

## THE NAVIGATION CORNER: ALL THINGS MAPS

By Bob Myers, LTC Navigation Chair



Map Gallery – Esri User Conference, San Diego Convention Center

In July, I attended the Esri User Conference in San Diego. It was a very impressive conference sponsored by Esri (Environmental Science and Research Institute), which is a Redlands, California based company with 3,000 employees. The annual user conference is the largest gathering of Geographic Information System professionals in the world. Over the course of the week, 15,000 map geeks attended. In the Map Gallery, hundreds of maps were on display, and the Exhibition Hall show-cased all of the latest mind-numbing technology.

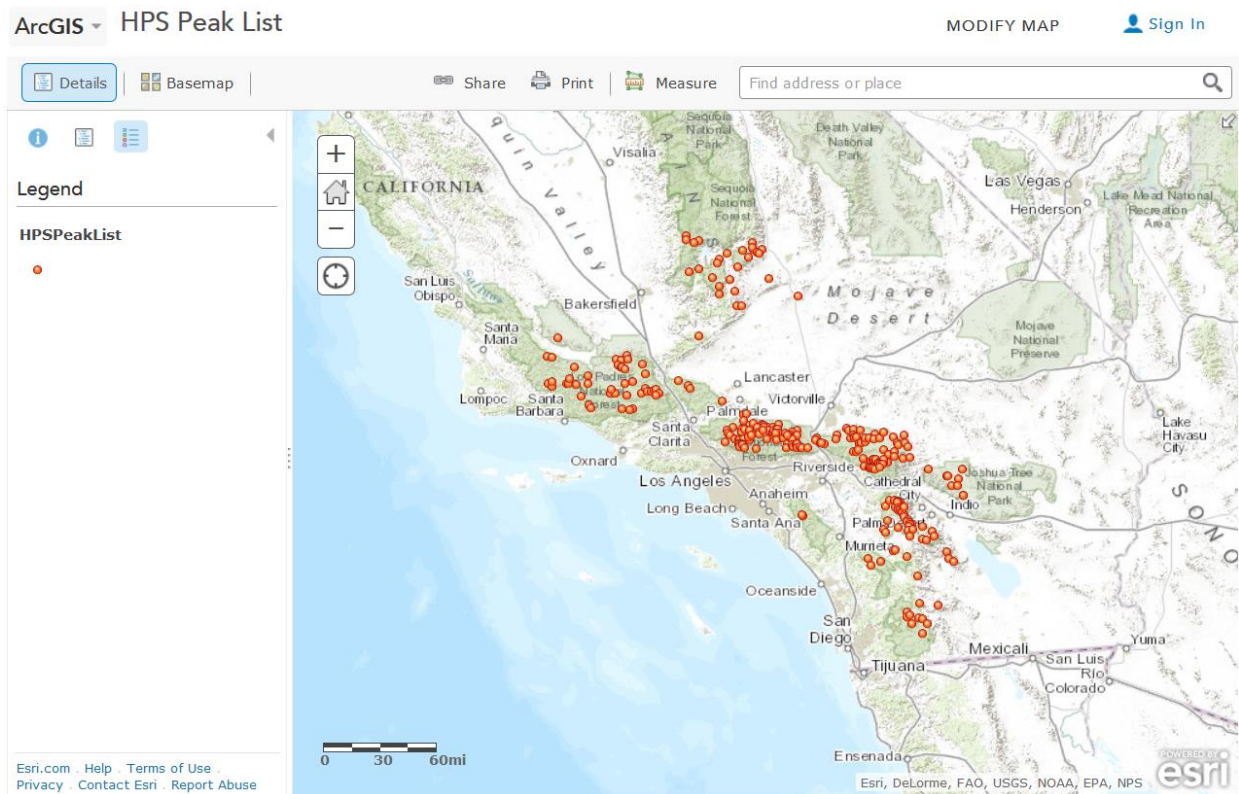
The field of mapping is significantly changing. As previously discussed in this column, the US Topo series launched by the United States Geological Survey is of little use to recreational hikers. This is highlighted by the new US Topo Map Symbols booklet ([http://nationalmap.gov/ustopo/images/US\\_Topo\\_Map\\_Symbols.pdf](http://nationalmap.gov/ustopo/images/US_Topo_Map_Symbols.pdf)). Notably missing are symbols for trails and peaks.

As I noted when the US Topo series was first launched, the USGS promised continuous improvements to the new maps. Earlier this year, the USGS launched “newly designed” US Topo maps for Georgia, New Jersey, and West Virginia. The USGS claims that these newer maps “now have a crisper, cleaner design - enhancing readability of maps for online and printed use. Map symbols are easier to read over the digital aerial photograph layer whether the imagery is turned on or off. Improvements to symbol definitions (color, line thickness, line symbols, area fills), layer order, and annotation fonts are additional features of this supplemental release ([http://www.usgs.gov/newsroom/article.asp?ID=3876&from=rss#.U-aNq2PG\\_Uk](http://www.usgs.gov/newsroom/article.asp?ID=3876&from=rss#.U-aNq2PG_Uk)).” In my opinion, this new release does not address the significant shortcomings of the US Topo series for recreational users. The old topographic maps – now the “Historical Topographic Map Collection” in USGS jargon – remain the maps of choice for Sierra Club navigation.

To keep up with advances in the field of mapping, I have been taking graduate school courses in Penn State Online Geospatial Education Program. The new skills that I am learning include the creation of topographic maps and web-based maps.

For the benefit of HPS, I created a web map showing the location of all HPS peaks. The version at the time this column was written includes the following features:

- Peak Name
- Elevation
- Longitude
- Latitude
- HPS Index Number
- HPS Section Area
- Hyperlink to the HPS Peak Guide



The web map can be found at the following locations:

<http://robertmmyers.weebly.com/hps-peak-list.html>

<http://bit.ly/1phy1JJ>

## USGS Resources

At the Esri Conference, I stopped by the booth maintained by the USGS. I obtained a list of web resources and the following may of interest to those wanting to pursue their navigation knowledge. Many of the documents are historic documents which will not be updated in the future. The USGS remains the preeminent mapping authority in the United States. Unfortunately, some of its work is compromised by cuts in funding.

### USGS FAQs Access

<http://www.usgs.gov/faq/>

### A 125 Year History of Topographic Mapping and GIS in the U.S. Geological Survey

<http://nationalmap.gov/ustopo/history.html>

### Topographic Mapping (historical reference)

<http://pubs.usgs.gov/gip/topomapping>

### History of the USGS Topographic Branch

<http://pubs.usgs.gov/circ/1341>

### All about USGS Topographic Maps

<http://topomaps.usgs.gov>

### Map Scales

<http://pubs.usgs.gov/fs/2002/0015>

### Topographic Map Margins for Educators

<http://education.usgs.gov/lessons/mapmargin.pdf>

### Elevations and Distances in the United States

<http://pubs.usgs.gov/gip/Elevations-Distances>

### Geographic Names

<http://geonames.usgs.gov/domestic/index.html>

### Using Topographic Maps to Teach Coordinate Systems

<http://education.usgs.gov/lessons/coordinatesystems.pdf>

### Latitude and Longitude

[http://nationalatlas.gov/articles/mapping/a\\_latlong.html](http://nationalatlas.gov/articles/mapping/a_latlong.html)

### UTM Coordinates

<http://pubs.er.usgs.gov/publication/fs0770>

### Public Land Survey System

[http://www.nationalatlas.gov/articles/boundaries/a\\_plss.html](http://www.nationalatlas.gov/articles/boundaries/a_plss.html)

### Principal Meridians and Base Lines

<http://www.blm.gov/wo/st/en/prog/more/cadastralsurvey/meridians.html>

**Datum Shifts**

[http://thor-f5.er.usgs.gov/drg/datum\\_shifts\\_v2.pdf](http://thor-f5.er.usgs.gov/drg/datum_shifts_v2.pdf)

**Finding Your Way with a Map and Compass**

<http://pubs.usgs.gov/fs/2001/0035>

**How to Use a Compass with a USGS Topographic Map**

<http://education.usgs.gov/lessons/compass.html>

**What is Magnetic Declination? USGS FAQ**

<http://www.usgs.gov/faq/?q=categories/9782/2736>