

NTS GIS Network- Meeting Minutes

Tuesday, April 21, 2020, 1:00 pm Mountain Time (12pm PT, 2pm CT, 3pm ET)

MEETING AGENDA

1. Welcome & Introductions (Peter Bosnall)

Meeting Attendees:

1. Peter Bosnall – NPS National Trails System
2. Kerry Shakarjian – NPS Alaska Region GIS
3. Brian Deaton – NPS GIS Specialist for [National Trails](#)
4. Don Owen - Partnership for the National Trails System (presenter - djowenhome@gmail.com)
5. Mitchel Hannon – Trust for Public Lands (presenter - mitchel.hannon@tpl.org)
6. Sarah Rivera - Nat Trail Intermountain
7. Tiffany Stram - Ice Age Trail Alliance
8. David Fothergill - US Forest Service Enterprise Program
9. Greg Matthews - USGS
10. Naomi Torres - Juan Bautista de Anza NHT
11. Laura White - USFS, Arizona NST Administrator
12. Noelle Bovio – BLM WY
13. Taylor Willow – USFS R02 – CDT
14. Philip Marley - USFS - Florida Trail
15. Aric Arakaki - Ala Kahakai NHT
16. Leslie Haig – DOT
17. Megan Wargo - Pacific Crest Trail Association
18. Dave Welch - Oregon-California Trails Association
19. Brenda Yankoviak – FS Region 2 Continental Divide NS Trail Administrator
20. Atridente -
21. Bob Ratcliffe - National Park Service, Washington DC
22. Kevin F. Waldron -

2. Announcements & Information from Audience

- a. We can now record the webinars! [PNTS website](#)
We are still learning how to record => Today's recording did not capture all of the video but it did record all of the audio.
We already have this resolved for our next webinar. Thank you for your patience.
- b. April 1-30 - [Continental Divide Trail Virtual Trail Days](#)
- c. June 3-13 - [National Pony Express Association's Annual Re-Ride, Sacramento, CA United States](#)
- d. June 6 - [National Trails Day](#)

3. Discussion Topic

Presenters: Don Owen, Partnership for the National Trails System; Mitchel Hannon, Trust for Public Lands

A Corridor Protection Gap Analysis and Connectivity Assessment for National Trails.

The Partnership for the National Trails System (PNTS), in collaboration with the Trust for Public Land, will utilize an integrated Geographic Information System (GIS) approach to identify, map, and characterize trail protection opportunities throughout the National Trails System. This effort will result in two Interactive Maps of the National Trails System, with one providing a public view of the conserved components of the trails on top of a 3D Scene viewer and a second practitioner view that provides information for decision making related to the conservation of unprotected segments of each trail.

Notes:

Don Owen – Presenting an update since it has been a year since presenting to NTS GIS Network.

Mitchel Hannon – GIS Project Manager for TPL. Kristin and I have been working together a year for the TPL. This effort creates tools for decision making.

NTS OVERVIEW – 11 NSTs, 19 NHTs – more than 58,000 miles of the NTS. Important to understand what Congress intended – long distance trails that people could hike or recreate across these trails. National Historic Trails people could understand the

events of the nation's history. Trails were meant to be physical features to recreate, experience and enjoy.

NTS only partially complete due to land protection. Must have some sort entity dedicated to the protection of the trail (federal, state, land trust, conservancy, etc). 60 percent of NTS - federal, state, local, or land trust are protected. 40 percent (~23,000 miles) are within areas that do not have conserved status. Need to protect at least 5,000 miles. We need to know the gaps for protective land ownership.

GAP analysis identify the gaps in protection/conserved route. Provides a decision support tool and provide quantitative measures. Total number of miles and site/resources need to protect. Also a web based decision support tool for planning along the NTS. Help smaller trail organizations and other partners (land trusts, historic preservation) to identify priority areas.

Ice Age NST – Illustrates the challenges of administering trails. Goal to secure a corridor along the NST. There are gaps in the land protection. Many of the gaps are along roads.

TPL – completed pilot plans – data compiling in comprehensive GIS database. Established a methodology for spatial analysis. Developed web based tools for decision makers and the public to use.

Timeline – began 1 year ago – worked through methodology, 6 different meetings, held peer review, conducted meetings with managers/superintendents. This is the 7th presentation we have made. Wrapping up the pilot phase and expand the model to all the NTS.

Mitchel -

GAP Analysis – Very complex analysis, data, capabilities for NTS. An eye opening experience to create a unified way of sharing and viewing this data of the NTS. Compiled the designated alignments of the NTS. PADUS/NCED data was identified as not being complete so this data was supplemented with ParkServe and state data including Florida Natural Areas Inventory, CoMAP. Worked with each of the NTS data managers to acquire ownership conserved land data. This created the combined land data for our web based applications.

Deliverables – These applications will become available – web based support tool and public access 3d viewer. Web based decision support tool will be password protected. Ensure data can be protected. Public viewer will allow the public to view data in the 3D scene viewer.

Gap analysis purpose – Create unprotected gap segments for each trail
Break the trail into 1 mile analysis segments and classify each segment – fully protected, partially protected, not protected, on-road. This will allow viewers to locate priority areas given the wealth of information presented within the attributes. Utilize any information and present information regarding priority segments that have been determined by agencies.

Protection Status – Data sources

Multiple Data Sources utilized with the analysis.

Trail Protection Status – Breakdown of pilot from analysis allows gathering of information and creation of statistics of interest for NTS. Characterize the situation with each trail.

Priorities and Risks – Look at various variables including demographics (nearest pop center, estimated population within quarter mile, natural attributes (proximity to water, undisturbed landscape, land cover types), closing gaps (adjacent conserved land), risks (residential housing development or energy development), safety (road types), and land parcels. Trail administrators helped ensure the data accurately reflects their trails.

Four Pilot Trails - Thanks to the trails involved with the pilot

Next Steps – November 2019 – Built initial draft website

Continuing review with trail administrators and gathering feedback

June 2020– run analysis on all trails

We want to make sure our methodology is locked in before conducting the analysis across the NTS.

Demo – Public Viewer

User is greeted with tutorial on how to use the viewer. Only loading information that is appropriate to share with the public. NTS conserved land, NTS centerline, Trails specific datasets. Pop up windows display dataset information to the user. Datasets are also scale dependent to allow for ease in viewing/performance and enable the user to see contextual information. The layers disappear once the viewer has zoomed in to a large scale to prevent direct navigation to potential sensitive locations. The 3D viewer allows the user to view the trail more accurately to the natural landscape. Lewis and Clark NHT one can see how the trail is going through the landscape along the waterways and cross conserved lands. Excited to test out this new technology. The 3D viewer will be useful for the public and administrators to view and experience the trail from a birds eye view.

Demo - Decision support tool

We will look at the current version. We have added a number of improvements. Can view areas of GAP protection. Created individual gap segments and attributing the gaps with information about the specific segment. This reporting capability will be added to the decision support tool. The 1 mile analysis segments contain multiple different attributes to inform and determined features that are useful for work priorities. Lots of characterization of the segments for decision making. Data includes identifying segments that are associated with roads, waterways, level of conserved land, etc.

Here is the web support tool as it current exists and it is being updated now. Here are the centerlines with the communities that are nearby, critical habitat layers, disturbance values of watersheds, NLCD, wildfire risk, and housing density. Lots of visual inspection of the trail. Usable data at your fingertips at one location for GIS professionals and trail administration. Ability to query within the application for various trails and datasets. The application will identify the areas that meet the criteria of the query. Each analysis segment as a report can be viewed and printed to share within organization or with partners. There is also the ability to draw areas and label them. The viewer can print maps for sharing purposes. The application has the usual ability to change to several different basemaps.

That is an overview of the 2 applications we have developed. Collected a lot of data and collaborated with the data mangers. We hope these applications are useful to trail administration, partners, and public.

Challenges

Working with accuracy of land ownership.

Working with potentially sensitive datasets to ensure these areas are not impacted by the release of the data.

Looking for the best ways to include parcel property data.

This is a larger project –Don – working on complimentary elements to go along with this analysis

Working with the land trust alliance to identify by segment a potential partner.

Questions -

Have you guys looked at the onXmaps ownership data and map tools/application?

from Don Owen to everyone:

In response to Bob Ratcliffe's question, yes, we're looking at the ONX maps and building in the proximity to landlocked federal lands per the Dingell Act

Nothing has been published yet?

Mitchell – Nothing has been published yet to the public.

Greg Matthews – There may be parcel data that can be accessed through HIFLD. USGS is looking into it for their own use.

Mitchell – Looking for a vendor for parcel data. There are 5 or 6 for national parcel vendors. At a reasonable cost and to allow sharing of the data. Loveland Technologies is a parcel data source.

Don – I use MapRight – but it is 4-5 years out of date.

Mitchell – We will be able to find parcels that meet query criteria.

Mitchell – Thanks for all of your thoughts and comments. We will be reaching out in the future.

Don – Thanks for any feedback and look forward to any future feedback.

4. Future Meeting Dates & Topics

- a. May 19, 2020 – Looking for presenters
- b. June 16, 2020 – Looking for presenters
- c. July 21, 2020 – Looking for presenters

We always welcome suggestions for additional topics for discussion or presentations. Please contact Ryan Cooper, Peter Bonsall, and/or Derek Nelson with your suggestions!

NTS GIS Email Address: ntsgis@nps.gov

NTS GIS Network Email List: ntsgis@webmail.itc.nps.gov

NTS GIS Network Website: <http://pnts.org/new/national-trails-system-gis-network/>

NTS GIS Network Mission:

We established the NTS GIS Network as a way to connect the diverse array of National Trails System staff and partners who use GIS systems and products in their work. One of our goals is to facilitate the sharing of information and tools that help us do our jobs more efficiently and innovatively. Because the national trails system is managed as a collaboration of agencies and partner organizations, the NTS GIS Network is open to anyone.