

NTS GIS Network- Meeting Minutes

Tuesday, 9/21/2021, 1:00 pm Mountain Time (12pm PT, 2pm CT, 3pm ET)

MEETING AGENDA

1. **Welcome & Introductions** (Ryan Cooper/Peter Bosnall/ Brian Deaton)

Meeting Attendees:

1. Peter Bonsall - National Trails Program Specialist - NPS
2. Brian Deaton - National Trails - NPS - GIS Specialist
3. Jen Larsen, Klondike Gold Rush National Historical Park
4. Kerry Shakarjian - NPS Alaska Region GIS Specialist
5. Chloe Shaw - Chloe Shaw – Glacier Bay National Park Carto Tech
6. Tiffany Stram, Ice Age Trail Alliance
7. Taylor Willow - USFS Region 2, Continental Divide Trail
8. Nyssa Landres, NPS Wrangell-St. Elias
9. BriAnna Weldon - NPS
10. Elizabeth McCartney (USGS)
11. Greg Matthews - USGS. Trails Aggregator
12. Jennifer Carlino - WASO – NPS
13. Matthew Little Florida National Scenic Trail GIS Program Manager
14. Whitney Rapp - Glacier Bay National Park and Preserve

2. **Announcements & Information from Audience**

3. **Discussion Topic**

Presenter – Jen Larsen, Klondike Gold Rush National Historical Park, Biological Technician & GIS Specialist

An overview of KLGO's multi-year project merging GIS and Facility Management Software Systems (FMSS) in Southeast Alaska

Klondike Gold Rush National Historical Park (KLGO) started the extensive marriage of Facility Management Software Systems and GIS collections along the U.S. portion of the Chilkoot Trail in 2019. The Chilkoot Trail in its entirety spans 33 miles of Alaskan and Canadian backcountry terrain, commemorating the Klondike Gold Rush of 1898. This project included KLGO's seasonal GIS/bio-tech mapping sixteen+ miles of backcountry features, documenting the work of the park's Maintenance Department as they maintain both a world-renown and historic trail system.

Notes:

- Focus on Chilkoot Trail, give some background including where we are, project overview, map views, current status, final product release, recommendations going forward and questions.
- Introduction – Jen Larsen – Bio Tech and GIS Specialist – BA Biology, MA Environmental Studies – Primary duties at Klondike include wildlife surveys. Completed mammal surveys, acoustic bat monitoring. GIS support for the park. I love doing surveys and collect data with a Trimble. I will show a bunch of photos of the Chilkoot Trail.
- Background – Located in Skagway Alaska. Have 3 valleys – Skagway, Nahku Bay, Dyea. On the northern end of temperate rainforest. There is a lot of precipitation. Bordering boreal forest unique environment.
- Klondike Gold Rush NHP – 4 Units Skagway, White Pass, and Chilkoot
- Native culture area – Tlingit and Athabaskan people. Area used for seasonal fishing.
- Klondike Gold Rush in 1898 - Gold discovered in 1896 in the area. One year after the discovery, news spread worldwide. A lot of people went by boat from the lower 48. The White Pass and Chilkoot trails were where to access the gold fields. Tent cities sprang up overnight to supply the gold rush.
- Thousands of people came and were hauling goods in extreme conditions and terrain.
- Chilkoot Trail US and Canadian Trail – 33 total miles with 16 in US. There are campgrounds along the trail. The longest outdoor museum in the world. There are artifacts strewn across the trail. Trail crews do a great job maintaining the trail. The US side of the trail is very steep.
- FMSS – software system used to document and manage facilities within the NPS. It records specifics of the asset, length, width, Asset ID, date constructed, condition, photo. Who uses the info– maintenance division NPS. Why merge

- GIS and FMSS – EASE OF REPORTING, efficiencies, expanded documentation, support maintenance.
- Project Overview – location and Hurdles – Lots of forest canopy, mountains, cloud cover – high accuracy collection can be an issue. I use a Trimble Geo7X. Use and antenna that worked out well for collection. Used a data dictionary for field collection. Post processing occurred in the Office using CORS. Used 2 COR sites. Everything was collected in WGS84 and processed into NAD83 and then converted to UTM. There were 5 overnight trips.
 - Used the COR sites Atlin and Glacier Bay.
 - Features that were collected 750 total features. Collected point and line files. All types of NPS assets (signs, benches, walls, buildings, culverts, campsites, etc. Artifacts, viewsheds (unique spots), trail re-route areas, and any deficiencies – features that needed to be fixed.
 - Next 5 slides photos of features along the trail: boardwalk walkways – 3 different FMSS assets – boardwalk, causeway, retaining wall. Waysides, steppingstones, turnpike, log retaining walls, stone steps -4 features
 - Coal bridge, historic stove – amazing people hauled these heavy items up this terrain, picnic tables, wooden bridge,
 - Examples of bridges, artifacts including pieces of preconstructed boats, example of a viewshed from the Chilkoot Trail, tent pad – all sites have tent pads
 - Wayside with a deficiency – posts are broken, another zig zag bridge, bear lockers at sheep camp – sheep camp has up to 50 Campers a night. Retaining walls, steps, bridge. Causeways and log drains
 - Chilkoot FMSS Collection – Next maps compare CLR to FMSS Collection
 - Various zones for the collections 1-5
 - Many different features in the zones.
 - Zone 4 broken into 2 areas.
 - Zone 5 has a lot of extreme weather. Constant rerouting, maintenance that must be done. Trail crews were very helpful for zone 5. They pointed out features that I didn't notice.
 - Facilities web Map – Screenshot showing the Chilkoot Trail. There are 100 features within the FMSS map.
 - Here the collections from this project, once the project is completed 750 features added to the map. Help NPS staff and the park. A geodatabase will be handed out to the AK regional office. There will be a final product release and will be placed in the permanent dataset. Will also be placed into the facilities database web map.
 - Recommendations – Update every 2 to 3 years due to maintenance, weather, and visitor use. There is always rot occurring, erosion, deficiencies occur all the time. Animal activities can also impact the assets. Constantly adapting to animal impacts.
 - Thank you for the help with this project: Angie Southwald, Kerry Shakarjian, Joel Cusick, Regan Sarwas, Jami Belt, Annie Matsov, Aric Baldwin, John Hinrichs, Catherine Stewart, Felipe Mendez
 - Thank you – Questions
 - Great Presentation - thank you! 1) Roughly how long would you estimate that it took you to collect data for 1 mile of trail? Depending on how many features a day to 2 days depending how close they are located together and how hard they are to find. 2 hours for 15 features. 2) Who entered the data into FMSS and how easily did the GIS data flow into FMSS? Maintenance department entered the data in FMSS. The GIS aspect the FMSS ID number was entered and once I hand off the data to AK regional office. They will marry to 2 with the FMSS ID.
 - Kerry – How much preparation had to be done and how long did it take? The end of season 2018 Angie Southwald and Julia Rold visited the park and initiated the project. We had 1 month to brainstorm the project. In May 2019, a month to get GPS equipment sent, 2 weeks to develop the data dictionary. Had to use hard copy paperwork due to connectivity issues. This season, I went out and finished collection. I have post processed for 4 months.
 - New real property features could be exported to excel and provided back to FMSS person, correct? Yes, exon of features that were not recorded in FMSS exported excel files with photos can be used to compare the 2 datasets. Zone 5 had a ton of features not noted in FMSS.
 - Are you using NPGallery to store images or how are you storing images? Just using a local drive for the park.

4. Future Meeting Dates & Topics

- a. October 19, 2021 - TBD
- b. November 16, 2021 - TBD

We always welcome suggestions for additional topics for discussion or presentations. Please contact us with your suggestions using the email below.

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.