**Anna Lee asks Elizabeth:** Is there a way to get involved in this project beyond utilizing the data? I will be graduating with my Master's degree in December and am currently looking for a job. My background is in natural resource management and GIS and I would love to be able to contribute!

*Congratulations! The best way to get hired at the US Geological Survey and many other federal agencies is by registering and setting up a profile on* [*USAJobs.*](https://www.usajobs.gov/) *There are special programs for current students and also recent graduates.*

**Annette Parsons asks Elizabeth:** Can we help by already providing versions of our trails that meet the attribute schema.

*Yes, it saves our operations group a lot of time if the data are in a schema similar to ours. Currently, we only acquire data at the state level or national level in the case of federal lands. Once the Trails Data Portal is in place, we may be able to accept data from other authoritative data managers. If your state or federal agency already partners with the USGS, you should work with them to integrate your data at the statewide or national level.*

**Annette Parsons asks Tatyana:** How does private property affect the scenario analyses?

*The user can adjust the importance or completely exclude private property from the analysis.*

Does the model assume a maximum tread gradient? How does it decide where to route a given trail? i.e. agencies generally have a standard for max tread gradient.

*The model uses percent slope based on the 3DEP elevation dataset. The user can either set a range (maximum/minimum) or set cost scores (importance) for each slope range.*

*Additionally, we are exploring how to better implement the Half Rule where the trail tread gradient is no more than half the slope of the hillside (sideslope) the trail follows along. If anyone has implemented a terrain analysis that models the Half Rule, we would be interested in talking with you. Please either contact us directly or email* [*trails@usgs.gov*](mailto:trails@usgs.gov)*. If you have specific requirements or a user story about how or why you would like to incorporate maximum tread gradient into the TRAILS decision support tool, we may be able to use the information when planning enhancements to the application.*

My non-profit partners with BLM and USFS in planning and developing trails I am very interested in having access to this tool to begin familiarizing myself with it and trying it out in our upcoming planning.

*We would be happy to set up a workshop for your group. Please either contact us directly or email* [*trails@usgs.gov*](mailto:trails@usgs.gov)*.*

**Charles Plopper asks Tatyana:** One of the problems in our area is that the GIS maps are very inaccurate. This is even true for the Assessor parcel boundary maps.

*Typically, all features used by the USGS meet minimum accuracy needs for 1:24K mapping, which is commonly expected to be within 40’ of true position 90% of the time. Your mileage will vary based on scale and resolution. For data that meet engineering specifications, you will have to acquire your own data sources.*

**Daniel Carter asks Elizabeth:** How do unofficial trails fit into this planning tool? they probably aren't in the authoritative datasets but are used by the public and in many cases eventually become official trails or function as connectors

*This is an interesting discussion that would need to be taken up with the land management agencies directly. The USGS only shows trails provided by authoritative data providers.*

*As far as the tool is concerned, you could bring in whatever you wish as a reference layer and use custom waypoint scenarios. After December you should be able to add custom layers that can actually take part in the analysis.*

**Ernest Rodriquez asks:** Are we able to access and download USGS maps for our area?

*Yes, you can download US Topo Maps from the following places:*

* Trails Explorer (view trails in the USGS trails database):  <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=d3c32c758316402dbd8292b7ffea720e>
* The National Map Viewer: [https://viewer.nationalmap.gov](https://viewer.nationalmap.gov/)
* The National Map Data Download Site: <https://viewer.nationalmap.gov/basic/>
* The National Map – Data Services: <https://viewer.nationalmap.gov/services/>
* The National Map Staged Products Directory (trails are a feature class in the transportation dataset): <http://prd-tnm.s3.amazonaws.com/index.html?prefix=StagedProducts/>

Is this an effort to integrate crowd sourcing into validated datasets?

*Not for trails data but possibly for other recreation features. The USGS does not create trails data but only aggregates from authoritative sources. The USGS would not be involved in validating crowdsourced trails; individual land management agencies would have to do this work as they are the authoritative managers of that data.*

What are the operating parameters for analysis? Hiking - point-to-point, equestrian - elevation, MTBing - sustainability?

*I’m not sure I understand the question, but once we complete the testing and deployment of the latest version of the TRAILS application, you will be able to configure “use type” in order to optimize your analysis. Currently, use type includes: Hiker/Pedestrian; Bicycle; Packsaddle; ATV; Motorcycle; OHV over 50 inches; Snowshoe; Cross Country Ski; Dogsled; Snowmobile; Non-motorized Watercraft; and Motorized Watercraft.*

**Jack Henderson asks:** How is GIS being utilized in this?

*The application uses GIS data for analysis (transportation, elevation, surface water, land ownership) to create a cost surface. Based on inputs and set variables from the user, the system creates a cost surface and optimizes trail corridor suggestions in that can be exported as a GIS file.*

**James Robertson asks Elizabeth:** What is the nationwide trails dataset that the TRAILS application is driven from?

*The nationwide trails dataset is an aggregation of trails primarily from federal land management agencies but also includes state and local trails from over 25 states. With help from our partners and other authoritative data providers, we are continuing to build this public domain dataset.*

As fas as FS trail data, would this dataset supersede the TrailsNFS Publish dataset (enterprise datasets)?

*No, the nationwide dataset is an aggregation of trails data from multiple authoritative sources and does not replace agency specific data. For the most current and up-to-date trail data including attribution, use the original source data. The USGS only utilizes a subset of the available attribution from the source.*

**Julianne Mills asks Elizabeth:** Does the TRAILS decision support tool account for accessibility data? Is it a resource for people with disabilities to know what trails can be accessed with mobility devices? (Not necessarily "ADA" compliant but generally accessible)

*The purpose of the TRAILS decision support tool is to provide a tool for trail planners and trail builders. It is not a resource for trail users. A trail planner could use the tool to assist in planning an accessible trail, however.*

In terms of prioritization due to limited resources, is there a higher priority placed on trails on federal lands versus state/local lands?

*That is a question for the trail planners and builders. Our group provides the planning tools rather than the funds to build trails.*

What are the categories measured for "Trail Use Type”?

*Trail Use Type includes: Hiker/Pedestrian; Bicycle; Packsaddle; ATV; Motorcycle; OHV over 50 inches; Snowshoe; Cross Country Ski; Dogsled; Snowmobile; Non-motorized Watercraft; and Motorized Watercraft.*

**Margaret Henderson asks:** It appears the trails tool is only currently available to federal partners - When will this be available to others?

*Although federal partners and their affiliates are our primary focus, as resources permit, we are making the tool available to states, other public partners, and nonprofits, especially as it relates back to the original vision of the project to expand access and connectivity to our public lands. Please contact us directly or at* [*trails@usgs.gov*](mailto:trails@usgs.gov) *for more information.*

**Mark Hildesheim asks Elizabeth:** Why can't equestrian and motorized use coexist if users are educated on what type of experience to expect? If you know you might see a bike/horse you can ride accordingly and not be surprised upset when it happens.

*I was speaking “off the cuff” and based on my own experience or lack thereof when I mentioned that a trail builder may not want to have both use types combined. We are providing tools rather than making any rules or suggestions on what trail use types you may want to include in the analysis. 😊*

**Mark Young asks Tatyana:** Can you project accessibility standards for trails?

*The TRAILS tool doesn’t specifically address accessibility standards, but will allow the user to set slope boundaries for trail corridor connections. This functionality should help the user to do preliminary design work for various compliant trails.*

**Michael Kilcullen asks:** I'm creating a university course...we use ABANDONED RAILROADS layer, bcs these are the first and most likely places to get trails AND with gentle slopes! I also discovered for 1st time that adding Historic Autotrails 1920s is showing lots of abandoned segments, specically the PPOO, but also Route 66 and others. Are these datasets available? Can you add them?

*Our transportation layer is an aggregated dataset. The roads are primarily made up of data from the US Census and our federal land management partners. I’m not aware of any historic roads layers. The railroads come from the Federal Railroad Administration (FRA), so your best bet would be to check with them directly or here:* <https://osav-usdot.opendata.arcgis.com/datasets?keyword=Rail>*. If you have the layer, right now you can add it as a reference layer. After December you’ll be able to add it as a custom layer that takes part in the actual analysis.*

**Neil Dytham asks Elizabeth:** I work with a City government, how can our trails be included in this database? Also, I've noticed that some of our trails are currently present on the explorer, but are incorrect alignments/names, how can these be updated?

*Currently our focus is on national and state level data. If your state is one that has aggregated statewide data, consider working with them to update your trails first, then we can work with the state to incorporate the new data. Contact us directly or email* [*trails@usgs.gov*](mailto:trails@usgs.gov) *if you’d like to discuss further.*

Is there a long term goal to have this kind of data shared with companies like Google Maps? We notice that many of our trails are misrepresented on these mapping systems and getting changes made is hard, perhaps a "catch all" database for them would save work on all ends.

*Many companies, agencies, and individuals use USGS data via service end points and downloadable GIS files. No contracts are needed with external users as USGS data is available as Public Domain. USGS does not exert any influence over what is portrayed in private sector maps and applications.*

**Norman Ward asks:** I may have missed this, but why are trails in some states not shown or mapped yet?

*Our initial focus is on states willing to provide public domain trails data. There are many reasons that we may not have trails data for a particular state. Some states are not interested in participating. Some states do not have a state level trails dataset. Once we complete the Trails Data Portal, it will be easier for us to incorporate smaller datasets, such as county level data, as long as we have the internal resources to do so. Lastly, we are about mid-way through this process and still have states to contact. If your state would like to participate please contact us either directly or at trails@usgs.gov.*

**Richard Kania asks Elizabeth:** Does the trail data only include off-street trails and only land trails? What about water trails for canoeing/kayaking?

*Our data model provides for water, terra, and snow trails. We have some water trails in our database, but not a lot. We can only show what our partners provide to us. Currently, the TRAIL planning tool only models terra and snow trails.*

**Richard Lutz asks Elizabeth:** What are you doing to protect trail data for organizations that use their data as part of funding their organization?

*We have a minimum set of attributes that we need to have in order to symbolize and use the data for our purposes including trail name, trail type (terra, snow, water), trail use type (bike, hike, etc.) and trail length. In addition, we request data to be in the public domain. If the organization has other value-added attributes or attributes we do not use, they can be removed. With many of our partners, we implement Memorandums of Understanding so both sides are clear about roles and responsibilities. If an organization wants to protect their trails data as a funding mechanism for their organization, it may not be appropriate for them to share as public domain data.*

**Stephen Page asks**: What plans do you have to ensure data (trails) are kept up to date?

*Keeping data up-to-date depends on several factors. Federal land management agency data are updated monthly, while state trail data will likely be checked yearly, which keeps USGS databases up-to-date. US Topo maps are updated on a 3-year cycle, and USGS base map tile caches are updated approximately yearly. End-use cartographic products will not always show the latest data due to the significant time it takes to create or update cartographic products. The most current trail data can be acquired from original data source.*

**Terre Dunivant asks:** Is it possible to see trail surface data - DG, asphalt, dirt...?

*Trail surface features are not currently included in the USGS trails database. This information may be available from the authoritative data source.*

Interested in knowing more about ADA trail guidelines, and how the National Map will provide the data we have to include on trail maps.

*We don’t have anything to do with ADA trail guidelines, but it might be good to have a default scenario/template built into the TRAILS tool at some point. I did a quick search and found that American Trails has a link to a document that discusses ADA:* [*https://www.americantrails.org/images/documents/TN-trail-ada.pdf*](https://www.americantrails.org/images/documents/TN-trail-ada.pdf)

**Tom Hanes asks:** Does the analysis for the connectors compare the slope of the trail to the side slope that you are building on so that you aren’t exceeding rules like the IMBA half rule.

*The application can be used for advance planning but there will always be a need for site surveys and field planning. The data scale used is typically made for 24K mapping and may not work well for specific local modeling needs. The current model uses percent slope based on the 3DEP elevation dataset. The user can either set a range (maximum/minimum) or set cost scores (importance) for each slope range. Currently, we are exploring possibilities with our partners at Esri to more closely model the One Half Rule. If anyone has implemented a terrain analysis that models the Half Rule, we would be interested in talking with you. Please either contact us directly or email* [*trails@usgs.gov*](mailto:trails@usgs.gov)*.*

**Tom Hennigan asks Elizabeth:** Should we standardize on using the Nation Grid?

*The provided trails data can be standardized based on local requirements. USGS will transform data as needed to integrate into the National Trails Dataset.*