

NTS GIS Network- Meeting Minutes

Tuesday, November 20, 2018, 1:00 pm Mountain Time (12pm PT, 2pm CT, 3pm ET)

MEETING AGENDA

1. Welcome & Introductions (Peter Bosnall/Kerry Shakarjian)

Meeting Attendees:

1. Peder Nelson (Presenter) - Oregon State University
2. Madison Vandersee - National Trails Intermountain Region Office (Santa Fe, NM) SCA Intern
3. Sandra Broncheau-McFarland - USFS Nez Perce National Historic Trail
4. Stafford Hazelett - Portland, Oregon; member, Oregon-California Trails Association
5. Reese Hirth - NPS, Geographer, Midwest
6. Brian Deaton - GIS Specialist, National Trails Intermountain Region, Santa Fe, NM
7. Matt Colwin - NPS Midwest Regional Office, Omaha
8. Sam Limerick - (Tahoe-Pyramid Trail)
9. Tiffany Stram - GIS/IT Specialist, Ice Age Trail Alliance, Cross Plains, WI
10. Dan -
11. Sarah Rivera - National Trails Intermountain Region, SLC, UT
12. Victoria Smith-Campbell (FS r02- Continental Divide National Scenic Trail)
13. David Fothergill -

2. Announcements & Information from Audience

- a. ESRI Federal User Conference, Washington D.C. – January 29-30, 2019.
- b. Updates from the PNTS Conference in Vancouver, WA in October.

3. Discussion Topic

Presenter: Peder Nelson, Oregon State University

A new citizen science tool for mapping and monitoring the National Trail System with the GLOBE Observer mobile app

Citizen science is a great way to help trail users to connect with and learn about the environment while making useful contributions to science and land management. In this presentation, I will introduce the GLOBE Observer (GO) citizen science project and explore how it could be used for the mapping, measuring, and monitoring of the National Trail System.

What is GLOBE Observer (GO)?

With the free GLOBE Observer mobile app, recreationists use their smart phones to make observations with photos and text about the environment, wherever they find themselves. These data are geographically linked to satellite images and provide more details of Earth's surface than we tend to get from satellites. They can compare their observations to those of others around the world. Importantly, land managers can use the submitted data to improve their own geospatial data, outreach activities, or engage new trail users. Scientists are using this data to improve maps of forest recovery after fires, tracking invasive species, and monitoring trail conditions.

The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment. It is sponsored by the U.S. National Aeronautics and Space Administration (NASA) with support from the National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA) and Department of State. . The app is free from the App Store and Google Play. Once downloaded, data can be collected while offline. <https://observer.globe.gov/>

Notes:

- Citizen Science for locations where there are less resources
- Map, measure, and monitor National Trails - <http://emapr.ceoas.oregonstate.edu>
- Use satellite data to time travel and look at past conditions and impacts that we didn't know were happening or didn't have a monitoring strategy for at the time
- Volunteer geographic information collection and use in GIS datasets
- USFS is funding Citizen Science - due January 2019 (see slides)

- Citizenscience.gov - designing a project for long stretches of trail
- Managing the data for long term - what needs to happen?
- Sustaining the citizen science community
- USGS Earth Explorer website - Land Cover Adopt a Pixel, proof of concept
- GLOBE is NASA ground Earth observation program
 - How get data out of this database into public/agency hands
 - Mobile app to collect data by citizens - engaging local communities
- Built in tutorial in the Globe Observer app
- Can be used to show where the trail is located as well as photos to show what the trail looks like in that location
- Tracks GPS accuracy on mobile devices
- Trail condition, trail width etc. from just the photos and monitor over time with repeat photos in the same location
- Photo point clouds can be generated over time from many photos in the same location
- Before and after trail work monitoring
- Maintenance needs can be shown through the photo
- Monitoring specific resource or past events and change over time at a location on the trail
- <https://datasearch.globe.gov> (raw data) or <https://vis.globe.gov/land-cover> (data viewer)
- Metadata from photos -- what is useful?
- Quality of data is a concern to have useful data
- Confidentiality/sensitivity - people using the app, who owns the data and who has access to it. Permission to take photos in certain locations, management locations to protect
 - users might not even know the area is sensitive, geotagged photos is a way around it and the app info is not that specific. Not a lot of information is in the app itself. Working with the NASA Legal Team for the app. All data is in the public domain with no copyright photos. If its a public area then people can take photos.
- Mailing list: <https://lists.nasa.gov/mailman/listinfo/go-sci>

4. Future Meeting Dates & Topics

- a. **Dec 18, 2018** – No call this month, enjoy the holidays!
- b. **Jan 15, 2019** – Ryan Abrahamsen, Terrain 360
- c. **Feb 19, 2019** – TBD

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.