

# USING GIS MAPPING BUILDING CROSSROADS BETWEEN E- TRAILS EDUCATION AND CULTURE!

**National Society & Friends Washington Rochambeau  
Revolutionary Route National Historic Trail, Inc.**

**Presented by: Acqunetta Anderson  
National President General**

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# Teaching History Using GIS, iPhones, Cell Phones, GPS Units and Historical Maps

- e-Trails Education is defined as instruction delivered on a computer via internet or CD-ROM.
- It can be self paced or instructor led and includes media in the form of text, streaming video, audio, iPhone and cell phone.
- Students use iPhones, cell phones and GPS units are mostly used in field case studies.
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# NS&F W3R NHT eTrails Education

- NS&F W3R NHT e-Trail's Education program commonly refers to training delivered/classroom instruction electronically in an organizational setting in:
  - workshops,
  - conferences,
  - schools,
  - after school programs,
  - museums,
  - cultural tourism tours, and
  - the library.

# e-Trail's Education Benefits

- e-trail education can provide benefits for the organizations, students, tourist, elected officials and individuals.
- **Improved performance:** A 12-year meta-analysis of research by the U.S. Department of Education found that higher education students in online learning generally performed better than those in face-to-face courses.

# E-trails Education Benefits

- **Increased access:** Instructors can share their knowledge across borders, allowing students to attend courses across physical, political, and economic boundaries.
- **Trailheads experts:** have the opportunity of making information available internationally, to anyone interested at minimum costs. For example, the NS&F W3R NHT program has made substantial portions of our Teaching History Using GIS Maps and National Trails curriculum and lectures available online to participating schools, colleges, organizations (4H Clubs, Boy scouts and Girl Scouts of America, etc.) as part of their membership benefits.

# Using Historical Maps and GIS to Teach History Produces

- ❑ Increase in school attendance,
- ❑ Increase in the honor roll system in schools,
- ❑ Instant Communication among students, tourist and other individuals,
- ❑ e-Mail Lists,
- ❑ Student, tourist and other individuals Blogging in open discussions,
- ❑ Wikis
- ❑ RSS web feeds
- ❑ Podcasting
- ❑ Finding and reusing learning resources
- ❑ Tagging
- ❑ Creating digital images, video and audio
- ❑ Audio and video blogging
- ❑ Using free and open source software

# Using Historical Maps and GIS to Teach History Produces

- Instant communication, text messaging, Online chat, live video and audio conferencing.
- email list, news list, eGroup, but probably most accurately called an electronic mailing list. Electronic mailing lists are a special usage of email that allows for widespread exchange of information to a list of email addresses.

# Trailhead's Email Benefits

- **Uses for eMail lists**
- Make announcements and distribute information to other trail groups, and people with similar interests.
- Stimulate topical discussions.
- Socialization tool.
- A learning resource when used with a broader community of practice or industry.

# Trailhead's Blogging Benefits

- A blog (or web-log) is a website in which about the national trails and byways are posted on a regular basis and displayed with the newest at the top. Like other media, blogs often focus on a particular subject, such as tourism, museums, or local and tourism news. Some blogs function as national trails online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. Its endless.

# Trailhead's Blogging Benefits

- **Uses for national trail blogs**
- Students and tourist record, process and reflect on the trail—learning experiences, etc..

# Trailhead's Wiki

- A wiki is a type of website that allows students and tourist visiting the trail to add, remove, or otherwise edit all content quickly and easily, often without the need for registration. The National Trail Wiki also offers a discussion forum. This ease of interaction and operation makes a national trail wiki an effective tool for collaborative writing.

# Trailhead's Wiki Benefits

- **Uses for the National Trail Wikis**
- Collaborative learning resource development.
- Subject related discussion.
- For example: General George Washington crossing the Delaware.

# National Trail Education Benefits

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- History
- Science
- Technology
- Engineering
- Mathematics

# National Trail Education Benefits

- History offers a storehouse of information about how people and societies behave.
- History helps us understand change and how the society we live in came to be.
- History provides identity.
- Studying history is essential for good citizenship.

# Education Benefits History

- Studying history helps us understand how recent, current, and prospective changes that affect the lives of citizens are emerging or may emerge and what causes are involved.
- More important, studying history encourages habits of mind that are vital for responsible public behavior, whether as a national or community leader, an informed voter, a petitioner, or a simple observer.

# What Skills Does a Student of History Develop?

- *The Ability to Assess Evidence.* The study of history builds experience in dealing with and assessing various kinds of evidence—the sorts of evidence historians use in shaping the most accurate pictures of the past that they can.
- Learning how to interpret the statements of past political leaders—one kind of evidence—helps form the capacity to distinguish between the objective and the self-serving among statements made by present-day political leaders.
- Learning how to combine different kinds of evidence—public statements, private records, numerical data, visual materials—develops the ability to make coherent arguments based on a variety of data.
- This skill can also be applied to information encountered in everyday life.
- So what this program does is connect the students and individuals with the national trail.

# The Ability to Assess Conflicts

- *The Ability to Assess Conflicting Interpretations.* Learning about national trail history means gaining some skill in sorting through diverse, often conflicting interpretations.
- Understanding how societies work—the central goal of historical study—is inherently imprecise, and the same certainly holds true for understanding what is going on in the present day.
- Learning how to identify and evaluate conflicting interpretations is an essential citizenship skill for which history, as an often-contested laboratory of human experience, provides training.
- The study of history in no sense undermines loyalty or commitment, but it does teach the need for assessing arguments, and it provides opportunities to engage in debate and achieve perspective.

# History Benefits

- History that lays the foundation for genuine citizenship returns, in one sense, to the essential uses of the study of the past.
- History provides data about the emergence of national institutions, problems, and values—it's the only significant storehouse of such data available.
- It offers evidence also about how nations have interacted with other societies, providing international and comparative perspectives essential for responsible citizenship.

# What is STEM Education?

- STEM refers to the areas of science, technology, engineering, and mathematics.
- STEM initiatives started as a way to promote education in these related areas so that students would be prepared to study STEM fields in college and pursue STEM-related careers.
- Schools with a strong emphasis on STEM education often integrate science, technology, engineering, and mathematics into the entire curriculum.

# STEM, HISTORY AND GEOGRAPHY CONNECTS DOTS

- The National Trail educational program is designed to build a research and learning network between mentors, middle and high school students who major in and/or plan to major in Science, Technology, Engineering, Mathematics, History and Geography.
- Increase the number of students who major in the STEMS, history and geography.

# Digital Dots Tell Stories (DOTS)

- This is a special GIS (Geographic Information System) technology driven program that allows integration and interaction of historical maps with current geospatial data and other historical and contemporary maps.
- Students examine and design the maps in GIS; the maps reveal changes in the history of the areas shown on the maps. For example: Rochambeau Arrival in Rhode Island. We will analyze the map in the next segment.

# History and STEM Connections

- History and STEM connections to national historical trails draws across time and place to the enduring themes and issues of American history and historical maps.
- Global connections between the United States and the world are an important feature of the program. So too are connections between ideas, individuals, documents and events as they developed on the local, national, and international levels---

# Geography and History: A Critical Educational Component

- Geography and history is a critical component of a 21st century education. The National Society & Friends Washington Rochambeau Revolutionary Route National Historic Trail (NS&F W3R NHT) is working to raise awareness so that all students have opportunities to know and understand the Washington Rochambeau National Historic Trail.

# GIS and Historical Maps

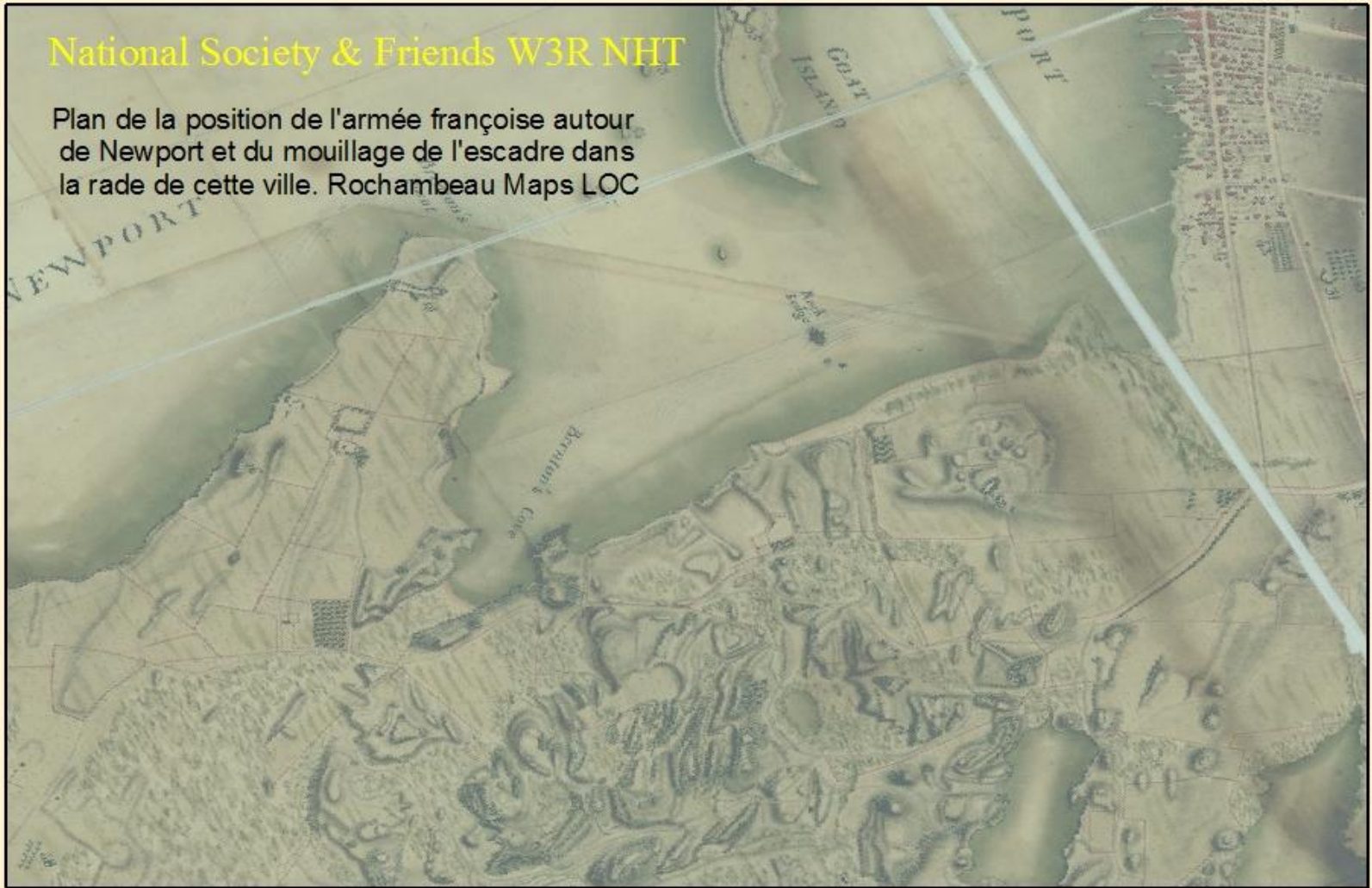
- Students from public schools in Washington, D.C., Maryland and Virginia have designed more than eleven historical maps of the Rochambeau arrival in Rhode Island,
- Designed 18 W3R NHT/Civil War Trails historical maps of the Boston, Maryland and Virginia areas between 1700s thru 1897, over thirty historical maps covering the area of the 1804 - 1806 Lewis and Clark Expedition,
- Designed 35 W3R NHT/Civil War Trail maps of Washington D.C., and 32 maps of W3R NHT New York are now available for viewing in the NS&F W3RNHT GIS database and school curriculums.

# GIS and Historical Maps

- Additional historic maps of historical trails are also available using the iPhone and cell phone---education and cultural tourism through DOTS.
- Currently geospatial data that can be overlaid and compared to the historical maps includes roads, lakes, national trails, parks, state boundaries, digital orthophotos (aerial photography), topographic map sheets, digital elevation models and satellite imagery.

## National Society & Friends W3R NHT

Plan de la position de l'armée française autour de Newport et du mouillage de l'escadre dans la rade de cette ville. Rochambeau Maps LOC



National Trails  
and  
Bridges  
GIS Portal  
R000

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**Plan the position of the French army around  
Newport and the anchorage of the squadron in  
the roads of this city**



Albers Projection  
Central Meridian: -96  
1st Std Parallel: 20  
2nd Std Parallel: 60  
Latitude of Origin: 40



# Narragansett National Society & Friends W3R NHT

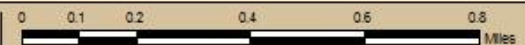
Plan de la position de l'armée française autour de Newport et du mouillage de l'escadre dans la rade de cette ville. Rochambeau Maps, LOC with ESRI World Street Map Underlay



National Trails  
and  
Bicycles  
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**Plan the position of the French army around  
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# National Society & Friends W3R NHT



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## Newport Rhode Island ESRI World Imagery



Albers Projection  
Central Meridian: -96  
1st Std Parallel: 20  
2nd Std Parallel: 60  
Latitude of Origin: 40



# National Society & Friends W3RNHT



59 Bellevue Ct, Newport, RI 02840

-71.3093; 41.4783 decimal degrees

National Trails  
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BWSF's  
GIS Portal  
R200

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**World Imagery with DOTS\*, George Washington  
Statue and Redwood Library & Athenæum,  
Newport RI.**

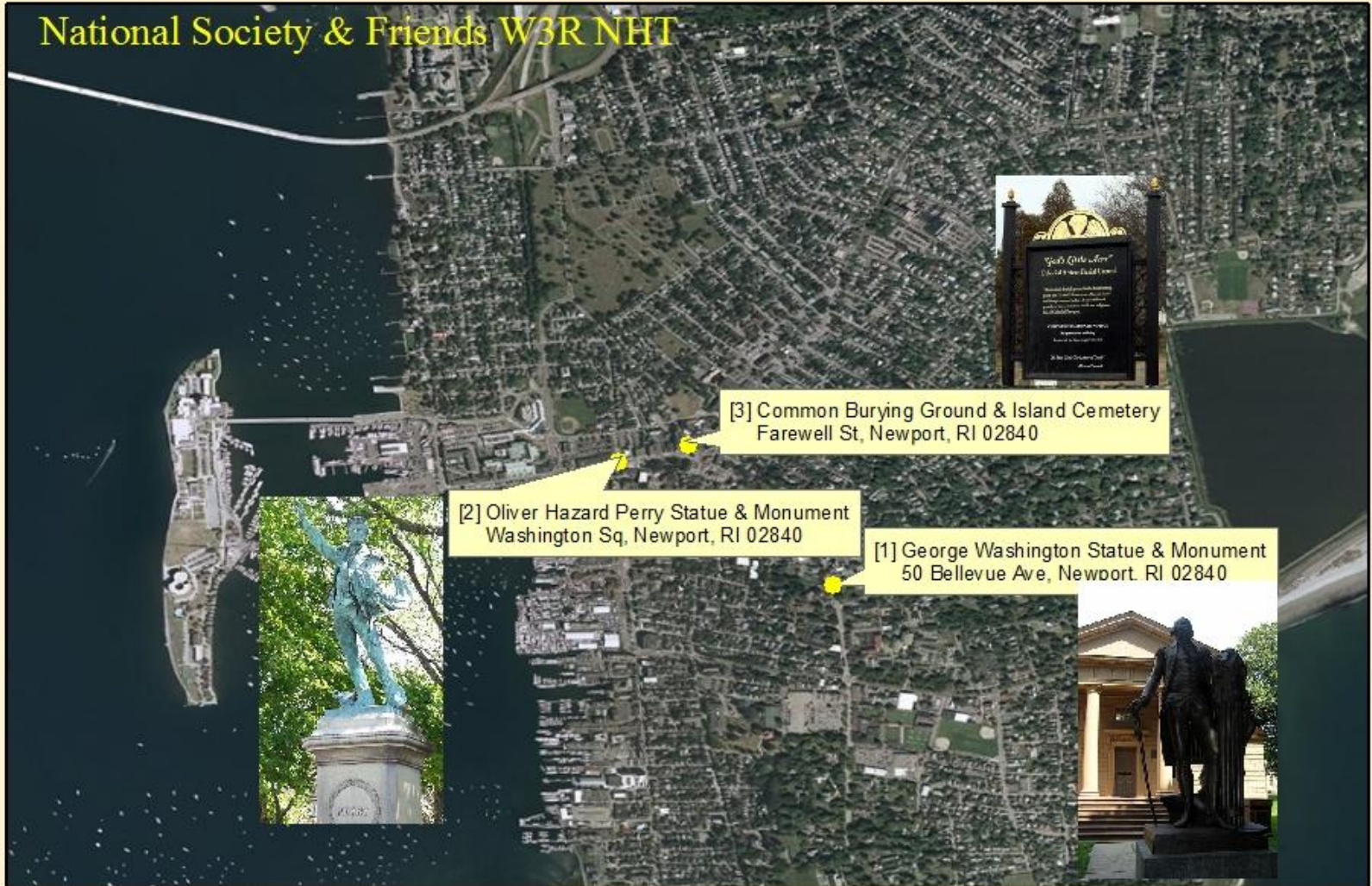
**\*Digital Objects Tell Stories™**

0 0.05 0.1 0.2 0.3 0.4  
Miles

Albers Projection  
Central Meridian: -96  
1st Std Parallel: 20  
2nd Std Parallel: 60  
Latitude of Origin: 40



# National Society & Friends W3R NHT



[3] Common Burying Ground & Island Cemetery  
Farewell St, Newport, RI 02840

[2] Oliver Hazard Perry Statue & Monument  
Washington Sq, Newport, RI 02840

[1] George Washington Statue & Monument  
50 Bellevue Ave, Newport, RI 02840

National Trails  
and  
BWSFs  
GIS Portal  
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Newport Rhode Island ESRI World Imagery with  
some DOTS\* on.

\*Digital Objects Tell Stories™



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2nd Std Parallel: 60  
Latitude of Origin: 40



# Building Bridges: Lighting National Trails Mapping

National Society & Friends Washington  
Rochambeau Revolutionary Route  
National Historical Trail's goals are:

- To increase national historic trail and geographic literacy among students.
- Inform the general public, policymakers, and the media about the importance of our National Historic Trails education and geographic literacy particularly in our schools.

# Building Bridges for National Historic Trails

- Help educators prepare students to be global preservationist, historians and conservationist of our National Historic Trail System, and
- Provide quality historical trail resources, and curriculums for educators and students---in the classroom with real case studies in the field with STEM, history and geography experts.

# Geo-spatial Technology

- **Geo-spatial technology is an essential element in becoming national historic trail literate.**
- **A national historic literate citizen is able to reason critically and evaluate situations systematically using the best information available.**
- **A key component of national historic trail literacy in the 21st century is the ability to use geographic information systems (GIS) and other geo-spatial tools and technologies to collect, organize, visualize, analyze, and communicate about geographic data and location-specific information.**

# Maps and Historic Trails and Byways

- GIS maps are helping to ensure the survival of our National Historic Trail's significant battle ground, and habitats.
- This GIS tourist map is designed to reach a wide scale of users, visitors, inhabitants, and employees working with city planning. Therefore it had to have a lot of information and still be easy to read and understand.

# GPS-Triggered Trail Prompts Pop Up On Screen

- As visitors and students approach various features, their GPS units triggered prompts pop up on their screen.
- For example:



Standing on the banks of the Delaware where General George Washington---crossing the Delaware at the Battle of Trenton on Christmas night 1776 by Emmanuel Leutze will cause the individual to receive a prompt pop-up on their cell phone. The individual will have the option of listening to self-guided tour.

# GPS Units Triggered Trail Prompts

- Another example: When touring the Washington Rochambeau Trail along “P” Street, NW in Washington, D.C. when nearing the Lauzun’s Legions Bridge---tourist/students GPS units triggered prompts pop up on their screen with the appropriate historical map and can follow Lauzun’s Legions route to the Potomac River Crossing at Georgetown.
- All documentaries are a minute-long.

# Using New National Trail Media Devices

- National Trail and byway iPhones apps allow users to:
  - ▣ Learn about the history of their built environment by overlaying old maps.
- iPhone apps allows students to utilize a medium that they understand.
- GPS prompts pop ups; allows students to engage in critically thinking skills and student interaction.

# Thanks to Our Partners and Supporters

- District of Columbia Public Schools.
- Virginia Public Schools.
- Maryland Public Schools.
- U.S. Department of Agriculture
- ESRI
- National Geographic
- Smithsonian Institutes
- National Park Service

# Closing

- Our society, our very existence as a free people, rest on our success in ensuring that all Americans understand our history, rights, and responsibilities, and pass this knowledge on to rising generations.
- This is who we are--

# For More Information About Becoming A W3RNHT Partner

Acqunetta Anderson

National Presidential General

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Rochambeau Revolutionary Route National  
Historic Trail

Email: [atanderson@washington-dc-national-trails-byways.org](mailto:atanderson@washington-dc-national-trails-byways.org)

# Questions and Discussions

- Coming Soon To A Mobile GPS, iPhone and/or cell phone Trail Near You...!
- If you would like to join the NS&F W3RNHT and/or join other DOTS Partners, please contact us via email: [atanderson@washington-dc-national-trails-byways.org](mailto:atanderson@washington-dc-national-trails-byways.org)