Technology on Trails

Tested by UAA GIS Students

ANCHORAGE PARKS & RECREATION

Healthy Parks, Healthy People

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UAA University of Alaska Anchorage

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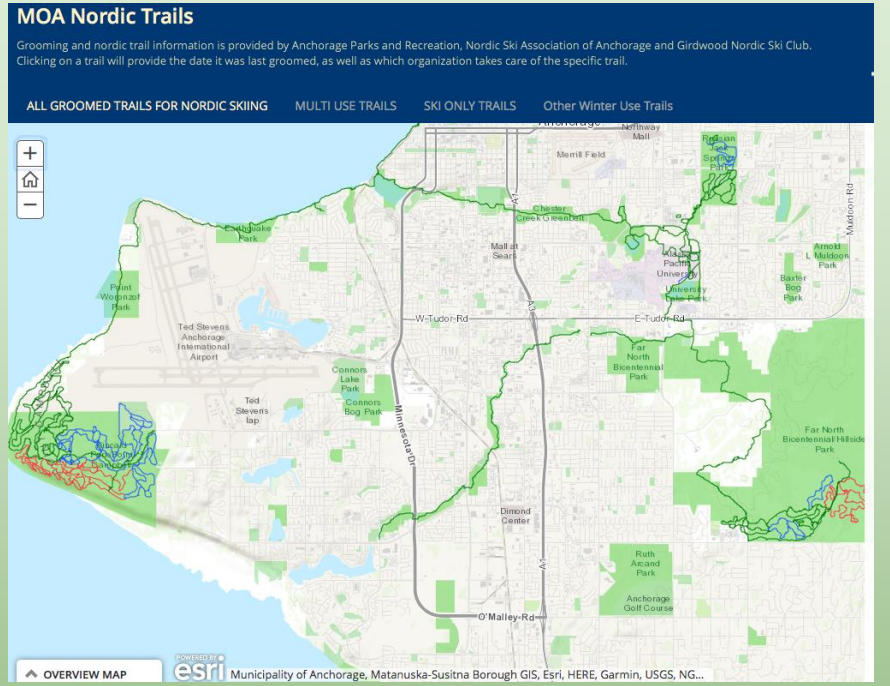
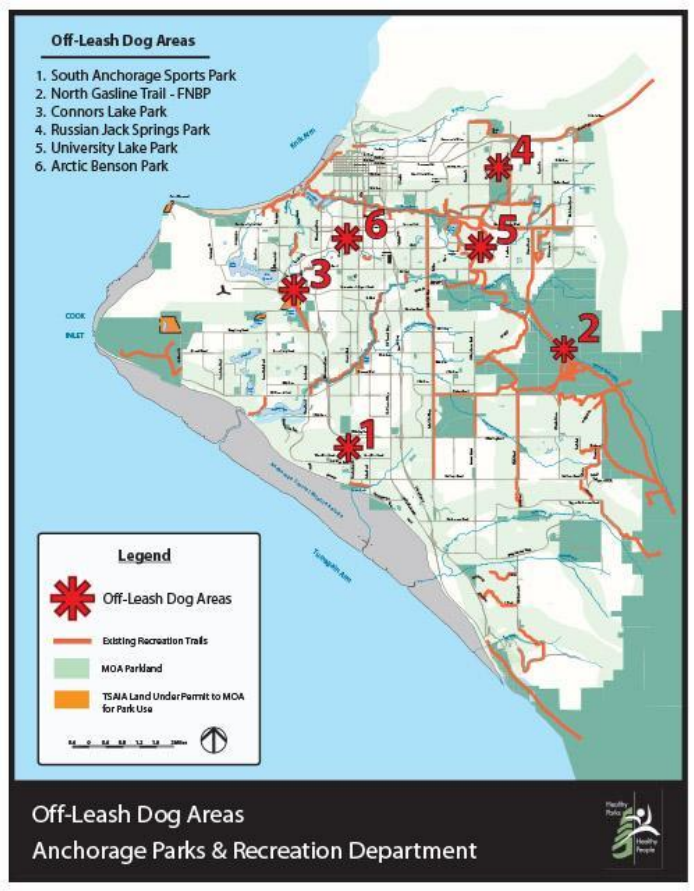
Background

- Parks and trails provide many benefits to people by offering recreational areas in a natural environment.
- The municipality of Anchorage contains 10,946 acres of parkland
- 250 miles of trails and greenbelts.
- Using ArcGIS online to utilize newly collected trail data



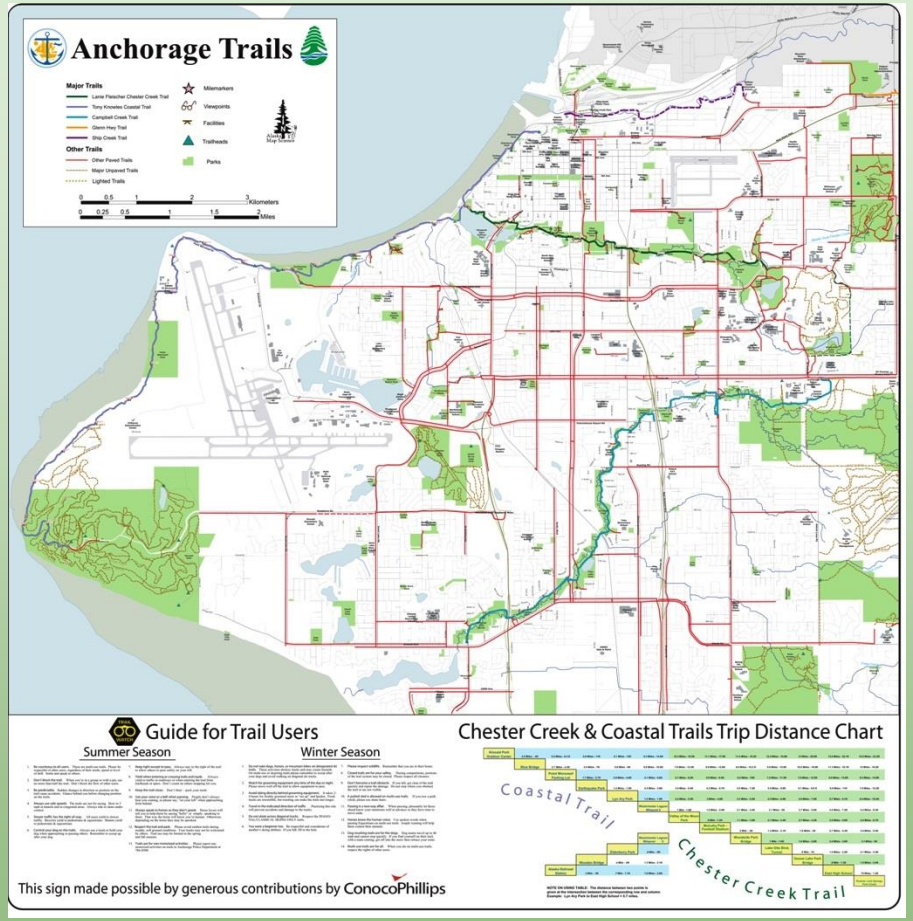
Getting Started

- Trial run of ArcGIS online for the Municipality of Anchorage Parks Department
- Conducted using the Collector App for ArcGIS online and new Arrow 100 receiver
- Will be useful to the Municipality for future field work projects, refining methodology, and allowing public easy access to trail information



Purpose

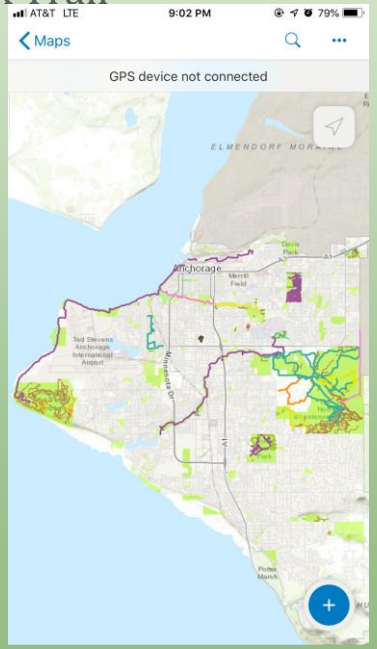
- Will help to update current trail system within Municipality of Anchorage
- Uploading data of local trails to ArcGIS online will allow easier access for public use
- Public will be able to use information to assess trail length, terrain, and be granted tools to better navigate trail systems



Tools/Materials

Materials used for precise trail mapping of the Coastal trail, Campbell Creek Greenbelt Trail, Ruth Arcand, Russian Jack Springs Park Trails, and Ship Creek Trail

- Arrow 100 Receiver
- Smartphone
- Collector app
- EOS Tools Pro app
- ArcGIS online
- ArcMap
- An account with the MOA
- And a good pair of shoes!

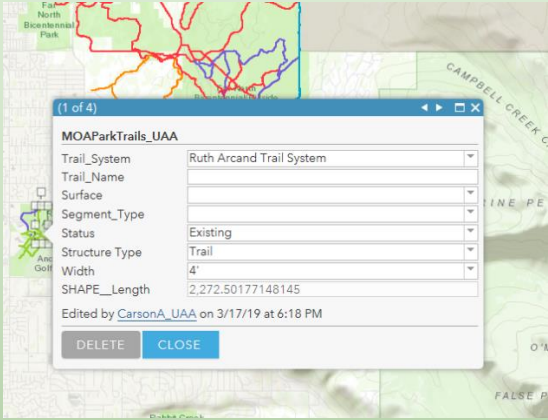


Collector App view

Methods

- Collect spatial data with Arrow 100 Receiver
- Enter trail properties in attribute table
- Once submitted, it will be automatically uploaded onto the ArcGIS online in your account (expand on muni account?)

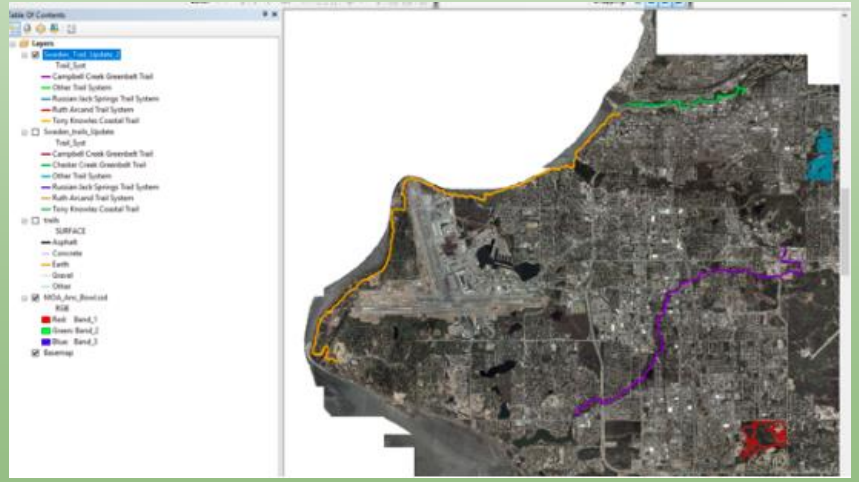
Municipality ArcGIS online account



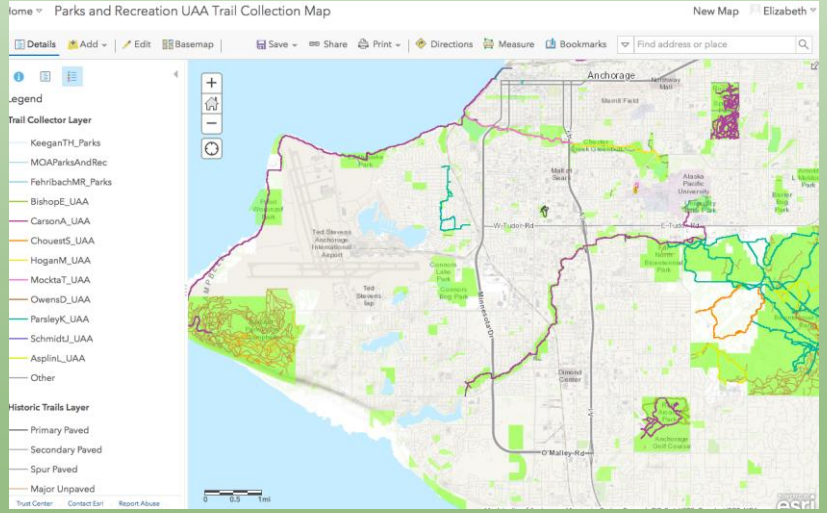
Attribute table editing in ArcGIS online

Methods continued

- Log in to ArcGIS online and edit to the best ability
- Export data and continue editing in ArcGIS desktop
- Once editing and collecting is complete, you can manipulate your data to achieve desired results



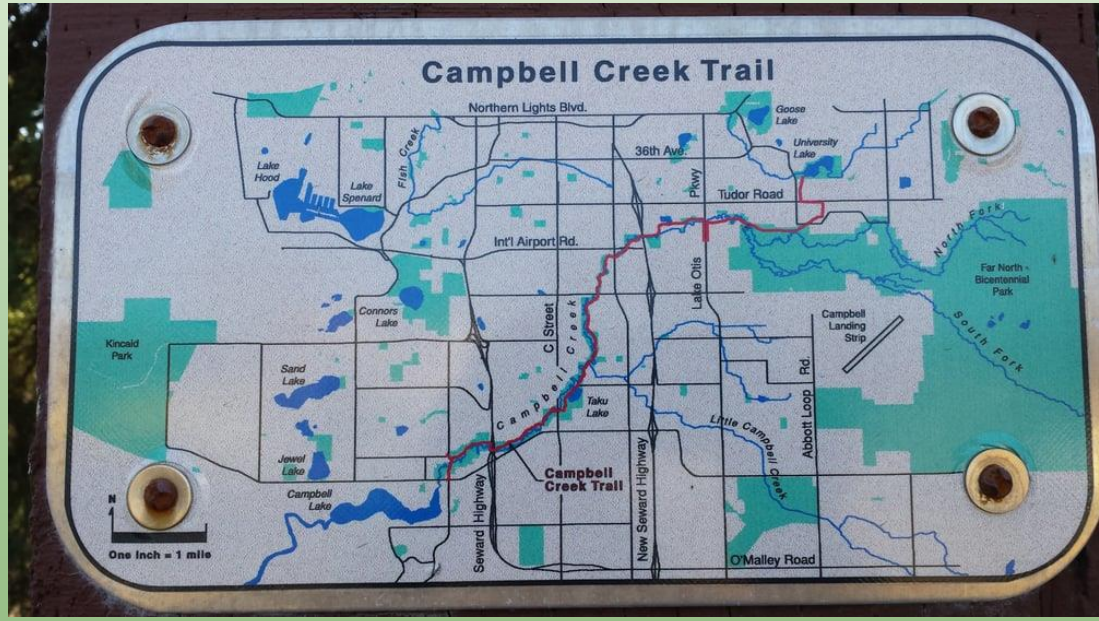
ArcGIS desktop view



ArcGIS online view

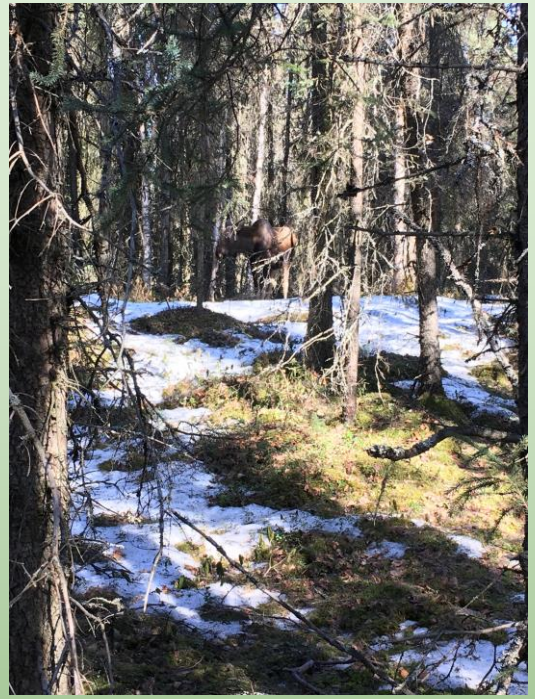
Expected Results

- Total length of our data collected from trails
- Density of trails within parks
- Average length of each trail system
- Characteristics of trails (i.e. width, surface type, etc.)



Challenges

- Data collection issues caused by the receiver and/or phone disconnect
- Limitations of editing on ArcGIS online
- Iphone and Android compatibility with collector
- Maintaining connection with satellites (most likely due to tree coverage in area)
- Determining correct trail attributes of each trail can be tricky
- Running into wildlife rendering the user unable to collect data of a trail



Take away thoughts

- Data can be used for accessibility within our parks
- Allocate funding
- Balancing habitat conservation and recreational use
- Assessing usefulness of technology for the Municipality of Anchorage
- Establishing a methodology

References

Benefits of Trails and Greenways. (n.d.). Retrieved April 10, 2019, from https://www.railstotrails.org/resourcehandler.ashx?id=2988

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Acknowledgements

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