



↑ The sample dataset for this exercise comes from the Slickrock area of Moab, Utah, which is a popular destination for mountain bikers.

- Close ArcMap and open ArcCatalog. Navigate to \Slickrock_Rescue_GDBFiles, right-click the UTM83Z12 folder, and create a new file geodatabase named GC_Transportation.
- Right-click GC_Transportation and choose New > Feature Dataset. Name it SR_Response. Set the coordinate system to NAD 1983 UTM Zone 12N and accept the defaults for the rest of the parameters.
- To import roads and trails into this feature dataset, right-click SR_Response and select Import > Import Feature Class (single). In the ArcCatalog window, select Slickrock Trail from the SHPFILE folder then to the Import wizard. To ensure that the entire shapefile is imported, click the Environments button at the bottom of the Import wizard and set the Processing Extent to Union of All. *This is a very important step.* Click OK. Repeat the process for Jeep Trails, and Grand Co Roads shapefiles.
- After all transportation feature layers are imported, close ArcCatalog and open ArcMap. Create a new Group Layer in the TOC called SR_Response and drag the new layers to it.
- To reuse thematic mapping that already exists for shapefiles, change the data pointer from each source shapefile in Transportation Group to its corresponding Feature Class in SR_Response. Begin by double-clicking Slickrock Trail to open its Properties, click the Source tab, and click the Set Data Source button. Choose Transportation_Group_Slickrock_Trail as the data source. Repeat this step for Jeep Trails and Grand Co Roads. Once this is done, remove the SR_Response group from the TOC and save the map.
- Right-click the Slickrock Trails shapefile and open its attribute table. Notice that slope-adjusted speeds are already posted, but the segment distances in miles (MILES) and travel times in decimal minutes (MINUTES) are set to zero.
- Right-click the MILES header and select Calculate Geometry. Calculate the Length in Miles US. ➔

A Little about Slickrock

In 1969, a motorcycle trail was established on barren, weathered Navajo Sandstone less than two miles northeast of Moab. Occasionally, motorcycle riders and hikers used the trail during the 1970s but in the early 1980s, it was discovered by mountain bikers. Since then, it has developed into a leading destination that attracts thousands of mountain bike riders each year.

With increased recreational use, accidents, injuries, and rescues have become very common. The Grand County Search and Rescue (GCSAR) group is often the busiest SAR agency in Utah, locating and extricating injured or lost bikers, hikers, rafters, and others, from dangerous situations throughout south-east Utah. Because of its popularity, the Slickrock Trail is often the most frequent response location. Fortunately, its trailhead is less than two miles from downtown Moab. The terrain is very open, and the trail is well marked. Unfortunately, for rapid response and victim extrication, it presents some of the most rugged terrain in the Four Corners region.

The Slickrock Trail is crisscrossed by the rugged and very popular Hell's Revenge Jeep trail. The trail was established in 1980 by Moab's Red Rock Four Wheelers. Hell's Revenge follows old jeep and seismographic trails and provides viable options for travel by emergency responders using small four- and six-wheeled vehicles. Both trails connect to the Grand County road system just two miles from Moab.

