Statistics at a Glance:

The total number of locations for wayfinding, amenities, information panels and maps, points of interest, and other points are detailed below. Note that the total number of locations surveyed does not equal the sum of all points below as some information panels containing maps were also counted as wayfinding points.



Total Number of Locations Surveyed:

4,325



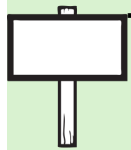
Total Number of Locations for Wayfinding:

2,564



Total Number of Locations for Amenities:

1,007



Total Number of Locations for Information Panels:

465



Total Number of Locations for Points of Interest:

127





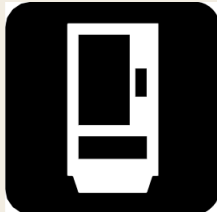

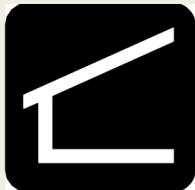
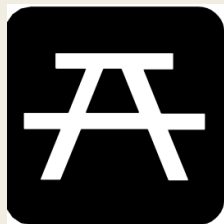

Total Number of Locations for Points Labeled "Other":

217

Amenities by the Numbers:

The total number of each amenity type surveyed, as well as their associated icons which correspond with the online maps, are outlined in the table below.

Amenity Type	Graphic on Interactive Maps	Total Number Surveyed
Bench		291
Bike Maintenance Station		8
Bike Rack		51
Bike/Scooter Share		9
Boat Rental		8

Campsites*		10
Concessions-Vending Machines		11
Dog Waste Stations		34
Pavilions/Covered Shelters		46
Picnic Tables		108
Recycling Bins		72

Restrooms		65
Trash Bins		256
Water Fountains		38

**Volunteers did not collect data for all campsites located along the PHNST. NVRC staff added five additional points during the data review process, including four at Prince William Forest Park and one at Algonkian Regional Park. Campsite locations for PHNST users can be found at Pohick Bay Regional Park, Leesylvania State Park, Prince William Forest Park, and Algonkian Regional Park.*

Wayfinding by the Numbers:

A wayfinding location may have one or more types of wayfinding. Therefore, the sum of wayfinding types will not equal the total number of wayfinding locations.

PHNST Directional Signs (i.e., Distance, Arrow)	114
Other Directional Signs (i.e., Distance, Arrow)	178
PHNST Blaze	2,052
Blaze - Other Color	54
PHNST On-Road Bicycling Route	4
Other On-Road Bicycling Route	47
PHNST Map	29
Other Map	26
PHNST Logo	171
Other Logo	4
Other Miscellaneous	68

Informational Panels by the Numbers:

An information panel may have one or more types of information. Therefore, the sum of information panels will not equal the total number of information panel locations.

Panel Type	Total Number Surveyed
Bulletin Board	50
PHNST Panel (contains PHNST logo, map, and/or narrative)	77
Cultural/Historic	203
Nature/Wildlife	101
Map	195
Visitor Information	148
Other	139

Points of Interest by the Numbers:

In addition to the wayfinding, amenities, and information panels, the volunteers also collected photos of the canoe/kayak launches, cultural or historic sites, scenic views, and visitor centers that are shown on the PHNST points of interest maps. Additional points of interest that the volunteers identified, yet were previously unaccounted for, were also collected. This data will be used to update pre-existing layers later in 2024.

Canoe/Kayak Launches	21
Cultural or Historic Sites	66
Scenic Views	53
Visitor Centers	14

Other Surveyed Items by the Numbers:

Volunteers were asked to collect other information that did not fall into the wayfinding, amenities, information panel, and points of interest standard categories. Example of “other” surveyed findings included erosion, washouts, a lack of adequate wayfinding at a site, and more. These “other” surveyed items will not appear on the online, interactive maps. However, the data will be retained for potential future use and to provide information on trail-related issues.

Other	217
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Condition of Wayfinding, Amenities, and Information Panels:

Total Number of Wayfinding, Amenities, or Information Panels by Condition:

Good	2,685
Fair	932

Poor	239
Unknown	147

Parks or Segments Left out of Surveys

The following parks and trail segments were not surveyed as part of the 2024 data collection process, with reasons for not surveying noted. The segments are arranged geographically along the trail from the northern to southern part of the Northern Virginia region.

Parks and Trail Segments	Reason for Not Surveying
Veteran's Park	Veteran's Park was closed due to construction.
Morven Park	The existing trail does not have access to this park. Once the missing gap in the PHNST trail network is constructed along Route 15 north of Leesburg there will be access.
Southern boundary of Edwards Landing Park to Edwards Ferry Road	This portion of the trail is currently inaccessible due to lack of trail maintenance. Once planned connections to parks along Edwards Ferry Road are completed, this trail section will have improved maintenance.

<p>Goose Creek - South of River Creek Pkwy</p>	<p>This portion of the trail is currently inaccessible due to lack of trail maintenance. Once planned connections along the Goose Creek to W&OD are completed, this trail section will have improved maintenance.</p>
<p>Keep Loudoun Beautiful Park</p>	<p>The existing trail does not have access to this park. In the next couple of years access to this park from the PHNST will be added.</p>
<p>Bles Park</p>	<p>Amenities at the park are being improved in 2024 and 2025 and a volunteer was unable to survey the park before its closure in June 2024. The new amenities, as well as the wayfinding and information panels will be inventoried after Bles Park reopens in 2025.</p>
<p>Potomac Greens Park</p>	<p>The existing trail does not have access to this park. In the next couple of years access to this park from the PHNST will be added.</p>
<p>Greenway Heights Park</p>	<p>The existing trail does not have access to this park but will have access if the gap in the PHNST is routed along Georgetown Pike.</p>

<p>Parallel to Crest Lane</p>	<p>The section from Chain Bridge Road (Route 123) to the stream crossing a quarter mile south of the northern terminus of Crest Lane was not surveyed. It was inaccessible due to its close proximity to the George Washington Memorial Parkway road construction project.</p>
<p>Old Colchester Park and Preserve</p>	<p>The existing trail does not have access to this park, but will have access if the gap in the PHNST is routed along Old Colchester Rd.</p>
<p>Featherstone National Wildlife Refuge Park</p>	<p>The existing trail does not have access to this park. Once the missing gap in the PHNST trail network is constructed through Featherstone there will be access. The missing gap is currently under construction.</p>

Online Interactive Maps

The survey data on amenities, wayfinding, and informational signage can be found on the [Potomac Heritage National Scenic Trail Dashboard](#). Specifically, the amenities can be found on this [study's dashboard page](#) and in the [visitor and trail characteristic maps](#), as the amenities are intended to be used both by trail visitors, trail managers, and planners. The general public, for instance, can see where trail amenities are located as well as their condition while planning for a visit to the PHNST. Park and trail managers can use the maps for planning purposes. The wayfinding and informational signage can be found on this [study's dashboard page](#), as this data is intended to be used by trail managers and planners. Visual representations of the data allow managers to observe where there are gaps in amenities, wayfinding, and signage. This information can support grant and other funding applications for additional studies

or improvement efforts. Understanding where there are features in poor condition can also assist in project prioritization.

[Amenities Map](#)

[Information Panels Map](#)

[Wayfinding - Condition Map](#)

[Wayfinding - Type Map](#)

Conclusions

Takeaways and Preliminary Findings

The various maps produced through this study provide preliminary insights into where improvements could be made to PHNST signage and wayfinding. Static maps of amenities, informational panels, and wayfinding (blazes and signage) can be found in Attachments 1-4. These attachments offer a broad picture of how amenities, informational panels, and wayfinding are distributed across the PHNST in Northern Virginia and where signage gaps exist. More detail on data locations and conditions can be ascertained through the [interactive online maps](#).

An initial analysis of the maps shows there is little PHNST-specific signage or wayfinding along the George Washington Memorial Parkway, Route 1, and Route 123 between Arlington and Occoquan. Signage is also lacking between the Woodbridge VRE Station and the Occoquan Bay National Wildlife Refuge. More broadly, there are significant gaps in PHNST-branded signage and wayfinding in Fairfax County. There are also very few PHNST on-road biking signs along the entire route in Northern Virginia, including the PHNST bike route through Prince William Forest Park. While this information is easily observed from the maps, a more comprehensive analysis on gaps and opportunities for improvement will occur in Phase Two of the study.

The static and interactive maps can also be useful in determining where there is a lack of signage at trail junctions and trail heads near parking lots. Both locations are crucial for clear and consistent wayfinding so visitors can confidently begin and navigate the trail. The sign below is located near a parking area at Riverbend Park and provides a good example of trailhead wayfinding.



(Informational panel and PHNST map located at Riverbend Park. GPS location Lat: 39.018399 Long: -77.245781)

Another key takeaway from the project is that existing signage infrastructure provides an excellent opportunity to add PHNST logos and/or blazes. There are 338 wayfinding points (e.g., “Other” directional signs, logos, maps, on-road bicycling signs) which do not yet have a PHNST-blue blaze or a logo. While not all will be suitable for such an addition, many do offer an opportunity for cross promotion of the PHNST. For example, there are signs posted along the Washington & Old Dominion Trail (W&OD), the Mount Vernon Trail, the Route 1 Bike Trail, the Gerry Connolly Cross County Trail, and others where the PHNST is co-located. Adding PHNST logos or blazes to this existing infrastructure can save time and money associated with adding new posts.

A final takeaway is that there were considerable differences between shades of PHNST-blue along the trail segments. As noted throughout Appendix I, this variability in blaze colors caused some confusion for volunteers. Inconsistent blazing also affects the overall impact of PHNST branding for trail users, as visitors may be unsure whether they are actually on the trail. As time, funding, and staff capacity allows, it will be important to improve outdated blazes to ensure consistency with the [PHNST standards manuals and for branding purposes](#). That said, the approach at the Bureau of Land Management’s Meadowood Special Recreation Management Area serves as the “gold standard” of clear and consistent PHNST wayfinding (see photo to the right). PHNST logos and arrows, as well as trail maps, are posted throughout the



Meadowood trails system. When applying for funds to improve wayfinding, trail managers are encouraged to consider utilizing a similar strategy.

Lessons Learned

A number of lessons were gleaned from the study's data collection and review process which could be of future use for NVRC, land managers, and other trail stakeholders undertaking similar projects.

First, for projects that rely heavily on volunteer support, timelines must account for volunteer drop off. For instance, although NVRC initially had sufficient volunteer sign-ups to conduct data collection along all the PHNST segments and associated parks, numerous individuals ended up being unable to complete their assigned segments for a multitude of reasons. It is therefore necessary to allow buffers within project timelines to recruit additional volunteers and/or evaluate staff capacity to complete on-the-ground work.

Iterative data cleaning was also essential in this study. Each of the 4,325 surveys needed to be quality controlled and have their condition characterized, which required a considerable amount of time. Reviewing the data as it comes in, as much as is feasible, prevented the need to go through thousands of survey entries at the end of the study. Additionally, the process of iterative review allowed issues to be caught and addressed. For example, early on in the data collection process there were several consistent errors made by volunteers (e.g., mislabeling a certain type of wayfinding). All volunteers could then be emailed to clarify the confusion so subsequent surveys might be more accurate.

Confusion over the distinction between cultural versus historical content on informational panels was also observed. For instance, many volunteers classified local events that were posted on bulletin boards as cultural, when that was not the original intent. These were not reclassified due to staff capacity and time limitations. However, on many of the signs historical information is often intertwined with culture so the differentiation between the two was often unclear. Therefore, cultural and history were combined into one category for the summary of results and mapping.

Next Steps

The inventory conducted as part of Phase One of this study offers a crucial first step in supporting improvements to wayfinding, amenities, and signage along the PHNST in Northern Virginia. Phase Two, of the project, planned for 2025, will examine where the trail requires increased and improved signage and amenities for greater trail accessibility and make recommendations on the signage and amenities to prioritize. NVRC will hire a consultant to utilize data collected from Phase One to create a full wayfinding and amenities implementation plan, including the selection of

recommended sites to install new signage and amenities. Between the completion of Phase One and the start of Phase Two, information collected through surveys is expected to change and become outdated as improvements are made. Therefore, data will need to be periodically updated with assistance from trail managers.

While data was collected along all PHNST trail segments and bordering parks in Northern Virginia, some trail managers already have improvement projects planned or underway. PHNST segments which already have funds or plans in place to update amenities, wayfinding, and/or signage will not be prioritized in Phase Two.

Near the end of the study, trail managers were asked to send updates on planned or recently implemented improvements, including wayfinding, amenities, information panels, and other trail improvements. The list of responses is outlined below.

- **George Washington Memorial Parkway:**

- Turkey Run approach project includes replacing a timber staircase, replacing a timber retaining wall and repairing and lengthening a split-rail fence. This is on the south/east side of the creek. This project is planned for fall 2024.
- There have been 23 old or dilapidated wayfinding signs replaced along the PHNST by the Potomac Appalachian Trail Club. Verbiage and placement of the signs have been consolidated to improve clarity for trail users. Most of the signs were replaced in 2023.
- Arlington County has conducted drainage reconstruction at Glebe Road to fix flood damage to the PHNST from a 2019 water main break. The County reconstructed the crossing to include rock stairs/steppingstones.
- The George Washington Memorial Parkway has also recently received an Inclusive Storytelling grant from the National Park Foundation. The grant will be used to develop interpretive signage detailing African American history in the region.
- Mount Vernon Trail-Specific Updates:
 - Bridge 23 and 24 Replacement:
 - Partially funded through the Bipartisan Infrastructure Law
 - Includes 725 feet of asphalt trail resurfaced
 - Top-down construction
 - New design standard for bridges on the Mountain Vernon Trail (e.g., new safety handrails and widening from 10 to 14 feet)
 - These bridge replacements were completed in May 2024. More information can be found in the following [press release](#). Maps of the new bridge locations can be found here: [National Park Service to begin construction on two Mount Vernon Trail bridges - George Washington Memorial Parkway \(U.S. National Park Service\) \(nps.gov\)](#).
 - Long Bridge Connector:
 - VDOT rebuilt the interchange to I-395 which connects the Mount Vernon Trail to Long Bridge.
 - Peter B. Webster III Memorial:

- Received support and funding from the National Park Foundation, the Friends and Family of Peter Webster, and the Friends of the Mount Vernon Trail.
- A new freeze-resistant water fountain and bottle-filling station, benches, a bike rack, and interpretive wayside have been, or will be, installed at the Memorial. A before and after photo can be found below.
- Additional freeze-resistant water fountain and bottle-filling stations will be placed along the Mount Vernon Trail in the near future. The GW Memorial Parkway received funding from the National Park Foundation to install approximately 7 fountains along the Mount Vernon Trail and at comfort stations along the Parkway from Mount Vernon to Great Falls.
- The Friends of the Mount Vernon Trail have removed over 900 bumps from >17 miles of the Mount Vernon Trail. Work is still underway near Mount Vernon Estate.



(Before and after photos of the Peter B. Webster III Memorial. Photos courtesy of the George Washington Memorial Parkway)

- **Leesylvania State Park:**
 - One new sign entitled “Water Resources of the Potomac” will be installed in the coming months. The signs were developed by NVRC with funding from the National Park Foundation.
- **Bazil Newman Park and Bles Park:**
 - NVRC and NPS are working with Loudoun County to replace signage at Bazil Newman and Bles Parks to update outdated maps and park names.

- **Meadowood Special Recreation Management Area (managed by the Bureau of Land Management):**
 - Meadowood is going to be installing six new kiosks at each of their trailheads. The new kiosk will have updated trailhead information, interpretive information, and a new map.
 - The Washington Rochambeau Revolutionary Route National Historic Trail follows the same trail as the PHNST, and they are looking to install two new interpretive signs for its 250th anniversary along the Giles Run Trail/Turkey Meadow Loop.
 - Meadowood is seeking funding to install a bike repair stand at the Mason Neck Gateway Kiosk Trailhead.
 - Other planning projects in the upcoming year is to replace two puncheon bridges on South Branch Loop and two bridges on Meadowood Connector Trail (contingent on funding).
- **Prince William County:**
 - Prince William County received a new Trimble GPS satellite receiver which will be used to collect data on exact locations of wayfinding, amenities, and signage at several PHNST sites throughout the county.
- **Town of Leesburg:**
 - Currently there is a three-sided board sign provided by the National Park Service that offers history and information about the PHNST at Edwards Landing Park. This sign acts as the main entrance to the trail within the park. At Potomac Crossing Park there is signage direct people to the PHNST. The PHNST route is blazed within Edwards Landing, Potomac Crossing and Veteran's Parks.
 - In the future there will be wayfinding signage within Veteran's Park once constructed.
- **Town of Occoquan:**
 - Two new signs will be installed in the coming months. The signs were developed by NVRC with funding from the National Park Foundation. One of the new signs will focus on the region's natural history and the other will highlight the historic industrial development in Occoquan (e.g., grist milling and iron forging) and its reliance on the skilled labor of enslaved peoples.

Disclaimers

There are several disclaimers related to this study which are important to recognize.

As noted above, the data points presented in this report and its corresponding maps represent one point in time. Data was collected between April 2024 and October 2024, and the report and maps were finalized at the end of October. Given the breadth of this timeline and the often impermanent nature of trailside amenities, wayfinding, and signage, the survey information on locations, conditions, and other characteristics of these points may differ from the reality on the ground.

Data collection and data review also include a certain degree of unavoidable subjectivity. Approximately 25 individuals, including volunteers and NVRC and NPS staff, assisted with data collection. All participants received the same training ahead of going into the field; however, each approached the data collection process and data classification with their own interpretations. Additionally, all data points were reviewed by the same NVRC staff, but review is still subjective to an extent. For instance, variable lighting in photos can impact the appearance and color of blazes, which can in turn influence its condition designation.

Lastly, some amenities, signs, and wayfinding were likely missed during the survey process. Updates to the data can occur as needed.

Appendices

[Appendix I. Overview of Volunteer Feedback](#)

Attachments

[Attachment 1. Maps of Amenities](#)

[Attachment 2. Maps of Informational Panels](#)

[Attachment 3. Maps of Wayfinding - Blazes](#)

[Attachment 4. Maps of Wayfinding - Signage](#)

[Attachment 5. Amenities in Poor Condition](#)

[Attachment 6. Informational Panels in Poor Condition](#)

[Attachment 7. PHNST Blazes in Poor Condition](#)

[Attachment 8. PHNST Signage in Poor Condition](#)

Additional Resources

[2022 Corridor Analysis](#)

[2024 Wayfinding and Amenities Study](#)

[Health, Social Equity, and Economic Impact of the Potomac Heritage National Scenic Trail in Northern Virginia](#)

[Interactive Map with PHNST Segments and Points of Interest](#)

[NVRC Recreational Trails Webpage](#)

[PHNST Dashboard](#)

Contact

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Appendix I. Overview of Volunteer Feedback

Volunteers provided feedback on their assigned trail segments in several ways, including word of mouth, through the comments section in the individual Survey123 surveys, and via email. Comments, suggestions, and insights have been compiled and organized by trail segments.

- **Segments 2 (Ball's Bluff Battlefield) and 2 (Edwards Landing Park):**
 - Volunteer identified locations where more blazes are needed.
- **Segment 7 (Goose Creek stream - Riverpoint Dr Trailhead @ Lansdowne to Route 7):**
 - An incorrect shade of blue was used for the PHNST blaze and ought to be updated with the correct blue.
 - Several blazes along the route were faded or overgrown.
 - There were impassable sections along the route, which is why there are gaps in the data.
 - Improved directional signage is needed as a connecting trail links with this segment, making navigation confusing, particularly at Lat: 39.08957 Long: -77.503678.
 - Directional signage needed at junction (Lat: 39.091645 Long: -77.501475) for people coming from Riverside Pkwy and heading towards Bazil Newman Park. Directional signage is also needed for Goose Creek alternative trail going southbound to Keep Loudoun Beautiful Park.
 - Blaze needed at Lat: 39.091554 Long: -77.501222 - The area all around is stones so there is no clear walking path.
- **Segment 9 (Lansdowne @ Bazil Newman Park to Potomac Dr):**
 - Two different shades of teal were used interchangeably for the blazes that mark the trail's corridor. It was difficult from the survey photos to determine which color is correct. It is strongly recommended that only one shade of the correct PHNST-blue is used when re-blazing occurs.
 - Tree down and blocking trail at Lat: 39.087791 Long: -77.468766.
- **Segment 15 (Algonkian Park @ western side of western most parking lot to Horsepen Run stream):**
 - Numerous blue PHNST blazes were covered with black blaze paint. They were labeled as "Poor"; however, there are other black blazes in the vicinity, and it wasn't always clear which were just black, and which were covering the PHNST blazes.
 - Several areas with extensive social trails also noted on Segments 15 and 16.
- **Segment 18 (Potomac Sportsplex to Trump National Golf Course to Seneca Park):**
 - Directional signage needed at Lat: 39.057469 Long: -77.348672 and Lat: 39.057303 Long: -77.347481.

- **Important Safety Note:** Trail segment was overgrown which forced volunteer up towards the golf course in several areas. There were a number of hostile interactions from golf course users directed at the volunteer. There was also a lack of accessibility from the parking area to PHNST.
- **Segment 19 (Seneca Regional Park near Trump National Golf Course to Fraser Preserve Nature Center):**
 - Most of the blazes are an older shade of PHNST-blue.
 - There was a slight reroute of the trail that deviates from the map. It is important for visitors to follow arrows instead of just blazes, but additional arrows are necessary to indicate where the reroute rejoins the original trail.
 - There are many social trails throughout the park, especially near the water. Additional blazes, arrows, or new signage are needed.
 - There are several forks in the trail. Clearer blazing or signage is needed.
 - Some blazes are on trees that have become branchy or have died, so they are no longer clear or visible.
- **Segment 20 (Fraser Nature Preserve):**
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 21 (Fraser Preserve eastern edge boundary with Seneca Park to River Park Dr):**
 - No bridge or steppingstones present across fairly deep stream at Lat: 39.045931 Longggg: -77.297849.
- **Segment 22 (River Park Drive to Riverbend Park/Seneca Park boundary):**
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 23 (Riverbend Park from Seneca Creek Park Boundary to Potomac Hills St terminus at water):**
 - It appears from survey photos that two different shades of blue have been used along the trail segment.
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 24 (Riverbend Park south to Great Falls Park visitors center):**
 - Volunteer found that from the Riverbend Park parking area it is not clear where the trail is or where it starts heading toward Great Falls. Additional signage would be beneficial.
 - More signage is needed where trail splits at Lat: 39.017409 Long: -77.245638. Volunteer noted that it is unclear where to go at the fork.

- Bridge at Lat: 39.017756 Long: -77.245701 (Riverbend Park) was noted to be overgrown and difficult to see from the road.
- **Segment 25 (Great Falls Visitor Center east to River Trail):**
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 26 (Great Falls Park River Trail):**
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 27 (Patowmack Canal from River Trail northern junction to River Trail southern junction):**
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 28 (Great Falls Park - Difficult Run to River Trail):**
 - Tree is down over the trail at Lat: 38.986847 Long: -77.247005.
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
- **Segment 29 (Scott's Run Nature Preserve):**
 - Appears there are two different shades of blue/teal used along the trail.
 - Volunteer originally labeled a number of blazes as “Other Color”. When reviewed by NVRC, they appeared to be an older shade of PHNST-blue/teal. Blazes assumed to be for the PHNST that are an outdated color have been identified as such and were labeled as being in “Fair” condition.
 - Volunteer noted that it is easy to get turned around or end up on the wrong trail in sections closest to the river. Additional wayfinding and signage would be beneficial.
 - Downed tree observed at Lat: 38.966783 Long: -77.19592
- **Segment 30 (Live Oak Drive from Scotts Run Nature Preserve @ Langley Swim and Tennis Club to underpass of I-495):**
 - Severe erosion observed at Lat: 38.966736 Long: -77.180661.
- **Segment 31 (Live Oak Dr/I-495 Bridge to Turkey Run Trail):**
 - Erosion noted in several locations along the trail (e.g., Lat: 38.966001 Long: -77.15982).
 - A difficult water crossing was flagged at Lat: 38.96535 Long: -77.15682
 - Trail overgrowth noted at Lat: 38.967993 Long: -77.178197.
 - Tree limbs down across trail at Lat: 38.965953 Long: -77.161029.

- **Segment 32 [Turkey Run Park - Turkey Run Trail (west) to Turkey Run Trail (east)]:**
 - Volunteer noted that a sign and bridge are needed at the stream crossing at Lat: 38.960084 Long: -77.143202.
- **Segment 33 (Turkey Run Trail eastern junction with PHNST to Fort Marcy):**
 - Volunteer noted several uncertain stream crossings.
 - Response from NPS staff: There are no known issues with the trail conditions and there are no trail improvement projects planned. Many of the creek crossings along George Washington Memorial Parkway's 10 miles of PHNST are not easy but are typical for a class 2 trail. In general, hiking the trail during or right after heavy rain can pose problems with water crossings. The section to the north of the Woods Trail junction has areas of trail that become submerged from even moderately high river levels. This usually occurs sporadically in the springtime and lasts a day or two. A ranger went out to the site and was unable to identify the issue indicated by the volunteer.
 - Following an inquiry from the volunteer as to the safety and status of the Route 123 Chain Bridge Road trail crossing, NPS staff indicated that the trail is out in the open through here and can be hard to follow as there is no discernible tread. Also, due to the road construction project, signs and markers may be missing. From the north/west it crosses at grade an entrance ramp and exit ramp, then goes across the cloverleaf and under the Route 123 bridge along the George Washington Memorial Parkway, then contours up into the forest on the south/east side. However, the volunteer could not locate where the PHNST continued past the Route 123 crossing. Construction on the Parkway has obstructed access along the roadway.
 - Wavyleaf basketgrass found along trail. Points were added to iNaturalist.
 - Several blazes along the segment are faded and could use improvement.
- **Connection between Segments 35 (Rt 123 at Chain Bridge to Gulf Branch Trail) and 36 (Gulf Branch Trail to Donaldson Run Trail):**
 - Erosion and trail washout at Lat: 38.925323 Long: -77.113862.
- **Segment 36 (Gulf Branch Trail to Donaldson Run Trail):**
 - Trash accumulated at Lat: 38.921564 Long: -77.10883.
 - Trail is steep and eroded at connection between Donaldson Run and PHNST.
 - Overgrown vegetation and encroaching invasive vines labeled in several locations along segment.
- **Segment 37 (Donaldson Run Trail to Windy Run Trail):**
 - Trail is steep and eroded at connection between Donaldson Run and PHNST.
 - Steep, severe erosion observed at Lat: 38.907442 Long: -77.096438.
 - Trees down over trail at Lat: 38.912435 Long: -77.102656.
 - Washout at Lat: 38.918533 Long: -77.106069.
 - Overgrown vegetation and encroaching invasive vines labeled in several locations along segment.

- **Segment 38 (Windy Run Trail to Key Bridge underpass):**
 - Some blazes were covered by invasive vines.
 - Several areas observed where the trail was overgrown with encroaching vegetation.
 - Additional blazing would be beneficial as there were several lengthy stretches with no blazes or wayfinding.
 - Trail washout observed at Lat: 38.902477 Long: -77.083605.
- **Segment 39 (Key Bridge underpass to Gravelly Point Park):**
 - Volunteer noted at Lat: 38.877141 Long: -77.048105, near the Lyndon Baines Johnson Memorial Grove, that the trail was difficult to navigate. Improved signage for bikers and other users to indicate the direction of Alexandria and the Pentagon would be beneficial. It was also observed that the online trail map did not appear to match the actual route in this section.
 - Volunteer was unable to determine how to get close to Key Bridge. Additional wayfinding might be necessary.
- **Segments 62 (Lorton Road from Gunston Cove Rd to Route 1) and 63 (Lorton Road from Gunston Cove Road to Workhouse Road to Route 123):**
 - Volunteer identified several areas along the route that offer partnership and interpretive potential, as well as locations of existing generic signage where a PHNST logo or sign could be added.
- **Segment 65 (Ocoquan Regional Park from trail terminus near I-95 to Rt 123):**
 - Could use improved signage at the start of Segment 65 (Lat: 38.695805 Long: -77.255892) to indicate the trail route.
- **Segment 80 (Veterans Drive @ Bay St to inside Rippon Station VRE where it terminates until connection to Featherston Wildlife Refuge is completed), Trailhead 15 (Rippon Station VRE):**
 - Stairs will be needed to get from the trail in Featherstone NWR to the train platform at approximately Lat: 38.612661 Long: -77.253283.
- **Segment 82 (Neabsco Creek Boardwalk parking to Neabsco Creek Boardwalk to Neabsco Road):**
 - Trail is overgrown and impassable at Lat: 38.606074 Long: -77.276423
 - This segment is generally overgrown and reroutes are confusing to navigate.
- **Segment 83 (Leesylvania State Park from Neabsco Rd to Danridge PI):**
 - Unmarked side entrance to PHNST off of Hanson Road was identified by a volunteer at Lat: 38.599289 Long: -77.266766.
 - Another Unmarked PHNST access point at Powell's Landing, Panorama Drive for 'Danridge Place' segment end (Lat: 38.588024 Long: -77.272178).
- **Segment 84 (Panorama Drive sidewalk terminus to Radcliffe Lane. Radcliffe Lane to trail just past Danridge Manor Drive. Trail to Wakewater Way near RT1. Sidewalks from Wakewater Way to Folsham Lane to Celestial Drive to RT 1):**
 - Improved wayfinding needed at western-most end of the trail segment and at fork(s) along trail.

- Bridge across stream labeled as “Poor” at approximately Lat: 38.594613 Long: -77.293775.
- Volunteer noted that there is a PHNST logo sign at the trail entrance near the townhomes on Hyden Place, but it is obscured by tree branches.
- **Segment 86 [Prince William Forest Park: Prince William Forest Park entry gate near Dumfries Road @ Waterway Dr to North Valley Trail. Follow North Valley Trail (PHNST) to Cabin Branch Mine Trail junction and bridge crossing Quantico Creek]:**
 - Blaze colors were noted to be confusingly similar, and an older version of the PHNST-blue/teal had been used.
- **Segment 89 (Joplin Road at RT 1 to National Museum of Marine Corp to and through Locust Shade Park to Russel Road):**
 - Notes from Volunteer:
 - It was observed that the wayfinding and signage will not be helpful in following the PHNST because none of them contain any PHNST signage. In some ways this makes sense since the exact route hasn’t been finalized in these areas, but there is still a lot of work to do to mark the trail.
 - In Locust Shade Park, in the south half of the park, the designated PHNST route is currently routed either on a maintenance road or on various mountain bike trails. Volunteer observed at Lat: 38.526442 Long: -77.357239, the recorded PHNST route had been closed. Volunteer followed a network of other mountain bike trails and eventually found the point where it hits the power lines, but a new PHNST alignment should be designated in the area and re-mapped.
 - There is no signage at all where the trail reaches Route 1 at the south end of Locust Shade.
 - The trail between the Marine Corp Museum and the boundary to Locust Shade Park is currently under construction.
 - Response from Prince William County Department of Parks and Recreation (PWCDPR):
 - During construction of the mountain bike trails that were added to this section of the park a few years ago, it was determined that the area the volunteer marked was constructed in an unsustainable manner for mountain bike use. That section was therefore closed to allow the forest to grow up over the old trail.
 - PWCDPR is aware that the alignment of the PHNST needs to be marked through the entire length of Locust Shade Park. They will address it as soon as they have the staff bandwidth to do so.