

Partnership for the National Trails System

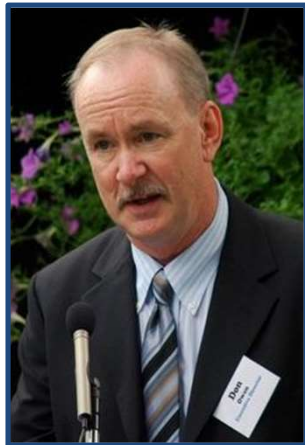


A Gap Analysis and Connectivity Assessment for the National Trails System

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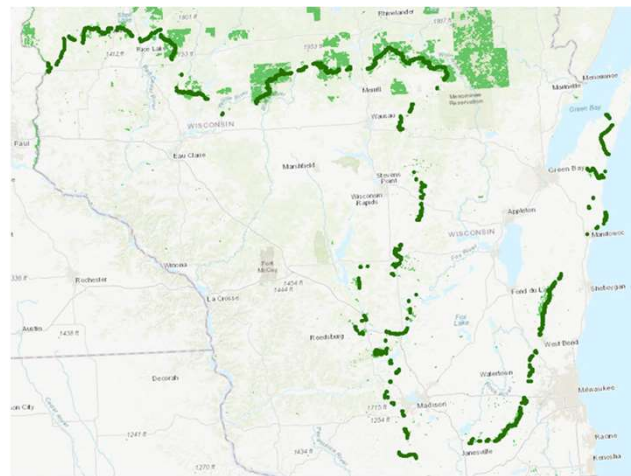
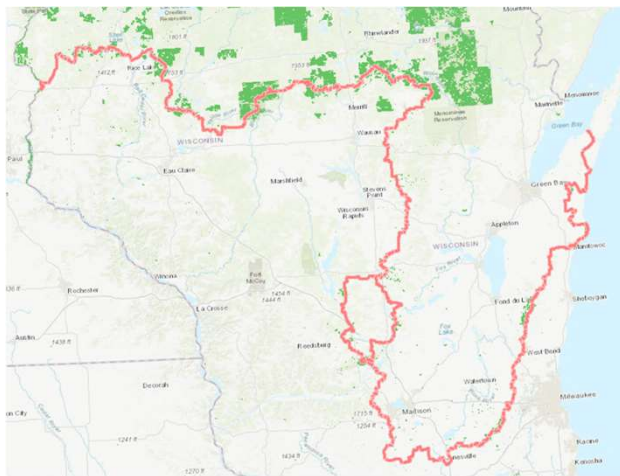


Interactive Map of the National Trails System

Purpose of the Gap Analysis

1. **Identify “gaps” in trail protection** — specifically, identify those areas needed to:
 - (a) provide a continuous conserved route for national scenic trails, and
 - (b) conserve high potential sites and segments and other significant resources for national historic trails;
2. **Provide a Decision Support Tool** that will help trail managers assess and categorize these “gaps”;
3. **Provide relatively accurate numbers** of miles needed to complete scenic trails, and of unprotected high potential historic sites and route segments and other significant resources for national historic trails; and
4. **Provide web-based tools** that permit Trail administrators and managers, and the public, to view the status of conservation for all national scenic and historic trails.

Ice Age National Scenic Trail

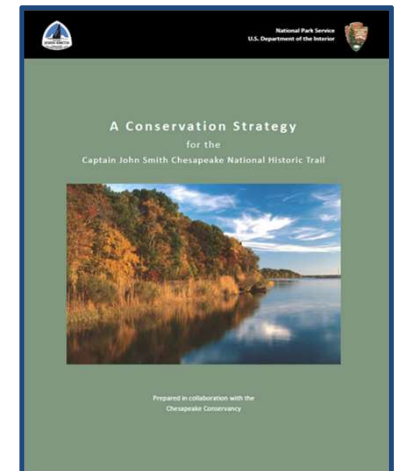


Using TPL's in-house GIS capabilities, we are:

- **Collecting the best available existing data on conserved lands, priority segments and compiling all trails** into a single GIS database;
- **Developing a comprehensive GIS database** that depicts the conservation status of all National Scenic and Historic Trails;
- **Conducting spatial analyses** on trails detailing public and private land ownership, as well as other attributes to assist in trail conservation planning such as proximity to communities, waterbodies, critical habitat and potential risks; and
- **Developing web based tools** that provide National Trail administrators and managers with the ability to view and assess the conservation status and potential benefits of conservation for any segment of the National Trail.

The Gap Analysis: Our Progress to Date

<u>Jan - Mar 2019</u>	Research and discovery phase; meetings with FHWA, agency partners, and Trail organizations
<u>Mar - April 2019</u>	Developed preliminary methodology and model
<u>April 2019</u>	Presented our preliminary methodology to the <u>NTS GIS Network</u> , <u>identified four pilot trails</u>
<u>May - July 2019</u>	Began work with GIS and resource specialists for four pilot trails
<u>Aug 2019</u>	Presented work to date to the federal <u>National Trails Administrators</u>
<u>Aug – Nov 2019</u>	Continued refinement of methodology
<u>Nov 2019</u>	Presented preliminary model and methodology to the <u>National Trails System Council</u>
<u>Jan 2020</u>	Presented draft model and methodology to a small <u>Peer Review Group</u>
<u>Feb 2020</u>	Presented draft model and methodology to approximately 25 <u>federal agency and nonprofit organizational partners</u> in a special session during Hike The Hill
<u>Mar - Apr 2020</u>	Integrated a list of more than 30 modifications to the model in response to recommendations, comments, and suggestions from GIS managers, Trail administrators, and others
<u>Apr 2020</u>	Presented final draft methodology to the <u>NTS GIS Network</u>

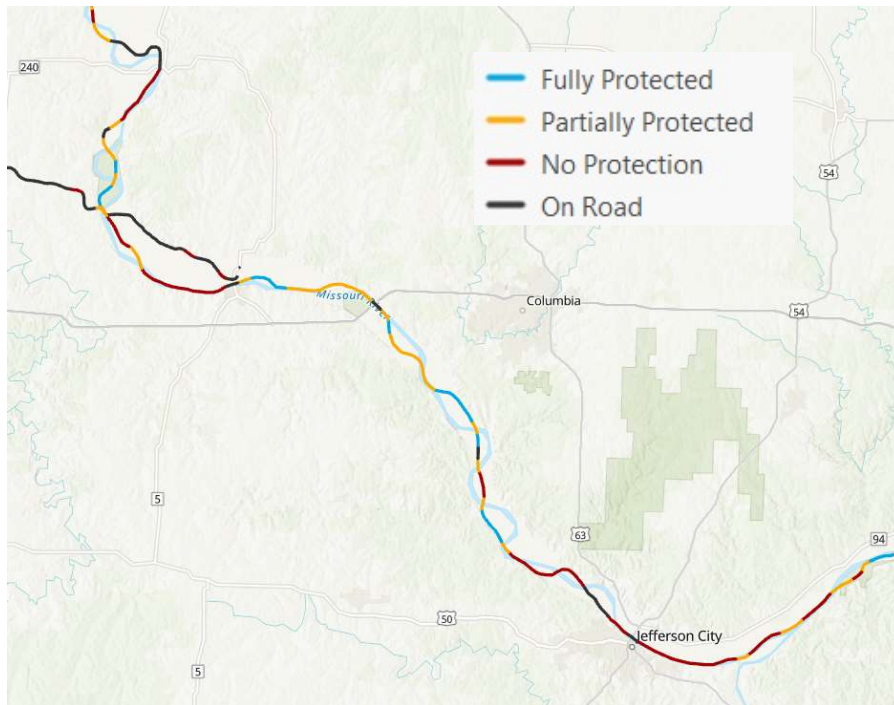


National Trail Protection Gap Analysis

- ✓ 1. Download and compile trail centerline data into a single GIS database with similar schema and population of attributes;
- ✓ 2. Download USGS PADUS and NCED to represent protected lands, and supplement these data sets with select internal TPL conserved lands databases such as ParkServe as well as select state aggregator data such as the Florida Natural Areas Inventory and CoMAP in Colorado;
- ✓ 3. Work with National Trails GIS Data Managers to review accuracy of the trail centerline data and obtain any refined land ownership or conserved lands data they have to more accurately identify where gaps exist in trail protection.

Deliverables

1. Web-based decision-support tool for practitioners



2. Publicly-accessible 3D viewer



National Trail Protection Gap Analysis

For each National Scenic Trail and Historic Trail:

- ✓ 1. Create unprotected gap segments for each trail and attribute with mileage and distance on road.
- ✓ 2. Break up the trail centerline into one-mile segments
- ✓ 3. Classify segments as:
 - Fully protected
 - Partially protected
 - Not protected
 - On-road (and not protected)
- ✓ 4. Add data to each one-mile segments describing trail conservation priorities and development risks

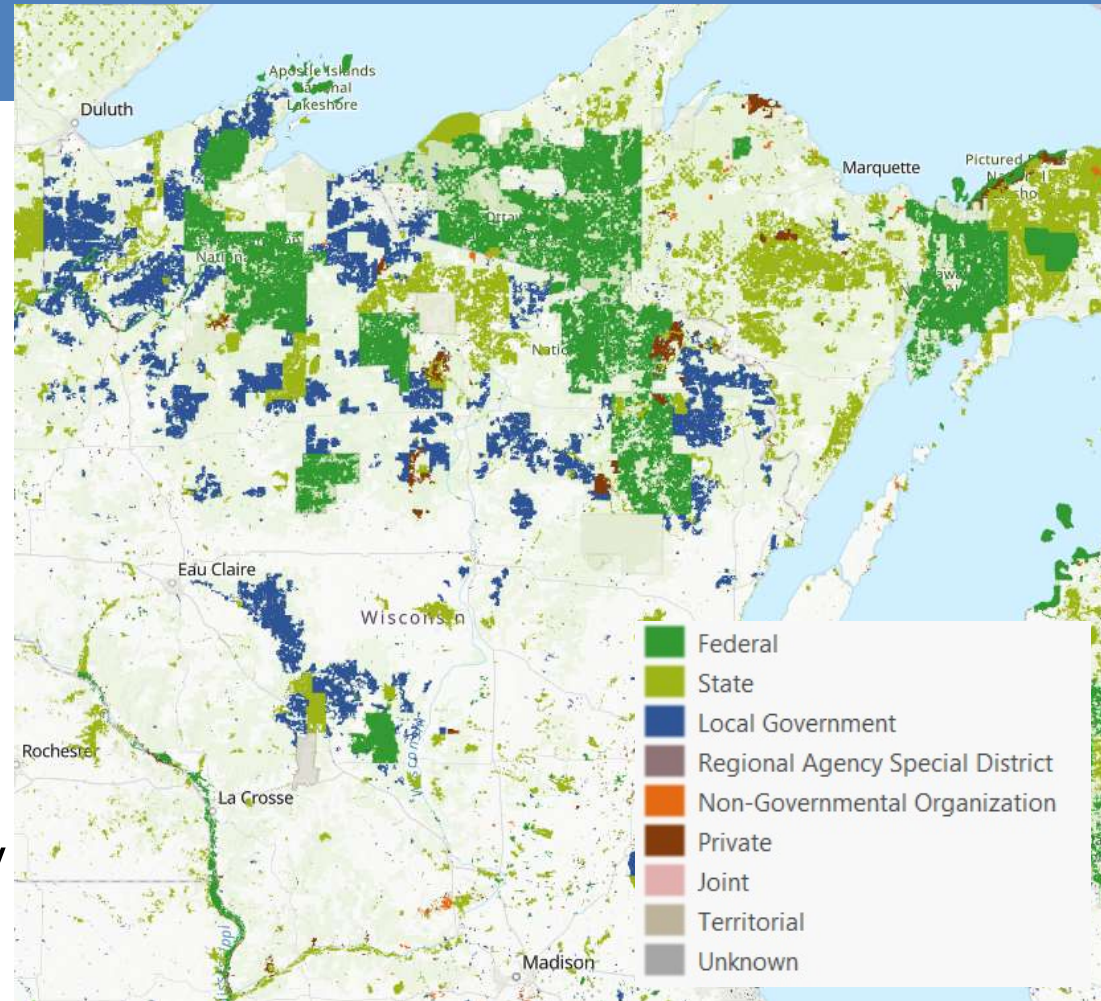
For National Historic Trails, we also are classifying High Potential Historic Sites and High Potential Route Segments based on their protection status, **where data are available.**

Protection Status

Local data are used when available

Otherwise, we are using national data:

- PADUS 2.0
- NCED
- National Park Service Tracts
- Conservation Almanac
- TPL's ParkServe
- BLM Surface Management data
- ...and state-level datasets where they exist, such as Florida Natural Inventory and COMAP in Colorado



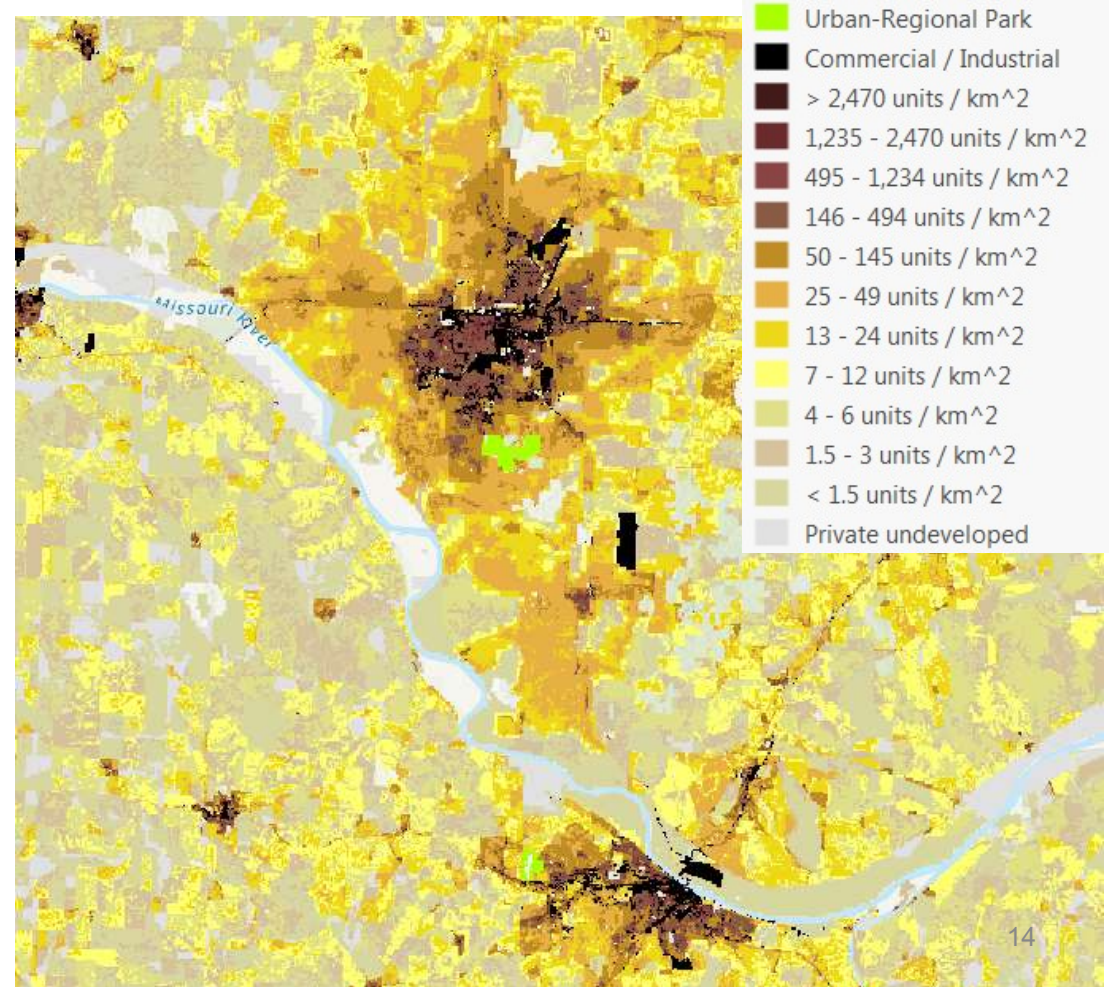


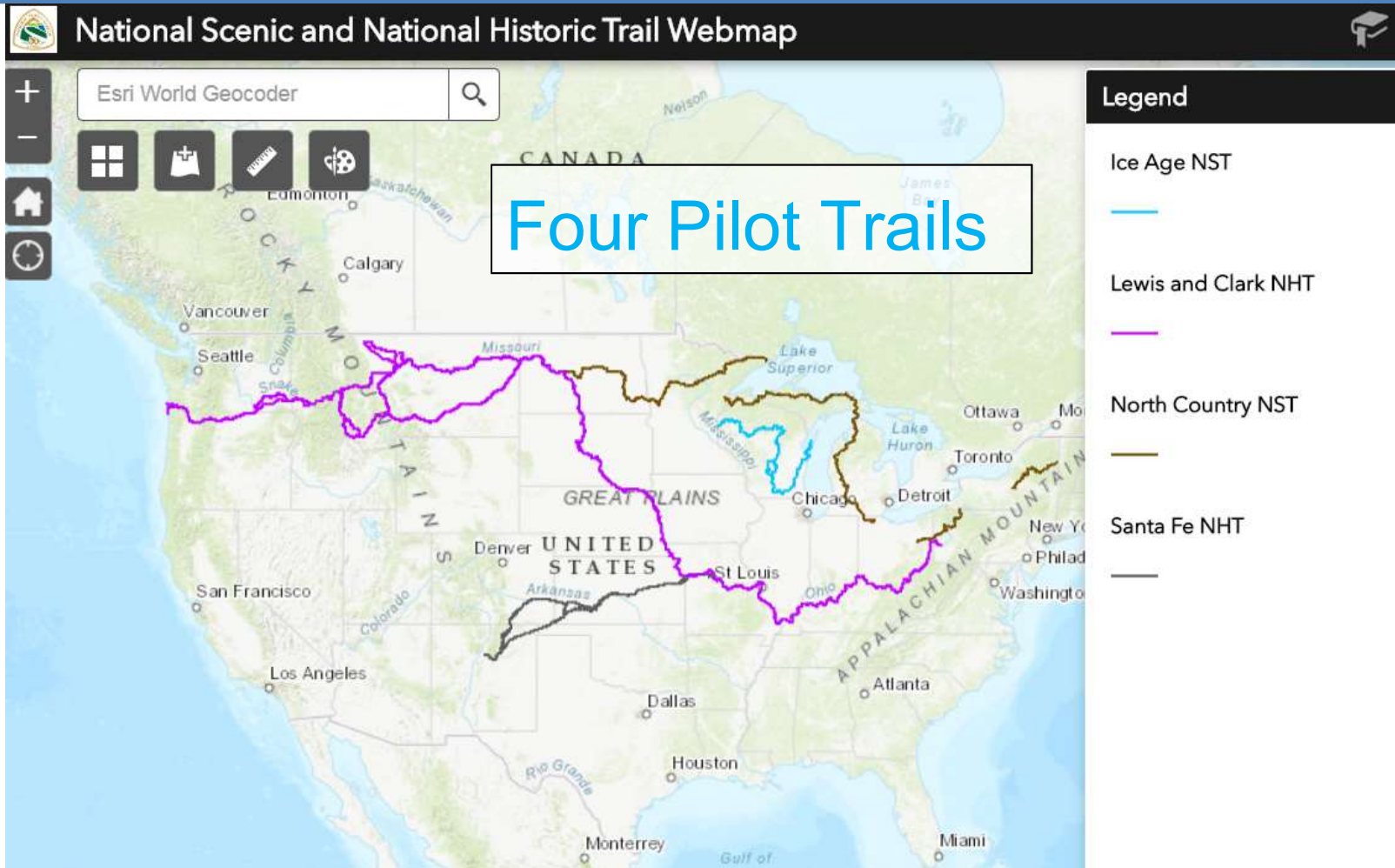
Trail Protection Statistics

	Ice Age NST	Lewis and Clark NHT	North Country NST	Santa Fe NHT	
On Conserved Land (miles)	644	460	2,617	170	
In Waterway	20	4,495	96	18	
Not Conserved	564	1,348	1,988	1,742	
On Road (Conserved and Not Conserved)	643	151	1,592	106	
Total	1,230	6,304	4,702	1,932	

Priorities and Risks

- **Demographic** –
Proximity to Nearest Population
Number of People within a Quarter Mile
- **Natural attributes** –
Proximity to water
Undisturbed landscape
Major land cover type
- **Closing Gaps**–
Adjacent to existing conserved land
Short segments between public lands
- **Risks** –
Predicted residential housing development
Predicted energy development
- **Safety** –
Potential obstacles
Crossings of major highways
Road walks on major roads
- **Trail Managers** – Priority resource data
- **Parcels** – Parcel size, number of parcels





Next Steps



November 2019 – Build initial draft website using methodology developed for pilot trails



April 2020 – Review with trail managers, collect feedback



June 2020 – Run analysis for all trails, incorporating feedback



September 2020 – Release Decision-Support Tool and 3D Viewer:

- Final map viewer for public viewing of all trails and data on a dynamic 3D backdrop; and
- Practitioner decision-support tool for trail administrators, who will be able to query conservation status and data for trail segments



... now, let's take a look at the trail analysis layers and example of 3D scene viewer!

Challenges and Responses

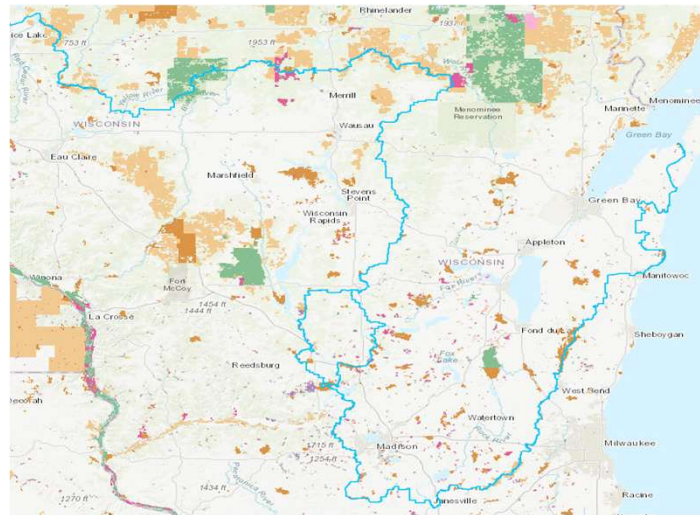
- Accuracy of PADUS 2.0 and other national conserved lands data sets



- We are collecting local land ownership and other data from National Trail GIS Data managers where available; and working with the best available data for each trail.

Challenges and Responses

- Availability of private land ownership data is highly variable from state to state and trail to trail. Also, significant disparities in robustness of available resource data from state to state and trail to trail.



- National datasets include PADUS 2.0, NCED, TPL's ParkServe, BLM Surface Management, Conservation Almanac and National Park Service tracts database

Challenges and Responses

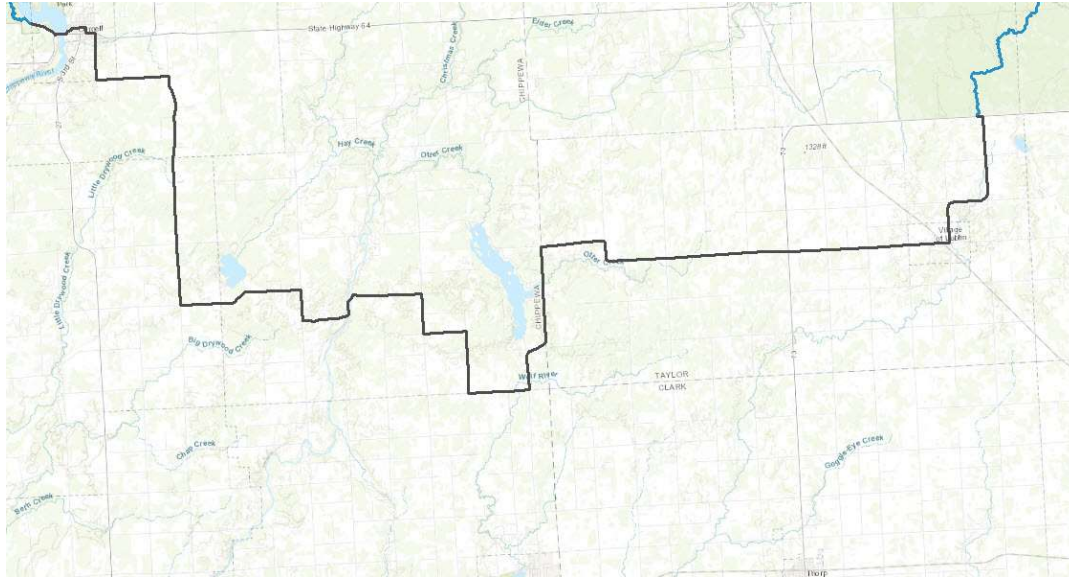
- Cannot display or utilize highly sensitive data sets, such as High Potential Historic Sites and High Potential Route Segments for certain National Historic Trails



- Where data on High Potential Historic Sites and High Potential Route Segments are available, we will use them in the analysis. If not, then we will move forward with segment analysis using other factors.

Challenges and Responses

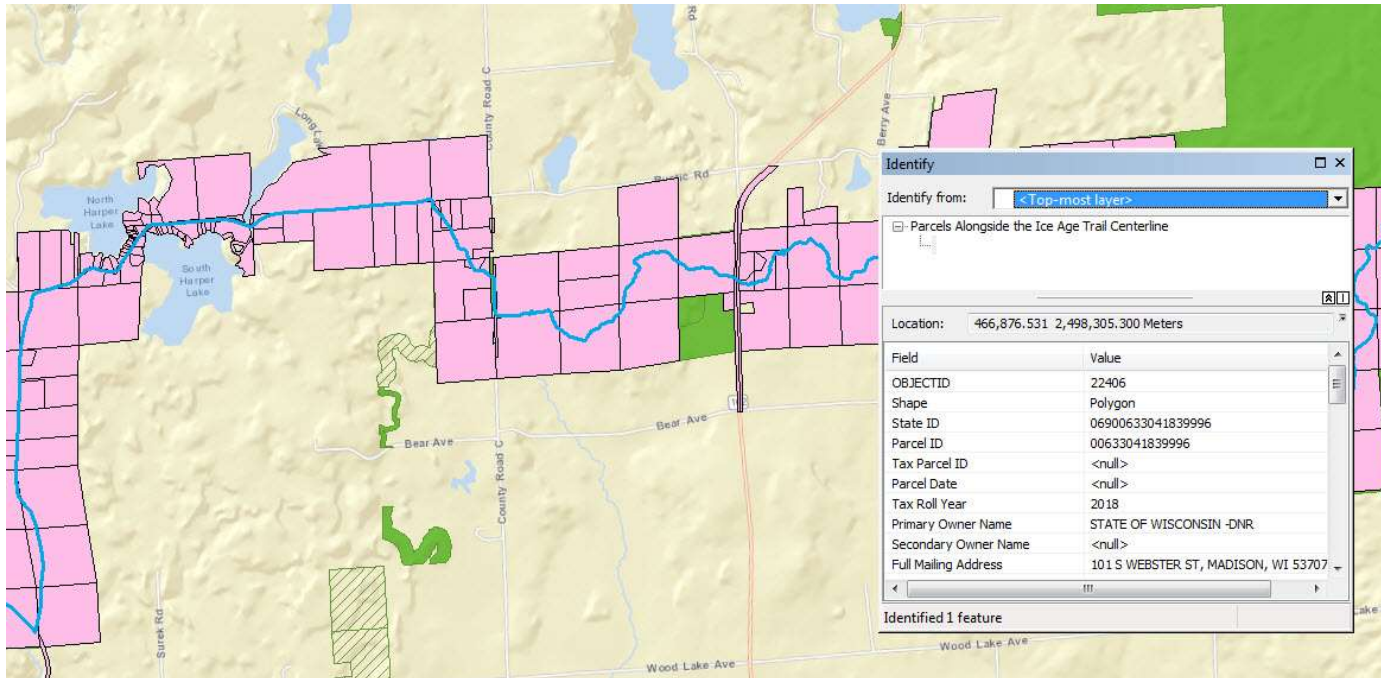
- Determining best approach for sections of National Scenic Trails that are located on public roads, where a preferred corridor has not yet been determined



- We are working with the Trail GIS data managers to determine if we can provide data to help frame decisions about where these segments can be moved



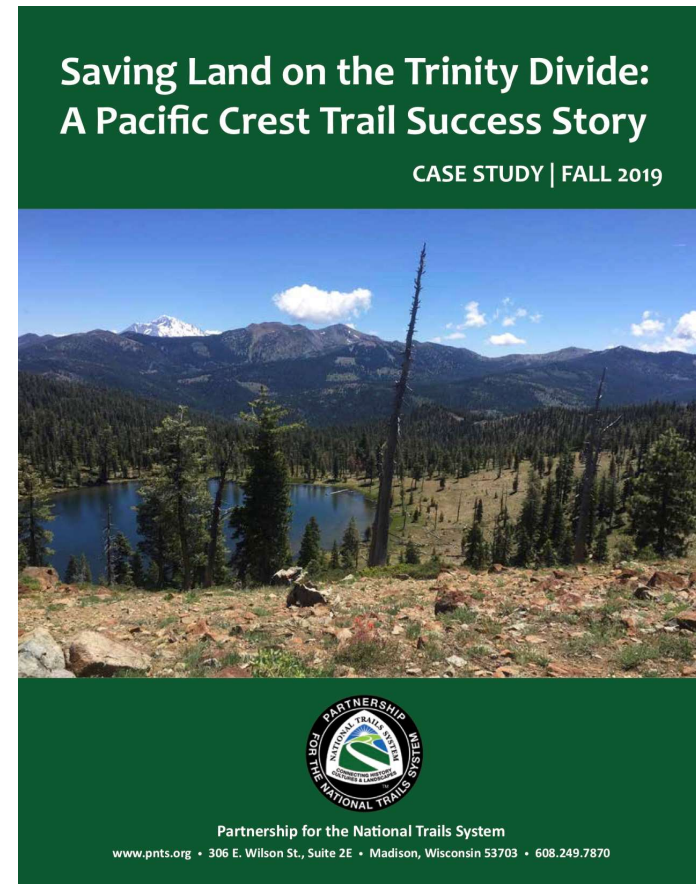
- Looking into best way to include land ownership data in next phase of work





As other complementary components of Task 2 of the cooperative agreement with FHWA, PNTS also is developing:

- “**Case Studies**” of successful land protection projects, to illustrate ways that agencies, nonprofit trail organizations, and others can work together to protect National Scenic and Historic Trails; and
- A ***National Trail Conservation Handbook***, to provide representatives of agencies and trail organizations with a “how to” guide to conserving national scenic and historic trails
- A compendium of **model cooperative agreements** across the National Trails Systems
- **Training workshops and webinars** in conserving lands to protect National Scenic and Historic Trails



Questions?



Thank you!



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